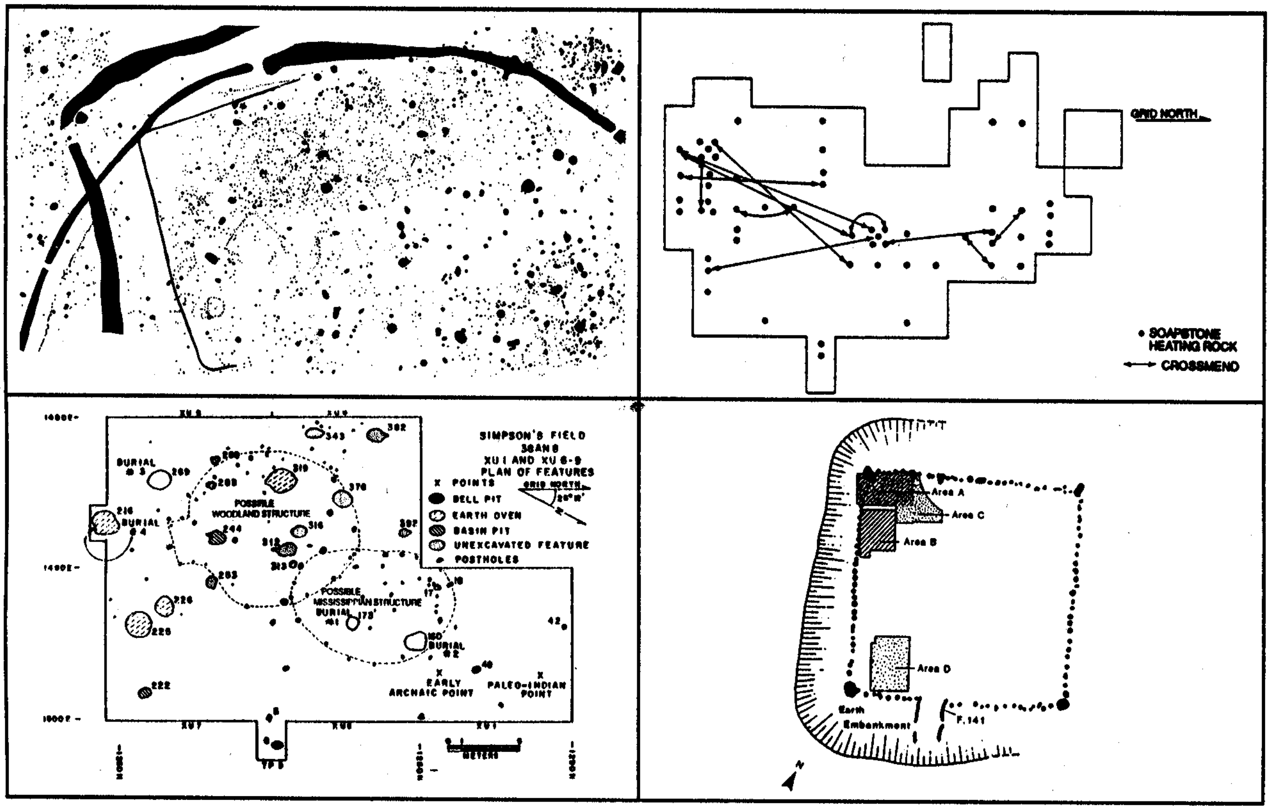
Prehistory and History Along the Upper Savannah River:

Technical Synthesis of Cultural Resource Investigations, Richard B. Russell Multiple Resource Area

Volume I

David G. Anderson and J. W. Joseph
Garrow & Associates, Inc.



FUNDED BY: U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

RUSSELL PAPERS 1988

Interagency Archeological Services - Atlanta, Georgia
National Park Service

David G. Anderson
(Sorry JEB, who knew
I had lost my
copy)

PREHISTORY AND HISTORY ALONG THE UPPER SAVANNAH RIVER:

TECHNICAL SYNTHESIS OF CULTURAL RESOURCE INVESTIGATIONS, RICHARD B. RUSSELL MULTIPLE RESOURCE AREA

VOLUME I

Contract Number CX5000-7-0012

Prepared For:

Savannah District,
U.S. Army Corps of Engineers

John -
With regards
and thanks for
making this possible
David G. Anderson

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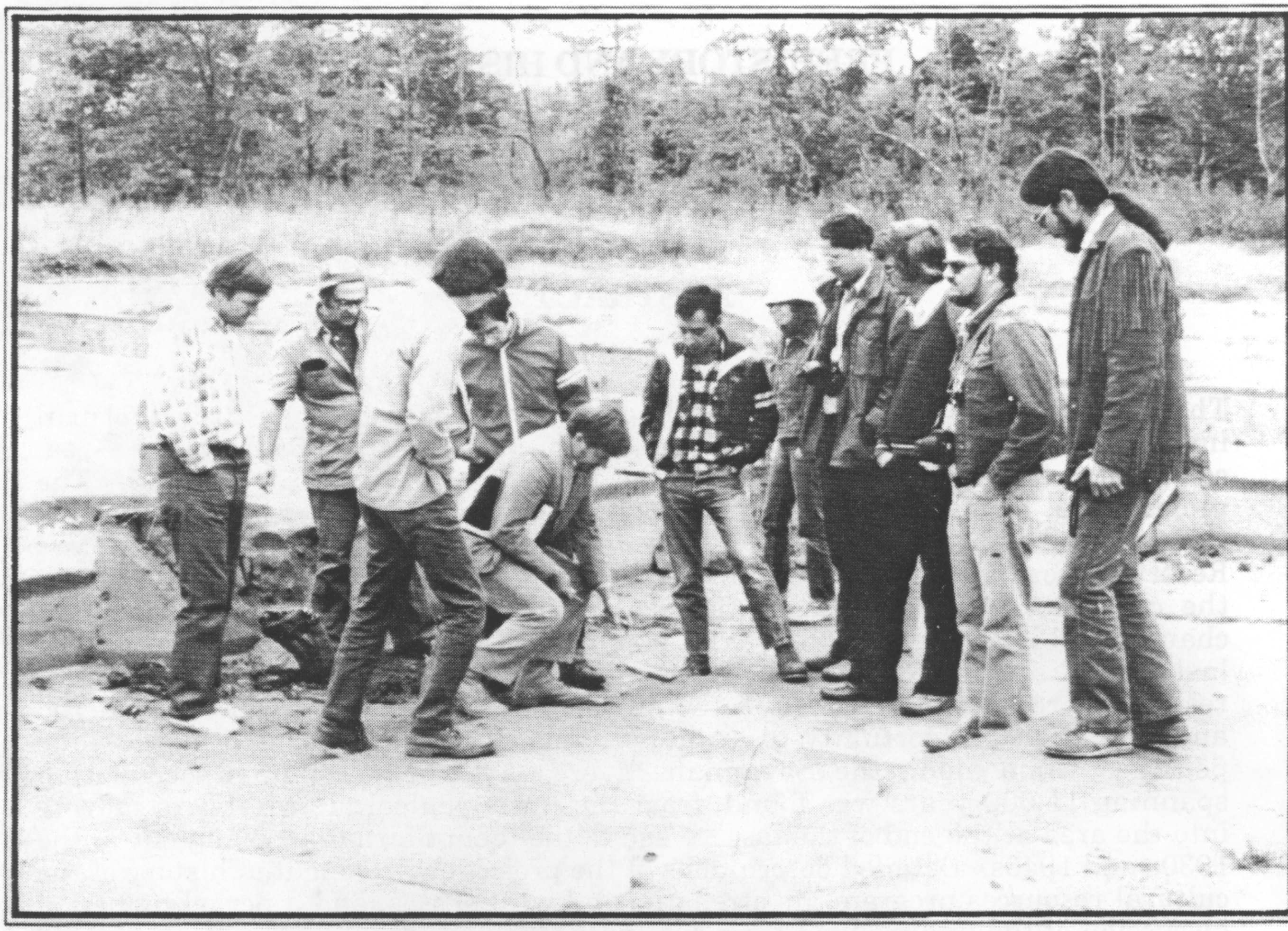
25 July 1988

PREHISTORY AND HISTORY ALONG THE UPPER SAVANNAH RIVER:
TECHNICAL SYNTHESIS OF CULTURAL RESOURCE INVESTIGATIONS RICHARD B. RUSSELL MULTIPLE RESOURCE AREA

ABSTRACT

This report synthesizes archaeological, historical, and architectural investigations undertaken in the Richard B. Russell Multiple Resource Area, commonly referred to as the Russell Reservoir, from 1969 through 1985. The project area, located along the upper Savannah River in the central piedmont of Georgia and South Carolina, lies between the J. Strom Thurmond Dam and Reservoir (formerly Clarks Hill Lake) and the Hartwell Dam and Lake. Prior to the construction of the Russell Reservoir, the 28 mile segment of the main channel and its associated tributaries making up the project area represented the last major undammed stretch of the river in the piedmont. The cultural resources program undertaken in the 52,000 acre Russell Reservoir thus offered an unparalleled opportunity to examine human life as it occurred over a long period of time along the Savannah River. A record of human occupation spanning 11,000 years was found, from the initial PaleoIndian settlers moving into the area at the end of the last ice age to the tenant farmers moving out in the 1930s and 1940s. Detailed descriptions of the project environment, a history of the cultural resources program, its strengths and weaknesses, and a period by period discussion of the findings and their significance is provided.



Victor Carbone (1942 - 1986) and Colleagues at the Rucker's Bottom
Early Archaic Block, Richard B. Russell Reservoir, 1981

l - r: Oscar Brock, Antonio V. Segovia, Roy S. Dickens, Joe Schuldenrein,
John E. Foss, Victor A. Carbone, V. Anne Tippitt, Albert C. Goodyear,
William S. Gardner, Sam B. Upchurch, William H. Marquardt.
(Photo by David G. Anderson)

PREHISTORY AND HISTORY ALONG THE UPPER SAVANNAH RIVER: TECHNICAL SYNTHESIS OF CULTURAL RESOURCE INVESTIGATIONS RICHARD B. RUSSELL MULTIPLE RESOURCE AREA

PREFACE

As the Richard B. Russell Cultural Resource Mitigation Program nears its completion, we celebrate with the publication of this report, entitled *Prehistory and History Along the Upper Savannah River: Richard B. Russell Multiple Resource Area Technical Synthesis of Cultural Resource Investigations.*

When planning began for this synthesis, we in the U.S. Army Corps of Engineers and the National Park Service wanted a report that would go beyond mere storytelling or description; we wanted a study that would interpret and critique the program (the good and the bad). We hoped for a synthesis that would reflect the efforts of each contractor, exceed the sum of the individual reports, and bring a new focus to the history and prehistory of the Georgia-South Carolina piedmont. The Garrow and Associates team has admirably carried out this task with a report that will stand as a valued information source and research guide.

For many of us involved in managing the program, this synthesis provides still more. It is a testament to the clarity and power of thought that was Victor Carbone. He once wrote that the challenge we confront in every large scale data recovery project is to bring meaning to what A. L. Kroeber called "fossils of the mind". Victor met this challenge when he shaped and managed the Russell program. His unique combination of scholarship, vision, and tenacity were undeniably responsible for many of Russell's contributions to Anthropology and History. These synthesis volumes are dedicated, with appreciation, to his memory.

It is an honor to present this work and it has been a privilege to learn from Dr. Carbone, the authors of this synthesis, and all the Russell scholars.

Paul D. Rubenstein
Savannah, Georgia

John E. Ehrenhard
Atlanta, Georgia

PREHISTORY AND HISTORY ALONG THE UPPER SAVANNAH RIVER:
TECHNICAL SYNTHESIS OF CULTURAL RESOURCE INVESTIGATIONS RICHARD B. RUSSELL MULTIPLE RESOURCE AREA

FOREWARD

In this document we have attempted to summarize, as objectively as possible, the cultural resource investigations that were conducted in the Richard B. Russell Multiple Resource Area over the past two decades. This proved a more difficult task than originally envisioned, perhaps because of the closeness we felt with the project area. Both of us had worked at a number locations in the floodpool, and had come to appreciate the setting and its people, and the rich legacy that was soon to be covered over. The work that was conducted, furthermore, was done by individuals who were our friends as well as our colleagues. This made production of the report a particular challenge, since the resulting document would have to stand as a testament to a research program, as well as to an area, that was largely a thing of the past when our writing began. In spite of these concerns, we welcomed the opportunity to prepare this synthesis, and hope our efforts have been successful.

The investigations in the Russell Reservoir stand out from a number of points of view. Given the shear magnitude of the field effort, the project area represents one of the most intensively studied regions yet examined in the southeastern United States. Much of this work is of a very high quality and will prompt follow-up research for generations to come. The range of investigations undertaken, furthermore, reflect a sensitivity and appreciation for the the diversity of cultural resources present in an area that we believe is still rarely seen, even though this work was undertaken in the late 1970s and early 1980s. Not only were landmark plantations and Colonial fortifications examined, but also small farmsteads, tenant sites, and industrial occupations. Not only were large mound and village sites examined, but also smaller and less spectacular campsites and knapping stations. In many ways the archaeological research was successful at documenting at least something about the lives of many of the region's past inhabitants, a rare accomplishment. Complementing the archaeology, the historical documentation of the Russell Reservoir area was meritorious for the types of investigations it pursued. Archaeology, history, architectural history, and oral history were all applied to the understanding of the region. The result is a unique set of finished documents, the *Russell Papers* and ancillary studies, that combine to form one of the most complete regional investigations yet to be undertaken under the mandate of historic preservation. This work should serve as a model and example for other studies conducted under the requirements of cultural resources legislation, as well as for history and archaeology in general.

The success of the cultural resources program in the Russell Reservoir is in large measure due to the attitudes and concerns brought to the project by the agencies responsible for its overall management, the Savannah District office of the U.S. Army Corps of Engineers and the Atlanta Interagency Archaeological Services Division office of the National Park Service. Their staffs deserve acknowledgement and thanks. Finally, the large numbers of people who collected information on the cultural resources in the Richard B. Russell Reservoir area over the past 20 years deserve particular recognition, for compiling a site and assemblage data base that stands as one of the best documented and reported in the southeastern United States. To those field archaeologists, historians, architects, preservation planners, land managers, and all their supporting staffs that worked in the Russell area, those who study the past owe a real debt.

David G. Anderson
J. W. Joseph

Atlanta, Georgia

PREHISTORY AND HISTORY ALONG THE UPPER SAVANNAH RIVER:
TECHNICAL SYNTHESIS OF CULTURAL RESOURCE INVESTIGATIONS RICHARD B. RUSSELL MULTIPLE RESOURCE AREA

ACKNOWLEDGEMENTS

The creation of this technical synthesis reflects the effort, support, and active encouragement of a large number of individuals. First and foremost, credit should be extended to the archaeologists and planners at the Savannah District, U.S. Army Corps of Engineers, and at the Atlanta Interagency Archeological Services Division (IASD) office of the National Park Service. The staffs of these two agencies managed the cultural resource program undertaken in the Russell Reservoir from start to finish, and actively shaped the investigations. Their guidance has led to the results summarized here, and in the many fine technical papers and monographs produced as a result of the reservoir work. At the Savannah District, the signal contributions of Dr. James E. Cobb, District Senior Archeologist from 1978 to 1982, and his successor, Mr. Paul D. Rubenstein must be acknowledged. These individuals provided advice and encouragement throughout the preparation of the synthesis, including detailed reviews of the various drafts. Dr. Cobb provided so much advice and assistance on the history of the project that he was made a co-author of that section of the report. During the formative planning years the Russell investigations were greatly supported by Colonel Tilford C. Creel, the District Engineer. At the National Park Service the guidance of the three successive leaders of the reservoir investigations, Dr. Bennie C. Keel, Dr. Victor A. Carbone, and Mr. John Ehrenhard also must be acknowledged. Planning for a synthesis component to the Russell Reservoir cultural resource program was initiated at an early date, and all three individuals offered their perspective on how it should be shaped.

The production of the synthesis was administered under the guidance of Mr. John Ehrenhard, the current Chief of the Atlanta IASD office, who provided advice and assistance throughout the course of the work, as well as detailed reviews of the draft manuscripts. The synthesis effort owes a great deal to John, and to the vision of his predecessors, particularly Vic Carbone, who was a driving force behind the field and reporting program implemented in the reservoir. Other individuals within the Atlanta IASD office providing advice during the synthesis production were Dr. Mark Barnes, Ms. Jean Godbee, Mr. Wilfred Husted, and Dr. Harry Scheele. Ms. Susan Cleveland, National Park Service Contracting Officer, provided overall administrative support. Other IASD personnel working at the time of the primary field effort in the reservoir who helped shape the work reported here include Dr. Michael Alterman, Dr. David S. Brose, Dr. Margaret Brown, Ms. Karen Cordova, Mr. Ed Hession, Ms. Joy Medford, Mr. Gary Petherick, Dr. Neil Robison, Mr. Joe Watkins, and Ms. Polly Worthy.

A number of specific individuals provided help in the preparation of this study. The staff of Mound State Monument, Moundville, Alabama, where the records and collections from the Russell project are curated, facilitated the detailed analysis of the survey collections undertaken as part of the synthesis effort. Mr. Futato, Associate Director, was particularly helpful, locating artifacts and camera-ready original graphics, as well as providing advice about the course of the research effort. The care with which the project materials are organized and curated at Moundville warrants special mention, since it ensures their long term value. The curation effort associated with the Russell investigations should stand as a model to other institutions. At the University of South Carolina Dr. Albert C. Goodyear, Ms. Nena Powell, Ms. Sharan Pekrul, and Mr. Stephen Smith of the Institute of Archaeology and Anthropology (SCIAA) provided access to records and photographs covering the project. Detailed technical review and commentary on the prehistoric section of the synthesis was provided by Mr. Glen Hanson and Mr. Kenneth Sassaman of the SCIAA staff; Dr. David J. Hally of the University of Georgia Department of Anthropology; Mr. Chad Braley, Mr. Thomas H. Gresham, Mr. R. Jerald Ledbetter, and Mr. W. Dean Wood of Southeastern Archaeological Services, Inc.; Dr. Mark Williams of the Lamar Institute. Dr. Michael Alterman of Louis Berger and Associates, Inc. provided a copy of his dissertation research on Late Archaic work in the Russell Reservoir. Detailed reviews of the historic section of the manuscript was provided by Ms. Karen G. Wood of Southeastern Archaeological Services, Inc., Mr. Richard D. Brooks of the SCIAA, and Ms. Beverly Bastion of the University of Mississippi. Ms. Rita Folse Elliott generously provided a draft copy of her thesis for consideration.

The contributions of Garrow & Associates personnel, who provided an atmosphere of technical support and personal encouragement throughout the project deserve particular mention. Ms. Barbara A. Garrow, company President, and Mr. Patrick H. Garrow, Senior Technical Advisor, provided advice and encouragement throughout the project. Patrick H. Garrow additionally provided detailed technical and editorial commentary on the various drafts, and helped shape many of the ideas that were advanced. Other members of the technical staff providing advice included Dennis Blanton, Daniel T. Elliott, Lisa D. O'Steen, Marvin T. Smith, and Thomas Wheaton. The figures that appear in these volumes were produced by Mr. Richard Bryant, project photographer, and Mr. Vince Macek, graphic artist. They deserve particular recognition for preparing what proved to be an extensive series of illustrations, highlighting this report and its findings.

PREHISTORY AND HISTORY
ALONG THE UPPER SAVANNAH RIVER:
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PART I

THE RESEARCH SETTING

I. INTRODUCTION

THE PROJECT SETTING

This report provides a technical overview of the cultural resource investigations undertaken in the Richard B. Russell Multiple Resource Area, forming the Russell Dam and Lake (hereafter commonly referred to as the Russell Reservoir) between 1969 and 1985. The study area is located in the central piedmont portion of the Savannah River drainage, and includes a 28 mile section of the main channel and its associated tributaries in Elbert and Hart Counties, Georgia, and Abbeville and Anderson Counties, South Carolina (Figure 1). The project area encompasses 52,000 acres, 26,650 acres in the maximum floodpool and the remainder in adjacent public use lands, between river miles 275.1 and 303, upstream from the Atlantic. With the closing of the floodgates and the filling of the reservoir in 1983/1984, the last undammed portion of the Savannah above the fall line was flooded. This fact renders the archaeological, architectural, and historic investigations undertaken in the Richard B. Russell project area of critical importance to the study of historic and prehistoric occupation in the basin.

Earlier reservoir construction, forming the J. Strom Thurmond Lake (formerly Clarks Hill Lake) to the south and Hartwell Lake to the north, occurred with only minimal cultural resource studies (Stephenson 1974:25). The Richard B. Russell project thus offered the last opportunity to examine the record of historic and prehistoric settlement along the segment of the river floodplain under Federal control. From 1969 to 1985 an extensive program of cultural resource investigations took place occurred in the reservoir area, conducted by scholars drawn from across the United States, and under the overall management and guidance of the staffs of the Interagency Archeological Services Division of the National Park Service and the Savannah District, U.S. Army Corps of Engineers. Hundreds of archaeological, architectural, and historical sites were found and documented, and extensive investigations were conducted at over 30 locations (Figure 1; Table 1). The report that follows is a record of those investigations, and of the major research findings.

PURPOSE OF THE TECHNICAL SYNTHESIS

A substantial amount of historical, archaeological, and architectural research has been conducted in the Richard B. Russell Reservoir over the past 15 years, making the area one of the most intensively examined localities in the southeastern United States, and the impetus for important, ongoing research. Over 20 major monographs and numerous shorter technical papers have appeared documenting the reservoir investigations, a body of literature of impressive and simultaneously unwieldy proportions. The purpose of this

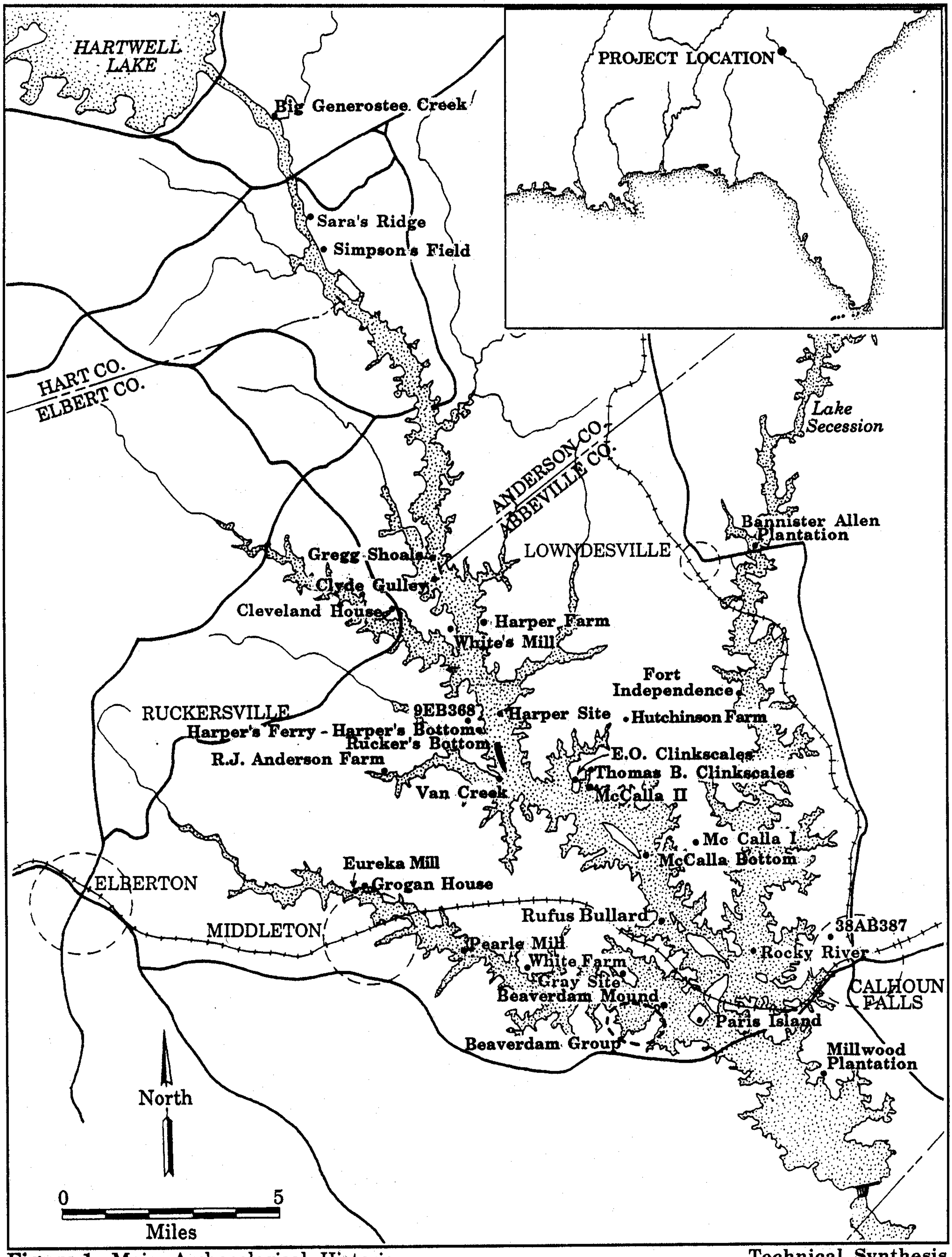


Figure 1. Major Archaeological, Historic, and Architectural Sites Examined in the Richard B. Russell Reservoir.

Technical Synthesis
Cultural Resources Investigations
Richard B. Russell Reservoir

Site Number	Site Name	Major Components Discussed in Text																		
		Paleo Indian	Early Archaic	Middle Archaic	Late Archaic	Early Woodland	Middle Woodland	Late Woodland	Missis-sippian	1540-1810	1810-1865	1865-1890	1890-1980	Controlled Surface Collection	Systematic Shovel/Auger Testing	Test Units	Block Units	Wide Area Stripping	Deep Testing	Architectural Documentation	REFERENCE
9EB075	Harper's Bottom						X							X		X		X	X		1
9EB076	Rufus Bullard			X				X							X	X			X		1
9EB091	Rucker's Bottom	X	X	X	X	X	X	X	X					X		X	X	X	X		1
9EB382	Van Creek								X					X		X			X		1
38AB022	Harper's Ferry				X										X	X	X	X	X		1
38AB091	Rocky River				X										X	X	X	X	X		1
38AB288	McCalla Bottoms			X	X		X								X	X	X	X	X		1
9EB348								X								X	X				1
9EB085	Beaverdam Creek Mound								X						X	X	X	X	X		2
9EB092					X				X							X		X	X		3
9EB207									X					X		X		X	X		4
9EB208									X						X			X	X		4
9EB219					X				X							X					4
9EB259	Gregg Shoals		X	X	X	X	X	X	X						X	X	X	X	X		4
9EB387	Clyde Gulley	X	X		X		X		X						X	X	X	X	X		5
38AN008	Simpson's Field	X						X	X					X	X	X	X	X			5
38AN029	Sara's Ridge			X	X	X									X	X	X		X		6
38AN126	Big Generostee Creek			X		X	X		X						X	X			X		6
9EB017	Transect 21				X	X	X	X								X	X	X	X		6
9EB019	Beaverdam Creek Borrowpit			X	X										X	X	X	X	X		6
9EB021	Paris Island South				X		X									X	X		X		6
38AB387				X											X	X					6
9EB368										X		X			X	X					7
38AB218	Fort Independence									X						X		X			8
38AB009	Millwood										X	X	X			X	X				9
38AB012	Millwood										X	X				X					9
9EB053	Millwood										X	X				X					9
38AB102	Banister Allen Plantation										X	X				X					10
38AB221	Thomas B. Clinkscales Farm											X	X			X					10
38AB287	Clinkscales											X	X			X					11
9EB045	Gray Site												X			X					11
38AB021	Harper Site										X	X	X			X					11
38AB078	McCalla I										X	X	X			X					11
38AB067	McCalla II										X	X	X			X					11
9EB455	White Mill										X	X	X						X	X	12
38AB018	Price Mill											X	X						X	X	12
9EB054	Eureka Mill										X	X	X						X	X	12
9EB415	Mattox Mill											X	X						X	X	12
9EB201	Pearle Mill												X						X	X	13
9EB027	Gray-Heardmont Mill											X							X	X	14
9EB026	Beaverdam Creek Mill											X							X	X	14
Ga-030	Alexander Cleveland House									X	X	X	X							X	14
Ga-034	W. M. Allen House									X	X	X	X							X	14
Ga-032	Rembert J. Anderson Farm												X							X	14
Ga-035	W. Frank Anderson Farm												X							X	14
Ga-031	Dye-White Farm												X							X	14
SC-382	Caldwell-Hutchinson Farm									X	X	X	X							X	14
SC-381	Featherstone Tenant Farm												X							X	14
SC-379	Harper-Featherstone Farm										X	X	X							X	14
SC-383	Long-Hutchinson Farm												X							X	14
SC-380	Harper-Featherstone Tenant											X	X							X	14
Ga-033	Grogam House											X	X							X	14

1 Anderson and Schuldenrein 1985
2 Flint and Suggs 1980
3 Rudolph and Hally 1985
4 Campbell and Weed 1984
5 Tippitt and Marquardt 1984
6 Wood et al. 1986
7 Gresham and Wood 1986
8 Bastian 1982
9 Orser et al. 1987
10 Drucker et al. 1983
11 Gray 1983
12 Newman 1984
13 Worthy 1983, Newman 1984
14 Worthy 1983

Table 1. Major Sites Examined in the Richard B. Russell Reservoir, by Period of Occupation and Field Procedures Employed

technical synthesis is to organize and summarize this diverse information, enabling interested researchers to quickly determine the nature and significance of individual investigations, and the main contributions of the overall project. The synthesis also provides an overview of the human occupation of the region. The text is organized using a chronological format, and is divided into periods significant in the region's prehistory and history. The period format provides a means of pulling together disparate threads of information and presenting these as a common cloth. The synthesis thus strives to document what was done in the reservoir, and to add the knowledge that was gained to our understanding of human settlement in this part of the southeast.

This synthesis was prepared in 1987 and 1988, shortly after the last of the primary research reports on the reservoir investigations were completed. In its preparation, the authors examined all of the reports emanating from these investigations, as well as many of the primary records and collections. A listing of the radiocarbon dates processed during the Russell Reservoir work is contained in Appendix I, while Appendix II lists all of the major cultural resource reports that were produced. To guide the discussion that follows, the cultural sequence that was developed from the work in the Richard B. Russell Reservoir is presented in Figure 2.

HISTORICAL PERSPECTIVE: PREVIOUS PREHISTORIC ARCHAEOLOGICAL INVESTIGATIONS IN THE SAVANNAH RIVER VALLEY

Perhaps the earliest description of archaeological remains along the upper Savannah River area was by William Bartram, during his travels through the area in May of 1775, when he described the Rembert Mound group in southern Elbert County, Georgia. Rembert, a large late prehistoric multi-mound ceremonial center dating from ca. A.D. 1100 to 1450, and probably the political center for the people living in the central Savannah River at the time, was inundated by the waters of Thurmond Lake in 1952. By that time the mounds at the site had been largely destroyed by historic farming, rendering Bartram's description invaluable:

> These wonderful labors of the ancients stand in a level plain very near the bank of the river; now 20 or 30 yards from it; they consist of conical mounts of earth and four square terraces. The great mount is in the form of a cone about 40 or 50 feet high, and the circumference of its base 200 or 300 yards, entirely composed of the loamy rich earth of the low grounds; the top or apex is flat; a spiral path or track leading from the ground up to the top is still visible. ...the circumjacent level grounds are cleared and planted with Indian corn at present and I think the proprietor of the lands, who accompanied us to this place, said that the mount itself yielded above 100 bushels of corn (Bartram 1792:324-325).

Bartram's descriptions of Rembert and other sites along the drainage such as Keowee and Silver Bluff are particularly important, since these sites were largely destroyed by the middle of the nineteenth century, when local antiquarian reporting began.

The Rembert Mounds were revisited and described three separate times in the nineteenth century, by George White (1849:229-230), Charles C. Jones (1878:284-285), and John Rogan (Thomas 1894:315-317). While the first two were essentially reports by private citizens, Rogan's 1886 investigations were conducted under the auspices of the Mound Division of the Bureau of Ethnology and included archaeological testing of the two largest surviving mounds. Almost three quarters of a century later, in 1948, 11 test pits were opened at the site during archaeological investigations associated with the construction of Thurmond Lake (Caldwell 1953). These successive descriptions document the erosion and ultimate destruction of the site over an almost two century interval. The materials that were collected over the years at Rembert have formed the basis for the recognition of a late prehistoric Mississippian archaeological culture in the upper Savannah, the Rembert Phase, dated to ca. A.D. 1350 to 1450 (Rudolph and Hally 1985:456-459; Anderson et al. 1986:41-42). Aside from limited testing at the Lindsey Mound in Greenville County, South Carolina in 1917 (Bragg 1918), and Heye, Hodge, and Pepper's 1915 excavations at Nacoochee, on the extreme upper Chattahoochee River (Heye et al. 1918), no further archaeological investigations were conducted in the vicinity of the upper Savannah River until the middle of the twentieth century, when reservoir construction was initiated.

Comparatively far more archaeological investigation occurred on sites at and below the fall line on the Savannah during this same interval. In 1891 Henry L. Reynolds of the Mound Division conducted excavations at the Hollywood Mound below Augusta in Richland County, Georgia (Thomas 1894:317-326; Waring 1968a:293). In the smaller of the two mounds two major construction stages were documented, the earliest of which contained two groups of burials. The stratigraphically earlier group was found with elaborate grave goods, including copper "eagle dancer" plates, painted and engraved bottles with sun circle and cross, anthropomorphized serpent, and human head motifs; and pipes, shell beads, and earspools. The later burial group lacked this elaborate material, suggesting a decline in the authority and influence of this Mississippian society. The site, since dated to between ca. A.D. 1250 and 1350, was abandoned shortly after these burials were placed in the mound (Anderson et al. 1986:40-41).

During the winter of 1897/1898 Clarence B. Moore "in a rapid steamer of light draught" (Moore 1898:167) examined 13 mound sites at six locations along the Savannah. Aside for limited testing at the Lawton Mound group in Allendale County, South Carolina, Moore confined his work to the Georgia side of the river, working at the Irene Mound near Savannah and at several low sand burial mounds in Screven and Burke Counties. His explorations extended from the coast to the fall line, and focused on what are now known to be late prehistoric habitation and burial sites. No shell middens were observed below Augusta, an interesting observation given the attention directed to the few such sites found to

MAJOR STAGE	PERIOD	CHRONOLOGY YEARS BP	AD/BC	CULTURAL COMPLEXES/ PHASES	GENERAL TRENDS	KEY REPORTED SITES* (*Located elsewhere in Savannah River Valley)
HISTORIC			AD 1985			
	THE CONTEMPORARY LANDSCAPE				Agrigultural decline	Clinkscales Harpers Allen Pearle Mill
		110	AD 1890			
	POSTBELLUM RESURGENCE				Tenancy	
		145	AD 1865	HISTORIC	Civil War	McCalla Millwood Clinkscales Allen Harper
	KING COTTON				Plantation agriculture	Harper Allen McCalla Millwood
		190	AD 1810	AMERICAN NATIONAL		
				COLONIAL		Fort Independence
	FRONTIER/ EARLY DEVELOPMENT			EXPLORATION	Historic Indian groups (no data)	
MISSISSIPPIAN		460	AD 1540			
	LATE MISSISSIPPIAN				Depopulation, abandonment of central, lower drainage	
		550	AD 1450	EARLY LAMAR (REMBERT PHASE)		Rembert Mounds*
	LATE MIDDLE MISSISSIPPIAN					Rucker's Bottom Simpson's Field
		700	AD 1300	SAVANNAH (BEAVERDAM PHASE)	Large and small villages	Irene*
	EARLY MIDDLE MISSISSIPPIAN				Intensive agriculture Platform mounds Earth embanked lodges	Beaverdam Creek Rucker's Bottom
		850	AD 1150	ETOWAH (JARRETT PHASE)		Clyde Gulley
	EARLY MISSISSIPPIAN				Small villages	
WOODLAND		1100	AD 900	WOODSTOCK		
	LATE WOODLAND			NAPIER		
		1500	AD 500	SWIFT CREEK	Small villages Horticulture?	Simpson's Field Rucker's Bottom
	MIDDLE WOODLAND			DEPTFORD/ CARTERSVILLE	Quartz predominates	Harper's Bottom Deptford* G.S. Lewis West*
		2300	300 BC		Occasional use of shellfish	Big Generositee Creek Sara's Ridge
	EARLY WOODLAND			DUNLAP	Minor occupations	9EB17
		3000	1000 BC		Area minimally settled?	

DIAGNOSTIC ARTIFACTS

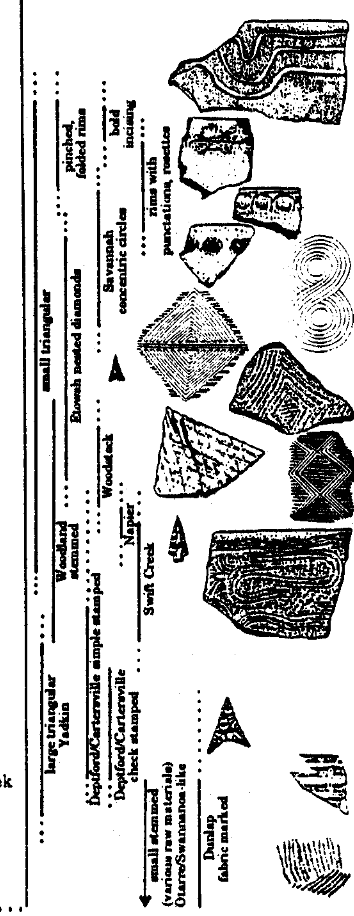
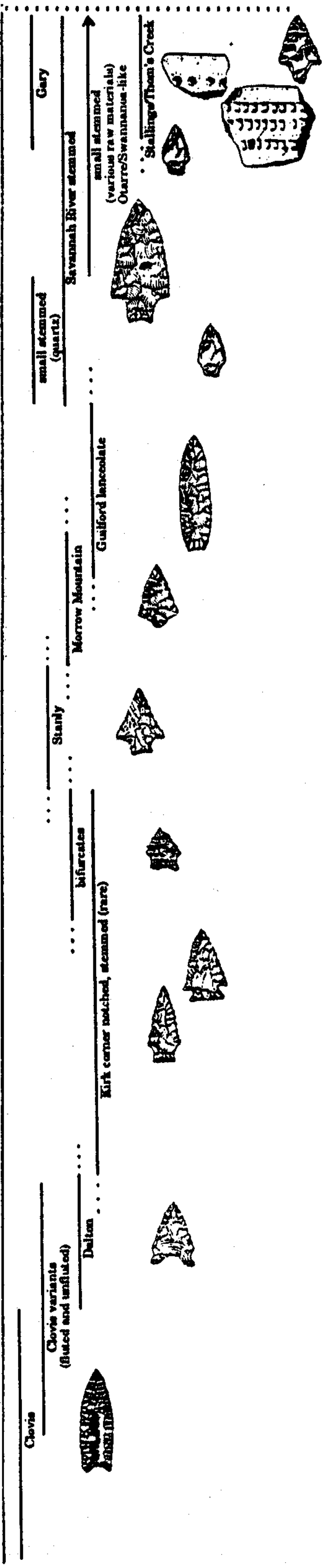


Figure 2. The Cultural Sequence for the Upper Savannah River Richard B. Russell Multiple Resource Area.

MAJOR STAGE	PERIOD	CHRONOLOGY YEARS BP	AD/BC	CULTURAL COMPLEXES/ PHASES	GENERAL TRENDS	KEY REPORTED SITES*	DIAGNOSTIC ARTIFACTS
		3000	1000BC		Area minimally settled?	(*Located elsewhere in Savannah River Valley)	
LATE ARCHAIC	TERMINAL LATE ARCHAIC			DIVISION III	Local, extralocal lithic materials in use Stallings pottery	Rucker's Bottom McCalla Bottoms Gregg Shoals Stalling's Island*	
		4000	2000 BC				
	MIDDLE LATE ARCHAIC			DIVISION II	Soapstone vessels Extensive use of riverine zone	Sara's Ridge Paris Island South Rocky River	
		5000	3000 BC		Perforated soapstone slabs		
	INITIAL LATE ARCHAIC			DIVISION I	Structures with associated activity areas	Lake Spring* Gregg Shoals	
		5500	3500 BC		Metavolcanics, quartz		
MIDDLE ARCHAIC	TERMINAL MIDDLE ARCHAIC			GUILFORD		Pen Point*	
		6000	4000 BC				
	LATER MIDDLE ARCHAIC			MORROW MOUNTAIN	Quartz dominates assemblages Expedient lithic technology	Gregg Shoals Rucker's Bottom McCalla Bottoms	
		7500	5500 BC				
	INITIAL MIDDLE ARCHAIC			STANLY	Residentially mobile foragers Metavolcanics common	Gregg Shoals	
		8000	6000 BC				
EARLY ARCHAIC	TERMINAL EARLY ARCHAIC			BIFURCATE			
		8750	6750 BC				
	EARLY ARCHAIC			KIRK	Local, extralocal lithic raw materials in use Mixed forager/collector mobility-technological organization	Clyde Gulley Rucker's Bottom G.S. Lewis East*	
		9500	7500 BC				
	INITIAL EARLY ARCHAIC						
		9900	7900 BC				
PALEOINDIAN	LATE/ TRANSITIONAL PALEOINDIAN			DALTON			
		10500	8500 BC		Highly curated technology		
	MIDDLE PALEOINDIAN				Extralocal lithic raw materials predominate		
		11000	9000 BC	CLOVIS	Geographically extensive, mobile foragers	Clyde Gulley Simpson's Field Rucker's Bottom	
	EARLY PALEOINDIAN						
		11500	9500 BC				

date in the inner coastal plain (e.g., Stoltman 1972, 1974); shell midden sites are now known to comprise only a tiny fraction (< 1.0 percent) of the sites recorded within the drainage. None of the rich Late Archaic shell midden sites such as Stallings Island and Lake Spring located at and just above the fall line were examined, even though Moore's boat could have reached Augusta. The mounds that were examined were found to be either natural clay rises in the swamp with thin layers of habitation debris, or low sand burial mounds. Moore visited the Stony Bluff quarry (9BK5), one of several major chert outcrops that occur in the central coastal plain portion of the drainage. His observation that the site had been heavily collected by local residents documents a long history of artifact collecting in the basin (Moore 1898:172). Few rich sites, by Moore's standards, were found and, commenting that "the Savannah River... did not offer a promising field" (Moore 1898:167), he soon abandoned his effort.

In 1929 the Peabody Museum of Harvard University conducted excavations at the Late Archaic Stalling's Island shell midden site near Augusta (Claflin 1931). A rich artifact and feature assemblage was found and documented, including the first extended descriptions of fiber tempered pottery, now known to be one of the earliest ceramic complexes in North America, dating between ca. 2,500 and 1,000 B.C. Now recognized as the type site for the Stallings Island culture, the site and its materials have been repeatedly examined (e.g., Fairbanks 1942; Bullen and Greene 1970), in efforts to develop and refine our understanding of Late Archaic culture and chronology. In the ensuing half century considerable research interest has focused on Late Archaic occupations in the lower Savannah River region, and intensive investigations have been conducted at sites such as Bilbo, Lake Spring, Rabbit Mount, Clear Mount, White's Mound, and Albert Love (Miller 1949; Phelps 1968; Waring 1968b; Stoltman 1974; Trinkley 1974). Most of these sites were characterized by moderate to extensive shell deposits, leading to the widespread acceptance of the Stallings Island Late Archaic as a "shell midden" culture. The Russell Reservoir investigations offered the first opportunity to examine the nature of Stallings occupation and use of the upper reaches of the drainage.

Minor Mississippian components were also found at Stallings Island during the 1929 Peabody Museum investigations, including two Savannah culture urn burials. That same year Antonio J. Waring conducted excavations at the early Mississippian Haven Home burial mound near Savannah (Waring 1968c). Waring, a medical doctor with a strong interest in archaeology, devoted much of his life to documenting the prehistoric cultural sequence in the lower Savannah River, an interest reflected in numerous publications and manuscripts (Williams, ed. 1968). Waring played a strong role in the WPA excavations conducted at the mouth of the Savannah in the late 1930s, the most extensive investigations in the basin prior to those conducted in the Russell Reservoir.

WPA-sponsored excavations were conducted at a number of Late Archaic through Mississippian period sites near the mouth of the Savannah River, some 275 miles downstream from the Russell Reservoir, in Chatham County, Georgia. This work, at Bilbo, Deptford, Oemler, and Irene and other sites in the area, enabled

Caldwell and Waring (1939a, 1939b; Waring 1955/1968d) to devise a prehistoric ceramic sequence for the lower Savannah drainage. Described as "one of the finest local sequences based on stratigraphic evidence that exists in southeastern archaeology" (Williams 1968:101), it has seen only minor revision in the intervening half century since its formulation (DePratter 1979; Anderson et al. 1986). The WPA investigations at sites like Bilbo, Deptford, and on Wilmington Island led to the recognition of major Late Archaic and Woodland coastal prehistoric cultures that remain the subject of intense interest to this day.

Extensive excavations were conducted at the Irene site from 1937 to 1939 (Caldwell and McCann 1941). Eight construction stages with associated structures were found in the large platform mound, while 106 burials were found in a smaller mound. A large mortuary structure, a rotunda or probable council house, several smaller structures, and a series of fence lines or enclosures were found in the area around the mounds. The report on the excavations remains one of the few comprehensive Mississippian site reports produced from this part of the southeast.

Of particular importance to the Richard B. Russell investigations was the 1938 to 1940 WPA-sponsored survey activity in north Georgia. This work, which was synthesized in Robert Wauchope's (1966) volume *Archaeological Survey in Northern Georgia*, remains to this day the only comprehensive overview on the prehistoric cultural and artifactual sequence in this region. Although investigation of Archaic stone tool assemblages and taxonomy has progressed markedly since this volume appeared, the utility of Wauchope's ceramic analyses and descriptions have been only minimally improved upon, particularly for the Woodland period (e.g., Garrow 1975; Hally 1975; Anderson 1985a).

With the close of the WPA little work was conducted in the Savannah River region until the later 1940's. The Refuge site near Savannah was examined in 1947, providing evidence for transitional Late Archaic/Early Woodland occupations (Waring 1968e). Additional work in the lower Savannah River region has refined our knowledge of the Refuge period, which has been dated to between 1,000 and 600 B.C. (Williams 1968:329; Peterson 1971a, 1971b:77-80; Marrinan 1979; Lepionka 1983:38). In 1948 the general area of Thurmond Lake north of Augusta was surveyed by Caldwell and Miller (Miller 1974). A total of 128 sites were located during preliminary survey work, and limited testing occurred at four of them, at Rembert Mounds, Lake Spring, Fort Charlotte, and 38MC6 (Caldwell 1953, 1974a, 1974b; Miller 1949, 1950, 1974).

At Lake Spring, where stratified Middle and Late Archaic assemblages were found, one 10 foot and one 5 foot square were opened. In the lower levels at this site quartz Morrow Mountain tools and debitage were found, overlain by levels containing Savannah River Stemmed points and Stallings fiber tempered pottery. This stratification prompted Caldwell (1954:37) to advance the concept of an Archaic "Old Quartz Industry" now known to correspond to the Middle Archaic. Prior to the Russell Reservoir investigations Lake Spring was the northernmost Stalling's Island phase site examined in detail along the Savannah River, which gave rise to the assumption that sites of this phase, particularly those with ceramics, were rare above the fall line (e.g., Stoltman 1972:38).

Further to the north, the area of Hartwell Lake was surveyed by Caldwell in 1953. Major excavations were subsequently carried out at three Mississippian mound sites, at Chauga, Tugalo, and Estatoe. The Chauga mound and village site, located in Oconee County, South Carolina, was examined in 1958 by A. R. Kelly and R. S. Neitzel (1961). Ten mound stages, most with associated structures, were found in the primary mound, and site occupation appears to have taken place during both the Early Mississippian Etowah period and late prehistoric/early historic Cherokee times (Hally 1987). A similar occupation span was documented at the Tugalo site, which was examined by Caldwell in 1954 (Caldwell 1956; Hally 1987). Four stages of mound construction were found, again with well defined associated structures. Later Lamar through historic Cherokee components were documented at Estatoe, which was examined by Kelly and deBaillou (1960) in 1959 and 1960. In the early 1980s the ceramic collections from these three sites were reanalyzed by Hally in conjunction with the Russell Reservoir investigations to develop a Mississippian sequence for the upper Savannah River (see Chapter VII; Rudolph and Hally 1985:447-470; Hally and Rudolph 1986; Anderson et al. 1986:38-42).

Archaeological investigations along the Savannah River have occurred with increasing frequency since the early 1960s. In 1963 a small excavation was conducted at White's Mound in Richmond County, Georgia, documenting the co-occurrence of Late Archaic Stallings fiber tempered and Thom's Creek sand tempered ceramics, as well as later Woodland occupations (Phelps and Burgess 1964; Phelps 1968). In 1964 James B. Stoltman surveyed and tested a number of sites on Groton Plantation in Allendale County, South Carolina, obtaining the earliest dates currently accepted for Stallings fiber tempered pottery from the Rabbit Mount shell midden. The two dates, obtained from charcoal collected from general level fill, were 2505±135 (GXO-343) and 2515±95 (GXO-345) (Stoltman 1966:872). These dates, if accurate, suggest the first ceramics appeared sometime between ca. 2700 and 2300 B.C. on the lower Savannah River. Current evidence, including dates obtained at other early ceramic sites in the region, and from preceramic Late Archaic sites in the Russell Reservoir, suggests that the latter end of this range is the most likely (Chapter V; see also Trinkley 1980a:5). In the latter 1960s additional work was conducted on Groton Plantation by Peterson (1971a, 1971b), further documenting the Stallings, Refuge, and later Woodland occupations in the area.

While knowledge about the Savannah River chert quarries dates to Moore's (1898:172) visit to Stony Bluff in Burke County, Georgia in 1898, the first modern investigation of these raw material source areas dates to the early 1960s, when Stoltman (1974:173-175) visited the Rice Site in Allendale County, South Carolina. In 1966 extensive excavations were conducted at the Theriault chert quarry along Brier Creek in Burke County, Georgia, where deposits spanning the entire prehistoric era were found (Brockington 1971). The margin of Brier Creek has seen extensive survey and excavation in recent years, along power line corridors built for the Plant Vogtle power plant (summarized in Elliott and O'Steen 1987).

Early Archaic through historic assemblages were found and examined at a number of sites; unfortunately this work remains unpublished and largely inaccessible. Chert quarries in Allendale County have seen intensive examination in recent years, and stratified assemblages have been found at nearby workshop sites such as Smith's Lake Creek (Goodyear and Charles 1984).

From 1966 to 1968 a program of survey and excavation was undertaken in the proposed floodpool of the Keowee-Toxaway Reservoir in Oconee and Pickens County, South Carolina, in the extreme upper reaches of the Savannah River watershed. Excavations were conducted at a number of prehistoric and historic sites, including I. C. Few, Wild Cherry, Rock Turtle, Toxaway, and Fort Prince George. A late prehistoric cultural sequence comparable to that noted in the Appalachian summit to the north was identified, characterized by Connestee, Pisgah, and later Lamar Qualla assemblages (Beuschel 1976). At the I. C. Few site on the Keowee River, Late Woodland through Mississippian Napier, Etowah, Lamar, and Pisgah ceramics were identified (Grange 1972). A single period of mound construction, characterized by a strong admixture of Early Lamar and Pisgah attributes, and dating from ca. A.D. 1300-1450, has been inferred (Anderson et al. 1986:35). The cultural resources work done during the construction of the Clarks Hill, Hartwell, and Keowee-Toxaway Reservoirs, although minimal in both scope and reporting, enabled the work in the Russell Reservoir to proceed with at least a general understanding of the kinds of cultural resources to be expected in the region.

A tremendous amount of survey and excavation has occurred in the Savannah River basin and nearby areas of the southeast in recent years as a result of cultural resource management (CRM) projects (Steponaitis 1986). These have helped fill in many of the gaps in our survey coverage and knowledge of the archaeological record in the basin. In the coastal plain intensive survey and testing projects have been conducted on both sides of the river (e.g., Fish 1976; Marrinan 1979; Smith 1986; Elliott and O'Steen 1987). Near the fall line comparable projects have occurred on the Fort Gordon Military Reservation in the interriverine uplands, and in the floodplain near Augusta, where excavations have occurred at several dense Early and Late Archaic sites (e.g., Ferguson and Widmer 1976; Cable et al. 1978a; Bowen 1978; Elliott and Doyon 1981; Campbell et al. 1981; Ledbetter 1988). In the interriverine piedmont extensive surveys, primarily along highway and powerline corridors have occurred (e.g., House and Ballenger; Cable et al. 1978b; Goodyear et al. 1979), and limited excavations have been conducted at the predominantly Middle and Late Archaic Windy Ridge site and at the Woodland Rabon Creek site (House and Wogaman 1978; Wood and Gresham 1982).

Perhaps the most significant archaeological research program in the piedmont in recent years has been the University of Georgia's investigations in the Wallace Reservoir, along the upper Oconee River in north-central Georgia (Fish and Hally 1983). This work, which occurred from 1974 to 1977, included the survey of 14,000 acres in the floodpool and excavations at a number of sites (e.g., DePratter et al. 1975; Lee 1977; Smith 1981; Wood 1981; Shapiro 1983; Fish and Jefferies 1983).

Survey occurred both before and after the floodpool area was cleared, resulting in an almost tenfold increase in the number of sites discovered. The work in the Wallace Reservoir has led to the development of PaleoIndian and Archaic settlement models (O'Steen 1983; O'Steen et al. 1986), as well as a fine-grained chronology for the Mississippian period (Smith 1981, 1983; Rudolph 1983; Williams 1983; Williams and Shapiro 1987) that has had widespread application throughout the general region, including along the upper Savannah River.

The recent CRM projects that have occurred have complemented directed research programs conducted in the drainage over the same interval, such as Ferguson's (n.d.) survey for Mississippian sites, Goodyear's work with the Allendale chert quarries, and Brooks' (Brooks et al. 1986) geoarchaeological analyses documenting changing channel morphology. The two major, long term archaeological research programs that have occurred in the basin in recent years include the work in the Richard B. Russell Multiple Resource Area and the ongoing program on the Department of Energy's Savannah River Plant (SRP) facility in Aiken and Barnwell Counties, South Carolina. The Russell Reservoir project brought together researchers from throughout the region for a comparatively brief but intense period. The project triggered an impressive body of research beyond the immediate results of the investigations that is continuing under the direction of a number of independent researchers. On the SRP, in contrast, a small team of investigators have been conducting an intensive program of archaeological survey, excavation, and analysis for almost 15 years (e.g., Hanson et al. 1978, 1981; Hanson and Most 1978; Brooks and Hanson 1978). Extensive excavations have been conducted at sites with major early Archaic, Late Archaic, Woodland, and historic components on the SRP in recent years which, when coupled with the survey data from the installation, provides a clear picture of the cultural sequence in this part of the drainage (e.g., Hanson 1980; Hanson and DePratter 1985; Anderson 1988a; Brooks and Hanson 1988; Sassaman n.d.; Sassaman and Radisch n.d.).

HISTORICAL PERSPECTIVE: ARCHAEOLOGICAL, ARCHITECTURAL, AND ARCHIVAL INVESTIGATIONS OF THE REGION'S HISTORY

Our understanding of the historic aspects of the study area is less dependent on regional archaeological investigations, and emanates from a number of sources: history, oral history, archaeology, and architecture being the primary disciplines addressed during the cultural resources investigations of the Russell Reservoir. In general, the approach taken for the historical overview sought to present a detailed regional history with a focus on material culture. This approach was based on several factors. First, as The History Group notes (1981:19) the historical perception of the "solid South" has eroded in recent years; in its wake attention has finally been given to the paucity of regional histories from southern states. Regional history must serve as the foundation upon which a more complex southern history is built, yet the awareness of the need for regional history has only arisen in the past two decades. To date, regional southern studies have focused on two areas: the Chesapeake (Rutman and Rutman 1984; Kulikoff 1985) and the lowcountry of South Carolina and Georgia (Joyner 1984; Smith 1985). The only regional study conducted within the general project vicinity is Burton's (1985) recently published examination of family and society in Edgefield, South Carolina. No attempts have been made to produce a comprehensive study for the upper piedmont.

A second deficiency in southern historiography is the failure to expand southern society beyond planters and slaves. Despite works such as Frank Owsley's (1965) seminal study, the "plain folk of the Old South" remain ignored by the bulk of southern scholars. This is due in part to a continued focus, and passion, for plantation studies, but also derives from a relative paucity of written documentation for small farmers, tenants, sharecroppers, and their brethren in the Old South. The following quote by Owsley (1965:vi) bears attention, especially in the present context:

> Since, in the writing of our history, the plain folk of the Old South have been so long relegated either to obscurity or oblivion, it has been a task closely akin to archaeology to recover them.

A third point is that lacking in the regional studies cited above is a sense of social evolution, and even of history. Regional histories are generally tightly focused on relatively short segments of time, addressing a single "period" in history. While the tight temporal definition employed by these studies provides for a comprehensive understanding of one time in history, historical evolution within the region is lost. Thus the experience is somewhat akin to viewing only the central act of a play; there is no sense of how the actors came to be on stage, or of where they are going. The Russell Reservoir technical synthesis thus offers the opportunity to examine the full impact of history on one region of the South.

Finally, the majority of regional studies mentioned above employ only the traditional tools of history: written documents. Other lines of evidence, such as material culture, archaeology, architecture, settlement patterning, and oral history have not been used to reconstruct the regional history. While these aspects are less lucid, they can inform us about the life and culture of individuals without written histories, and should be important considerations of regional history.

The synthesis of the historic materials from the Russell Reservoir offers the opportunity to present a detailed regional history, covering the full span of the area's occupation, both temporally and in terms of the region's inhabitants. The variety of historic materials researched for the Russell Reservoir is unparalleled in the southeast, and is testimony to the comprehensive planning and sensitivity with which the historic studies were formulated and carried out. The goal of the historic synthesis is thus to intertwine each thread of historic knowledge: archaeology, oral history, architectural history, and the documentary history, in order to produce a comprehensive regional study.

In order that the various strands of historic knowledge be integrated in a comprehensible fashion, a series of research topics drive the period discussions. These topics have been selected with several factors in mind. First, they represent legitimate concerns in the current historiography of the South. Second, they offer avenues through which the diverse types of data may be brought to bear on a single question. Third, they contribute extensions of critical questions raised by researchers working in the reservoir. Finally, they expand the realm of traditional historic research by incorporating perspectives from archaeology and anthropology. The research topics selected for the synthesis include the following:

Settlement Patterning. Settlement patterning was a concern for a number of researchers of the reservoir (Orser et al. 1987; Drucker et al. 1983; Gray 1983; The History Group 1981; Worthy 1983). This topic offers perhaps the broadest research perspective with which to integrate the various types of data available for the reservoir. For example, settlement patterning as studied across the project area will incorporate data from Taylor and Smith (1978) and Goodyear et al. (1983) as well as individual site studies. Settlement patterning also offers the opportunity to track land use over time. At the site specific level, settlement patterning can address the relation among structures at individual sites, to determine how these relations were affected by: (a) economic status; (b) ethnicity; (c) time; (d) the nature of the agricultural or industrial enterprise of a particular site; (e) the division of labor; and (f) other factors. Here, information produced by Worthy (1983), as well as material included in other reports (Orser et al. 1987; Drucker et al. 1983; Grey 1983), is of value. Finally, settlement pattern studies offer the opportunity to address ethnic community formation (Ramsey et al. 1986) and the influence of kinship on settlement patterns (The History Group 1981:78), a factor not considered by many archaeologists, but one which has proven valid in other settlement studies (c.f., Joyce 1981).

Social Organization. Perhaps no other topic in southern history demands as much attention as social organization. The Russell studies offer the opportunity to consider social organization at its full scale: comparing plantation structure (Orser et al. 1987) to that of small farms (Gray 1983); cross-comparing economies, such as industrial (Newman 1984) with agricultural; and comparing antebellum and postbellum relations between blacks and whites (Orser et al. 1987; Ramsey et al. 1986). The material garnered from the Russell research which can be used to address social organization includes archaeologically recovered remains, documents, oral history, and architecture. Folklorist Henry Glassie (1976), for example, contends that social relations can be considered through the internal divisions of domestic structures, and the Russell materials offer an excellent opportunity to address this hypothesis, since they include floor plans for dwellings associated with the full range of social and ethnic groups in the area, and from a variety of periods in the reservoir's history. Thus social organization can receive attention from a number of perspectives, offering the opportunity to more fully explicate the social relations of the Old and New South.

The Transformation of the South. The period scheme naturally lends itself to an examination of the transformations which shaped southern society. Here, a materialist-evolutionist approach will be employed, which assumes that the social structure and ideology of the region will be directly influenced by the economic base (Harris 1980), but that there will also be feedback from the social and ideological structure to the economy (White 1949). For example, the hesitant development of industry in the region may be understood not only from the economics (i.e. the demand for capital made by the plantation economy), but also as a factor of regional self-sufficiency and isolation. Thus the major transitions which constitute the breaks in the period format will be explained in terms of economic behavior, and the corresponding response and influence of society and ideology.

The Material World. Once beyond the ornate interiors of plantation mansions, the material culture of the South has drawn little attention. A variety of materials recovered during the historic research in the Russell Reservoir offer a remedy to this oversight. The archaeological remains from a number of sites offer the opportunity to address the world of planters, slaves, tenants, sharecroppers, small farmers, and frontiersmen. The archaeology is bolstered, and in places contradicted, by the information contained in a number of informative inventories recorded during the project research. The comparison of archaeological remains with inventories has been demonstrated as an illuminating means of determining not only the formation of the archaeological record, but also shifts in the composition of the material and ideological world over time (Garrow and Wheaton 1986).

Pattern in the Archaeological and Historical Record. A basic assumption of archaeology is that behavior is "patterned," following set rules and norms, and that this patterning can be recovered archaeologically (South 1977). Patterning can be evaluated in the Russell Reservoir through several techniques. Given the number of historic sites either tested or excavated, it should be possible to determine refuse disposal patterns and to compare and contrast these patterns across time, for varying ethnic groups, and as a product of socio-economic scale. This information will aid not only the discussion of how historic persons perceived of their surrounding environment, but will also be of value in determining the types of loci in which historic refuse might be anticipated for particular site types. Pattern can also be discussed in terms of the composition of artifact assemblages and their distribution by functional groups. Pattern analysis also extends to settlement patterning, and the behavioral constants dictating the relations of structures will be discussed.

CONCLUSIONS

While it is clear that an extensive body of archaeological research occurred in the Savannah River basin prior to the construction of the Richard B. Russell Reservoir, it is also evident that very little work had been done in the upper reaches of the drainage. Investigations from the time of C. C. Jones and C. B. Moore in the 19th century to the WPA of the 1930s and the CRM projects of the

1970s and 1980s had tended to focus on the mouth, the coastal plain, and the fall line areas of the drainage. In earlier years the piedmont was ignored because few spectacular remains were thought present. The trend in recent years has been simply due to the inaccessibility of the area. With the exception of the Russell project area, virtually the entire upper part of the drainage was flooded in the 1950s and 1960s with minimal historical or archaeological analysis. When major investigations have occurred in the piedmont, they have either been in the interriverine area, well away from the main channel, or in the floodplains of other drainages. The Russell Reservoir investigations are thus doubly important, not only for what they can tell us about human occupation in this portion of the drainage, but also for shaping our perspective on life in the general region.

II. RESEARCH FRAMEWORK

INTRODUCTION

In this chapter the research program and compliance framework shaping the cultural resources investigations undertaken by the National Park Service and the Savannah District, U.S. Army Corps of Engineers in the Russell Reservoir are examined, in conjunction with a history of the investigations and a general discussion of project research directions. It must be stressed at the onset that the cultural resources program undertaken in the Russell project area was the result of a detailed compliance process, mandated by Federal legislation, and administered by a number of dedicated state and Federal archaeologists and land managers. The research contributions arising from the work in the reservoir illustrate the effectiveness of this process, the complexity and workings of which are not often appreciated.

In brief, the approach brought to the cultural resource investigations that were undertaken in the Russell project area can be best described as holistic. The investigations were conducted with a broad-based emphasis on a wide range of subjects, including paleoenvironmental reconstruction, archival and oral historical research, architectural evaluation, and historic and prehistoric archaeology. In this chapter project history, compliance procedures, and research designs, directions, and contributions are examined, and are subjected to critical evaluation. Additional detail on these topics, particularly on the reservoir-wide and project specific research designs that were implemented, may be found in the Site Specific Mitigation Plan volumes released in 1980 (Carbone et al. 1980), and in the various technical reports that have appeared.

A HISTORY OF THE RICHARD B. RUSSELL CULTURAL RESOURCE RESEARCH PROGRAM

Initial Investigations

The initial plans for the construction of the Richard B. Russell Dam and Lake, formerly known as Trotter's Shoals Lake, had their inception in 1944, when the Corps of Engineers submitted to Congress a final plan for the construction of three dams and reservoirs on the Savannah River and its tributaries. The entire program was approved as part of the Omnibus Rivers and Harbors Bill of 1944. Two of the major projects recommended in the plan, the Clarks Hill (now J. Strom Thurmond) and Hartwell Dam and Lake projects, were constructed in the 1950s. In 1966 authorization for the Trotters Shoals project was enacted by Congress, and on October 29, 1973 a second bill was enacted renaming the Trotters Shoals project area the Richard B. Russell Dam and Lake. Russell project field studies began in 1966-1967 with the location and final approval of the dam site and the tentative definition of the reservoir zone. In conjunction with the dam and reservoir planning designs, cultural resource investigations in the Russell Reservoir basin began in the late 1960s and continued sporadically into the middle 1970s. Field work, analysis, and report preparation were funded by the National Park Service (NPS). Contracts for preliminary archaeological survey were awarded in 1969 to the University of Georgia and the University of South Carolina for work in these respective states (Cobb 1979:1-2).

Limited archaeological surveys within the area of the proposed Trotter's Shoal reservoir, later changed to the Richard B. Russell Dam and Lake, were conducted in 1969 and 1970. The Georgia side of the river was surveyed in January 1969 by Brooks Hutto (1970) of the University of Georgia, while the South Carolina side was examined in January and February of 1970 by E. Thomas Hemmings (1970) of the University of South Carolina's Institute of Archaeology and Anthropology (SCIAA). Thirty eight sites were located in Georgia, while 35 were found in South Carolina. The largely abandoned, overgrown nature of much of the reservoir area was noted by both investigators (Hutto 1970:1; Hemmings 1970:10), a factor that greatly hampered site discovery. No systematic subsurface investigations were conducted, and most of the sites that were found were prehistoric surface scatters in disturbed or cleared areas. Both surveys were little more than limited reconnaissances. No historic sites were recorded on the Georgia side, while three historic sites, an apparent mill site (Millwood Plantation), a farm, and a ferry crossing were recorded in the South Carolina portion of the proposed reservoir. Three additional contracts were awarded to the SCIAA, one in 1972 and two in 1975, to continue survey and testing activity in the reservoir area. Brief follow-up visits and testing operations were conducted under these contracts, resulting in the discovery of a small number of additional sites (Cobb 1979:2).

Much of the reporting from this early work consisted of fairly mundane descriptions of the sites and associated diagnostic artifacts, although Hemmings (1970:48-52; 1972) commented on the subsistence potential of the area's riverine resources. Descriptive data on fish traps and weirs in the main channel were collected, some of the only work conducted on this site type in the project area (see also Taylor and Smith 1978:69-72). Most of the traps were V-shaped boulder alignments with the apex pointed downstream, to channel fish into areas where they could be harvested with nets or baskets. Fishtraps were used by both prehistoric and early historic populations in the piedmont (Logan 1859:81), and it is probable that the Russell traps saw use in both periods. Of the three traps described in detail by Hemmings, one was thought to be a historic feature, while the other two were assumed to be either prehistoric or historic. At one site, 38AB15, logs had been incorporated into the alignment, indicating possible historic period repair of an earlier feature (Hemmings 1970:50). Radiocarbon dates obtained from two of these logs (180±80 B.P., 545±100 B.P.; Appendix I) indicated both prehistoric and early historic period use of these features was likely (Goodyear et al. 1979:142-143).

Two late prehistoric Indian mound sites were located in the Richard B. Russell reservoir area during the initial surveys, Beaverdam Creek (9EB85) and Tate (9EB86) (Hutto 1970:21-25). No other Woodland or Mississippian period mounds are known from the area of the reservoir, nor have extensive shell midden deposits (which sometimes form mound-like accretions) been located. In 1971 limited excavations were conducted at the Beaverdam Creek Mound by students from the University of Georgia under the direction of Joseph R. Caldwell (Lee 1976). The results of this work have been incorporated into the final report on the investigations conducted at the site by the University of Georgia during the Russell Reservoir data recovery program in 1980 and 1981 (Rudolph and Hally 1985; see Chapter VII). The Tate Mound, which is outside the proposed floodpool, has seen only minimal subsequent investigation since Hutto's 1969 visit and surface reconnaissance (Taylor and Smith 1978:193).

Intensive Survey and Testing Activity

Federal Agency Management. In the mid-1970s the Savannah District entered into a Memorandum of Agreement (MOA) with the Atlanta Interagency Archeological Services Branch office of the Heritage Conservation and Recreation Service (HCRS), later reorganized into the Atlanta Interagency Archeological Services Division (IASD) of the National Park Service (NPS), for assistance and direction in the management of the Russell Reservoir cultural resources investigations program. Project planning was conducted by the professional staffs of both agencies, with costs accommodated by the transfer of separate contract and overhead funds to IASD from the Savannah District. Formal scope of work development and contract award and administration was accomplished within IASD, whose overhead costs typically ran to no more than fifteen percent of each project budget. Within HCRS Dr. Bennie C. Keel was initially in charge of the Russell Reservoir project, and signed the MOA. Dr. Keel subsequently transferred to NPS Headquarters in Washington and was succeeded by Dr. Victor A. Carbone, who served as first Acting Chief and later Chief of the IASD-Atlanta office from 1979 to 1984.

Dr. Carbone, who played a large role in shaping the nature and direction of many of the investigations subsequently undertaken in the reservoir, was assisted by the following IASD personnel: Dr. Michael Alterman, Dr. Mark Barnes, Dr. David S. Brose, Dr. Margaret Brown, Ms. Karen Cordova, Mr. Ed Hession, Mr. Wil Husted, Ms. Joy Medford, Mr. Gary Petherick, Dr. Neil Robison, Dr. Harry Scheele, Mr. Joe Watkins, and Ms. Polly Worthy. In Washington Dr. Bennie C. Keel, Department of Interior (Departmental) Consulting Archaeologist, maintained an ongoing interest in the project. After Carbone himself transferred to Washington in 1984 to head IASD, Mr. John E. Ehrenhard assumed overall management of the Russell program, and was responsible for the final production of many of the technical reports coming from the investigations, including this synthesis effort.

Within the U.S. Army Corps of Engineers Dr. James Cobb, Savannah District Senior Archeologist, and his successor Mr. Paul Rubenstein also greatly shaped and guided the investigation program that was ultimately conducted within the reservoir. Assistance within the Savannah District office was provided by Mr. Oscar Brock, Mr. David Wahus, and Ms. Judy Wood. During the formative planning years the investigations were greatly supported by then District Engineer, Colonel Tilford C. Creel. These people ultimately made the decisions shaping the course of investigations in the reservoir.

The 1977 Intensive Survey. A much more intensive survey program in the reservoir was initiated in 1976 under the direction of archaeologists from the SCIAA (Taylor and Smith 1978). Fieldwork was conducted in 1977, and a total of 490 sites were located and recorded in the reservoir area. In December 1978 a comprehensive integrated survey report was completed, summarizing in great detail local environmental conditions, the historic and prehistoric sequence, field methods and results, the location and context of all archaeological and architectural remains encountered, research themes to guide future investigations, and recommendations as to the general direction subsequent cultural resource investigations should take (Taylor and Smith 1978). Summary appendices provided primary data on site environmental and archaeological characteristics, historic and prehistoric artifact categories, the texts of informant interviews collected as part of oral history studies, and a photographic inventory of standing structures. While the survey procedures were subsequently criticized (i.e., Carbone et al. 1980; Thompson and Gardner 1983:4-5) for focusing on open areas with exposed soil surfaces (i.e., roadcuts, old fields, eroded areas), the report remains one of the most comprehensive technical documents produced during the Russell Reservoir program. Given the fact that much of the actual survey was performed in an eight week period by two to three 3 person teams (Taylor and Smith 1978:178, 182), the amount of information recovered and documented is of a very high level. Almost all of the sites chosen for examination in subsequent field programs, in fact, were found during this first intensive survey of the reservoir area (Gardner et al. 1983:3).

Prior to initiating the 1977 intensive survey, the SCIAA team reviewed previous archaeological work in the Georgia/South Carolina piedmont to aid in the development of field strategies, and determine areas of high and low site probability (Taylor and Smith 1978:138-154). Efforts were made to control for biases that might arise due to factors of chronology (e.g., earlier surveys had clearly missed historic sites, a bias that was to be avoided), landform (i.e., were sites more prevalent on one type of topographic feature as opposed to another?), site size (would use of transects spaced certain distances apart result in smaller sites being missed?), vegetational cover (i.e., if surveys were directed to cleared areas, would this practice lead to a severe underrepresentation of sites?), site type (i.e., were certain types of sites, such as fish weirs, recent historic houses, etc. unconsciously overlooked?), and site and artifact density. Field procedures and data recorded at each site were described in detail, with the primary data incorporated into the report appendices.

The field survey was opportunistic and nonprobabilistic in nature, and was directed to accessible, open or exposed surface areas, mostly along old road beds, in logged or cleared areas, and in cultivated fields (Taylor and Smith 1978:180-184). An attempt was made to implement a probabilistic sampling survey, using systematic shovel testing along linear 1000 x 100 m transects, dispersed one per kilometer along all reservoir main channel or tributary segments, and oriented using randomly selected compass azimuths. This effort failed due to the dense ground cover and irregular terrain that characterized much of the project area (Taylor and Smith 1978:1978:182). After following the sampling procedure for several days, with few sites discovered as a result, it became apparent that completing the survey would take far more time than was available, and that the resulting site data would probably be of limited value for cultural resource management purposes. It was quickly determined that by using an opportunistic strategy, in contrast, fairly large areas of the reservoir could be examined, and large numbers of sites discovered.

In all, approximately 41.7 percent of the floodpool, or 11,108 acres were examined during the 1977 intensive survey (Taylor and Smith 1978:190-193). This included almost half the "high probability" or favored areas in the reservoir, locations with nearly level terrain (i.e., slopes <10 percent) and more than 10 feet above water. A lower percentage of the low probability zone, defined as those areas with steep slopes or close to water, was also examined. In all, 490 sites with 818 distinct historic and prehistoric components were recorded during the survey. In the final report detailed descriptive summaries of the assemblages were presented, including all prehistoric projectile points and ceramics and historic artifacts recovered. The report also included detailed settlement analyses directed toward determining site/landform associations. The information from the 1977 survey formed the primary data base guiding subsequent investigations in the reservoir.

The Russell Reservoir Computerized Database. To facilitate management planning a computerized data base summarizing the reservoir cultural resource assemblages was initiated by IASD in 1978, incorporating the data collected during the Taylor and Smith and earlier surveys. Locational, environmental, cultural historical, and resource management information was coded for each archaeological site located within the Russell project area. This database was updated intermittently during the subsequent investigations, as new sites or components were identified. A total of 732 prehistoric and historic archaeological sites have been recorded in the Russell area through 1988, and are documented in the project database.

As part of the present synthesis effort the computerized site files for the reservoir area, which are maintained through the Atlanta IASD office, were used to help document the number of prehistoric diagnostics and components found during the project investigations (Table 2, Figures 3, 4). Because many of the original component assignments were in need of revision, due to subsequent work at many of the sites, and the marked increase in knowledge about the local cultural sequence since the early work in the reservoir, published assemblage descriptions were reexamined, and three weeks of collections analysis was conducted at Mound State Monument, Moundville, Alabama, where the project assemblages are curated. The information collected during the synthesis reanalysis has been used to update the IASD data base; the primary records and files generated during this research, delimiting diagnostic and component identifications by site and project, have been placed on file with the Russell project records at Moundville.

The 1978-1979 84 Sites Testing Program. After the completion of the 1977 intensive survey program it was apparent that a number of sites and areas within the reservoir required further examination and evaluation for National Register eligibility determinations. In August 1978, the SCIAA was contracted by IASD-Atlanta and the Savannah District to conduct additional fieldwork at 84 of the 490 sites identified during the 1977 field survey. A program of intensive mapping, controlled surface collection, shovel testing, augering, and/or test pitting was conducted at these sites between October 1978 and March 1979. Upon completion of the fieldwork at the 84 sites, a change order for an additional month of fieldwork was negotiated, to conduct a survey of the major river islands in the proposed floodpool. These investigations were undertaken in March and April 1979. Preliminary results of the project were transmitted to IASD in 1979, to aid in management planning, with the final report submitted in August 1983 (Goodyear et al. 1983).

The 84 sites testing project included controlled surface collections at seven sites; mapping and shovel testing at eight sites; systematic shovel testing at 37 sites; mapping, systematic shovel testing or augering, and the excavation of larger test units at 18 sites; and the mapping of surface features with subsurface testing and probing to delimit buried features at 14 sites (Goodyear et al. 1983:9). Probing was used at historic sites to locate and follow foundations and other architectural features. The site plans and assemblages that were developed during this project provide a valuable record about the extent and content of these sites. Deep auger testing was employed at several locations, including Gregg Shoals, McCalla Bottoms (38AB288), and 38AB170, and proved to be a highly effective method of documenting assemblage stratification. The detailed maps made at historic sites such as Millwood Plantation and Pearle Mill were employed in subsequent investigations.

Small Scale Survey and Testing Projects. A number of small-scale survey and testing projects were conducted at locations throughout the reservoir from 1978 to 1980 where construction was imminent or where additional information about specific site types was needed. Two slave cemeteries were tested by Drs. Margaret Brown (IASD) and James E. Cobb (Savannah District) to determine the feasibility of paleoanthropological/human osteology studies. Unfortunately, bone preservation was poor, and plans for a cemetery data recovery were dropped. Brown and Cobb also conducted survey work at the Grogan, Cleveland, and Hutchison house sites, and at the Harper farm, in an effort to locate archaeological remains to complement the standing architecture documented at these sites (Worthy 1983). Survey projects were also undertaken in proposed state and county road relocation areas (Warner and Metropol 1979; Warner and Savage 1979; Warner et al. 1979a), along proposed gas and telephone cable relocation routes (Warner et al. 1979b, 1979c), and in several proposed borrow areas (Warner et al. 1979d, 1979e).

Table 2. Prehistoric Components and Diagnostic Artifacts in the Richard B. Russell Reservoir

DIAGNOSTIC PROJECTILE POINTS BY RAW MATERIAL AND OCCURRENCE

Period	Point Types	Quartz	Metavolcanic	Coastal/Piedmont Cherts	Ridge & Valley Chert	Raw Material Not Classified	Total Artifacts	Total # of Sites	
Early PaleoIndian (11.5-10.5)	Clovis			1 (33.33%)	2 (66.67%)		3 (100.00%)	3	
Late PaleoIndian (10.5-9.9)	Dalton	12 (85.71%)	1 (7.14%)		1 (7.14%)		14 (100.00%)	11	
Initial Early Archaic (10.0-8.5)	Palmer/Kirk Corner Notched	90 (69.77%)	5 (3.88%)	26 (20.16%)	8 (6.20%)		129 (100.00%)	57	} 59
	Kirk Stemmed	5 (41.67%)	3 (25.00%)	4 (33.33%)			12 (100.00%)	5	
Late Early Archaic (9.0-7.5)	Bifurcates/ Stanlys	7 (41.18%)	6 (35.29%)	3 (17.65%)	1 (5.88%)		17 (100.00%)	12	
Early Middle Archaic (7.5-6.0)	MMI	289 (96.01%)	11 (3.65%)	1 (0.33%)			301 (100.00%)	119	} 135
	MMII	59 (98.33%)	(0.00%)	1 (1.67%)			60 (100.00%)	33	
Late Middle Archaic (6.5-5.5)	Guilford	62 (89.86%)	6 (8.70%)	1 (1.45%)			69 (100.00%)	44	
Late Archaic (5.5-3.0)	Savannah River Stemmed	130 (42.35%)	159 (51.79%)	18 (5.86%)		464	771 (100.00%)	79	
Late Archaic/Woodland (4.0-1.5)	Otarre/ Swannanoa	258 (58.50%)	160 (36.28%)	23 (5.22%)			441 (100.00%)	58	
Early/Middle Woodland (2.5-1.0)	Yadkin	215 (89.96%)	18 (7.53%)	5 (2.09%)	1 (0.42%)		239 (100.00%)	49	} 50
	Badin	6 (100.00%)					6 (100.00%)	6	
Late Woodland (1.5-1.0)	Woodland Stemmed	12 (44.44%)	12 (44.44%)	3 (11.11%)			27 (100.00%)	6	
Mississippian (1.0-0.5)	Mississippian Triangular	553 (94.21%)	16 (2.73%)	10 (1.70%)	8 (1.36%)		587 (100.00%)	43	
		1698 (63.45%)	397 (14.84%)	96 (3.59%)	21 (0.78%)		2676 (100.00%)	525	

CERAMIC PREHISTORIC COMPONENTS IN THE RUSSELL RESERVOIR

Period	Total # of Artifacts	Number of Components
Stallings/TC (4.5-3.0)	212	11
Dunlap (3.0-2.0)	1701	50
Dept/C'ville (2.5-1.5)	4910	61
Swift Creek (1.5-1.3)	411	13
Napier (1.3-1.2)	109	7
Woodstock (1.2-1.0)	16	5
Mississippian (1.0-0.5)	22845	110

PREHISTORIC CERAMIC ARTIFACTS IN THE RUSSELL RESERVOIR

Pottery Type	Total # of Artifacts
Stallings Plain	83
Stallings Punctate	124
Thom's Creek Punctate	5
Dunlap Fabric Marked	1707
Woodland Check Stamped	2611
Simple Stamped	2301
Cord Marked	338
Swift Creek Comp. Stamped	411
Napier Complicated Stamped	109
Woodstock Stamped	16
Miss. Check Stamped	1323
Corncob Impressed	1098
Incised	189
Plain	33641
Unidentified	37960

Pottery Type	Total # of Artifacts
Etowah Comp. Stamped	145
Savannah Comp. Stamped	147
Rectilinear Comp. Stamped	3151
Curvilinear Comp. Stamped	1934
Unknown Comp. Stamped	4900
Miss/S.C. Folded Rims	
Pinched	82
Notched	42
Punctated	55
Plain	101
Miss. Unfolded Rims	
Punctated	50
Rosettes	16
Notched	24
Lugs	39
Collared Rims	50

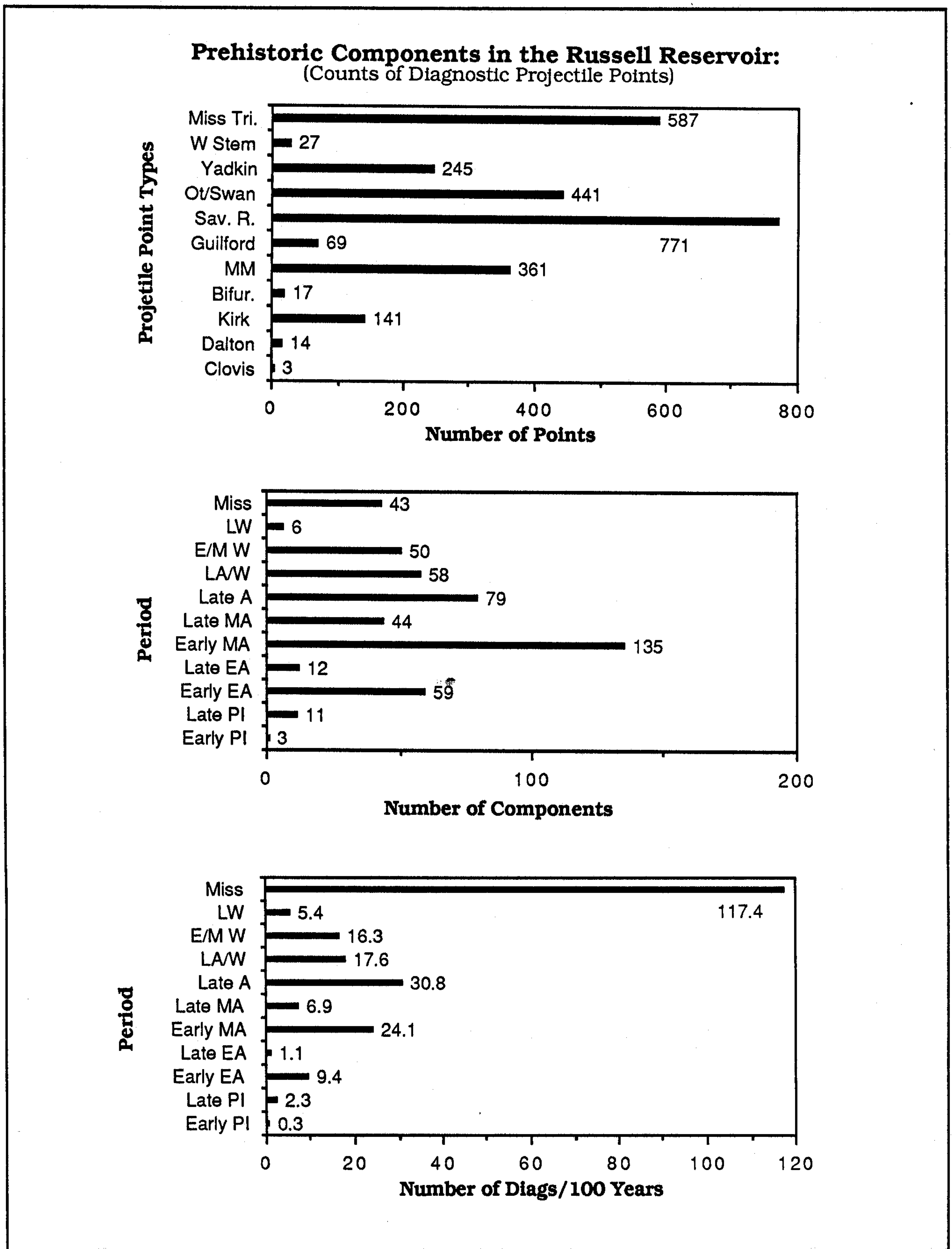


Figure 3. Lithic Components and Diagnostics per Period, Richard B. Russell Reservoir.

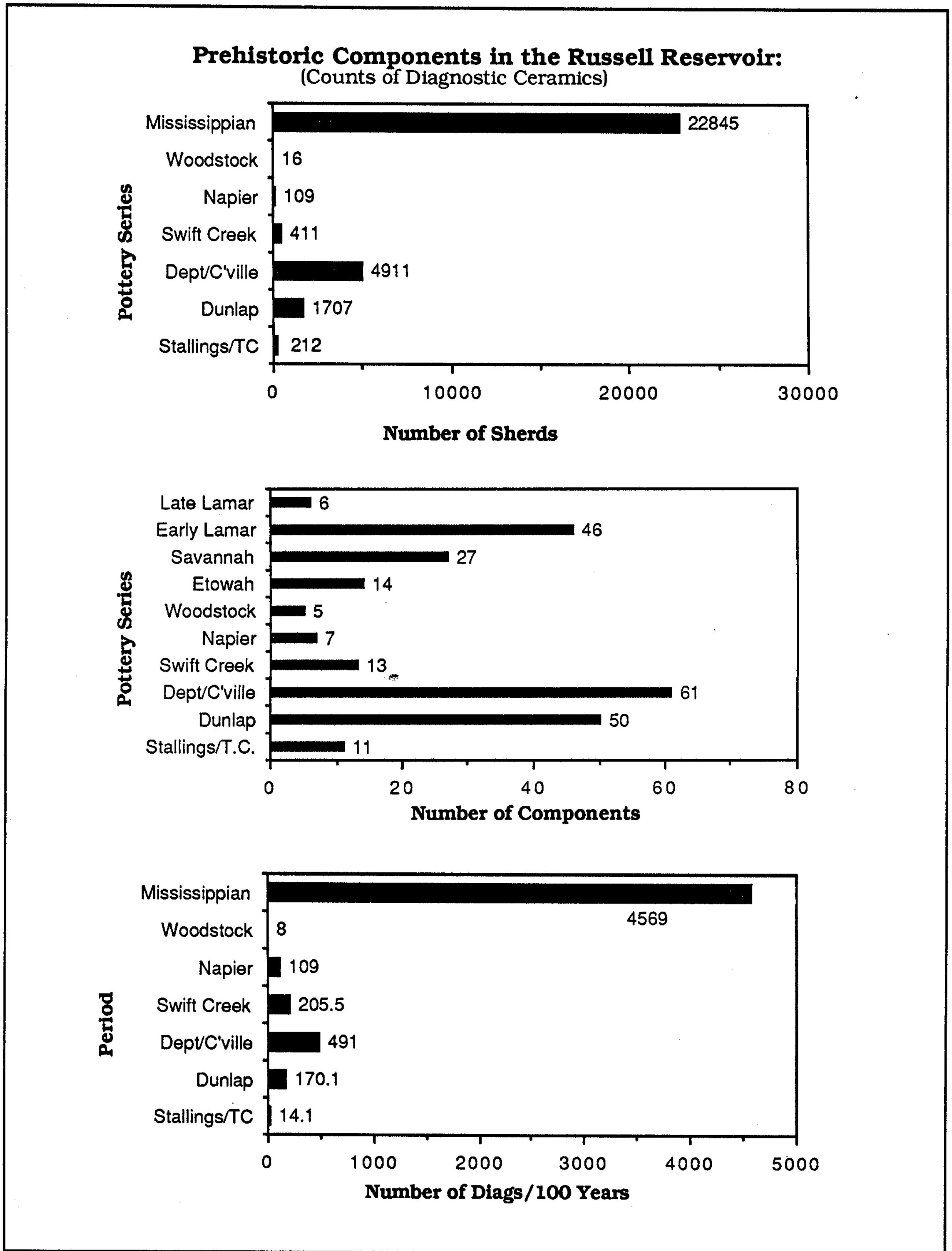


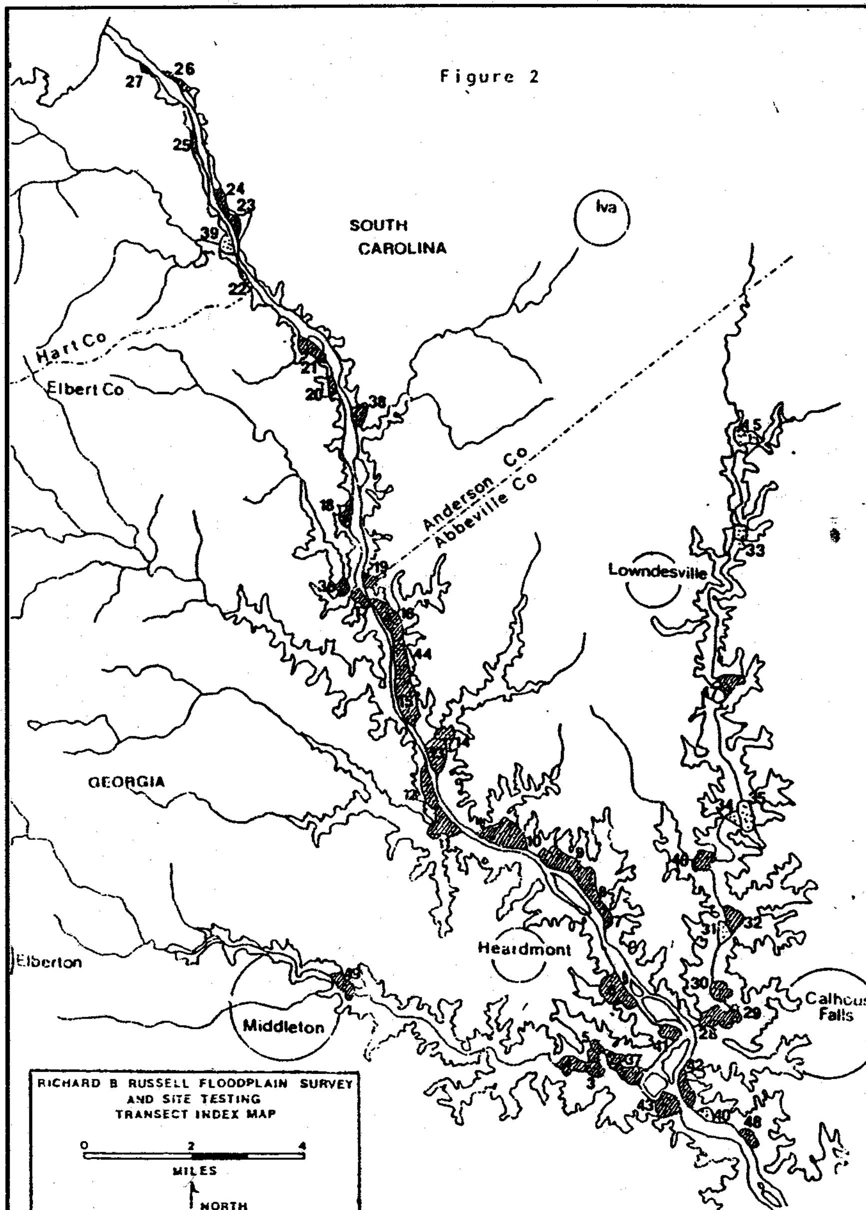
Figure 4. Ceramic Components and Diagnostics per Period, Richard B. Russell Reservoir.

The 1979-1980 Floodplain and Islands Testing Program. Because of concern over deficiencies in the coverage of the floodplain areas (raised by Dr. Lewis H. Larson, Georgia State Archaeologist), in the fall of 1979 a contract was issued to Thunderbird Research Corporation to test previously recorded sites and survey an approximately 3,000 acre area, all in the floodplain. Fieldwork on this contract was conducted in October and November 1979 and from May through September 1980. Thirty nine transects within the floodplain were selected and examined, most along the main channel of the Savannah River and lower portions of Beaverdam Creek and Rocky River (Figure 5). Twenty one of the transects contained previously recorded sites requiring testing, while eighteen were selected outside of known site areas. In all, 35 previously recorded and 11 new sites were tested during these investigations (Gardner et al. 1983:1). Detailed descriptions of the stratigraphy and assemblages located in each transect and tested site were prepared and forwarded to IASD shortly after the completion of each field season, to aid in subsequent data recovery planning. Of the 23 prehistoric sites in the project area that eventually went to data recovery, all but four (9EB21, 9EB208, 9EB368, 38AB387) were tested during these investigations, most (17 of 19) during the 1979 season.

To follow-up on the SCIAA's initial reconnaissance of the river islands in the spring of 1979, a major survey and testing program was conducted at five of the major islands, McCalla Island, Carter Island Central, Carter Island South, Paris Island North, and Paris Island South. This work occurred from July to September 1980 by archaeologists from Thunderbird Research Corporation, using the same procedures employed in the floodplain testing program (Thompson and Gardner 1983). Eighteen previously recorded sites were found and examined, yielding detailed stratigraphic and assemblage data to aid in subsequent planning.

Compliance Considerations and the Implementation of the Richard B. Russell Intensive Data Recovery Program

During construction of the Richard B. Russell Dam and Lake project, the U.S. Army Corps of Engineers, Savannah District, was the Federal agency responsible for documenting the cultural resources present in the project area, and for evaluating and mitigating the impacts to these resources that would occur as a result of the construction. This task was mandated by The Reservoir Salvage Act of 1960, the National Historic Preservation Act of 1966, the National Environmental Policy Act of 1969, Executive Order 11593, and the Archeological and Historic Preservation Act of 1974. Following Section 106 procedures of the National Historic Preservation Act (PL-89-665), the Savannah District nominated the Richard B. Russell project to the Keeper of the National Register of Historic Places (NRHP) as a Multiple Resource Area, within which was included the Richard B. Russell Archaeological District (Partial Inventory). The Archaeological District was determined eligible for inclusion on the NRHP in February 1979, giving the Corps of Engineers the legal impetus to greatly expand the cultural resource investigations.



Source: Gardner et al. 1983: 8

Areas Investigated Per Phase of TRC's Fieldwork

Area of Investigation	1979 Survey Phase	1979 Site Testing Phase	1980 Site Testing Phase	Pedological/ Geomorphological
Transect 1 (9EB207)		9EB207		
Transect 2 (9EB92)	Transect 2	9EB92		
Transect 3 (9EB219)		9EB219		
Transect 4				Transect 4
Transect 5 (9EB203)		9EB203		Transect 5
Transect 6 (9EB76, 9EB348)		9EB76, 9EB348		Transect 6
Transect 7 (38AB170)			38AB170	Transect 7
Transect 8 (38AB288)	Transect 8	38AB288		Transect 8
Transect 9 (38AB302)	Transect 9		38AB302	Transect 9
Transect 10 (38AB303)	Transect 10		38AB303	Transect 10
Transect 11 (9EB382, 9EB91)	Transect 11	9EB382, 9EB91		
Transect 12 (9EB75)	Transect 12	9EB75		
Transect 13 (38AB22, 38AB304)	Transect 13 (38AB304)	38AB22		Transect 13
Transect 14				Transect 14
Transect 15 (38AB305)	Transect 15		38AB305	
Transect 16 (38AB306)	Transect 16		38AB306	
Transect 17 (9EB387, 9EB20)	Transect 17 (9EB20)		9EB387	
Transect 18	Transect 18			
Transect 19	Transect 19			
Transect 20	Transect 20		Transect 20	
Transect 21 (9EB17, 9EB18)	Transect 21		9EB17, 9EB18	Transect 21
Transect 22				Transect 22
Transect 23 (38AN8)		38AN8		
Transect 24 (38AN29)		38AN29		
Transect 25 (9HA9)				
Transect 26 (38AN126)		38AN126		
Transect 27				Transect 27
Transect 28	Transect 28			Transect 28
Transect 29 (38AB91)		38AB91		Transect 29
Transect 30				Transect 30
Transect 31	NOT INVESTIGATED			
Transect 32 (38AB313)	Transect 32		38AN313	
Transect 33	NOT INVESTIGATED			
Transect 34	NOT INVESTIGATED			
Transect 35	NOT INVESTIGATED			
Transect 36 (9EB259)		9EB259		Transect 36
Transect 37 (9EB85)	Transect 37 (9EB85)			
Transect 38 (38AN140)			38AN140	Transect 38
Transect 39	NOT INVESTIGATED			
Transect 40	NOT INVESTIGATED			
Transect 41 (9EB83)	Transect 41		9EB83	Transect 41
38AB101		38AB101		
Transect 42 (38AB125)			38AB125	
Transect 43 (9EB412, 9EB413, 9EB14)	Transect 43 (9EB412, 9EB413, 9EB14)			
Transect 44 (38AB242)			38AB242	
Transect 45	NOT INVESTIGATED			
Transect 46 (38AB160)			38AB160	
Transect 47 (38AB185)			38AB185	
Transect 48 (38AB10)			38AB10	
Transect 49 (9EB19)		9EB19	9EB19	

Source: Gardner et al. 1983: 2

Figure 5. Floodplain Transects and Sites Examined in the 1979 -1980 Deep Site Testing Program.

A Memorandum of Agreement (MOA) on the scope and directions of the cultural resource investigation/compliance program to be undertaken in the reservoir was prepared in 1979 between the Savannah District, the Advisory Council on Historic Preservation (ACHP), and the State Historic Preservation Officers (SHPOs) of Georgia and South Carolina. A requirement of the MOA was that a detailed Site Specific Mitigation Plan (SSMP) be prepared and implemented in advance of project completion. This plan, which was subsequently prepared by archaeologists and preservation planners on the staffs of the Savannah District and Interagency Archeological Services-Atlanta (Carbone et al. 1980), detailed how cultural resources in the proposed reservoir would be further evaluated and treated. Stipulations of the plan included:

> (a) a discussion of each cultural resource (archaeological site, historic property, engineering element) known in the project area;
>
> (b) the manner in which each resource would be affected, including land acquisition and construction schedules; and,
>
> (c) a specific proposal for the treatment of each cultural resource. When avoidance or data recovery was not appropriate for a resource, the rationale for this decision was to be provided. If the treatment for a given resource was dependent on the results of data recovery at other sites in the project area, this was to be noted and discussed (Carbone et al. 1980:I-1).

Scheduling was to consider the order in which sites and areas would be impacted, with particular attention to construction sites such as railroad and state and county road and bridge relocations and timber harvesting areas, and areas within the inundation zone. An outline of the SSMP was submitted to the South Carolina and Georgia SHPO's, and to the ACHP for review and comments in September 1979. A final version of this plan, incorporating revisions and commentary, was released in 1980 (Carbone et al. 1980).

As part of the Russell project SSMP, short-term, mid-term, and long term objectives for the investigations were defined, corresponding roughly to exploratory testing, excavation or extensive research/documentation, and report production and public information phases. Deficiencies in the cultural resources work prior to 1980 were identified, and an effort was made to rectify them. In particular, weaknesses were perceived in the state of knowledge about the reservoir floodplain, historic sites and architecture, and riverine islands and resources, and served as the objectives for short term investigations.

Short Term Objectives of the Site Specific Mitigation Plan

Short term objectives of the Richard B. Russell SSMP included the preparation of historical and ethnographic (i.e., oral history) overviews, standing structure architectural documentation, research directed toward paleoenvironmental reconstruction, and floodplain survey and testing efforts. In the absence of an historic overview of the Russell project, one was initiated that was designed to guide historic sites investigations (The History Group 1981). An extensive program of architectural and engineering documentation focusing on standing structures was conducted by the Historic American Buildings Survey and the Historic American Engineering Record (summarized in Worthy 1983). An oral history project focusing on black occupations was conducted (Ramsey et al. 1986). Cultural resources within the river channel itself, such as weirs, ferry crossings, boats, bridges, dams, etc. were also targeted, and were addressed in one or more projects (e.g., Worthy 1983; Newman 1984).

At the time that the SSMP was in preparation, as noted previously, little information was available about cultural resources in floodplain areas of the reservoir, primarily because earlier investigations were directed to sites found in surface exposures. The deep testing program along riverine terraces and island areas was initiated at this time (Gardner et al. 1983; Thompson and Gardner 1983). Coupled with this field testing effort, a program of paleoenvironmental investigations directed to reconstructing soils, geomorphic, and vegetational histories in the project area was also started (Foss et al. 1985, Segovia 1985; Sheehan et al. 1985).

During the floodplain survey program 49 transects thought to have the potential to contain deeply buried sites were purposefully selected, and 39 were subsequently examined (Figure 5). The selection criteria made use of preliminary results from the paleoenvironmental (pedological and geomorphological) research program, coupled with the intuitive selection of areas in proximity to low order streams and their confluences, within major stretches of arable floodplain bottoms, and on terraces overlooking both the main channel and backwater swamps (Carbone et al. 1980:19-20). These settings were thought the most likely to contain deeply buried sites.

Field methods included pedestrian reconnaissance coupled with the excavation of 0.75 x 0.75 m test units taken to depths of up to a meter, with all fill passed through 3/8 inch mesh (Gardner et al. 1983:28). Bank cuts were examined, and a backhoe and a three inch bucket auger were used in some cases to examine deeper deposits. Larger 1.0 x 1.0 m test units were opened on known site areas and in suspected site locations as part of the exploratory investigations. These were typically opened in pairs spaced ca. 4 to 5 m apart, with samples of the fill screened through 3/8 inch mesh. Excavation proceeded by natural or arbitrary 10 cm levels until either the water table or two sterile levels had been reached, or the depth of the test pit precluded safe working conditions. Most units were taken up to 1.0 m in depth, with a few units opened to 2.0 m.

Areas within the floodplain where sites were found were characterized by:

(a) well drained soils on inner and outer levees, terraces, and fans;

(b) tributary streams in the immediate vicinity; and

(c) poorly drained areas such as flood chutes, old stream channels, or springs at the upland-floodplain interface present in the immediate or general vicinity (adapted from Carbone et al. 1980:23).

Almost every major well drained section of bottomland examined was found to contain sites. The investigations were hindered, however, by the presence of almost a meter of recent alluvial deposits, and as a result few hand excavated units penetrated to levels dating earlier than ca. 3000 B.P. The value of the floodplain reconnaissance, consequently, lay more in the location of site areas than in the delimitation of their depth, extent, chronology, or function (Carbone et al. 1980:24). What was evident from the survey and testing program was that numerous deeply buried, stratified sites existed in the floodplain; some 132 separate areas with a high probability of having deeply buried sites were identified (Carbone et al. 1980:25).

Testing methodology employed on reservoir floodplain and island areas was designed to obtain the following kinds of information from each site:

a. The cultural components present.

b. Whether components were stratigraphically or horizontally separable, and their maximum extent.

c. Whether features were present beneath the plowzone.

d. An evaluation of overall site integrity.

e. The presence of buried soil horizons.

f. The general classes of artifacts present.

h. The kinds of activities represented (Carbone et al. 1980:26).

The purpose of the testing program was to further evaluate the significance and probable contribution of each site to knowledge of prehistory or history, and to delimit whether and what kind of additional work would be necessary to complete this process, and the likely costs involved in each level of effort. These procedures also guided subsequent data recovery operations at project sites.

Mid Term Objectives of the Site Specific Mitigation Plan

<u>Data Recovery Phases.</u> Mid term objectives of the Russell SSMP focused on additional data recovery and site evaluation operations throughout the project area, work that was conducted from 1980 through 1982. Effort was directed to cultural resources in the project area as a whole, rather than at any one site, to "comprehensively, realistically, and parsimoniously deal with the total resource base" (Carbone et al. 1980:44-45). A phased approach to data recovery was employed, with management decisions perceived as dynamic and subject to

constant revision as new data became available. Six phases were defined for the mitigation plan, of which Phases I and II were considered both Short and Mid Term Objectives:

Phase I. This phase was directed to the evaluation of each historic and prehistoric site in terms of the research potential of the entire study area, to determine their status vis-a-vis subsequent phases of work. This step was designed to provide a preliminary sort of the cultural resources on the basis of information potential. Site information was evaluated in terms of the overall site situation, including integrity, components represented, data categories present at the site, and the types of data likely to result from detailed investigations.

Phase II. This phase represented the initial testing and evaluation effort. Testing in the sense used here meant sufficient surface reconnaissance and sub-surface excavations to determine the extent of each site; site integrity, site depth, the presence of buried cultural features or deposits; and in so far as possible site function and chronology. Testing included relocating the sites; developing plan maps of the sites, including their limits and the locations of all subsurface test units; and the excavation of a series of one to two meter test squares at each site supplemented with bucket augering sufficient to meet project objectives and make the necessary follow-up recommendations.

Phase III. This phase represented the initial data recovery effort at known sites. The initial level of effort at each site varied depending on the nature of the sites. Different approaches, for example, were utilized for small single component sites which had been plow disturbed but were known to have subsurface features as opposed to those sites which had *in situ* buried components. The Scopes of Work which were issued for these projects required that the potential contractors develop project specific research designs addressing research possibilities. The research proposals were to clearly identify the applicable research questions and develop them at the specified [funded] level of effort. Proposers were expected to develop these research questions into hypotheses with well defined test expectations which were to be detailed in the proposals. The proposals were also required to detail the level of testing and data recovery in detail, including outlining the areas to be investigated and the techniques to be used. The sampling strategy, placement and size of test units, methods of excavation and the estimated number of various types of units to be excavated were also to be detailed.

Phase IV. This phase consisted of extended data recovery at those sites which as a result of Phase III investigations proved to be the most productive. The decisions as to which sites that would be extensively excavated depended on a number of factors, including the potential of the site for addressing as broad a range of research questions as possible. It was recognized that considerable redundancy was present among the sites which were slated for Phase III effort and therefore it was necessary to define this redundance and to restrict the level of effort at certain sites in order to deal with data recovery throughout the entire project in a comprehensive yet cost effective way.

Phase V. This phase represented an attempt to deal with the many diagnostic and undiagnostic upland sites (i.e., those above the inundation zone). The work contemplated for this phase consisted of the following: (1) an evaluation of the components represented; and (2) an evaluation of site integrity to determine whether the sites were totally eroded or deflated or if some plowzone or A horizon was present. Once this determination was made it was possible to calculate site density indices which were used to rank the sites. On the basis of these rankings and other stratification criteria (i.e., environmental factors) sites were selected for more intensive systematic surface work. Once these data were collected and analyzed the upland sites were evaluated with respect to similar sites and components from the floodplain or lowland settings.

Phase VI. This phase was the final integrative effort. All of the information from the various data recovery projects were integrated into comprehensive volumes designed to present the culture history of the Russell project area to the scientific community and the general public (adapted from Carbone et al. 1980:45-47).

In the implementation of this phasing, site specific mitigation recommendations were developed for all reservoir cultural resources and, based on information available as of late 1979, a series of historic and prehistoric sites were selected for further investigation. These sites were incorporated into a series of logistically convenient procurement groupings (i.e., similar kinds of sites; sites in close proximity to one another), and Scope of Work/Requests for Proposals were issued. Funding levels were typically specified, rendering award on technical merit rather than lowest cost a primary selection criteria.

Prehistoric Research Design. Scopes of Work for prehistoric archaeological testing and data recovery investigations conducted within the reservoir after 1979 included the following statement on research design:

The Richard B. Russell Multiple Resource Area offers potential for a variety of research questions. Among the long term goals envisioned for this area are: a reconstruction of the paleoenvironment for each cultural period; chronological refinement and archaeological phase definition; an explication of the [human]-environment relationship; the development of models of demographic change through time; the

> explication of local prehistoric cultures; cultural evolution in local cultures; transitions between major cultural thresholds; resource utilization within and outside of the [Russell] area; the examination of the processes of food production and subsequent changes in settlement plan, pattern, demography, and social cultural complexity; and the development of predictive models for site location and their applicability to other areas.
>
> Investigators should direct their research minimally toward the goals addressed above in order to develop a regional perspective on the aboriginal occupations of the area. Since numerous individuals or institutions will be working on the prehistoric sites in the area, this approach will allow for a better integration of the work done (Carbone et al. 1980:4).

Specific research questions that prospective contractors were asked to consider were then advanced for each site, taking into consideration the components and conditions identified during the earlier testing programs.

The Scopes of Work also placed guidelines on field data collection, insisting on detailed descriptions and justifications for the field procedures that were advanced. All submittals were to include information on the size, number, and placement of test units; document provisions for the routine collection of radiocarbon, floral, and faunal samples; provide for the use of controlled surface collection, hand excavation, mechanical stripping, and deep testing as warranted; and list the laboratory and analytical procedures that would be employed to ensure the processing and curation of all remains.

Historic Research Design. Unlike the prehistoric investigations, which were guided by a general research design, site or site-group specific questions to be addressed by the contractor were included in each Scope of Work issued for historic sites investigations within the reservoir (e.g., as detailed for each project in Carbone et al. 1980). The historic data recovery investigations within the reservoir were to be guided, in part, by themes developed in a historic overview of the reservoir prepared by the History Group (The History Group 1981). These themes were period based, and focused on models of settlement, economy, technology, and cultural behavior (Carbone et al. 1980:38-44, 50-57). Although this document was not generally available in final format until 1981, after most field data recovery projects had been completed, drafts were available earlier, in time to guide many of the field programs and all of the subsequent analysis and reporting efforts.

Mitigation/Data Recovery Efforts. Investigations conducted in 1980 under the six phase mitigation plan included the continuation of the intensive floodplain testing program initiated in 1979. This work, directed to sites in the floodplain and on river islands, was conducted by archaeologists from Thunderbird Research Corporation (Gardner et al. 1983; Thompson and Gardner 1983). Detailed paleoenvironmental investigations continued throughout the reservoir in conjunction with this testing program, by research teams focusing on geomorphology (Segovia 1985), soils (Foss et al. 1985), and palynology (Sheehan 1985).

Major archaeological data recovery operations were also initiated at over 30 prehistoric and historic sites in 1980. A listing of these sites, by period of occupation and type of work undertaken, is given in Table 1. Phase III work was started at 17 prehistoric sites that had been examined the previous year during the Phase II testing effort (Gardner and Barse 1980). The Rucker's Bottom (9EB91), Harper's Bottom (9EB75), and the Van Creek (9EB382) sites were examined by archaeologists from Commonwealth Associates, Inc. (Anderson and Schuldenrein 1985). Archaeologists from Lawrence Johnson and Associates began work at the Bullard site group (9EB76 and 9EB348; Flint and Suggs 1980), while Professional Analysts, Inc. personnel examined three sites in Abbeville County, at the Rocky River (38AB91), McCalla Bottoms (38AB288), and Harper's Ferry (38AB22) sites (Glander et al. 1981). Additional investigations at Rucker's Bottom, Harpers Bottom, the Rufus Bullard site (9EB76), and the three Abbeville County sites were conducted by the Commonwealth team in 1981 and 1982.

In 1980 and 1981 Phase III investigations were also conducted at the Gregg Shoals (9EB259) and Clyde Gulley (9EB387) sites by the South Carolina Institute of Archaeology and Anthropology (Tippitt and Marquardt 1982, 1984). Those same years intensive excavations were undertaken at the Beaverdam Creek Mound and Village site (9EB85) by archaeologists from the University of Georgia, under the direction of James L. Rudolph and David J. Hally (1985). Four sites near the Beaverdam Mound in Elbert County, thought to be possible outlying satellite communities, were examined in 1980 by archaeologists from New World Research, Inc. (Campbell and Weed 1984). Six sites in Elbert County, Georgia and Anderson County, South Carolina were examined from 1980 to 1982 by archaeologists from Southeastern Wildlife Services, at the Simpson's Field (38AN8), Sara's Ridge (38AN29), Big Generostee Creek (38AN126), Transect 21 (9EB17), Beaverdam Creek Borrowpit (9EB19), and Paris Island South (9EB21) sites (Wood et al. 1986).

Historic sites data recovery investigations were conducted at Fort Independence and at seven mill sites by archaeologists from Building Conservation Technology, Inc. (Bastian 1982; Newman 1984); at Millwood Plantation by archaeologists from the Mid-American Research Center at Loyola University (Orser et al. 1987); at the Allen plantation and Clinkscales farm by Carolina Archaeological Services, Inc. (Drucker et al. 1982); and at five farms/plantations by Wapora, Inc. (Gray 1983). Also during 1979 and 1980 a team of architectural historians from the Historic American Buildings Survey and Historic American Engineering Record were at work in the reservoir documenting standing structures (Worthy 1983).

Rigorous selection criteria were employed to delimit the sites chosen for additional data recovery effort after 1980. Following the close of the first season of Phase III fieldwork and the submission of detailed technical and management summaries of the work to date by each contractor, an evaluation of the results occurred. A Richard B. Russell Project Workshop was held in Atlanta in

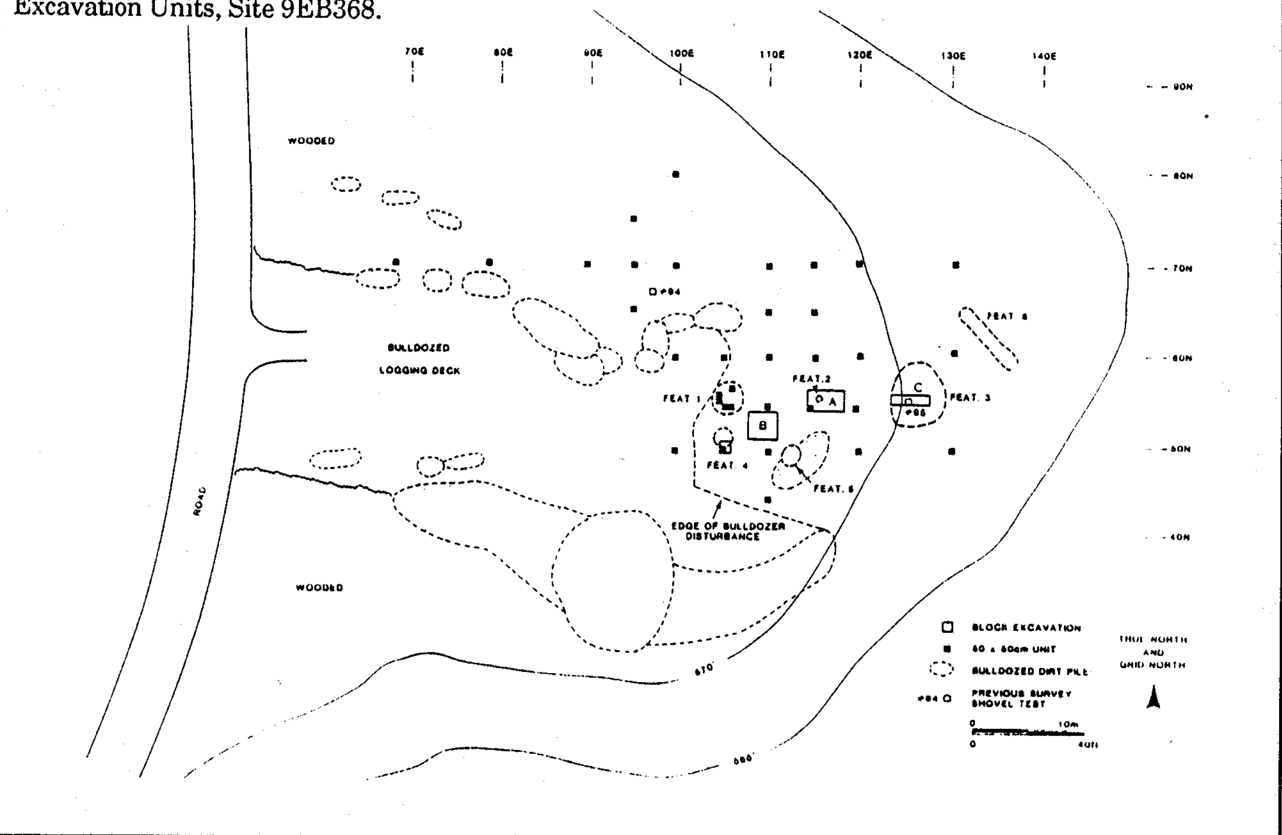
December of 1980, sponsored by the Savannah District and IASD. At this meeting the results of the 1980 fieldwork were reviewed and planning for further investigations was initiated. Besides the representatives from the sponsoring federal agencies and the primary cultural resources contractors, the SHPO archaeological staffs and State Archaeologists from Georgia and South Carolina were present, as well as representatives from the Advisory Council on Historic Preservation and IASD headquarters in Washington. A panel of distinguished senior archaeologists and historians were also brought in, to provide peer review and commentary, and an outside perspective to the evaluations. Included in this body were Roy S. Dickens, Charles H. Faulkner, James B. Griffin, Christopher S. Peebles, and Eleanor Ramsey. The recommendations of all of these reviewers were subsequently used by the IASD and Savannah District archaeological staffs to guide the selection of sites and areas of interest (such as black oral history studies) receiving additional investigation in 1981 and 1982. Sites selected for further work included the Beaverdam Creek Mound, Fort Independence, Clyde Gulley, Gregg Shoals, Harper's Ferry, McCalla Bottoms, Millwood Plantation, Paris Island South, Rocky River, Rucker's Bottom, Rufus Bullard, Sara's Ridge, and Simpson's Field; a black oral history/ethnographic study was also initiated as a result of this meeting.

Smaller scale survey and data recovery efforts continued past the 1982 field season, directed to the park and recreation areas under construction about the reservoir margin (Elliott and Blanton 1985; Jackson and Drucker 1985). A survey of 484 acres in the proposed Coldwater Creek State Park and 113 acres in the Elbert Recreation area, both in Elbert County, Georgia, was conducted from November 1984 to January 1985 (Elliott and Blanton 1985). Fifty eight sites, 47 of which were previously unrecorded, were discovered in cleared upland areas along and just back from the reservoir shoreline. The site density, approximately one site/ten acres, was comparable to that observed in the Wallace Reservoir, which was totally surveyed after clearing (Fish and Hally 1983).

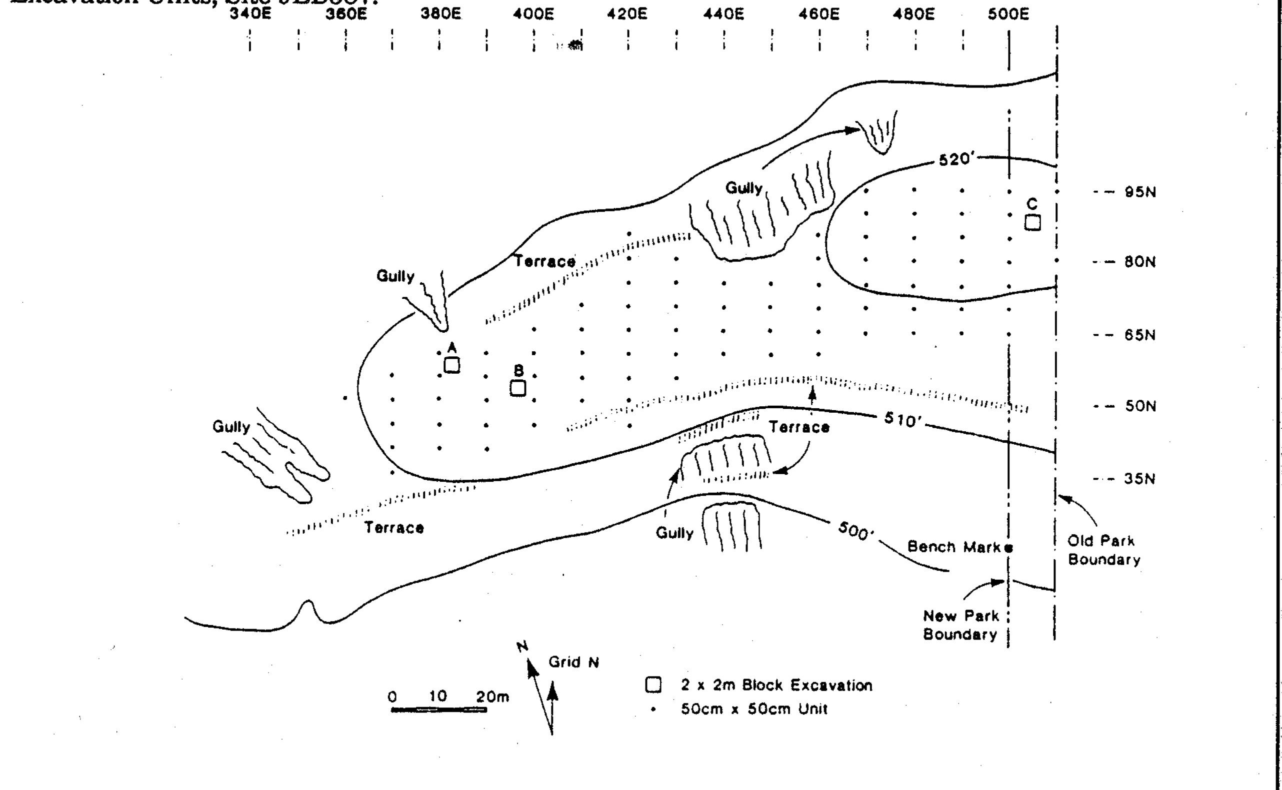
Data recovery operations were subsequently conducted at two upland ridgetop sites, at 9EB368 in the boundaries of the proposed Coldwater Creek State Park, and at 38AB387, in the proposed Calhoun Falls Park, Abbeville County, South Carolina (Figure 6) (Gresham and Wood 1986). At 9EB368, a late nineteenth century farmstead was examined, while at 38AB387 prehistoric components spanning the Middle Archaic through the Mississippian period were found. At both sites the deposits were found to be shallow and somewhat disturbed, precluding stratigraphic analyses. Instead, the horizontal or spatial distributions of artifacts were examined to resolve individual occupations.

Curation and Report Production. Following the completion of each survey, testing, and data recovery project the associated records and collections, including all artifacts, special samples, field and analysis notes, slides, photographs, negatives, and the original camera-ready manuscripts for the final reports were shipped to the Erskine Ramsey Archaeological Repository at Mound State Monument, Moundville, Alabama, for permanent curation. Human skeletal remains are curated at the Laboratory for Human Osteology at the

Excavation Units, Site 9EB368.



Excavation Units, Site 9EB387.



Source: Gresham & Wood 1986: 47, 51

Figure 6. Upland Sites Data Recovery, Sites 9EB368 and 38AB387 Plan Maps.

University of Alabama, Tuscaloosa. As part of the curation arrangement negotiated by the Savannah District and IASD, the entire reservoir assemblage was uniformly inventoried and cataloged by the Mound State Monument staff (for a detailed discussion of the curation procedures, see Futato 1986). The catalog is maintained in computerized format, and locations of specific items within the artifactual and documentary assemblage can be quickly determined and accessed.

The reservoir materials are maintained in a secure, climate-controlled facility. All of the curated documents, (i.e., field and analysis notes, official correspondence, maps, and photographic records) have been microfilmed or copied on acid free paper for long term storage. Photographs, slides, and negatives are maintained in archival quality file sheets, and contact sheets were additionally produced and cataloged for all negatives and slides. The Russell project collections and records remain the property of the U.S. Government. Access to the collections, which are available for study, display, or other purposes, requires the prior written approval of the Savannah District, and must be coordinated with the Curator of Archaeology at Mound State Monument. A mobile home has been established adjacent to the curatorial facility, and is available for use by visiting researchers.

As each project report was completed during the reservoir investigations, up to several hundred copies were printed and made available to interested parties upon request. Monographs summarizing major archaeological, architectural, or historical data recovery operations were released as part of a formal report series, the Russell Papers, ensuring standardized, high quality reproduction. A listing of the Russell Papers, and all other major contract reports produced as a result of the Russell Reservoir investigations, is provided in Appendix II. This technical synthesis, and a popular synthesis to be released in late 1989, represent the final volumes from the reservoir program.

Long Term Objectives of the Site Specific Mitigation Plan

Long term objectives of the Russell SSMP are directed to the preservation and maintenance of significant cultural resources in the project area. Examples of this effort include the development of permanent exhibits describing the cultural resource investigations and their discoveries. To facilitate these investigations, each cultural resources contractor was required to submit 35 captioned slides documenting their investigations, as well as examples of representative artifacts. A major exhibit documenting the overall cultural resources program was established at the Russell Resource Manager's Office and Powerhouse site in 1988, and other exhibits describing specific aspects of the investigations have been placed at state parks located around the reservoir.

At the McCalla State Park, located just outside the floodpool, for example, the South Carolina Department of Parks, Recreation, and Tourism, in conjunction with the Savannah District, has developed a major recreational and educational facility centered on the Caldwell-Hutchison family farm. This living history park, which is scheduled for completion in 1989 or shortly thereafter, will document farm life in the early 1800s in the project area. Part of the development of this complex included the relocation of the Harper dairy barn and well house from the floodpool. Other structures relocated to this and other parks included turbines from early historic mill sites and the Blackwell Bridge, which formerly spanned Beaverdam Creek.

METHODOLOGICAL CONTRIBUTIONS OF THE RUSSELL RESERVOIR CULTURAL RESOURCES PROGRAM

The investigations in the Russell Reservoir incorporated a number of unusual and innovative field, laboratory, and reporting procedures that warrant discussion in any overview of such a project. Many of these contributions were difficult or inappropriate to place in the ensuing period-focused synthetic chapters, yet offer important solutions to problems encountered during the investigations.

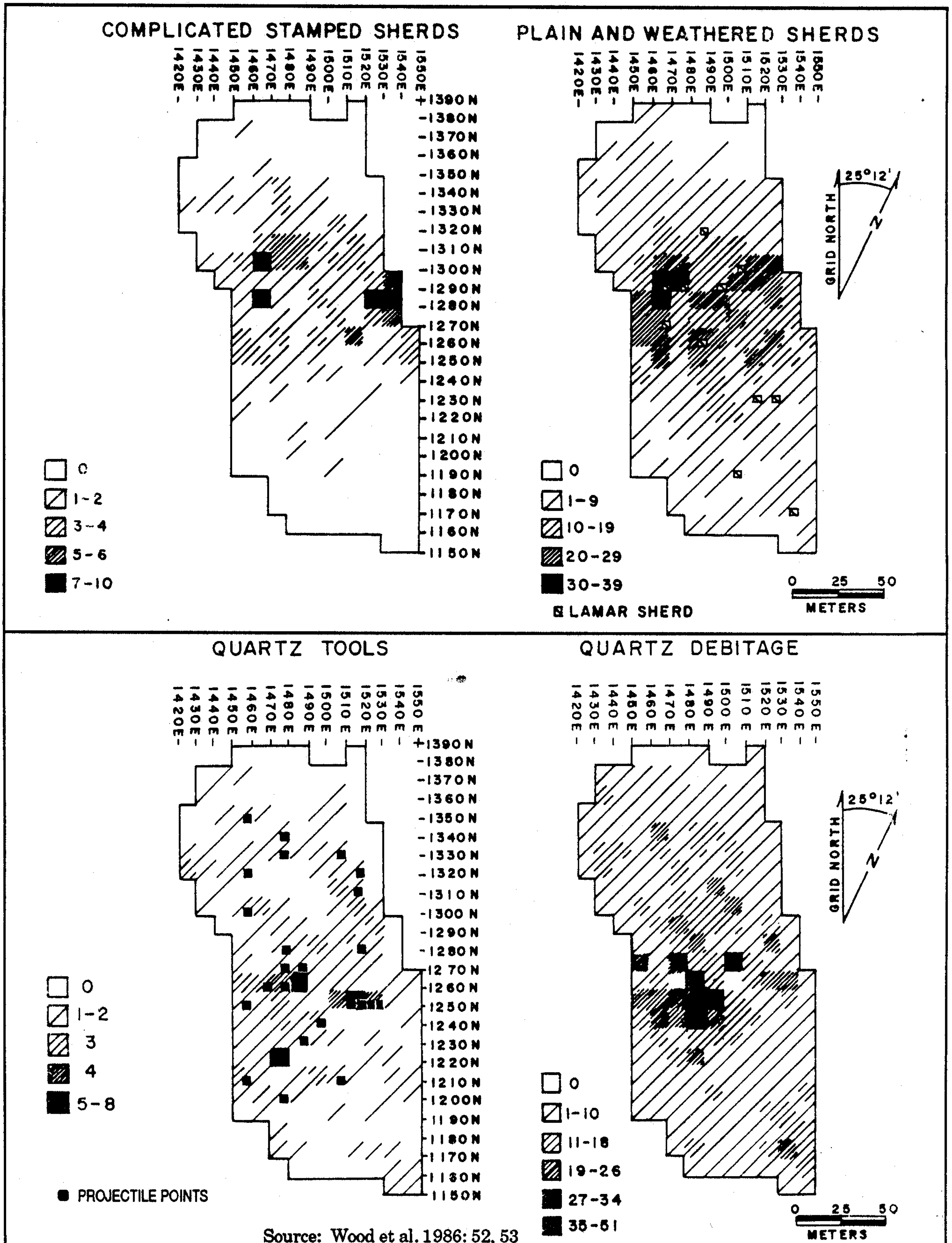
Remote Sensing. Remote sensing procedures were used at several sites in the Russell Reservoir project with mixed results. At Fort Independence a metal detector was used to locate historic artifacts and features with considerable success (Bastian 1982). During the paleoenvironmental investigations conducted by Thunderbird Research Corporation, Inc. ca. 3000 m of proton magnetometer traverses and 150 m of seismic traverses were made, a technique that proved useful for revealing underlying geological horizons (Carbone et al. 1980:6). Proton magnetometry was used at the Beaverdam Creek, Simpson's Field and Sara's Ridge sites in an attempt to detect subsurface magnetic anomalies indicative of features. At Beaverdam Creek, where unusual magnetometer readings were examined with test pits, flood sands containing magnetite produced ambiguous readings (Rudolph and Hally 1985:46). At Sara's Ridge electrical resistivity measurements were taken across portions of the Late Archaic midden. At both Simpson's Field and Sara's Ridge readings were also taken over known features exposed during stripping operations, providing baseline measurements (Wood et al. 1986:23). Given the ease with which archaeological features could be exposed with heavy equipment in these cases, versus the difficulty of interpreting the sometimes ambiguous remote sensing output, however, use of the latter procedures was found to be of little utility as an exploratory tool.

An attempt to combine satellite imagery, aerial photography, and site-specific locational and environmental data from the Russell computerized database, by Earth Resources Data Analysis Systems, Inc. also yielded mixed results. Problems with the primary site data files (i.e., coding errors, missing or inaccurate data), and the absence of detailed environmental data from the project area precluded all but the development of the most general of observations about site/environment relationships. These were summarized in a series of color graphics and slides showing site distributions in the reservoir area. Many of the problems with the database have since been resolved, in part through the component identification analyses associated with the production of this synthesis. Verification of existing locational and environmental data is recommended, however, before extensive use is made of these files.

Controlled Surface Collection Procedures. Controlled surface collections were made at a number of sites in the Russell Reservoir with varying results. During the original intensive survey, Taylor and Smith (1978) commonly made surface collections from subareas within the sites they were examining. Equal sized collection circles systematically dispersed over the site area were employed in some cases, while on other sites general collections were made from mapped subareas of the scatter. The notes and collections from these investigations remain available for intrasite analyses. Most of the controlled surface collections made at reservoir sites employed grid units of varying size. In the investigations at the Beaverdam site group, for example, a 1 percent surface sample was collected at three sites, using systematically dispersed 1 m squares (Campbell and Weed 1984:34-35). At Simpson's Field the cultivated portions of the site, a ca. 2.4 ha area, were gridded into 10 m squares and intensively collected for a maximum of ten minutes per unit (Figure 7; Wood et al. 1986:23,25, 49-51).

The most intensive controlled surface collections were conducted at the Rucker's Bottom site group (Figure 8; Anderson and Schuldenrein 1985), where a stratified systematic unaligned sampling procedure was used to collect a 60,000 square m area extending for almost a kilometer along the river terrace (Haggett 1966:196-198; Redman and Watson 1970). This proved a quick, useful method of obtaining a representative, standardized artifactual and spatial sample from the site surface. The site area was arbitrarily divided into grid blocks 10 m on a side, and one 4.0 m diameter circle was collected in each block, giving a 12.6 percent sample fraction. The collection points were predetermined in the laboratory, with the angle and distance to each sample point calculated from a centrally fixed referent. Once in the field, a transit was set up in the center of the scatter and sample points were located using stadia and tape. The actual transit reference location did not have to be predetermined; once in the field the investigator only had to be careful to establish the datum in such a location as to insure coverage over the entire scatter. By having a list of potential sample points encompassing a far larger area than the anticipated size of the scatter, or by using multiple datums, sites of any size can be readily accommodated. At Rucker's Bottom, 583 sample circles were dispersed and collected, using eight 100 x 100 m sampling frames. Once points were shot in within a block, the datum was relocated 100 m, and the procedure repeated.

As each sample collection point was located, a surveyor wire flag was planted and numbered. Since a stadia rod was used, elevations could be entered for each point, providing the basis for a detailed site contour map. Using a dog-leash method, the collection circle was scribed in the plowed earth with a chaining pin about each sample point, and all artifacts were collected from within this circle. Each circle was collected for a minimum of ten minutes, to ensure that areas with low artifact density were not quickly "written off". Once the controlled



Source: Wood et al. 1986: 52, 53

Figure 7. Artifact Distributions, Simpson's Field (38AN8), Controlled Surface Collections.

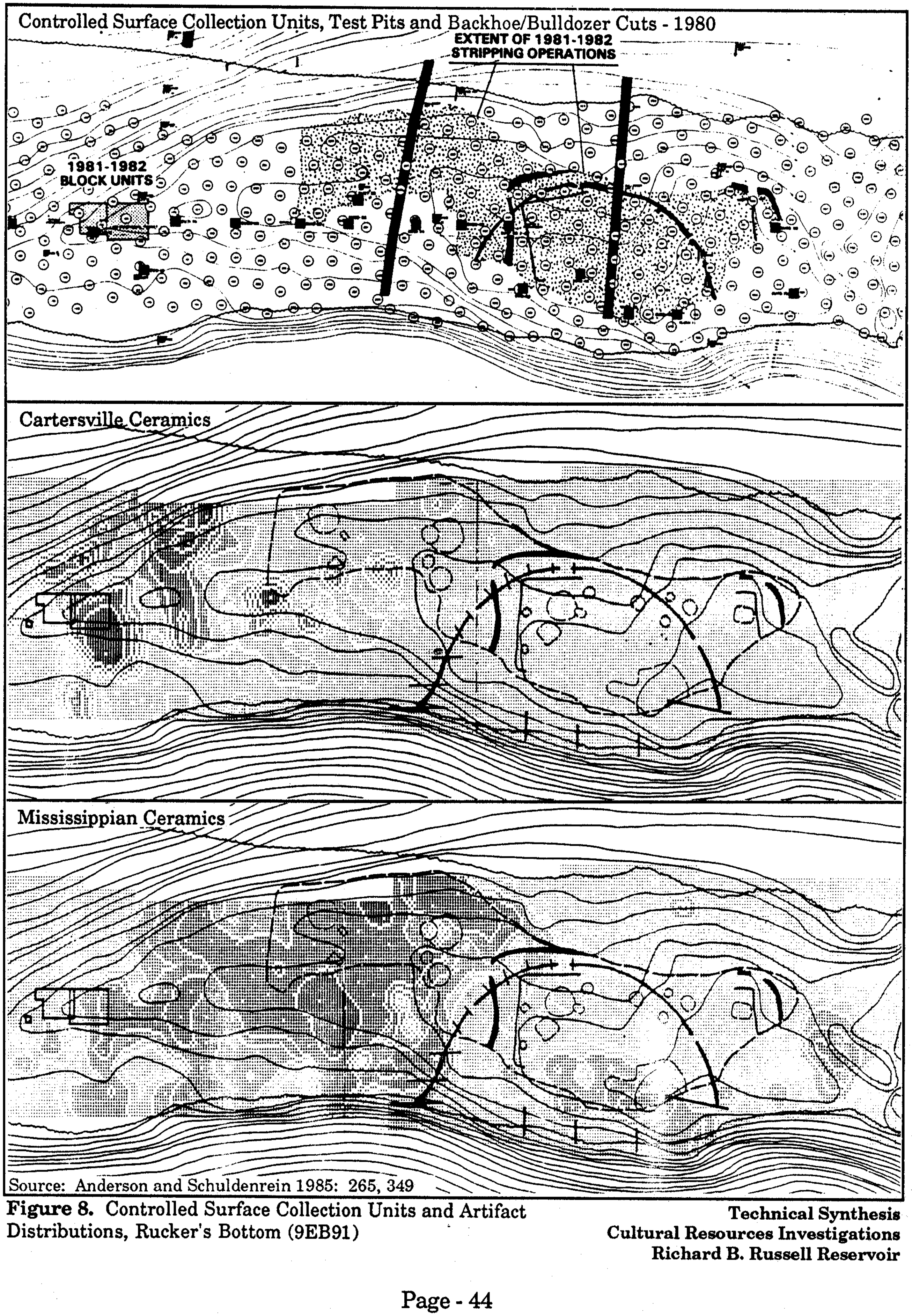
surface collection had been made, a general or "grab sample" collection was obtained from the surrounding area, and again labeled in reference to the sample point. In such a manner, the location of every surface artifact was known to within approximately 10 m. At Rucker's Bottom a team of six mapped and collected the entire 60,000 square m scatter using this procedure in five days.

The controlled surface collection procedures employed in the reservoir did resolve artifact concentrations at each site. The effectiveness of the procedure was only demonstrated at Simpson's Field and Rucker's Bottom, however, where wide-area stripping occurred after collection. At those sites, where appreciable fractions of the scatter were collected (i.e., 12.6% and 100%, respectively), a close association between surface artifact and subsurface feature incidence was demonstrated. The accuracy of smaller sample fractions, such as the one percent used to define artifact concentrations by the New World Research team (e.g., Campbell & Weed 1980) could not be effectively tested, as only small blocks were opened following the surface collection. This sample fraction, on the face of it, appears to have been too low; what was evident from the report was that few artifacts were recovered using this strategy, and their utility in cultural historical analyses was comparatively minimal.

Shovel Testing Procedures. Systematically dispersed posthole and shovel tests were used to great effect at a number of sites in the reservoir to define the horizontal extent and vertical stratification of cultural deposits. The most extensive program employing these kinds of units was the 84 Sites Testing Program (Figure 9; Goodyear et al. 1983). This study provided an excellent site sample from the upland portions of the project area, documenting how badly disturbed and deflated sites in this zone tended to be due to historic agricultural practices and subsequent erosion. These same data also indicated, however, that the collection of numerous small samples could effectively reveal intrasite patterning and discrete activity areas even on highly disturbed sites (e.g., Goodyear et al. 1983:52-56; Gresham and Wood 1986).

The effectiveness of soil augering for detecting buried cultural deposits and soil horizons was demonstrated by both the paleoenvironmental research program (e.g., Foss et al. 1985; Segovia 1985), and the archaeological investigations, particularly the 84 Sites Testing Program (e.g., Goodyear et al. 1983:141-145). Use of posthole diggers appeared to yield ever better results than augering, at least for exploring deposits under ca. 1.5 m in depth. Systematically dispersed posthole-digger tests 1.5 m deep, and 60 cm in diameter at the top and tapering to 30 cm in diameter at the base were excavated at the six sites examined by Southeastern Wildlife Services, Inc. (Wood et al. 1986:24). All fill was routinely screened through 1/4 inch mesh, and the procedure proved quite successful in delimiting artifact horizons and midden areas.

Shovel tests, typically ca. 30 cm in diameter, were employed by many survey, testing, and data recovery projects to help define site contents. Unfortunately, statements as to whether screening was routinely employed, or maps giving the precise location of these tests, were not always provided. Such data must be



Source: Anderson and Schuldenrein 1985: 265, 349

Figure 8. Controlled Surface Collection Units and Artifact Distributions, Rucker's Bottom (9EB91)

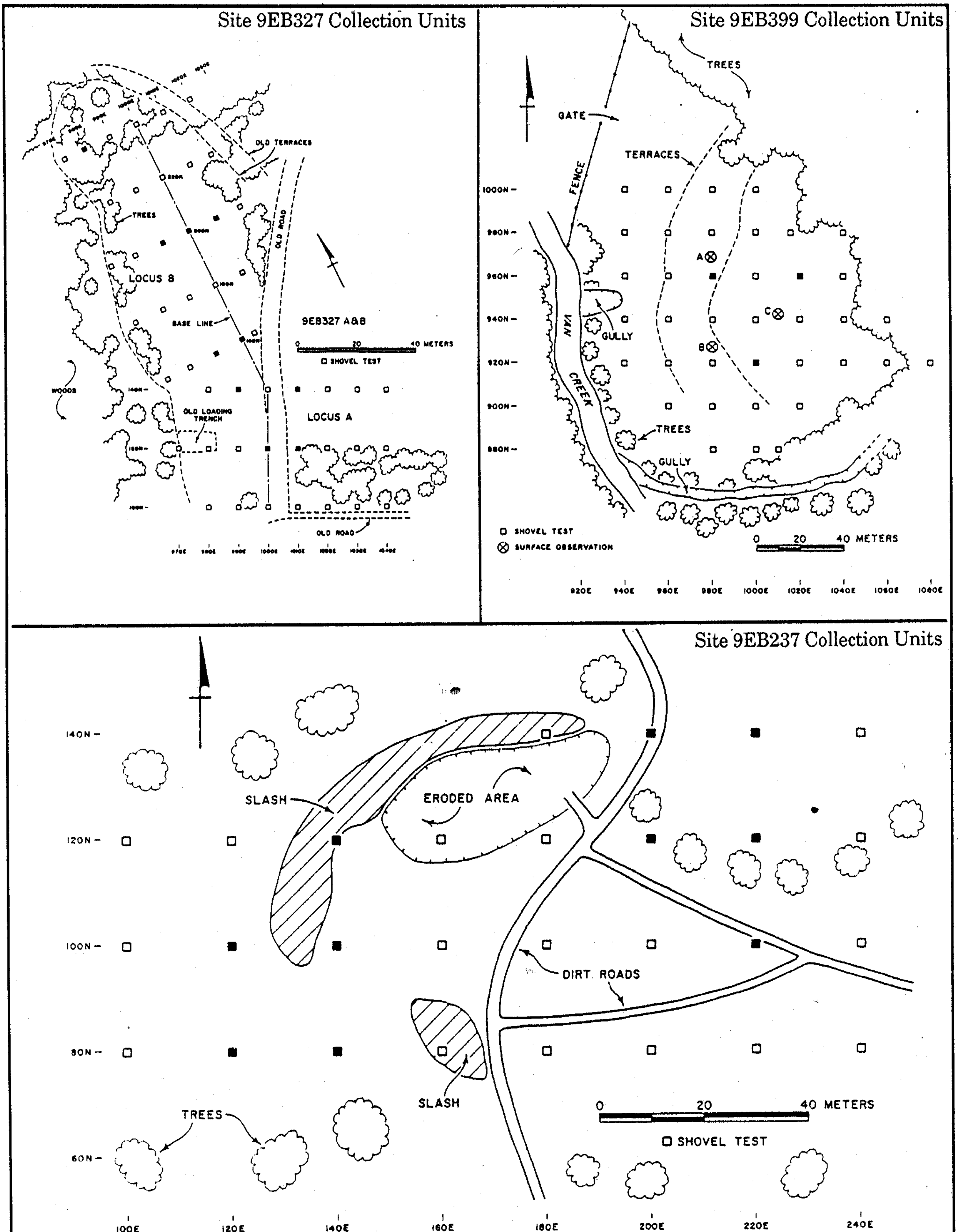
included in field notes, site forms, and reports from investigations where shovel testing is used.

Large Area Excavation Strategies. Wide area stripping was used on several projects to locate subsurface features. A small bulldozer, a tractor with a front end loader, and a backhoe with a three foot toothless bucket were used to remove overburden at several sites by archaeologists from Southeastern Wildlife Services, Inc., with final cleaning done largely by hand using shovel skimming (Wood et al. 1986:24-25). A D-6 bulldozer, a motorgrader, and a backhoe/front end loader or a tractor with a pull blade were successively used by archaeologists from Commonwealth Associates, Inc. at Rucker's Bottom to remove overburden and expose features (Anderson and Schuldenrein 1985). After final scraping with the tractor-pulled blade, only minimal shovel skimming was needed. A backhoe and a motorized pan were used by SCIAA archaeologists at the Clyde Gulley site, a procedure that required extensive shovel skimming and hand excavation (Tippitt and Marquardt 1984).

Backhoes were used by several teams to remove plowzone levels from small block areas, and by virtually all of the contractors to dig exploratory stratigraphic columns. Where useful results were obtained using this equipment, it reflected the conjunction of skilled operators (minimizing damage to significant deposits) and archaeologists capable of recognizing and interpreting the deposits. Backhoe excavations proved extremely beneficial for the recovery of machine components at the seven mill sites (Newman 1984).

On several of the projects where heavy equipment was employed, hundreds or even thousands of features were exposed. This success, however, created great logistical difficulties in examination. To determine whether features were cultural disturbances, random samples of feature stains were selected and excavated at Simpson's Field (20 percent random sample of stains; Wood et al. 1986:28) and Rucker's Bottom (212 features, for a 17.5 % random sample of the 1208 stains encountered during the 1981 field season; Anderson and Schuldenrein 1985:453). These procedures helped delimit cultural from noncultural features, and led to the detection and examination of feature-types that might have been overlooked by more intuitive selection schemes.

Contractors dealt with rapidly drying deposits in their excavation blocks in innovative ways. A sprinkler system was set up during the Mississippian structure excavation at 9EB208, to wet down areas that had become sun-baked (Campbell and Weed 1984:100). A similar system was used at Clyde Gulley, where a Mississippian component was examined. Two pumps were set up on the river, with water hoses run to lawn sprinklers dispersed over the midden area (Tippitt and Marquardt 1984:8-20). During the Mississippian village excavations at Rucker's Bottom, the presence of several pieces of heavy machinery on the site throughout the excavations meant that only enough area that could be handled by the crew needed to be stripped each day. Initial stripping (with a D-6 bulldozer or motor grader) proceeded until ca. 5 to 10 cm above the level where features appeared. The final soil covering, which retained moisture for several days,



(Source: Goodyear et al. 1983: 28, 53, 75)

Figure 9. Systematic Shovel Testing, 84 Sites Testing Program.

preventing stains from drying out, was removed as needed with a small tractor-pulled blade; each day throughout the final field season between 100 and 200 square meters of the village area were exposed and mapped.

Feature Excavation. To examine features, a variety of procedures were employed. Traditional hand excavation and recording procedures were most typical. Somewhat unusual procedures included the use of a 2.5 cm auger by archaeologists from Southeastern Wildlife Services, Inc. to great effect to quickly determine the depth and composition of feature fill (Wood et al. 1986:28). At the Clyde Gulley site a one inch split spoon auger was used to great effect to map the thickness of the Mississippian midden (Tippitt and Marquardt 1984:8-20; see Chapter VII, pp. 300-302). At the Rucker's Bottom site a backhoe was used to remove a ca. 20 m section of a stockade ditch; this same backhoe had earlier been used to define one of the site ditch lines, when it was first found, by using a series of short slot trenches (Anderson and Schuldenrein 1985:282, 285).

Block Unit Excavation. Innovative procedures were used by several of the project teams in the excavation of large or deep block units. The Commonwealth investigations, for example, routinely used a backhoe to move earth to waterscreens placed by the river edge (Anderson and Schuldenrein 1985:279). Unit fill was shoveled onto plastic drop cloths, from which it was lifted into the front end loader bucket. The fill was then driven to and emptied directly into 8 x 3 ft reinforced aluminum frames with 1/8 inch screens set up by the river, where it was washed using hoses from pumps located at the base of the bank, by the waters edge. This procedure permitted the excavation, transport, and waterscreening of several hundred cubic meters of feature and level fill over the course of the excavations.

At Gregg Shoals, where the primary excavation block was opened to a depth of 4.25 m, fill from the lower levels was removed using a winch and boom (Tippitt and Marquardt 1984:6-3). When the deep excavation block was expanded, fill was lifted out of the lower levels using the backhoe bucket as a mobile boom (Tippitt and Marquardt 1984:7-38). All fill was then carried to sectioned waterscreens, which had one-half and one-eighth inch hinged mesh screens stacked atop one another, permitting the separation of coarse and fine artifact fractions in the field. Discharge from these screens, which ran into an enclosed tub built into the frame, was carried away from the work area in plastic pipes (Tippitt and Marquardt 1984:6-5). To facilitate personnel and equipment movement into and out of the excavation block, and minimize damage to profiles, an adjustable ladder and ramp was constructed.

To maximize information recovery from the deeper deposits at Gregg Shoals, the advice of specialists who had conducted deep site excavations elsewhere in the region was solicited (Tippitt and Marquardt 1984:7-1). The use of bucket auger coring and precision backhoe testing at the site, and the close coordination of the archaeological and the paleoenvironmental investigations, proved a highly efficient method for determining the horizontal and vertical extent of the cultural deposits. A toothless bucket was used during the backhoe testing, with level depth measured and recorded, and fill screened using mechanical sifters (Tippitt and Marquardt 1984:8-1).

Historical Archaeological Analyses. Several innovative analytical techniques were applied to the historical archaeology of the Russell Reservoir. Gray's (1983) research at five agricultural sites in the reservoir involved the excavation of test trenches through burnt dwellings to determine if internal divisions could be read from the archaeological remains, and to evaluate South's (1977) artifact patterning concept. Her work suggested that certain functionally diagnostic artifacts (i.e. bedsprings) were indicators of the internal dynamics of dwellings, but that pattern variation did not reveal such divisions (Gray 1983:221). Gray also noted the influence of architectural elements on artifact patterning interpretation, and proposed an "Expanded Historic Artifacts Classification System" for use with nineteenth- and twentieth-century site analyses (Gray 1983:194-195). This system has some validity, but in general is too similar to South's (1977) original formulation of artifact patterning groups to warrant its replacement. The utility of excavating recently burnt structures was not apparent, since most of the information Gray was able to reveal could have been recovered in greater detail and at less cost through oral history. The project does represent an interesting methodological experiment.

Orser et al. (1987:709-740) applied a number of ceramic analyses to the problem of social status at Millwood Plantation. Their research indicates that the number of vessels present, and number of ceramic types present per structure is a relatively accurate reflection of social status in the late nineteenth century, and that vessel decoration is a less accurate means of revealing status on antebellum sites. Their quantifications and ranking of structures by the number of types and vessels present is an interesting application, which should receive additional testing on other late nineteenth century sites.

Aerial Photography. Low level aerial photography was used to document archaeological fieldwork with great success in two of the projects, notably those conducted by Commonwealth Associates (Anderson and Schuldenrein 1985:vi) and the SCIAA (Madry 1984). Several hundred black and white and color shots were taken of the seven sites examined by Commonwealth Associates, and aerials occur throughout the final project report, illustrating the site and excavation setting to great effect (e.g., see Figure 39, this volume). The cost of the aerial photography was minimal; light plane rental typically ran to between $30.00 to $50.00/hour, and the film itself was comparatively inexpensive. Taking large numbers of shots, with careful attention to exposure settings, however, was necessary to ensure useful results. During the SCIAA investigations, black and white, color slide, and false color infrared aerials were shot at a number of reservoir sites, including Gregg Shoals, Clyde Gulley, Millwood, and Rucker's Bottom. The river channel was also photographed from Gregg Shoals south to the Russell Dam site, and used to prepare black and white and color photo mosaics of the region at a scale of 1:3400. These mosaics provide a valuable record of channel features, including fishtraps, weirs, and mill dams that had previously only been recorded from the bank.

Paleoenvironmental and Geoarchaeological Research. A comprehensive program of paleoenvironmental research accompanied the initial reservoir intensive testing investigations, with studies directed to terrace and channel geomorphology (Segovia 1985), soils (Foss et al. 1985), and palynology (Sheehan et al. 1985). This and subsequent, site-specific paleoenvironmental research is detailed in Chapter III. The reservoir-wide programs were conducted primarily in 1979 and 1980, when the investigators were able to collect samples from many of the sites that were being examined at that time. The results of these investigations, beyond contributing to individual site reports, were used to prepare topical overviews on these subjects, encompassing the general reservoir area. More detailed, site-specific geoarchaeological research was conducted at Gregg Shoals and Clyde Gulley by the SCIAA (Upchurch 1984), at the seven sites examined by Commonwealth Associates (Anderson and Schuldenrein 1985), and at many of the sites tested by Thunderbird Research Corporation (Thompson and Gardner 1983; Gardner et al. 1983).

AN EVALUATION OF THE RESERVOIR INVESTIGATIONS

Strengths and weaknesses exist in any research program, and the Russell Reservoir project was no exception. The lessons learned from this work, both positive and negative, need to be reviewed to help guide future projects of this magnitude. In the pages that follow both positive and less successful aspects of the program are recounted in some detail. This commentary is not advanced to be negative, or denigrate individual contractors or agency personnel. On the contrary, every effort has been made to be evenhanded. The Russell program is widely regarded as a model cultural resources investigation program, and rightly so. Room for improvement is always possible, however, and hopefully the next major reservoir project can benefit from what follows.

Viewed in overall perspective, the cultural resources investigations that were conducted in the Richard B. Russell Reservoir formed a holistic, well-knit research program. A wide range of site types and topics were examined, in a sincere and comprehensive effort to encompass the range of human occupations and activities that had occurred in the area. The archaeological, historical, and architectural data that were collected are both extensive and important samples, encompassing hundreds of locations throughout the reservoir. Major research programs were directed to virtually every period of human occupation. Upon completion, project results were quickly published and made available to interested parties. Finally, the collections that were gathered were carefully curated and documented, and serve as a valuable resource for future investigators.

The Use of Multiple Contractors. The use of researchers from widely varying backgrounds and institutions offered both very real advantages and disadvantages. On the positive side, the large numbers of investigators actively involved in reservoir projects meant that a diversity of approaches and perspectives could be brought to bear on local research problems. Many of the best results from the project, and in subsequent ongoing research with the reservoir data, it is argued, emerged because researchers from differing institutions had the opportunity to share, discuss, and build on their differing interpretations. Recent syntheses of the Early Archaic and Mississippian occupations in the Savannah River Valley (e.g., Anderson et al. 1986; Hally and Rudolph 1986; Anderson and Hanson 1988), of paleosubsistence data from the drainage (Reitz et al. 1988), or on-going arguments about the organization of plantation labor (e.g., Orser and Holland 1984) or Late Woodland systematics (c.f., Anderson 1985a; Rudolph 1985, 1986), for example, would probably have never appeared had only one team been at work. These research advancements, it is argued, outweigh negative aspects of this kind of contracting.

On the negative side, use of a wide range of investigators resulted in fieldwork and reports of varying quality, although through stringent peer review (project monitoring by agency personnel) from the proposal stage through the final report, this effect was lessened. Where major problems were observed, contracts were terminated, and the work completed by other investigators; this proved necessary in a small number of cases. Inconsistencies in artifact analyses and descriptions between investigators was another drawback involving large numbers of researchers. Efforts to overcome this problem included agency-sponsored meetings of the contractors that dealt with topics such as ceramic typology and lithic raw material classification. It can also be argued that such ambiguities can be overcome through collections analyses, like the effort employed in the present synthesis.

Agency Management/Funding Considerations. Challenges of the field and laboratory research program aside, project management proved to be a critical factor to the success of the reservoir investigations. The considerable technical achievements that were realized, it should be stressed, had to come about with concern for very real factors of time, funding, and human strengths and frailties. While fieldwork began as early as 1969, the first intensive investigations did not begin until 1977, with virtually all of the fieldwork conducted over the next six years, through 1982. Most of the site-specific intensive testing and data recovery effort, in fact, took place within a three year period, from late 1978 to late 1981. This scheduling was closely linked to the funding process, which could not be drawn out.

The cultural resources program undertaken in the Russell project area first had to be justified, following the compliance process discussed previously, and then had to be implemented. Implementation was dependent upon available funding, which was tied in to project construction schedules. Funding for cultural resources work typically came available with construction monies, and had to be obligated the same fiscal year. This made project management particularly critical, since large sums of money had to be spent over comparatively brief periods of time, and large numbers and widely varying kinds of cultural resources had to be accommodated. Much of this was accomplished through the careful evaluation of existing cultural resources information from the reservoir, and its use in the preparation of Scopes of Work/Requests for Proposals that would meet the perceived research needs. The fact that successful investigations were accomplished over such widely differing areas of research as prehistoric and historic archaeology, architectural documentation, oral history, history, park/exhibit preparation, and paleoenvironmental reconstruction, indicates the general success of the program.

Agency planning and implementation of the field investigations, and the collection and evaluation of data from this work, to guide subsequent research efforts, proved to be the most pivotal aspect of project management. Problems complicating this process bear documentation, so they can be avoided in the future. Poor coordination between projects and inconsistent reporting standards, for example, reduced the utility of the data collected during the initial investigations in the reservoir area. Many of the early survey records that were prepared, for example, contained little more than locational data and artifact lists, with minimal information about the extent and context of the sites themselves (Carbone et al. 1980:28). Major sources of bias were present that had to be recognized and controlled. Floodplain areas saw minimal survey coverage until comparatively late in the investigations, due to a failure of initial surveys to recognize and accommodate recent historic deposition:

> The seemingly low density of sites in the floodplain reported in earlier investigations (Hutto 1970; Hemmings 1970; and Taylor and Smith 1978) is largely a product of the fact that most of the pre-1750 A.D. surface of the floodplain is buried under up to a meter of sediment (Carbone et al. 1980:29).

In all fairness to the field investigators, however, it should be noted that the planning for these early projects did not address these concerns, and given the budgets that were allocated, only comparatively minimal work could have been done had the strategies that were later adopted been considered. The level of effort that would have been sufficient to complete an intensive survey of the project area was not fully recognized, and funded, until 1978 and 1979.

In some cases organizational failures entered into the picture, confounding the best planning. Due to unanticipated delays in the completion of some reports, for example, the results of some of the early survey and testing efforts were not readily available to the federal archaeologists managing the reservoir investigations, or to subsequent researchers working on the sites in question. In particular, the results of the SCIAA's 1978 84 sites testing program were not widely available until 1983, well after all the mitigation stage field investigations were completed, and in some cases after the final mitigation reports on tested sites had gone to press. These results had to be prepared, in fact, by a completely different team than the one that did the work (Goodyear et al. 1983). Problems like these had an effect on the selection of sites for intensive data recovery operations. Of the 23 prehistoric sites in the reservoir that eventually went to data recovery, all but four - 9EB21 (Late Archaic deposits), 9EB208, 9EB368, and 38AB387 - had been found by 1977, and most were tested during the 1979 season. Few sites tested after 1979 received further work, even though dense, deeply stratified deposits were found at several locations (Gardner et al. 1983; Thompson and Gardner 1983).

This was in part due to the presumed redundant nature of these deposits, and the need to maximize funding at sites with proven resources; sites found after 1979 had little history of research behind them, and hence only the most unusual were examined further.

Beyond delays in the completion of draft or final reports, which are unfortunately almost a truism in archaeological research, collections and field records from earlier work were not always available to subsequent investigators. The primary records from the Thunderbird Research Corporation's 1979 and 1980 testing investigations (Gardner and Barse 1980; Gardner et al. 1983) were not available at the time these sites went to mitigation, for example, precluding the successful relocation of the initial test units in some cases (Wood et al. 1986:55). Even when records from earlier investigations were available, the occasional inconsistent or ambiguous placement of permanent datums rendered unit relocation difficult.

The Field Investigation Program. In spite of a conscious and largely successful attempt to deal with the range of cultural resources to be found in the reservoir, some site categories were only minimally treated. In particular fish weirs, highlighted in earlier survey investigations, were largely ignored in subsequent research. Other categories of sites that saw little investigation, yet were known to be present, included ferry stations, and features such as barges or boats buried or submerged in the channel. At some sites where significant cultural remains were found during the testing or initial data recovery investigations no follow-up research was conducted. In most cases this was due to the apparent redundancy of the remains with those at other sites where work continued. In a few cases, however, mistakes were made by both the contractors and the managing agencies which, while easy to see in hindsight, were probably unavoidable at the time.

Evidence for a probable Mississippian hamlet with numerous well preserved features, for example, was found in a small block unit opened at 9EB92 (Campbell and Weed 1984:57-73). Unfortunately, this discovery was not fully appreciated until the laboratory analysis phase. No further work was done at the site, and no other hamlets, representing the lower end of the local Mississippian settlement hierarchy, were thoroughly examined in the project area. A similar incident occurred during the Rucker's Bottom excavations, when a large probable public building or rotunda (Structure 7), located in the late Mississippian village, went largely unexamined because it was not recognized until the final map was assembled and scrutinized in the laboratory (Anderson and Schuldenrein 1985:539-541).

An apparently dense Early Mississippian feature and artifact assemblage at the Clyde Gulley site saw little examination beyond the hand excavation of a small block and several test units; stripping stopped when the top of the midden was reached (Tippitt and Marquardt 1984). Minimally, the midden at the site should have been stripped away and a large area carefully shovel skimmed to resolve the community plan. Likewise, at Rucker's Bottom, where some 10,000 square meters of two overlapping Mississippian villages were examined, the investigators were unable to complete the mapping of the entire village plan, in spite of an extensive and comparatively well-funded effort. At Rucker's Bottom the need for deep, wide area stripping (completely removing obscuring midden staining, and not stopping when features first appeared; see also p. 272) was not fully appreciated until almost too late, in the third field season (Anderson and Schuldenrein 1985:286). Greater perspicuity on the part of the project field directors, and better (or more forceful) guidance from the monitoring agency personnel, it is suggested, might have overcome some of these problems.

It is probable that additional funding directed to sites like Rocky River (Late Archaic), Simpson's Field (Late Woodland), Clyde Gulley (Early Mississippian), 9EB92 (Middle Mississippian), and Rucker's Bottom (Late Woodland and Mississippian) might have markedly increased the information recovered from these sites, and our knowledge of these periods in the reservoir area. Unfortunately, the complexity of these sites was sometimes not fully appreciated until near the end or after the close of field investigations, so this must remain speculative. It should be emphasized, furthermore, that a great deal was actually learned from all of these sites. Maintenance of funding reserves until well into the data recovery period might have been avoided some of these problems. The nature of the Federal funding process in this case, however, with funds available on a fiscal year basis and in proportion to construction funding levels, precluded this option.

The Russell Reservoir program illustrated the difficulties of surveying in overgrown conditions in the southeastern United States. Comparison with the Wallace Reservoir investigations in the Oconee drainage of central Georgia is instructive. Roughly comparable site densities were found in each reservoir when they were initially surveyed in predominantly overgrown condition (c.f., DePratter et al. 1975; Taylor and Smith 1978). The Wallace Reservoir area, however, was completely cleared before filling, and then re-surveyed. The number of sites found in the subsequent re-survey was almost an order of magnitude greater (Fish and Hally 1983). Even allowing for local differences, the example indicates potential coverage biases in the Russell sample that must be acknowledged (see also Elliott and Blanton 1985:77, 89 for further discussion of this problem in the Russell area).

The historical research of the reservoir suggests a holistic intent without solid holistic goals. For example, excavations at the mill sites in the project area focused on technological elements, ignoring adjacent communities (such as the one present at Pearle Mill) and the opportunity to address the social dimension (Newman 1984). The plantation archaeology was weakened by the fact that most of the sites under study continued to be occupied into the postbellum period, making it difficult to segregate antebellum from postbellum remains (Orser et al. 1987; Gray 1983; Drucker et al. 1983), although this facilitated antebellum/postbellum comparisons. No securely documented slave habitations were investigated in detail during the historical archaeology. This was partially the result of ground cover, erosion, and colluviation conditions at the time of the intensive survey, since only those historic sites with visible architectural ruins or surface scatters of materials were identified. Sites with low architectural and artifactual residue (a characteristic of slave occupations) were thus most likely missed. Additional survey should have been conducted at those plantations selected for testing and data recovery, with the goal of identifying outlying slave villages (but see Gray 1983:132). Finally the partial segregation of architectural and archaeological sites provided a false dichotomy in the historical research. While testing was done at the Grogan, Harper, Hutchison, and Cleveland houses by Brown and Cobb, data recovery programs were conducted only at the Harper house. Some of the farmstead and plantation sites documented by HABS undoubtedly also possessed significant archaeological remains, and the coordinated architectural and archaeological investigation of these sites would have been illuminating.

A final oversight in the reservoir cultural resources program was the absence of a thorough upland site survey and mitigation program. Only two upland sites saw data recovery investigation (Gresham and Wood 1986), and no surveys were conducted during the reservoir clearing operations. Thorough shoreline surveys conducted during periods of low water should go a long way towards rectifying this situation; the only such study undertaken to date effectively tripled the numbers of sites within an area previously intensively surveyed (Elliott and Blanton 1985).

Analysis Considerations. A much less serious problem brought about by budgetary considerations was the level of analyses presented in many of the published reports. The vast majority of available project funds for many projects were directed to field work and collection processing and cataloging, leaving minimal time for analysis and reporting. While this led to the collection of more assemblage information than might have otherwise been possible, at some sites whole categories of data were only minimally examined and reported.

Detailed paleosubsistence analyses, to consider one category, were typically conducted on only a fraction of the samples collected during the investigations, with the level of effort varying markedly from project to project. Even where detailed analyses were conducted, ethnobotanical and particularly the zooarchaeological investigations usually focused first on the 1/4 inch screened samples, and then to a lesser extent on fine screen and flotation samples. While judicious sampling of paleobotanical remains is essential to reduce workloads and expenses to manageable levels, in some cases far too little work was done. Fill from only one 1 m square each, for example, was examined at the critically important, sealed preceramic Late Archaic middens found at Paris Island South and Simpson's Field (Gardner 1986a). At Simpson's Field, detailed paleosubsistence analyses were conducted on samples from only five of the 15 major identifiable Late Woodland features. This work included the analysis of charcoal samples from three features and pollen samples from two other features (Gardner 1986a; Sheehan 1986; Wood et al. 1986:106-107), a fairly minimal effort considering the fact that an extensive and (within the reservoir) unique Late Woodland feature assemblage was identified at the site. While important results were obtained from these paleosubsistence analyses, their representativeness can and has been challenged (Gardner 1986a:392).

Fortunately, this is a problem that will correct itself over time. All of the Russell collections, it should be stressed, have been carefully curated, and are available to future researchers. Data that can be used to explore a wealth of topics is available within the collections, and will undoubtedly attract attention in the years ahead. Regarding the paleosubsistence investigations, large numbers of flotation, pollen, and zooarchaeological samples are curated within the project assemblages, and are in excellent condition. The research potential of these samples cannot be underestimated, and has already prompted several major studies (Dickens 1985; Reitz et al. 1988; Rudolph n.d.).

CONCLUSIONS

In spite of some very real problems, a tremendous amount of cultural resources research was accomplished in the Russell Reservoir, on a wide range of topics. The work in the Richard B. Russell project area has revolutionized our understanding of the prehistoric and historic occupation of this portion of the southeast, and continues to prompt research. The remainder of this report documents the extent of this accomplishment, and gives some idea of its significance. As a synthesis, its purpose is to provide a broad picture, or overview, and to guide investigators to the primary sources and collections, where far greater data is available for examination.

III. PALEOENVIRONMENTAL HISTORY AND ARCHAEOLOGY IN THE RUSSELL LAKE AREA

THE PHYSICAL ENVIRONMENT

The Savannah River, extending from the Blue Ridge to the Atlantic Ocean, is one of the major drainages of the South Atlantic Slope, lying near the transitional area between the Atlantic and the Gulf coastal watersheds. The basin is approximately 320 kilometers in length and covers 10,600 square kilometers. The basin is comparatively narrow, draining a much smaller extent than the two major drainages that flank it, the Santee to the northwest and the Ocmulgee to the southwest. Formed in the Appalachian Mountains by the confluence of the Tugalo and Seneca Rivers, the river flows in a linear course from northwest to southeast to the Atlantic. Several fairly extensive tributary streams enter the river, including (from north to south) Rocky River, Broad River, and Little River in the piedmont, and Upper Three Runs, Lower Three Runs, and Brier Creek in the coastal plain.

The Richard B. Russell Multiple Resource Area is located in the central portion of the piedmont physiographic province, in Elbert and Hart Counties, Georgia and Abbeville and Anderson Counties, South Carolina. The maximum floodpool covers 26,650 acres, along an approximately 28 mile stretch of the river between the headwaters of Thurmond Lake and the dam forming Lake Hartwell. The Russell dam site is 275.1 river miles upstream from the mouth of the river, 29.9 miles below the Hartwell Dam, and 37.4 miles above the Thurmond Dam. The elevation of the maximum floodpool is 457 feet above mean sea level, with 546 miles of shoreline. Portions of several major tributaries inundated by the reservoir, proceeding from south to north, include Beaverdam Creek, Rocky River, Van Creek, Allen Creek, Coldwater Creek, Pickens Creek, Cedar Creek, Little Generostee Creek, and Big Generostee Creek.

In the area of the Russell Reservoir the channel was deeply incised. The floodplain was comparatively narrow and well defined, with islands, shoals, and small waterfalls common (Hall and Hoyt 1905). Major shoals in the reservoir area, proceeding from north to south, included:

> Turners Shoals, with a fall of 17 feet in two and a half miles, (2) Middleton Shoals, with a fall of 11 feet in one and one quarter miles, (3) Gregg Shoals with a fall of seven feet in one mile, (4) Cherokee Shoals with a fall of 19 feet in three miles, and (5) Trotters Shoals with a fall of 69 feet in six miles (Hemmings 1970:5-6).

Floodplains rarely extended more than 250 meters to either side of the channel, with fairly steep hills rising abruptly at the edge of the floodplain, to elevations of 100 feet or more above the floodplain. The piedmont is an eroded peneplain, and at

Trotter's Shoals the river formerly lay about 170 feet below the upland surface.

Floodplain soils were highly prized by early settlers in the upper Savannah River (McClendon 1910; Wood et al. 1986:8). Prior to the extensive farming and land clearing associated with historic settlement, floodplain soils were highly fertile and easily tilled "brownish or black sandy loam to loam" (McClendon 1910:24). Beginning in the early nineteenth century clearing of the upland accelerated tremendously, resulting in extensive sheet erosion, increased flooding, aggradation of stream beds, and extensive scouring or deposition in floodplain areas (Trimble 1969). Formerly fertile floodplain soils were either scoured away or buried under coarse sands on terrace crests and progressively finer sediments away from the crests; in slackwater environments thick clay deposits that impede fertility have built up (Campbell & Weed 1984:8-9).

PALEOVEGETATIONAL COMMUNITIES

The initial human occupation of the upper Savannah River area in all probability occurred between 15,000 and 11,500 years ago, during the Late Glacial era. During this interval sea level was much lower than at the present, up to 70 or more meters, and the Atlantic and Gulf shorelines were considerably seaward of their present location. As the continental ice sheets retreated in the north, water was returned to the oceans, and large sections of the continental shelf were inundated; by 9,000 B.P. sea level was within a few meters of its present stand. Widespread extinctions accompanied these environmental changes in North America, specifically the loss of 33 genera of large mammals, including the Equidae and Camelidae (horses and camels), and all the members of the order Proboscidea (elephants) (Martin 1984:361-363). Contemporary analyses indicate that these extinctions were complete by ca. 10,000 years ago (Mead and Meltzer 1984:447), shortly after widespread evidence for human settlement appears in the New World archaeological record. The relationship between these human and animal populations is a matter of considerable controversy (Martin and Klein 1984). While human predation of megafauna has been conclusively demonstrated at a number of locations, most notably in the southwest and on the Great Plains, to date only minimal evidence for megafaunal exploitation has been recovered from the eastern United States (Clausen et al. 1979; Webb et al. 1984).

Recent broad-scale paleoenvironmental analyses from the lower southeast indicate that a mixed oak-hickory hardwood forest was in place or rapidly emerging across the Southeast Atlantic Slope by ca. 10,000 B.P. (Larson 1982:208-222; Cable 1982:671-683; Sheehan et al. 1985; Delcourt and Delcourt 1983:269, 1985:19; Delcourt et al. 1983). In the Late Glacial era (15,000 to 10,000 years B.P.), northern hardwoods (hemlock, oak, hickory, beech, birch, elm) began to replace the pine and spruce of the boreal forest in the Georgia Piedmont, temperatures were becoming less equable (i.e., warmer in summer and colder in winter), and precipitation was increasing (Watts 1980; Holman 1982, 1985a, 1985b). Holman (1982:162) notes the coexistence in late Pleistocene (10,500-11,000 years B.P.)

deposits in northwest Georgia of tropical species such as the giant land tortoise and armadillo, and boreal species such as the spruce grouse. He argues that a more equable environment, with milder winters and cooler summers, must have existed in northern Georgia during the late Pleistocene (Holman 1982:162; 1985b:569). The vegetation mosaic of the late glacial period was replaced by a more evenly distributed and denser forest, with pine and oak gradually colonizing areas that were previously unforested.

South of 33 N latitude, roughly the latitude of Augusta, there is evidence to suggest that this hardwood canopy was in place considerably earlier, perhaps throughout much of the previous glacial cycle (Delcourt and Delcourt 1983, 1985). In the region just to the north of latitude 33 N, the full-glacial boreal pine-spruce forest and patchy, park-like vegetation apparently quickly gave way to more mesic, mixed hardwood and oak-hickory communities following the glacial maximum; this transition is thought to have been largely complete by the early Holocene (Watts 1971:687, 1980:195; Delcourt and Delcourt 1981:145-150; Davis 1983:172-173). Only during the mid-Holocene Hypsithermal Interval, from ca. 8,000 - 4,000 B.P., did southern pine communities begin to emerge in the sandy interriverine uplands; this was also the period when extensive riverine swamps began to emerge (Wright 1976; Howard et al. 1980; Delcourt and Delcourt 1981, 1983; Delcourt et al. 1983; Davis 1983; Knox 1983; Segovia 1985; Foss et al. 1985; Brooks et al. 1986).

The late Pleistocene to Early Holocene vegetational matrix on the Southeastern Atlantic Slope was thus rapidly changing, trending from a patchy boreal forest/parkland towards a homogeneous, mesic oak-hickory forest. In ecological terms, the vegetational matrix was changing from immature, or coarse-grained, to mature, or fine-grained in structure (c.f., Pianka 1978). The best available evidence suggests that this transition was complete over much of the region by shortly after 10,000 B.P., and almost certainly by 9,000 B.P. Although traditionally viewed as a time of major paleoenvironmental change, the early Holocene on the lower Southeastern Atlantic Slope (prior to the Hypsithermal Interval) appears to have been characterized by stable regional oak-hickory vegetational communities.

Later, post-Pleistocene paleoenvironmental conditions in the upper Savannah River area were examined as part of an integrated multidisciplinary research program. The importance of the paleoenvironmental research undertaken in the reservoir, particularly in relation to the discovery and interpretation of archaeological materials, will be examined in some detail. There is little doubt, for example, that site preservation and visibility can be directly linked to the nature and extent of post-occupational depositional and other environmental processes. Prehistoric occupations in the reservoir area are common on stable land surfaces, (e.g., Segovia 1985; Anderson and Schuldenrein 1985). These same "stable" land surfaces may, however, due to gradual depositional rates, have comparatively shallow, compressed or mixed archaeological deposits. The reservoir investigations indicate that it is sometimes in the less stable areas, where rapid changes in depositional regimes can occur, that the most favorable (i.e., sealed, stratified) archaeological deposits may occur. The linkages that were made between the archaeological and paleoenvironmental research programs were a major contribution of the Russell investigations.

ENVIRONMENTAL ARCHAEOLOGY OF THE RUSSELL RESERVOIR

Introduction

One of the primary objectives of the Richard B. Russell studies has been to furnish systemic or cultural context to the extensive but often disjunct reservoir archaeological record. The need for an overarching framework in which to place the Russell Reservoir archaeological investigations stems from the numerous research themes and interests addressed by individual scholars, compounded by the unique nature of the resources that were under investigation for over a decade. While individual research interests often resulted in the productive investigation of specific themes, a potential liability in this approach lay in the absence of prospective "big picture" reconstructions.

To a large degree, the ecological and paleoenvironmental investigators were shielded from embarking on overly parochial research avenues. This development was due to the careful planning by the IASD and Savannah District archaeological staffs in the sequence by which contracts were awarded for paleoenvironmental studies. Accordingly, the baseline geomorphology, pedology, and paleovegetation studies were initiated in advance of the site specific investigations (Gardner 1984; Segovia 1985; Foss et al. 1985; Sheehan et al. 1985). The initial and subsequent Scopes of Work for the paleoenvironmental components, for all study areas, clearly prioritized the need to address the overall issue of ecological change through time. This objective injected a diachronic, regional focus to the research from the outset. Consequently, the paleoecological component for the synthesis had inherent advantages that enabled it to provide integrative parameters for the reservoir research program.

While no single discipline was exclusively relied upon to furnish the environmental and paleoenvironmental data bases, an examination of the site reports shows that the earth sciences contributed most strongly to composite sequences and reconstructions. All the study areas that were investigated in any detail involved major inputs from the fields of geomorphology, pedology, and geoarchaeology. Paleovegetation studies were employed at selective sites and performance of floral and faunal analyses were necessarily restricted to sites where remains were adequately preserved. This overview is thus based primarily on landscape and climatic models of environmental succession. A major advantage of the geoarchaeological investigations was that they went beyond environmental reconstruction to the study of site formation processes. At key sites it was also possible to link changes in the archaeological record to specific environmental factors.

The bulk of the paleoecological studies were undertaken at those sites that also contained the richest archaeological records. One of the primary objectives was to trace the synchroneity in archaeological and environmental developments, initially within individual sites and subsequently between sites and over the extent of the reservoir. In this way it would be possible to describe systematic change through time for a major and dynamic component of the southeastern riverine network. Finally, it was hoped that a comprehensive appreciation of human ecological dynamics along the Savannah River would assist in understanding the larger scale changes occurring across the greater southeast.

The Contemporary and Historic Landscape

The overall attractiveness of the Middle Savannah River Valley is explicable in terms of the mix of physiographic, geologic, and biotic components of the contemporary landscape. The unique geography of the piedmont plateau must have played a role in drawing aboriginal people to the valley. The piedmont province extends north-south for approximately 80 miles, separating the Blue Ridge Mountain province to the north and west from the southeastern coastal plain. Technically the piedmont is the "non-mountainous portion of the older Appalachians" (Fenneman 1938) and its plateau surface formed as a result of degradation. The plateau generally slopes from the mountains eastward toward the coastal plain. Inner piedmont topography in Georgia and the Carolinas is relatively rugged and semi-mountainous. The relief is attributed to both the presence of abundant monadnocks near the mountain front and the relatively steep slopes at the headwaters of the major streams emptying east and southeastward into the coastal plain (Aniya 1970). The mountains of the inner piedmont are extensive and are clearly separated from each other and from the Blue Ridge chain by deeply incised valleys.

The eastern piedmont boundary is structurally delimited by a zone of igneous rocks underlying sedimentary rocks of the coastal plain. In most places, the juncture is a zone of steeper hills and downcutting channels that grades to the gentler slopes and more broadly spaced streams of the coastal plain. The zone broadly trends along a northeast-southwest axis and is referred to regionally and along the Atlantic Slope as the fall line. The project area is completely contained within the piedmont province, but dramatic gradient breaks are typical and have been invoked to explain turbulent channel behavior and major erosional surges (Paterson 1889; Kennedy 1964; Trimble 1974).

River Morphology and Evolution

Locally, the most extensive topographic features are broad divides separating major tributaries from the Savannah River. These consist of gently rolling ridges with rounded crests and uneven slopes that may often be abrupt and discontinuous. Perennial as well as intermittent streams have incised below ridge crests, but there are tracts of smooth and level land generally underlain by granite bedrock. In general, topography slopes from the northwest to the southeast. Elevations near the Savannah River range from approximately 400 ft.

to 350 ft. (120-110 m). Steeper slopes are characteristic of the terrain fronting the Savannah floodplain. In the lower portion of the Russell basin, higher elevations and steep slopes have given rise to pronounced headcutting and slope back wearing.

It is noteworthy that the confluences of the major basin tributaries with the Savannah are often associated with diagnostic alluvial landforms that supported prehistoric sites. Along the project area the most elevated alluvial landform has been identified as a terrace-levee, or T-1 surface, registering the principal depositional events in the central Savannah drainage over the past 15,000 years. Stream activity is the prime geomorphic process that has modified the piedmont landscape and relief in Quaternary times. The multiple drainages form a dendritic network and flow primarily in a southerly or easterly direction. Most of these streams are actively incising their channels at present. In most tributary valleys interfluves are sharp and narrow as they abut narrow floodplains along upstream reaches, but topographic gradation is typical below the fall line and near the mouth where alluvial fills thicken and widen.

Across most of the Russell project area the river ranges in width from 80 to 120 meters (Segovia 1985). Variable width and stream flow patterns reflect lithological and structural constraints, but frequent channel migration is characteristic. Sinuosity is not especially high, however, and an index of 1.13 has been calculated for the linear valley distance for the central site distributions (Anderson & Schuldenrein 1985:12); this is well below the meander stream threshold of 1.5 (Leopold et al. 1964). The evidence suggests that bedrock controls are most critical in maintaining channel regimen; regionally, Segovia (1985:6) proposes that "the bedrock valley is narrow enough that the meanders cannot increase their amplitude or sweep down the valley with total freedom."

Current interpretations of valley morphology indicate that the pre-Holocene valley history was characterized by a single sedimentary cycle. The initial period of deposition, of probable Sangamon age, is represented by a thin gravel accumulation capped by a six-meter thick sand aggradation (Carbone et al. 1982). This was succeeded by a late Wisconsin incision episode that scoured out the clastic fills but left exhumed terraces and isolated island remnants.

In this report terrace-levee features refer to the present elevated (T-1) surfaces rimming the contemporary Savannah River channel and these are 3-4 m above low water levels. In general, semi-continuous outcrops of the terrace-levee run the length of the valley axis of the study area with only minor changes in relief. As the homogeneous dispositions of raised alluvial T-1 surfaces would indicate, the channel gradient of the Savannah is relatively smooth and gentle, sloping at approximately 1 m/km. Below the Rocky River confluence, however, gradient changes to 3.75 m/km, a function of a base level knick point, related to either a Tertiary sea level stand or tectonic activity. Locally, channel steepening on the order of 3 m/km has been documented for a 300 m stretch between McCalla and Carter Islands, at sites 38AB288 and 9EB76, and this may explain the poorly drained settings at the former site (Segovia 1985:32).

After the late Wisconsin, the T-1 terrace-levee began to assume its present morphology; up to 4 meters of sediment built up the landforms that have been dated to the late Pleistocene/Holocene transition (Carbone et al. 1982): Geoarchaeological investigations at numerous project area sites have documented the variable nature and magnitude of subsequent alluviation episodes during the Holocene, but in general these episodes only augment landscape stability. A fining in sediment particle size upward in the sequence underscores the overall trend to geomorphic equilibrium. Over the course of the Holocene net accretion along most floodplain tracts was on the order of one to two centimeters per century; this has been demonstrated by independent researchers (Upchurch 1984; Anderson & Schuldenrein 1985; Segovia 1985:Plate 20).

Significant changes in the alluviation regime were generated in historic times due to the effects of dam regulation. Studies at Rucker's Bottom (9EB91) have shown, however, that since the Hartwell Dam began functioning in 1955 the general effect of dam activity has been to reduce the net sedimentation rates by up to one-half (Anderson & Schuldenrein 1985:Chapter 10). Examination of historic discharge records show that the well-bedded medium sandy alluvium that effectively sealed the late prehistoric Mississippian middens at reservoir sites such as Clyde Gulley, Rucker's Bottom, and Harper's Ferry is probably assignable to the last major inundations of 1908 and 1928. Average annual discharge rates are on the order of only 5,000-8,000 cfs along the central Savannah. Studies at sampling stations along the Broad River, a key tributary, show that daily discharges vary from September lows of 500 cfs to February-March highs of >8,000 cfs; particle size distributions of flood sediment are comparable with those analyzed in these historic alluvial fills at the Russell sites (see Kennedy 1964:Tables 5 and 6). Compared to the coastal plain reaches of the Savannah (Brooks et al. 1986), sediment yield along the piedmont stretch is on the order of 5 to 20 times higher, so that historic period sedimentation is expectedly widespread and abrupt block-like depositions of bedded medium sands are typical.

Probably the most conspicuous explanation for high sedimentation in the piedmont results from extensive erosive land use associated with European farming activities since the early eighteenth century (Trimble 1974). It has been estimated that an average depth of 7 inches has been stripped from native piedmont soil mantles by human-accelerated erosion, and these sediments have been differentially redeposited on the terrace-levees downstream.

Local Geology

The geological setting of the Savannah River is complex, due largely to the deep weathering of most of the rock types. The paucity of diagnostic outcrops of sedimentary and metamorphic rocks makes them difficult to study as well. Several major regional studies have been undertaken, including those of Georgia piedmont monadnocks (Aniya 1970), the pre-Recent surfaces (Dennis 1971), and the geology of Elbert County (1965). The most comprehensive geological study summarizes the structural and lithological history of South Carolina (Overstreet and Bell 1965), which has also served as a baseline study for mapping of the Georgia piedmont formations (DNR 1976). Figure 10 shows the distribution of the principal geologic belts and metamorphic facies in the reservoir area.

Across the piedmont, rocks are generally banded in northeast trending belts (Overstreet and Bell 1965), and the Russell study area incorporates portions of the Inner Piedmont, Charlotte, and Kings Mountain belts. The entire basement complex consists of metamorphic and igneous rock of Paleozoic and perhaps even of Pre-Cambrian age. Major periods of deformation occurred in early to late Paleozoic times, although limited deformation is ongoing, as evidenced by the sensitivity of the Charleston area to earthquake activity. Lithologic descriptions of the principal belts and facies follow.

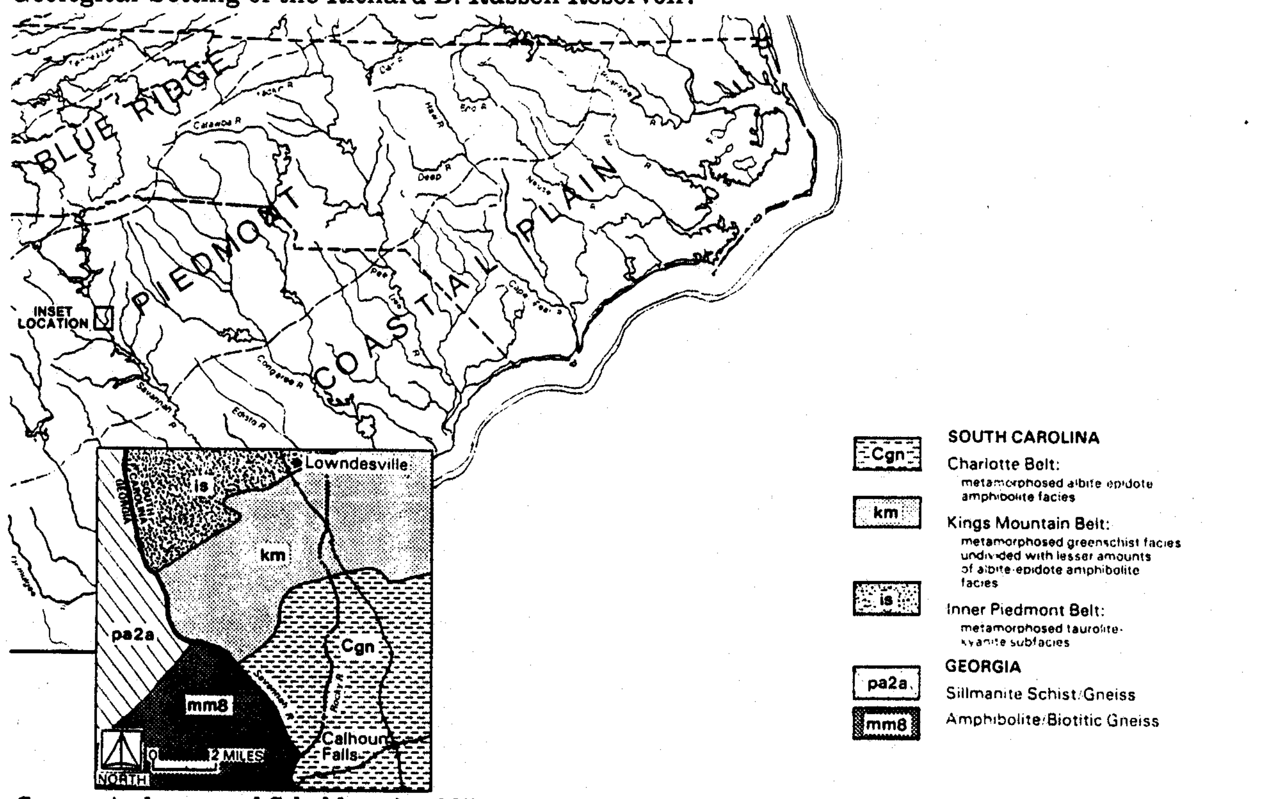
The Charlotte Belt consists principally of metamorphosed granitoid gneiss including gneiss, migmatite, and schist of the albite-epidote-amphibolite and amphibolite facies. These rocks are mostly granitoid in texture with strong compositional layering suggesting sedimentary origin, possibly from the Carolina Slate Belt which lies to the south under the coastal plain. The Kings Mountain Belt is well delineated and contains hornblende schist, sericite schist and small amounts of quartzite and marble. The metamorphosed hornblende schist unit contains hornblende schist, hornblende gneiss, actinolite gneiss, chlorite schist and marble. The Inner Piedmont Belt includes plutonic schists and gneisses that are intruded by igneous rocks of gabbroic to granitic character. The boundaries of this belt are not clearly defined and the high degree of metamorphism has made the interpretation of origin and geologic history difficult.

The deposition of the major rock formations and their subsequent metamorphism and igneous activity has been tied to the evolution of a continental margin that underwent subduction followed by uplift and isostatic stabilization (Segovia 1985). The widespread and patterned distribution of the metavolcanic and metasedimentary rocks is critical to the archaeological research as it affected lithic resource exploitation strategies. These concerns are most evident in the examination of changing lithic resource preferences at particular sites.

Soils

Soils of the Savannah River Valley have evolved in both upland and alluvial settings. At most sites alluvial profiles are the norm as they are associated with present or ancient floodplains. The processes of upland pedogenesis are critical, however, since colluviation and redeposition of slope and bluff deposits have affected the weathering patterns in terrace-levee milieus. In general, upland profiles formed in regolith weathered from parent materials of the three principal lithologic belts described above. Most dominant rock types are mica gneiss, hornblende gneiss, mica schist, massive and weakly foliated granite and gabbro, and diorite cut by dikes or minor intrusions. Foss et al. (1985) claim that soil profile characteristics including type and degree of horizon expression, profile thickness, color and amount of clay are influenced principally by the proportion of felsic and mafic minerals and the amount of quartz.

Geological Setting of the Richard B. Russell Reservoir.



Source: Anderson and Schuldenrein 1985:14

Correlation of Geologic, Pedologic and Archeo-Stratigraphic Units Across the Richard B. Russell Study Area.

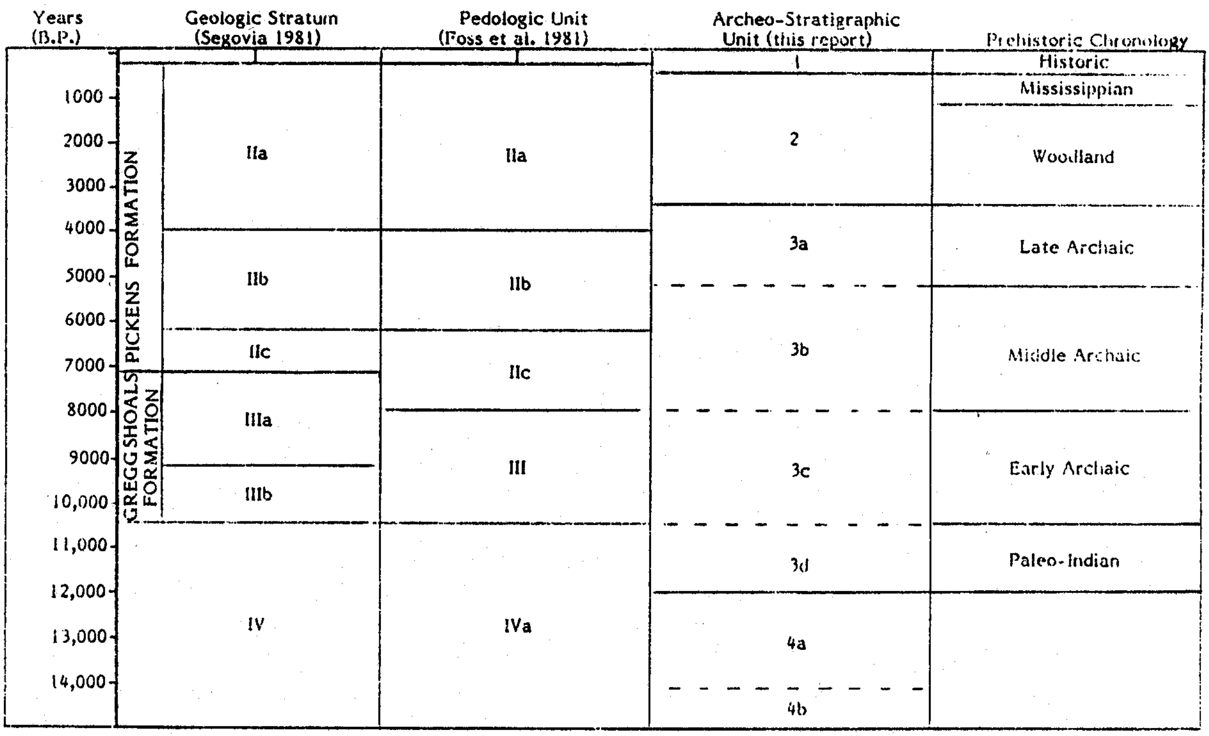


Figure 10. Geologic Formations and Stratigraphic Units, Richard B. Russell Reservoir Area.

In general, lowland soils are formed in floodplain fills variously reworked by stream or colluvial agency from initial upland settings. Profiles are variable, usually consisting of brown fine sandy loam underlain below 13-20 cm by yellow or brownish fine sandy loam which is often mottled due to periodic groundwater saturation. Thin lenses of sand, silt loam and clay loam occur at depths below 150 cm. These soils are deep, nearly level to gently sloping, well and poorly drained, and are subject to flooding at least once every 5 years. They occur on narrow to moderately broad terraces along the Savannah River and larger secondary drainages (Frost 1979, Herren 1980).

The upland soils have developed principally as a result of residual saprolitic weatherings of gneiss, mica schist, diorite, gabbro, granite and other basic or acidic igneous rocks. Subsoils are commonly reddish, yellowish or brownish clays, clay loams or gravelly clay loams. Surface textures are usually sandy loams with some areas of gravelly or sandy clay loams. The upland soils are deep to shallow, well drained, and are positioned on broad to narrow upland ridges, complex side slopes and the upper reaches of numerous small drainages. Slopes vary from very gently sloping to steep (about 40 percent) (Frost 1979, Herren 1980).

Most of the archaeological sites that saw extensive examination in the reservoir are terrace-levee settings associated with sandy substrate and Entisol profiles displaying minimal pedogenic alteration. Profile thicknesses typically range from only 30-60 cm in depth before encountering late prehistoric components (i.e., Woodland-Mississippian). Historic period sedimentation is not only minimal, but in most cases it can be linked to early twentieth century inundations since preserved foreset bedding structures, the signature of these flood deposits, are often sandwiched between two plowzones. At Rucker's Bottom, Clyde Gulley, and Harper's Ferry sites a sequential stratification of prehistoric components was observed terminating in the Mississippian midden. Overlying that stratum was a historic plowzone overlain by flood-related sand deposits. The midden/plowzone interface defines a geologic unconformity, indicating a 300-400 year erosional interval.

Land Use

The depositional gap and minimal preservation of relict landforms in the Russell reservoir area is consistent with Trimble's (1974) documentation of the southeastern piedmont as one of the most severely eroded agricultural areas in the United States. His research showed that the Elbert-Abbeville County areas experienced the most accelerated erosion due to cotton based land use in the late eighteenth and nineteenth centuries. Accordingly "...especially in Regions III and IV (Elbert and Abbeville counties), erosional debris filled streams and covered floodplains" (Trimble 1974:129). Presumably the redeposition occurred downstream of the area studied, probably below the fall line at Augusta where the floodplain widens. Comparison of 1979-1980 mean flood discharge data at a piedmont gauging station (at Calhoun Falls, South Carolina) with that at Augusta shows that at Augusta rates are up to 1.5 times higher (USDI 1980).

The disposition of the terrace-levee landforms in the reservoir area is also in accordance with an upstream-erosion downstream-deposition model, since they do not comprise an extensive concave-convex floodplain that is being actively flooded. Effectively there is no distinctive T-O surface along the central Savannah. It has either been differentially eroded by the regulatory effects of dam operation or it has been gradually worn away by the scouring and migratory regimen of a Savannah channel that has been in an erosional epicycle for the past few hundred years. Perhaps both explanations are responsible, but it would appear that the clearing-induced erosion since 1700 has had as much if not more impact on the transformation of the landscape systems than any previous cycle.

The impacts of prehistoric land use are, of course, difficult to assess, but Trimble (1974:22-32), citing European and colonial accounts, concludes that pre-contact erosion was minimal. This trend may be traced as far back as the early Holocene, based on studies at Gregg Shoals and Rucker's Bottom, where records of continuous prehistoric occupation were preserved (Upchurch 1984; Foss et al. 1985; Anderson and Schuldenrein 1985). Well stratified deposits for each major Archaic stage are interdigitated with diagnostic alluvial fills at these sites, demonstrating that stream aggradation was the dominant fluvial process for most of the Holocene, as each succeeding deposition sealed in a previous occupation horizon. These optimal preservation conditions characterizing the Archaic deposits at sites in the reservoir may be closely linked to regional climatic conditions. There is a tendency for streams in humid continental environments to aggrade, and hence bury and preserve cultural deposits during such major dry intervals as the Hypsithermal (8,000-5,000 B.P.), which spanned the Middle Archaic (see Schumm 1977). The field evidence clearly supports Trimble's (1974) hypothesis that no climatic fluctuations during the past 10,000 years were severe enough to cause massive removal of the vegetation cover and give rise to the magnitude of erosion that was initiated in early historic times. The fact that sustained deposition occurred along the ancient (i.e., early-middle Holocene) banks (= terrace-levees) of the Savannah may indicate not only that the post-Pleistocene channel was largely an aggrading stream, but also that during minor erosional epicycles the central Savannah constituted a minor sediment trap for redeposition of eroded upstream sediments. These epicycles may even have been associated with localized tectonic events that occurred in the study area (Segovia 1985:16).

Obviously, historic agricultural land use had extreme impacts on landscape stability in the piedmont. Documentation of the effects of this activity along the Savannah in particular is somewhat limited, but an incisive account has been offered by Paterson (1889) in a historic study of the destructive effects of Savannah River flooding. His account notes that most flood damage tended to occur immediately downstream from the project area, at the Broad River confluence. Since 1796 major floods, or those topping 6 ft. (ca. 2 meters) had occurred in 1840, 1852, 1876 and 1887. In an indictment of the land management practices of the day, which he claims were virtually nonexistent, Paterson (1889:13) traced the seemingly unpredictable floodlevels along various reaches of the Savannah to cumulative discharges produced by the parent Savannah and its principal arteries. To counter erosion, Paterson recommended systematic terracing along the most prominently affected channel reaches. In spite of his recommendations extensive terracing was not adopted as a major mitigative strategy, as federal planners opted for reservoir building. Paterson's (1889) account among select others (see Stokes 1951 for references) does provide insight into the persistent effects of Savannah stream activity during the era of optimal erosive land use regionally when cotton farming was in its heyday. Trimble (1974:130) notes that with the agricultural decline in the early twentieth century and the adoption of soil conservation practices, erosion has decreased markedly in the piedmont and landscapes have stabilized correspondingly.

Vegetation and Floral Communities

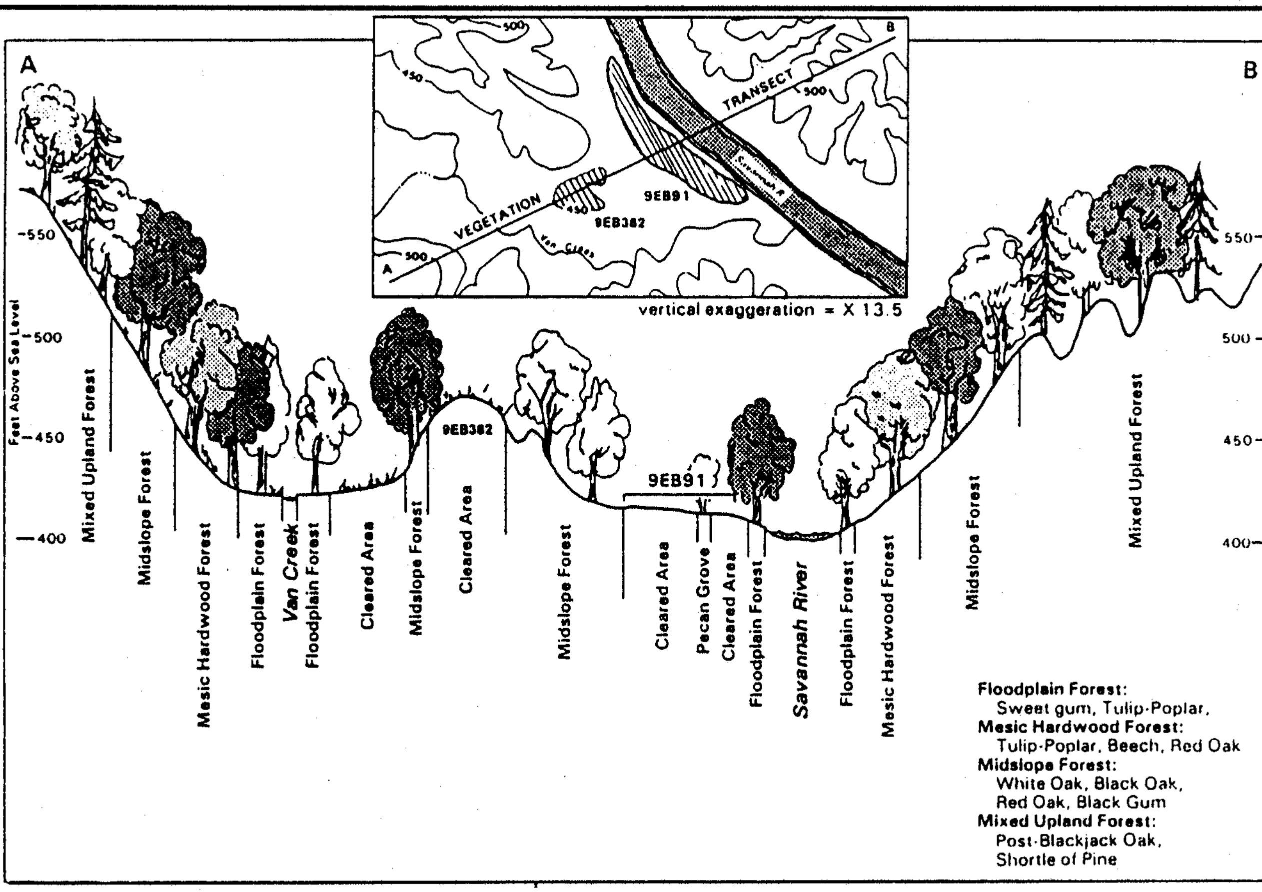
The following account attempts to link distributions of contemporary floral and faunal communities with those topographic and landscape gradients constituting the present regional ecosystem. The Savannah River study area lies at the front of a sensitive physiographic ecotone: the transitional province of the Oak-Pine Forest (OPF) and Southeastern Evergreen Forest (SEF) (Waggoner 1975). It has been emphasized that regional boundaries with respect to vegetation distributions

> ...are so indistinct that they can be but arbitrarily drawn... this is a transition belt where the ranges of trees of the central hardwood forest and of the evergreen forest of the southeast overlap (Braun 1950).

Consequently, vegetation distribution and dynamics are best understood on the local scale.

Most of the study area lies in the Oak-Pine Forest (Braun 1950). This region extends as a broad belt about 130 miles wide from southern New Jersey south to Georgia and then west to eastern Texas. On the east coast of the United States, Oak-Pine Forest extends across the coastal plain and piedmont north of the James River of Virginia and over the piedmont south of the James River.

Along the central Savannah Valley, principal upland arboreal species are post oak (*Quercus stellata*), white oak (*Quercus alba*), loblolly pine (*Pinus taeda*), short-leaf pine (*Pinus echinota*) and southern red oak (*Quercus falcata*). Bottomland and mesic arboreal species include sweet-gum (*Liquidamber styraciflua*), tulip-poplar (*Liriodendron tulipifera*), river birch (*Betula nigra*), willow oak (*Quercus phellos*), beech (*Fagus grandifolia*), red oak (*Quercus rubra*), southern silver maple (*Acer saccharum spp. floridanum*), and ash (*Fraxinus spp.*). Figure 11 illustrates the typical relationship between topographic and vegetational gradients in the vicinity of site 9EB91.



Full Glacial (22,000-18,000 years B.P.)

In the uplands this period was characterized by a very cool climate. Spruce and fir were not common in the vegetation but were present in the Piedmont, probably in special microhabitats. Pine was the dominant tree in the patchy forests. Oak was uncommon as were most deciduous trees. Herbs were much more important in the vegetation than in modern times. Their abundance and diversity, and the presence of several taxa with "boreal" affinities, give the impression of a parklike vegetation interrupted frequently by patches of trees and shrubs. The lowlands at this period are not represented at our pollen sites.

Late Glacial (18,000-12,000 years B.P.)

A decrease in the extent of pine dominance occurred, accompanied by a decline in the fir and spruce populations. Oak and hickory replaced these species to some extent, reflecting increased warmth. The continuation of high percentages of herbs and shrubs suggests that the increased warmth was not accompanied by increased precipitation. Towards the end of this period pine dominance was reestablished at the expense of oak and hickory. Shrubs became somewhat less important, but herbs remained a prominent feature of the generally open vegetation.

Early Postglacial (12,000-9,000 years B.P.)

In the Savannah River valley, pine, oak, and hemlock were the dominant trees. Spruce and fir were present locally. River birch, sycamore, and alder were important on the floodplains and streamsides. Chestnut was present, at least locally. In the uplands the forests gradually became denser with pine first, then oak colonizing the previously unforested areas. Hemlock was absent. Chestnut was present but not abundant.

Mid-Postglacial (9,000-4,000 years B.P.)

In the lowlands spruce, fir, pine, and hemlock rapidly decreased in importance, to be replaced by oak, gum, hickory, and other deciduous types. Toward 5,000 years B.P., birch replaced much of the oak, though probably just locally. In the uplands oak replaced pine forests to a large extent and was accompanied by gums, chestnut, and beech. Hickory became somewhat less important. Arboreal pollen values are maximal at this time, indicating very dense forest cover. Shrubs and herbs became minor components of the vegetation.

Late Postglacial (4,000 years B.P.-present)

In the Savannah River valley the vegetation from 1,320 years B.P. to an unknown later date is characterized by gradually declining populations of oak, ash, sycamore, and basswood, evidence of agricultural activity (maize, agricultural weeds), and, in the uppermost sample, an abrupt expansion of sweet gum and hickory populations. In the uplands this period is characterized by fluctuations in population sizes of pine, oak, and chestnut. Hickory and gums are generally unimportant here. Alder and ragweed become more important toward the end of this period, suggesting a thinning of the arboreal vegetation, possibly resulting from human disturbance (agriculture?). At no time is pine as important in the vegetation of this period as it is in other parts of the Southeast.

Sources: Anderson & Schuldenrein 1985: 24; Sheehan et al. 1985: 33-34

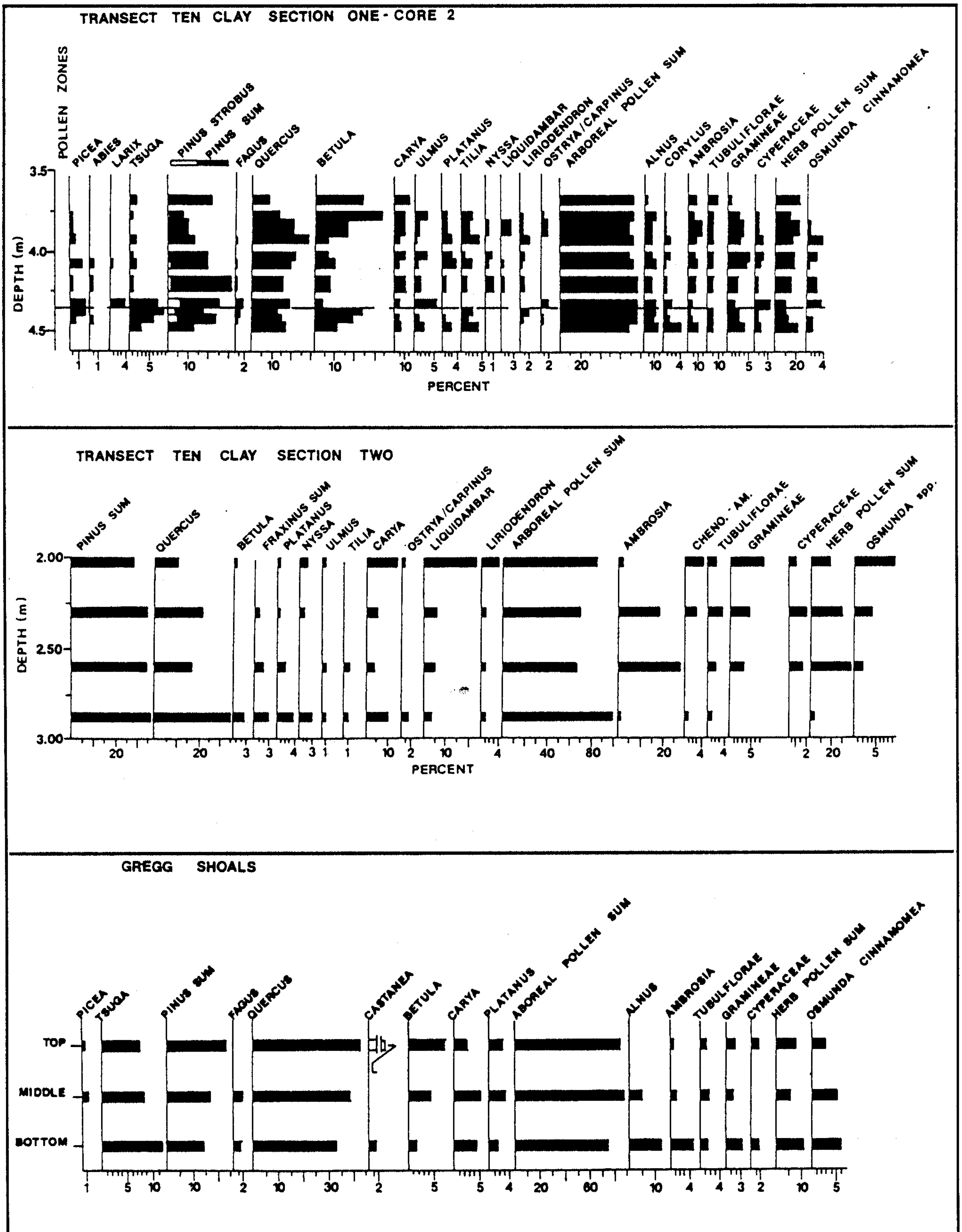
Figure 11. Present and Past Vegetational Communities, Richard B. Russell Reservoir Area.

GENERAL BACKGROUND: PALEOVEGETATION AND THE LATE QUATERNARY STRATIGRAPHY

To date several minor summaries have been compiled of the pollen successions in the vicinity of the Russell Reservoir area (Figure 12). Reconstructions have been based on coring at three major locales, Nodoroc, Gregg Shoals and Transect 10 (see Sheehan et al. 1985). Nodoroc is actually an upland bog located well west of the study area, so its use for local paleovegetational reconstruction is marginal. Gregg Shoals was a major prehistoric site (Tippitt & Marquardt 1984) but the interpretive potential of the pollen core suffers contextual limitations. Stratigraphic context in this column was only generally documented (i.e., Top, Middle, and Bottom zones). The core taken from Transect 10, from the floodplain in the south central part of the reservoir (see Figure 5) is perhaps the most reliable sampling location. It features two clay sections that document the local Early to Late Holocene vegetational succession. For the lowlands this pollen record is considered accurate for the period following 12,000 B.P., with the internal chronology supported by two radiocarbon determinations (Carbone et al. 1982:Table III).

An overview of what is known about the changing composition of paleovegetation communities since the late Pleistocene in the area is provided in Figure 11, derived from the work of Sheehan et al. (1985). Major transitions that occurred in the paleovegetational sequence involved the shifting boundaries of forest communities across the southeast (Watts 1980; Whitehead 1973; Delcourt 1979; Delcourt and Delcourt 1981, 1983, 1985) and especially near the physiographic transitions between ridge and valley, piedmont, and coastal plain provinces. The Savannah River Valley was most sensitive to changes in the nearby Blue Ridge Province and along the piedmont-coastal plain margin.

The early postglacial (12,000-9,000 B.P.) locally featured a Pine-Oak-Hemlock forest with river birch, sycamore and alder dominant along floodplains. Spruce and fir were present locally. River birch, sycamore, and alder were key components along the floodplains and stream sides, as was chestnut. In the uplands the forests became dense with pine and oak. The subsequent mid-postglacial (9000-4000 B.P.) era witnessed the influx of oak-gum-hickory complexes that stabilized deciduous forests. Birch replaced much of the oak on a local scale. In the uplands oak, chestnut, and beech stands replaced pine forests. Hickory gradually declined in significance. Arboreal pollen values were optimal at this time. After 4000 B.P. the pollen record becomes sparse, but by 1320 B.P. declining populations of oak, ash, sycamore and basswood suggested an expansion of the agricultural base on the floodplain locales. Alder and ragweed increase in significance, perhaps as a result of intensified soil erosion due to agricultural practices. In the uplands the borders of pine, oak, and chestnut forests were continually fluctuating and the dominance of pine forests diminished appreciably.



Source: Sheehan et al. 1985: 15, 17, 23

Figure 12. Pollen Diagrams, Richard B. Russell Reservoir Area.

The pollen record for the immediate reservoir area, although valuable, proved too general and incomplete to furnish a systematic and well-chronicled paleoclimatic background. The geomorphologic and pedologic records are somewhat more diagnostic and are discussed in detail in subsequent sections. For present purposes, it should be noted that the initial geomorphological and pedological investigations constructed a stratigraphy based on the floodplain soil and sedimentation record (Figure 13; Segovia 1985; Foss et al. 1985).

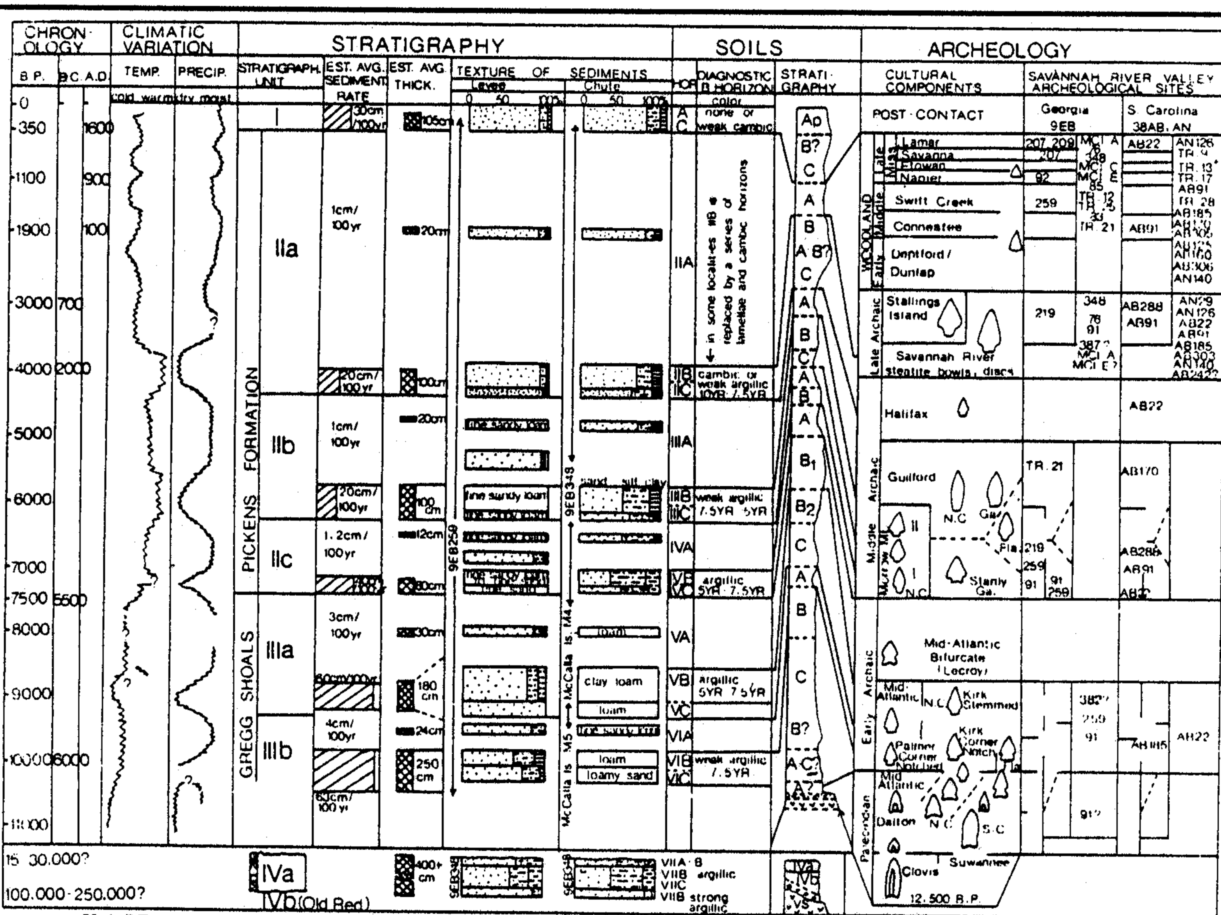
Alluvial events were assigned to four main episodes of floodplain deposition in the valley separated by intervals of down-cutting and soil development. The Late Pleistocene-Holocene transition was a threshold depositional interval registered by up to 4 meters of sedimentation capped (Unit IV) by a major paleosol (= Argillic B; Unit III). This was followed by a renewed depositional phase sealed again by a second paleosol (= Cambic B; Unit II) documenting renewed equilibrium. After A.D. 1700 rapid sedimentation is noted and is attributable to land clearance initiated in the colonial period and accelerated by nineteenth century agricultural practices (Unit I) (see Figures 10, 13).

In general, soils on the "recent levees" are not considered to have undergone major weathering, while ancient stream terrace and slope soils do contain more diagnostic red and clayey B-horizon characteristics (see Foss et al. 1985:Table 3). Subsequent research has modified these observations, demonstrating that many landforms initially classified as "recent" actually register developmental histories of over 15,000 years through pedologic units I to IV (see Anderson and Schuldenrein 1985). Recent alluvium does generally cap these landforms, however, and is the product of episodic flood inundations. Accordingly, most surface soils associated with alluvial fills are best characterized as belonging to the Entisol order.

The updated stratigraphy for the project area is illustrated in Figure 10. The four major episodes are represented by strata associated with two principal geologic formations. The present report attempts a finer grained differentiation of these stratigraphic relations by linking them to the cultural deposits discovered and integrated with the geological sequence at eight key sites, Gregg Shoals (Tippitt and Marquardt 1984; Upchurch 1984; Segovia 1985) and at the seven sites in the Rucker's Bottom and Abbeville Bullard site groups (Anderson & Schuldenrein 1985). Accordingly, an archaeostratigraphy has been established that correlates the paleoenvironmental, geomorphic, pedologic and archaeological signatures of the strata.

PALEOENVIRONMENTS AND GEOARCHAEOLOGY: AN EMPIRICAL RESEARCH DESIGN

Since most of the paleoenvironmental studies both reservoir wide and site specific highlighted deep site testing and floodplain geoarchaeology as a key investigative method, this served as a common focus for the overall paleoenvironmental



Unit I Recent Floodplain and Levee Soils (<250 years)

This association is the most extensive in the Savannah River area. This results from the extensive erosion resulting from agricultural activities and deforestation during the past 250 years and the attendant sedimentation on landscapes in the Valley. The soils in this association are also highly variable because they include soils developed on young, relatively unweathered alluvium as well as from sediment coming directly from the strongly weathered upland residuum. In some areas near the upland, the soils appear red and have a high clay content, but this has resulted from the source area being the residuum as contrasted to weathered in situ. Buried A horizons are generally found at the contact between the young material and the older soil. On recent levees, however, the soils area brownish in color and contain appreciable mica and organic matter. The high organic matter results from contribution of organics through sedimentation and the resulting vegetation that establishes itself on the sediment. These young soils will not have argillic B horizons, but incertain cases the B horizon will qualify as a cambic B.

Unit IIa, IIb, IIc Young Terrace or Levee Soils (250-8,000 B.P.)

Soils developed on alluvium deposited from 250 to 8,000 years ago are weakly developed and have minimal argillic (clayey) horizons. Although the stated interval is from 250 to 8,000 years, most of the soils observed on landscapes in this association are believed to be about 3,500 to 4,000 years in age. A major instability of the landscape between 3,500 to 4,000 years could have resulted from an extensive drought period. Few soils were described in the IIb or IIc subunits, be obvious breaks in sedimentation patterns and soil profiles were noted. Most of the soils in this association were described in terrace or levee positions and show numerous discontinuities and thin weathered zones. In fine sandy soils, lamellea devlopment may be appreciable in soils 3,500 years in age. The soils in this age association may also be a combination of profiles, with buried A and B horizons quite common within profiles.

Unit III Intermediate Terrace Soils (8,000-10,300 B.P.)

The soils developed on alluvium 8,000 to 10,300 years old are not particularly well preserved on landscapes in the Savannah River Valley. In most cases this soil underlies more recent sediment. In many other profiles, this particular component is present but probably only appears as a buried A or a remnant of a B horizon.

Unit IVa Old Terrace and Levee Soils (10,300-30,000)

This unit occurs mainly as extensive, partially dissected, terraces throughout the study area. In many areas the soils will have a post 10,300 B.P. mantle of fine sand resulting from overbank deposits or eolian processes. The well drained soils of this unit are reddish brown, fine loamy, and deeply weathered. In other regions of the main and tributary valleys, this unit is found underlying younger sediments. In soils with impeded drainage, the soils associated with this unit are grayish brown to gray, but they will still have strongly developed clayey, argillic horizons.

Unit IVb Ancient Terraces, Levees, or Colluvial Fan (100,000-250,000)

Soils developed on ancient terraces and/or colluvial slopes are red, clayey, and extremely well-developed soils. Although these soils are not extensive, they are quite contrasting to other soils in the Valley. In most cases these soils occur as dissected terraces or moderately sloping colluvial fans near the residual uplands.

Source: Foss et al. 1985: 93

Figure 13. Terrace Soils and Sedimentation History, Richard B. Russell Reservoir Area.

research synthesis. Much of the research focus also centered on the fact that occupations and stratigraphic columns were typically restricted to the period of human occupation, an interval spanning approximately the past 12,000 years. For synthetic purposes, then, a reconstruction of the late Pleistocene through Holocene alluvial sequence was the initial concern. From this base more comprehensive issues of concern to southeastern archaeologists could then be addressed:

1. What alluvial microenvironments comprised the habitation and subsistence areas of particular cultural groups?

2. How accurately may immediate site conditions as well as general resource environments (i.e., catchments) be reconstructed?

3. What was the pattern and scope of environmental change through time and how did it affect prehistoric lifeways and settlement?

Prior to addressing these questions, several methodological issues had to be resolved regarding the actual analysis and interpretation of the earth science data. On the most basic level this involved adopting uniform terminology for defining and classifying soils and sediments. Since it is often difficult to isolate soils from sediments in temperate piedmont settings, high resolution is mandated to document the paleoenvironmental correlates of sediment origins and subsequent weathering patterns. In the varied alluvial settings along the Savannah where relict landforms and complex features register facies changes and disjunct stratigraphies, it was necessary to sort out both depositional modes and diagnostic alterations as carefully as possible.

Certain basic trends and laws of fluvial sedimentation and pedogenesis provided fundamental guidelines. It was recognized that the Savannah floodplain featured a gently accreting concavo-convex floodplain and basin; weathering processes here are typically not continuous on the active alluvium, diagnostic soils do not often form, and azonal profiles are common. Foss et al. (1985) showed that regionally incipient soil formation was usually characterized by a series of "A" horizon transformations and the creation of a weak solum and a "texture" B-horizon. At a number of sites several generations of weak soil development were noted. The identifications of Ap, Ab, A2, and texture B horizons across most of the Russell sites suggested that gradational pedo-sedimentary changes were the rule at most floodplain and terrace settings (Gardner et al. 1983; Thompson and Gardner 1983; Foss et al. 1985) Generally similar profiles were recorded at most examined floodplain sites, but often intrasite soil/sedimentary histories remained unresolved due to both the varied topo-stratigraphic gradients at some sites and the limited testing programs conducted. This provided early indication that more regional reconstructions would be problematic, though a drainage-wide pedosedimentary mode has been formulated (Segovia 1985).

At all sites previous work was examined with great detail to isolate those locations where the sequence could or could not be readily incorporated into the synthesis.

For all sites the geological and archaeological notes and profiles were evaluated to determine:

1. depositional modes of sediment transport;

2. the shifting pedosedimentary balances in the profile;

3. introduction of anthropogenic residues in the sediment matrix.

In most cases strong differentiation of the floodplain, floodplain margin, and adjacent upland areas could be determined. Finer grained separation of deposits by sedimentary cycles and soil forming episodes was then possible.

To expand the geoarchaeological observations beyond the upper Savannah River Valley required linking floodplain sequences with the coastal and marine succession along the coastal plain. Recent research suggests that the Savannah River floodplain has undergone alluviation and built upward from an earlier incised channel that graded to Late Pleistocene low sea levels (see Brooks et al. 1986). Thus, PaleoIndian and Early Archaic floodplain sites associated with the Early Holocene (ca. 10,000-8000 B.P.) have been progressively covered by Middle and Late Holocene alluvium as post-Pleistocene sea levels rose and attained the near present stand (ca. 5000 B.P.). Alluviation kept pace with this changing base level until the present terraces were established in Late Archaic times. Downwarping of the Carolina coastal plain (Colquhoun 1969) doubtless accentuated alluviation along the Savannah River as well.

Since Late Archaic times and the establishment of the present floodplain system, the dominant processes affecting the landscape have involved both braided and meandering river patterns. In general, braided patterns are more prevalent along upstream and central reaches. Specific changes in valley and stream sinuosity may be verified on available topographic maps and aerial photographs. Indications are that Savannah River sinuosity has decreased to present configuration over the past 4000 years. Such changes can reflect variations in discharge, sediment load, decreasing gradient, or a combination of all of these variables.

With the added element of geoarchaeological site formation studies it is also possible to link the buried cultural and natural strata. In this way floodplain histories and more subtle land use patterns for later prehistory can be unravelled in the absence of deep or pronounced alluvial sequences.

EVOLUTION OF THE SAVANNAH RIVER FLOODPLAIN

The earliest period for which floodplain development interweaves with the archaeological record is the PaleoIndian era, from ca. 11,500 to 10,000 B.P. Evidence for early prehistoric occupation in the reservoir at this time is minimal and confined to limited artifact assemblages at isolated sites (see Chapter IV). For the succeeding Early Archaic period, from ca. 10,000 to 8,000 B.P. the situation is only marginally enhanced. Still, some locations do provide probable *in situ* context, thereby facilitating alluvial reconstructions for the critical late Pleistocene/Holocene interface. The prime sites furnishing evidence for early prehistoric occupation are Rucker's Bottom and Gregg Shoals. The latter site contains a deeply stratified sequence some 3.5 m thick, formed largely as a result of high sedimentation rates occurring at the confluence of an alluvial fan with the primary stream. It is not typical of primary depositional activity elsewhere along this part of the Savannah, where Holocene deposits are typically much thinner. The Rucker's Bottom site is more indicative of the valley sedimentation regime locally.

In the discussion below the depositional history of the Rucker's Bottom site is utilized as an index of the paleoenvironmental events that occurred since the time of earliest habitation. The emphasis is placed on the dynamics of climate and stream morphology. It is stressed that it was only in later prehistoric times (i.e., post-Woodland) that land use actually impacted the site settings appreciably. For these latter periods the study of site formation process becomes increasingly significant.

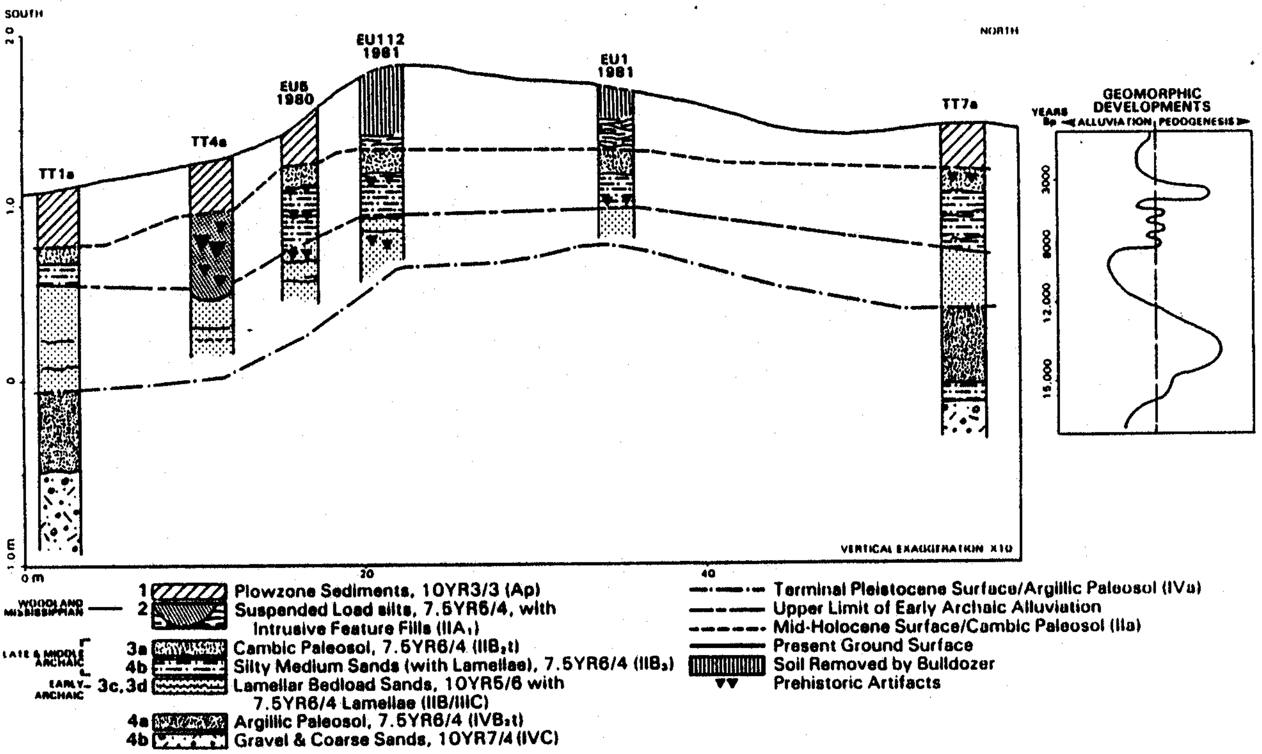
Terminal-Pleistocene through Holocene Events

Major sedimentation events and soil forming periods along the floodplain in this portion of the drainage are illustrated in Figure 14, a profile crosscutting the primary Archaic block excavations at 9EB91. The key feature is the succession of three major Archaic horizons spanning 7500 years. Since the total sediment accumulation from the base of the Early Archaic component, the lowest marker horizon, to the top of the sequence is only on the order of 1.3 m, it was necessary to monitor the compressed Archaic succession carefully in the field. Close attention was paid to subtle stratigraphic changes with depth.

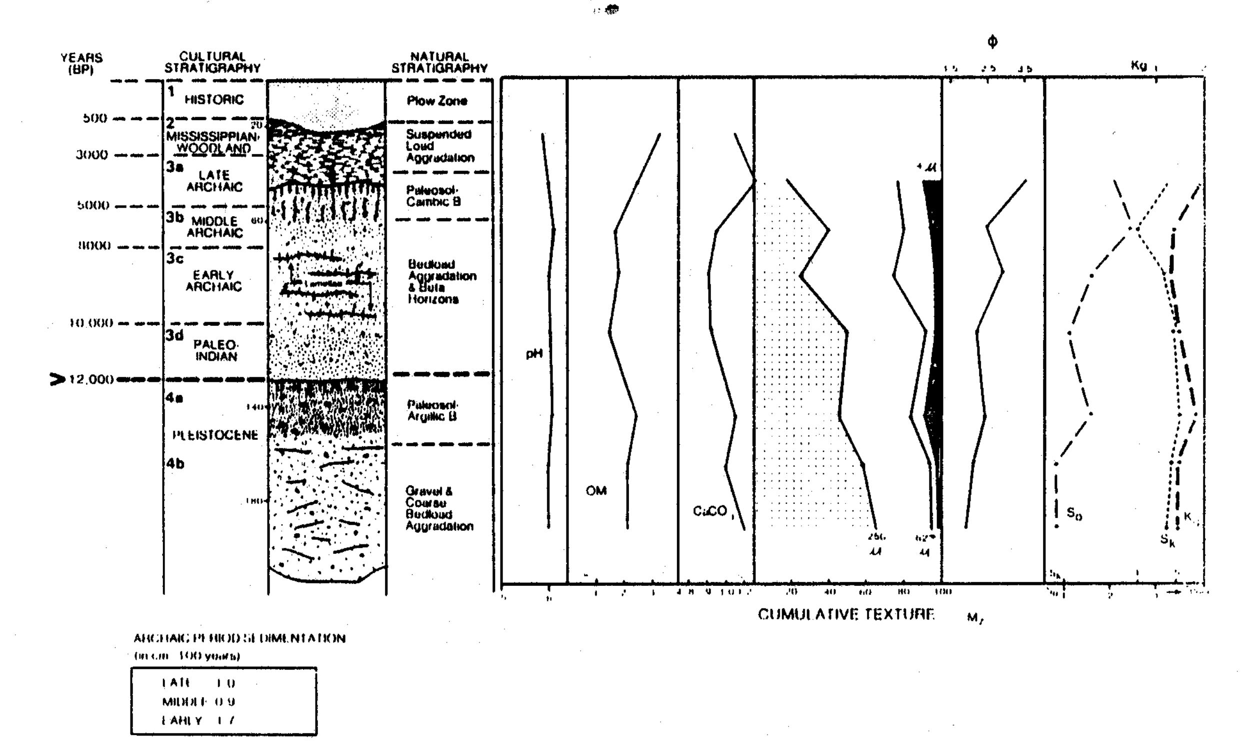
Contributing to this subtlety is the fact that the Savannah, as a braided stream over the duration of the Holocene, differentially eroded and deposited sediment on altimetrically equivalent surfaces, often obscuring the significance of surficial relief. To control for lateral and vertical stratigraphic variability the distribution and depths of the particular Archaic horizons were followed out over the Rucker's Bottom terrace, using an extensive series of backhoe and test units.

The relatively level ridgetop was a convenient index of contemporary land surface stability and allowed for correlation between the relief of subsurface Archaic levels. On the large-scale, the disposition of buried surfaces - most notably those defined by the terminal Pleistocene and mid-Holocene soils - does not diverge significantly from the contemporary ridge (see Figure 14). Subsurface probes did, however, suggest micro-topographic variations in the substrate. The Early Archaic occupations, for example, appeared at depths ranging from 80 to 130 cm in differing areas of the site. Upon closer inspection it was shown that these discrepancies were attributable to localized recession of floodwaters and the

Geoarchaeological Transect, Archaic Deposits, Rucker's Bottom, 9EB 91.



Composite Stratigraphy, Archaic Block, Rucker's Bottom, 9EB91.



Source: Anderson and Schuldenrein 1985: 396, 407

Figure 14. Late Pleistocene/Holocene Stratigraphy, Rucker's Bottom (9EB91), Richard B. Russell Reservoir Area.

minor displacement of artifacts along graded slopes of the terrace crest.

The most striking aspect of the earliest Holocene fills was their homogeneity, lateral extent, and consequently their long-term potential for stratigraphic correlation. They all occur in medium to coarse grained sands that were not visibly bedded, but were reasonably well-sorted and apparently tied to the same depositional regime and interval. Additionally, these sands occurred below a zone of laterally extensive mineralized bands known as lamellae, a feature prolific at Rucker's Bottom and at most of the other floodplain sites in the reservoir (Foss et al. 1985). The clear stratification in the site deposits indicated that if the mineralized bands were pedogenic (i.e., associated with stable land surfaces and hence soil forming episodes) they documented a post-Early Archaic interval of environmental equilibrium and stability.

The uniform presence of bedload sediments in the Early Archaic exposures at Rucker's Bottom and Gregg Shoals, in contrast, implied that vigorous channel activity was occurring at this time. The Early Archaic deposits at Rucker's Bottom were relatively coarse, and deposition was probably associated with a braided stream regimen when surfaces were quite unstable and dynamic, well-drained, and locally subject to intense sedimentation. They would appear to either predate period III or to coincide with its initiation.

Middle Archaic profiles were also exposed at many of the units at the site. Their broad ranging depths, from 50 to 155 cm, coincided with a widespread lateral distribution. Apparently the mid-Holocene stream flow was extremely sinuous and created an expansive floodplain. Taken together, the archaeological and sedimentological indications were for a more dispersed Middle Archaic settlement associated with a series of gently undulating floodplain rises and depressions. Sedimentologically, progressive diminution in mean grain size typified all exposures and argued for gentler and probably less competent stream flow. Variable entrenchment of the channel into underlying coarse Early Archaic deposits characterized a period of lateral planation after which meandering and accompanying suspended load deposition established a new channel morphology and sedimentation pattern trending to long-term overbanking.

The Middle Archaic horizons registered the most intensive distributions of the mineralized clay lamellae, generally occurring as abrupt beds varying in thickness from 2 and 3 cm to as much as 10 cm. Hypotheses in support of pedogenic origins for these strata - generically referred to as Beta horizons - were initially tied to a field model that merged several hydrographic and sedimentological variables. Central to the model was the systematic expansion of level floodplain surfaces promoted by progressive fining of the sediment matrix, the broader confines of a meandering floodplain, and diminished accretion rates up the sequence. Collectively the geoarchaeological ramifications of these site developmental changes translate into a broader, more diversified, and simultaneously more stable floodplain habitat with the passage of time. As it developed, this floodplain became increasingly attractive to more specialized prehistoric groups.

Across the terrace/levee, sedimentation rates slowed appreciably and began resembling contemporary trends by Late Archaic times. These strata overlie Middle Archaic units by 10-25 cm and Late Archaic artifacts were rarely found at depths of more than 30 to 60 cm below the surface. A systematic increase in the silt component and the redder hue of the sediment matrix suggested a more sustained pedogenetic interval than was noted for any previous prehistoric period. An extensive Cambic B-horizon caps the mid-Holocene alluvium at Rucker's Bottom and many other sites in the reservoir (Foss et al. 1985; Anderson and Schuldenrein 1985). In contrast to the Beta or lamellar horizons, the upper Late Archaic soil/sediment featured a graduated contact to the parent material. Truncated surfaces, marked in Middle Archaic lamellae by sharper contacts, were absent. Evidence for extended settlement of the floodplain environment occurred for the first time in the Late Archaic (see Chapter V), something that may be due in part to the progressive stabilization of the available floodplain occupation surface that took place at this time.

The sequence of alluviation, lamellar formation, and pedogenesis over the protracted period of Archaic period floodplain occupation is systematically represented in the exposures of the Archaic block units opened at Rucker's Bottom (Figure 14). In these units the range of stratified Early, Middle, and Late Archaic deposits illustrate a generally low index of net sedimentation associated with the particular depositional setting of the site. In an attempt to provide a crude and preliminary index of depositional dynamism, the sedimentation rates for each of the Archaic phases were measured. Net sedimentation was the sole quantitative parameter that could reflect general trends in the morphogenesis of the floodplain. Accordingly, thicknesses of sediment were determined from the base of the lowest clear Early Archaic stratum to the top of the Late Archaic stratum. Corresponding sediment thicknesses at two diagnostic (1980) sections were averaged out to provide mean values. Over the 7500 year interval, from 10,000 to 2500 B.P., net sedimentation was 75 cm, or an average of 1 cm/100 years. The results of segregating these data according to the separate Archaic components were as follows:

1. Early Archaic. 25.0 cm/1500 yrs. (=1.7 cm/100 yrs.)

2. Middle Archaic. 22.5 cm/2500 yrs. (=0.9 cm/100 yrs.)

3. Late Archaic. 10.0 cm/2000 yrs. (=1.0 cm/100 yrs.)

It should be stressed that these results are solely site-specific and are very general indexes since they measure exclusively net sedimentation rates (i.e., irrespective of differential erosion and degradation rates in the past, etc.); they also lack precise radiometric controls. It is striking, however, that a general decrease in sedimentation is observed up the sequence, to Middle and Late Archaic times, that broadly mirrors the synchronous trend to finer sedimentation and stability through time. Parallel trends have been documented geoarchaeologically for other multicomponent Archaic floodplain sites in similar (i.e., Humid subtropical, Koppen:Caf) environments, most notably at the Koster locality in the lower Illinois Valley (Butzer 1976).

A corollary to these results is obviously that sedimentation rates at sites in the Savannah River floodplain were slow over much of the Holocene. As a result, the probability of the preservation of largely *in situ* archaeological materials was correspondingly high throughout the reservoir. This was demonstrated repeatedly in the floodplain and island testing programs (Gardner et al. 1983; Thompson and Gardner 1983).

Evidence from site sedimentological analyses confirm field observations and are illustrated in Figure 14. This is a composite profile of the archaeo-stratigraphy of the Archaic excavation block units at Rucker's Bottom, pointing out sequential variation in chemical and sedimentological properties. As the natural stratigraphy column shows, each cultural stratum featured a unique geoarchaeological signature, but over the 2 m profile, fully 1.3 m of bedload (below 3b) document the earliest and most active sedimentary phases, from 14,000 to 8000 B.P. This is the signal indicator that overall channel behavior was predetermined by late Pleistocene and Early Holocene build-ups and that general stream and flow cycles did not diverge significantly from those initiated earlier in the Pleistocene, despite changes in channel geometry.

In general terms the presence of four principal depositional units (1-4) offset by two paleosols (3a and 4a) was confirmed. Progressive fining characterized the discrete depositions up the sequence. Unit 3 was the most pervasive and thickest accumulation spanning PaleoIndian to Late Archaic times. Minor soil forming episodes are distinguished by the thin and crenulated red-brown lamellae ranging from 2 to 10 cm in thickness. Evidence of their origin points to pedogenetic transformations on discrete alluvial units (Dijkerman et al. 1967; Schuldenrein 1981; Larsen 1982). Mineralogical enrichment proceeded on well-sorted medium to fine-grained sands. The lamellae are the sole indicators of even limited soil formation over the 7000 period of the early to mid-Holocene. Otherwise the entire central portion of the sequence records gentle and episodic floodplain accretion. Clearly, over this duration sedimentation dominates over pedogenesis. Figure 14 shows the time-stratigraphic and pedo-sedimentary correlations within this column, dating the optimal period of soil formation to around 15,000 to 12,000 B.P. That interval dates the age of the lower paleosol, Unit 4a, and is equivalent to regional soil Unit IVa (Table 10-5; Foss et al. 1985:Table 3). The 9EB91 sequence is a more detailed version of the reservoir wide model outlined in Figure 10.

At Rucker's Bottom the relations between pedomorphic, sedimentary, and archaeological units are most apparent (Figure 14). As noted earlier, the distributions of the Archaic assemblages were relatively diffuse. This is a function of the mildly acidic composition of the substrate, which exemplifies a poorly maintained anthropogenic context for occupational horizons. Leaching of the prehistoric A-horizons and their susceptibility to stripping would have degraded features and eliminated their sedimentary integrity and consistence. The localized displacement of artifacts by winnowing and recession of periodic floodwaters only enhanced this trend. At Rucker's Bottom the time factor appears to have been most diagnostic for the relative degree of archaeological preservation, with the later Woodland-Mississippian features maintaining relatively intact occupational matrices and the pre-Late Archaic components exhibiting more disjunct spatial and stratigraphic articulation. Consequently, a distinctive pre-Late Archaic anthrosol cannot be distinguished on sedimentological grounds.

Both sedimentological and pedological properties are highlighted by the graphs in Figure 14. The pH values show that acid-base balances remained fairly consistent and mildly acidic for the duration, but the organic matter curve displays significant variation with time. Obviously, values are high for upper (i.e., Late Archaic and subsequent) occupations housing preserved features; the fine-grained sandy matrix supported a forest cover and thin leaf litter horizon that resulted in rapid leaching at the level of the Cambic B-horizon. Subsequent declines in lower Archaic levels attest to the poorly developed soil covers that were apparently subject to more inundation and sediment reworking. Organic values only rise in the Argillic B-horizon, marking the terminal Pleistocene erosional surface, which was a long-term and therefore stable marker horizon. Pollen studies locally and regionally offer suggestions that this time frame (15,000-12,000 B.P.) was one of expansion for floodplain vegetation communities, a trend accommodated by richer preservation of organic matter (Sheehan et al. 1985; Watts 1980, 1983). Calcium carbonate values also peak at this level and show that leaching and mineral translocation occurred, probably below the rooting zone in a forested situation. High carbonate values are normally associated with former A-horizons because of chemical reactions resulting from optimal concentrations of CO_2 at levels of root and micro-organism respiration (Birkeland 1974:115); they diminish down the profile. On the terrace/levee the CaCO3 signature bulges at the A/B transitions underscore this trend.

Perhaps the most telling index of change in the depositional regimen is the granulometric data illustrating the transition from bedload to suspended load aggradation up the column. Principal shifts occur in the relative proportions of the fine and medium sand grade (at 250 phi). By the end of Late Archaic times finer grade sands and silts begin to dominate the sediment load and mark a turning point towards progressive floodplain stabilization, a point underscored also by the scaled reduction in sedimentation rates over the course of the Archaic (Figure 14). Mean particle sizes decrease to the top of the prehistoric column. The only bulges in the clay fraction occur in the paleosols where illuviation was the dominant process. Finally, the sorting data show that sediment uniformity was the rule until overbanking and differential settling altered the depositional pattern around 8000 B.P.; sorting is best in the bedload aggradation units and worst in pedogenic units and overbank strata.

A final consideration involves the paleoclimatic implications of the alluviation phases, which peak during the intervals 10,000-8000 B.P., 5000-4000 B.P., and 1500 B.P. Fluvial geomorphologists are divided as to whether high level sedimentation attests to intensification or retardation of runoff and attendant precipitation. Most recent research suggests that in humid temperate regions cooler and wetter climates may result in reduced sediment yields (due to greater upland ground cover and decreased runoff and erosion), the consequent erosion and incision of primary channels carrying the increased precipitation, or minimally channel enlargement (see Schumm 1977:Table 5-2). Conversely, in situations with increased sediment yield, such as those implicated by the two alluviation peaks, slightly drier and warmer conditions than those favoring soil formation would have prevailed. Along these lines, it is striking that major alluviation cycles bracket what is considered the warmest and driest phase of the Holocene, the Hypsithermal (8000-5000 B.P.). If that phase reliably dates a warm-dry peak, then the pattern of climatic changes recorded by the floodplain stratigraphy at the Rucker's Bottom terrace-levee may best be viewed as a continuum with optimal warm-moist conditions prevalent in pedogenesis phases and alluviation bridging a transition to cooler and drier environments.

Late Holocene Events: Anthropogenic Sediments As Documented at Rucker's Bottom

While climatic changes, specifically moisture and runoff regimes, were largely responsible for modifying landscape systems during most of the prehistoric period, it was human activity that affected the stability of landforms and surfaces in later times. During the Mississippian, intensive occupations stripped soil covers and produced middens and extensive feature networks that drastically altered the natural habitat. Some of the key sites with major Mississippian components include the Beaverdam Creek Mound (Rudolph & Hally 1985), Clyde Gulley (Tippitt and Marquardt 1984), and Rucker's Bottom (Anderson & Schuldenrein 1985). At the latter site the nature and intensity of site utilization was measured using a variety of geochemical techniques.

By Mississippian times the terrace levee at Rucker's Bottom was a stable landform, only periodically exposed to inundations. The location of the terrace and its broad extent made it naturally attractive to the agriculturally-based Mississippian populations. The occupation was both intensive and extensive, as evidenced by the number and variety of features discovered over the course of investigation. To gain insights into feature function and significance two experimental methods were applied to the study of feature fills: quantitative trace element analysis and phosphate fractionation.

Trace element tests were conducted on soil elements that were known to be affected by various forms of human activity. Such chemical determinations have been used across broad ranges of archaeological settings and have been helpful in identifying such occupational parameters as duration of human activity, types of activities performed, and patterns of site degradation (Cook and Heizer 1965; Sokoloff and Carter 1952; Hassan 1978). Several exploratory investigations have focused on the nature of anthropomorphic sediments in late prehistoric North American village sites (Parsons et al. 1962; Griffith 1980), and their results were initially considered in the present research due to the analogous site contexts. In general, these and other geochemical studies have shown that phosphorous (P), potassium (K), calcium (Ca), magnesium (Mg), and sodium (Na) may all be diagnostic of particular human activities.

Phosphorous is perhaps the most widely known indicator of human activity (Cook and Heizer 1965; Eidt 1973, 1977; Sjoberg 1976). Potassium may be worked into the soil by degraded animal and bird remains (Griffith 1980), as well as by burning of the soil (Tarrant 1956), and by extensive wood-ash deposits associated with hearths and fire-pits (Butzer 1982). Calcium is dominant in human feces, in all animal tissues (Cook and Heizer 1965), and in a variety of organic human refuse items (Heidenreich et al. 1971). Most significantly, potassium is an optimal indicator of ancient buried A-horizons and vegetation covers and hence of former habitation surfaces (Parsons et al. 1962; Birkeland 1974). Magnesium is also a major component of wood-ash and is contained in animal, fish, and bird bones; it would be an excellent indicator of high intensity activity areas (i.e., intrusive features), but interpretations must be indexed against the strong presence of the ion in subhumid settings such as those along the Savannah. Finally, sodium may be considered a negative indicator since its abundance is actually detrimental to the preservation of organic components in oxidizing environments (Butzer 1982). Thus, low presence of sodium in conjunction with other positive habitation indices would serve to verify the nature of the occupational record.

In light of these considerations, the Mississippian occupation units at Rucker's Bottom were sampled for potentially diagnostic anthrosol properties, in part to confirm the archaeological observations, and in part to assess the significance of particular elements for measuring activity patterns. Five sets of Mississippian feature types were sampled: sheet midden fills, occupation floor/fill levels, post holes, trash midden, and palisade-ditch fill. The Mississippian sample series was compared to a set of naturally stratified but archaeological sterile Holocene samples from the same terrace environment. It was therefore possible to compare both populations for trace elements and determine if any or all of the elements furnished evidence for significant alteration by human agency.

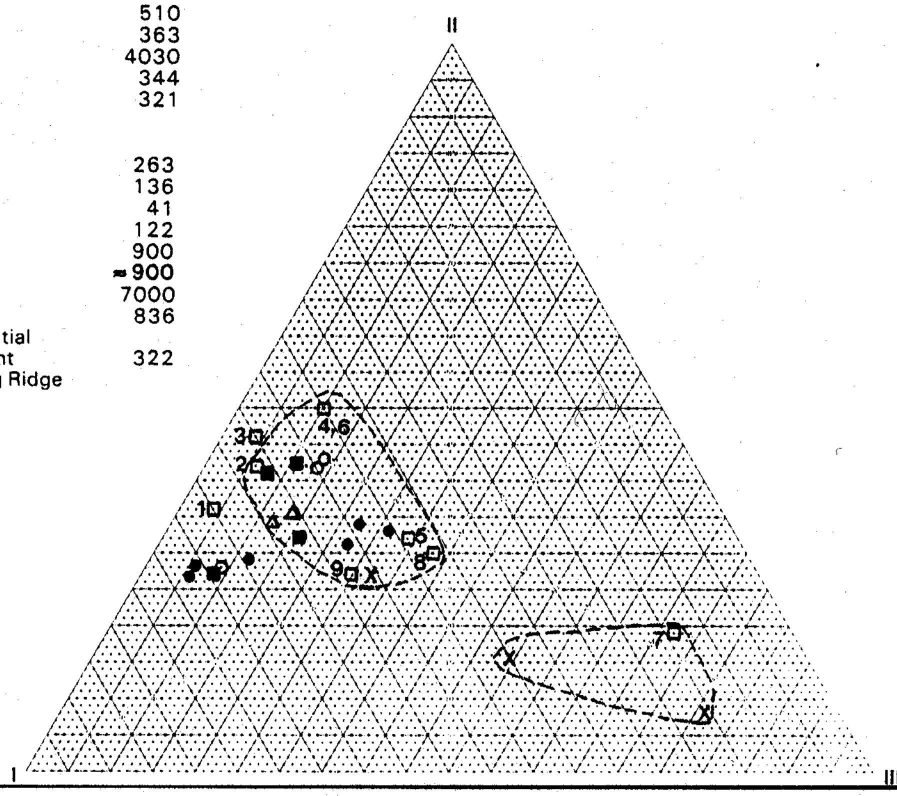
To assess the differences between the two populations the Z statistic was employed as a probability measure. The statistic is a means for determining if the chemical differences in the occupation sediments and the natural sediments are significant (i.e., due to human activity) and not a consequence of relatively small difference due to chance. Griffith (1980) utilized an analogous strategy in comparing on and off-site soils at a Huron village site.

Pooled variances were utilized in the determination of the degrees of freedom for the calculations (Snedecor and Cochran 1973). Results of the statistical analysis are presented in Figure 15, showing the differences between the Mississippian and naturally stratified sediments. Both P and K appear to be most diagnostic of anthropogenic inputs. The strong presence of P was expected given the very high levels of activity documented at all site locations, and the very clear utility of P as an anthrosol indicator under most circumstances.

Of more striking concern are the high K values since in an ostensibly similar site context, the Benson village site in central Ontario, Griffith (1980) found only P and

Phosphate Prints of Mississippian Feature Fills, 9EB91

		MEAN TOTAL P
●	Housefloor (M1020)	510
O	Posthole (M2400 series)	363
X	Refuse Pit (M1400)	4030
Δ	Stockade Fill (M1199)	344
■	General Sheet Midden (archeo-stratum 2)	321
1☐	Diagnostic Land Use Prints	
	1. All Forest Types	263
	2. Mixed Forest	136
	3. Evergreen Forest	41
	4. Planting Ridges	122
	5. Platforms	900
	6. Floors and Paths	≈900
	7. Pit	7000
	8. Mississippi Settlement (SE Wisconsin), Residential	836
	9. Mississippian Settlement (SE Wisconsin), Planting Ridge	322



DETERMINATIONS OF ANTHROSOL GEO-CHEMICAL PROPERTIES

I. Phosphorous (P)

	x (in ppm)	Z*
Mississippian	135.0	3.21
Natural	62.4	

The natural soils are statistically different at the 99% level from the Mississippian soils based on P content

II. Potassium (K)

	x (in ppm)	Z*
Mississippian	116.0	3.38
Natural	72.5	

The natural soils are statistically different at the 99% level from the Mississippian soils based on K content

III. Calcium (Ca)

	x (in ppm)	Z*
Mississippian	585.5	0.19
Natural	567.7	

The natural and Mississippian sediments are derived from the same population based on Ca content

IV. Magnesium (Mg)

	x (in ppm)	Z*
Mississippian	19.5	-1.47
Natural	39.7	

The natural and Mississippian sediments are derived from the same population based on Mg content

V. Sodium (Na)

	x (in ppm)	Z*
Mississippian	4.56	0.52
Natural	4.65	

The natural and Mississippian sediments are derived from the same population based on Na content

*** In all cases the following obtain:**
Mississippian (n_1) = 18
Natural ($n_2$0 = 13
d.f. = 29

Source: Anderson and Schuldenrein 1985: 580, 586

Figure 15. Feature and Anthrosol Geochemistry, Richard B. Russell Reservoir Area.

Mg to be useful for delimiting signs of the occupation. Moreover, previous clay mineral analyses at 9EB91 indicated an extremely strong illite, and therefore mobile K presence in the natural sediments, due to the subhumid weathering conditions that have prevailed since late Pleistocene times. In fact, natural K contents are about 20 times higher at Rucker's Bottom than at Benson and occupational K levels are 30 times higher. The inference is that even though the more-continental natural environment at Benson was generally less conducive to K-profile weathering, it is apparently cultural activity that accounts for an even larger than expected discrepancy between sites. K values are high for all sets of features in the Mississippian sample series. If K content is a function of such diverse activities as soil clearing, wood burning, and disaggregation of animal tissue, the evidence suggests that in all probability the entire range of these activities were occurring at 9EB91. Sheet midden, trash midden, and occupation floor fills would easily accommodate all activities noted.

The relatively low values of Mg may be of some concern, since these are also optimal activity indicators, but when viewed, again in relation to the Benson site, mean values of 19.5 ppm versus 23.4 ppm at Benson are not that divergent; since Mg is not, however, a discriminating element, it should be noted that Mg is naturally abundant in the parent sediment matrix at 9EB91.

As noted, it is the P component that has been the most widely researched indicator of anthrosol genesis. Phosphate fractionation is now a reasonably reliable method for distinguishing particular modes of activity and settlement at sites (Eidt 1973, 1977; Sjoberg 1976). In general, the cultural or human impact on the land surface will have an identifiable effect and differing activities will register singular phosphate "prints." These prints can be analyzed by a fractionation method consisting of separation of inorganic settlement phosphate into three separate components, or fractions, by means of nonoverlapping extractions. Calculations of the relative loadings of phosphate levels on each fraction provide an index of land use type (Figure 15).

The abundance of total phosphorous (P) in a particular feature is a measure of land use intensity. Total P determinations are routinely performed at archaeological sites with high levels of success (Arrhenius 1931; Cook and Heizer 1965; Hassan 1978; Goffer et al. 1983). Eidt (1977) has suggested that total P value ranges may be diagnostic of activity intensity as follows:

P range (in ppm)	Activities
10-300	hack farming and ranching
300-2000	dwelling, gardening, manufacturing, garbage dumping
>2000	burials, refuse pits, slaughter areas, urban living

At Rucker's Bottom 18 phosphate samples were taken from provenances of the following feature types (note feature numbers in parentheses):

a. House floors (M1020)
b. Post Holes (M2400 series)
c. Refuse pits (M1400; taken from debris-laden entrance fill)
d. Stockade ditch fill (M1199)
e. General sheet midden (unit 2)

Samples were submitted for phosphate fractionation and produced the results shown in Figure 15. This is a representation of the relative loadings on each fraction on a percentage basis. All 18 samples and total P values are plotted as well as nine additional reference land use "prints." The reference "prints" are mean determinations of discrete feature types accumulated by Eidt (personal communication) from a variety of different locales. Attention is drawn particularly to types 8 and 9 that document Mississippian occupations. The reference prints provide a comparative framework for assessing the significance of the Rucker's Bottom features.

Examination of the clustering pattern of the site feature samples reveals distinctive sorting, delimited graphically by two distributions. The major clustering is keyed to a heavy loading for Fraction I with proportionately lesser weight on Fractions II and III. The cluster encompasses what may be considered a generalized matrix of Mississippian land use patterns. Accordingly, the limits of the distribution are defined by both the residential and planting ridge prints as well as by floors and paths (prints 4, 6) and, interestingly, by a mixed forest (print 2) possibly representative of the pre-clearance vegetation. Taken together, these activities would be expected to incorporate extensive features as opposed to focused or activity specific variants such as, for example, the sheet midden. In fact, three of four sheet midden feature samples fall within the distribution.

A series of alternating sterile (and overburden) and house floor (Feature M1020) strata offers perhaps the most singular distribution. The floor fills cluster tightly in a band loaded at 30 to 35 percent on Fraction II, shown by Eidt (1977:Figure 3) to be an index of dating due to its extraction by time transgressive iron and aluminum oxide deposition. This fraction may be indicative of a rapid succession of house floor building episodes. As Figure 15 shows, a measure of the diagnostic potential of the "extensive occupation" signature lies in the fact that the overburden strata above the Feature M1020 floor fills all fall considerably outside the perimeter of the distribution. Both post hole (M2400 series) and stockade fills (M1199) are also tightly focused on Fraction II, at 43 and 35 percent respectively. If this fraction could be calibrated to an absolute date it could furnish an optimal chrono-stratigraphic marker. In summary, it appears that what may be considered an extensive Mississippian occupation signature consists of phosphate distributions that load from 35 to 55 percent on Fraction I and 25 to 55 percent on Fraction II. While these are very crude indices, it is stressed that only 15 samples from four feature types were analyzed.

An indication of the utility of the method for activity identification is furnished by the second print cluster in Figure 15, dramatically offset from the first with a high loading on Fraction III and proportionately minimal loading on Fraction II. Mean total P is 4000 ppm, so that the print is indicative of a very specific type of land use, concentrated trash disposal. The contents of the two samples (M1400) that sort out with Eidt's pit print (7) were sufficiently degraded so that initial visual inspection in the field did not in and of itself reveal the full significance of the feature, although subsequent wide-area stripping revealed it to be a ditch line. In a feedback sense, then, systematic feature sampling can potentially result in post-hoc identifications of site activity loci. This type of observation is extremely critical for resolving land use problems in humid temperate environments such as the southeast, where soil acids degrade fills at high rates.

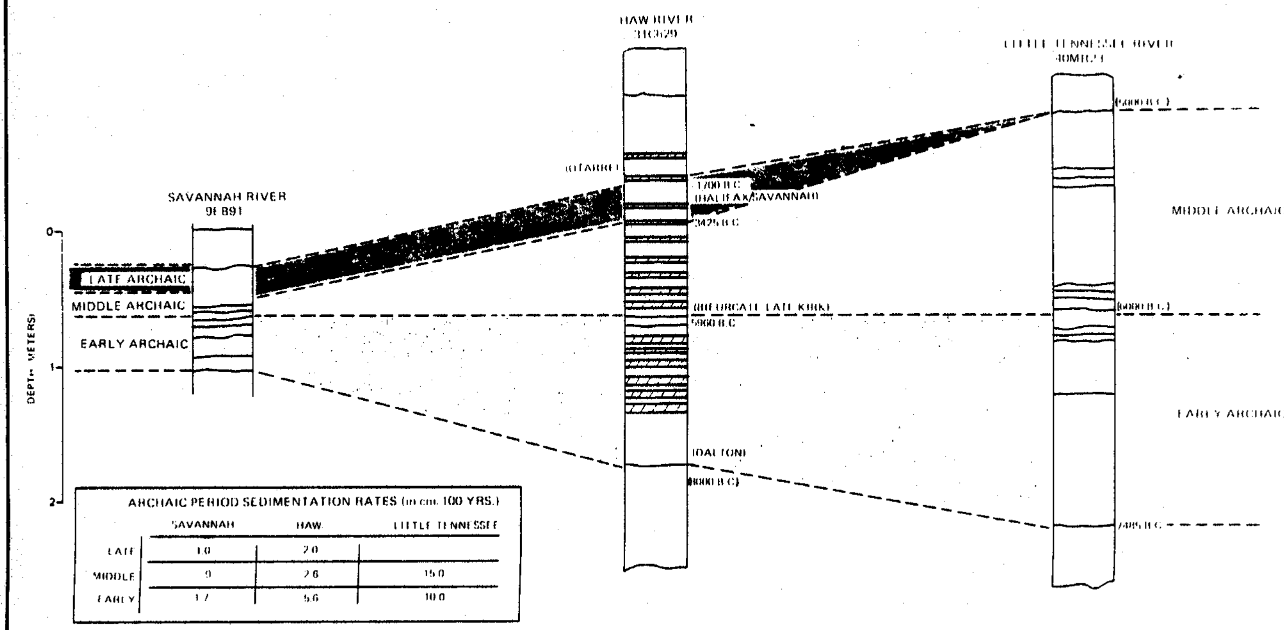
With the refinement of geochemical techniques it will be possible to address such questions as the ancient management of land and reclamation of the site microenvironment. Recent research, for example, suggests that flood management was a major problem in later prehistoric periods and that the building of control embankments was actively pursued in pre-Columbian Peru (Knapp 1982; Orfloff and Mosely 1983). The Mississippian groups may have utilized analogous management practices (i.e., floodwater diversion) to maintain the kind of environmental balance required by a mixed agricultural hunting-gathering economy. As Smith (1978) argues, in most instances the lush aquatic biomes favored by the Mississippians were in close proximity to the raised floodplain surfaces on which their villages were built. Periodic changes in the hydrologic budget could conceivably have flooded out and destroyed the agricultural tracts and households, especially at sites like Rucker's Bottom where surface relief is extremely graded. Flood control is not a problem that has been addressed by archaeologists working on Mississippian period research, but it has major implications for understanding the nature of land use by agricultural societies.

HUMAN ECOLOGY IN THE UPPER SAVANNAH RIVER

Prior to expanding the paleoenvironmental and geoarchaeological models from the upper Savannah River drainage to other regions in the southeast, it is necessary to summarize the primary human ecological correlations observed in the Richard B. Russell project area. As stressed earlier these apply largely to systematic prehistoric occupation and utilization of the floodplain environments. For each major prehistoric period there is a distinctive alluvial environment. Figure 16 outlines the relationship between prehistoric components and geoarchaeological contexts on a period by period basis.

In broad terms the later Woodland and Mississippian landscapes were the most analogous to those of the present. Independent lines of evidence suggest that the stable floodplain surfaces of the present had essentially assumed their present dispositions between 2000 and 3000 B.P. While medium to low energy alluvial regimes persisted, they generally had strongest impacts on low-lying landforms

Archaic Period Profiles - Three Southeastern Floodplain Sites.



Source: Anderson and Schuldenrein 1985: 696, 705

SUMMARY OF PREHISTORIC COMPONENTS AND GEOARCHEOLOGICAL CONTEXTS

Prehistoric Components	Geoarcheological Contexts (and Archeo-strata)
Mississippian, Early Woodland, Late Archaic, Middle Archaic (38AB22)	Mississippian midden in buried context on outer levee (2); Early Woodland in terminal floodplain deposits (1,2) on inner levee; Late Archaic associated with inner levee Cambic paleosol (3a). Middle Archaic articulates with lamellar units (3b).
Middle/Late Woodland (9EB75)	Cultural materials housed in inter-digited buried A-horizon and weak sheet midden on terrace-levee (2).
Mississippian, Middle/Late Woodland, Early Woodland, Late Archaic, Middle Archaic, Early Archaic (9EB382)	Surficial manifestations on exhumed late Pleistocene terrace.
Mississippian, Middle/Late Woodland, Late Archaic (9EB76)	Mississippian in disturbed (i.e., plowzone) context (1); Woodland and Archaic associated with terrace-levee Cambic paleosol and swale-edge (2,3a).
Mississippian, Middle/Late Woodland, Early Woodland, Late Archaic, Middle Archaic (38AB288)	Mississippian and Woodland materials in disturbed or recently sealed alluvial contexts (1,2); stratified Late Archaic assemblages preserved in both classic slackwater and ponding deposits and in underlying Cambic paleosol developed on low energy flood silts (3a); Middle Archaic associated with Argillic paleosol in slough and lower elevations and with silty bank sediments at outer levee (3b).
Mississippian, Middle/Late Woodland, Early Woodland, Late Archaic (38AB91)	Mississippian and Woodland in maxtrix of stabilized floodplain surface sediments (1,2); Late Archaic housed in Cambic paleosol (3a).
Mississippian, Middle/Late Woodland, Early Woodland, Late Archaic, Middle Archaic, Early Archaic, Paleo-Indian(?) (9EB91)	Mississippian articulates with both extensive sheet midden and activity specific features assignable to discrete occupational phases (1,2) across terrace-levee and into swale edge; Woodland deposits are spatially localized on terrace-levee (2); Late Archaic features extensive distributions on Cambic B profile documenting stabilized floodplain surface (3a); Middle and Early Archaic distributions rest on surfaces that evidence dynamic geomorphic balances, alternately registering episodes of soil formation (lamellae) and channel activity (both vertical and lateral aggradation) (3b,3c); Paleo-Indian(?) manifestation is associated with early Holocene gravel flow.

Figure 16. Local and Regional Geoarchaeological Contexts.

(i.e., swales, ox-bows, meander-scrolls) that tended to infill and flood either seasonally or in response to more sustained intervals of high runoff. Mississippian settlements were most visibly geared to utilize the differentiated. floodplain micro-environments, as demonstrated by the extent of midden deposits that trail off the well drained terrace-levees and into downslope flanks (i.e., at 9EB91 and 38AB22).

Scott (1985) has made a case for seasonally dictated site utilization over the course of Mississippian times, citing the paucity of small animal bone among other lines of evidence as an indicator of winter settlement in the later Mississippian; broader species representation argues for more permanent habitation during the earlier Mississippian. Alternatively, however, this patterning in the faunal remains may reflect greater specialization, or focalization of procurement over time, a trend noted in a number of intensive agricultural populations (Speth and Scott 1985). Similar seasonal trends are not verifiable for the Woodland period, due to the meager data base, but in general it appears that the last 2000 years of prehistory register more specialized site utilization, and the strong anthropogenic components of the sediment matrices in varied site settings document these impacts. Since landform configurations had essentially assumed their current dispositions, the later prehistoric geological deposits were not indicative of major paleoenvironmental changes. The only exception to this trend is the past century's alluvium (in archaeo-stratum 1) that blankets historic and late prehistoric surfaces. That deposition is attributable, in part, to dam-regulated inundations and the bedload deposits are most analogous to the early Holocene aggradation unit (archaeo-stratum 3d).

It is the late Archaic Cambic paleosol that is the most pervasive natural sedimentary unit (archaeo-stratum 3a). The utility of this archaeo-stratum assumes major significance, since it can be used to date alluvial successions even in the absence of diagnostic archaeological assemblages or stratigraphies. The paleosol effectively furnishes a broad chrono-stratigraphic benchmark across the study area.

Below the paleosol, both the prehistoric and geologic stratigraphies display disjunct distributions. Intact Middle Archaic deposits have been noted at numerous sites while Early Archaic matrices are not nearly as abundant. In no case did the cultural materials appreciably alter the natural matrix of the alluvial fills or associated weathering profiles. Correlations across sites corroborate the model for an upward fining sequence established at 9EB91, intermittently disrupted by minor intervals of soil formation over an approximate 6000 year span (10,000-4000 B.P.). As discussed earlier, the primary evidence for soil formation derives from the present interpretations on the origins and sequential modifications of the graded beds into the lamellae.

In general, previous research (see Segovia 1985:Plate 20) has stressed the interval between 7500 and 4000 B.P. as marking the optimum expression of the Altithermal in the central Savannah valley. Three discrete peaks, at 7000, 6000 and 4000 B.P., are offset warm-dry maxima and also coincide with prime conditions for soil formation as well as for alluviation. The present research modifies these general trends somewhat and suggests that the only major period of soil formation occurred between 4000 and 3000 B.P., when the Altithermal had effectively come to an end. This Late Archaic Cambic paleosol would therefore have developed under relatively moist conditions, circumstances normally associated with the evolution of soil profiles in mid-latitude environments (Birkeland 1974; Bunting 1967). Weak pulses governing the shifting pedo-sedimentary balances during the interval 8000-5000 B.P. are accordingly manifest in the closely spaced lamellae as discussed earlier.

Previous reconstructions of the prehistoric floodplain at 9EB91 have suggested independently that by Altithermal times slowing alluviation regimes promoted by medium energy streamflows and a migrating stream exposed broader floodplain surfaces and allowed for more extensive vegetation mats, soil formation and the proliferation of the lamellae. Research by Knox (1983) across the Eastern Woodlands indicates alluviation rates had slowed in most areas east of the Mississippi River by 8000 B.P. and that in fact moderately moist conditions may have persisted in the southeast; on a finer-scale, then, the lamellar pulses may help calibrate these developments.

REGIONAL CORRELATIONS

It is clear that the primary value of archaeo-stratigraphies in the critical early to mid Holocene time range lies in sorting out processes and rates of sedimentation and soil formation and in placing general Early, Middle and Late Archaic sequences in the context of a changing floodplain. Towards this end it is feasible and appropriate to synthesize the relatively refined geoarchaeological sequences documented in the Russell Reservoir and to compare them with analogous integrated prehistoric and alluvial successions from across the southeastern United States. In this manner, it could conceivably be possible to discern regional synchroneity in the geoarchaeological record.

Three floodplain Archaic site complexes are considered: the Russell Reservoir sites along the upper Savannah River, the Ice House Bottom site along the Little Tennessee River (Chapman 1976, 1977), and the Haw River sites in the North Carolina Piedmont (Claggett and Cable 1982)(Figures 16 and 17). At all three site complexes, broadly analogous natural settings and the use of similar field methods and conceptual approaches provide a base for comparison.

Immediately striking are the following geographic observations:

1) The sites are situated at locales where depositional basins are the norm and gradients are slight. These pockets are generally downstream, except along the Savannah, but here the gradient is uniformly gentle.

2) Steep fall is characteristic only of the Little Tennessee and is accompanied by the intense upstream erosion typical of ridge and valley streams. Work by floodplain geomorphologists has shown that, with increased slope and sediment load, there is a trend to high sinuosity and meandering (Schumm 1977). This is the behavior of the Little Tennessee River as it reaches base level and the confluence with the Tennessee. Dramatic morphologic changes can occur abruptly when critical erosional and/or depositional thresholds are exceeded. This is an especially crucial consideration in explaining abrupt, block-like Archaic sediment accumulations versus the more progressive, gradual and diminished accumulations of the less dynamic piedmont streams.

3) On a finer scale, turning points along the gradient implicate variability in sedimentation modes that are critical. While micro-depositional pockets explain a high degree of this variability, studies have shown that patterned distributions of these pockets are functions of overall river hydrography (Leopold et al. 1964; Schumm 1977).

As stressed above, regional scale comparisons necessitate appreciation of a multiplicity of variables including landform configurations, channel geometry, runoff patterns, stream dynamics, and vegetation cover. Relationships among these variables are often problematic. Empirically, the geoarchaeologist has limited research resources that are determined by the soil-sediment matrix and the context it is found in. The two major parameters that may be most comfortably examined in this regard are:

1) Sedimentation Rates. These are gauged by time-depth controls using archaeological assemblages as stratigraphic indicators;

2) Soil Forming Processes. These are disclosed by the presence of relict features, in this case the Beta horizons or lamellae that occur at all the prehistoric sites under consideration.

Both parameters were examined in detail and were utilized to compare the pedo-sedimentary profiles of the three locales under consideration.

At both piedmont site complexes (Haw River and in the Russell Reservoir), the earliest major diagnostic cultural horizons are Early Archaic and occur in medium to coarse-grained sands, apparently tied to a relatively uniform depositional regime. These sands are coarsest below the zone of lamellae formation. The presence of bedload sediments at Early Archaic exposures implies vigorous channel activity at this time. Middle Archaic depths of occurrence, especially at 9EB91, are the most variable of those encountered and are associated with a series of surfaces. Progressive diminution in mean grain size is typical and argues for gentler and probably less competent streamflow. Evidence derived from recognition of paleotopographic gradients implicates variable entrenchment of the channel into underlying coarse Early Archaic deposits and characterizes a period of lateral planation across the floodplain. After this time, meandering and accompanying suspended load deposition resulted in differentiated floodplains that were relatively broad and featured a drastic reduction in the sedimentation rate.

It is the Middle Archaic horizons that mark the appearance of the mineralized clay lamellae, generally occurring as abrupt beds varying in thickness from 2 and 3 cm to as much as 10 cm. The broader, more diversified, Middle Archaic surfaces define a more stable floodplain habitat that became increasingly more attractive to more specialized prehistoric groups. By Late Archaic times sedimentation rates and patterns slowed appreciably and began resembling contemporary trends.

Because of its location in more accentuated terrain and the emergence of a more dynamic fluvial system, the depositional context of the Ice House Bottom site is in marked contrast with those characterizing the piedmont sites. Ice House Bottom is the most deeply stratified site, featuring over 3 m of deposition over 2500 years. Earliest occupation began around 9500 B.P. and the floodplain sedimentation continued through the Middle Archaic. The site is located on the first terrace of the south bank of the Little Tennessee River along a stretch of the river that displays extreme sinuosity; this is an island type situation. Sedimentation at Ice House Bottom is characterized by episodic block-like depositions with cultural and natural strata displaying more abrupt textural and structural features than the Haw River or Russell Reservoir sites, as well as clearer stratification.

Despite the dramatic differences between site settings produced initially by the constraints imposed upon the fluvial system by physiographic zonation, they all register analogous vertical successions. These are illustrated by synchronous breaks in the sedimentation and pedogenic regimes as depicted in Figure 16. Moreover, critical breaks are tied to distinctive transitions in the prehistoric succession. The synchroneity in the geoarchaeological record is initially discernible in the recurrent geological cycles registered across all three profiles. As shown, all the representative sites from each setting feature geologically sealed Archaic sequences characterized by progressive fining of sediments up the sequence. Active deposition is cyclically disrupted by lamellar horizons which appear to be pedogenetic in origin. For want of a better term we can categorize these floodplain sequences as displaying alternating intervals of pedo-sedimentary equilibrium and disruption. At given stages active net deposition ceases, and stabilization ensues and is marked by a variable degree of soil development. This may be succeeded by an erosional phase, after which deposition resumes. While the magnitude and intensity of the component phases of the cycle vary, general trends are parallel through time.

In site-specific terms, the Savannah River Rucker's Bottom site features the most compressed depositional record with obviously slow net sedimentation rates and, while the occupations are tied to the lamellae, the compactness of the profile often blurs the relationship. Lamellae are clustered at the Early/Middle Archaic stratigraphic boundary (Schuldenrein 1988, n.d.). At Haw River there is a much deeper accumulation and a more complex sequence of lamellae. The most closely spaced and thin lamellae are situated at the Early/Middle Archaic interface, highlighting some of the most crowded occupations. These abundant lamellae are indicators of relatively low sedimentation rates. The data show a major drop off in Haw River alluviation intensity prior to Morrow Mountain/Middle Archaic times (Larsen 1982). At both piedmont locations relatively low sedimentation rates are registered for the Archaic, but significantly the Early Archaic with its bedload sediment features twice the deposition of the Middle and Late Archaic periods. This may be an indicator of a desiccation trend documented for the early Holocene across the eastern Woodlands and would substantiate contemporary hypotheses linking such trends to higher alluviation rates (Schumm 1977; Knox 1983).

At Ice House Bottom the sedimentation rate data illustrate a significantly different picture. Net aggradation is much more rapid than at piedmont sites and intensifies with time. This may be attributed to a stream regime that is more episodic with a high degree of periodicity. Major accumulations against terrace edges as well as erosional unconformities (Chapman 1977) provide strong evidence for a more abrupt depositional pattern than that characteristic of the Haw and Savannah Rivers, which, as indicated earlier, featured semi-continuous overbanking intermittently disrupted. Nevertheless, the key point is that the lamellae are clustered in the middle of the sequence where they are described as "distinct but closely spaced vertically" and are so clearly linked with unique occupations. The indication is that site occupation occurred more frequently at this time. As at the other two locales this time frame brackets the Early/Middle Archaic interface. The lamellae disrupt an otherwise rapid rate of deposition.

Summarily, then, this exploratory study has documented three major regional trends bearing on Archaic period geoarchaeology:

1) Sedimentation modes, patterns, and rates along piedmont streams are, expectedly, different in intensity and magnitude from those of the ridge and valley province due to variable stream dynamics. Piedmont streams flowing along gentler gradients are distinguished by overbank sedimentation regimes over the course of the Archaic. Over time these streams lay down progressively finer sediments; Early Archaic deposition was much greater than that of subsequent periods and was associated with relatively coarse bedload deposits. The ridge and valley province supports high energy river systems whose dynamics are governed by intense upstream erosion, episodic downstream sedimentation, and abrupt sedimentation regimes reflecting sharply defined geomorphic thresholds.

2) There is a cyclical pattern for Archaic period floodplain development that may cross-cut physiographic boundaries in the southeast. Major streams feature progressive sedimentation followed by intervals of stabilization, after which soil development ensues and is succeeded by erosion. Patterned sequences of floodplain buildup and lamellae formation seem to be recurrent.

3) In this connection there is a clustering of lamellae at the Early/Middle Archaic stratigraphic boundary, suggesting that this period witnessed minimal deposition and floodplain stabilization on a regional scale. There is a correlation of the shifting pedo-sedimentary balance with the prehistoric record which establishes principal trends in floodplain morphology as they pertain to the archaeological record. The major break in the 6000 year record features a dominance of pedogenetic process at the Early/Middle Archaic boundary, during which stable and broad floodplains were promoted and contain stacked successions.

Consistent with regional observations, the model supports the hypothesis that the Altithermal was heralded by increasing sedimentation rates as erosional conditions were accelerated and the climate assumed a warming-drying aspect (i.e., by the close of Early Archaic times). New patterns of geomorphic equilibrium set in over the interval 8000-5000 B.P. as floodplains stabilized and shorter term pedogenic-sedimentation cycles dominated. The correlation between lamellae and artifact density at this juncture then assumes added significance, insofar as it suggests that drier climatic conditions may have encouraged prehistoric groups to cluster at floodplain locales.

In conclusion, it is argued that future investigations of subsistence-settlement systems across the southeast would benefit by the consideration of paleoenvironmental and geoarchaeological research. The research program undertaken during the Russell Reservoir investigations has attempted to provide an environmental context for viewing the cultural sequence and changing record of adaptation and settlement. The linkage of archaeological and paleo-environmental data is imperative if Quaternary scientists and archaeologists hope to expand the scale of prehistoric research.

PART II

PREHISTORIC OCCUPATIONS IN THE RICHARD B. RUSSELL MULTIPLE RESOURCE AREA

IV. PALEOINDIAN AND EARLY ARCHAIC PERIODS

INTRODUCTION

The initial human settlement of the upper Savannah River area occurred during the interval from 11,500 to 8,000 years ago, during what are called the PaleoIndian and Early Archaic periods. Artifacts and assemblages dating to this 3,500 year span were found at a number of sites during the cultural resource investigation program in the Richard B. Russell Multiple Resource Area. Early PaleoIndian Clovis points were found at three sites, while later PaleoIndian and initial Early Archaic Dalton and Palmer/Kirk diagnostics were more common, occurring in either surface or excavation context at 11 and 59 sites, respectively (Table 2, Figure 3). The low numbers of Early PaleoIndian components, when compared with the far greater number of later PaleoIndian and particularly Early Archaic components, suggests that dramatic population increase was occurring, corresponding to the initial settlement, and subsequent rapid filling, of the formerly empty but ecologically rich southern landscape.

Prior to the mid-1970's, excavations at late Pleistocene/Early Holocene sites were extremely rare in the lower southeast. The best known work in the general vicinity of the southern Appalachian area occurred at rockshelters such as Stanfield Worley and Russell Cave in Alabama (DeJarnette et al. 1962; Griffin 1974), at stratified floodplain or upland sites such as Hardaway and Doerschuk in North Carolina (Coe 1964) and Taylor and Thom's Creek in South Carolina (Michie 1969, 1971), or at underwater sites in Florida such as at Silver Springs or in the Tampa Bay area (Rayl 1974; Hoffman 1983; Goodyear et al. 1983b) (Figure 17). Since the mid-1970's there has been an explosion in our knowledge of these early periods, much of it due to CRM-mandated research. Large scale excavations have occurred at stratified sites such as Rose Island, Ice House Bottom, Bacon Farm, and other sites in eastern Tennessee (Chapman 1973, 1975, 1977, 1978); at the Harney Flats site in west-central Florida (Daniel and Wisenbaker 1987); at the Haw River and Baucom sites in piedmont North Carolina (Claggett and Cable 1982; Peck and Painter 1984); and at the G. S. Lewis East, Smith's Lake Creek, and Nipper Creek sites in South Carolina (Goodyear and Charles 1984; Hanson and Sassaman 1984; Hanson 1985; Wetmore and Goodyear 1986; Wetmore 1986). In addition to large scale excavations at early sites, more limited testing and surface collection has occurred at thousands of locations across the region as a result of CRM-funded survey work. The increased fieldwork, and the rise of strong amateur and professional interaction in many southern states, has led to a marked expansion in our knowledge of early assemblages in the region.

During investigations in the Russell Reservoir, surface assemblages dating to the PaleoIndian and Early Archaic periods were found at many sites, and large-scale excavations were conducted at two of these locations, at Gregg Shoals and

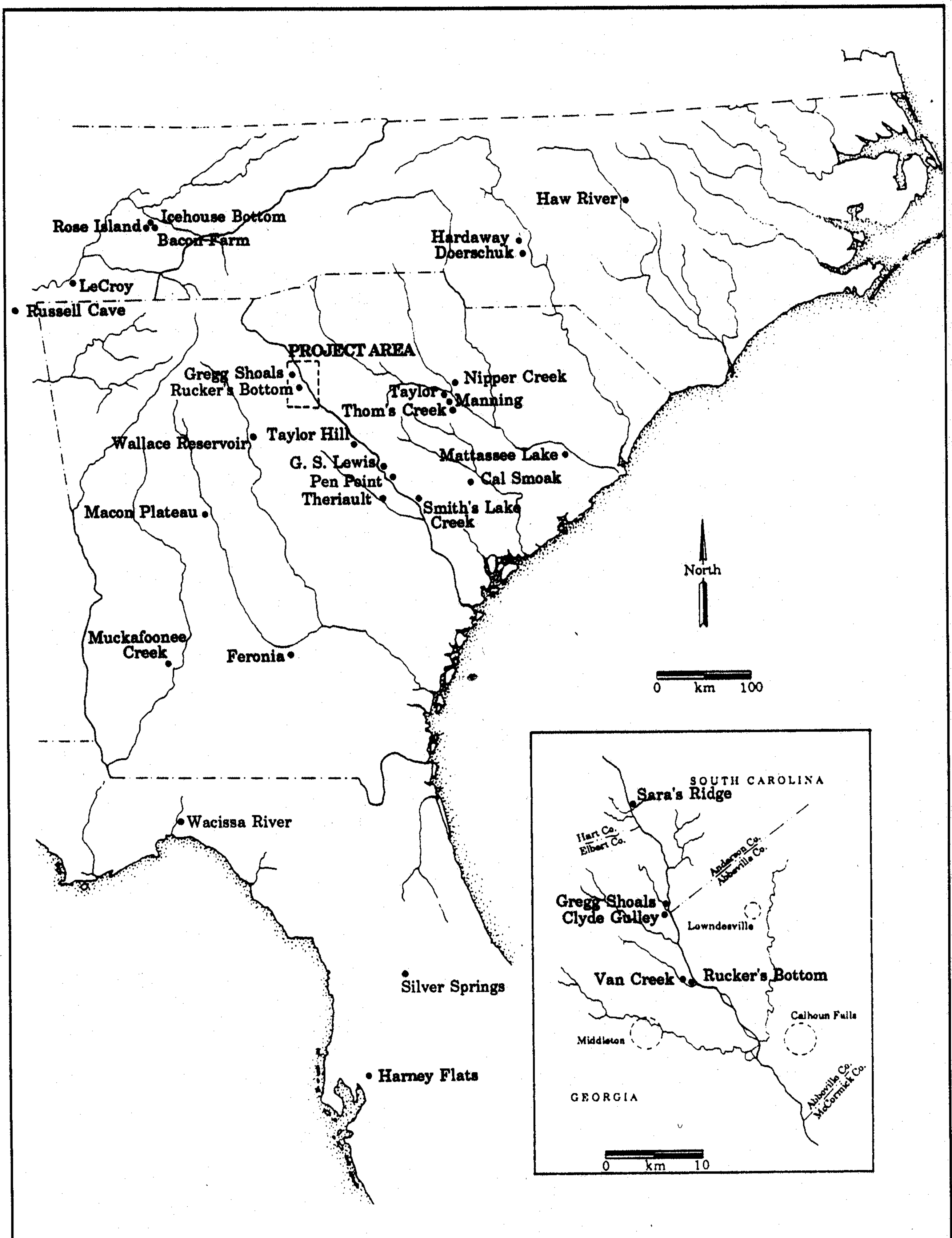


Figure 17. PaleoIndian and Early Archaic Sites, Richard B. Russell Reservoir and Vicinity.

Rucker's Bottom in Elbert County, Georgia (Tippitt and Marquardt 1984, Anderson and Schuldenrein 1985). This work has led to a better understanding of the early occupation of the area. Considerable refinement of the local sequence has occurred as a result, as well as some of the first attempts to reconstruct the kinds of activities that were occurring in these central piedmont floodplain settings.

THE PALEOINDIAN PERIOD (ca. 11,500 -10,000 B.P)

Introduction

The first unequivocal evidence for human occupation in the southeastern United States dates to around 11,500 years ago during the PaleoIndian period, when assemblages characterized by fluted lanceolate projectile points appeared widely over the region. PaleoIndian components in the Georgia and South Carolina area have been provisionally grouped into three temporal categories: early, middle, and late or transitional (Anderson et al. 1986a; O'Steen et al. 1986), although it should be noted that this inferred sequence remains to be confirmed through stratigraphic excavations and absolute dating (Meltzer 1988:15-18). The first subperiod, the Early PaleoIndian, is thought to be characterized by fluted points similar to the classic southwestern Clovis forms. The points are relatively large and thick with nearly parallel haft edges, slightly concave bases, and single or multiple flutes. There is some agreement that larger fluted Clovis-like points are earlier in the southeast than the smaller, often unfluted and more waisted forms (Gardner 1974:18; Goodyear et al. 1979:90-96; Morse and Morse 1983:60-65). The second subperiod, the Middle PaleoIndian, is characterized by smaller fluted points and fluted or unfluted points with exaggerated constrictions of the haft. Identifiable forms include the Suwanee and Simpson types. These points are presumed to be later, although again it must be stressed that absolute stratigraphic or chronometric evidence is lacking locally. These two periods, the Early and Middle PaleoIndian, are assumed to date from ca. 11,500 - 11,000 B.P. and 11,000 - 10,500 years B.P., respectively. Some temporal overlap of these forms is considered probable, and it is also possible that the Middle PaleoIndian forms continued in use after 10,500 B.P.

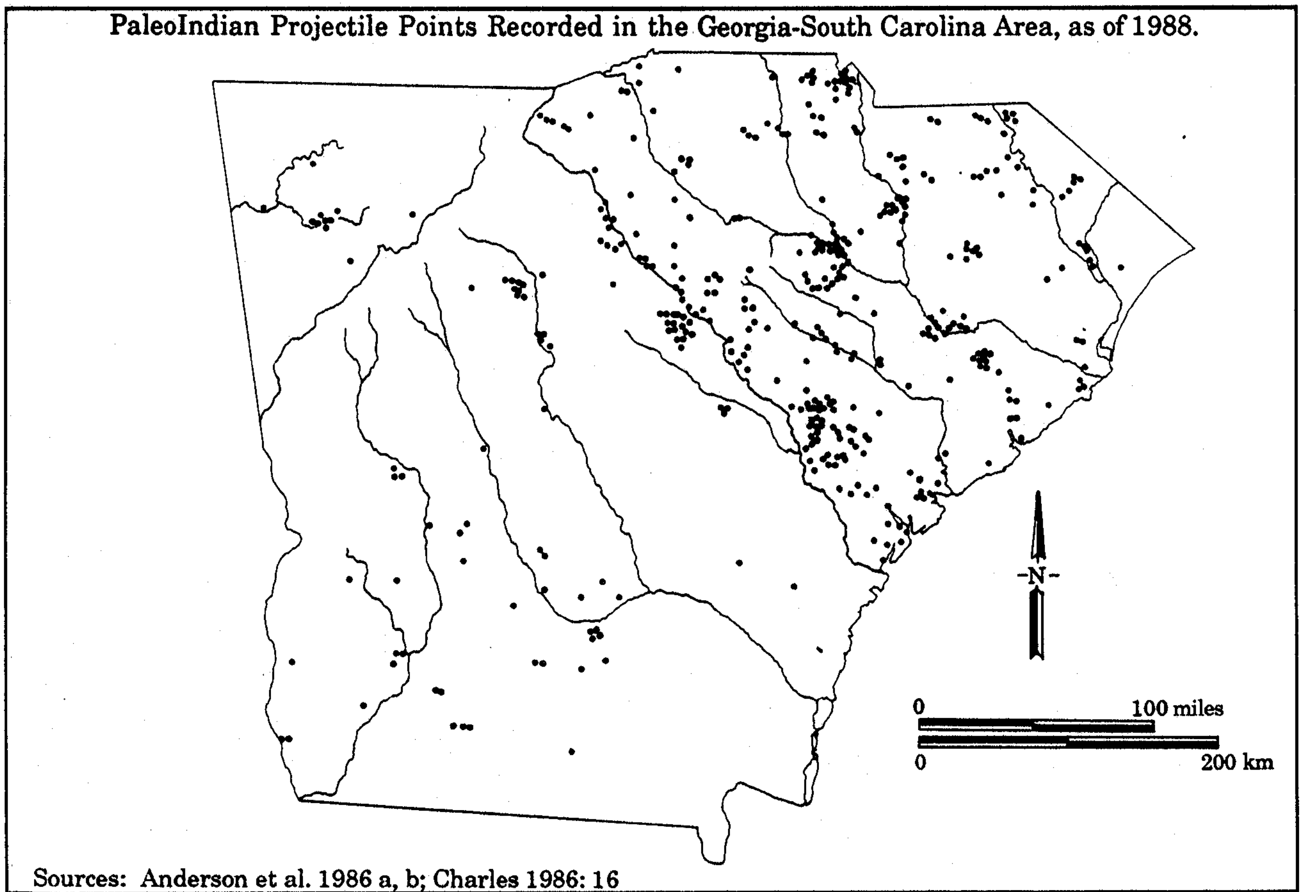
Dalton points, varyingly referred to as PaleoIndian, Early Archaic, or Transitional PaleoIndian (Coe 1964; Tuck 1974; Goodyear 1982) make up a Late or 'Transitional' PaleoIndian grouping, dating from ca. 10,500 to 9900 years B.P. (Goodyear 1982:390). The transitional placement for Dalton follows from arguments that these populations lived in a time of environmental change, when the boreal-like forests and late Pleistocene fauna were being replaced by modern species (e.g., Morse 1975a, Goodyear 1982). Dalton points are characterized by a lanceolate blade outline, at least in the earliest stages of tool life (Morse 1971, 1973; Goodyear 1974), and a concave base that is usually well thinned and ground on the lateral and basal margins. The Dalton point and accompanying tool kit retains many characteristics of earlier assemblages, although the presence of serrations and evidence for resharpening to exhaustion suggest technological differences in the use of these bifaces when compared with earlier PaleoIndian points (Goodyear 1974, 1982).

In the lower South Atlantic area the Dalton horizon combines the classic piedmont Hardaway Dalton form described by Coe (1964) with lanceolate, Quad-like points (Soday 1954). The Hardaway Blade, found in the lowest levels of the Hardaway site, is the oldest projectile point type excavated to date in secure context in North Carolina (Coe 1964:64-67; Ward 1983; Oliver 1985). The point type is thought to be a regional variant of the Dalton style, which has been observed throughout much of the lower southeast, and as far west as the eastern Plains. The appearance of this point form is thought to signal a change in adaptive strategy, away from the hunting of a range of large and small Pleistocene fauna, and towards the utilization of smaller, Holocene species. Oliver (1985:199) has noted that a decrease in point size occurs over this interval, from the Hardaway Blade to the Hardaway Dalton to the subsequent Early Archaic Palmer and Kirk projectile point types.

Models of PaleoIndian Settlement

Much of our knowledge about the PaleoIndian period in the lower southeast has come from surface finds gathered by archaeologists or collectors, rather than from controlled excavations, a situation that also characterizes our knowledge in the immediate Georgia and South Carolina area (Mason 1962; Williams and Stoltman 1965; Anderson et al. 1986a,b,c; Meltzer 1988). In the quarter century or so after 1938, when the first fluted point recovered in excavation context from the Georgia/South Carolina area was found at Macon Plateau (Kelly 1938:7), only occasional reports of fluted points appeared in the literature from these and other states in the region (e.g., Caldwell 1952:Figure 167; Waddell 1965a; Wauchope 1966:99-100; Waring 1968f). In recent years, fortunately, fluted point surveys have been initiated in almost every state in the southeast, and a high level of amateur and professional interaction now centers around this kind of effort. Examples of fluted point recording projects in states in the vicinity of the Richard B. Russell Multiple Resource Area that have yielded impressive results include studies in Georgia (Anderson et al. 1986a,b,c), North Carolina (Perkinson 1971, 1973), South Carolina (Michie 1977; Charles 1986), and Virginia (McCary 1986).

As of mid-1988, over 400 fluted and non-fluted PaleoIndian Clovis, Suwannee, and Simpson lanceolate projectile points had been recorded in South Carolina and Georgia (Figure 18). Dalton points are much more common, and hundreds of specimens are known to exist from these states, although detailed records on these forms have not been maintained until quite recently. Examining the distribution of these points, it is apparent that PaleoIndian populations occupied both riverine and interriverine environments throughout the piedmont, fall line, and coastal plain, with many of the points coming from terrace settings along major drainages. Examining raw material distributions (Charles 1986:16), the data additionally suggest that local PaleoIndian groups carried or exchanged



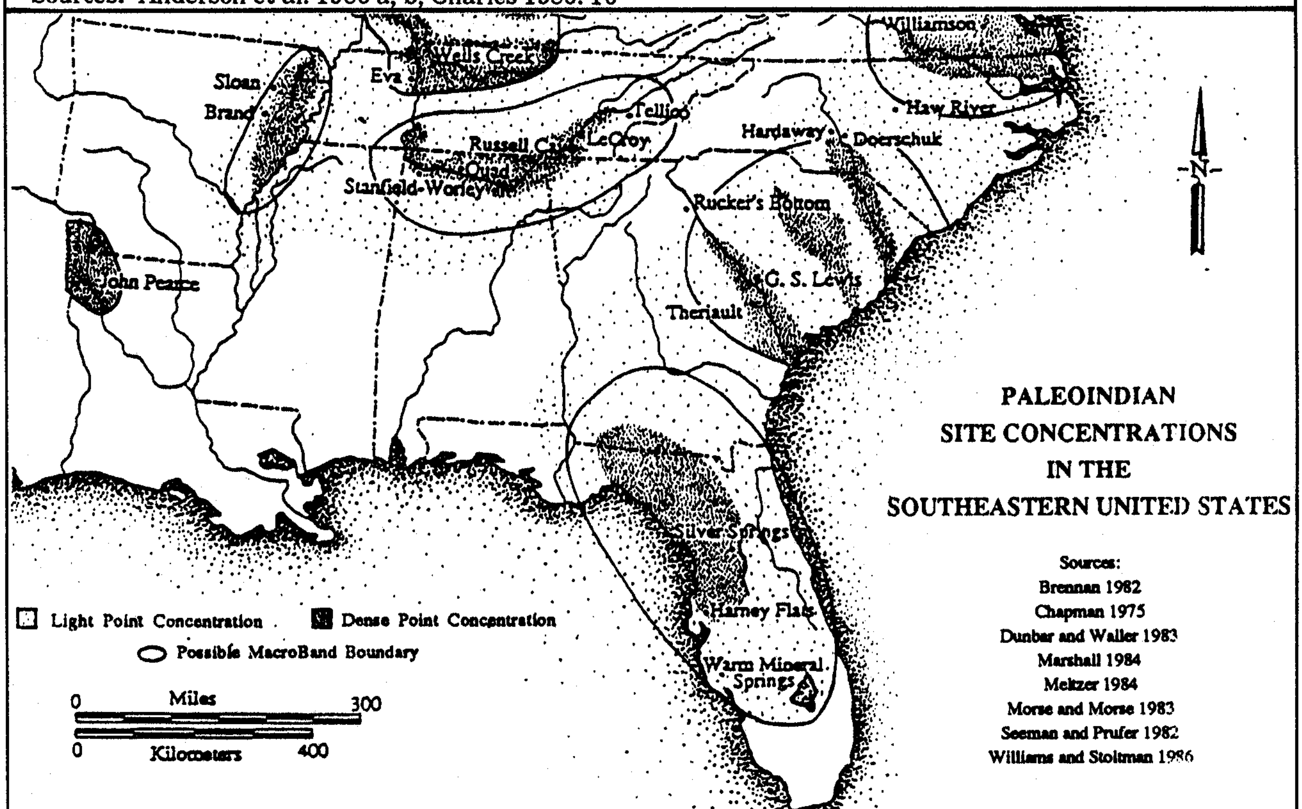


Figure 18. PaleoIndian Artifacts and Site Concentrations.

small size of the Savannah River basin, at least when compared with the Santee and Altamaha basins to either side, may have discouraged extensive settlement. The area does lie near the junction of the Atlantic and Gulf coastal regions, and studies in this region should ultimately prove important to understanding the nature of the PaleoIndian occupations in both areas.

To date PaleoIndian fluted point assemblages have only rarely been found in secure context in the Georgia and South Carolina area (Anderson et al. 1986a). While substantial numbers of PaleoIndian artifacts have been found in surface context, the excavation data recovered to date has consisted of small numbers of artifacts, with few associated diagnostic projectile points. Several isolated points have been found in fairly secure context during excavations along the Savannah River, at Rucker's Bottom (9EB91) and Simpson's Field (38AN8) in the Russell Reservoir (see below), at Taylor Hill (9RI89) on a fall line terrace near Augusta (Elliott and Doyon 1981), and at the Theriault chert quarry along Brier Creek in the central coastal plain (Brockington 1971). Like the original Macon excavations, however, where only one fluted point was found despite a massive excavation effort (Kelly 1938), most local PaleoIndian finds in excavation context have been isolated finds, found during major field programs. The single fluted point found at the Theriault chert quarry along Brier Creek, for example, came from an excavation block encompassing 142 square meters, while the isolated fluted point at Rucker's Bottom came from a 160 square meter block. While more extensive Early PaleoIndian components may exist in the general vicinity of the Savannah River, their existence remains to be demonstrated.

Virtually the only attempt to examine PaleoIndian settlement data locally has been by O'Steen and her colleagues using materials from the upper Oconee River valley in Georgia (O'Steen et al. 1986). Ninety-one PaleoIndian sites yielding 95 components were identified in the Oconee River survey sample, most predominately short term or limited activity sites, with a few quarry locations and larger possible residential sites also located. Sites were grouped by four types of landform, specifically levee, terrace, uplands edge, and uplands. A gradual expansion of occupation through time and into new areas was indicated. Early PaleoIndian sites were located primarily in the floodplain, with the remainder of the sites at the uplands edge. Middle PaleoIndian sites still occurred frequently in the floodplain, but there was also evidence for exploitation of the upland or interriverine areas. Dalton sites occurred in all zones, with a majority at the uplands edge or in the uplands. The data suggested that by Late PaleoIndian times populations were utilizing upland areas more frequently. A concentration of large sites at shoals, possible game crossing or fording areas, was evident. The use of local as opposed to extralocal raw material increased dramatically over time in the Wallace Reservoir sample. Early PaleoIndian diagnostics were predominantly on extralocal materials while most Middle and Late PaleoIndian points were made of locally available raw materials (O'Steen et al. 1986). A similar pattern was suggested in the Russell Reservoir sample (Table 2).

The available projectile point distributional data from the general region, in conjunction with the analyses from the Wallace Reservoir, suggest that the coastal plain and ridge and valley provinces were more heavily utilized than the piedmont during the earlier PaleoIndian period, at least in the Georgia area. Piedmont Georgia PaleoIndian points tended to be small and extensively resharpened; broken points were often modified and used as scrapers, wedges, and gravers; and broken blades were often fashioned into new, but smaller, bifaces (O'Steen et al. 1986). The extensive reworking of these local assemblages suggests, possibly, that the area was on the fringes of settlement networks centered elsewhere.

Previous studies have identified areas in the southeast where large numbers of PaleoIndian points have been found that are thought to have been population concentrations (Figure 18; Williams and Stoltman 1965). The centers closest to the Russell Reservoir area are in northern Florida, the Atlantic coastal plain of South Carolina, and in the ridge and valley province of Tennessee and Alabama. The Georgia piedmont, including the upper Savannah River valley, may thus represent a relatively unoccupied area between two or more population concentrations. Raw material distributions examined on diagnostic points from across the region suggest that interaction between these areas was fairly minimal. Intensive utilization of the Georgia piedmont, including the upper Savannah River area, does not appear to occur until the latter portion of the PaleoIndian period or in the succeeding Early Archaic.

EVIDENCE FOR PALEOINDIAN OCCUPATION IN THE RUSSELL RESERVOIR

Introduction

PaleoIndian components were identified in excavation context at only three sites in the reservoir. Isolated fluted points of Early or Middle PaleoIndian age were found at Simpson's Field, Clyde Gulley, and Rucker's Bottom, while a Late PaleoIndian Hardaway Dalton point was found at Rucker's Bottom. The points from Rucker's Bottom and Simpson's Field were in late Pleistocene/early Holocene context, while the point from the Clyde Gulley site was found in later deposits. Small numbers of potentially associated tools and debitage were found with these artifacts at Sara's Ridge and Rucker's Bottom, where there was also some evidence to suggest that the assemblages were in primary context. The fluted point from Clyde Gulley occurred in a Mississippian midden, however, and in all probability reflected collection and discard by those inhabitants; the same may be indicated for the fluted point found at Rucker's Bottom, which may have been brought onto the site by subsequent, Early Archaic occupants.

Surface Finds

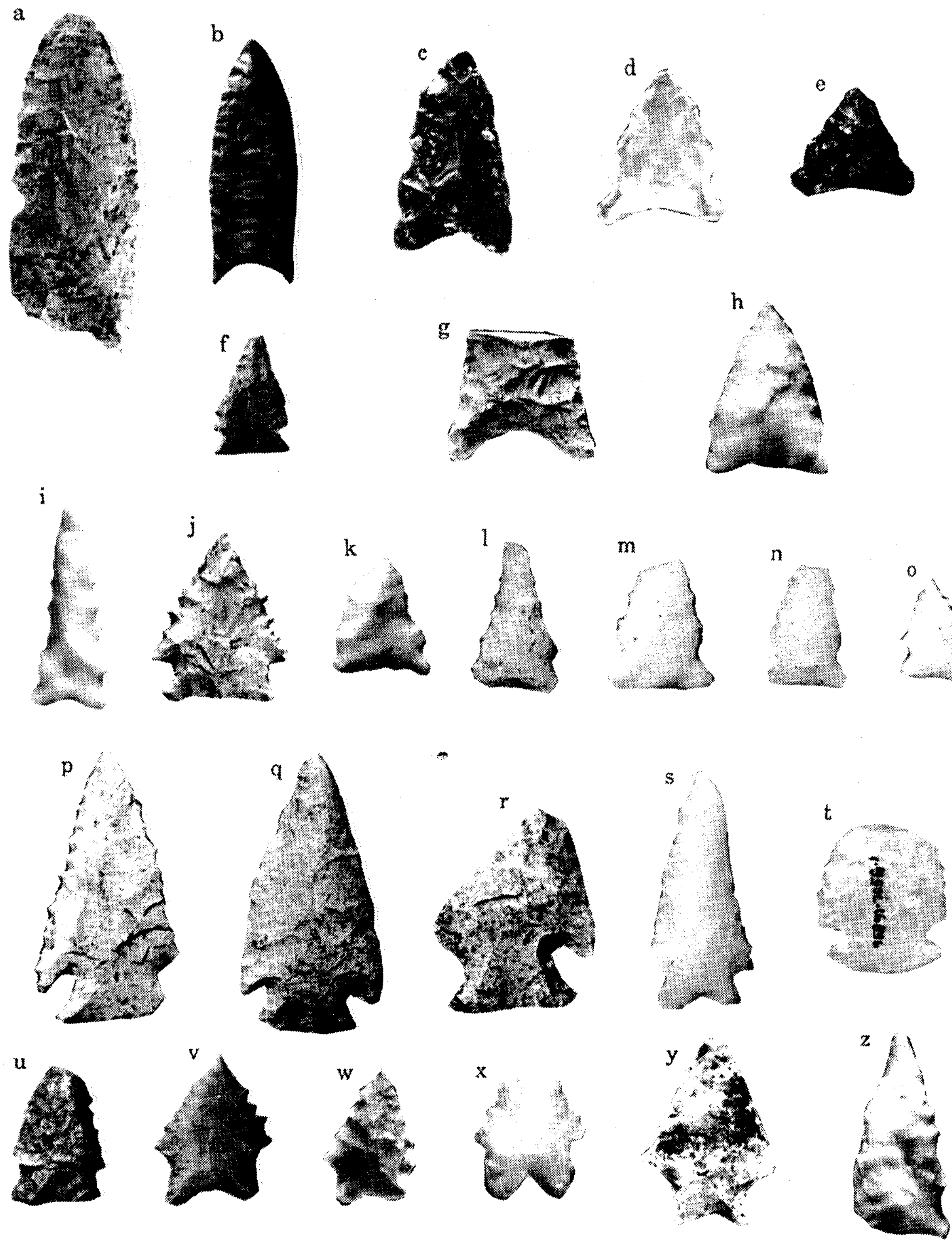
Isolated finds of PaleoIndian fluted bifaces, probably dating to before 10,500 B.P., have been found at several sites in the upper Savannah River in the general vicinity of the Russell Lake (Figure 18; Barse 1980; Charles 1986; Anderson et al.

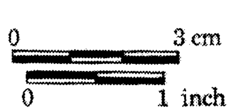
1986a). No associated assemblages were found with these points, suggesting a fairly minimal occupation of the area. Concentrations of fluted points appear to be quite rare on sites of this time level in many areas of the lower southeast. This pattern, markedly different from that observed in the plains and in the northeast, where dense kill sites have been reported, has prompted some investigators to suggest southeastern PaleoIndian populations were highly mobile, generalized foragers "never participating in the highly structured spatial behavior that produces sites" (Meltzer 1984:354). The seemingly low incidence of PaleoIndian remains from the Georgia/South Carolina piedmont has been variously attributed to an absence of locally available high quality cryptocrystalline resources; survey bias; settlement systems favoring the resources of the coastal plain; the small size of local river basins; and, of particular relevance to the Russell area, the somewhat peripheral nature of the Savannah River drainage from major arteries extending well into the midcontinent, such as the Tennessee River Valley.

Large numbers of Dalton points have been recorded in the Georgia and South Carolina area in recent years (Anderson et al. 1986a, 1986c; Tommy Charles: personal communication 1988). The incidence is quite high, and may warrant comparison with the central Mississippi Alluvial Valley, where data on hundreds of Dalton sites exist (Redfield 1971; Morse 1971, 1973, 1975a, 1975b, 1977, n.d.; Morse and Morse 1983; Goodyear 1974, 1982). Many of the Georgia Dalton points are fluted or, more properly, basally thinned, arguing for a direct, possibly local transition from earlier fluted point assemblages. Dalton points, indicative of later Paleoindian occupation (probably from 10,500 - 9800 B.P., after Goodyear 1982), were found at a comparatively greater number of locations in the reservoir. In all, 14 points were found on 11 sites over the total Russell project survey and excavation assemblage (Table 2, Figure 3). Three Dalton points, two of metavolcanics and one of quartz, were also recovered by amateurs in surface collections from the beach in front of the Gregg Shoals site, the highest single site total observed (Tippitt and Marquardt 1984:1-4; due to provenience uncertainty these are not included in Table 2). Population growth during the PaleoIndian period is suggested by this increase in the number of diagnostic artifacts.

Rucker's Bottom (9EB91)

A single fluted point of black chert was found at Rucker's Bottom, in a 160 square meter excavation block directed to the early components (Figure 19:b; Anderson and Schuldenrein 1983a; 1985:288-308). Intensive testing at the site in 1980 had documented the presence of stratified Archaic deposits, and in 1981 a 256 square meter block had been opened from 20 to 80 cm below the plowzone to explore these remains (see also pp. 270-272). Some 80 square meters of this block were taken to a depth of from 50 to 80 cm below the base of the plowzone. Because both a Clovis point and extensive Early Archaic materials were found in these initial units, the block was expanded and another 80 square meters were examined in 1982. The excavation proceeded using 10 cm levels, with all fill waterscreened through 1/8 inch mesh. Unfortunately, no additional PaleoIndian remains were found, although an appreciable number of Early Archaic diagnostics were recovered.





a Clovis (38AN8); b Clovis (9EB91); c Clovis (9EB387); d, e, g, h Daltons (9EB259, 9EB91, 9EB260, 9EB405); f, i-o Palmers - f (38AN8), i-k (9EB387), l-u (9EB91); v-x Bifurcates (9EB91, 9EB217, 38AB149, 38AB12, 38AB32); y Stanly, z Palmer?

Sources: Taylor & Smith 1978: 245, 248, 253; Tippitt & Marquardt 1984: 8-5, 8-18; Anderson and Schuldenrein 1985: 292; Wood et al. 1986: 61

Figure 19. PaleoIndian and Early Archaic Projectile Points, Richard B. Russell Reservoir Area.

The black fluted point was found in a fairly dense cluster of Palmer points, debitage, and other stone tools (Figure 20). No unambiguously associated artifacts or features were found with this point. The presence of three Palmer points and several tools of the same black chert in the block further confuse the issue. The Clovis point may be *in situ*, with the overlap of components reflecting fairly compressed stratigraphy. Alternatively, it may have been brought onto the site by the later, Early Archaic inhabitants, or may have been relocated from a Clovis component located elsewhere on the terrace. The later assemblage may even reflect Early Archaic scavenging and reworking of materials brought onto the site during the PaleoIndian period. Three 1 x 2 m tests were opened and screened to a meter below the level of the block, but found no evidence beyond a few pieces of quartz and chert debitage for possible earlier components; these flakes were interpreted as intrusions from higher levels.

A small quantity of black chert debitage was found in the block (N=692 flakes), almost all very small retouch flakes from late stage tool manufacturing or maintenance activity. Short of refitting or source analysis studies, it is not possible to equate this material with a specific component. The material is very high quality, precisely the sort of fine-grained cryptocrystalline selected by PaleoIndian populations in the region (Goodyear 1979). The source of this material is unknown at the present, although similar materials have been found in the ridge and valley province of northwest Georgia and from an outcrop some 50 miles to the south, in the Thurmond Reservoir.

An extensively resharpened Hardaway point of clear quartz crystal was found in the 160 square meter deep excavation block at Rucker's Bottom (Figures 19:e, 20). A moderate amount of clear quartz debitage, 2,122 pieces, was also found in the block, most of it at the north end of the unit in the general vicinity of the Hardaway. Like the Clovis point from the same block, the Hardaway was found in levels dominated by Early Archaic Palmer projectile points. No Palmers made from the material were found, however, so it is possible that all of the clear quartz derives from a Hardaway component. The only other tools of clear quartz found in the block were a single formal biface and six expedient unifaces. All of these tools except for a single expedient uniface were located at the north end of the block near the Hardaway. Much of the debitage was small interior flakes, suggesting late stage tool manufacturing or maintenance activity, although a few cortical pieces with crystal facets were present. Given the moderate quantity of debitage recovered, transport of finished tool forms off the site is indicated.

Simpson's Field (38AN8)

The only other site in the reservoir where early materials were found in what could be considered primary context was at 38AN8, Simpson's Field (Wood et al. 1986:60-61). Four chert tools, including a Clovis point, a corner-notched Palmer point, and two unifaces were found embedded in the sandy clay subsoil which immediately underlay the plowzone in XU1 (Figure 19:a,f). The artifacts were found during shovel skimming operations associated with the excavation of a

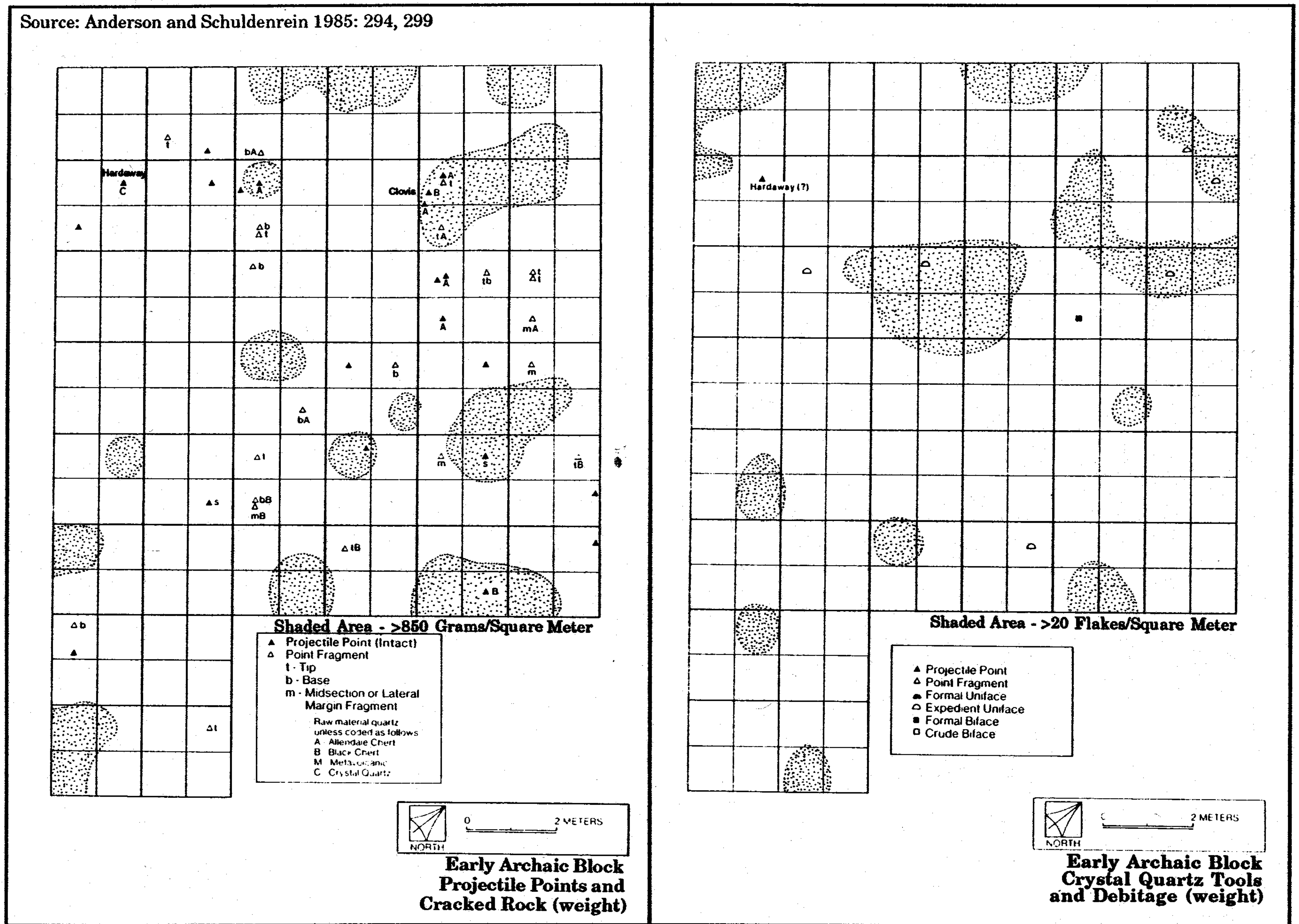


Figure 20. Projectile Points, Cracked Rock, and Crystal Quartz Distributions, Rucker's Bottom Block.

large block unit directed to the exposure of Late Woodland and Mississippian period features, which intruded into the subsoil (see Chapters VI, VII). The early materials were found in close proximity to one another, within an area approximately 20 meters in diameter. No other associated artifacts or features were found.

The four artifacts were found on a slight rise in the floodplain, bounded on either side by two creeks and a small swampy depression. Although only slightly elevated above the surrounding landscape at the present, the location may have been more exposed in the Late Pleistocene, prior to the extensive deposition of the Holocene era. To the early human populations occupying the region, the location may have been viewed as an advantageous location for hunting and camping. The fluted point (Figure 19:a) is quite large and resembles classic western Clovis forms, suggesting it was manufactured early in the PaleoIndian era. In general size and shape it resembles fluted points found at Macon Plateau in central Georgia (Kelly 1938:7) and at the Theriault site in the lower Savannah basin (Brockington 1971:129).

Clyde Gulley (9EB357)

A highly waterworn black triangular Clovis-like point was found at the base of the Mississippian midden at the Clyde Gulley site (Figure 19:c). The material was fine grained and slightly translucent, and may be from the same source as the fluted point found at Rucker's Bottom. The point exhibited considerable reworking along its lateral margins, giving the edges an irregular appearance. The flutes or basal thinning flake scars, two on one face and one on the other, were long and somewhat asymmetrically located. No other examples of the raw material were found in the midden and this fact, coupled with the waterworn condition of the specimen, suggests that it was brought onto the site by one of the later, Mississippian inhabitants.

THE PALEOINDIAN IN THE UPPER SAVANNAH RIVER VALLEY IN LIGHT OF THE RUSSELL RESERVOIR INVESTIGATIONS

Only minimal evidence for PaleoIndian utilization of the upper Savannah River was found during the Russell Reservoir project. Three fluted points and a somewhat larger number of Dalton-like points were found, most in contexts suggesting isolated discard or deposition, or a result of a very brief occupation. No evidence for actual habitation sites were found, and settlement in the area appears to have been sparse. All three fluted points were of unusual materials that came from appreciable distances, from the lower coastal plain (i.e., Simpson's Field) and possibly from the ridge and valley province (i.e., Clyde Gulley and Rucker's Bottom), or at least as far away as the fall line. The Dalton points, in contrast, were made primarily from local materials, a pattern comparable to that observed in the upper Oconee (O'Steen et al. 1986). Most of the

Dalton points found in the Russell area, in fact, were made of quartz; only one point each were found made on metavolcanic or ridge and valley chert (Table 2). Increased group mobility, and increased use of the upper Savannah River area, is indicated by this preference for locally available lithic raw materials. While predominantly surface data, the PaleoIndian materials from the reservoir can be examined in relation to other assemblages from the region. Some 50 fluted points, and over twice as many Dalton points, for example, are currently known from the Savannah River basin, as documented by collections research (Charles 1981; Anderson et al. 1986a; 1986c). While population densities were low, these figures indicate that basin was occupied during this early period.

THE EARLY ARCHAIC PERIOD (ca. 10,000 - 8000 B.P.)

Introduction

The Early Archaic period in the Eastern Woodlands of North America is widely viewed as a time of initial human adaptation to Holocene, post-glacial climatic conditions. Accepting the placement of the Pleistocene/Holocene boundary at 10,000 B.P., a roughly 2000 year span for the Early Archaic period is employed in most cultural sequences. The end of the Early Archaic is usually equated with the onset of the Hypsithermal episode, at about 8000 B.P. In its most common expression, the period is viewed as one in which the assumed predominantly big-game hunting, focal adaptation of the PaleoIndian period was replaced by a more generalized or diffuse "Archaic" hunting and gathering way of life (Anderson and Hanson 1988).

In the lower southeast, Early Archaic components are recognized almost exclusively by the presence of diagnostic side and corner-notched and bifurcate-based projectile points. These hafted biface forms and their inferred period of occurrence, from earliest to latest, include the Dalton and Hardaway-Dalton types, dating ca. 10,500 - 9900 B.P.; the Taylor-Big Sandy-Bolen side-notched types, dating ca. 10,000 - 9500 B.P.; the Palmer-Kirk corner-notched types, dating ca. 9500 - 8800 B.P.; and a series of bifurcate forms, including the MacCorkle, St. Albans, LeCroy and Kanawah types, dating from ca. 8900 - 7800 B.P. (Coe 1964; Broyles 1971; Chapman 1975, 1976:5-7; 1985:146; Goodyear et al. 1979:100-101; Goodyear 1982; Daniel and Wisenbaker 1987). The end of the Early Archaic in the region, which occurred around 8000 B.P., was characterized by the replacement of these notched and bifurcate forms by square and contracting stemmed Stanly (ca. 7800 - 7000 B.P.) and Morrow Mountain (ca. 7500 - 6000 B.P.) points, and the Kirk Stemmed type, dating from ca. 8000 - 7800 B.P. (Coe 1964; Chapman 1976:7; 1985:146; Goodyear et al. 1979:106; Oliver 1985). Discussion of bifurcate and Stanly assemblages found in the reservoir is largely deferred until the following chapter, since many of these points were found in transitional Early/Middle Archaic context with Stanlys, a Middle Archaic form, predominating.

The occurrence, relative temporal placement, and diagnostic utility of these hafted biface forms in the immediate South Atlantic region was initially delimited by Coe (1964) at the Hardaway and Doerschuk sites in Piedmont North Carolina. Subsequent excavations have provided extensive confirmation and some refinement of this sequence, which has been found to have general utility throughout Georgia and the Carolinas (Michie 1969, 1971; Anderson et al. 1979, 1982; Claggett and Cable 1982; Tippitt and Marquardt 1982, 1984; Oliver 1985). Sequence definition and refinement and component identification tend to dominate ongoing research, although some studies have appeared that attempt to move beyond this stage. Within the past ten years, for example, it has become evident that Early Archaic sites are common on the South Atlantic Slope and occur in a wide range of microenvironmental zones (Hanson et al. 1978:105; Taylor and Smith 1978:318; Goodyear et al. 1979:105; Anderson et al. 1979:91; Phelps 1983:21; O'Steen 1983:78-81; Anderson and Schuldenrein 1983a; Anderson and Hanson 1988).

Traditional Views of Early Archaic Settlement in the Southeast

Many of the views that dominated professional archaeological assessment of Early Archaic settlement systems during the 1950s and 1960s and in some instances to the present day were outlined by Griffin (1952:354-355), in a paper entitled "Culture Periods in Eastern United States Prehistory." A picture of small, exogamous, probably patrilineal and patrilocal egalitarian bands moving within specific hunting territories was advanced. Seasonal population movement linked to resource procurement, as well as periodic aggregation for ceremonial purposes and information sharing, were suggested facets of Early Archaic life. The paper that had perhaps the most profound impact on subsequent views on Early Archaic lifeways and settlement, however, was Caldwell's *Trend and Tradition in the Prehistory of the Eastern United States* (Caldwell 1958). Caldwell argued that although the Eastern Woodlands were rich in exploitable foodstuffs, aboriginal knowledge about the occurrence and effective utilization of these resources only slowly developed. Life prior to the establishment of what he called "primary forest efficiency" was portrayed as "unsettled, nomadic... almost completely wandering" (Caldwell 1958:8-11). Because the specialized nut-processing economies observed later were not in evidence, hunting was thought to be of considerable if not primary importance (Caldwell 1958:9,13). This picture of Early Archaic life, as a highly mobile, predominantly hunting adaptation has continued to dominate thinking about the period.

The basic premise of Caldwell's "primary forest efficiency" argument, that it took thousands of years for local aboriginal populations to learn how to effectively exploit the eastern forest, has been severely challenged in recent years. It can no longer be assumed that plant foods were a relatively minor, unimportant part of the early Holocene diet (Asch et al. 1972; Asch and Asch 1985; Cowan 1985; Ford 1977, 1985; Smith 1986). While probable plant processing tools have been only rarely noted in Early Archaic excavation reports (as reviewed in Goodyear et al. 1979:104-105), recent compilations suggest that they may be more prevalent than once thought (Chapman 1977; Anderson and Schuldenrein 1983a; Neusius and

Wiant 1985; Smith 1986). Where favorable preservation occurred, and where careful recovery procedures have been used, evidence for plant exploitation has been found to be fairly common, as Chapman's work in the Little Tennessee River Valley has demonstrated (Chapman and Shea 1981:63, 77; see also Cowan 1985 and Asch and Asch 1985 for similar examples).

Recent Early Archaic Investigations in the Lower Southeast

Work in rockshelters such as Russell Cave and Stanfield-Worley characterized most Early Archaic research in the lower southeast prior to the 1960s, excepting only Coe's (1964) pioneering work in the Yadkin River floodplain of North Carolina. By the later 1960s, and particularly in the 1970s and 1980s, extensive excavation of floodplain as opposed to rockshelter settings came to dominate field data recovery approaches to the study of earlier Archaic occupations, although work in the latter settings continued. Major Early Archaic assemblages recovered from deeply stratified alluvial sites in the southeastern United States in recent years include materials from several sites in the Shenandoah Valley of northern Virginia (Gardner 1974, 1977, 1983); from a number of sites in the Little Tennessee River Valley, including Icehouse Bottom, Rose Island, Patrick, Harrison Branch, and Bacon Farm (Chapman 1973, 1975, 1976, 1977, 1978, 1985; Schroedl 1975, 1978); and from the Haw River sites in North Carolina (Claggett and Cable 1982), to cite perhaps the best known examples.

Coupled with this excavation activity, there has been a tremendous increase in site distributional data. Literally hundreds of Early Archaic components, identified by the presence of diagnostic hafted bifaces, have been reported from the Georgia-South Carolina-North Carolina area in recent years (Hanson et al. 1978, 1981; Goodyear et al. 1979; Anderson et al. 1979; Elliott and Doyon 1981; O'Steen 1983; Anderson and Schuldenrein 1983a, 1985). In South Carolina, for example, Hanson (personal communication 1988) has recorded data on almost 1200 discrete Early Archaic components on over 800 sites, and comparable numbers of components have no doubt been recorded in Georgia and North Carolina. The marked increase in knowledge in recent years is due in large measure to CRM-mandated survey and excavation activity. Contributing factors have included an increased awareness of the research potential of private collections, and the fact that the Early Archaic period has been the focus of extended research by several local scholars.

A number of Early Archaic sites have been tested in the general Savannah River area in recent years, mostly through small-scale, areally limited excavations. These assemblages include materials from probable quarry workshop sites such as Theriault (Brockington 1981), as well as from terrace locations in the Coastal Plain such as Cal Smoak, SN08, SN09, SN13, and Pen Point (Anderson et al. 1979; Elliott 1986; Wise 1986; Espenshade 1986; Sassaman n.d.). On the fall line similar excavations have been conducted at Taylor Hill, and in the piedmont at Gregg Shoals and at several locations in the Wallace Reservoir (Elliott and Doyon 1981; Tippitt and Marquardt 1984; O'Steen et al. 1986). In addition, areally extensive excavations have been conducted at several Early Archaic sites in the Little Tennessee River area of eastern Tennessee, and at the Rucker's Bottom and G. S. Lewis sites in the piedmont and coastal plain portions of the Savannah River drainage, respectively (Chapman 1973, 1975, 1978, 1985; Anderson and Schuldenrein 1983a, 1985; Hanson 1985; Anderson and Hanson 1988).

Models of Early Archaic Settlement

While an extensive body of Early Archaic site and assemblage data has accumulated in the southeastern United States in recent years, the development of theoretical settlement and subsistence models has been slow to occur. Major attempts at Early Archaic settlement modeling in recent years in the lower Atlantic Slope have been: (1) Cable and Claggett's (1982) "Temperature-Organizational" model, as tested at the Haw River sites (Claggett and Cable 1982) and across the South Atlantic Slope (Anderson and Schuldenrein 1983a); (2) O'Steen's (1983) Wallace Reservoir Model; and (3) Anderson and Hanson's (1988) "Band/Macroband" biocultural model. Each of these is discussed in turn below.

<u>The Haw River Effective Temperature/Technological Organization Model.</u> In the context of a major excavation and reporting program centered on two deeply stratified sites along the Haw River in the central Piedmont of North Carolina, Claggett and Cable (1982) argued that changes in the technological organization of local PaleoIndian through later Archaic adaptations were a direct, if delayed response to post-glacial warming. Because the late Pleistocene and early Holocene was a time of dramatically increasing average annual temperature in the southeast, these conditions would have had a considerable effect on local resource structure and hence on hunter-gatherer organizational strategies:

> It is suggested that this dynamic and rapid shift from a cool, boreal setting to a warmer, temperate setting might cause the adaptive organizations of early to mid-Holocene hunter-gatherers to exhibit a hypothetical directional trend from systems emphasizing logistical mobility to systems dominated by "mapping on" strategies. Since logistical strategies result in fewer residential moves, we should expect a decrease in the degree of residential permanence from the Early to Middle Holocene (Claggett and Cable 1982:13).

The inferred increase in residential mobility and decrease in residential permanence suggested by this model runs counter to the traditional view advanced by Caldwell (1958), that increasing sedentism characterized Archaic developments in the region (Claggett and Cable 1982:13; Cable 1982a).

In brief, following arguments developed by Binford (1980), the Haw River "effective temperature/technological organization" model states that the Early Holocene temperature increase led to a shift from logistical to residential mobility, with a corresponding shift in assemblages from a highly curated or logistical, collector-based technology, to a highly expedient, situational technology better suited to a foraging adaptation. At the Haw River sites, where the study of directionality within local technological adaptations formed a primary research goal, a pronounced shift from curated to expedient tool forms was noted, at or shortly after the Dalton/Palmer boundary (Claggett and Cable 1982:686-687, 764). The data from the Haw River sites thus suggested that by ca. 9800 B.P., at least in this part of the southeast, a predominantly residentially mobile, foraging adaptation had become established.

This conclusion was supported in a further test of the Haw River model by Anderson and Schuldenrein (1983a:201), in an examination of assemblage data from 98 sites. They found that most published Early Archaic site assemblages from Georgia and the Carolinas were characterized by highly expedient technologies, with only a low incidence of formal, curated tools. The variation in assemblage size and composition between sites that was observed, it was suggested, was more likely the result of re-occupation than major differences in site function. A high level of group mobility was further indicated, particularly along rather than across drainages, through an examination of the incidence of local vs. extralocal raw materials on diagnostic projectile points (Anderson and Schuldenrein 1983a:201, 205). The primary conclusion of the Haw River model, that a pattern of extensive residential mobility may have appeared early in this part of the southeast, during the Early Archaic, is in direct opposition to most of the other Early Archaic settlement models advanced to date, which posit permanent to semi-permanent base camps occupied much of the year.

<u>The Wallace Reservoir Early Archaic Model.</u> One of the more ambitious attempts to examine Early Archaic settlement on a portion of the South Atlantic Slope in recent years has been by O'Steen (1983), based on an analysis of 363 Early Archaic projectile points from 248 sites located in the floodpool of the Wallace Reservoir, on the upper Oconee River in the eastern Georgia piedmont. O'Steen (1983:68-69, 99) was able to demonstrate that Early Archaic site density and base camp incidence along the upper Oconee was highest in areas of greatest resource density and diversity (possible base camps were defined as sites where more than one Early Archaic point or component were found; O'Steen 1983:106). The majority of multicomponent/multipoint sites occurred at the confluence of two or more drainages. These floodplain sites were interpreted as spring, summer, and/or fall base camps, while the upland base sites were interpreted as fall/winter camps (O'Steen 1983:106-108). Single point loci, the most widely scattered class of sites, occurred on all land surfaces and along both major and minor drainages. These sites, which outnumbered multicomponent/multipoint sites by a 5:1 ratio, were interpreted as transitory hunting/butchering camps (O'Steen 1983:108-109).

Using population density estimates for hunter-gatherers of from 0.05 to 0.13 persons/square kilometer (taken from Jochim 1976:134), O'Steen (1983:110) argued that the area of the Wallace Reservoir may have supported between 80-200 people at any one time during the Early Archaic. Following the same line of reasoning, she argued that a maximum band (defined by Wobst 1974:152 as "a marriage network which guarantees the biological survival of its members") of approximately 475 people may have been present within the overall Oconee basin, which extended over about 13,600 square kilometers (O'Steen 1983: 112). In contrast to the studies conducted by Claggett and Cable (1982) and Anderson and Schuldenrein (1983a) noted previously, O'Steen argued that local Early Archaic populations were comparatively sedentary, operated within small territories, and probably obtained their extralocal lithic raw materials through trade (1983:115-116). The evidence marshalled in support of this position, that this type of adaptational system tended to occur among "hunter-gatherers in temperate, ecologically diverse environments" (O'Steen 1983:115), remains to be demonstrated archaeologically (e.g., Binford 1980, 1983; Kelly 1983), and depends upon the nature of early Holocene paleoenvironment conditions and resource structure. Overall, the attempt to incorporate an array of factors, including paleoenvironmental conditions, microenvironmental variability in site location, and the need to maintain viable mating networks represented an important advance.

<u>The Band/Macroband Biocultural Model.</u> The third generalized model of Early Archaic settlement to emerge on the South Atlantic Slope in recent years has been Anderson and Hanson's (1988) "band/macroband" model, which was evaluated with archaeological data from the Savannah River basin. The impetus for this model, in fact, came about in part as a result of the work in the Richard B. Russell Reservoir. The model was developed in an effort to interpret the major Early Archaic assemblages found at Rucker's Bottom and at the G. S. Lewis East site in the lower portion of the drainage, on the Savannah River Plant (Hanson 1985). The discussion that follows is drawn from the basic presentation of this model (Anderson and Hanson 1988).

Four limiting factors, it was argued, strongly conditioned the structure and operation of Early Archaic adaptations on the South Atlantic Slope:

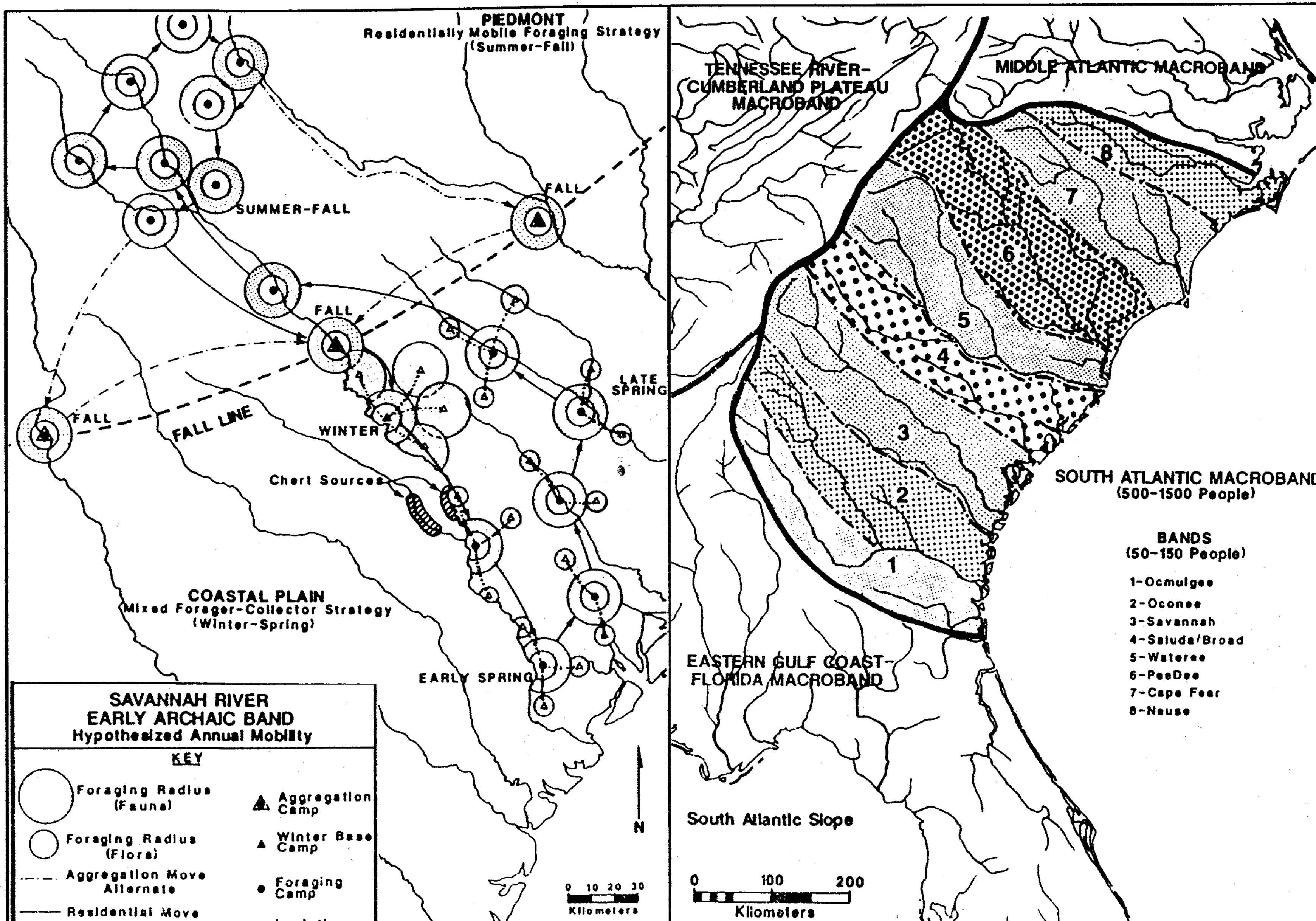
1. Environmental structure, specifically seasonal and geographic variation in food and other resource distribution patterns.

2. Biological interaction, manifest in mating network regulation.

3. Information exchange, notably for mating network maintenance and subsistence resource regulation, most probably embedded in patterns of intra and intergroup mobility, and social and economic interaction.

4. Demographic structure, evidenced in population size and spacing.

Two levels of settlement organization were proposed, corresponding to local (band-level) and regional (macroband) organizational systems (Figure 21). At the band level, co-residential population aggregates of from roughly 50 to 150 people were proposed. A hypothesized pattern of annual band mobility within the Savannah River Basin was advanced. Regional social entities, macrobands corresponding to Wobst's (1974) minimum equilibrium mating networks and assumed to consist of from roughly 500 to 1500 people were also proposed. A spatial model for the distribution of individual bands over the South Atlantic



Source: Anderson and Hansen 1988

Figure 21. Early Archaic Band Level Mobility and Macroband Distributions, Savannah River Region.

Slope, and macrobands over this part of the southeast, was advanced.

In brief, the hypothesized annual settlement round was characterized by the use of logistically provisioned base camps during the winter, and foraging camps throughout the remainder of the year. Annual movement was towards the coast during the early spring, back into the upper coastal plain and piedmont during the later spring, summer, and early fall, with a return to the winter base camp in late fall. The return to the winter base camp may have incorporated side trips to other drainages, for aggregation events by groups from two or more different drainages. Fall line river terraces were posited aggregation loci since the dramatic character of this macro-ecotone, where rocks and shoals first appeared proceeding inland from the coast, would facilitate population rendezvous. The occurrence of rich Early Archaic assemblages in fall line sites over the region indicated that these areas saw use in special activities of some kind (Michie 1971; Anderson 1979a; Wetmore 1986; Wetmore and Goodyear 1986).

Low population densities of between 50 to 150 people per drainage were proposed during the initial Early Archaic occupation of the region; this figure in all probability increased over time, leading to group fission and a concomitant decrease in annual range. The low incidence of diagnostics from this period found during archaeological surveys formed the primary argument against high population densities. It was cautioned, however, that the primary focus of the modeling exercise was on patterns of annual population movement and resource procurement, and not on precise population estimates.

The hypothesized regional distribution of Early Archaic band-level groups is illustrated in Figure 21 and reflects the northwest to southeastward trending flow of most major drainages, from the Appalachian Mountains to the ocean. The maintenance of viable Early Archaic populations required mating networks extending over a large area (Wobst 1974; Wilmsen and Roberts 1978; Wright 1981). To maintain a minimal equilibrium population, given the population levels assumed in the model, several bands had to be in regular contact. The fluid movement of individuals coupled with periodic aggregation of larger social groups at fall line locations, were suggested mechanisms by which this interaction was maintained (see also Conkey 1980; Hayden 1982; Wiessner 1982).

A pure "social fluidity" model, postulating only the movement and interaction of individuals and not of groups, does not appear a viable strategy locally given conditions during the Early Archaic. Aggregation appears essential in very low density settlement systems, and where social groups move largely as units (Wilmsen and Roberts 1978; Conkey 1980; Moore 1981). The need to find and exchange mates in a cultural environment characterized by an extremely low population density is what drives this model, and presumably earlier PaleoIndian settlement systems. As the landscape filled up over the course of the PaleoIndian and subsequent Archaic periods, the strength of this driving force would lessen. Social fluidity may be an entirely appropriate mechanism of intergroup contact and mating network maintenance during the Middle Archaic, and has been inferred in some local models (Sassaman 1985a; Blanton and Sassaman 1988).

Early Archaic assemblages from seven sites in and near the Savannah River Valley, including the Rucker's Bottom and Gregg Shoals sites from the Russell Lake area, were examined in an initial test of the model (Anderson and Hanson 1988). The analysis suggested that Rucker's Bottom and Gregg Shoals were short duration, warm season foraging camps, with the G. S. Lewis East site in the inner coastal plain a winter base occupied by these same groups, but employing a collector, or logistically-based technology more appropriate to the seasonal conditions.

EVIDENCE FOR EARLY ARCHAIC OCCUPATION IN THE RUSSELL RESERVOIR

Introduction

Over seventy Early Archaic components were found in the Russell Reservoir, including 59 early components identified by Palmer and Kirk Corner Notched and Kirk Stemmed points, and 12 later Early Archaic components, identified by the presence of bifurcate and Stanly points (Table 2, Figure 3). The terminal Early Archaic/initial Middle Archaic Kirk Stemmed type (dated from ca. 8000 to 7800 B.P.; Coe 1964; Chapman 1985:146) was included in the initial Early Archaic period due to its overall morphological similarity and distributional co-occurrence with Kirk Corner Notched forms in the reservoir. Kirk Stemmed points were observed at five sites, and were combined with the data for Palmer and Kirk Corner Notched to provide the figure for the total number of initial Early Archaic components in the reservoir (N=59; Table 2, Figure 3).

One major Early Archaic assemblage was excavated in the reservoir, at Rucker's Bottom, and minor components were examined at two other sites, at Gregg Shoals and Clyde Gulley (Anderson and Schuldenrein 1983a, 1985; Tippitt and Marquardt 1984). This work has helped document assemblages characteristic of this time level, providing a baseline from which to examine trends over subsequent periods. Of particular interest, the stratigraphic columns and archaeological signatures from these and other reservoir sites have proven invaluable for documenting changing patterns of raw material and tool utilization over time in the upper Savannah River area.

Rucker's Bottom (9EB91)

Extensive Early Archaic assemblages were found at Rucker's Bottom, on a low terrace/levee remnant on the western side of the river immediately north of the confluence of Van Creek, a minor tributary channel draining the adjoining uplands (Anderson and Schuldenrein 1983a, 1985). Early Archaic materials, identified by the presence of Palmer projectile points, were found along an approximately 200 meter section of the terrace in stratified contexts at depths of from approximately 70 to 120 cm below the surface. A number of test pits and backhoe trenches were opened over the terrace to document the extent and geoarchaeological context of the deposits, and a 160 square meter block unit was excavated, with all fill passed through 1/8 inch mesh (Figures 19, 20, 22, 23).

The spatial organization and assemblage composition of the Early Archaic assemblage at Rucker's Bottom was relatively uncomplicated. No obvious features (i.e., tight concentrations of rock, fired clay, charcoal, or other anthropogenic staining) were observed, although 14 diffuse scatters of cracked rock were evident that may reflect hearth remnants (Figure 20). The stone tool assemblage included projectile points and well-flaked bifacial core/tools, as well as a range of less well-executed, presumably expedient bifacial and unifacial tools (Figure 22). Formal unifaces characterized by evidence for hafting and carefully retouched margins were rare. Thirty-two cobbles and cobble tools were recovered, including two with grinding facets and four that were pitted; use of these objects for both lithic raw material reduction and plant processing activity was suggested (Figure 23). Debitage distributions within the block suggest both tool kit maintenance (i.e., resharpening) and replacement (i.e., gearing-up) activities were occurring; much of the larger debris appears related to the production of flakes or crude bifaces for use as expedient tools. Some spatial separation in the occurrence of hafted bifaces and most other flaked tool forms was evident, suggesting different patterns of use and discard for these categories.

Extralocal raw materials made up roughly 20 percent of both the debitage and flaked stone tool assemblages recovered at Rucker's Bottom, suggesting a fair degree of mobility or interaction for the populations using the site. Just over half of the 28 Palmer points (N=15) found in the block were made of locally available vein quartz, while the remainder came from presumably more distant sources. Eight points were made of yellow Allendale chert from the central coastal plain some 175 kilometers downriver, and three points were a black chert of unknown origin, thought to originate either near the fall line or in the ridge and valley province of Tennessee. Extralocal raw material debitage was almost uniformly composed of small flakes; only the vein quartz debitage, of material immediately at hand in cobble form in the adjacent river channel, exhibited a greater size diversity. Maintenance and discard of tools of extralocal materials was evident, as well as the manufacture, maintenance, and discard of tools of locally available materials.

The size, duration, and seasonality of specific occupations at Rucker's Bottom were difficult to ascertain given the comparatively small area examined, the minimal stratification within the Early Archaic deposits themselves, and the absence of preserved floral and faunal remains. The block assemblage appeared, however, to reflect a number of small, overlapping occupations. At least two Palmer components were suggested, based on the occurrence of these diagnostics in two apparent clusters. These were a large diffuse scatter in the eastern part of the block, and a smaller, more isolated cluster in the western portion (Figure 20). Earlier Hardaway and Clovis components may have also been present in this general area, something suggested by the recovery of isolated examples of these types in the same deposits. These earlier occupations, as noted previously, were either ephemeral, or were centered elsewhere on the terrace (assuming that the

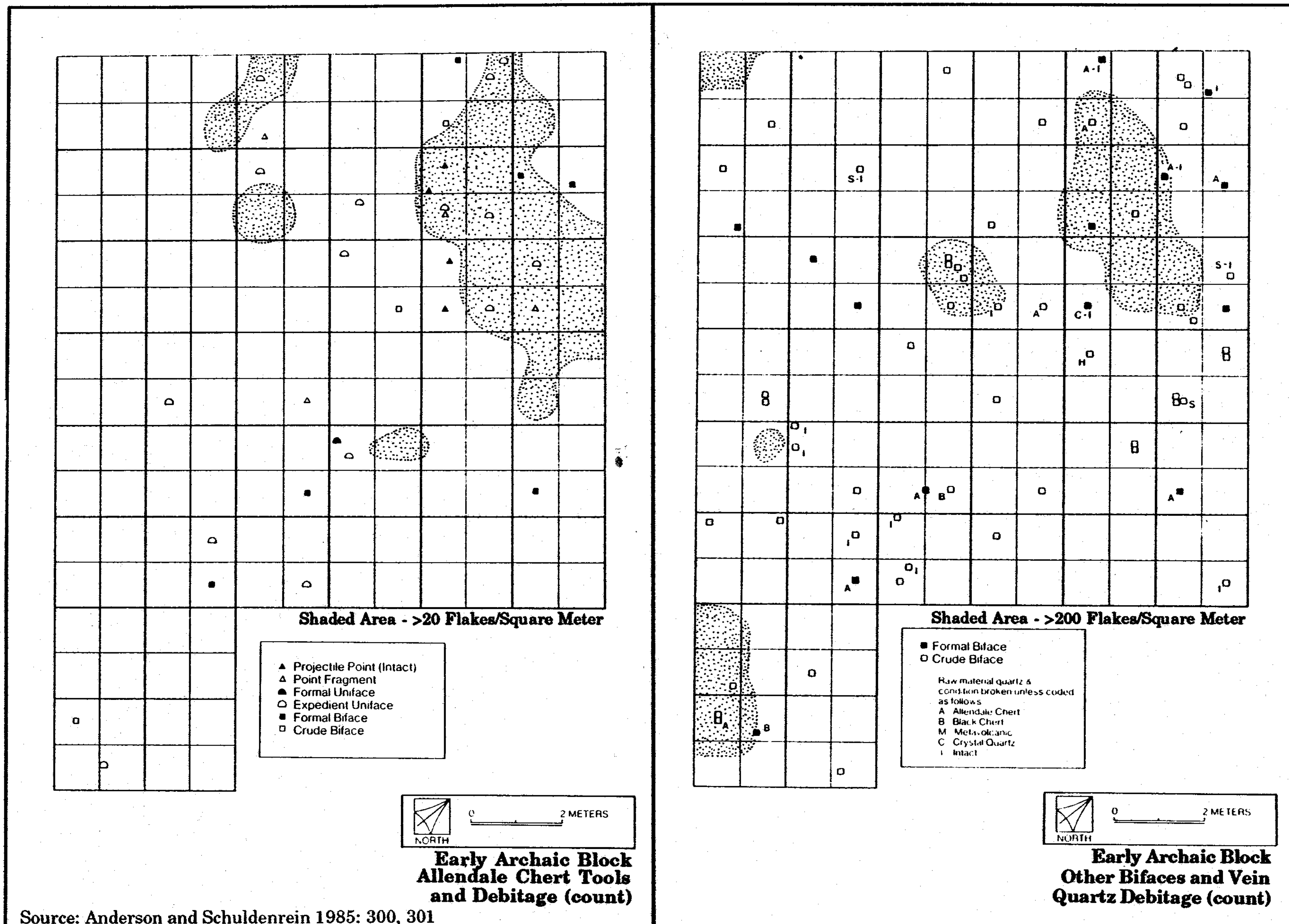
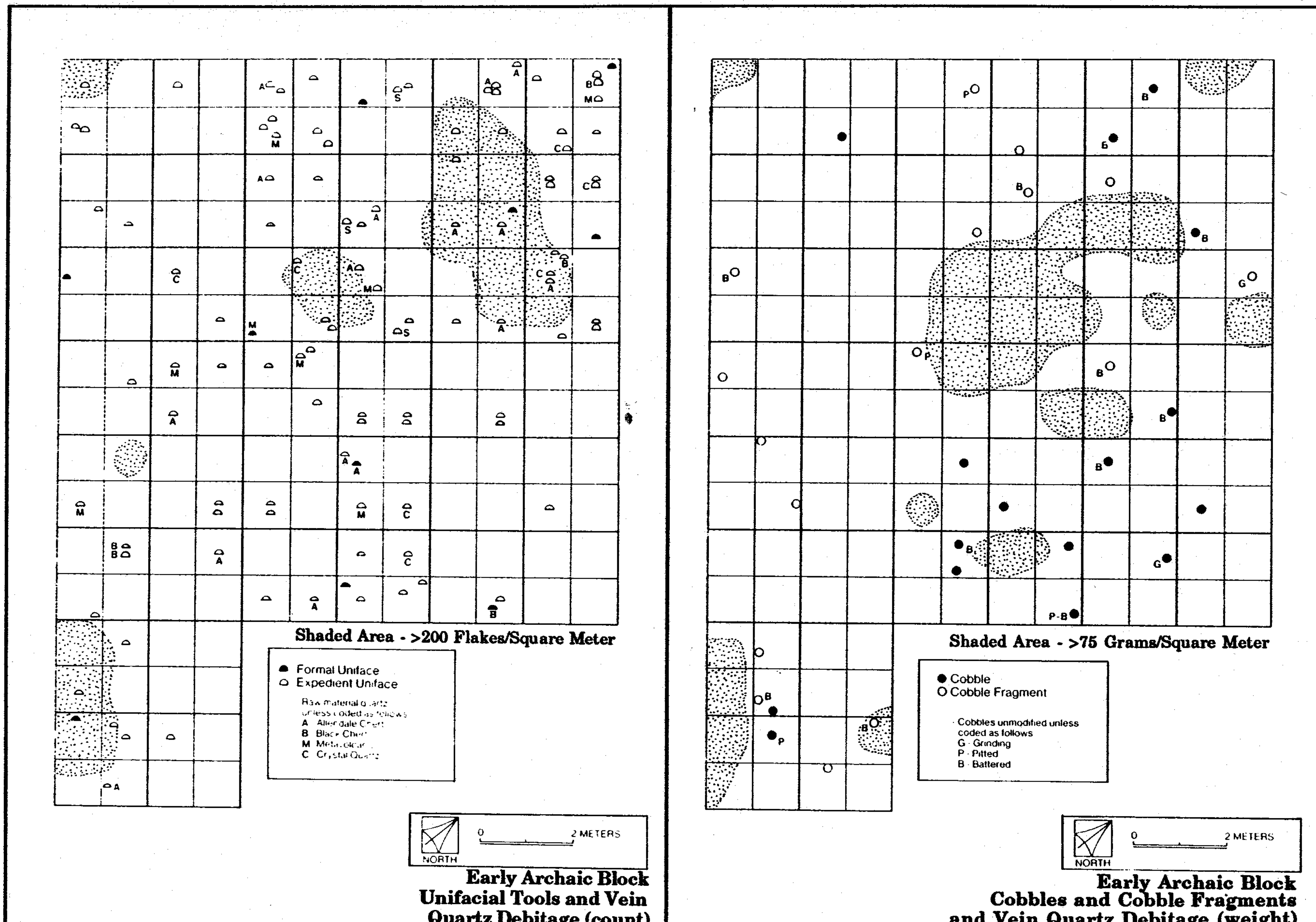


Figure 22. Coastal Plain Chert, Other Bifaces, and Vein Quartz Debitage Distributions, Rucker's Bottom Block.



Source: Anderson and Schuldenrein 1985: 304, 307

Figure 23. Unifacial Tools, Cobbles, and Vein Quartz Debitage Distributions, Rucker's Bottom Block.

diagnostics actually reflect discrete occupations and not subsequent, Palmer period collection and discard of these artifacts).

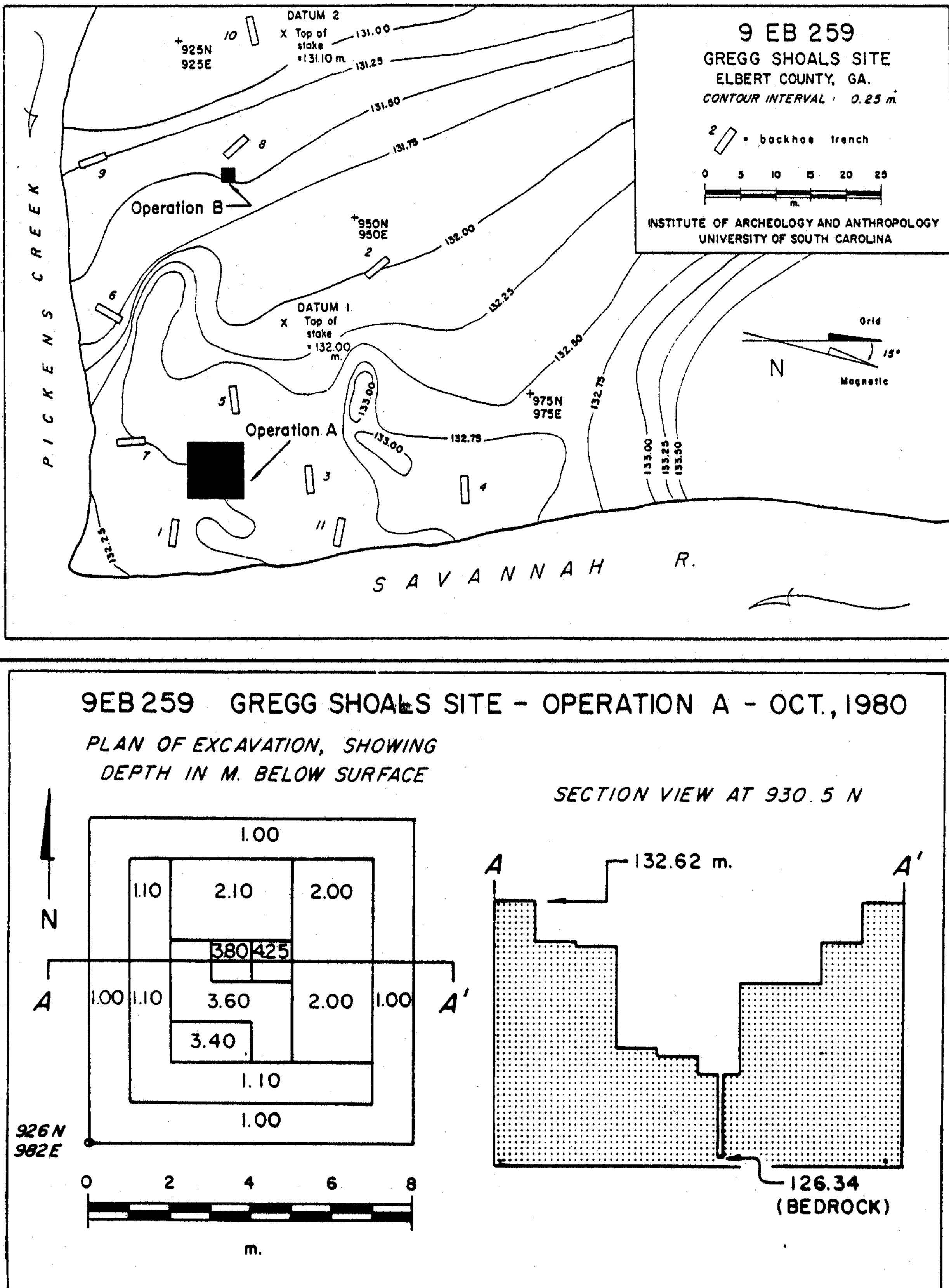
Given the incidence of possible hearth areas in the excavation block, and the extent to which Early Archaic remains were found over the site, it is probable that several dozen similar artifact clusters, and possibly as many as 800 to 1000 hearths were present on the terrace. Given such a density, some degree of occupational overlap is inevitable. At least some, and quite possibly an appreciable proportion of the block unit assemblage may, in fact, represent overlapping or outlying debris from several such clusters. While the Rucker's Bottom Early Archaic feature/concentration density appears high, an accretion of roughly one hearth per year or one artifact cluster per decade over the 2000 year span of the Early Archaic period could easily account for the site record. Although repeated use of the terrace is indicated, the size of these occupations need not have been large.

Given the absence of well-defined hearths, or evidence for structures of any kind, warmer weather occupations have been suggested. This inference is somewhat supported by the stone tool assemblage data. The low incidence of formal flaked stone "scraping" tools (i.e., steep-angled hafted unifaces) may indicate a minimal amount of hideworking, an activity that probably usually occurred during the fall and winter, when animal pelts were in prime condition. The presence of possible plant processing cobble tools, furthermore, points to warmer weather occupations, although the pitted stones could have seen fall/winter use in nut processing. Taken together, the evidence suggests that Early Archaic site use at Rucker's Bottom was of short duration, by groups using a predominantly expedient technology, and characterized (given the moderate incidence of extralocal materials) by a mobile, wide-ranging adaptation.

Gregg Shoals (9EB259)

The Gregg Shoals site was located on a high terrace immediately to the north of the confluence of Pickens Creek with the Savannah River (Figure 24). Over three meters of stratified archaeological deposits were found, offering a valuable perspective on the prehistoric cultural sequence in the reservoir. Excavations at the site included systematic testing using a six inch bucket auger, the excavation of seven 1 m test units, backhoe testing across the deposits and into the cutbank face, and the excavation of a large block unit (Goodyear et al. 1979:33-50; Gardner et al. 1983:266-275; Tippitt and Marquardt 1984). Because the depth of the site was known in advance of the major excavation program, planning for the fieldwork was able to make use of deep site experience gained from previous investigations in the region, notably in the Little Tennessee River Valley (e.g., Chapman 1975, 1978, 1985; Tippitt and Marquardt 1984:7-1).

Since the completion of the Hartwell Dam and hydroelectric plant the site area had undergone extensive erosion due to daily water fluctuations associated with power generation. Because the Gregg Shoals Dam located just to the north of the



Source: Tippitt & Marquardt 1984: 1-6, 6-2

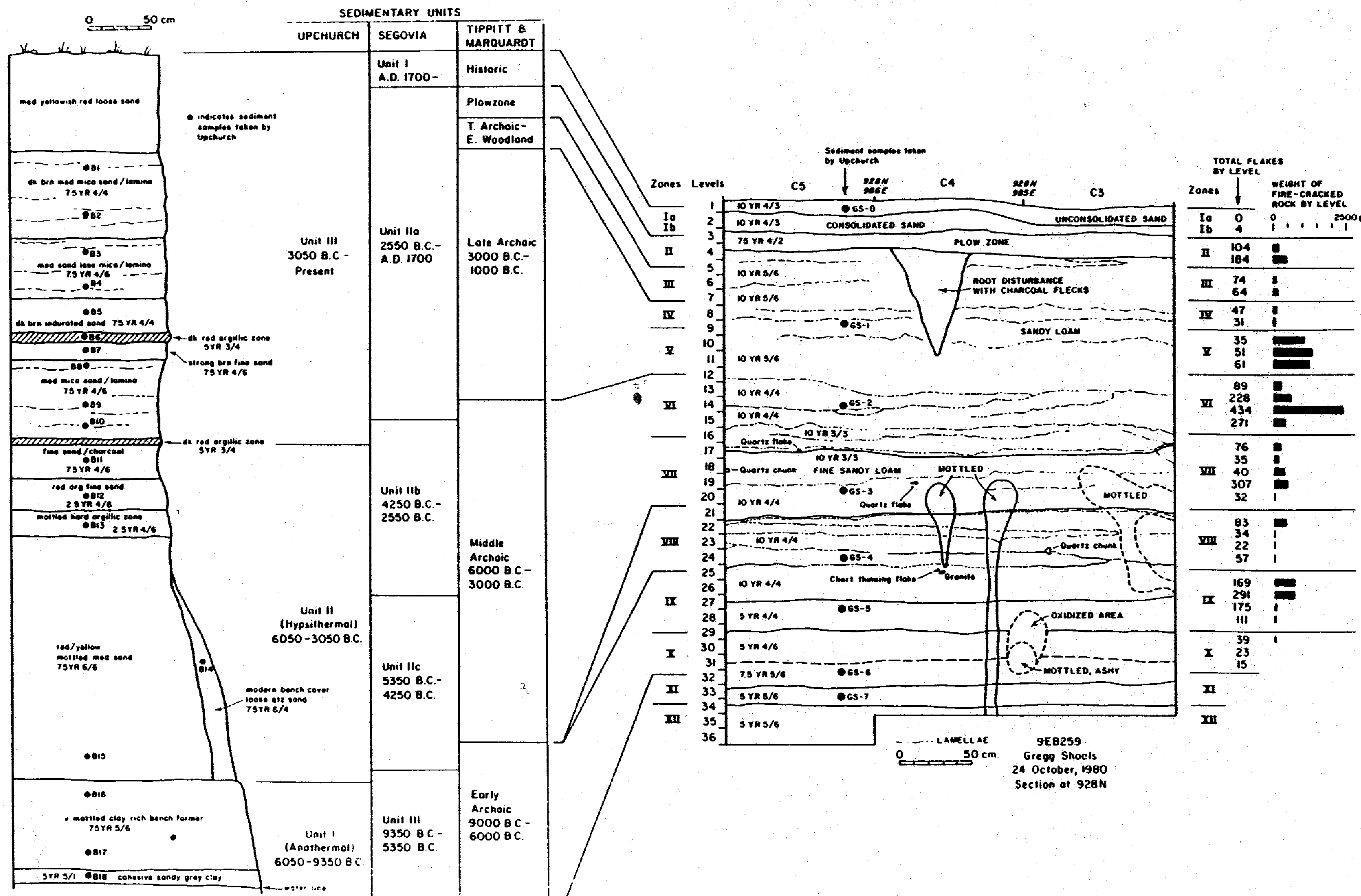
Figure 24. All Excavation Units and Deep Block Profile, Gregg Shoals Site 9EB259.

site formed a dangerous obstruction to water flowing from Hartwell Lake, it was breached in the early 1960s. Unfortunately, this was done in such a way as to direct water against the bank face containing the Gregg Shoals site, undercutting and eroding the deposits. Up to 50 m of the site closest to the channel had been washed away prior to the Russell investigations, including apparently the densest occupation zones. Massive private artifact collections were accumulated from the beach below the bank face, some of which could be examined (Tippitt and Marquardt 1984:1-4). According to these local collectors, the amount of material eroding out of the bank had dropped markedly in recent years, indicating that the densest part of the site had been lost prior to the start of the excavations. The collections included a wide range of projectile points, soapstone, and pottery, with recognizable types spanning the Late PaleoIndian to the Mississippian periods. Early Archaic bifurcate points were rare in the private collections from the site, highlighting the pattern observed across the reservoir, although three LeCroy points made of ridge and valley chert were observed (Tippitt and Marquardt 1984:1-4; note that Table 2 does not include surface material from the Gregg Shoals beach since the provenience of these collections was not completely secure).

Due to the deep, stratified nature of the alluvial deposits, intensive paleoenvironmental investigations were conducted at the Gregg Shoals locality (see Chapter III; Tippitt and Marquardt 1984:5-1 to 5-6; Upchurch 1984; Foss et al. 1985; Segovia 1985; Sheehan et al. 1985). A geoarchaeological profile spanning the entire Holocene was recovered; Late Pleistocene organic sediments at the base of the profile slightly upstream from the excavations were dated to between 10,370±140 and 10,000±140 B.P. (Segovia 1985:5; Tippitt and Marquardt 1984:5-1; Appendix I). The sedimentary units resolved in the Gregg Shoals profile in relation to the archaeological assemblages are illustrated in Figure 25.

The primary excavation block at Gregg Shoals was an 8 x 8 m unit opened in 1 m squares and 10 cm levels, with all fill waterscreened through 1/8 inch mesh (Figure 24). The 8 x 8 m block was opened to a depth of 1.0 m and was then stepped, with a 5 x 5 m block opened to 2.0 meters. Below this, a 3 x 3 m unit was opened to a depth of 3.4 m, followed by a 1 x 1 m unit opened to a depth of 4.25 m. A 3 inch bucket auger was then used to reach bedrock, which was found to lie at 6.28 m below the surface (Tippitt and Marquardt 1984:6-3). Vertical control within the block was accomplished using a fixed transit mount located on the surface, while fill was removed using a swinging metal boom and winch. Four liter flotation samples were taken from every level, and were processed on the site using an SMAP machine (Watson 1976).

Following the completion of the excavation block, when site stratigraphy had been carefully determined, heavy equipment was used to remove overburden first to the Middle Archaic and then to the Early Archaic levels, at 1.70 m and 2.55 m, respectively. A 40 square meter area was excavated next to the 5 x 5 m block opened through the Middle Archaic levels, and a 32 square meter area was opened next to the 3 x 3 m opened though the Early Archaic levels (Figure 26). In all, 41 square meters were opened into the Early Archaic deposits at Gregg Shoals

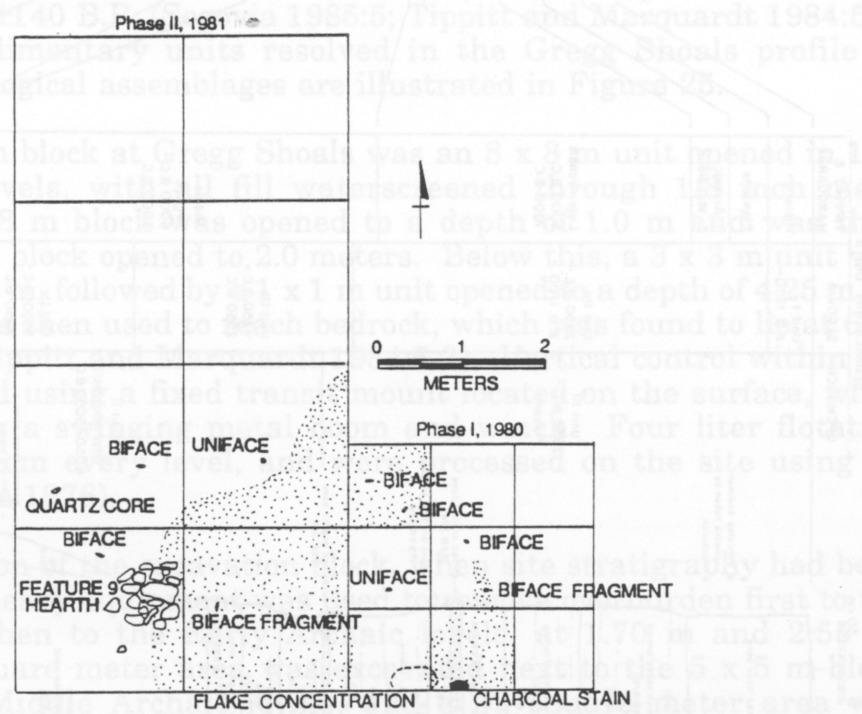


Source: Tippitt & Marquardt 1984: 5-4

Figure 25. Composite Archaeological Stratigraphy, Gregg Shoals Site, 9EB259.

Early Archaic Rock Cluster, Zone IX, 9EB259.

Source: Tippitt & Marquardt 1984: 7-43, 7-45



Early Archaic Assemblage, Zone IX, Gregg Shoals (9EB259)

Figure 26. Early Archaic Occupation Surface, Gregg Shoals Site, 9EB259.

(Tippitt and Marquardt 1984:7-8).

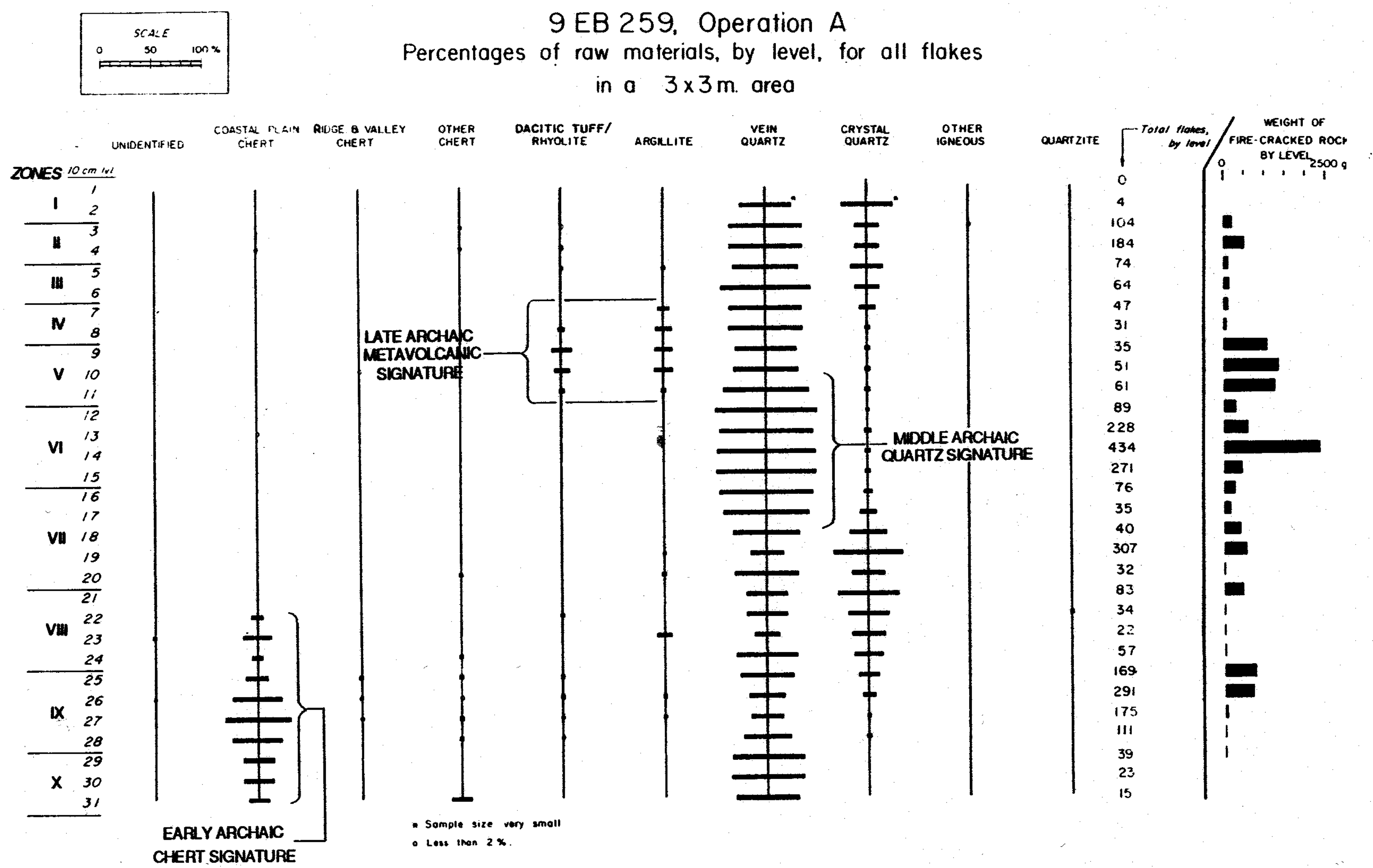
Early Archaic materials at Gregg Shoals occurred in Zone IX in the block unit, from 240 to 280 cm below the surface, stratigraphically separate from and well below the Middle Archaic assemblages found in Zones VI and VII (Tippitt and Marquardt 1984: 7-32 to 7-45; see also Chapter V, pp. 138-141). Three hafted bifaces were found in this zone, a metavolcanic Stanly stemmed, an intentionally thermally altered Kirk Corner Notched of coastal plain chert, and a highly weathered metavolcanic notched biface that may be a Stanly or some other bifurcate type (see Figure 29). Three biface fragments, one each of quartz, coastal plain chert, and ridge and valley chert were also found, as well as seven unifaces, three of chert and four of vein quartz. A comparable raw material diversity is evident within the debitage assemblage from these levels, which were dominated by chert, a signature of the initial Early Archaic in the upper Savannah River (Figure 27). The chert debitage consists mainly of small biface thinning flakes, suggesting edge maintenance, while the quartz debitage is more diversified, suggesting both manufacturing and maintenance activity (Tippitt and Marquardt 1984:7-46). Conservation of tools of fine grained extralocal material, and their replacement with tools of local material, appears indicated; a comparable pattern was observed in the Early Archaic block at the Rucker's Bottom site (see p. 119 above). No additional diagnostics were discovered in the 32 square meter area opened next to the 3 x 3 m block, although several additional wear and intentionally retouched unifaces were found.

Features associated with the Early Archaic occupations at Gregg Shoals included a rock cluster, a small circular stain ca. 25 cm in diameter and characterized by burned earth and gray ashy staining, and a concentration of debitage and tools (Figure 26). The rock cluster, which was found at a depth of 2.55 m, contained fire cracked vein quartz, river cobbles, and granite fragments. No charcoal or other organic staining was observed, although it is possible that it had been leached away. No charcoal flecks were observed in the small circular burned earth feature, which may have been a hearth remnant. Tools tended to occur close to the two probable hearth features, while the primary debitage concentration occurred between them. Given the tight spatial clustering of most of the materials around the two probable hearths, it is tempting to view the assemblage as the result of one or at the most two episodes of site use.

No clear evidence for earlier occupations was found at Gregg Shoals, although small quantities of chert and quartz debitage continued to occur to a depth of 3.1 m. Whether this represented intrusion and sifting from the Early Archaic zone, or possible earlier Archaic or PaleoIndian occupations could not be determined.

Clyde Gulley (9EB359)

The Clyde Gulley site was located immediately to the south of the confluence of Pickens Creek with the Savannah River, on a low terrace in a narrow section of the river floodplain. An Early Archaic component was discovered near the



Source: Tippitt & Marquardt 1984: 7-52

Figure 27. Debitage Raw Material Signatures, Gregg Shoals Site, 9EB259.

confluence in Backhoe Trench 3, one of 14 backhoe trenches that were opened and screened to determine the nature of the site deposits (Tippitt and Marquardt 1984:8-3, 8-14 to 8-19). A quartz Palmer, a waterworn quartz crystal, and a number of thinning flakes were found in fine sand just above a layer of red clay, at a depth of approximately 40 cm. To further explore this component, a motorized pan was used to remove the plowzone from a ca. 30 x 50 m area around the backhoe trench. A second quartz Palmer was found during the stripping. A 3 m wide cut was then made into the red clay across the southern end of the stripped area, to better ascertain the stratigraphy.

An irregular, linear excavation block encompassing an approximately 43 square meter area was then opened adjacent to the 3 m cut, using 1 m squares and 10 cm levels, and taken one level into the red clay. Three Palmer points, two of quartz and one of coastal plain chert, were found in the block area, together with several flake tools (Figure 19:i-k). Most of the debitage was of quartz, with small retouch flakes the most common category. Nine small, somewhat amorphous stains of unknown origin and function and a small scatter of fire cracked rock were also found. While the cracked rock may be from a dispersed hearth, no well defined features were observed. Fairly limited site use is indicated, with the presence of mostly small flakes indicating activities focused on toolkit maintenance rather than initial manufacture.

THE EARLY ARCHAIC IN THE UPPER SAVANNAH RIVER VALLEY IN LIGHT OF THE RUSSELL RESERVOIR INVESTIGATIONS

Analyses to date of PaleoIndian and Early Archaic assemblages in the Savannah River area, including within the Russell Reservoir, document a general trend over time toward expedient technologies and foraging adaptive strategies. Following the models discussed previously, it is likely that the PaleoIndian and Early Archaic assemblages that were documented in the reservoir represent different types of short-term camps or residential locations. Small uncomplicated assemblages, really little beyond isolated finds, characterize the PaleoIndian components that were found, and from these data it is difficult to argue for either large populations or extended settlement locally. Several times as many sites, and larger, more diversified assemblages were found dating to the Early Archaic period, although again there was little evidence for extended occupation (i.e., seasonal or year-round camps) at these locations.

Analyses of excavated assemblages from the Savannah and Oconee drainages indicate that base camps, foraging camps, and special-purpose resource extraction camps were present within local PaleoIndian and Early Archaic settlement systems (O'Steen et al. 1986; Anderson and Hanson 1988). While these findings are in line with expectations of current models, further details about matters such as season and duration of site use, specific activities undertaken, or the size of the resident groups must await larger excavations, the recovery of preserved floral and faunal remains (or other seasonal indicators), and the continued development of analytical strategies and theoretical models.

Riverine extensive, or at least geographically wide-ranging adaptations are indicated by analyses of hafted bifaces from collections along local drainages and across the region (Anderson and Schuldenrein 1983a; Anderson and Hanson 1988; Sassaman et al. 1988). Lithic raw materials used to manufacture hafted bifaces, artifacts readily identified to period, occur at distances of up to 300 kilometers from their source area at some sites. A gradual, rather than a dramatic or step-like fall-off in the occurrence of lithic raw materials occurs, suggesting minimal social boundaries. Extralocal raw material use appears greatest along rather than across drainages, furthermore, based on analyses of diagnostic artifacts from riverine and interriverine contexts (Anderson and Schuldenrein 1983a:201), suggesting that most group activities (except for possibly seasonal or annual aggregation events) occurred within individual drainages. Finally, evidence for raw material or finished artifact exchange is completely lacking. The assemblages recovered to date, even at quarry sites, suggest routine tool kit maintenance, discard, and replenishment ("gearing-up") activity, rather than production for exchange.

The high incidence of extralocal raw materials on Early Archaic artifacts observed on sites over the region is what might be expected if low numbers of people were moving rapidly over the landscape. The almost exclusive use of local raw materials characteristic of succeeding Middle Archaic populations in the South Atlantic area (Sassaman 1983, 1985a; Anderson and Schuldenrein 1985:317; Blanton and Sassaman 1988), in contrast, probably reflects increasing regional population densities and a corresponding decrease in annual range, including the distance traveled to procure lithic raw materials (Ford 1974; Stoltman 1978; Brose 1979; Smith 1986:18-25). If raw material distributions are indeed an accurate indicator of regional settlement dynamics, a time-transgressive decrease in the use of extralocal raw materials should be evident over the course of the Early Archaic, as population increased and mobility decreased. This is precisely what is observed in the archaeological record from the region (Anderson 1979a, 1979b; Goodyear et al. 1979; Claggett and Cable 1982; Blanton 1983; Sassaman 1983; Anderson and Schuldenrein 1985), and from the Russell Reservoir sample itself (Table 2). In particular, the incidence of extralocal lithic raw materials (measured using coastal plain and ridge and valley cherts) declines from 26.3 percent of all Palmer/Kirk corner notched points in the initial Early Archaic, to 23.5 percent of the terminal Early Archaic bifurcates, to less than 1 percent of the Middle Archaic Morrow Mountain forms.

Evidence for Population Increase

Evidence for a major population increase from the PaleoIndian into the Early Archaic is also indicated in the Russell Reservoir assemblages. The incidence of diagnostic projectile points found on reservoir sites indicates a regular pattern of increase in the occurrence of these tools from the earlier PaleoIndian period (measured by counting the number of fluted points found in the reservoir) to the later PaleoIndian (Dalton points), to the initial Early Archaic (Palmer and Kirk points) (Table 2, Figure 3). This observation is supported by comparable analyses employing materials from three differing localities in the Georgia/South Carolina area, in the Wallace Reservoir of north-central Georgia (O'Steen 1983; O'Steen et al. 1986), on the Savannah River Plant in the inner coastal plain of South Carolina (Hanson et al. 1978, 1981), and at the Feronia locality in south-central Georgia (Blanton and Snow 1986). Taken together, these data suggest a major increase in regional population, or at least in the use of projectile points, over this interval (Anderson et al. 1986a).

Particularly sharp increases in the total numbers of observed diagnostics are evident between the Early and Late PaleoIndian and again between the Late PaleoIndian and the Early Archaic (Table 2; Figure 3). This may reflect changing technologies as well as population growth. Dalton and later Early Archaic hafted bifaces appear to have seen extensive use as multipurpose tools, for example, more so than earlier fluted and unfluted lanceolate forms in the region (Ahler 1971; Goodyear 1974). The observed pattern of increase does not appear to be an artifact of the length of time over which these tools were manufactured. To control for the differing lengths of time represented by these periods, the data were standardized by examining the number of diagnostics per 100 year interval. A similar although less marked pattern of increase was still noted (Figure 3). If the Russell projectile point data do reflect regional population levels, it suggests that major population growth was occurring over this interval, and that considerable landscape filling had apparently occurred by the start of the Early Archaic period.

The Early/Middle Archaic Transition

The transition between the Early and Middle Archaic periods is not well understood in the South Atlantic area. Bifurcate projectile points, thought to be diagnostic indicators of terminal Early Archaic components, were comparatively rare in the Russell assemblages, suggesting a decline in population had occurred (Figure 3). A replacement of side and corner notched forms by stemmed points and bifurcates has been documented in piedmont North Carolina and in the Little Tennessee River Valley, (Coe 1964; Chapman 1985), and a comparable sequence was evident in the Russell Lake area. The rarity of bifurcate point forms locally, however, calls into question their utility as a primary indicator of terminal Early Archaic occupations.

Bifurcates are common in the piedmont of North Carolina and eastern South Carolina (Chapman 1975; Steen 1985), but are decidedly uncommon in the piedmont of western South Carolina and eastern Georgia (DePratter 1975:13; House and Ballenger 1976:68; Taylor and Smith 1978:320; Anderson et al. 1979:88; Goodyear et al. 1979:107; Cable 1982b:433-434; O'Steen 1983; Gardner 1984:34). A co-occurrence of Kirk-like and bifurcate forms has been indicated at some sites in the little Tennessee River Valley:

> Based on data from the stratified Rose Island, Icehouse Bottom, Howard, Calloway Island, and Citico sites, it is certain that Kirk Stemmed occurs after the Kanawha Stemmed and before the Stanly Stemmed types. ...It is unfortunate that the prefix Kirk was assigned to the type name of this stemmed point since evidence now suggests that Kirk Stemmed is separated from Kirk Corner notched types by 700 - 1000 years (Chapman 1979:32-33).

A comparable pattern has been observed in Maryland (Vitelli 1975; Wesler 1983:22; Tippitt and Marquardt 1984:3-6).

It is possible that Kirk forms continued to be used in areas such as the upper Savannah River where bifurcates were rare or absent. Given the infrequent occurrence of bifurcates and Kirk Stemmed forms locally, and the absence of other recognizable diagnostics, a continuation of the Kirk Corner Notched type to perhaps ca. 8000 B.P. is therefore inferred (Figure 2). The occasional bifurcates found in the central piedmont along the Savannah, in this view, probably represent sporadic or low-level interaction or visitation from populations based elsewhere, such as in the eastern South Carolina/western North Carolina piedmont, or in the ridge and valley province. The distributions of these various Early Archaic/initial Middle Archaic point types, it is further suggested, reflect major cultural as well as stylistic boundaries during this period.

Alternate explanations for the low incidence of bifurcates in the upper Savannah are that the area was depopulated for unknown ecological or social reasons, or that sites with these points have simply not been recognized. Given the level of paleoenvironmental and archaeological investigation conducted to date over the region, and particularly in areas like the Wallace and Russell Reservoirs, where few bifurcates were found, these explanations are considered unlikely. This problem is examined further in the ensuing discussion on the Middle Archaic assemblages from the Russell area.

V. TRENDS TOWARD SEDENTARY LIFE: MIDDLE AND LATE ARCHAIC PERIODS

INTRODUCTION

The Middle and Late Archaic periods in the Savannah River Valley saw the appearance of the first evidence for the emergence of sedentary life, or at least the extended occupation of specific locations in the general region (Figure 28). A marked change in archaeological assemblages occurred during this interval. During the Middle Archaic relatively uncomplicated assemblages were present in most environmental zones, suggesting a residentially mobile way of life. By the beginning of the Late Archaic, however, a range of site types had appeared, including dense occupational middens in the floodplain, suggesting extended settlements. During the Richard B. Russell investigations Middle and Late Archaic assemblages were found at large numbers of sites (Table 2, Figure 3). The Middle Archaic materials were for the most part from either minor or stratigraphically compressed assemblages. Dense, well defined Late Archaic assemblages, in contrast, were found at a number of locations. Three major preceramic Late Archaic occupations were examined, as well as several minor components dating to the later ceramic Late Archaic era. Surprisingly, given the history of research in the Savannah River Valley at early ceramic shell midden sites, no shellfish remains were found at these sites. The reservoir assemblages thus shed light on the precursors of the classic Stalling's Island adaptation, and offer a perspective on how this way of life evolved in the piedmont.

THE MIDDLE ARCHAIC PERIOD (ca. 8000 - 5000 B.P.)

Introduction

The Middle Archaic is traditionally viewed as a period of gradually increasing population and concomitant territorial circumscription by groups fully adapted to Holocene environmental conditions. The middle Holocene climatic interval or Hypsithermal occurs during the period, although the effect of this broad global warming trend on local adaptations remains unknown. Diagnostic artifacts include Stanly Stemmed, Morrow Mountain Type I and II, and Guilford Lanceolate projectile points (Coe 1964:37-44). Ranges of from ca. 8000 to 7500 B.P. for the Stanly Stemmed, 7500 to 6000 B.P. for the Morrow Mountain forms, and 6500 to 55000 B.P. for Guilford Lanceolates are inferred, based on stratigraphic and absolute dating (Coe 1964; Chapman 1976, 1985:146; Goodyear et al. 1979:106-111; Claggett 1982:25; Smith 1986:18-21; see Figure 2).

The kinds of diagnostics present at the end of this period, from ca. 6000 to 4500 B.P., are currently not well known, either locally or in the larger South

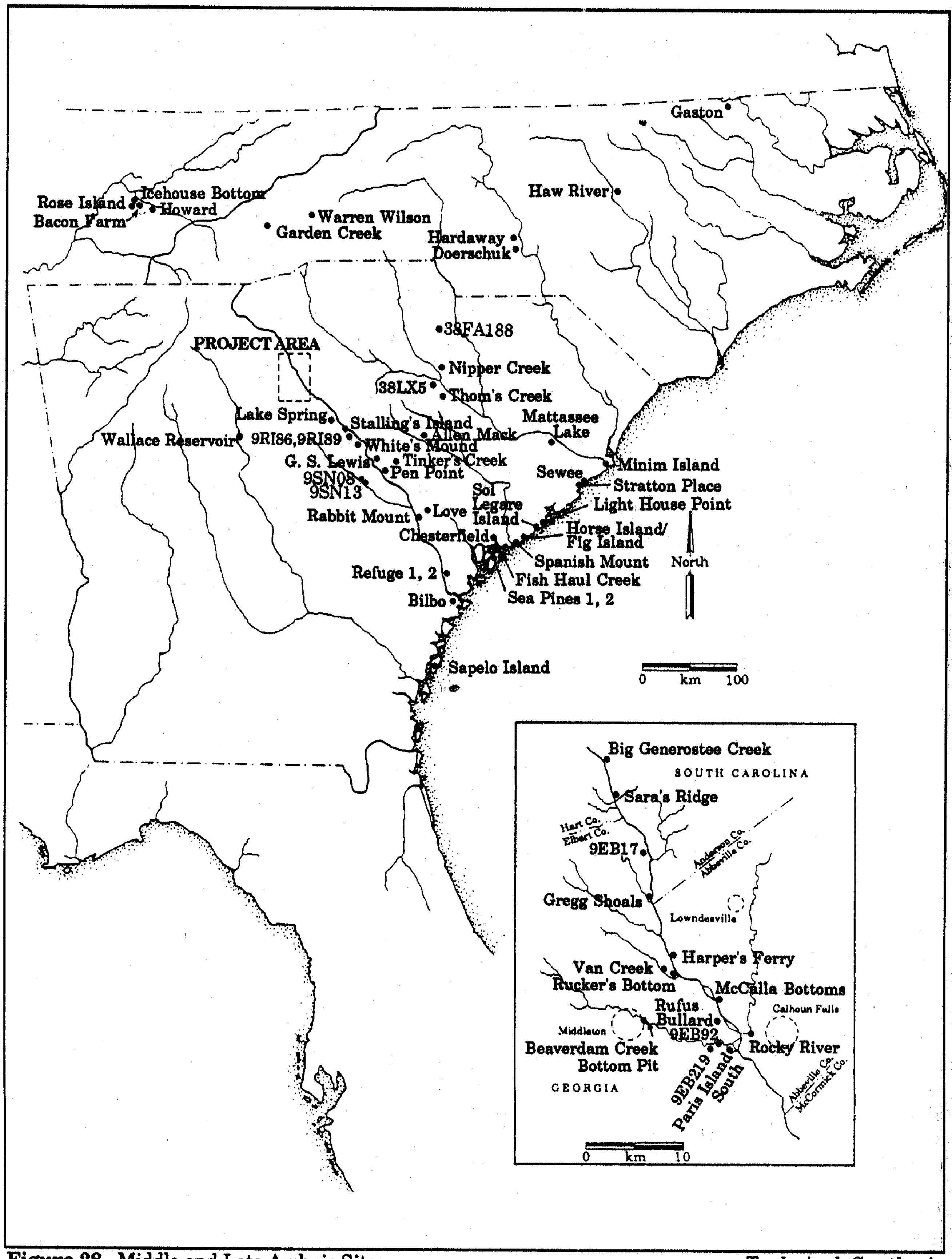


Figure 28. Middle and Late Archaic Sites, Richard B. Russell Reservoir and Vicinity.

Appalachian area (Chapman 1985:148-149; Sassaman 1988). Possible diagnostics include stemmed forms similar to Coe's (1964) small Halifax and larger Savannah River Stemmed types, or local Sykes-White Springs-Benton variants such as the MALA (Sassaman 1985b, 1988). Evidence for the co-occurrence of small stemmed forms and larger Savannah River Stemmed-like points has been found in the reservoir area in the subsequent Late Archaic period, at sites like Gregg Shoals and Rucker's Bottom. Benton-like points, which have been found in the coastal plain portion of the drainage, do not appear to have been present, although this may be a recognition problem. Other general artifact categories that occur during this period locally include pitted and battered cobble tools, utilized flakes, fairly crude core/bifaces and, less commonly, chipped axes and ground stone adzes, celts, and atlatl weights; none of these, however, should be considered diagnostic of the period (Goodyear et al. 1979:106-111; Sassaman 1983).

Very little is currently known about Middle Archaic lifeways in the Georgia/South Carolina area. Virtually no evidence for elaborate toolkits, houses or other structures, planned communities, cemeteries or other formal burial practices, or long distance exchange or settlement mobility has been found. Small, residentially mobile foraging groups employing an expedient or situational technology are thought to have been present, with group territories and movement constrained to fairly small regions, possibly to within the piedmont itself (Claggett and Cable 1982; Sassaman 1983, 1985a; Blanton and Sassaman 1988).

Models of Middle Archaic Settlement

A number of scholars have argued that a trend toward sedentism, intensified procurement of local resources, and increasingly complex sociopolitical organization occurred over the course of the Middle Archaic and early Late Archaic, both over the general region (e.g., Stoltman 1972, 1974; Stoltman and Baerreis 1983; Ford 1974; Brose 1979; Brown and Vierra 1983; Smith 1986) and locally (e.g., Sassaman 1983, 1985a, 1988; Blanton and Sassaman 1988). In broad outline this trend is thought to reflect increasing regional population density and concomitant territorial circumscription, and the initial appearance and development of elite exchange networks. These changes are most evident in the interior river valleys of the mid-South, where dense midden and burial sites have been found and examined (e.g., Lewis and Lewis 1961; Brown and Vierra 1982; Marquardt and Watson 1983; Smith 1986). In the South Atlantic region these developments in the mid-continent do not appear to have had much of an impact until towards the very end of the period.

Two major models of later Archaic settlement in the South Atlantic piedmont have been advanced in recent years that can be examined with the Russell data. These include Sassaman's (1983, 1985a; Blanton and Sassaman 1988) "adaptive flexibility" model, a major premise of which is that little difference should be evident between upland and floodplain assemblages in this immediate region. House and Goodyear's "riverine-interriverine" Archaic settlement model, in contrast, posits quite different behavior: major base camps are expected in the floodplain, with scattered smaller camps in the uplands (House and Ballenger 1976; House and Wogaman 1978; Goodyear et al. 1979). Comparatively few Middle Archaic sites from the riverine zone had been examined when these settlement models were first developed. The Russell Reservoir data, representing the first extensive floodplain assemblages from the central piedmont, are thus of critical importance to their evaluation.

The riverine-interriverine model for Archaic period settlement, developed during the mid-1970s prior to the collection of large survey and excavation samples from the region, assumes that:

> habitation or base camp-like activities should tend to occur in the riverine zone, and extraction/procurement activities should be related to the upland, interriverine area (Goodyear et al. 1979:33).

The floodplain base camps are thought to have been occupied over much of the year, from winter through summer, with smaller fall deer hunting and nut-harvesting sites scattered throughout the interriverine zone, with concentrations on ridge tops and along major stream divides (House and Ballenger 1976:119-120). Specific archaeological correlates of these base camps and extraction stations have been presented (House and Wogaman 1978:10-11), and have been used to test the applicability of the model by several investigators working in the region (e.g., White 1982; Sassaman 1983; Anderson and Schuldenrein 1983a, 1985).

In the early 1980s an alternative model of piedmont Archaic settlement appeared directed specifically to the Middle Archaic period, and based on the greater amount of survey data that had been collected by that time (e.g., Sassaman 1983, 1985a, 1988; Blanton 1983; Blanton and Sassaman 1988). A residentially mobile foraging strategy was inferred, a pattern referred to as one of "adaptive flexibility". In this view, Middle Archaic sites:

> tend to be small in size, low in artifact density and diversity, distributed abundantly and widely across the piedmont, and exhibit little interassemblage variation. ...[the settlement pattern entails] frequent relocation of residential bases, small co-resident group size, fluid group membership, relatively undifferentiated land use, and expedient technology (Sassaman 1988:5).

Piedmont Middle Archaic populations, it was argued, made opportunistic use of local resources, adjusting their movements to accommodate the appearance or availability of these resources. Fairly high population densities were inferred, precluding the need for periodic aggregation for mate and information exchange that appeared to characterize the preceding Early Archaic (Sassaman 1985a; 1988:5).

The riverine-interriverine settlement model has seen the most extensive evaluation. Ward (1983:67-68), in a general critique, has argued that the environmental similarities between the piedmont floodplain and upland zones greatly outweigh the differences, particularly in the occurrence of mast-producing flora. Unless aquatic resources were important, group subsistence activities and hence assemblages should thus be quite similar in the two zones. Currently, the existence of a riverine/base camp, interriverine/extraction station settlement dichotomy in the piedmont is indicated only during the Late Archaic, when extensive presumed base camps are documented in the floodplains of major drainages (White 1982:226-227). Little evidence for such a settlement dichotomy has been noted within piedmont Early or Middle Archaic surface assemblages (Anderson and Schuldenrein 1983a:201-205; Sassaman 1983, 1985a). The data from excavated Middle Archaic sites is somewhat ambiguous but tends to argue against the riverine-interriverine model. Middle Archaic assemblages from the interriverine piedmont in South Carolina where the model was developed, at Windy Ridge (House and Wogaman 1978:132), at 38FA188 (Elliott 1987), and at a series of surface scatters in the Laurens-Anderson survey corridor (Goodyear et al. 1979:198-199) were, for the most part, extensive and diversified. Residential camps are indicated, suggesting a considerably greater use of the interriverine zone than predicted by the riverine/interriverine model, and more in line with the expectations of the "adaptive flexibility" model. This latter model, prior to the present study, has seen little examination in the piedmont, beyond that associated with its initial formulation.

EVIDENCE FOR MIDDLE ARCHAIC OCCUPATION IN THE RUSSELL RESERVOIR: MAJOR EXCAVATION ASSEMBLAGES

Introduction

Both initial Middle Archaic components, identified by the presence of bifurcate and Stanly points in the regional sequence, and terminal Middle Archaic components, characterized by Guilford Lanceolate and related forms, were somewhat uncommon in the Richard B. Russell assemblages (Table 2, Figure 3). Bifurcates and Stanly points were found at 12 sites, while Guilfords were more common, occurring at 44 locations. Later Middle Archaic components characterized by Morrow Mountain points, however, were much more widespread, with 135 separate components recognized. Morrow Mountain components were, in fact, the most common prehistoric occupations found in the reservoir area, occurring on large numbers of surface sites and in many excavations.

Most of the Middle Archaic assemblages found in the reservoir area, unfortunately, with the exception of the materials from Gregg Shoals and a few of the deeper test units opened at sites such as Rucker's Bottom, Big Generostee Creek, and McCalla Bottoms, were from disturbed context, or from fairly compressed or minor deposits. In spite of these shortcomings, the Middle Archaic data sample that was collected can be used to examine questions about settlement patterning and land use, particularly the nature of prehistoric occupation in the riverine zone, the focus of much of the excavation effort. The available stratigraphic data, importantly, can also be used to resolve information on changing raw material use and assemblage composition during this period.

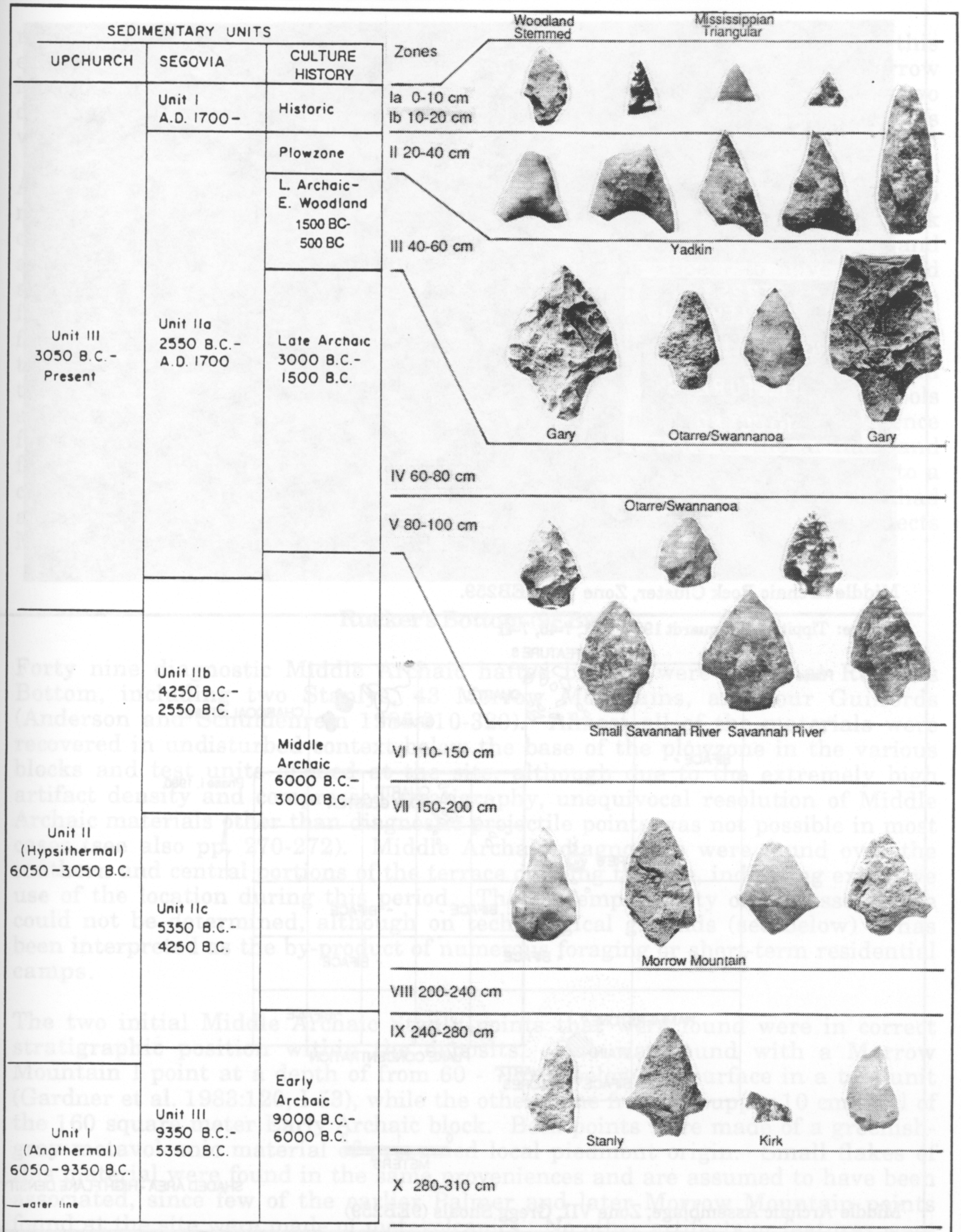
Gregg Shoals (9EB259)

Well defined Middle and Late Archaic assemblages were found in clear stratigraphic separation in the upper two meters of deposits at the Gregg Shoals site (Figure 29; Tippitt and Marquardt 1984). A replacement of assemblages characterized by terminal Early Archaic bifurcate and initial Middle Archaic Stanly forms by later Middle Archaic Morrow Mountain points occurred in the lower levels of this site. The Middle Archaic Morrow Mountain assemblages were in turn replaced by levels dominated by first small and then large and small stemmed Late Archaic points. In the upper levels these Late Archaic forms gave way to first larger and then smaller triangular points of the Woodland and Mississippian periods.

Middle Archaic deposits were found in Zones VI and VII in the large excavation block at depths from 1.1 m to 2.0 m below the surface, and a single Guilford Lanceolate point was found stratigraphically below a Savannah River-like point in Operation B, a test pit opened to the west of the block (Tippitt and Marquardt 1984:7-28 to 7-31, 7-37 to 7-41; see also Figure 24). In Zone VI, which occurred from 110 to 150 cm below the surface, the entire assemblage was made from either vein or crystal quartz, with most or all of the material obtained from nearby river cobbles (see Figure 27). A moderate amount of debitage and fire cracked rock, together with a few retouched flakes, cores, biface fragments, and hammerstones characterized the assemblage, and some stoneworking was indicated. No hafted bifaces or features were found, but a Middle Archaic occupation was inferred given the raw material signature and the stratigraphic position of the assemblage between zones with Middle and Late Archaic diagnostics.

In Zone VII, from 150 to 200 cm below the surface, four Morrow Mountain Type I projectile points were found in the 5 x 5 m excavation block, two of quartz and two of metavolcanic material. Since all of the debitage found in the zone was either vein or crystal quartz (Figure 27), while two of the points were metavolcanics, "tooling-up" behavior or "the discard of used tools and the manufacture of replacements from local materials" was indicated (Tippitt and Marquardt 1984:9-3). A well defined circular rock cluster containing some six kilograms (kg) of cracked quartz and granite was found on one side of the block, while some 5 m away a concentration of debitage was observed (Figure 30). Several flakes, bifaces, biface fragments, and cores were found near the hearth, while the four Morrow Mountain points were found scattered between these features.

To further examine the Middle Archaic deposits in Zone VII, overburden was removed to a depth of 1.70 m below the surface to the north and west of the 5 x 5 m excavation block using heavy equipment. An additional 40 square meters were excavated in this area, using 2 x 2 m units and 10 cm levels (Tippitt and Marquardt 1984:7-6). Two rock hearths, a dark stained area, and a quartz

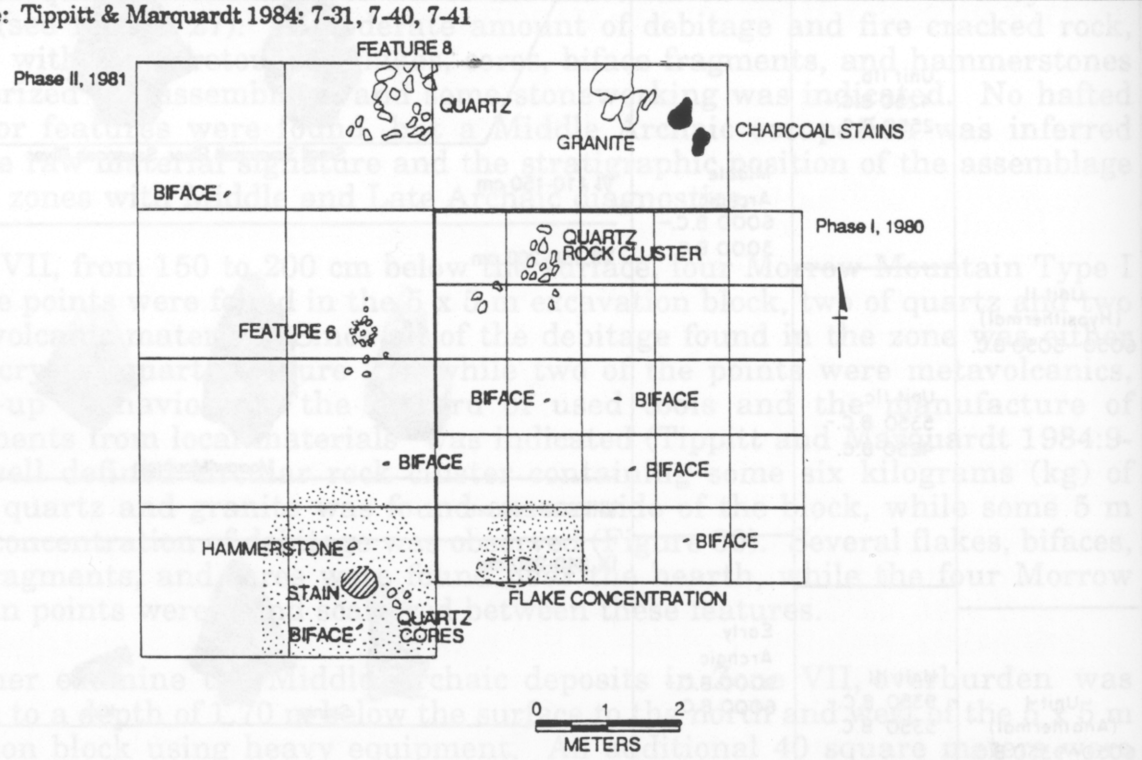


Source: Adapted from Tippitt & Marquardt 1984: 5-4, 7-12, 26, 30

Figure 29. Early Archaic through Mississippian Assemblage Stratification, Gregg Shoals Site 9EB259.

Middle Archaic Rock Cluster, Zone VII, 9EB259.

Source: Tippitt & Marquardt 1984: 7-31, 7-40, 7-41



Middle Archaic Assemblage, Zone VII, Gregg Shoals (9EB259)

Figure 30. Middle Archaic Occupation Surface, Gregg Shoals Site, 9EB259.

reduction area with an associated Morrow Mountain point were found in this extension (Figure 30). In all, 65 square meters of the Middle Archaic, Morrow Mountain phase deposits were examined at the site, and three rock clusters, two debitage concentrations, and three charcoal stains from either pits or hearths were found.

Although more than a single occupation may be represented, it is interesting to note that the knapping areas were located several meters away from the rock clusters or probable hearth areas, while tools tended to occur both around and away from these features. A range of activities thus appear to have occurred around the hearths, while stoneworking was situated well away from these features. These patterns suggest that much or all of the occupational surface formed during a single period of site use. Charred hickory nut shell fragments, the only possible subsistence remains observed, were found in low incidence in the general level fill (Tippitt and Marquardt 1984:9-3). No plant processing tools such as pitted cobbles or grinding stones were found, nor was there any evidence for structures. Given the relatively uncomplicated nature of the artifact and feature assemblage, site use is thought to have been both brief and directed to a comparatively limited range of activities. Since the densest part of the site had apparently washed away, however, how accurately the surviving record reflects Middle Archaic site use remains unknown.

Rucker's Bottom (9EB91)

Forty nine diagnostic Middle Archaic hafted bifaces were found at Rucker's Bottom, including two Stanlys, 43 Morrow Mountains, and four Guilfords (Anderson and Schuldenrein 1985:310-320). Almost all of the materials were recovered in undisturbed context below the base of the plowzone in the various blocks and test units opened at the site, although due to the extremely high artifact density and compressed stratigraphy, unequivocal resolution of Middle Archaic materials other than diagnostic projectile points was not possible in most cases (see also pp. 270-272). Middle Archaic diagnostics were found over the southern and central portions of the terrace defining the site, indicating extensive use of the location during this period. The contemporaneity of the assemblage could not be determined, although on technological grounds (see below) it has been interpreted as the by-product of numerous foraging or short-term residential camps.

The two initial Middle Archaic Stanly points that were found were in correct stratigraphic position within the deposits. One was found with a Morrow Mountain I point at a depth of from 60 - 70 cm below the surface in a test unit (Gardner et al. 1983:120, I-53), while the other came from the upper 10 cm level of the 160 square meter Early Archaic block. Both points were made of a greenish-gray metavolcanic material of presumed local piedmont origin. Small flakes of this material were found in the same proveniences and are assumed to have been associated, since few of the earlier Palmer and later Morrow Mountain points found at the site were made of metavolcanics. No other artifacts or features were found that could be associated with these points. A minor occupation, with tool maintenance a primary activity, was inferred.

In levels dominated by Morrow Mountain points in the Archaic blocks at Rucker's Bottom large numbers of crude and formal bifaces, expedient unifaces, and cobble tools were found, suggesting fairly extensive and extended occupations. The incidence and proportional occurrence of these tool categories, in fact, was much higher than in the succeeding Late Archaic levels. The stratigraphic evidence also indicated that the proportional use of quartz compared with other raw materials peaked in the Middle Archaic levels, and that a situational technology making extensive use of local materials was employed. Average quartz flake weight was also the greatest in these levels, suggesting that a wide range of reduction/manufacturing activities were occurring. The quantity of debitage and cracked rock was fairly constant over all the levels, however, suggesting that tool manufacturing and hearth construction activity may have been roughly comparable in intensity throughout the Middle and Late Archaic periods. The greater occurrence of non-hafted biface tool forms in the Middle Archaic levels suggests that greater tool use and discard, and hence more extended site occupation, took place at this time than during the Late Archaic period.

Few features could be unequivocally attributed to the Middle Archaic period at Rucker's Bottom. A number of rock clusters were found in the 256 square m block unit between 10 and 40 cm below the plowzone, but so many Middle and Late Archaic diagnostics were found in the same levels that associations could not be made with certainty. A stratigraphically isolated Middle Archaic component was found at a depth of 155 cm in a test unit opened at the north end of the terrace, underlying the Mississippian occupation. The occupation was characterized by a single Morrow Mountain point and a small quantity of quartz debitage. The only feature noted was a circular basin shaped charcoal stain ca. 50 cm in diameter and 10 cm deep with the Morrow Mountain point lying beside it. Unfortunately, the great depth of this occupation surface, coupled with its low artifact density and position under the dense Mississippian feature assemblage, precluded further examination. Other faint charcoal stains and irregular concentrations of cracked rock were noted in test units opened on the terrace that also probably represent Middle Archaic hearths and scattered hearth remnants.

Fairly extensive Middle Archaic use of the Rucker's Bottom terrace was indicated, although the size of the coresident groups and the duration of their visits remains unknown. When Morrow Mountain points were found, they tended to occur in groups of two or three points within a meter or so of each other, suggesting contemporaneous discard. Although the deposits were mixed, rendering interpretation difficult, considerable assemblage diversity was evident, suggesting a wide range of activities were taking place. Repeated, short term or longer occupation of an unusually favorable location appears indicated. Unlike the earlier Archaic assemblages at the site, which were interpreted as the remains of brief visits by geographically wide-ranging foragers, the greater use of local raw materials and the presence of large numbers of cobble and crude bifacial tools within the later Middle Archaic assemblages suggests a pattern of intensive foraging within a comparatively restricted area.

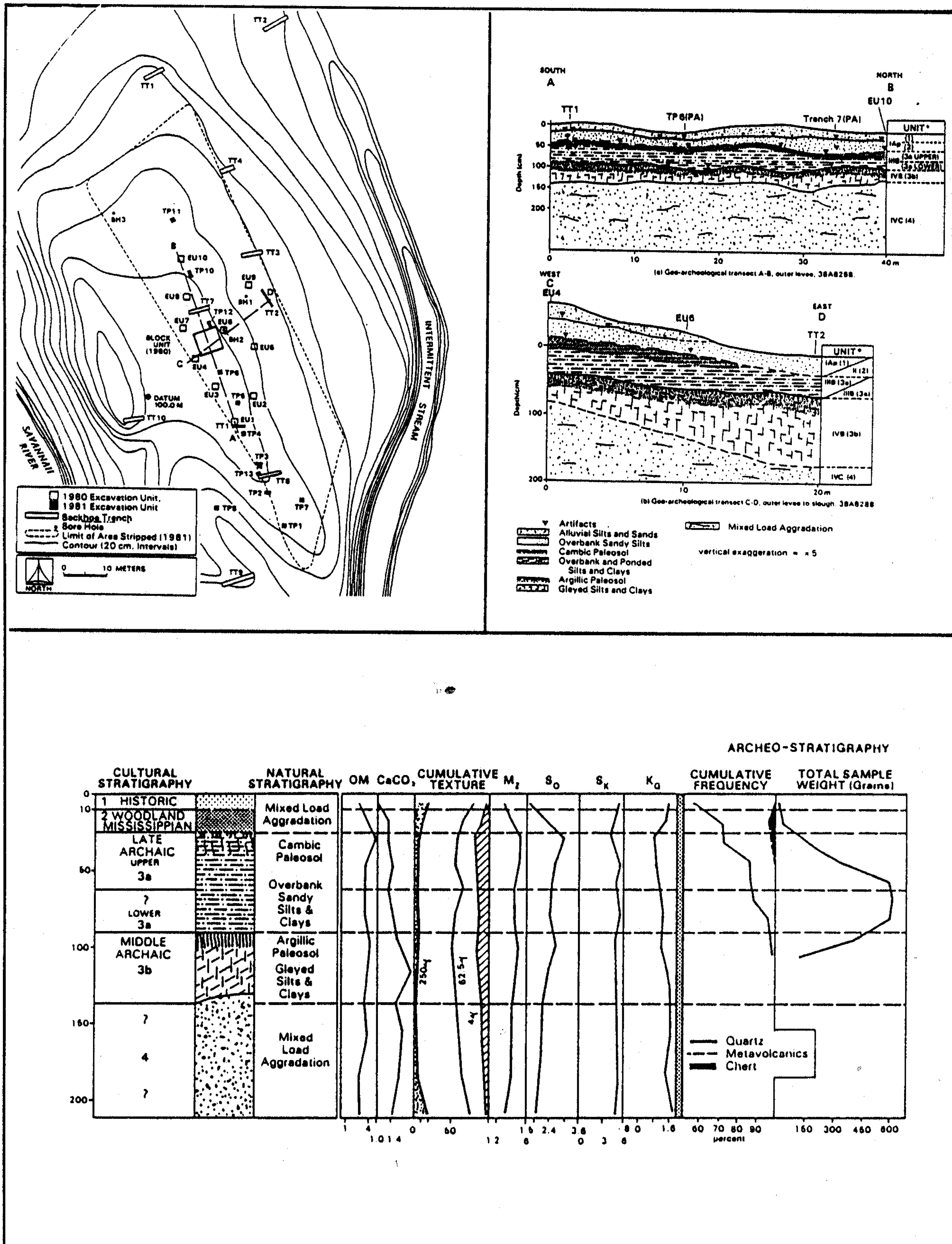
McCalla Bottoms (38AB288)

Over a meter of stratified Middle and Late Archaic deposits overlain by minor Woodland and Mississippian assemblages were found at the McCalla Bottoms site in Abbeville County, South Carolina (Goodyear et al. 1983:139-145; Glander et al. 1981; Schuldenrein et al. 1985:185-213). The site was located near the main channel of the Savannah on a levee opposite the southern end of McCalla Island. Pronounced shoals were present in the river immediately to the south of the site that may have attracted early occupants. A minor tributary flowed behind the levee defining the site and entered the Savannah immediately to the south; during high water this basin would have impounded water and been a broad marshy area. Well differentiated alluvial microenvironments thus occurred in the site area, with the shoals, main channel, and backswamp tributary settings all in close proximity to the occupations (see also Chapter III, page 61).

Initial fieldwork at the site included a general surface collection (Taylor and Smith 1978:411, 422) followed by a program of systematic auger testing and test pitting (Goodyear et al. 1983:139-145) (Figure 31). Sixteen 2.5 m deep auger tests were opened, producing large numbers of artifacts at depths of up to 2 m in all but two of the tests. Diagnostics recovered in the auger tests included two Morrow Mountain points at average depths of 90.5 and 118 cm, an Otarre Stemmed-like point at 85 cm, and a large Savannah River Stemmed at 109.5 cm, all from different units. The high artifact density and apparent stratification documented by the auger testing coupled with the recovery of four diagnostic points prompted further fieldwork and, parenthetically, illustrate the utility of the procedure (see Chapter II, page 43).

In 1979 six 1 x 1 m test units were opened to depths of up to 2 m; no diagnostics and only a few expedient flake tools were found in levels taken through the Middle Archaic deposits (Gardner et al. 1983:8-96). In 1980 major excavations were initiated (Glander et al. 1981), and an 8 x 7 m block, and eight 1 x 1 m and five 1 x 2 m test pits were opened, in 10 cm levels with fill passed through 1/4 inch mesh. In addition, 10 backhoe trenches and 44 auger tests were opened to further define the extent of the site. Three major periods of occupation were identified: (1) Woodland and Mississippian ceramic prehistoric components confined almost entirely to the plowzone; (2) ceramic and possibly preceramic Late Archaic components occurring from roughly 40 to 70 cm below the surface; and (3) one or more Middle Archaic components located at depths below 70 cm. The Middle Archaic assemblage found in 1980 included quartz debitage, expedient tools, Morrow Mountain projectile points, moderate quantities of cracked rock, and three features. The features included a rock cluster interpreted as a hearth, a concentration of quartz debitage, and a dark shallow stain; unfortunately no diagnostics were found associated with any of these features.

To further examine the stratification in the Middle and Late Archaic deposits, ten randomly disperse 2 x 2 m units were opened within the concentration in 1981.



Source: Schuldenrein et al. 1985: 178, 198, 205

Figure 31. Composite Archaeological Stratigraphy, McCalla Bottoms Site, 38AB288.

All fill was removed in 10 cm levels and waterscreened through 1/8 inch mesh (Schuldenrein et al. 1985). Two backhoe trenches and a series of auger tests were also opened as part of a program of geoarchaeological research. To facilitate the excavations the upper 20 cm of historic plowzone/flood deposits were removed. Five of the units on the terrace crest were opened to depths of 60 cm or more below the plowzone, documenting the Middle and Late Archaic stratigraphy. Four features were found, including a Late Archaic rock cluster and three equivocal stains from possible pits.

Almost 40,000 pieces of debitage and other artifacts were found in the ten units opened in 1981, and their vertical and horizontal distributions were examined in detail, and linked to specific soil horizons and occupation surfaces (Figure 31) (Schuldenrein et al. 1985:195-202). Most of the site occupation dated to the Late Archaic period, in levels associated with a stable soil surface. A range of raw materials were found in these upper levels, with metavolcanics and chert an appreciable minority. The Middle Archaic levels below these, in contrast, were dominated by quartz, which accounted for over 80 percent of the debitage and all of the tools. Only a small number of tools were found, however, including two Morrow Mountain Type I projectile points, two bifaces, and a hammerstone. This was somewhat surprising, given the discovery of two Morrow Mountain points during the auger testing and, with the results of the 1979 and 1980 fieldwork, indicated less intensive Middle Archaic site use than was originally inferred.

Taken together, the low diversity and predominantly expedient nature of the tool assemblage found during the 1979 - 1981 fieldwork indicated that site use during the Middle Archaic was probably directed to a fairly narrow range of activities. Some but not an appreciable amount of quartz tool manufacture and maintenance was occurring, given the few finished artifacts left behind. Most tools made or used at the site appear to have been transported elsewhere, reinforcing the picture of comparatively brief occupations. The presence of rock clusters and possible pit features suggests somewhat more than ephemeral visitation, although the extent of the occupations, and the activities pursued, remain largely unknown.

EVIDENCE FOR MIDDLE ARCHAIC OCCUPATION IN THE RUSSELL RESERVOIR: MINOR EXCAVATION ASSEMBLAGES

Sara's Ridge (38AN29)

A minor sealed Middle Archaic component was found at a depth of from 1.3 to 1.8 m at Sara's Ridge (38AN29), in XU1 and Test Pit 2 (Wood et al. 1986:121, 123). The work at Sara's Ridge, which had a dense preceramic Late Archaic occupation, is discussed in detail later in this chapter. Small quantities of noncortical quartz retouch flakes and a single quartz Morrow Mountain point were found in the 13 square meters examined. Although possible midden staining was noted in Test Pit 2, no unambiguous features were found, and comparatively minimal Middle Archaic use of the levee area defining the site was indicated.

Big Generostee Creek (38AN126)

At 38AN126, the Big Generostee Creek site, a dense, deeply buried Middle Archaic assemblage was found, almost all of the material debitage from the primary reduction of quartz river cobbles (Wood et al. 1986:169-212). The site was located at the north end of the reservoir on a levee adjacent to the river, to the north of the confluence of Big Generostee Creek. Sixty seven post hole tests and five 2 x 2 m test pits were opened, with well preserved, stratified deposits found in two units, Test Pits 2 and 4. Below successive Mississippian, Woodland, and Late Archaic materials, a dense concentration of quartz debitage (> 1500 artifacts) and a small number of tools were found. A single, small basin shaped pit (35 x 17 x 12 cm) of unknown function was also found in these levels. Only minute charcoal flecks were present in the fill, and the stain may represent traces of a weathered hearth.

Twenty bifaces and biface fragments were found in these probable Middle Archaic levels, most tapering square stemmed ovate blades or simple ovate blades. These tools, particularly the simple ovate bifaces, resemble crude Morrow Mountain points, although they may date slightly later given the square stems observed on some of the specimens. Other tools present included two edge abraded cobbles, a quartzite hammerstone/chopper, and three cores. The tools and almost all of the debitage were quartz; traces of cherts and metavolcanics in these levels may represent intrusions from higher levels. The presence of cortex on a number of flakes suggested cobble procurement from the nearby river; these cobbles were apparently reduced into crude bifaces which were finished elsewhere (Wood et al. 1986:203, 209). Aside from the workshop activity, the occupations were minimal, and the quarrying may have occurred as part of normal group movement, rather than the result of a specific logistical foray.

Beaverdam Creek Borrow Pit (9EB19)

A minor Middle Archaic component was discovered at the Beaverdam Creek Borrow Pit site, located just to the north of Beaverdam Creek approximately 10 km upstream from its confluence with the Savannah (Wood et al: 245-254). Middle Archaic remains were found in Area B of XU1, a four square meter test opened to 60 cm below the base of the plowzone (Wood et al. 1986:251-254; see the following Late Archaic section for additional detail). Three flaked quartz tools, one a Morrow Mountain I point, and a probable hearth were found at a depth of 50 cm below the plowzone. The hearth measured 30 x 25 cm and contained approximately 2 kg of cracked quartz cobbles. A comparatively brief occupation was indicated.

Rufus Bullard (9EB76)

Evidence for a minor Middle Archaic component was found at the Rufus Bullard site, located on the west bank of the Savannah River opposite the northern end of Carter's Island (Anderson et al. 1985a:149-174). The site was surface collected and auger tested during initial survey work (Hutto 1970:16; Taylor and Smith 1978:368), documenting Early Archaic through Mississippian components, and apparent stratified deposits. In 1979 the site area was again augered in several locations, and twelve 0.5 x 0.5 to 1 x 2 m test units were opened, further documenting the presence of later prehistoric Woodland and Mississippian components (Gardner et al. 1983:73-77). In 1980 the plowzone was removed from six 10 by 10 m squares in an effort to locate features, and several smaller units were opened to depths of up to 150 cm (Flint and Suggs 1980:30). No diagnostic pre-Late Archaic remains were found, although their existence was inferred by the presence of debitage in levels below those producing Late Archaic diagnostics.

To further clarify the stratigraphy at the site, ten 2 m units were opened the following year (Anderson et al. 1985a). It was during this final work that the first unambiguous evidence for Middle Archaic site use was found in excavation context. A dense rock cluster was found at a depth of 91 cm in EU1, one of the 2 m test units opened on the levee crest (Anderson et al. 1985a:160). No artifacts were found associated with this probable hearth, but a Guilford Lanceolate point was found in the level immediately above it, suggesting a late Middle Archaic age for the feature. Although the possibility of Middle Archaic deposits was indicated in several other units (i.e., by the presence of assemblages dominated by or consisting exclusively of quartz debitage in levels below those producing Late Archaic materials), the extent of these occupations at the site remains unknown.

38AB387

A minor initial Middle Archaic component, identified by the presence of two metavolcanic Stanly points, was found at 38AB387 (Jackson and Drucker 1985; Gresham and Wood 1986:67-68, 71). The site occupied about 0.5 ha and was located on a narrow ridge overlooking the confluence of two streams. These formed a larger tributary flowing into the Rocky River, which was some 3 km to the west. Eighty five 0.5 x 0.5 m units were opened over the ridgetop using a 10 m (E/W) by 5 m (N/S) grid (Figure 6), followed by the excavation of three 2.0 x 2.0 m units in areas of concentration. Deposits were shallow on the ridgetop, but thickened appreciably downslope due to sheetwash; movement of artifacts on the ridge crest was thought to have been minor. One of the Stanlys was extensively resharpened and resembled a drill, suggesting it may have been a later (Late Archaic?) point with basal damage; the other point was only minimally reworked and appeared much more characteristic of the type. Only small amounts of metavolcanic debitage were found around these points, suggesting fairly minor tool maintenance activities. Two quartz Morrow Mountain I points were also recovered at the site, as well as a moderate quantity of quartz debitage, crude bifaces, and flake tools, suggesting somewhat greater use during this part of the Middle Archaic. The presence of later Archaic, Woodland, and Mississippian remains in the same areas as the Morrow Mountain points, however, rendered interpretation difficult.

THE MIDDLE ARCHAIC IN THE UPPER SAVANNAH RIVER VALLEY IN LIGHT OF THE RUSSELL RESERVOIR INVESTIGATIONS

Chronological and Cultural Subdivisions within the Middle Archaic

Initial Middle Archaic (8000 - 7000 B.P.). As noted at the end of the last chapter, the nature of initial Middle Archaic settlement in the upper Savannah River area is currently poorly understood. Terminal Early Archaic bifurcate projectile points, as well as the seemingly related initial Middle Archaic Stanly type, are rare in the eastern Georgia/western South Carolina piedmont in the vicinity of the upper Savannah River, and only a few of these point types were found during the Russell investigations (Table 2, Figure 3). Of the 17 bifurcate/Stanly points found in the project area nine were Stanlys; of these five were on metavolcanics, two were on local piedmont chert, and one each were made on quartz and ridge and valley chert. A pronounced selection for metavolcanics or cherts was evident. Most of the bifurcates, in contrast, were made on quartz. The differing raw material selection preferences evident over the bifurcate and Stanly forms suggests that differing cultural systems may have produced these types. No identifiable bifurcate components were found in excavation context during the reservoir investigations, however, rendering interpretation difficult.

The isolated Stanly points and debitage documented in the excavation units at Gregg Shoals, Rucker's Bottom, and 38AB387 suggest small, short duration hunting camps occupied by only one or a few people. The preference for local metavolcanics and cherts suggests at least some occupation or use of this part of the piedmont at this time. The low overall incidence of diagnostics or other remains, however, argues against high population densities. Localized depopulation or abandonment of the area, a continuation of earlier Kirk Corner Notched forms, or a failure to recognize relevant diagnostics have been variously advanced as explanations for this sparse distribution. Given the restricted regional distribution of bifurcate forms, primarily in the continental interior, and particularly in the Appalachian Mountain/inner piedmont zones (Chapman 1975:252; Justice 1987:86-92), their low incidence in the Russell area, which is at the edge of this distribution, is not unexpected. Rather than interpreting the low incidence of these points as a sign of localized population decline, a continuation of corner notched and stemmed forms, and occupations, is instead inferred. The bifurcates that do occur in the upper Savannah River, in this view, probably reflect limited visits, perhaps as part of unusually extended foraging activities, by members of groups located elsewhere.

Later Middle Archaic (ca. 7000 - 6000 B.P.). Later Middle Archaic components characterized by Morrow Mountain points were common in the Russell area (Table 2, Figure 3). These components ranged from minor assemblages characterized by isolated points, debitage, and cracked rock, to denser assemblages at sites such as McCalla Bottoms or Rucker's Bottom, where appreciable quantities of projectile points, crude and formal bifaces, cobble tools, expedient unifaces, and cracked rock were found. Extended occupation or repeated short-term occupation of the floodplain was indicated.

Extensive use of locally available lithic raw materials, specifically quartz, characterized later Middle Archaic components in the project area. Over 96 percent of the Morrow Mountain points found in the reservoir were made of quartz, the highest selection for this raw material observed over any period, and an incidence not approached again until the Woodland and Mississippian periods (Table 2). Quartz is very common in the central piedmont, with outcrops occurring in the uplands and cobbles in floodplain drainage beds. Local Middle Archaic groups were thus taking advantage of the most common lithic resource at hand; raw material procurement appears to have been opportunistic and embedded in normal group movement (c.f., Binford 1979). Locally, it also appears to be a reflection of a highly situational technological organization, as evidenced by the low incidence of formal curated tool forms, other than hafted bifaces, in the reservoir assemblages. The almost complete absence of extralocal lithic materials, coupled with the expedient technological organization, argues for highly restricted movement and exchange. Foraging territories limited to small areas, probably entirely within the piedmont, have been inferred (Sassaman 1983, 1988; Sassaman et al. 1988; Anderson and Schuldenrein 1985:713-714).

The extensive use of quartz by Middle Archaic populations has been observed throughout the eastern Georgia and western South Carolina piedmont. This has been most commonly documented through the examination of raw material selection preferences within specific projectile point assemblages (Kelly 1972:Table 43; House and Ballenger 1976:130, Appendix D; Taylor and Smith 1978: Table 38; House and Wogaman 1978:95-97; Anderson 1979a:Table 18; Goodyear et al. 1979: Tables 21,28,29; Novick 1979:123-130; Gardner 1984; Sassaman 1983:83ff; Sassaman et al. 1988). Caldwell (1954:37-39, 1958:8-9), based on the stratigraphic occurrence of a pure quartz assemblage below a Savannah River level at the Lake Spring site (reported in Miller 1949), in fact, described the earlier Archaic occupations of the Georgia piedmont as the "Old Quartz" industry.

This increased use of local raw materials in the Middle Archaic, at least when compared with earlier periods, is a pattern observed throughout the eastern United States, and has been attributed to increasing regional populations and a corresponding decrease in group territorial ranges (Ford 1974:392-394; Brose 1979:5; Goodyear et al. 1979:111). The incidence of quartz is so pronounced locally (Table 2), however, that deliberate cultural selection for the material is indicated. Whether this reflected functional considerations (i.e., the durability of quartz as opposed to other locally available materials such as metavolcanics) or stylistic factors (i.e., selection for its white or clear appearance) is unknown. Both factors were probably at work.

Major later Middle Archaic Morrow Mountain assemblages in the Russell Reservoir, such as at Rucker's Bottom and McCalla Bottoms, appear to represent repeated short term to seasonal occupation of unusually favored areas, where a range of activities took place. Minor, less intensive and probably shorter duration occupations were also found, at sites such as at Gregg Shoals, Sara's Ridge, Big Generostee Creek, and Beaverdam Creek Borrow Pit. At these sites artifact assemblages were less diversified, and were apparently directed to one or a few tasks, such as initial stone tool manufacture, hunting/butchering activities, or camping. Flaked stone tool assemblages at all of the reservoir sites, large or small, were dominated by crude bifaces, bifacial cores, and expedient unifaces; little evidence for formal curated tools other than the associated Morrow Mountain points themselves was found. Extensive use of battered and to a lesser extent pitted cobble tools also characterized local Middle Archaic assemblages; this may indicate an increased emphasis on plant foods in the diet. Some of the battered cobbles were undoubtedly hammerstones, however, used to produce the quartz tools that were ubiquitous during this period. The intensive use of local raw materials, coupled with the occurrence of a range of tool forms such as cobble tools, crude bifaces, expedient unifaces, and hafted bifaces on larger sites, suggests intensive foraging within a comparatively small area. The data from the Russell Reservoir survey and excavation program thus closely conform in many respects to the expectations of Sassaman's (1985a, 1988; Blanton and Sassaman 1988) 'adaptive flexibility' Middle Archaic settlement model.

Although areally extensive Middle Archaic assemblages were documented at several sites in the reservoir, the contemporaneity of these materials could not be determined. Most are thought to represent aggregations of numerous small, short term occupations. At the Windy Ridge site in the interriverine piedmont of South Carolina, House and Wogaman (1978:123-125) suggested that local Middle Archaic occupations were in the form of clusters that were:

> 10 to 20 (or more) meters in diameter and included 50 to 150 Morrow Mountain points and 5 to 15 kilograms of quartz debitage. There is little evidence that any other tool systems besides hafted bifaces, in this case Morrow Mountain points, are represented by these clusters of artifacts (House and Wogaman 1978:123-124).

Comparable Middle Archaic clusters were not observed within the Russell Reservoir, although given the absence of areally extensive excavations at most sites their detection would have been difficult.

If areally extensive assemblages could be shown to have formed during individual occupations, it would indicate a lower rate of residential relocation (i.e., mobility) or larger coresident group size than has been implied by the adaptive flexibility model. While the reservoir Middle Archaic assemblages indicate that small, presumably short duration occupations were the rule during this period, the possibility of more extensive occupations at favored locations was also suggested. These assemblages may reflect temporary aggregation loci, rather than or in addition to the remains of numerous small camps. Given the near absence of extralocal raw materials, however, any aggregation that may have occurred probably encompassed local populations.

Population increase, increasing group sedentism, and concomitant territorial constriction are traditionally inferred for the Middle Archaic in the Eastern Woodlands (Caldwell 1958; Ford 1974:392-394; Brown and Vierra 1983). These observations, derived from sites located in the midcontinent, stand in direct contrast to the evidence for increased group residential mobility noted in the upper Savannah River basin and over the surrounding piedmont. The qualitative difference in Middle Archaic adaptations in the South Atlantic region from those in the midcontinent, where many of our views about this period were developed, must be acknowledged.

Terminal Middle Archaic (ca. 6000 - 5000 B.P.). Except for a fair number of Guilford Lanceolate projectile points found in surface collections and a small number in general excavation levels, little information about terminal Middle Archaic occupations was found in the Russell Reservoir. Many of the points found in excavation context, like the four found at Rucker's Bottom, came from mixed or highly compressed deposits, rendering interpretation difficult or impossible. A Guilford Lanceolate point was found stratigraphically below a Savannah River-like point at Gregg Shoals, and another was found near a hearth at Rufus Bullard. Little else was found with these points, however, and no other stratigraphically distinct terminal Middle Archaic assemblages were identified in the reservoir assemblages.

Quartz continued to dominate stone tool assemblages, and almost 90 percent of the Guilford Lanceolates found were made from this material (Table 2). By the third millenium B.C. or possibly slightly earlier the use of metavolcanics began to increase; several Guilfords were made from this material, and it also began to reappear in debitage assemblages (Figure 27). The material does not achieve widespread use, however, until the subsequent Late Archaic period.

Like in the piedmont North Carolina sequence (Coe 1964), a replacement of Morrow Mountain points by Guilford Lanceolates is indicated, although there appears to be considerable temporal and morphological intergradation between these point types (see below). Exactly what replaced these Morrow Mountain and Guilford forms locally is unclear. Large Savannah River points, most made from metavolcanics, are thought to appear sometime around 5500 B.P. in the general region (Coe 1964). No evidence for components with this point type present at such an early time level, however, were found in the Russell Reservoir. Large Savannah River Stemmed points, in fact, were comparatively unusual; similar, but smaller forms were more typically found.

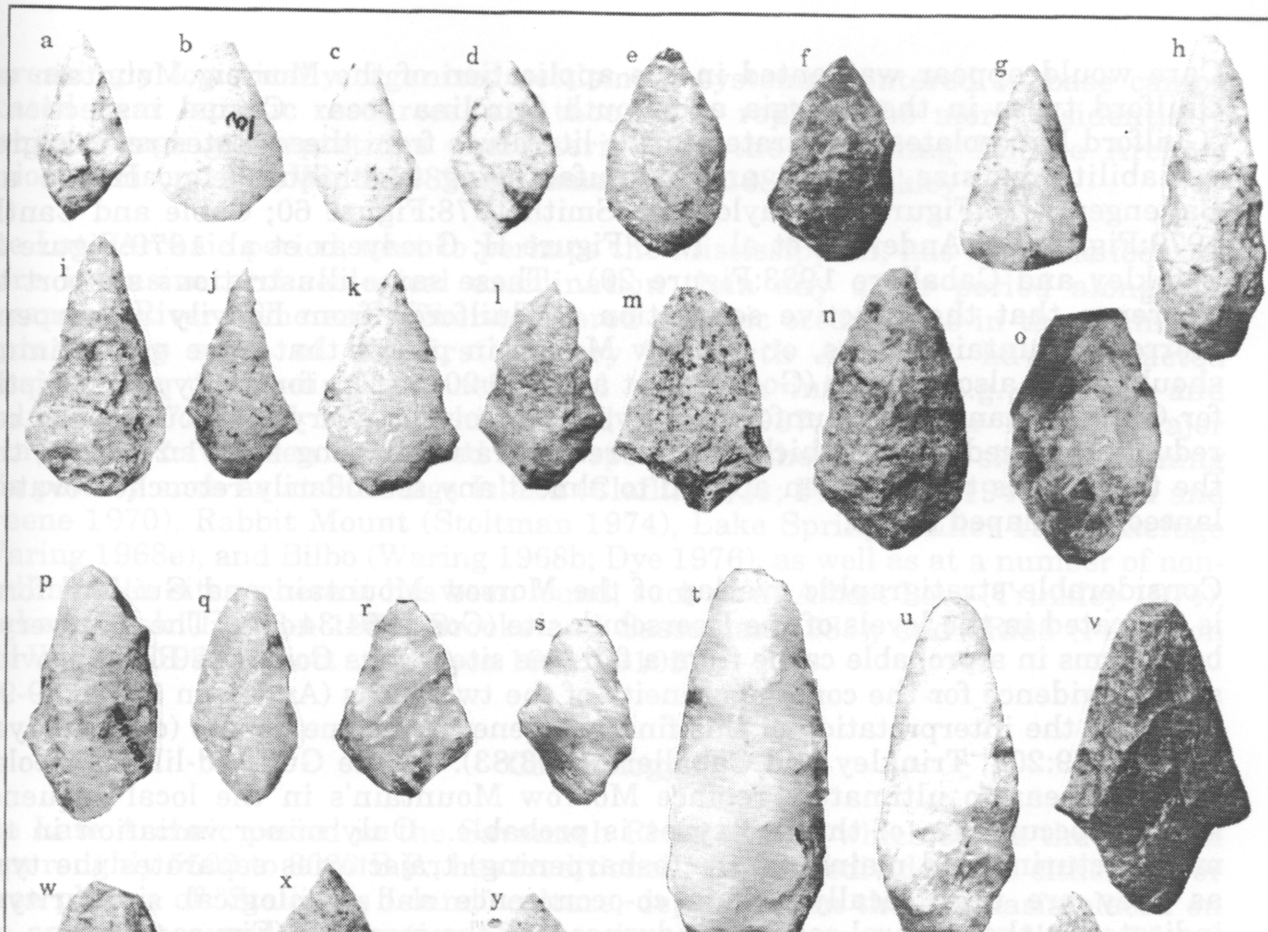
Instead of a replacement by classic Savannah River Stemmed points, in the upper Savannah River region Morrow Mountain and Guilford Middle Archaic types instead appear to have been replaced by smaller, square to slightly expanding or contracting stemmed forms made predominantly from quartz or metavolcanics. By ca. 5000 B.P. or shortly after these smaller forms appear to dominate local assemblages (see below). This succession is most evident in Zones VII to III at the Gregg Shoals site (Figure 29). These later points resemble small Savannah River forms, and while they may be related, are different in all but size from Coe's (1964:108-109) Halifax Side Notched type, a point form occurring at this general time level in eastern North Carolina and Virginia.

Projectile Point Typologies

Morrow Mountain Type I and II projectile points were among the most common hafted biface types found in the reservoir area. These forms have been widely reported throughout the Georgia and South Carolina piedmont, in both the riverine and interriverine zones (Blanton 1983; Sassaman 1983). Initial Middle Archaic Stanly points were comparatively rare, however, as were (to a lesser extent) later Middle Archaic Guilford Lanceolates. No evidence was found for MALA points, a transitional Middle Archaic/initial Late Archaic type recognized in stratigraphic context from the Middle Savannah River (Sassaman 1985b). This type, an apparent variant of the Benton Stemmed (Kneberg 1956), is thought to represent an intrusion of some kind, possibly a population movement, into the middle Savannah River Valley from the mid-south, specifically from the middle Tennessee River Valley and its environs (Sassaman 1985b, 1988). The general absence of these forms in the Russell area, if not a recognition problem, suggests that this intrusion was restricted to the lower portions of the drainage, at and below the fall line. MALA's may be subsumed locally by the large Savannah River Stemmed point, although no evidence for the occurrence of this type was found in early Late Archaic context.

Most of the Morrow Mountain points found in the Russell Reservoir could be subsumed under Coe's (1964:37) Morrow Mountain Type I; a far lower incidence of the presumably later Morrow Mountain II points were found in the surface or excavation assemblages (Table 2, Figure 32). This distribution may be due to the predominance of quartz tools; the long stems characteristic of the Morrow Mountain Type II may have been difficult to fashion on this material (this same selection for quartz, parenthetically, may have also made the manufacture of bifurcate based forms difficult). Many of the Morrow Mountain points that were found in the reservoir area were fairly crude, almond shaped bifaces with comparatively minimal evidence for shoulders or formal hafting elements. The chronological importance of the stem length/blade length ratio, the primary criteria used to differentiate the Morrow Mountain I and II types, may be somewhat overdrawn since this ratio is directly related to the extent of resharpening and reworking a point has undergone (Goodyear et al. 1979:201; Cable 1982b:486-488). For those reasons these types were treated as a single combined category in the component analyses presented here (Figure 3).

Comparatively few Guilford Lanceolates were found in the reservoir collections (Table 2). While the type has been widely reported in the Georgia/South Carolina Piedmont, an inspection of the actual artifacts indicated few met Coe's (1964:43-44) formal typological criteria. Just as the differentiation of Morrow Mountain forms "can be at times a rather subjective affair" (Goodyear et al. 1979:201), comparable ambiguity pervades the separation of Morrow Mountain and Guilford points locally, and even the recognition of the Guilford type itself (DePratter 1975; Johnson 1984:70). A considerable intergradation between Morrow Mountain and Guilford forms was evident in the reservoir collections, prompting a conservative approach to the reclassification analyses (i.e., attempting to adhere to the original type descriptions; Table 2, Figure 3).



Middle and Late Archaic period hafted bifaces from the Russell Reservoir area. a-s Morrow Mountain-like forms; t-u Guilford-like forms; v-w Gary-like forms; x-bb Savannah River Stemmed-like forms. r 9EB56, s 9EB395, t 38AB35, u 38AN33. All others from 9EB91.

Source: Anderson and Schuldenrein 1985:309; Taylor and Smith 1978: 258, 260

Figure 32. Middle and Late Archaic Projectile Points, Richard B. Russell Reservoir Area.

Care would appear warranted in the application of the Morrow Mountain and Guilford types in the Georgia and South Carolina area. Casual inspection of "Guilford Lanceolates" illustrated in the literature from these states reveals great variability in size, shape, and manufacturing technique (e.g., House and Ballenger 1976:Figure 11; Taylor and Smith 1978:Figure 60; Cable and Cantley 1979:Figure 24; Anderson et al. 1979:Figure H; Goodyear et al. 1979:Figure 23; Trinkley and Caballero 1983:Figure 20). These same illustrations support the inference that the effective separation of Guilfords from heavily resharpened Morrow Mountain points, or Morrow Mountain points that have only minimal shoulders, is also difficult (Goodyear et al. 1979:204). The formal type description for Guilford Lanceolates, unfortunately, is so broad in everything but formal core reduction procedure and thickness-to-breadth ratio (varying from 1:2 to 1:3), that the type seems to have been applied to almost any secondarily retouched ovate to lanceolate shaped biface.

Considerable stratigraphic overlap of the Morrow Mountain and Guilford forms is indicated in the levels of the Doerschuk site (Coe 1964:34-35). The discovery of both forms in a probable cache from a fall line site on the Congaree River provides strong evidence for the contemporaneity of the two forms (Anderson 1979a:89-95), although the interpretation of this find has generated some debate (c.f., Goodyear et al. 1979:204; Trinkley and Caballero 1983:83). While Guilford-like lanceolate forms appear to ultimately replace Morrow Mountain's in the local sequence, some co-occurrence of the two types is probable. Only minor variation in tool manufacturing and maintenance (resharpening) trajectories separates the types as they are used locally. This co-occurrence and typological similarity is indicated in the cultural sequence advanced for the reservoir (Figure 2).

The evidence from the Russell Reservoir, then, indicates that during the Middle Archaic predominantly quartz Morrow Mountain forms were replaced by quartz lanceolate Guilford-like points, which were in turn replaced by small square to slightly contracting stemmed bifaces. Over time, a range of other raw materials, particularly metavolcanics and cherts, came to be used.

THE LATE ARCHAIC (ca. 5000 - 3000 B.P.)

Introduction

The Late Archaic period in the eastern Woodlands and particularly on the South Atlantic slope is viewed as a period of increasing population, sedentism, group size, and organizational complexity (e.g., Griffin 1967; Ford 1974; Stoltman 1978; Brose 1979; Smith 1986). Long distance trade networks become established throughout much of the region, and raw material and goods exchange over fairly wide areas becomes increasingly common, something that has been attributed to "multidirectional reciprocal exchange between trading partners (often lineage leaders) of both nearby and distant communities" (Smith 1986:30). In the South Atlantic area extensive use of riverine and coastal resources is evident, and increasingly logistically organized settlement systems, centered on base camps located near aquatic resources, are thought to replace the more residentially mobile foraging adaptations characteristic of the preceding Middle Archaic period (Hanson 1982; White 1982; Sassaman 1983, 1985a; Trinkley 1985).

The Late Archaic period, next to perhaps the Mississippian, has been the focus of more intensive archaeological examination than any other period along the Savannah River. The early fiber-tempered ceramic occupations in the drainage, representing some of the first pottery in North America, have attracted considerable continuing archaeological research interest (e.g., Bullen and Stoltman 1972; Reid 1984; Schiffer and Skibo 1987; Goodyear 1988). Major excavations have been conducted and reported at shell midden sites containing this pottery such as at Stallings Island (Claflin 1931; Fairbanks 1942; Bullen and Greene 1970), Rabbit Mount (Stoltman 1974), Lake Spring (Miller 1949), Refuge (Waring 1968e), and Bilbo (Waring 1968b; Dye 1976), as well as at a number of non-shell midden sites where it has been found, such as at Albert Love (Trinkley 1974), Tinker Creek (Hanson 1980; Brooks and Sassaman 1988), and 9Ri86 (Ferguson and Widmer 1976; Elliott and Doyon 1981:74-105).

Chronology

The Late Archaic period in the Savannah River region, which spans the interval from roughly 5500 to 3000 B.P., has traditionally been subdivided into either two or three phases of "Stalling's Island" culture, depending on the emphasis placed on the appearance and elaboration of ceramics. The concept of a Stallings Island culture was initially used by Claflin (1931:37-42), in his report on the original excavations at Stallings Island. Fairbanks (1942:230) referred to the preceramic and ceramic periods at Stallings Island as representative of the Savannah River focus. One tripartite sequence has included a preceramic Savannah River or Stallings I Phase, followed by Stallings II, characterized by the appearance of undecorated fiber tempered pottery, and Stallings III, which saw the addition of decorated fiber tempered pottery to local assemblages (Stoltman 1964/1974:19). Because the evidence for a replacement of plain by plain and decorated fiber tempered pottery is somewhat equivocal, a preceramic/ceramic Stallings I - Stallings II dichotomy has also been proposed (Stoltman 1972:55). These subdivisions were based on stratigraphic excavations at shell midden sites such as Stalling's Island, Bilbo, and Sapelo (Claflin 1931; Waring 1968b; Waring and Larson 1968).

Late Archaic components on the South Atlantic Slope are identified by the presence of a range of diagnostic projectile points and ceramics. Large square tanged Savannah River Stemmed points (Coe 1964:44-45), sometimes called Broadpoints, are a horizon marker for this period along the entire Atlantic coast (Turnbaugh 1975; Cook 1976). Although Savannah River Stemmed forms are considered characteristic of the period, a range of large and small stemmed forms, with a variety of basal morphologies, were actually present (White 1982:50; Alterman 1987). These included contracting stemmed Gary-like forms (c.f., Newell and Krieger 1949:164-165); the large Savannah River Stemmed type (Coe 1964); and smaller, predominantly square stemmed forms like the Otarre Stemmed (Keel 1976:194-196) and the Small Savannah River (Oliver 1981). A replacement of larger by smaller point forms over the course of the Late Archaic has been widely inferred, and is frequently used to differentiate possible earlier from later Late Archaic components (Bullen and Greene 1970; Goodyear et al. 1979; Oliver 1981, 1985).

Ceramics of the fiber tempered Stallings and sand tempered Thom's Creek series, repeatedly dated to between ca. 4500 - 3000 B.P. in the general region, are readily identifiable signatures of later Late Archaic occupations (e.g., Claflin 1931; Fairbanks 1942; Griffin 1943, 1945; Waddell 1963; Phelps 1968; Stoltman 1972, 1974; DePratter 1979; Trinkley 1980a, 1980b; Anderson 1982). Most vessels are typically simple hemispherical bowl-like forms, with larger straight-sided rounded to conoidal based jars sometimes observed within Thom's Creek assemblages. Plain, punctated, incised, and simple stamped finishes are typical over both series, with design complexity ranging from simple linear arrangements to complex geometric decorations. Stalling's ceramics, which have the earliest absolute and average radiocarbon dates, are assumed to be earlier, although a long period of co-occurrence for the two wares is evident.

In the central Savannah River, where the two wares have been found together, there is limited stratigraphic data to support a slightly earlier appearance for Stalling's ceramics at sites such as White's Mound and Rabbit Mount (Phelps 1968:29; Stoltman 1974:91). Some stylistic or decorative evolution within these wares is also evident. Within the fiber tempered series, for example, a replacement of plain by plain and decorated finishes is indicated at some sites, such as at the Bilbo and Sapelo shell middens on the Georgia coast (Waring 1968b; Waring and Larson 1968). Within the Thom's Creek series no evidence for a replacement of plain by decorated ceramics has been found, although along the coast finger pinching is the latest decorative treatment to appear (Awendaw Finger Pinched; Waddell 1965b, Trinkley 1980a, 1980b).

Other less securely dated artifacts that are sometimes used to infer the presence of Late Archaic components on the South Atlantic Slope include soapstone artifacts of any kind, but particularly perforated objects (i.e., "netsinkers") and bowls; full and three quarter grooved ground stone axes; baked clay objects; cruciform drills; winged, diamond, or butterfly-shaped atlatl weights; grinding basins; metavolcanic debitage; and appreciable quantities of fire cracked rock (Anderson et al. 1979:65-68; Goodyear et al. 1979:112-113; White 1982:70-80). Many of these categories have a broad temporal occurrence, so their presence must be interpreted with care.

Models of Late Archaic Settlement

White (1982) and Sassaman (1983) have each recently completed major settlement analyses of Middle/Late Archaic occupations in the South Atlantic piedmont. White's data set consisted of 367 sites yielding Late Archaic diagnostics from the

South Carolina and Georgia piedmont, while Sassaman's analysis was based on 275 Middle and Late Archaic sites from the piedmont of South Carolina. In both analyses, intensive settlement in the floodplains during the Late Archaic was inferred, coupled with reduced and more varied use of the uplands. The results were in line with the expectations of the riverine-interriverine Archaic settlement model advanced by House and Goodyear discussed previously, and it appears the model has some utility for the Late Archaic period. That is, the survey collections examined by Sassaman and White support the notion that base camps were present in the floodplains at this time, while upland sites tended to be more diversified, and directed to a range of specialized activities. The Russell Reservoir data are critical to the evaluation of these models, because they represent the first major floodplain sample collected from the region (White and Sassaman's syntheses were based primarily on upland site data, and made use of only limited data from the Russell Reservoir work).

Some refinement to these models has occurred in recent years. Both Alterman (1987:309) and Sassaman (1988) have argued that dense shell midden sites such as Stallings Island probably represent major aggregation loci, where populations living throughout all or major portions of the interior Savannah River Valley came together on a regular if temporary basis for a range of activities. These would include ceremonial and possibly burial rituals, kin-based social activities, and goods and information exchange. All of these would have helped to strengthen intra-group solidarity, and foster alliances, or at least reduce the possibility of aggressive behavior between groups. Discrete social entities have been inferred in differing parts of the valley (i.e., along the coast, in the interior coastal plain, and in the piedmont/blue ridge areas) based on ceramic and lithic raw material distributions, although this interpretation remains highly debatable (see below). Sassaman (1988), working with data from the inner coastal plain and fall line, has argued further that aggregation appears to have been taking place at two levels, both locally (i.e., within individual cultural systems, which presumably occupied different portions of the basin) and regionally (i.e., meetings between members of two or more of these local social groups, from differing portions of the basin and possibly beyond, at sites such as Stallings Island). Both local and regional aggregation loci, while utilized for important activities, were only occupied for comparatively brief periods. Dispersed settlement by smaller groups was more the norm, and would have placed less stress on local resources. Major or regional aggregation loci, in this view, were likely only in areas capable of supporting large numbers of people, at least on a temporary basis. Areas such as the fall line macroecotone, that were rich in shellfish, anadromous fish, or other food resources, would have facilitated such aggregation.

As noted, the areal extent or scale of adaptation of Late Archaic groups in the Savannah River area is the subject of some debate. Due to the low incidence of Stallings pottery in the piedmont, the existence of differing populations or cultures in the coastal plain and piedmont has been inferred by some investigators (e.g., Stoltman 1972; Anderson et al. 1979:94). Differential lithic raw material distributions within the drainage, measured on diagnostic projectile points, have also been used to infer the presence of discrete cultural systems

(Sassaman et al. 1988). In contrast to these views, Taylor and Smith (1978:323) have argued that the Stalling's adaptation was riverine extensive, with tool kits and sites types varying according to the environment and resources under exploitation:

> It should be known that while the Broadpoint Horizon has primarily an Atlantic slope focus, Late Archaic manifestations are known into the Appalachian Summit. ...there might be [in] the Savannah River region, an adaptation that is seasonally manifested in all of the physiographic zones from the Appalachian Summit to the coast. (Taylor and Smith 1978:88-89).

Thus, while most local researchers agree that local Late Archaic settlement systems were riverine in orientation, disagreements exist as to the size of group territories, the number and combination of resource zones that were exploited, and the degree of interaction that took place.

EVIDENCE FOR LATE ARCHAIC OCCUPATION IN THE RUSSELL RESERVOIR: MAJOR EXCAVATION ASSEMBLAGES

Introduction

Late Archaic components were fairly common in the Russell Reservoir, third in overall incidence behind the Middle Archaic and the Mississippian periods (Table 2, Figure 3). Late Archaic assemblages were found at 79 sites, as measured by the presence of diagnostic Savannah River Stemmed projectile points. Late Archaic sites with Stallings or Thom's Creek pottery present were much less common, however, occurring at only 11 locations. Over and above these sites with their unambiguous Late Archaic diagnostics, a large number of assemblages were present that were characterized by smaller Otarre and Swannanoa Stemmed-like points, that date to either the Late Archaic or the initial part of the Woodland period. Fairly appreciable use of the reservoir area was indicated, albeit by groups placing comparatively little emphasis on pottery.

Major preceramic Late Archaic assemblages dating to the mid to late third millenium B.C. were excavated at three sites, at Rocky River, Sara's Ridge, and Paris Island South. Although no major ceramic Late Archaic assemblages were found, a number of minor Late Archaic components with Stallings or Thom's Creek pottery present were examined, at Gregg Shoals, Rucker's Bottom, McCalla Bottoms, Rufus Bullard, 9EB17, and 9EB219. Taken together, the reservoir assemblages provide a good picture of Late Archaic floodplain and adjoining upland occupation in this portion of the piedmont.

The emergence of the Stallings Island adaptation in the Savannah River region is a topic of great interest to researchers throughout the Eastern Woodlands. The occurrence of Stallings pottery in the project area indicates that this adaptation, traditionally assumed to extend no further than just above the fall line, reached deep into the piedmont. The Russell Reservoir data represent the first securely documented materials from the Savannah River region that portray events during the millennium immediately prior to the adoption of pottery. Previous research on the Late Archaic occupation of the Savannah River Valley has tended to emphasize shellfish exploitation and the appearance and use of fiber tempered pottery (Stoltman 1972:52). Perhaps one of the most important research contributions of the Russell Reservoir project is the documentation of major preceramic and non-shellfish using Late Archaic occupations within the upper part of the drainage.

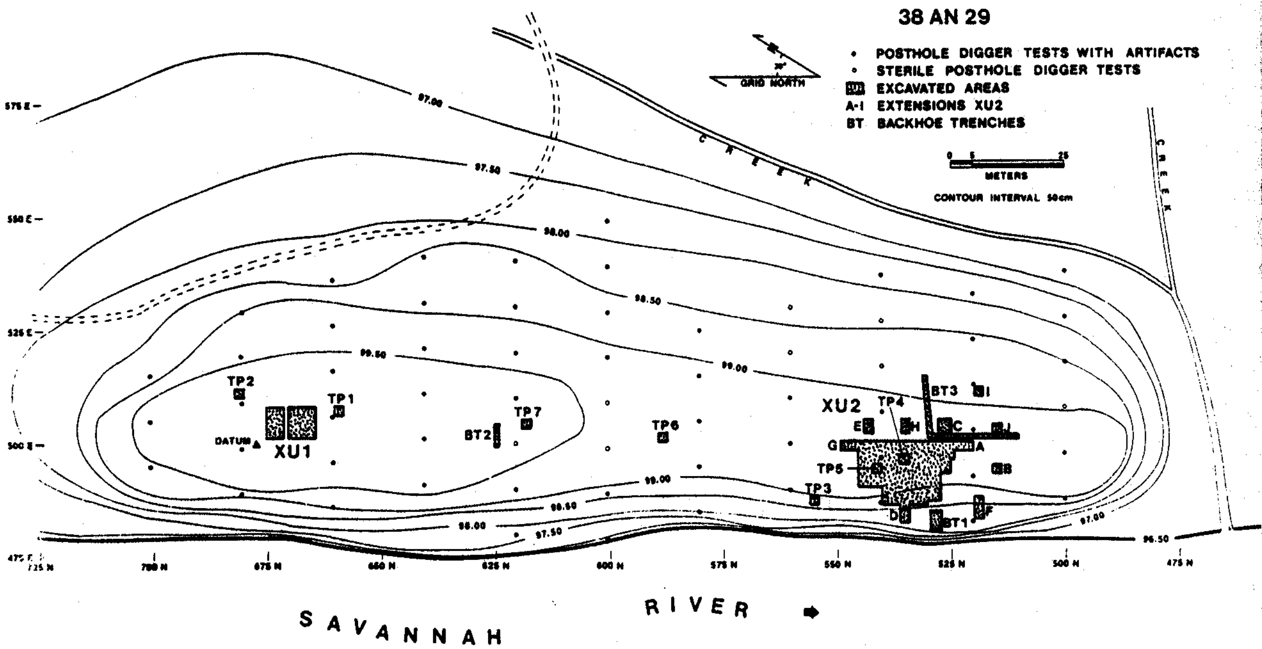
Sara's Ridge (38AN29)

A major Late Archaic occupation dating to the latter part of the third millenium B.C. was documented at Sara's Ridge (Wood et al. 1986:126-163). Two dense concentrations of artifacts were discovered at depths of from 50 to 90 cm, on a levee immediately adjacent to the Savannah River. Field investigations at the site included the excavation of 63 systematically dispersed posthole tests opened to 1.5 m, seven 2 m x 2 m test pits opened to a minimum of at least 1.0 m, five backhoe trenches, and two large block units (Wood et al. 1986:28-32) (Figure 33). The posthole testing program indicated the site occupied approximately 1.4 ha. (ca. 200 m N/S x 70 m E/W). Late Archaic materials were densest at the north and south ends of the levee; little material was found in the intervening central area (Wood et al. 1986:122).

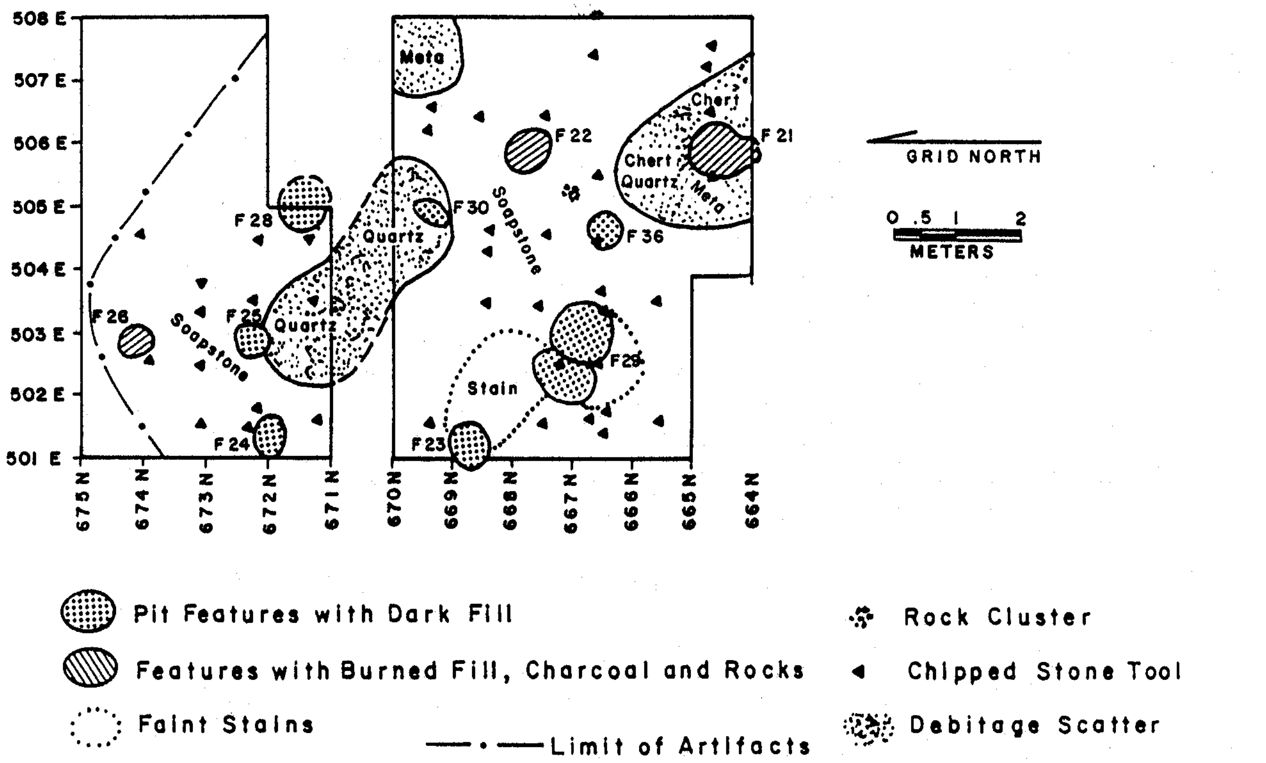
In all, 369 square meters of the Late Archaic deposits were excavated. In Excavation Unit 1 (XU1), a stepped block opened to a depth of 2.6 m at the north end of the site, Late Archaic materials were found from 50 to 80 cm below the surface. A 64 square meter area was excavated in these deposits, using 1 m squares opened in three 10 cm levels, with all fill passed through 1/4 inch mesh. Fair assemblage stratification was observed, with Swift Creek and Cartersville materials in the plowzone underlain by successive Dunlap, Late Archaic, and Middle Archaic assemblages (Wood et al. 1986:Table V-1). In Excavation Unit 2 (XU2) at the south end of the terrace, Woodland materials were found in the plowzone, with Late Archaic materials immediately below the plowzone. A total of 305 square meters of the Late Archaic midden were excavated in this area. Once again, 1 m squares were used, each opened in three 10 cm levels, with all fill screened through 1/4 inch mesh. In both blocks all stains were cored using a 2.5 cm auger, and all cultural features were excavated, with soil, carbon, and pollen samples routinely collected.

<u>Late Archaic Materials in Excavation Unit 1 (XU1), 38AN29</u> Dense concentrations of features and artifacts were found in XU1, in a roughly oval-shaped pattern about 7 m long by 5.5 m wide (Figure 33). The excavation unit appears to have come down in a major activity area of some kind, although its full extent was not determined. Anthropogenic midden staining was minimal, with most materials occurring in tan/yellow sands. Four types of features were found in the block:

Sara's Ridge (38AN29)-All Excavation Units.



Composite Plan of Late Archaic Surface in XU1, 38AN29.



Source: Wood et al. 1986: 30, 138

Figure 33. All Excavation Units and Late Archaic Surface, XU1, Sara's Ridge Site, 38AN29.

(1) Hearths (N=3). These were basin-shaped pits ca. half a meter to a meter in diameter and 15 to 22 cm deep and filled with large amounts of fire-cracked rock and wood charcoal (Features 21, 22, and 26). The rocks were predominantly quartzite and basalt cobbles from the river. No nut fragments or seeds were observed in the fill. Fragments of worked soapstone slab fragments were found in one feature, Feature 21, which was radiocarbon dated to 2000 B.C., uncorrected (BETA-2735, 3950±80 B.P.).

(2) Pits (N=5). These were circular to oval stains ca. half a meter to a meter in diameter and 10 to 23 cm deep with regular outlines and bases (Features 23-25, 28, 29). Very few artifacts or charred material occurred in the fill. Their function is unknown, although use in storage, skin boiling (hot rock cooking using skins stretched over pits for stew pot type containers), or other functions is possible. Feature 29, two overlapping pits, occurred near a faint orange stained area that may derive from intensive firing.

(3) Faint stains (N=1). Apparent feature staining was mapped when observed. In some cases very faint, apocryphal stains were observed that could not be readily interpreted. Given the time elapsed since site abandonment, it is evident that some features had leached appreciably, particularly those with minimal initial midden, artifactual, or charcoal fill.

(4) Rock Clusters (N=1). A small cluster of unmodified rocks was found in the southwest part of the block (Feature 23). In the absence of charcoal or staining, the rocks are thought to represent a cache for use in subsequent fires. Miscellaneous rock and cracked fragments, presumably debris from scattered hearths, or secondary refuse from cleaned hearths, were quite common in the general midden, although in XU1 (unlike the situation in XU2) this material was rarely found clustered (adapted from Wood et al. 1986:126-128).

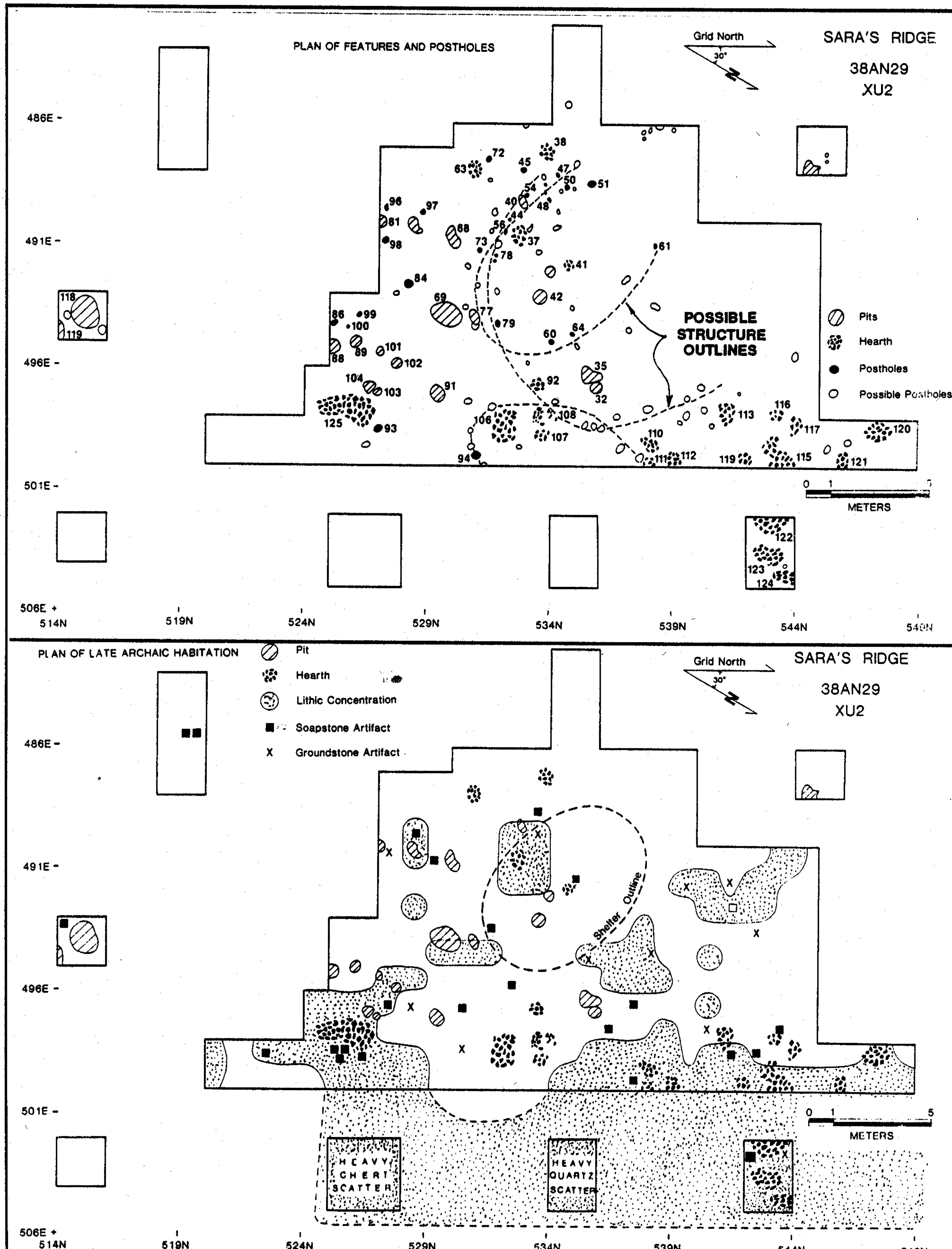
A concentration of cracked rock near Feature 21 appears to represent refuse emptied from this hearth (Wood et al. 1986:137).

Artifacts in XU1 consisted primarily of chipped stone tools and debitage, together with a number of fragments from ovate perforated soapstone slabs. No fiber tempered pottery was found at the site, and the assemblages appear to represent preceramic, or at least aceramic Late Archaic occupations. Three categories of chipped stone tools were recognized, (1) formal projectile points with well defined hafting elements and broad, triangular blades; (2) other bifaces; and (3) lightly retouched expedient unifacial flake tools (Wood et al. 1986: 128, Tables V-2 to V-5). The vast majority of the tools recovered were projectile points and other bifaces, suggesting that these forms were used in a wide range of functions, or (if this was not the case) that site use in this area was highly specialized, requiring only a few tool forms. Roughly equal quantities of quartz and metavolcanic debitage were found, with chert a distinct minority. Detailed analysis of a 15 percent sample of the debitage indicated that it derived from secondary thinning of bifaces (i.e., probable tool maintenance activities); virtually no cortical material was observed, and little initial manufacture was indicated (Wood et al. 1986:134). Although a few fragments of apparently worked gneiss, basalt, and schist were found, no ground stone tool forms were identified.

Late Archaic Materials in Excavation Unit 2 (XU2), 38AN29. The Late Archaic assemblage in XU2 at Sara's Ridge was within a dark well-defined midden stain at a depth of from 60 to 90 cm. An extensive artifact and feature assemblage was recovered in the 305 square meter excavation area that appears to represent a major preceramic Late Archaic habitation and activity loci, with associated structures, cooking areas, and lithic workshops (Figure 34; Wood et al. 1986:137-163). Artifacts recovered included 496 chipped stone tools, 27,165 pieces of debitage, 520 kg of cracked rock, and 25 perforated soapstone slabs and slab fragments. Features comparable to those found in XU1 were present, including numerous hearths, pits, and rock clusters. Significantly, a moderate number of postmolds (N=25 definite, 62 possible) were also found, a feature type that has previously been only rarely noted on Late Archaic sites in the general region (e.g., Waring 1968b:156; Stoltman 1972, 1974:51ff; Trinkley 1980b:170, 256; 1984:18-20; 1986:145-147, 336).

Four radiocarbon dates were obtained from XU2, securely dating the occupation to within the third millenium B.C., approximately coeval with the occupation in XU1 (Wood et al. 1986:159) (Appendix I). The corrected dates, all on wood charcoal, were 2190±60, 2940±90, 2980±60, and 4075±280 B.C. Uncorrected, these dates are 1730 B.C., 2250 B.C., 2260 B.C., and 3250 B.C., respectively. The earliest and latest dates were from general midden fill from the southeast corner of the block near Feature 125, while the two relatively consistent 22nd century B.C. (uncorrected) dates were from two rock clusters in the southwest corner of the block, Features 37 and 63. Excluding the earliest determination, the average of the four remaining dates from the site (in both XU1 and XU2) is 2060 B.C., uncorrected.

Given the absence of Stallings fiber tempered pottery, which has been repeatedly dated between ca. 2500 and 1200 uncorrected radiocarbon years B. C. at fall line and coastal plain sites in and near the Savannah River basin, the site occupation may be aceramic. That is, Sara's Ridge may have been a location within a ceramic-using adaptation where ceramics were not used or discarded, for presumably functional or cultural reasons of some kind (i.e., the nature of the tasks performed may not have required pottery; pottery use was prohibited for some reason). This appears somewhat improbable. Given the size, density, and complexity of the site assemblage, it is likely that if ceramic technology was employed at all, it would have been represented in the assemblage, even if only in minor quantity. As we shall see, the combined data from the Russell Reservoir suggests that pottery use locally occurred somewhat later than in the coastal plain, after ca. 2200 - 2000 B.C. In this view, Sara's Ridge may illustrate Late Archaic settlement in the area immediately prior to the adoption of ceramics.



Source: Wood et al. 1986: 141, 161

Figure 34. Late Archaic Features and Occupation Surface, XU2, Sara's Ridge Site, 38AN29.

Hearths at Sara's Ridge (N=22) were typically about 1 m in diameter, with from ca. 2 to 10 kg of rock in the fill, although one (Feature 125) was quite large, ca. 3.0 x 1.0 m (Wood et al. 1986:140). Large quantities of cracked rock assumed to be from scattered hearths were also found in the general midden. In one concentration, over 54 kg of cracked rock was found in and around four well defined hearths (Features 106-109), in a seven square meter area on the east side of the block. Given ready access to the cobble beds in the nearby river channel, scavenging materials from one hearth to another may have been unnecessary.

Pits were common (N=20); like those in XU1 they were typically shallow circular to oval basins ca. half a meter to a meter in diameter, with regular outlines and bases, and comparatively little in the fill. The function of these features remains unknown, although use in storage, skin boiling, food preparation, or other activities may be suggested. Interestingly, they did not tend to occur in immediate proximity to the hearths, but instead were somewhat removed, at distances of up to several meters (Figure 34). If used in skin boiling, these pits may have been placed at a sufficient distance from the fires to preclude ash or other debris from the hearth environment from being kicked or blown into the food. Wood et al. (1986:162) have suggested that these features may also or alternatively have been be food storage or curing pits, with skins or bark serving as a protective covering.

Eighty-seven probable postmolds were found in XU2, most in the central part of the block. Twenty five of these were well defined, while the remainder were comparatively faint and somewhat amorphous stains. Definite postmolds were up to ca. 30 cm in diameter with flat or tapered bases; they were fairly shallow, rarely exceeding 20 cm in depth (Wood et al. 1986:141). These undoubtedly served as supports for structures, and possibly for other facilities such as meat or fish drying racks, benches, partitions or dividers, storage cribs, or marker poles.

Although many of the posts were poorly defined, when the feature assemblage was examined collectively possible structural alignments were evident within the block. The alignment favored by Wood et al. (1986:142, 162) formed a 7 m (E/W) x 5 m (N/S) oval shelter in the west central part of the block, near the edge of the levee overlooking the river channel (Figure 34). The presence of an arc of multiple posts in the southwestern part of this alignment suggested one or more episodes of rebuilding. An entrance toward the west, facing the river, was inferred by an absence of posts in this area, with a second possible entrance to the east; it must be cautioned however, that these apparent openings may simply reflect poor feature preservation. Only a few posts were found along the northeast wall of the alignment, again reflecting either poor feature preservation or that the structure was open or comparatively flimsy in this area. A single rock cluster was found in the center of the alignment that may be a central hearth, and a second rock cluster was found near the south wall. Comparatively minor amounts of debitage and cracked rock were found within the alignment, which may reflect cleaning. Additional clusters of posts to the south and east may represent other structures or facilities.

An alternative alignment is a large, semicircular to rectangular structure approximately 12 meters in diameter (NE/SW) and open on the northwest and west sides (Figure 34). The posts in the center of this alignment, forming the flimsy north wall of Wood et al.'s inferred structure, may have been roof supports or dividers. This alignment, although similar in size to the midden area in the preceramic Late Archaic occupation zone at the Rocky River site (38AB91, see below), is considered improbable because the wall crosses a number of hearths (Wood et al. 1986:142).

A dense concentration of hearths, cracked rock, and lithic tools and debitage was found in a band of darkly stained soil ca. 25 m long by 8 m wide on the east side of the block, back away from the river and the inferred oval shelter (Wood et al. 1986:162). Eighteen hearths were found in this area, indicating cooking or food preparation on a large scale. A number of posts were also found that may be from unrecognized structures, although a preferred explanation is that they represent facilities associated with these hearths, such as drying frames or racks, or wind baffles. While this accumulation may represent the sum of a number of small behavioral episodes (i.e., numerous family cooking fires), the dark midden staining and the large numbers of chipped stone tools found in this zone, particularly projectile points, argues for activity by a fair number of people over a long period of time. The site may have seen extended (seasonal or longer?) occupation by a fairly small group, or it may have been a temporary aggregation loci for larger numbers of people. If the latter, it probably corresponded to Sassaman's (1988) local group aggregation site type; the assemblage, while extensive, did not have the quantity and diversity of tool forms, debris, and lithic raw materials indicative of aggregation on a regional scale.

The general absence of ground stone tools in the midden area and on the site in general argues against extensive plant processing activity, while the presence of large numbers of projectile points and other flake tools suggests animal (deer or fish) processing. Such an inference, of course, assumes that wooden mortars or other implements were not used to process plant foods. This may be incorrect, since the numerous expedient unifaces found on the site could have been used (among other functions) to produce wooden plant processing tools. Given the proximity of the river, anadromous fish procurement and drying could have easily occurred; alternatively, the riverine location may have just been highly favored for settlement, with deer and other upland animal species a primary source of meat No faunal remains were found preserved in the acidic soils, so inferences about game procurement remain moot. Careful analysis of curated soil samples for fish otoliths (Casteel 1976), or of tool edges for distinctive wear patterns (Keeley 1980) might help to resolve this question.

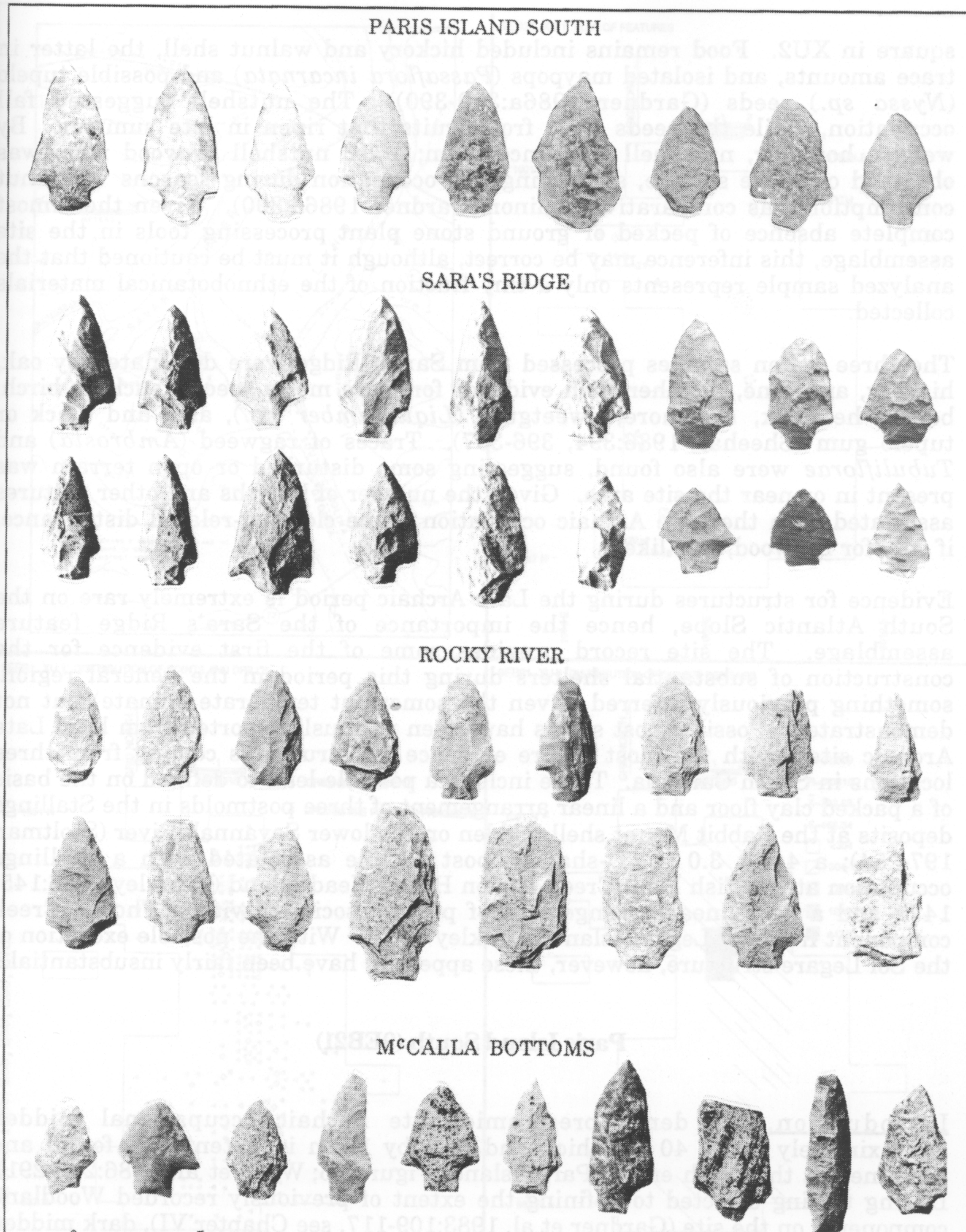
Like XU1, artifacts in XU2 consisted primarily of chipped stone tools, debitage, and fragments from ovate perforated soapstone slabs. Evidence for ground stone tools was minimal, with seven quartz hammerstones the only pecked and battered objects found. Approximately equal numbers of projectile points, other bifaces, and flake tools were recovered; quartz was the predominant raw material, followed by metavolcanics and chert (Wood et al. 1986:128). The projectile point assemblage was similar in shape to Coe's (1964:44-45) Savannah River Stemmed, but the points were appreciably smaller, on the average (Figure 35). In this regard the assemblage closely conformed to Oliver's (1981:181-183) Small Savannah River Stemmed and Keel's (1976:194-196) Otarre Stemmed types. These forms have been widely attributed to the late Savannah River phase in the regional literature (from ca. 2000 or 1500 B.C. to 1000 B.C.; Oliver 1981:183; Goodyear et al. 1979:114; but see Keel 1976:210). Their unambiguous, well-documented and dated mid-to-late third millenium B.C. association at Sara's Ridge and, as documented below, at the Paris Island South and Rocky River sites, however, indicates that the established Late Archaic projectile point sequence is in serious need of revision.

Other, unhafted and less formal bifaces found in XU2 encompassed a wide range of sizes and shapes, indicating use in a range of functions, a pattern similar to that noted in XU1. Also like XU1, a large number of expedient unifacial flake tools were recovered. Unlike XU1, many of the tools from XU2 made use of naturally-occurring cortex as a backing, something probably due to the greater incidence of cortical debris noted in this part of the site. Several concentrations of tools were observed in the block, all in the thick midden and debris zone on the eastern side, suggesting that both tool manufacture and use occurred in this area, away from the apparent structure. Tool forms tended to co-occur, suggesting minimal functional differentiation between the concentrations.

Dense concentrations of debitage, frequently over 300 flakes/square meter, were found in and around the hearths in the midden zone, which may suggest knapping during colder weather, or in conjunction with tasks (i.e., meat drying) requiring extensive use of fire (Wood et al. 1986:163). Quartz, metavolcanics, and local piedmont chert were all being worked, with quartz the most common, followed by the latter two materials in roughly equal amounts (52%, 25%, and 23% of all debitage, respectively; Wood et al. 1986:151). A detailed analysis of a random sample of debitage indicated that both tool manufacture and maintenance activities were occurring (Wood et al. 1986:151-153). Each of the three raw materials tended to concentrate in different areas of the midden, although what was represented by this separation remains unclear (Figure 34). Although debitage was also found in low incidence in and around the probable structure, it appears that knapping activities were conducted away from this area.

Ground stone implements were virtually non-existent at Sara' Ridge, suggesting minimal plant processing activity was occurring, at least activity based on the use of stone tools. Soapstone was comparatively common, although it appears to have been used exclusively in perforated slabs. Twenty-three fragmentary and two intact perforated soapstone slabs were found in XU2, almost all in close proximity to hearths (see Figure 38). While traditionally described as netsinkers, use in stone-boiling appears more probable (Dagenhardt 1972; Anderson et al. 1979:65-67; Wood et al. 1986:155).

Three pollen and one charcoal sample from the Late Archaic deposits at Sara's Ridge were subjected to intensive paleobotanical analysis. The carbonized plant remains came from fine screened (1/16th inch) general level fill from a one meter



Source: Wood et al. 1986: 145-147, 262, 263; Anderson and Schuldenrein 1985: 187-188, 235

Figure 35. Preceramic Late Archaic Projectile Points, Sara's Ridge, Paris Island South, Rocky River and McCalla Bottoms Sites.

square in XU2. Food remains included hickory and walnut shell, the latter in trace amounts, and isolated maypops (*Passaflora incarnata*) and possible tupelo (*Nyssa sp.*) seeds (Gardner 1986a:389-390). The nutshell suggested fall occupation, while the seeds were from fruits that ripen in late summer. By weight, however, nut shell was uncommon; a 1:6 nutshell to wood ratio was observed over the sample, suggesting site occupation during seasons when nut consumption was comparatively minor (Gardner 1986a:390). Given the almost complete absence of pecked or ground stone plant processing tools in the site assemblage, this inference may be correct, although it must be cautioned that the analyzed sample represents only a tiny fraction of the ethnobotanical materials collected.

The three pollen samples processed from Sara's Ridge were dominated by oak, hickory, and pine, together with evidence for more mesic species such as birch, beech, hemlock, sycamore, sweetgum (*Liquidamber sp.*), ash, and black or tupelo gum (Sheehan 1986:394, 396-397). Traces of ragweed (*Ambrosia*) and *Tubuliflorae* were also found, suggesting some disturbed or open terrain was present in or near the site area. Given the number of hearths and other features associated with the Late Archaic occupation, some clearing-related disturbance, if only for firewood, was likely.

Evidence for structures during the Late Archaic period is extremely rare on the South Atlantic Slope, hence the importance of the Sara's Ridge feature assemblage. The site record provides some of the first evidence for the construction of substantial shelters during this period in the general region, something previously inferred (given the somewhat temperate climate) but not demonstrated. Possible post stains have been variously reported from local Late Archaic sites, with the most secure evidence for structures coming from three locations in South Carolina. These include a possible lean-to defined on the basis of a packed clay floor and a linear arrangement of three postmolds in the Stallings deposits at the Rabbit Mount shell midden on the lower Savannah River (Stoltman 1974:54); a 4.3 x 3.0 m "D-shaped" post outline associated with a Stallings occupation at the Fish Haul Creek site on Hilton Head Island (Trinkley 1986:145-147); and a 3 m linear arrangement of posts associated with a Thom's Creek component from Sol Legare Island (Trinkley 1984). With the possible exception of the Sol Legare structure, however, these appear to have been fairly insubstantial.

Paris Island South (9EB21)

Introduction. A dense preceramic Late Archaic occupational midden approximately 30 to 40 cm thick and 6 m by 15 m in extent was found and examined at the south end of Paris Island (Figure 36; Wood et al. 1986:255-291). During testing directed to defining the extent of previously recorded Woodland components on the site (Gardner et al. 1983:109-117, see Chapter VI), dark midden staining and Late Archaic artifacts were found at depths of from 50 to 80 cm. The area of the staining was tested and a block unit was then opened and expanded

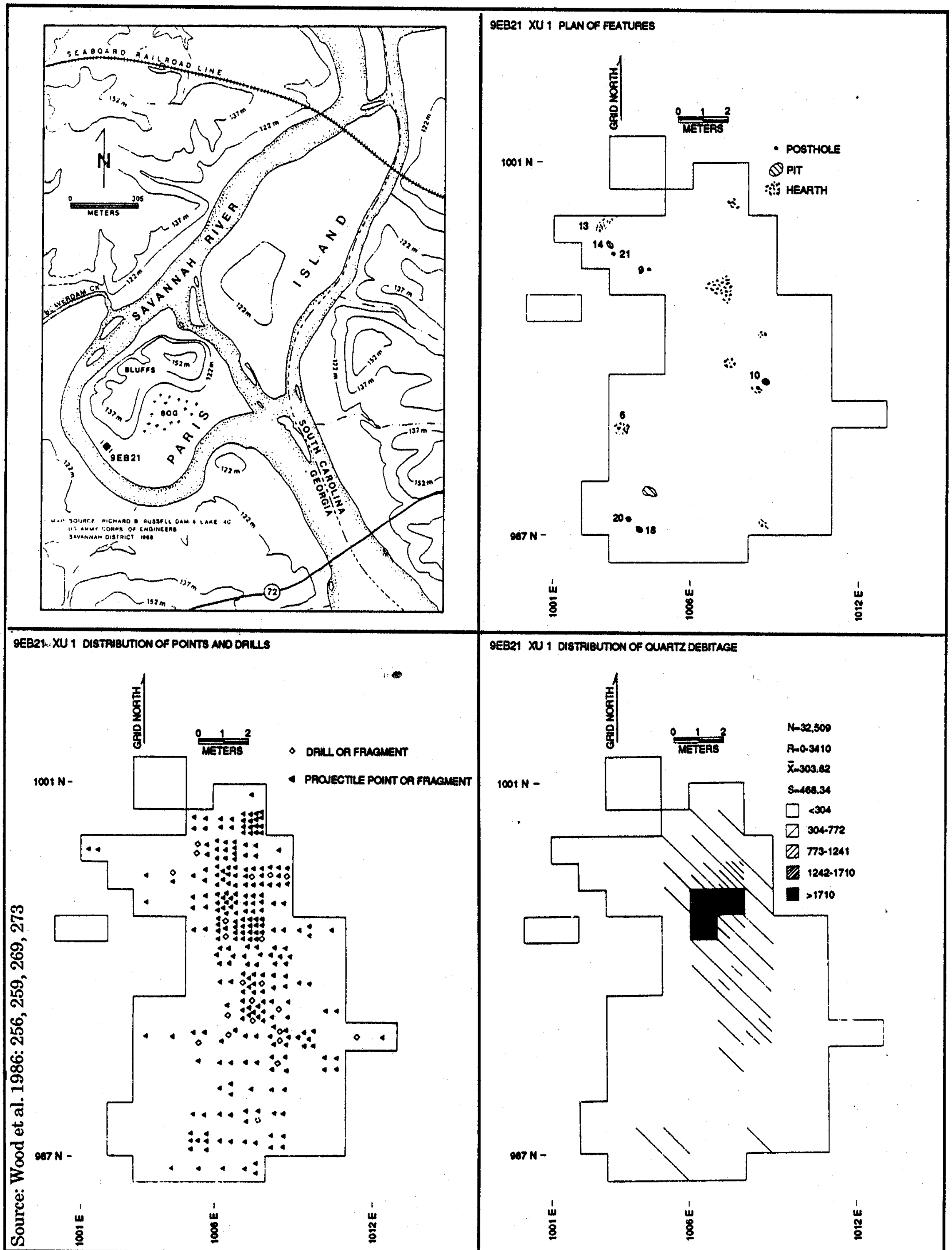


Figure 36. Late Archaic Features, Points, and Quartz Debitage Distributions, Paris Island South Site, 9EB21.

until it encompassed the entire area of the stain. The block was excavated using 1 m squares and three 10 cm levels, with all fill dry screened through 1/4 inch mesh. A total of 109 square meters were examined.

Three uncorrected radiocarbon dates from the midden (2120±70, 2140±70, 2220±100 B.C.; Appendix I) average to 2160 B.C., and place the Paris Island South occupation roughly contemporaneous with the occupation at Sara's Ridge (Appendix A; Wood et al. 1986:286). Corrected, these dates range from ca. 2700 to 2900 B.C. A fourth uncorrected date of 1240±140 B.C. from the midden was dismissed as too recent. The Paris Island South assemblage differed from that at Sara's Ridge in four respects, however: (1) the midden was far denser; (2) only equivocal evidence for structures was found; (3) ground stone tools, all but absent at Sara's Ridge, were common; and (4) the lithic assemblage was dominated by quartz, as opposed to the more even proportional occurrence of quartz, metavolcanics, and chert noted at Sara's Ridge.

The Late Archaic midden at Paris Island South was located under 50 to 80 cm of sterile sand, about 30 m to the northeast and parallel to the modern river channel. The midden sloped away from the river at an angle of about 11 degrees, and was thought to represent an activity area and dump from a slightly larger occupation. The area on the levee crest to the west of the block between the midden and the river was examined and found to have been scoured; no evidence for *in situ* artifacts or features was found (Wood et al. 1980:290). It was in this area at Sara's Ridge that the probable structure had been located; if the two sites had a similar layout, then any structures present at Paris Island South have since been lost (Wood et al. 1986:255, 290).

Late Archaic Materials at Paris Island South. Because of the dense, darkly stained midden deposits, feature recognition was difficult at Paris Island South. Only two recognizable hearths could be identified with confidence, a ca. 33 kg rock cluster with no associated staining, and a ca. 11 kg cluster over a very dark stain (Features 6 and 13, respectively; Figure 36). Both features were located near the southwest (grid west) edge of the unit, where the midden staining diminished markedly approaching the river. Both charcoal and cracked rock were common throughout the midden, and six other dense concentrations were evident when distributions were plotted square by square (Wood et al. 1986:257).

Only one shallow pit feature was recognized within the block, an incidence again probably due to the thickness and degree of the midden staining. This pit, Feature 8, was oval in shape, under 0.75 m in maximum extent, and had hickory nut shell and debitage in the fill, as well as ca. 2 kg of cracked rock (Wood et al. 1986:260). At least six small circular to oval stains were found at the base of the midden that may represent postmolds; all were ca. 25 cm in diameter and rarely exceeded 25 cm in depth. One of these, Feature 10, yielded almost 41 grams of carbonized hickory nut shell; a radiocarbon determination from a sample of this nutshell gave an uncorrected date of 2140±70 B.C. (Wood et al. 1986:260; Gardner 1986a:388). So few posts were found that it is difficult to infer the presence of structures; the posts that were found may be from drying racks or frames associated with the numerous hearths in the area (Wood et al. 1986:290). While other, shallower postmolds may have been present, they could not be recognized within the midden staining. This suggests that, like at Sara's Ridge, excavation of deep pits or posts was not a characteristic of the Late Archaic occupation.

Artifacts recovered within the excavation block included 210 kg of rock, 36,238 pieces of debitage, 760 flaked stone tools, fragments from at least 46 perforated soapstone slabs, and a number of battered and ground stone artifacts, including three small polished bead or pendent fragments. Quartz and quartzite dominated the flaked stone assemblage, accounting for 83.0 percent of the tools and 89.7 percent of the debitage (Wood et al. 1986:261, 267). Only small amounts of cherts and metavolcanics were used (8.9% and 0.9% of all debitage, and 2.0% and 3.0% of all tools, respectively). The chert was a grainy, low quality metamorphized material observed in bluffs on the northwest face of the island and in cobbles in the riverbed. A probable local procurement of almost all of the lithic debris found on the site was indicated; only the metavolcanics appear to have come from some distance away, although even this material occurred within ca. 25 km (Alterman 1987:134-146, 300).

The incidence of metavolcanic material, under one percent of the debitage and ca. three percent of the tools, was surprisingly low considering this raw material is widely viewed as a signature for the Late Archaic period in this part of the South Atlantic piedmont (House and Ballenger 1976:74; Taylor and Smith 1978:32; Goodyear et al. 1979:207-212; White 1982:51, 70). This pattern may be more apparent than real, however, and reflect undue archaeological research attention toward large, broad-bladed metavolcanic Savannah River points at the expense of other artifacts also typical of the period. Goodyear, in a comparison of raw material selection over Savannah River and Otarre (Small Savannah River-like) forms in the interriverine zone to the east of the reservoir, for example, has noted that "there seems to be a trend away from the igneous /metamorphic rock [typical of Savannah Rivers] among the Otarres and an emphasis on quartz and siliceous materials with better flaking properties" (Goodyear et al. 1979:209). The investigations in the Russell Reservoir indicate that both quartz and metavolcanic raw materials were used in considerable quantity during the Late Archaic period.

A total of 281 projectile points were recovered in the excavation unit, making this the dominant tool form. The points, which resemble the Small Savannah River type (Oliver 1981), are similar to the points found at Sara's Ridge and Rocky River (Figure 35). Straight, expanding, and contracting stemmed forms were found, indicating the range of variation possible within a single assemblage of this period. The three forms were evenly distributed over the block and do not appear to reflect obvious functional or temporal differences; cross mends of point and other tool fragments from the upper and lower parts of the midden also tend to support one primary episode of midden formation (Figure 37; Wood et al. 1986:267). Other bifaces, many probable preforms or manufacturing rejects, were also common (N=53 artifacts), as were unidentifiable biface fragments (N=119 artifacts). Hafted drills, a comparatively rare tool form at the two other major preceramic Late Archaic sites excavated in the reservoir, occurred with some

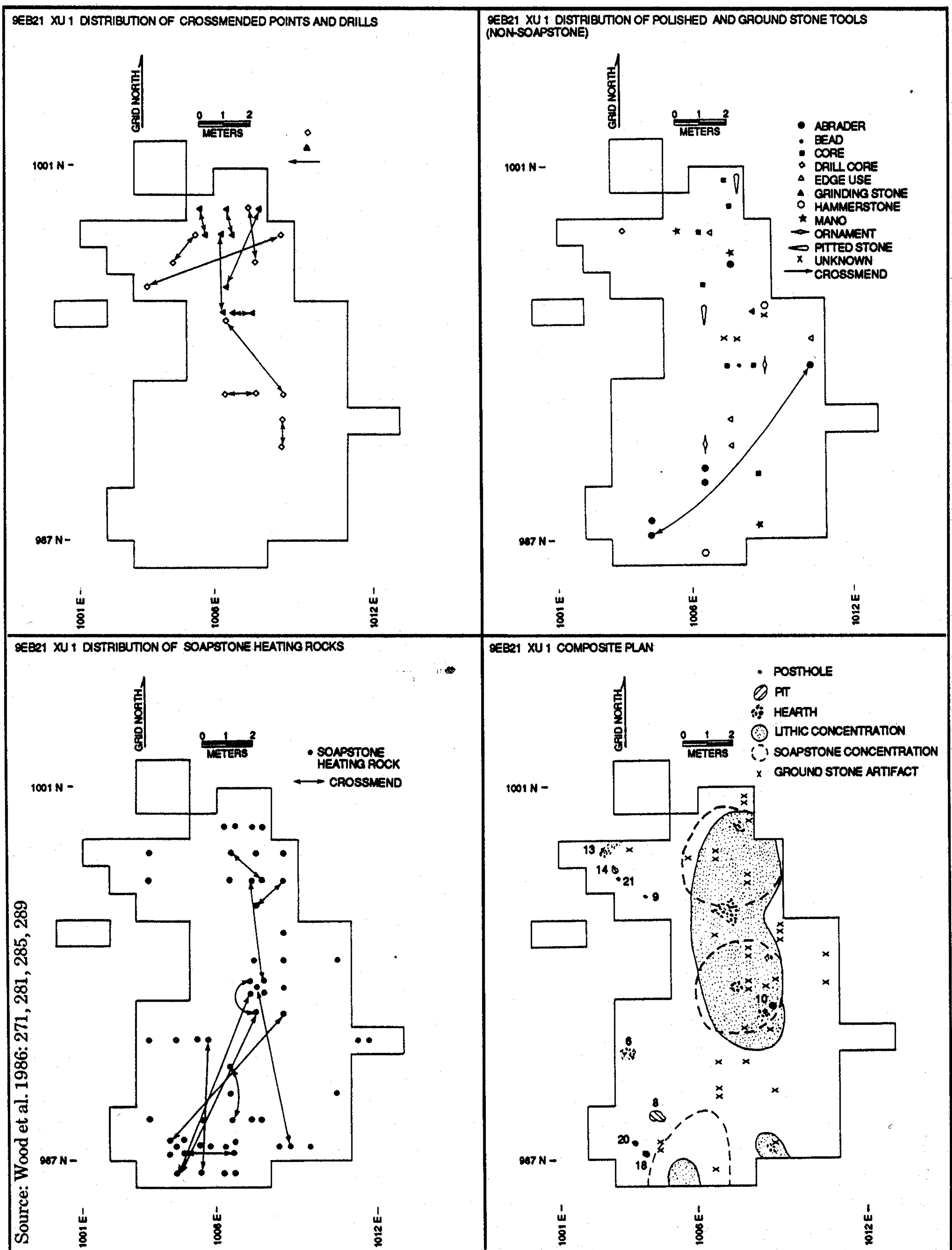


Figure 37. Crossmend Analysis and Late Archaic Occupation Surface, Paris Island South Site, 9EB21.

incidence (N=23 artifacts) and are thought to have been used to perforate soapstone slabs, among other tasks (Wood et al. 1986:282). Unifacial flake tools were also common within the midden (N=184 artifacts). Most were expedient forms with minimal intentional retouch that appear to have been selected from the manufacturing debris in the area, used, and then discarded. Most of the local meta-chert tools found on the site were expediently utilized unifaces.

An extensive quantity of debitage was found within the block, distributed in such a way as to suggest that most stoneworking occurred in one area. A workshop ca. 9 by 3 m in extent was indicated in the north central part of the block, where the vast majority of the debitage occurred, including over 8,600 flakes in four contiguous 1 m units (Figure 37). This concentration was centered around four possible hearths (dense concentrations of cracked rock in the general midden), and included large numbers of flake and ground stone tools and soapstone slabs. An analysis of a 1653 flake sample of the debitage indicated that both initial reduction and secondary maintenance activities were occurring. While extensive stoneworking was clearly documented, a range of other activities also appear to have taken place in this area.

A cross-mend analysis conducted over the points and drills found 11 mends, most from fragments in adjacent squares, and all from fragments within five meters of each other (Figure 37). This suggests fairly minimal movement of flaked stone tools upon breakage. A cross-mend analysis of soapstone slab fragments, in contrast, found a somewhat greater dispersion, suggesting intentional scattering of these artifacts upon breakage, possibly related to efforts to scavenge useable material (Figure 37; Wood et al. 1986:267, 288).

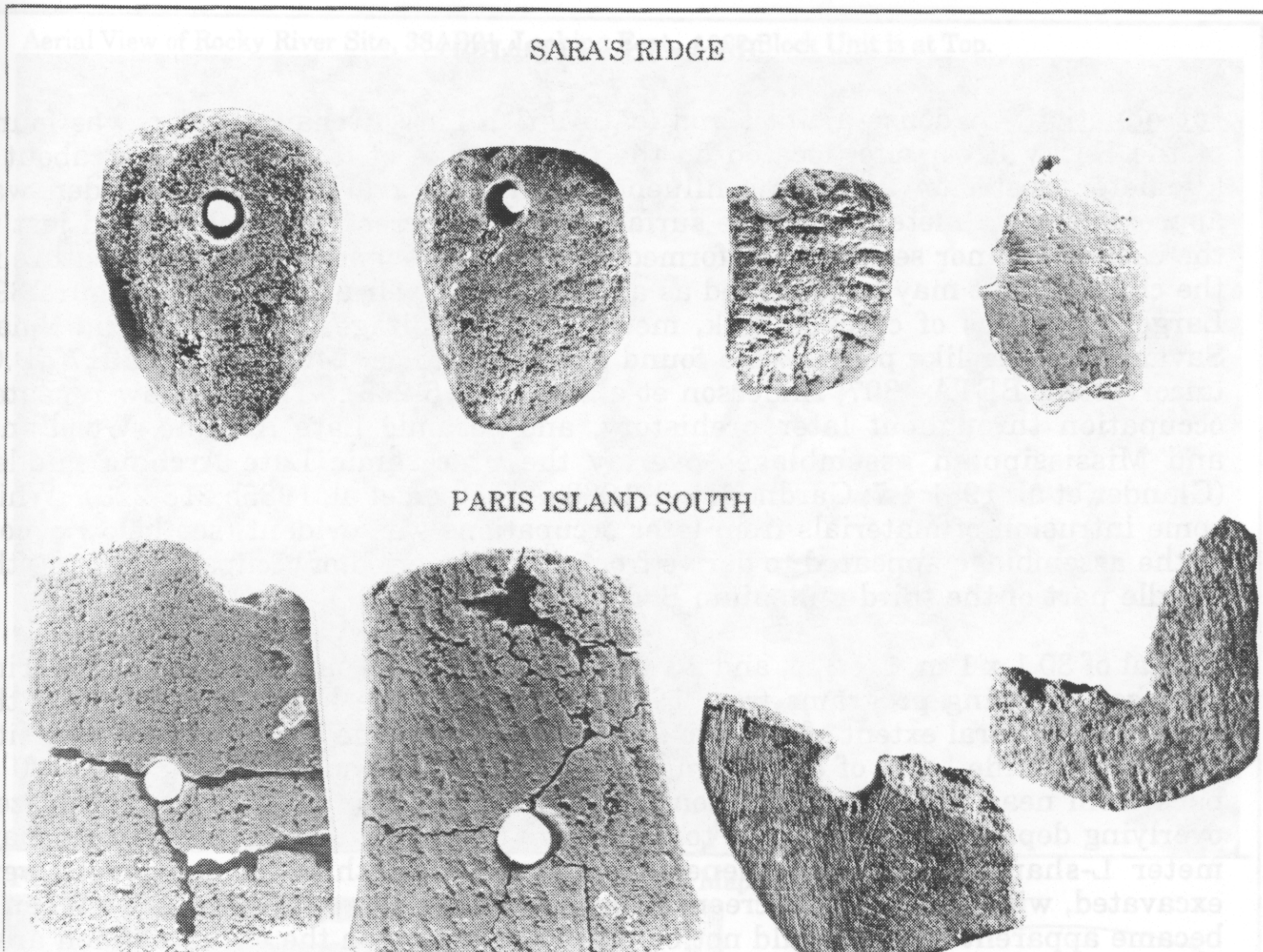
Four manos, two pitted cobbles, a grinding slab, four edge abraded cobbles, three hammerstones, and three abraders were found within the midden at Paris Island South (Wood et al. 1986:277, 280). The three abraders were made of sandstone or orthoquartzite, and may have been used to manufacture bone and antler objects, such as pins, awls, spear points, or fish hooks. These artifact types are fairly common in subsequent ceramic Late Archaic shell midden assemblages in the region, where better preservation occurs (e.g., Waring 1968b:165-172; Stoltman 1974:130-136). The manos and one of the pitted cobbles were of an unknown igneous material, while the other pitted cobble was made of soapstone. The remaining tools were on river cobbles of locally occurring quartz, quartzite, or metachert. The grinding slab exhibited extensive wear and use preparing soapstone slabs has been inferred (Wood et al. 1986:277). These tools were fairly widely scattered within the block, with the greatest numbers occurring among the probable lithic workshop debris.

Somewhat unusual artifacts recovered within the midden included an atlatl drill core (formed when a hollow cane was used to perforate an atlatl preform), a reddish-brown (catlinite?) bead fragment, and two small smoothed slabs, one of soapstone and the other of an unidentifiable material (Wood et al. 1986:280). The function of these latter two items is unknown, although they may have been bead or pendent preforms, or gaming pieces.

Soapstone was abundant at Paris Island South, with over 12 kg recovered within the block, mostly in the form of perforated slabs or slab fragments (Figure 38; Wood et al. 1980:280-285). Most of the slabs were rectangular or pentagonal, similar to the majority of the forms at Rocky River (Anderson et al. 1985b:242), and differing somewhat from the rounded or oval forms found at Sara's Ridge. It should be noted that both slab forms occurred at all three of these sites, although at each one form tended to dominate. The reasons for these shape differences between the assemblages are unknown. A temporal trend during the third millenium B.C. may be indicated, although both forms also apparently occurred in later, second millenium B.C. Stallings assemblages (Claflin 1931: Plate 52; Stoltman 1974:Plate 34). No evidence for the occurrence of soapstone bowls or notched soapstone objects, the latter an artifact type found at the Stalling Island (Claflin 1931:31-32; Plate 51) and Lake Spring (Miller 1949:40) sites, was found at the three preceramic Late Archaic sites examined within the reservoir.

All of the soapstone slabs found at Paris Island were broken, typically at the perforation. Most were plain, although a few exhibited incising or incompletely smoothed tooling marks. Through extensive cross-mend analysis, and using the presence of a perforation as the critical MNI element (minimum number of individual artifacts), the 424 slab fragments that were found could be attributed to at least 46 complete slabs (Wood et al. 1986:282). Three clusters of soapstone artifacts were observed, two associated with the lithic workshop and the third at the south end of the block. While some cross mends were made between these clusters, suggesting scavenging or reuse of the slabs, no re-perforated fragments were found. A soapstone outcrop was located just across the river in Elbert County, reducing the need for scavenging, re-perforating broken pieces, or other raw material conservation strategies. All three concentrations were found near dense concentrations of fire cracked rock, supporting the use of these slabs as heating stones, assuming discard occurred near fires. Only one pit where skin boiling might have occurred was found, however, in the south part of the block. A cooking area has been cautiously inferred here (Wood et al. 1986:290), although the general absence of these pits may indicate heating elsewhere, or in other types of containers (i.e., suspended skin bags?).

Ethnobotanical analysis was conducted on charcoal from a single 1 m square from the midden that was waterscreened through 1/4 and 1/16th inch mesh, and from the fill of Feature 10, a postmold (Gardner 1986a:387-390; Wood et al. 1986:287-288). Hickory and walnut shell were the only food remains found; no identifiable seeds were recovered. While hickory was comparatively common, walnut occurred in only trace quantities. By weight, the ratio of nutshell to wood charcoal was 1:4. The presence of the nuts coupled with the absence of seeds suggested a fall/winter occupation, although the examined sample size was very small and could not be considered representative. Plant processing was clearly indicated by the numerous ground stone tools found in the midden, a task that could have been directed to either stored or fresh foods, or both.



Source: Wood et al. 1986: 158, 283, 284; Anderson and Schuldenrein 1985: 242

Figure 38. Preceramic Late Archaic Perforated Soapstone Slabs, Sara's Ridge, Paris Island South, Rocky River Sites.

Rocky River (38AB91)

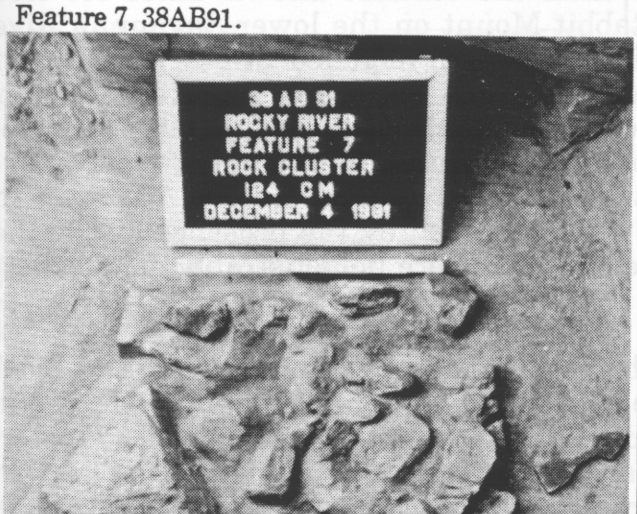
Introduction. A dense artifact and feature-rich Late Archaic midden was found at the Rocky River site, located on the eastern side of the Rocky River about a kilometer upstream from its confluence with the Savannah. The midden was approximately a meter below the surface on a levee crest, overlooking and just to the east of a minor set of shoals formed by a resistant igneous dyke-like feature in the channel that may have served as a natural fish weir and crossing (Figure 39). Large quantities of cracked rock, metavolcanic debitage, soapstone, and Small Savannah River-like points were found and dated to ca. 2400 B.C. (2450±70 B.C. uncorrected, BETA-4307; Anderson et al. 1985b:215-249). The site saw repeated occupation throughout later prehistory, and ceramic Late Archaic, Woodland, and Mississippian assemblages overlay the preceramic Late Archaic midden (Glander et al. 1981:4-7; Gardner et al. 1983; Anderson et al. 1985b:218-223). While some intrusion of materials from later occupations was evident (see below), most of the assemblage appeared to derive from a single period of occupation during the middle part of the third millenium B.C.

A total of 30 1 x 1 m, 1 x 2 m, and 2 x 2 m test units were opened at 38AB91 during successive testing programs from 1979 to 1981. These located and defined the depth and general extent of the late Archaic midden in the eastern part of the site. A 6 to 7 m wide band of dark organic staining was found extending about 20 m back from near the river bank along a north south axis. Using a D-6 bulldozer, overlying deposits were removed to just above the midden level, and an 88 square meter L-shaped block was opened in 1 m squares; three 10 cm levels were excavated, with all fill waterscreened through 1/8 inch mesh (Figure 39). When it became apparent that it would not be possible to examine the entire midden area, a series of shovel tests were opened to accurately define its extent. Approximately one-third of the midden area (ca. 56 square meters in the southern part of the block), the portion closest to the river, was excavated. The northern part of the block (ca. 32 square m) examined the area just beyond the midden, to see what might have been present; few features or artifacts were found, suggesting activity was fairly tightly constrained spatially.

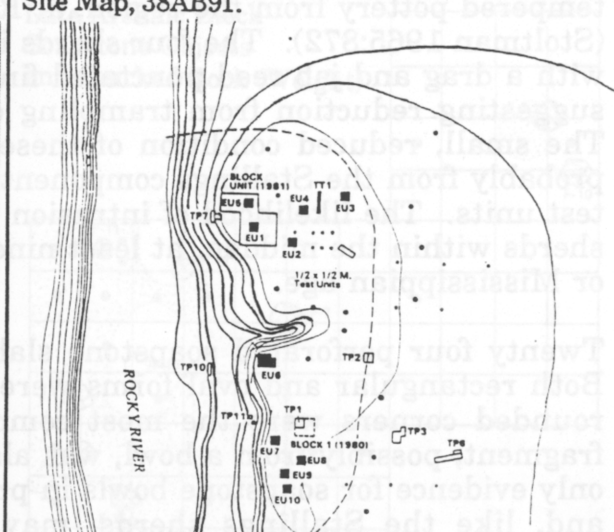
Late Archaic Materials Within the Midden at Rocky River. Four clusters of fire cracked rock, six small oval to circular basin shaped pits, and 22 faint shallow circular stains from possible posts were found in the block (Figure 40). Three of the four rock clusters were from 0.5 to to 0.75 m in diameter; the fourth was considerably smaller, approximately 30 cm in diameter. All had associated charcoal staining and appear to have been hearths. The pits were circular to oval in shape, from ca. 0.5 to 0.75 m in maximum dimension, and shallow, ca. 10-25 cm in depth. Five of the six pits were devoid of artifacts, while the sixth (Feature 11) contained a cluster of ca. 20 metavolcanic flakes and crude bifaces that appear to have been swept into the top. The smaller faint stains were observed at the base of the midden and may have been from posts or other facilities such as drying racks.

Aerial View of Rocky River Site, 38AB91, Looking East. 1982 Block Unit is at Top.

Feature 7, 38AB91.



Site Map, 38AB91.



Source: Anderson et al. 1985a: 216, 217

Figure 39. Site Location, Excavation Units, and Preceramic Late Archaic Feature, Rocky River Site, 38AB91.

Artifacts recovered in the Late Archaic midden at Rocky River included 19,212 pieces of debitage, over 150 kg of rock and cracked rock, 30 projectile points, 47 formal bifaces or preforms, three hammerstones, three crude bifaces, four cores, and 25 pieces of worked soapstone. Metavolcanic materials accounted for the vast majority of the flaked stone assemblage at the site, accounting for over 80 percent of the debitage and 90 percent of the tools. Almost all of the remaining material was quartz, with chert present in only trace amounts. A major change from predominantly metavolcanics in the Late Archaic to predominantly quartz in the Woodland and Mississippian period was evident in the levels of the 30 test units opened at the site. Increased chert use was also evident in these latter periods. Four of the thirty projectile points found within the midden fit the Savannah River Stemmed type, while the remainder fell within the Small Savannah River/Otarre Stemmed categories (Figure 35) Twenty five of these, including the four Savannah River Stemmed, were metavolcanics, four were quartz, and one was a fine grained chert of probable piedmont origin.

Eight Stalling's fiber tempered sherds were found at the site, four from between 40 and 80 cm in depth in test units well to the west of the Late Archaic midden, and four within the midden itself (Anderson et al. 1985b:220, 232). The four Stallings sherds from the test units (three plain, one linear separate punctate) were stratigraphically below most of the site's Woodland materials, and above the Late Archaic midden. The sherds in the midden were intriguing since the assemblage appeared to be otherwise preceramic and, with an uncorrected date of 2450±70 B.C., was only slightly later than the earliest known dates for fiber tempered pottery from the region, at Rabbit Mount on the lower Savannah River (Stoltman 1965:872). The four sherds in the midden included three plain and one with a drag and jab reed punctated finish; all were small and considerably worn, suggesting reduction from trampling or other mechanical weathering agencies. The small, reduced condition of these sherds argued for intrusion from above, probably from the Stallings component found at between ca. 50 and 70 cm in the test units. The likelihood of intrusion was reinforced by the presence of 16 other sherds within the midden, at least nine of which were demonstrably of Woodland or Mississippian age.

Twenty four perforated soapstone slab fragments were found within the block. Both rectangular and oval forms were present, although rectangular slabs with rounded corners were the most common (Figure 38). One curved soapstone fragment, possibly from a bowl, was also found within the midden. This was the only evidence for soapstone bowls in preceramic context found in the project area and, like the Stallings sherds, may represent an intrusion. Interestingly, although large amounts of soapstone were found in the Late Archaic midden, the stratigraphic evidence indicated that the greatest occurrence of the material was in the levels immediately overlying the block that have been attributed to the ceramic (Stallings) Late Archaic (Anderson et al. 1985b:233).

Artifact and feature distribution closely conformed to the midden staining (Figure 40). In the eastern part of the block, where the midden was poorly defined or nonexistent, artifact and feature density was low. Only one hearth and one pit

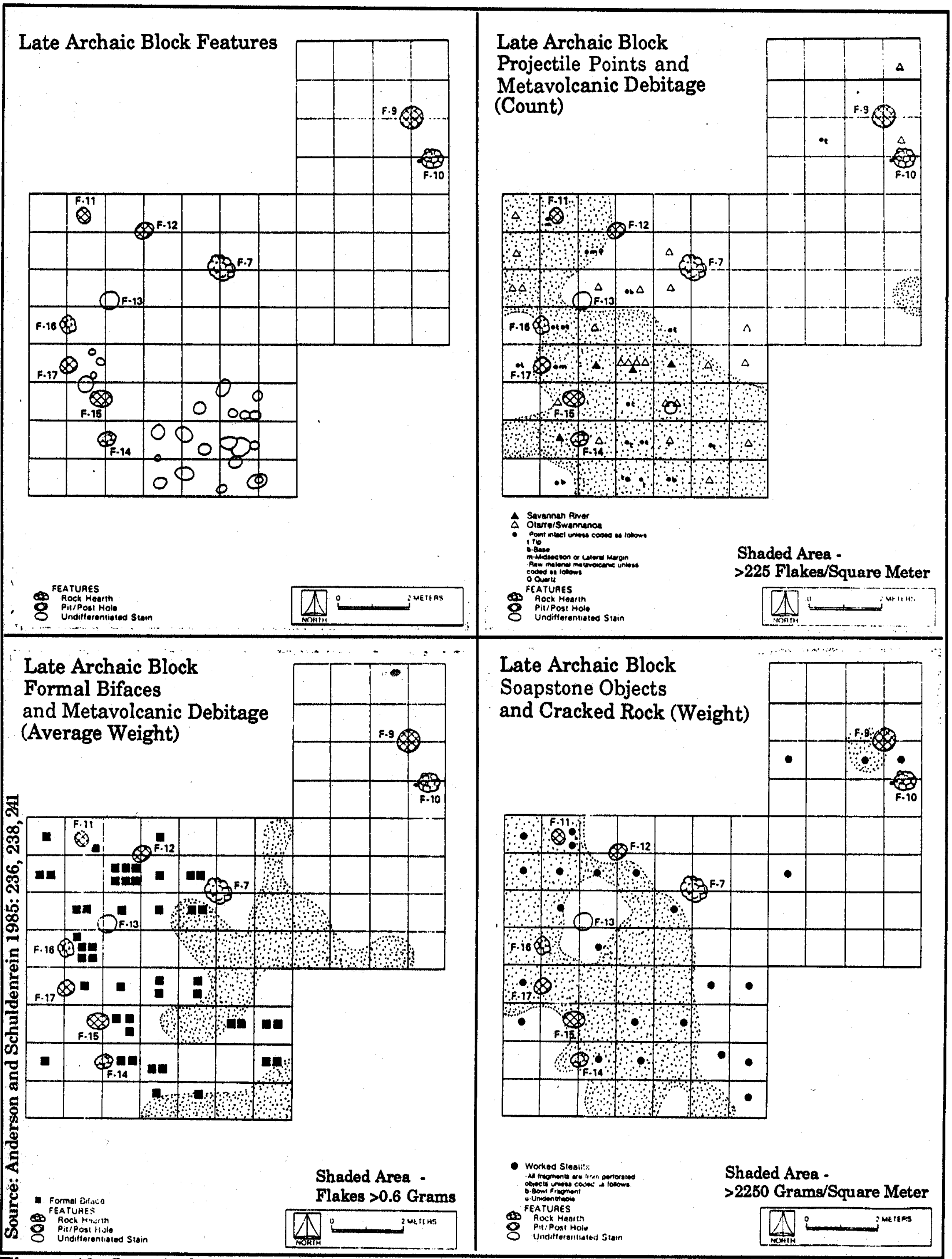


Figure 40. Late Archaic Features, Points, Bifaces, and Perforated Slab Distributions, Rocky River Site, 38AB91.

were found in this area, that may represent an isolated cooking location. A few tools, including a small stemmed point, a point tip, three perforated soapstone slab fragments, an expedient uniface, and three cores were found around these features, and were probably associated with their use. Throughout the block the distribution of hearth features and fire cracked rock closely corresponded to the occurrence of perforated soapstone slab fragments, supporting the inference that the slabs saw use in cooking activity.

The remaining tools and features were all in the western half of the block, together with dense concentrations of debitage and cracked rock. An examination of the debitage indicated that both initial and later stage manufacturing/tool maintenance activities occurred, with most of the activity directed to the production of bifaces. An analysis of average flake size distributions within the block showed that larger flakes were located near the edge of the midden (Figure 40). This suggests either the cleaning or sweeping of large flakes, or that initial production took place away from presumably more intensively occupied areas, after which knapping activity shifted to around the hearth and pit features.

The artifact and feature distributions indicated that a range of activities occurred in the vicinity of the Late Archaic midden at Rocky River, including food preparation, cooking, and flaked stone tool manufacture, use, and discard. In this regard the site assemblage was essentially identical to that in the midden areas at Sara's Ridge and Paris Island South. If the three sites were laid out the same way, then the midden at Rocky River probably served as an intensive activity area and dump, with any structures present probably located closer to the river. If that was the case they have since washed away. While the faint circular stains that clustered in the southeastern portion of the block may have been associated with a structure or structures, no wall lines could be resolved. Small quantities of fired clay were found in the midden that might have been daub fragments, but since they occurred almost invariably in or near hearths, they were probably not from structures. While it may be possible that the entire Late Archaic midden area at the Rocky River site represented the outline of one or more large multi-family structures, the data from Paris Island South and particularly Sara's Ridge suggest otherwise. At those sites the midden staining was either away from known structures or contained little evidence for their presence.

The only other evidence for structures found on the site appeared to be associated with the site's Woodland occupations (see Chapter VI, page 228). Some 20 m to the west of the Late Archaic midden a large oval fired area was found near the river in EU6. This feature was interpreted as either the partial remains of a burned structure or an intensively utilized living surface. Both Late Archaic and Woodland artifacts were found in the fill, and while it was assumed to be Woodland, its age and function were uncertain.

Although extensive paleosubsistence analyses were conducted with the Late Archaic midden deposits at the site, only limited, albeit somewhat tantalizing results were obtained. Several small, extremely weathered bone fragments were found, but unfortunately none could be identified. Soil chemistry analyses run on samples from the midden produced high calcium and phosphorus signatures, however, suggesting that considerable degradation and concentration of bone minerals may have occurred in the area. Phosphate fractionations performed on the same samples also suggested the possibility of localized forest clearance (Anderson et al. 1985b:247-249). In spite of an extensive program of flotation sampling and ethnobotanical analysis (Moore 1985), little beyond charred hickory nutshell was found. While nutshell remains were common throughout the midden, suggesting a fall/winter occupation, the absence of ground stone tools, as at Sara's Ridge, made it appear unlikely that extensive plant processing occurred.

EVIDENCE FOR LATE ARCHAIC OCCUPATION IN THE RUSSELL RESERVOIR: MINOR EXCAVATION ASSEMBLAGES

McCalla Bottoms (38AB288)

An extensive Late Archaic assemblage was found at depths up to 60 cm below the base of the plowzone on the levee crest at the McCalla Bottoms site, underlain by the Middle Archaic deposits recounted previously (Schuldenrein et al. 1985:175-213). A detailed geoarchaeological research program undertaken at the site indicated that the Late Archaic occupation was located on a stable land surface characterized by a well defined soil horizon developed on overbank silts and clays. The stable surface, the nearby shoals in the river, and the presence of backswamp/marshy settings behind the levee area offered unusual microenvironmental diversity, and helps explain the presence of dense archaeological assemblages at this location. The Late Archaic assemblage included Stallings Plain and Punctated ceramics, soapstone bowl fragments, large quantities of debitage and cracked rock, and a number of small square stemmed projectile points resembling the Otarre, Swannanoa, Gary, Savannah River, and Stallings Island Type II forms (Figure 35; Alterman 1987:191). The Stallings fiber tempered assemblage is currently the northernmost concentration of this ware known along the Savannah; only minor quantities of the material were found further upstream, at sites like Gregg Shoals and Rucker's Bottom.

Late Archaic features were comparatively rare (N=5), and no midden staining or shellfish debris was observed. An uncorrected radiocarbon date of 1460±80 B.C. (BETA-2530: Glander et al. 1981:5-17) was obtained from a small pit in the 40 - 50 cm level. While no artifacts were present in the fill, the feature was assumed to be contemporaneous with the Stallings assemblage. A well defined rock cluster with associated Stallings Punctated sherds, a large soapstone bowl fragment, and minor amounts of debitage was also found, that probably represents a hearth remnant. The only other features were three equivocal stains (Schuldenrein et al. 1985:183-185). The fill from the rock cluster was floated and produced identifiable pine wood charcoal. The quantity of charcoal recovered was too small to allow successful dating at the time, although accelerator dating could now be used to date the feature and, by association, the Stallings assemblage. Given advances in dating procedures in recent years, many samples like this from the reservoir warrant reexamination.

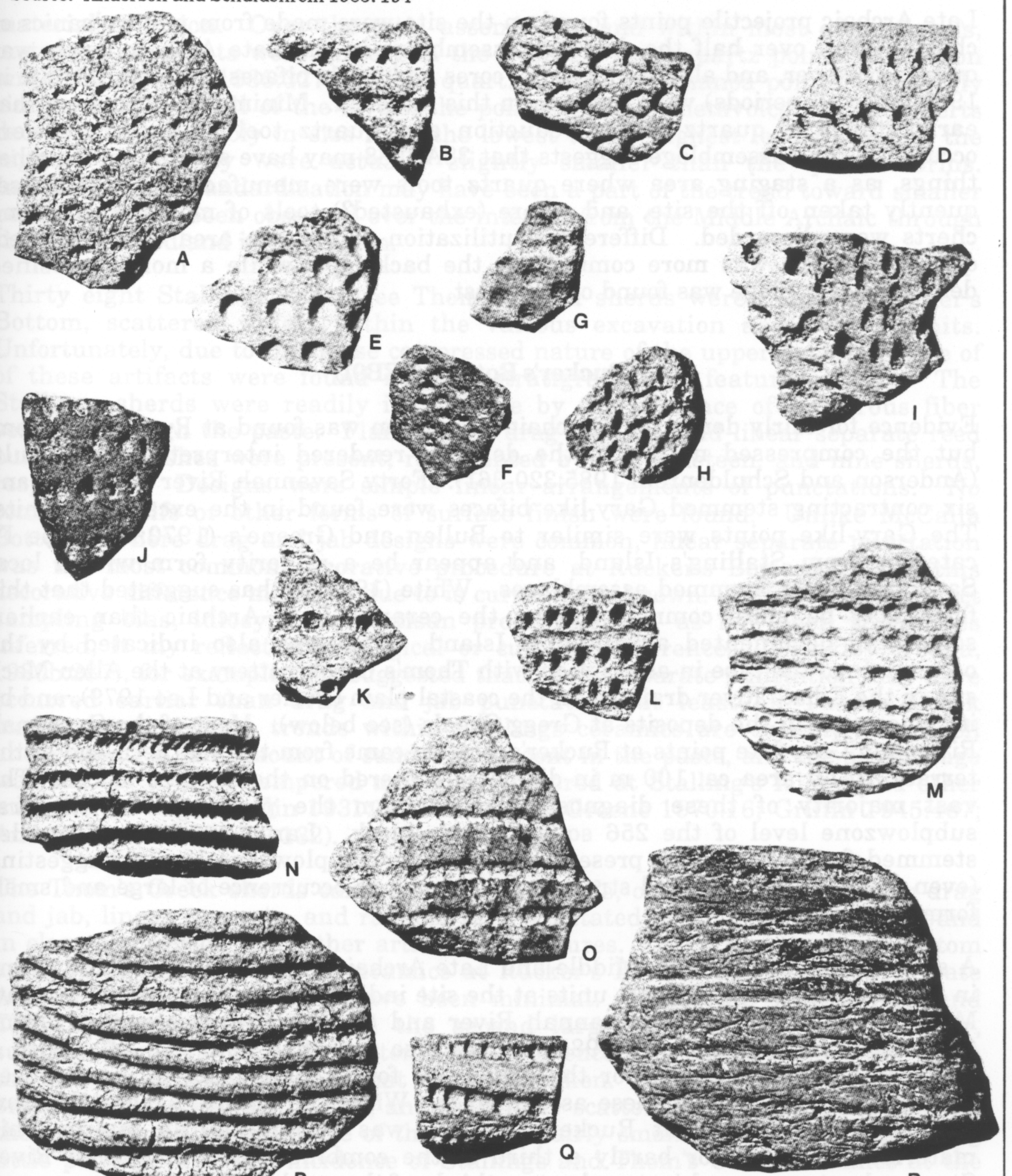
The Late Archaic projectile points that were recovered from the site exhibited appreciable variation in size and shape, although most fell within the range of variation of Keel's (1976:194-196) Otarre Stemmed type. A range of raw materials were employed; of 38 identifiable Late Archaic bifaces found in stratified context in 1981, the majority were made from metavolcanics (N=24; 63.2 percent), followed by chert (N=10; 26.3 percent) and quartz (N=4; 10.5 percent) (Schuldenrein et al. 1985:186). Most of the chert was a local piedmont material (Alterman 1987:292). The raw material diversity was comparable to that observed in the later levels at Stalling's Island, which have been dated roughly contemporaneous with the Stallings occupation at McCalla Bottoms. The increased raw material diversity observed during the Late Archaic locally has been linked to the increase in exchange, interaction, and social diversity observed over the general region during this period (e.g., Sassaman et al. 1988).

The site produced the largest sample of Stallings pottery, 139 sherds, found in the reservoir. The assemblage was dominated by punctated sherds (N=81; 58.3 percent), with decorative treatment restricted to simple linear arrangements of drag and jab or separate punctations (Figure 41). No geometric patterns or other elaborate decorative procedures, such as incising or zoned punctation, were present. Vessels were simple molded bowls with straight to incurving rims and rounded or flattened lips. Decoration was restricted to the rim area in some cases and bases tended to be plain. Assuming only one method of punctation was used on any given vessel, than at least 18 bowls were represented in the assemblage. Most of the sherds were characterized by linear drag-and-jab punctations formed with a cut stick or cane; linear separate crescent or circular punctations were a distinct minority. No Thom's Creek sand tempered ceramics were found at the site. The vertical distribution of Stallings plain, drag and jab, and linear separate punctate pottery in the levels at McCalla Bottoms was examined, but no trends were observed; most of the pottery was found from 40 to 50 cm in depth (Schuldenrein 1985:191).

Stoltman (1972:44-45) has suggested that plain fiber tempered pottery may have appeared earlier than decorated finishes in the Savannah River area, and that the incidence of decoration increased over time. If this observation is correct, then the McCalla Bottom's assemblage may date fairly late in the period of fiber tempered pottery manufacture. The ratio of plain to decorated ceramics at McCalla Bottoms (0.59/1.0) was between the ratios observed in the lower (0.94/1.0) and upper (0.46/1.0) portions of the midden at the Stalling's Island site (Stoltman 1972:45). The contemporaneity of the two sites is further supported by the 1460±60 B.C. radiocarbon date from a Stallings level at 38AB288, and the date of 1780±150 B.C. obtained from the base of the ceramic-bearing deposits at Stalling's Island (Williams 1968:331; Bullen and Greene 1970:12).

Examining the vertical distribution of debitage raw materials in the 1981 units, a major decline in the use of quartz was evident when compared with the preceding Middle Archaic period (Figure 31). Quartz remained a major component of the Late Archaic technology, which was interesting since almost 90 percent of the

Source: Anderson and Schuldenrein 1985: 194



Stallings Punctate Ceramics from the Upper Savannah River. a-j Stallings Punctate with linear separate punctations; k-n Stallings Punctate with drag and jab punctations. The punctations in sherds are shallow and uniform, creating a simple stamped effect. Sherds a, d, e, g, h, k, l are from 9EB91; sherd c is from 38AB91, sherd i is from 38AB22; all others are from 38AB288.

Figure 41. Stallings Fiber Tempered Ceramics, Richard B. Russell Reservoir Area.

Late Archaic projectile points found on the site were made from metavolcanics or cherts. Well over half the debitage assemblage in the Late Archaic levels was quartz, however, and all but one of the cores and crude bifaces found on the site in 1981 (over all periods) were made from this material. Minimally, it appears that early stages of quartz cobble reduction and quartz tool manufacture were occurring. The assemblage suggests that 38AB288 may have served, among other things, as a staging area where quartz tools were manufactured and subsequently taken off the site, and where (exhausted?) tools of metavolcanics and cherts were discarded. Differential utilization of the site area was indicated; quartz debitage was more common on the backslope, while a more diversified debitage assemblage was found on the crest.

Rucker's Bottom (9EB91)

Evidence for fairly dense Late Archaic occupation was found at Rucker's Bottom, but the compressed nature of the deposits rendered interpretation difficult. (Anderson and Schuldenrein 1985:320-361). Forty Savannah River Stemmed and six contracting stemmed Gary-like bifaces were found in the excavation units. The Gary-like points were similar to Bullen and Greene's (1970:14) Type IV category from Stalling's Island, and appear be a minority form within local Savannah River Stemmed assemblages. White (1982:51) has suggested that this form may be more common during the ceramic Late Archaic than earlier, something documented at Stallings Island. This was also indicated by the occurrence of the type in association with Thom's Creek pottery at the Allen Mack site in the Edisto River drainage in the coastal plain (Parler and Lee 1979), and by its placement in the deposits at Gregg Shoals (see below). Most of the Savannah River and Gary-like points at Rucker's Bottom came from the southern end of the terrace, in an area ca. 100 m in diameter centered on the Archaic blocks. The vast majority of these diagnostics came from the plowzone or the first subplowzone level of the 256 square meter block. Large numbers of smaller stemmed forms were also present in the upper subplowzone levels, suggesting (even given the compressed stratigraphy) that a co-occurrence of large and small forms was probable.

A seriation analysis of the Middle and Late Archaic and initial Woodland forms in the Archaic blocks and test units at the site indicated a replacement of Morrow Mountain points by both Savannah River and smaller square stemmed forms (Anderson and Schuldenrein 1985:329; see also Alterman 1987:248-249), with a considerable co-occurrence for the latter two forms. Raw material preferences varied dramatically over these assemblages. While the Middle Archaic Morrow Mountain assemblage at Rucker's Bottom was predominantly quartz, this material accounted for barely a third of the combined Gary/Savannah River Stemmed category, and just under two thirds of the combined Otarre/Swannanoa assemblage at the site (Anderson and Schuldenrein 1985:314).

Differences in size within the the Middle and Late Archaic hafted biface assemblage at Rucker's Bottom appeared to be at least partially linked to raw material selection. Over the total assemblage, and within most of the levels, metavolcanic points were larger, on the average, then quartz points (Anderson and Schuldenrein 1985:327). While quartz Otarre/Swannanoa points were fairly similar in size in all of the levels, the points made of metavolcanics and cherts decreased appreciably in size from the lowest to the highest levels, until in the highest level they were actually slightly smaller than the quartz forms. Increasing size standardization may have been a part of the trend toward smaller points that has been observed over the interval from the Middle Archaic through the Early Woodland in the region.

Thirty eight Stallings and three Thom's Creek sherds were found at Rucker's Bottom, scattered widely within the various excavation and surface units. Unfortunately, due to the dense compressed nature of the upper deposits, none of of these artifacts were found in good stratigraphic or feature context. The Stallings sherds were readily identifiable by the presence of numerous fiber vesicles through the paste. Plain, linear drag and jab, and linear separate reed punctated finishes were present, represented by ten, nineteen, and nine sherds, respectively. Designs were simple linear arrangements of punctations. No complex motifs or other forms of surface finish were found. Unlike McCalla Bottoms, where drag and jab designs were common, linear separate punctation was the most common decorative procedure at Rucker's Bottom. What this decorative difference might be due to is currently unknown. It may merely reflect sampling bias, idiosyncratic artisan preferences or, as has been sometimes inferred, it my reflect chronological or cultural differences. Trinkley (1980a, 1980b:287), for example, has suggested that linear separate punctation may have occurred earlier than drag and jab punctation, at least on Thom's Creek materials; decorative trends within Stallings ceramics are currently not well understood. A fair amount of sand was present in the paste, and the assemblage was similar to fiber tempered material recovered at Stalling's Island and other inland sites (e.g., Claflin 1931:14; Bullen and Greene 1970:16; Griffin 1945:467; Anderson et al. 1979:75, 132).

The Thom's Creek sherds came from three vessels, characterized by linear drag and jab, linear separate, and random reed punctated finishes. None were found in clear association with other artifacts or features. Use of the Rucker's Bottom area, or at least the use of ceramics at Rucker's Bottom during the later Late Archaic period, appears to have been minimal. While the 41 Stallings and Thom's Creek sherds formed the second largest sample in the reservoir, surpassed only by McCalla Bottoms, the incidence was actually quite low given the massive excavation effort that was undertaken. Few vessels were apparently broken or discarded at the site, and the widely scattered nature of the fragments that were found suggests use of the area by fairly small groups, or groups using little pottery. The low incidence of Stallings and Thom's Creek ceramics at the site, in fact, was somewhat surprising, given the intensive use the location saw throughout much of prehistory.

Gregg Shoals (9EB259)

Late Archaic artifacts and features were found in largely undisturbed, stratified context in zones III to V (40 to 110 cm) of the 8 x 8 m block opened at the Gregg Shoals site (Tippitt and Marquardt 1984:7-18 to 7-27). The lowest levels (Zone V, from 80 to 110 cm) were dominated by small, square stemmed quartz projectile points, debitage, and hammerstones, and perforated soapstone disk fragments Figure 29). Above these levels, in Zone III, from 40 to 60 cm, the assemblage was characterized by Stallings Plain fiber tempered pottery, soapstone bowl fragments, hammerstones, and both large and small square and contracting stemmed projectile points. The only fiber tempered pottery found in the excavation block, eight sherds, came from the lower part of this zone, from 50 to 60 cm in depth. Metavolcanics increased markedly in Zone III, to some 16 percent of the total debitage assemblage, the highest incidence observed in any of the levels at the site (Figure 27). A small number of later, Woodland period ceramics and projectile points were also present in this zone, however, so a Late Archaic association for all the artifacts cannot be assumed.

A replacement of small stemmed points by both large and small stemmed forms was documented in the excavation levels. Projectile points in Zone III included two large contracting stemmed forms resembling Garys or Bullen and Greene's (1970:24) Type III at Stalling's Island, one Otarre Stemmed or Plott Short Stemmed, one Swannanoa Stemmed, and two Yadkin Large Triangulars (Figure 29; Tippitt and Marquardt 1984:7-18 to 7-20). The larger Gary and Otarre forms were made from metavolcanics, and were probably Late Archaic in age, while the other stemmed forms, of quartz, were either Late Archaic or Woodland age. No points were found in Zone IV. The projectile points in Zone V were small, square to slightly contracting stemmed forms similar to the points found in the preceramic Late Archaic middens at Paris Island South, Rocky River, and Sara's Ridge. Of the twelve points found in this zone, eight were quartz, three were metavolcanics, and one was coastal plain chert.

Four charcoal stains each approximately half a meter in diameter, three with associated fire cracked rock, were found in Zone III and probably represent Late Archaic hearth remnants. Several teeth from a domestic dog (*Canis familiaris*) estimated to weigh approximately 25 to 30 pounds were found in the same zone. A single mussel shell was recovered in one of the four features, in apparent association with three plain fiber tempered sherds (Tippitt and Marquardt 1984:7-24, 9-4). This isolated shell was the only evidence for Late Archaic period shellfish exploitation found in the reservoir. In Zone V two small basin shaped charcoal stains ca. 30 and 50 cm in diameter were found near a small cluster of fire cracked rock. Five small stemmed hafted bifaces were recovered in close proximity to these features, and activity about one or more hearths was suggested.

A large, presumably Late Archaic period hearth was found at a depth of from ca. 30 to 55 cm in Operation B, a 2 x 2 m unit opened to a depth of 1.30 m some 25 m west of the large excavation block (Figure 24; Tippitt and Marquardt 1984:7-37). The feature was a well defined cluster of rocks, including 25 intact and eight split quartz cobbles. The base of a large stemmed hafted biface of quartz, possibly a

Savannah River Stemmed, was found in the same level. Faint staining and small flecks of charcoal were observed around the rocks, and the feature may represent a hearth or a steaming area. Given the absence of evidence for fire cracking, it may alternatively represent a raw material cache. A well made quartz biface resembling a Guilford Lanceolate was found below this rock cluster at a depth of ca. 60 - 70 cm. Repeated minor Late Archaic period use of the Gregg Shoals area was indicated by the excavation assemblage, although it must be cautioned that much of the site had been lost prior to the start of fieldwork. The assemblage stratification that was documented, however, proved extremely important to the construction of the Late Archaic portion of the reservoir area cultural sequence (Figure 2). Particularly important to this effort was the data on the occurrence and relative positions of projectile point forms, fiber tempered pottery, and soapstone bowl and disk fragments.

Clyde Gulley (9EB387)

The Clyde Gulley site was located immediately to the south of the confluence of Pickens Creek with the Savannah River, on a low terrace in a narrow section of the river floodplain (see Chapter IV, pp. 127-129). An apparent preceramic Late Archaic component was discovered at a depth of from 60 to 80 cm in Backhoe Trench 4, one of 14 backhoe trenches that were opened and screened to determine the nature of the site deposits (Tippitt and Marquardt 1984:8-5 to 8-7). A small quartz square to slightly expanding stemmed point resembling a Plott Short Stemmed (Keel 1976:126-127) was found, together with a number of pieces of fire cracked rock and quartz and metavolcanic debitage. No pottery was observed, although ceramics were common in the upper 30 cm of the unit. The point, which resembled some of the smaller forms found in the Late Archaic middens at Sara's Ridge and Paris Island South, may date to the same general period.

9EB17 (Transect 21)

A minor Late Archaic component characterized by quartz and metavolcanic debitage, soapstone, and chipped stone tools was found in three of four 1 x 2 m test units opened at 9EB17, at depths ranging from ca. 40 to 70 cm (Wood et al. 1986:213-219). This was underlain by a predominantly quartz debitage and tool assemblage that included bifaces resembling the Guilford Lanceolate type. Debitage signatures from the test units documented a peak in the occurrence of metavolcanics in the Late Archaic levels, a pattern similar to that noted at Gregg Shoals (Figure 27).

Beaverdam Creek Borrow Pit (9EB19)

A minor Stallings ceramic Late Archaic assemblage was found in XU1 at 9EB19 (Wood et al. 1986:249-253). XU1 was a 52 square meter excavation opened in a single 10 cm level within a larger, 10 x 20 m area that was machine stripped and examined for features. Two sherds of Stallings drag and jab fiber tempered pottery were found, one from general level fill and the other within a later Woodland feature; no identifiable Late Archaic features were found (Wood et al. 1986:249, 254). Other Late Archaic materials present in the general level fill from this unit included nine small square stemmed points resembling the Small Savannah River type (Oliver 1981:181-183), and five soapstone bowl fragments. The Late Archaic materials were recovered in mixed context within a much larger Woodland assemblage, and no other artifacts could be unambiguously attributed to this component. The apparent association of fiber tempered pottery and soapstone vessel fragments was also noted at other sites in the reservoir, notably at Gregg Shoals and McCalla Bottoms (Tippitt and Marquardt 1984:7-22; Schuldenrein et al. 1985:189).

Rufus Bullard (9EB76)

Minor Late Archaic components were found at the Rufus Bullard site, which was located on a levee opposite the northern end of Carter's Island, in Elbert County, Georgia (Flint and Suggs 1980; Anderson et al. 1985a:149-174; Alterman 1987:169-172). The field work conducted at this site was summarized in the preceding Middle Archaic section (pp. 146-147). A stone alignment from a possible prehistoric fish weir or historic mill dam connects the island with the mainland near the site (although the possibility that this was a historic weir must also be considered). Four sherds of Stalling's fiber tempered pottery (three linear separate punctate and one plain), perforated soapstone disk fragments, and Savannah River Stemmed-like projectile points were found at depths from 50 to 70 cm below the surface. An uncorrected radiocarbon date of 2550±135 B.C. (UGa-3612) was obtained from a rock cluster found at a depth of from 60 to 65 cm in one of the units opened on the levee crest. While no artifacts were directly associated with this feature, a Savannah River Stemmed point was found nearby at a depth of 60 cm, and the Stalling's sherds and worked soapstone came from the same general level. The date is essentially equivalent to the two early dates obtained from Rabbit Mount (2505±135, 2515±135 B.C.; Stoltman 1965:872) in the lower part of the drainage, and may be valid (the two dates from Rabbit Mount also came from general level fill). The absence of a direct association of artifacts with the hearth, the scattered nature of the units producing the diagnostics that were found, and the low artifact density in these units, however, render the date from Rufus Bullard suspect.

9EB92

A probable Late Archaic hearth with a Savannah River Stemmed point in the fill was found in Area D at 9EB92, a site located near the mouth of Beaverdam Creek in the southern part of the reservoir (Campbell and Weed 1984:65-66; see Chapter VII, pp. 308-310 for additional information about this site). The feature, found at the base of the plowzone during stripping operations, was a small rock cluster in a mottled stain. The feature was approximately 65 cm in diameter and 20 cm deep, and contained the point, a perforator, and a number of flakes and pieces of fire cracked rock. Other Late Archaic projectile points were found on the surface at the site, but no other features were found that could be attributed to this occupation.

9EB219

One plain and four linear drag and jab reed punctated sherds of fiber tempered pottery were found in test units opened at 9EB219, a site along lower Beaverdam Creek, in subplowzone levels dominated by Dunlap Fabric Marked and Deptford (?) Simple Stamped pottery (Gardner et al. 1983:57; Campbell and Weed 1986:113, 126; see Chapter VII, p. 311 for additional information about this site). Small Savannah River-like points, a few soapstone vessel fragments, and a number of pieces of soapstone debris were also found in these levels that may be associated with the Stallings pottery. The deposits at the site were highly mixed, and little else can be determined about the Late Archaic occupation. The association of the Early Woodland fabric marked pottery with the Stallings material in the same levels was used to infer a continuation of Late Archaic settlement and subsistence patterns into the Early Woodland (Campbell and Weed 1980:130). It should be stressed, however, that no evidence for a direct continuity between Late Archaic and Early Woodland adaptations was found anywhere in the reservoir.

Harper's Ferry (38AB22)

A minor late Archaic component identified by the presence of several metavolcanic Savannah River and Otarre/Swannanoa projectile points, worked soapstone fragments, and one sherd of Thom's Creek linear separate punctate pottery was found at the Harper's Ferry site (Cantley et al. 1985; Alterman 1987:182-185). The site, which was about 1.0 ha in extent, was located in the Savannah River floodplain just below the confluence of Allen Creek, on two levees adjacent to the main channel. The Late Archaic materials were found on the levee closest to the river, in undisturbed context just below the base of the plowzone. The site was originally found by Hemmings (1970:35-36) in 1970, when a few artifacts were found in four test units opened in the area of the confluence. Following limited testing by Thunderbird Research Corporation in 1979 (one 1.0 x 1.0 m unit; Gardner et al. 1983:142-149), thirteen 1.0 x 1.0 to 2.0 x 2.0 test units and two small blocks, one on each levee, were opened in 1980 (Glander et al. 1981) Mississippian through Late Archaic remains were found; most of the post-Late Archaic materials were interpreted as disturbed or in the plowzone. To further examine the undisturbed Archaic deposits near the river the plowzone was stripped from a ca. 15 x 100 m area, and block units were opened in two areas where concentrations of features were noted. The blocks, encompassing 30 and 50 square meters, were opened in three 10 cm levels, using 1.0 m units, with all fill waterscreened through 1/8 inch mesh.

Fourteen features were found, ten of which were rock clusters, the probable remains of hearths, together with four stains thought to be the remains of pits.

Given the low incidence of later, Woodland and Mississippian artifacts in the levels, most of these features were thought to date to the late Archaic. Most of the features contained only debitage or cracked rock, although Late Archaic diagnostics (one Savannah River Stemmed point and one worked soapstone fragment) were found in one rock cluster. The associated tool assemblage in the general level fill was small but fairly diversified, and included bifaces, drills, cores, spokeshaves, soapstone disk fragments, flake and cobble tools, and one full-grooved axe. Analyses of debitage size and spatial distributions indicated considerable core/biface reduction was occurring, typically in close proximity to hearth areas. Moderate use of the site area was indicated; the absence of midden or unusually dense artifactual debris such as that noted at sites like Rocky River, Paris Island South, or Sara's Ridge suggested camps or short duration residential sites were present (Cantley et al. 1985:89).

THE LATE ARCHAIC IN THE UPPER SAVANNAH RIVER VALLEY IN LIGHT OF THE RUSSELL RESERVOIR INVESTIGATIONS

Chronological and Cultural Subdivisions Within the Late Archaic

As a result of the work conducted within the Russell Reservoir, it is possible to recognize three distinct cultural and temporal subdivisions within the Late Archaic occupations in the upper Savannah River Valley. These divisions, as advanced by Wood and his colleagues (1986:331-334), and modified somewhat here, offer a more precise framework from which to view local Late Archaic developments than earlier temporal models advanced for the region (e.g., Stallings I-II, Stallings I-II-III).

Division I (ca. 3500 - 3000 B.C.). Sites of this period have traditionally been identified by the presence of large Savannah River Stemmed points, typically made on metavolcanic materials. The point type is a local variant of a major regional "Broadpoint" horizon along the Atlantic coast (Turnbaugh 1975), and has also been linked to the Benton horizon in the mid-South (Coe 1974:45; Wood et al. 1986:331; Sassaman 1988). Large "classic" Savannah River Stemmed points were uncommon in the reservoir, however, and when found tended to be in later context, either with ceramics, or in direct association with smaller stemmed forms, as in the middens at Paris Island South, Rocky River, and Sara's Ridge. This distribution suggested either fairly minimal occupation of the middle Savannah River area during the initial Late Archaic, or the use of other, unrecognized point forms. Stratigraphic evidence from reservoir sites such as Gregg Shoals and Rucker's Bottom indicated the latter alternative was the most likely. A replacement of Morrow Mountain and Guilford forms by small, square-to-slightly contracting stemmed points was evident at these sites. These terminal Middle Archaic, initial Late Archaic point forms occurred on the same time level as Coe's (1964) Halifax type, a roughly similar form in size and shape, but were characterized by squared rather than weakly side notched stems.

Quartz continues to dominate assemblages, although there is some evidence for an increase in the use of other materials, notably metavolcanics. While large Savannah River Stemmed points may first appear during this period, they are uncommon. No conclusive evidence for an association of these forms with soapstone slabs, soapstone vessels, or fiber tempered pottery was found.

Sassaman (1985b, 1988) has recently documented the appearance of Benton Stemmed-like points, locally described as MALA points, in stratigraphic context between Morrow Mountain and Savannah River Stemmed types at sites in the inner coastal plain portion of the Savannah River at this same time level. This has been interpreted as an intrusion of ideas or people from the mid-south, where Benton points date from ca. 4000 to 3000 B.C., and an overlap with the Savannah River Stemmed form locally has been inferred. At two sites in the inner coastal plain, G.S. Lewis and Pen Point, MALA points were found associated with perforated soapstone slabs, suggesting either an early occurrence for this technology locally, or a continuation of the MALA horizon into the third millenium B.C. No evidence for MALA points was found in the Russell Reservoir assemblages, although some similarity is evident with the later Archaic, Division II point forms found in the three sealed mid-to-late third millenium B.C. assemblages.

Division II (ca. 3000 - 2000 B.C.). Division II assemblages are characterized by moderate-sized stemmed points and perforated soapstone slabs. There is no conclusive evidence for soapstone or fiber tempered vessel use locally, although pottery may have appeared on sites in the coastal plain by the later half of the period. Equivocal associations of Stallings pottery from sites in this time range within the reservoir, at Rufus Bullard and Rocky River, may indicate ceramic technology was available, but only minimally (or seasonally?) employed. Tools were made almost exclusively from local lithic raw materials found within the piedmont. A change in raw material preference from quartz to quartz, metavolcanics, and other materials marks a major shift from the assemblages associated with earlier Morrow Mountain, Guilford, and the small square stemmed forms. Projectile points exhibit considerable variability in size and shape but typically were square to slightly expanding or contracting stemmed forms. They were made from a wide range of locally available raw materials, and most closely resemble the Small Savannah River and Otarre Stemmed types.

Three major, intensively occupied sites from this period were examined within the reservoir, at Sara's Ridge, Paris Island South, and Rocky River. Minor components were also documented, suggesting briefer, less complicated occupations, at sites such as Gregg Shoals and probably at Rucker's Bottom (where extensive reoccupation created an extensive assemblage). Semi-permanent or permanent occupations on floodplain levees in close proximity to the river are documented that appear to represent the year-round residences of small (family or extended family?) groups as well as shorter duration camps occupied by larger groups. Settlement appears to have alternated between seasonally occupied and shorter duration camps. The incidence and diversity of tool forms indicates a logistically-based technological organization, while the raw material sources employed argue for limited group mobility. Spatially circumscribed territories, probably restricted to specific segments of the drainage, have been inferred. Social organization presumably remained relatively uncomplicated, as evidence for long distance exchange is minimal. Social solidarity within local territorial kin-based groupings is thought to have been reinforced through periodic aggregation, where mate and information exchange may have occurred. Such aggregation may have been facilitated by the presence of periodic resource abundances such as anadromous fish. All three of the major sites examined were in excellent locations for catching fish, and a natural weir was even present at Rocky River. The larger group sizes permitted by these resources, parenthetically, would have probably been necessary to successfully handle such an operation (i.e., building and maintaining the weir, netting, and other equipment; catching and processing the fish).

The larger (local group) aggregation sites, of which Sara's Ridge appears to be a prime example, thus may have been situated to take advantage of seasonally available resources such as anadromous fish. Structures and sleeping areas at these sites appear to have been located near levee crests, with major cooking and stoneworking activities relegated to the backslope areas. No evidence for the use of domesticates such as squash, gourd, or the starchy seeds of the Cheno-Am group was found. Likewise, no evidence for the use of shellfish was detected; shellfish do not appear to have been exploited to any great extent at any time during the Late Archaic appreciably to the north of the fall line in the drainage. The Stallings Island and Lake Springs cluster of shell midden sites apparently represent the northernmost extension of this activity in the drainage.

Division III (ca. 2000 - 1000 B.C.). Sites of this period are characterized by a continuation of the stemmed projectile points observed in Division II, together with some larger and smaller forms; soapstone vessels and perforated slabs; and, less commonly, by the presence of the fiber and sand tempered ceramics of the Stallings and Thom's Creek series. Point forms exhibit considerable variation in size and shape, with large Savannah River Stemmed and Gary-like forms occurring in association with smaller, Small Savannah River or Otarre/Swannanoa-like points. While local materials continue to dominate flaked stone assemblages, a distinct increase in the occurrence of extralocal raw materials is evident.

Although sites of this period were fairly common throughout the reservoir, most occupations were minor, characterized by only one or a few diagnostics, typically one to a few projectile points and associated tools and, if present at all, one to a few sherds of Stallings fiber tempered pottery. Fairly light occupation of this part of the piedmont may be indicated. No dense midden assemblages comparable to the three Division II sites were found, nor was evidence for shell fish utilization or plant domestication found. A single mussel from a minor Division III component in Zone III at Gregg Shoals, in fact, was the only evidence for Late Archaic shell fish exploitation found in the reservoir.

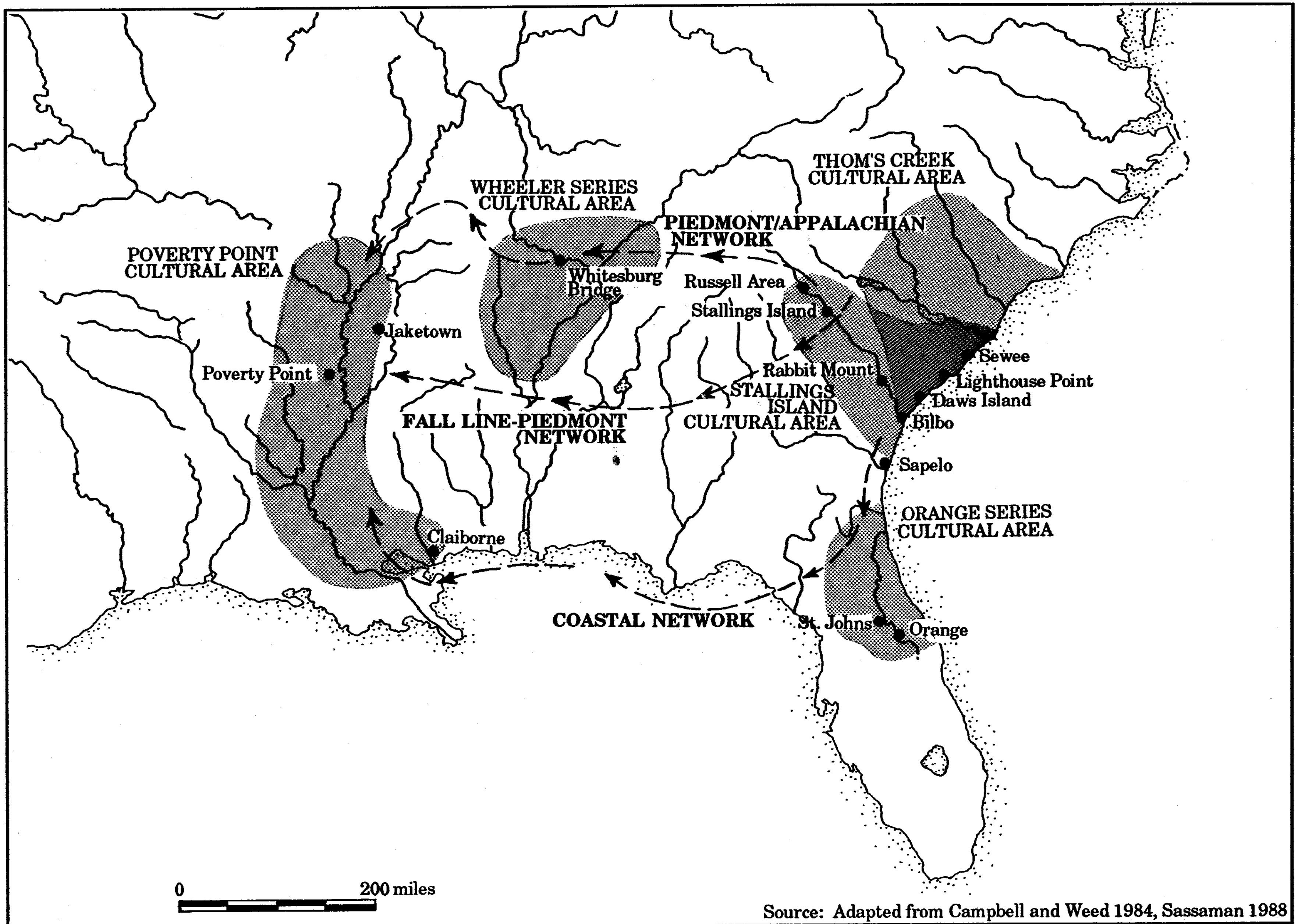
The only major ceramic Late Archaic assemblage excavated in the reservoir was at McCalla Bottoms (38AB288), where fiber tempered pottery, soapstone vessel fragments, and small stemmed projectile points were found in close association and dated to ca. 1500 B.C. Evidence for hearths and for the differential use of levee crest and backslope areas in the reduction of lithic raw material was documented, although due to an absence of large area excavations little else can be said about internal site structure. Minor Division III Late Archaic components were recognized at several sites by the presence of soapstone or fiber tempered sherds. At Gregg Shoals evidence for a replacement of perforated disks by vessels was found over the soapstone assemblage, as well as possible evidence for the presence of a domesticated dog.

Late Archaic Ceramics

Stallings fiber tempered pottery was found at nine sites in the Russell Reservoir (Table 2). The Stallings assemblages at these sites, particularly at Rucker's Bottom and McCalla Bottoms, where the ware was found in some incidence, represents the northernmost occurrences of the material in the drainage. Stallings pottery most commonly occurs on sites on the coast and inland along the rivers of the coastal plain to the fall line in the Georgia-South Carolina area, with the Savannah River at or near the center of this distribution (Stoltman 1972; Anderson 1975). Its occurrence well into the piedmont along the Savannah River, as documented at several sites in the Russell Reservoir, suggests forays by groups living in the coastal plain, or alternatively the use of pottery by groups residing year-round in the piedmont. The absence of shell at the sites where it was found reinforces observations made over the past decade that Stallings pottery is not exclusively a shell midden ware (e.g., Anderson et al. 1979:93-94; Campbell et al. 1981:166-175).

The presence of Stallings ceramics well into the interior piedmont increases the plausibility that the fiber tempered manufacturing tradition could have entered the midcontinent and other parts of the southeast through this area (Figure 42). The origins of Wheeler series fiber tempered pottery in the Tennessee River Valley may thus derive from the piedmont via the upper Savannah or nearby drainages. Alternatively, the technology may have spread along the coast and lower coastal plain, or along the inner coastal plain and fall line. Sassaman (1988) has argued for the emergence of an interaction network based on down-the-line reciprocal exchange along the fall line/inner coastal plain throughout the lower southeast at this time level. Movement would have been least constrained in this area, given the nature of the topography, and it would have been facilitated by the abundant resources of the fall line macroecotone. The appearance of Benton-like assemblages resembling those found in the mid-south in the inner coastal plain of the Savannah River during the terminal Middle Archaic/initial Late Archaic was cited in support of this model.

Late Archaic ceramics found in the Russell Reservoir were identical in manufacturing technique and choice of design elements to materials found in the lower part of the drainage, specifically at sites such as Lake Spring (Miller 1949:Figure 22) and Stallings Island (Claflin 1931:Plates 12-18). Designs were



Source: Adapted from Campbell and Weed 1984, Sassaman 1988

Figure 42. Late Archaic Interaction Networks in the Lower Southeastern United States.

invariably fairly simple linear arrangements of punctates or incised lines (Figure 41); complex designs such as those observed at Stallings Island (Claflin 1931:Plates 19-20), Rabbit Mount (Stoltman 1974: Plate 21), and Bilbo (Waring 1968b:Figure 58-59) were not observed. Given the low number of fiber tempered sherds found within the reservoir (207 sherds), this may reflect sampling bias. It may, however, also say something about the level of complexity of Late Archaic social interaction within the region. Complex designs typically occur at larger midden sites, where larger population aggregates have been inferred. The greater diversity in design elements may reflect the greater social diversity, and may signal concepts such as vessel ownership or group affiliation (Wobst 1977). The presence of comparatively simple decorative elements, like those noted on the sites within the Russell Reservoir and the inner piedmont in general, may indicate less emphasis on or need for such signalling behavior. Large aggregation loci comparable to those found in fall line and coastal areas may not have been present within the piedmont; whether this reflects an absence of resources promoting aggregation (i.e., shellfish, anadromous fish) or a lower local social complexity remains unknown. Alternatively, if aggregation sites were present, ceramics do not appear to have seen much use at them.

The variation in the amount of Late Archaic pottery observed on sites within the reservoir was itself interesting. The low incidence of Stallings and Thom's Creek ceramics at sites like Rucker's Bottom and Rocky River, where otherwise major Late Archaic components were found, stood in contrast to McCalla Bottoms, where both appreciable Late Archaic ceramic and lithic assemblages were recovered. Whether McCalla Bottoms represents a local group aggregation loci, or a seasonal camp by a coastal group "visiting" or ranging in the piedmont, remains unknown. Sites like Rucker's Bottom, in contrast, may represent short term to seasonal camps by groups employing little or no ceramics.

The fact that evidence for ceramic and soapstone vessel use was minimal at most Late Archaic sites in the reservoir suggests that containers of this kind were relatively unimportant to the effective use of the piedmont at this time. If the adoption of containers was indeed a reflection of subsistence intensification, to maximize caloric and nutrient return through liquifying and boiling food, as Goodyear (1988:321) has suggested, then the pressures producing this behavior may have been less intensive in the piedmont than in the coastal plain and fall line areas, where Late Archaic pottery is widespread.

Projectile Point Typologies

Considerable confusion currently surrounds the classification of Late Archaic projectile points in the Savannah River area. Traditional projectile point sequences from the general region (e.g., Coe 1964; Oliver 1981, 1985) have emphasized a decrease in the size of Late Archaic bifaces over time, from large square stemmed Savannah River forms early in the period to Small Savannah River or Otarre Stemmed-like forms late in the period. Support for such a trend, on an assemblage basis, has been demonstrated at sites such as Stallings Island

(Bullen and Green 1970) and Warren Wilson (Keel 1976; Oliver 1981). This has been widely used by local investigators to infer early occupations at sites with large Savannah River Stemmed type points, and later Late Archaic occupations at sites where small points Otarre or Small Savannah River points have been found (Keel 1976:196; Goodyear et al. 1979:112; White 1983:50; Oliver 1985). The discovery of Small Savannah River-like points in sealed context at three sites in the Russell Reservoir dating to between 2500 and 2000 B.C. (uncorrected) necessitates some modification of this perspective.

Summary metric data on the Late Archaic bifaces — variously described as Savannah River Stemmed, Otarres, Small Savannah Rivers, and "Paris Island Stemmed" (e.g., Whatley 1985) — that were found in sealed and dated third millenium B.C. contexts at 38AN29, 38AB91, and 9EB21, as well as from other Late Archaic sites in the upper Savannah basin, have been collected and examined in detail by Alterman (1987). His work clearly documents the wide range of variation occurring within local Late Archaic projectile point assemblages, even those found in tightly sealed contexts and presumably deposited over comparatively brief periods. Major conclusions of his study included: (1) a demonstration that the Savannah River Stemmed type was not exclusively preceramic, but occurred in both ceramic and preceramic Late Archaic contexts; and (2) that Savannah River Stemmed types were most typically found in direct association with smaller Otarre/Small Savannah River Stemmed points, traditionally assumed to date later in time (Alterman 1987:247-251). He concluded that:

> the Savannah River Stemmed type, as it is now used, is not a reliable temporal diagnostic of the preceramic Late Archaic period in the upper Savannah River Valley. Likewise, Otarre and Stallings 3 types, also referred to as Small Savannah River Stemmed, do not seem to be diagnostic of Stallings ceramic-phase occupation (Alterman 1987:251).

Adoption of this perspective with regard to projectile point taxonomy is crucial for Late Archaic research locally, since many archaeologists have persisted in placing the larger stemmed points earlier and the smaller points later in time.

Late Archaic projectile point morphological variation was found to be more closely linked to intended tool function, raw material, and use life stage (Alterman 1987:299). Raw material was found to be a particularly critical variable, and was linked to differing flaking/manufacturing patterns, functional differences, breakage patterns, degree of use wear, degree of curation, and stem morphology (Alterman 1987:252-274). Quartz points exhibited greater transverse and longitudinal blade fractures, while metavolcanic points were commonly found intact or with only minor tip damage. Use of the quartz bifaces for cutting and sawing resistant materials and the metavolcanics for cutting softer materials was inferred (Alterman 1987:273). While considerable variation was evident, straight square stemmed forms tended to occur on metavolcanics, expanding stemmed forms on cherts, and corner notched point forms on quartz, contracting stemmed forms occurred about equally over all of these materials (Alterman 1987:259).

Prior to the Russell Reservoir investigations, large, predominantly square stemmed projectile point forms were thought to dominate Late Archaic assemblages in the vicinity of the upper Savannah River. The presence of large, contracting stemmed Gary-like points, which are comparatively common within the coastal plain (Anderson et al. 1979:121-129; Charles 1981:30, 35-36; Novick 1982:161-162), had been reported or emphasized at only a few sites. Inspection of earlier reports indicates that substantial numbers of expanding and contracting stemmed and weakly corner notched "Savannah River Stemmed" points have, in fact, been reported from the piedmont, although this has received little emphasis (e.g., Taylor and Smith 1978:264-265; White 1983:55, 58).

As Alterman's (1987) research has shown, this has been a direct result of the classificatory procedures employed. In his study, employing a sample of 368 points from secure Late Archaic contexts in the Russell Reservoir, only a minority were square stemmed forms (N=103, 28.0%); most exhibited other shapes, such as contracting (N=111, 30.2%), corner notched (N=103; 28.0%), or expanding stems (N=51, 13.8%) (Alterman 1987:259). Most, furthermore, were considerably smaller than the minimum dimensions for the Savannah River Stemmed type advanced by Coe (Alterman 1987:257). Inspection of the local literature, however, indicated that few points from the Georgia/South Carolina piedmont classified as Savannah River Stemmed actually conform to Coe's (1964:44-45) size or shape range (e.g., Taylor and Smith 1978: Table 54; Goodyear et al. 1979: Table 31; White 1982: Tables 1, 3). Most of the points typed as "Savannah River Stemmed" are considerably smaller than the original type, and conform more closely to the Otarre or Small Savannah River types. Because considerable typological abuse has confounded local Late Archaic projectile point classification, chronological and hence cultural interpretation has remained difficult.

The Savannah River Stemmed type as defined by Coe (1964:44-45) has been dated to between 4900 and 3500 B.P. at sites in the interior piedmont and Blue Ridge provinces of the South Atlantic Slope, including at Gaston and Warren Wilson in North Carolina (3900±250, M-524, Coe 1964:118; 4865±280 B.P., GX-2274, 3515±140 B.P., GX-2275, Keel 1976:242). The point type has also been widely reported from shell midden sites along the Georgia/South Carolina coast and inland to the fall line along the Savannah River. Dates from levels or features within sites containing these point forms ranging from ca 4700 to 2900 B.P. have been obtained at Rabbit Mount, Whites Mound, and at Stallings Island along the interior Savannah, and from a large number of sites along the coast, including Bilbo, Sapelo, Daws Island, Spanish Mount, Lighthouse Point, and Sewee, to cite a few of the better known sites (Edwards 1965:25; Waring 1968b; Waring and Larson 1968; Bullen and Green 1970:11-12; Stoltman 1972, 1974; Michie 1973:6-8; Sutherland 1974:31-32; Dye 1976; Trinkley 1980a:204, 1980b:5). Given their long temporal occurrence, it is difficult to see how these point types can be attributed to the early part of the period. Instead of a fairly rapid replacement of large points by small ones, a long co-occurrence of both large and small forms is indicated.

This has been clearly demonstrated in the Russell Reservoir.

It has been suggested that the large Savannah River Stemmed may be the Atlantic Slope equivalent of the Benton point, a transitional Middle Late Archaic form dated to between 4000 and 3000 B.C. in the mid-south (Wood et al. 1986:322). A similar relationship between MALA points, a lanceolate form with corner-removed, stemmed or notched haft elements from the inner coastal plain portion of the drainage, and Benton points has been suggested by Sassaman (1985b, 1988). The Late Archaic occupation of the Savannah River Valley thus exhibits ties with both the Benton horizon from the midcontinent as well as the Atlantic coastal 'Broadpoint' horizon (Turnbaugh 1975; Cook 1976).

Current Late Archaic projectile point typologies have thus tended to ignore potential differences in point size and shape that are due to factors such as raw material, reuse, resharpening, or differing functions (Alterman 1983, 1987; Wood et al. 1986:320; Sassaman 1988). This perspective is rapidly changing. Stoltman (1972:46) once suggested that size differences between metavolcanic and quartz Savannah River points were due entirely to raw material differences. Alterman's (1987) research lends some credibility to this inference, although factors such as function, use life stage, and even possible stylistic differences must also be considered (see also Sassaman 1988).

Trends in raw material utilization have been documented over the course of the Late Archaic at a number of sites in the general region. A marked increase in the number of raw material types employed during the later, ceramic Late Archaic has been noted by several local researchers, and has been attributed to a number of factors, including: (1) an expansion of the procurement network, possibly coupled with an increase in the scale, or geographic range of local adaptations, permitting greater access to extralocal raw materials; (2) an increase in the logistical aspects of local adaptations, with an increase in curated tool forms, that may have necessitated the use of higher quality raw materials; and (3) the manufacturing requirements of certain tool forms, such as the Savannah River Stemmed, a large hafted biface that may have been more easily produced on metavolcanics and chert than on quartz (Taylor and Smith 1978:322-323: Goodyear et al. 1979:207-209; White 1982:194-198; Sassaman 1983:83, 155; 1988; Sassaman et al. 1988; Alterman 1987).

At two sites on the fall line on the Savannah River, at Stallings Island (Bullen and Green 1970:13-14) and 9Ri86 (Elliott and Doyon 1981:106), a change from predominantly metavolcanics to a range of raw materials for the manufacture of projectile points has been documented. This pattern was also seen in the Russell Reservoir, at Gregg Shoals and McCalla Bottoms. This has been linked to changing raw material preferences by local groups, the extent and duration of site use, and an increase in the intensity of social interaction over the region. Artifact use-life studies indicate that sites that were repeatedly occupied, or occupied for a long period of time, are likely to exhibit a greater range of point and tool forms and possibly raw materials (Schiffer 1975c; Shott n.d.). The wide range of point forms and raw materials found at Stallings Island, one of the largest Late

Archaic middens known from the interior Savannah River Valley, unquestionably reflects repeated and probable long term use of this location. Increased social interaction, with larger numbers of people interacting over greater distances, could also likely lead to a wide range of raw materials and artifact styles at a site (Sassaman et al. 1988). Stallings Island would have been an ideal aggregation loci for these people, given its location on the fall line (Wood et al. 1986:322; Alterman 1987:309; Sassaman 1988).

Soapstone Use in the Upper Savannah River

As part of the reservoir investigations a pilot trace element study was conducted on soapstone artifact and quarry samples from several locations along the upper Savannah River (Elliott 1986:305-317). Neutron activation analysis was employed, in an effort to develop diagnostic signatures for soapstone sources in the Savannah River region. Samples of soapstone from two quarry sites were examined, one from near the southern end of the reservoir in Elbert County, Georgia, and the other from Dixie Mountain in Columbia County, Georgia, near the fall line. Late Archaic artifacts, primarily perforated slab fragments, were examined from two sites in the reservoir, 38AN29 and 38AN126 (Wood et al. 1986), and from three sites near the fall line (9Ri86, 9Ri88, 9Ri89; Elliott and Doyon 1981). Cluster analysis of the sample trace element concentrations successfully grouped the samples from the two quarry sites, indicating the feasibility of the method. The same analysis indicated that the Late Archaic artifacts in all probability originated at a number of discrete outcrops; none of the artifacts could be unambiguously linked to one of the two sources that were sampled (Elliott 1986:312).

Soapstone exploitation and use within the Savannah River Valley is currently not well documented. Soapstone artifacts have been found at Late Archaic sites throughout the drainage, but in the absence of quantified analyses it is difficult to assess patterns of utilization. The greatest quantities of worked soapstone appear to occur on sites in close proximity to outcrops, such as at Stallings Island (Claflin 1931:31-33) and Paris Island South (Wood et al. 1986). Regular fall-off in the occurrence of the material with increasing distance from source areas, implying minimal long-distance trade of soapstone artifacts within the drainage, has been suggested (Wood et al. 1986:236). This argument receives some support from studies within the adjacent Oconee River drainage in central Georgia, where a detailed distributional analysis of soapstone has been conducted (Elliott 1981). A recent examination of the occurrence of soapstone within the coastal plain portion of the Savannah challenges this belief, however (Sassaman et al. 1988). Soapstone was found to be comparatively common on Late Archaic sites, with a particularly high incidence on sites in the central coastal plain. This was tentatively attributed to exchange, possibly part of alliance maintenance, between discrete groups occupying the coastal plain and piedmont portions of the drainage. Sites such as Stallings Island and Lake Spring, where soapstone artifacts were abundant, were interpreted as centers for this exchange.

One result of the work in the Russell Reservoir is a considerable refinement in our understanding of soapstone use over time in the upper Savannah. Perforated soapstone slabs (perforated soapstone objects, or "netsinkers"), for example, were common in the three sealed preceramic Late Archaic middens examined, and no clear evidence for soapstone vessel use prior to ca. 2000 B.C. was found. At the Gregg Shoals site, furthermore, perforated soapstone disks were stratigraphically below levels containing soapstone vessel fragments and fiber tempered pottery (Tippitt and Marquardt 1984).

While commonly reported as "netsinkers" in the literature, these objects were consistently found associated with hearths at the three preceramic Late Archaic sites excavated in the reservoir, lending further support to the interpretation that these objects were in actuality used for stone boiling (Dagenhardt 1972; Anderson et al. 1979:65-67; Wood et al. 1986:324). The numerous cross-mends made within the midden at the Paris Island South site led to the reconstruction of several complete specimens, indicating that breakage and discard occurred on the site (Wood et al. 1986:325). Either the use or the manufacture of perforated slabs on the site, or both, could have led to the kind of assemblage observed. Breakage from use as a netsinker, in contrast, would have undoubtedly resulted in portions of these objects being lost, and few reconstructable slabs returned to the site.

At the present, three soapstone quarries are currently known within the Russell Reservoir area, one near the south end of the reservoir, and the other two along Beaverdam Creek, one near the mouth and the other several miles upstream (Elliott 1985:305). All three of these saw use during the prehistoric era, with the greatest period of use apparently within the Late Archaic. The quarry near the mouth of Beaverdam Creek was close to both the Paris Island South and Rocky River sites, where extensive preceramic Late Archaic use of soapstone was documented. A soapstone workshop, where perforated slab blanks were prepared, was also found near this quarry (Wood et al. 1986:325).

The geographic distribution of soapstone slabs within the region is not well known, although they appear restricted primarily to Stallings/Savannah River and MALA sites on the South Atlantic Slope (Wood et al. 1986:324; Sassaman 1988). They are apparently unreported in the Middle Atlantic and Poverty Point regions, where soapstone vessel use has been well documented (Wood et al. 1986:324). Soapstone slabs are fairly common within the Savannah River Valley, particularly on sites near the fall line and in the piedmont, in close proximity to raw material sources (Stoltman 1972; Sassaman et al. 1988). While common in the interior, they are infrequent on coastal sites. In coastal areas, however, baked clay objects are common, and over the region an inverse relationship in the distribution of these artifact categories is indicated.

Notched soapstone objects, an artifact type thought used for stone boiling or as a netsinker, were not found within the reservoir Late Archaic assemblages. This was somewhat unusual, as the artifact type was common in the Stalling Island area (Jones 1871:337; Claflin 1931:31-32; Plate 51), and has also been reported at the Lake Spring site (Miller 1949:40, 46). Notched stones have been reported from

Late Archaic cooking features at the Iddens site in eastern Tennessee, where they were described as netsinkers (Chapman 1981:92; 125), prompting the comment that "the practice of burning one's fishing nets may be inferred" from such an interpretation (Wood et al. 1986:324)!

Indirect evidence for subsistence intensification appears and becomes progressively more elaborate during the Late Archaic on the South Atlantic Slope, first in the abundant occurrence of fire cracked rock and perforated and grooved soapstone objects on sites, and then with the appearance of first Stallings ceramics apparently designed for indirect stone boiling, and then Thom's Creek and subsequent Woodland wares employed directly over fires. This increasingly efficient trend in boiling techniques, from skin to container hot rock cooking, to open fire cooking, has been linked to increasing pressure on local subsistence resources, brought about by increasing population density and territorial circumscription, and the need to maximize caloric and nutritive extraction (Goodyear 1988). The Russell Reservoir assemblages help to document these trends, although the comparatively minimal use of Stallings pottery locally suggests that resource pressure may not have been as great, or may have been directed to other resources (not requiring ceramic container technology)

Preceramic Late Archaic Settlement

A model of Late Archaic settlement and sociopolitical organization has been developed by Wood and his colleagues, based on their work within the reservoir:

> The Russell area represents a cultural fringe zone at the end of the Middle Archaic. A widely dispersed settlement of possibly low density is inferred at this time. This pattern begins to change at the end of the Middle Archaic Period. By 2700 B.C. a significant increase in settlement occurs; these settlements have an aquatic focus. Small semi-permanent camps develop as well as less intensively occupied extractive sites. ...the most compatible model of social grouping is a complex tribal organization with a high degree of territorialism. Individual residential groupings were variable in size from a single residence to small villages. Occupation on these sites was semi-permanent. Certain localities were seasonally exploited for specific resource extraction, while others were occupied year round (Wood et al. 1986:325,326).

Sara's Ridge and Rocky River were interpreted as seasonal extractive sites, possibly directed to the exploitation of aquatic resources such as anadromous fish, while Paris Island South was interpreted possible extended family habitation site within a preceramic Late Archaic settlement system encompassing the upper Savannah River during the third millenium B.C. (Wood et al. 1986:319, 326-331). Smaller sites, located in both the floodplain and uplands, were interpreted as campsites produced by populations dispersing from these more permanent settlements; population dispersal for at least part of the year was an inferred part of this settlement system.

A wide range of tool forms coupled with evidence for the intensive exploitation of local lithic resources was found at Paris Island. The occupation is thought to have been fairly small, with no more than one or two structures present, and more or less year round occupation has been inferred. The site may indicate the kind of residence, and residential unit, employed by local populations during this era. At Sara's Ridge and Rocky River, in contrast, ground stone tools were virtually nonexistent, and a much wider range of local and extralocal lithic resources were found. These latter two sites may have been aggregation locales where larger numbers of people met, taking advantage of seasonally available resources (anadromous fish?) to support comparatively large population concentrations (Wood et al. 1986:327).

At all three of these sites considerable projectile point manufacture and discard occurred, suggesting Late Archaic stemmed points saw use in a wide range of tasks. Drills and stemmed scrapers, common at Paris Island and thought to have been used to finish soapstone slabs, were absent at Sara's Ridge and infrequent at Rocky River (where three perforators were found in the midden). Evidence for shelters or other site facilities in the form of postmolds was found at all three sites. Overall site structure was generally similar, in that all three locations had dense midden areas characterized by dense concentrations of cracked rock (probably from hearth areas), chipped stone tools and manufacturing debris, and dark charcoal and organic staining. These middens were located in close proximity to the river, usually on a levee backslope, and appear to have been deliberately placed away from where shelters were located. At Sara's Ridge, where evidence for a structure was fairly conclusive, the area around this shelter was kept clear of debris. Hearths located in or near these structures may have been for comfort (warmth), for cooking, or both.

Only minimal evidence for interaction with populations in the coastal plain, ridge and valley, or Appalachian Summit areas was documented in the three primary preceramic Late Archaic occupations examined in the reservoir. This pattern appears to change in the subsequent, ceramic Late Archaic, with the appearance of Stallings pottery and a greater range of raw materials within projectile point assemblages, as documented at sites like McCalla Bottoms.

The assemblages from Sara's Ridge, Rocky River, and Paris Island South produced areally extensive preceramic artifact, feature, and midden levels, and defined a previously unrecognized mid-to-late third millenium B.C. Late Archaic horizon. As such, they are of critical importance to studies of Late Archaic development in the southeast. These assemblages, particularly the features delimiting the probable structure and associated activity areas at 38AN29 (Figure 34), represent some of the best data on site structure collected from this time level in the Eastern United States (see Smith 1986:26-27 for a discussion of this evidence). They certainly provide some of the best evidence for Late Archaic structures found to date on the South Atlantic Slope, since only limited evidence for structural remains has been found in the work to date elsewhere (Stoltman 1972, 1974; Trinkley 1980b, 1985, 1986; see p 168). Some of the few comparable middle/late Holocene assemblages from the eastern Woodlands include the

Carrier Mills, Labras Lake, and Go-Kart sites in Illinois, the Poplar and Walnut sites along the upper Tombigbee river, and the Bacon's Bend and Iddins site in the Tellico Reservoir (Smith 1986).

The evidence from the Russell Reservoir suggests that local preceramic Late Archaic adaptations were complex, and that the trend toward extended, sedentary occupations suggested by massive shell midden sites such as Stalling's Island had already begun. It has been suggested that

> "the Stalling's Island Culture was not an entirely local development, but was influenced in its formative stages by cultures of the Tennessee Valley to the west. There, as exemplified by the Eva site, a way of life based upon the intensive exploitation of shellfish had begun by 5200 B.C. (Stoltman 1972:54).

The data from the Richard B. Russell Reservoir, which document the presence of dense local Late Archaic populations apparently exploiting riverine resources (even if not shellfish), indicate that the origins of this adaptation were highly complex.

Ceramic Late Archaic Settlement

Large, extensive settlements comparable to those found during the preceramic (Division II) Late Archaic were apparently not present during the subsequent ceramic (Division III) period, or at least have not been recognized. Fairly appreciable numbers of sites are inferred, however, given the numbers of Late Archaic projectile points found in the reservoir, although it must be cautioned that these cannot be placed within the earlier or later portions of this era. Most of these sites are thought to have been comparatively brief occupations, given the absence of evidence for midden staining or structures. No shell middens were found, even though these are common at this time level in the coastal plain and fall line areas of the drainage. Pottery use locally was minimal. Stallings fiber tempered ceramics were found at only nine sites in the Russell Reservoir, mostly in trace amounts. A total of 207 sherds (84 plain, 124 punctated) were recovered, most from McCalla Bottoms (N=139, 67.21%) and Rucker's Bottom (N=38, 18.4%). The next highest incidence of the ware were the eight sherds each found at Rocky River and Gregg Shoals; the remaining five assemblages had from one to five sherds each. Only five sherds of Thom's Creek pottery (all punctated) were found, at three separate locations; three of the Thom's Creek sherds came from Rucker's Bottom while the other two were isolated occurrences. In all, only 11 ceramic Late Archaic components were found, indicating use of this technology was fairly minimal (Table 2, Figure 3).

The presence of Late Archaic pottery in the reservoir area indicates some degree of interaction was occurring between the central piedmont and the fall line/coastal plain portions of the drainage. This inference is also suggested by the increased occurrence of extralocal lithic raw materials in assemblages dating to this period, at sites like Rucker's Bottom, McCalla Bottoms, and Gregg Shoals.

Greater social interaction throughout the region has been inferred, including large scale (drainage extensive?) aggregation at sites such as Stallings Island, for the purpose of alliance development and maintenance, resource and information exchange, and the maintenance of social solidarity through shared ritual. Population increase, territorial circumscription, and the emergence of discrete social entities in differing parts of the drainage have been inferred. Increasing pressure on subsistence resources has been suggested, and has been linked to the extensive use of shellfish and the adoption of pottery. Given the minimal evidence for large-scale occupation or aggregation sites dating to this period in the Russell Reservoir, and the only incidental occurrence of pottery, either relatively low population levels or populations experiencing fairly minimal subsistence stress may be inferred. Given the large number of potential Late Archaic components documented in the area, the latter interpretation is preferred.

VI. EMERGENT HORTICULTURAL ECONOMIES: THE WOODLAND PERIOD

INTRODUCTION

The Woodland period in the southeast saw a continuation of the pattern of increasing sedentism, population density, and organizational complexity initiated during the later Archaic. Extended village occupation coupled with the use of native domesticates such as chenopodium, sunflower, and other plants of the Eastern Agricultural Complex is thought to have characterized settlements of this period in portions of the midwest (Ford 1974, 1985; Farnsworth and Emerson 1986; Smith 1986:39-43). In the South Appalachian area large numbers of Woodland sites have been examined in recent years (Figure 43). It was during this period that the first semi-permanent to permanent villages appeared. These communities were characterized by multiple structures occupied part or all of the year, although some population dispersal has also been inferred. Evidence for the use of domesticates by these groups is minimal locally, however, and occupations over much of the period have been described as basically Archaic-like adaptations with pottery. While this is something of an oversimplification - profound changes were occurring in social organization, communal ritual, and patterns of exchange and interaction throughout the region, including within the Georgia/South Carolina area - local populations appear to have made little use of domesticates until the Mississippian period.

Large numbers of Woodland period sites identified by the presence of diagnostic projectile point and ceramic artifacts were found in the Russell Reservoir (Table 2, Figures 3, 4). Although Woodland materials were found at many of the sites that saw subsurface examination, extensive feature assemblages were documented at only two locations, at Rucker's Bottom and Simpson's Field (Anderson and Schuldenrein 1985; Wood et al. 1986). Two possible Middle to Late Woodland structures associated with Cartersville-like ceramics were examined at Rucker's Bottom, while at Simpson's Field a number of early Late Woodland transitional Swift Creek/Napier features were found, including several large pits and a possible structure. Minor Woodland assemblages were found at a much larger number of sites, including Early/Middle Woodland hearths or pits from the Harper's Ferry, McCalla Bottoms, Rufus Bullard, and Rocky River sites (Anderson and Schuldenrein 1985); a Dunlap hearth at Sara's Ridge and other Woodland features at Big Generostee Creek and 9EB17 (Wood et al. 1986:164, 197ff, 240); a Yadkin biface workshop feature from Paris Island South (Thompson and Gardner 1983:113); and minor Woodland feature and artifact clusters at Gregg Shoals and Clyde Gulley (Tippitt and Marquardt 1985:7-16), to cite some of the cases reported here. In addition, the Thunderbird Research Corporation's site testing program recorded Woodland features and stratified Woodland deposits in a number of subsurface units (Thompson and Gardner 1983; Gardner et al. 1983). While individually these data may not appear impressive, collectively they

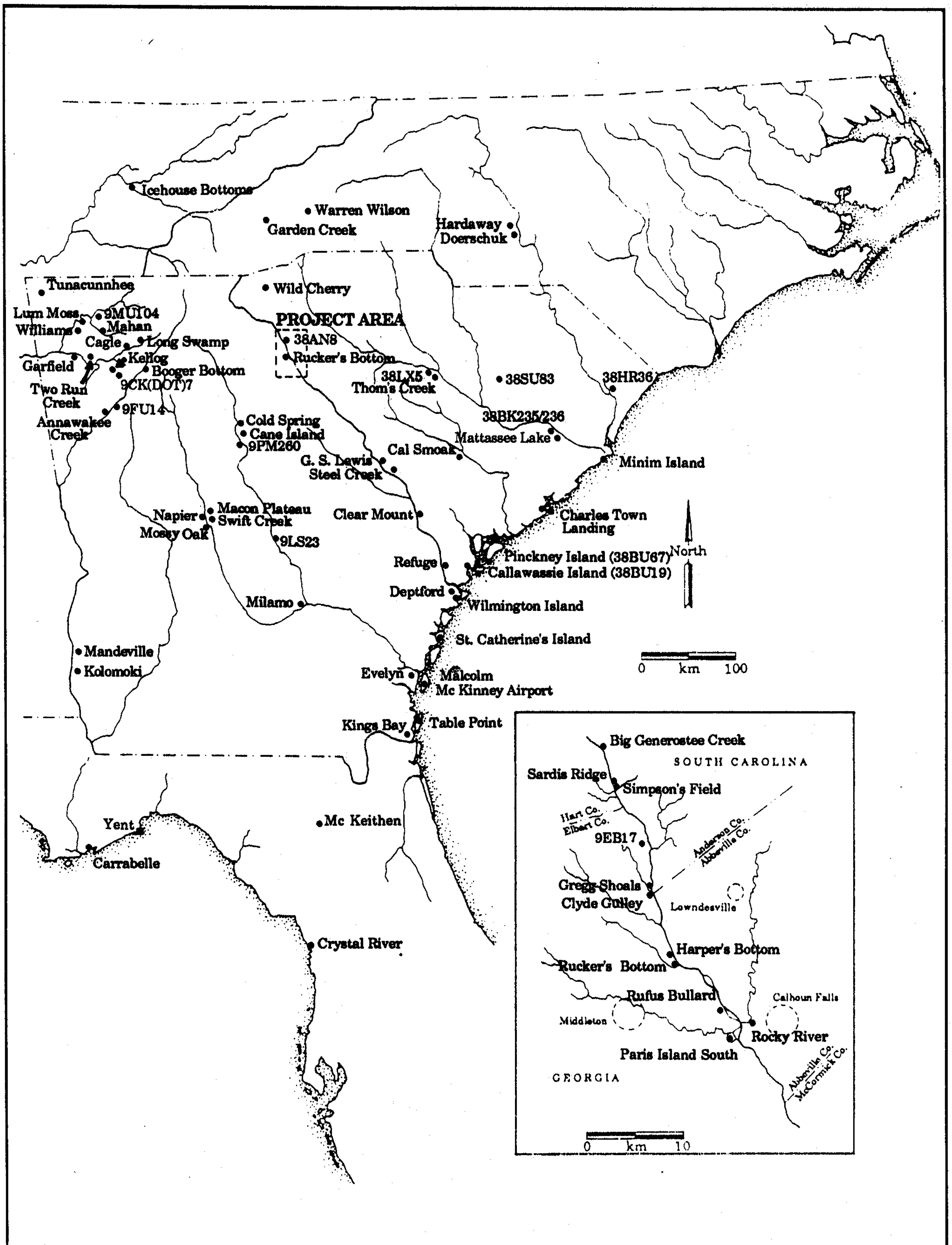


Figure 43. Woodland Sites,
Richard B. Russell Reservoir and Vicinity.

have provided a series of time capsules documenting local occupations over this period, and details about the Woodland cultural sequence.

Woodland lifeways in the Georgia, South Carolina, and western North Carolina area have been examined in some detail in recent years, with much of the work devoted to cultural historical reconstruction and sequence building (Garrow 1975; Schnell 1975; Keel 1976; Purrington 1983; Anderson et al. 1979, 1982; Anderson 1985a; Hanson and DePratter 1985; Trinkley 1983a, 1988). Prior to the work in the Russell Reservoir the Woodland/Mississippian cultural sequence in the vicinity of the upper Savannah River was very poorly known, rendering the study of this period difficult. The primary cultural sequence employed in the project area until quite recently has been an inferred but largely untested amalgam of sequences developed elsewhere in the region, in the Allatoona Reservoir area of northwest Georgia, at Macon Plateau, and at the mouth of the Savannah River (e.g., Taylor and Smith 1978:82-83). Component recognition was based almost exclusively on the presence of diagnostic ceramics, which were assumed to date to the periods they occurred within in other areas.

The northwest Georgia Woodland sequence (Caldwell 1958, n.d.; Wauchope 1966) begins with the appearance of Dunlap Fabric Marked ceramics around 600 B.C. and, at the same time or slightly later, a crude simple stamped pottery of the Mossy Oak or Dunlap series (Padgett 1980). After about 300 B.C. these wares were replaced by the plain, check, and simple stamped ceramics of the Cartersville series, which have been traditionally thought to extend to between A.D. 300 to 500. The Cartersville series was eventually replaced by the Middle to Late Woodland Swift Creek and then the Late Woodland Napier series. Both of these latter series were initially recognized near Macon Plateau in the late 1930s (Kelly 1938; Fairbanks 1952).

The mouth of the Savannah sequence, which has been widely used in coastal Georgia and South Carolina, includes the Early Woodland Refuge, Early/Middle Woodland Deptford, and Late Woodland Wilmington and St. Catherines series (Caldwell and Waring 1939a, 1939b; DePratter 1979). Modifications to this sequence have recently appeared, encompassing assemblages in the inner coastal plain (Hanson and DePratter 1985; Anderson 1988a). Fairly appreciable differences were evident between the coastal and interior sequences, particularly regarding tempering elements (i.e., grog tempering, common on the coast in the Late Woodland, is absent in the the interior), indicating care must be used when applying the coastal sequence (or any sequence) too far afield. Throughout the remainder of South Carolina away from the Savannah River the recognition and identification of Woodland components has, until quite recently, also tended to rely on work from nearby areas, particularly sequences developed in North Carolina (e.g., Coe 1964; Keel 1976; Phelps 1983). Within the past decade, however, detailed cultural and ceramic sequences have been advanced for the South Carolina sea islands (Trinkley 1980b) and for the inner coastal plain along the Santee and Savannah Rivers (Anderson 1982, 1988a; Hanson and DePratter 1985; Brooks and Hanson 1988). Again, a considerable divergence from classic sequences in adjoining states was evident.

Except for limited work supporting the applicability of Keel's (1976) Appalachian Summit sequence (Beuschel 1976; Goodyear et al. 1979; Wood 1982), the nature of the Woodland sequence and cultural adaptation in the western South Carolina and eastern Georgia piedmont has remained largely unexamined. The Russell Reservoir project offered the first opportunity to address this problem.

THE EARLY WOODLAND (ca. 3,000 - 2,300 B.P.)

Introduction

The Early Woodland period in the Eastern Woodlands is traditionally assumed to have been the time of the initial introduction of pottery into much of the region, the appearance of elaborate burial mound ceremonialism, and the first evidence of intensive horticulture (Griffin 1967:180). Recognition of Early Woodland components in the Georgia and South Carolina piedmont has proven difficult because many of the artifact categories used as diagnostics are similar or identical to forms occurring earlier and later in the sequence. Small square to contracting stemmed projectile points, variously typed as Swannanoa Stemmed, Plott Short Stemmed, or Gypsy Stemmed (Keel 1976:126-127, 196-198; Oliver 1981:154-156) are characteristic of the period, as are large triangular projectile points, typically with indented bases, resembling Badin Crude Triangulars, Yadkin Large Triangulars, Transylvania Triangulars, and Garden Creek Triangulars (Coe 1964:45-49; Keel,1976:130-131; Wauchope 1966:109-111).

Ceramic assemblages dating to the Early Woodland period in the Georgia/South Carolina piedmont include sand tempered plain, fabric marked, simple stamped, cord marked, check, and linear check stamped wares of the Dunlap, Mossy Oak, and Deptford/Cartersville series (Caldwell 1958:35, n.d.; Wauchope 1966:46-54; Anderson 1985a; Trinkley 1983a, 1988). Fabric marked pottery is assumed to have been the earliest, followed by simple stamped, check stamped, linear check stamped, and cord marked wares toward the end of the period. In the current analysis fabric marked pottery from the reservoir collections was tentatively assumed to indicate Early Woodland site use locally (unless evidence to the contrary was available), while simple stamped, cord marked, check stamped, and liner check stamped pottery was placed into the later, Middle Woodland period.

Virtually nothing is currently known about the Early Woodland period in the South Carolina piedmont, although a continuation of typical coastal plain sequences has been documented as far inland as the fall line at a number of sites (Ferguson and Widmer 1976; Anderson 1979a; Blanton et al. 1986). To the north of the piedmont, in the Appalachian summit, fabric marked pottery and small square stemmed and triangular projectile points dominate assemblages. The local succession proceeds from larger to smaller stemmed and triangular point forms and the coarser to finer sand and grit tempered pottery of the Pigeon and Swannanoa series (Keel 1976). The Woodland period in north Georgia began sometime between 1000 and 600 B.C., and is identified by the appearance of

Dunlap Fabric Marked pottery (Caldwell 1958:23-25; Wauchope 1966:46-48; Garrow 1975:18, Wood 1981:13-14; Bowen 1982). The earliest securely dated assemblages date to ca. 600 B.C., and are characterized by course sand/grit tempered fabric marked pottery and large Badin and Yadkin-like triangular projectile points. This point form occurs widely at this time level from Alabama to western North Carolina, and replaces the stemmed point tradition dominant since the Early Archaic in many areas (Oliver 1985).

Much of the research conducted to date on the Early Woodland period in the region has focused on the development of artifact typologies and cultural sequences, prompting one researcher to note that once one looks beyond the:

> ...lengthy discussions of the typology and temporal placement of ceramic assemblages and their apparent inherent indications of interregional influence and interaction, there is relatively little information available concerning the lifeways of southeastern populations during this period. ...it is still not possible to establish accurately the timing, duration, and nature of seasonal population movements between different sites within the various settlement systems that existed across the southeast (Smith 1986:37,41).

The nature of Early Woodland adaptation in the piedmont of Georgia and South Carolina, and its relationship with lifeways documented during the preceding Late Archaic period, remains an important topic for research.

EVIDENCE FOR EARLY WOODLAND OCCUPATION IN THE RUSSELL RESERVOIR: EXCAVATION ASSEMBLAGES

Introduction

Fabric marked pottery indicative of Early Woodland site use was found at 50 locations in the Russell Reservoir, while Otarre/Swannanoa and Yadkin projectile points were found at 58 and 49 locations, respectively (Table 2, Figures 3, 4). While most of the fabric marked pottery appeared to be Dunlap series material, and hence an unambiguous marker of an Early Woodland component, the temporal range for the point forms was too great to make them effective Early Woodland diagnostics (see below). No major Early Woodland assemblages were excavated in the project area, although minor components were examined at a number of sites. Stratigraphic evidence for an early position for fabric marked pottery was found at several locations, although associated features were unfortunately rare. The data indicate that the initial Woodland position for fabric marking documented in northwest Georgia also generally applies to the eastern Georgia/western South Carolina piedmont. While the finish may be present in later contexts, its primary occurrence locally appears to have been during the Early Woodland.

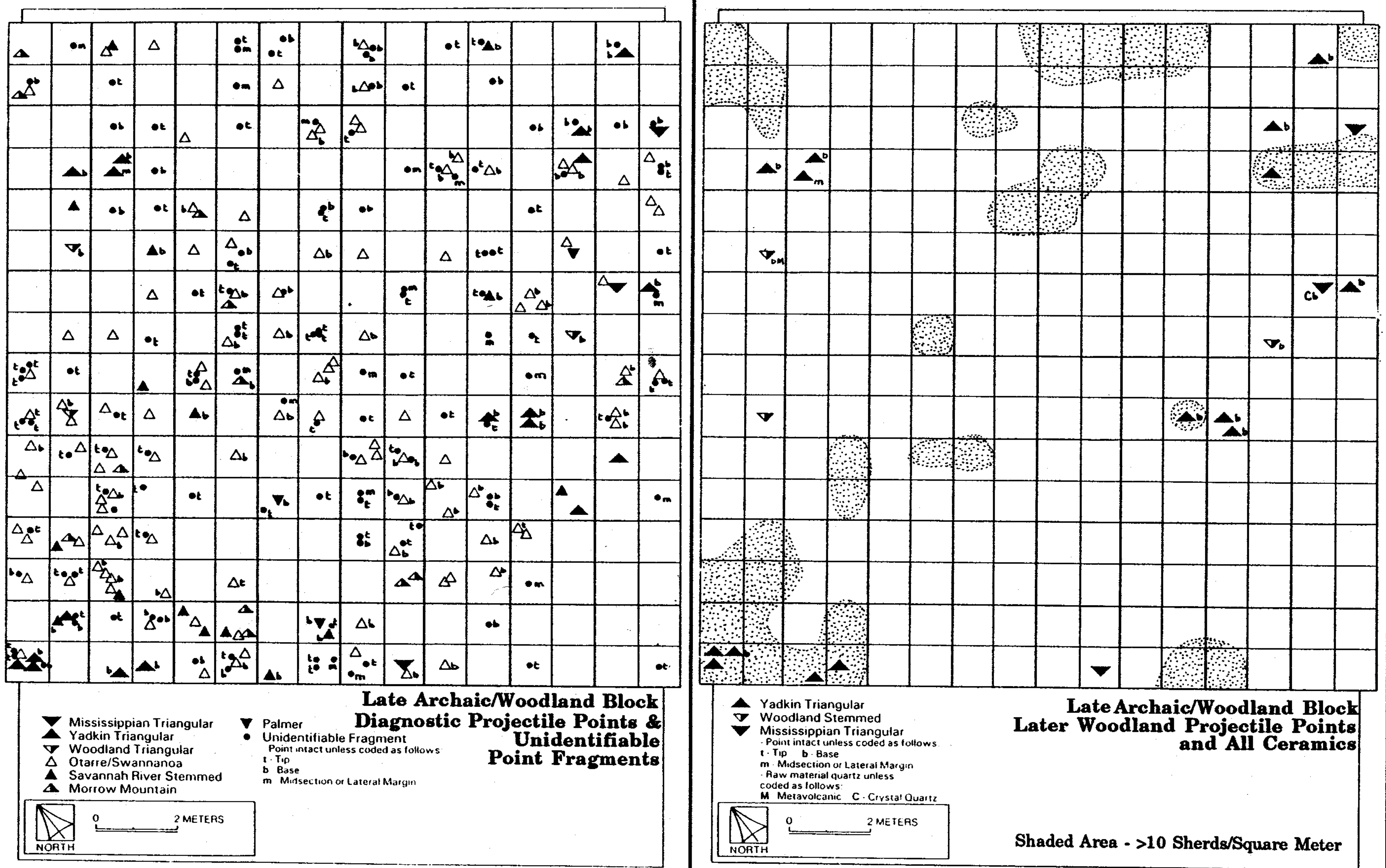
Sara's Ridge (38AN29)

A minor Early Woodland component was identified immediately below the plowzone in XU1 at 38AN29, the Sara's Ridge site (Wood et al. 1986:121, 163-164). Twenty four square meters in these levels were excavated, yielding an assemblage that included a moderate amount of Dunlap Fabric Marked pottery (N=166 sherds), six indented base quartz triangular projectile points or point fragments, three crude quartz bifaces, a scattered rock cluster from a probable hearth, and two small concentrations of quartz debitage. The vast majority of the debitage in these levels was quartz. No other features were found, although a 46 square meter area around the excavation was shovel skimmed. The sherds appear to all come from a single vessel, and comparatively minor site use was indicated.

Rucker's Bottom (9EB91)

Evidence for fairly appreciable use of the Rucker's Bottom area during the Early Woodland period was found, in the form of numerous small square stemmed projectile points, large triangular Yadkin-like points, and sand and grit tempered fabric marked potsherds (Anderson and Schuldenrein 1985:320-361). A 16 x 16 m block was opened in two 10 cm levels below the plowzone in the southern portion of the site specifically to explore the dense Late Archaic/Early Woodland remains thought to be there based on surface distributions and earlier testing. This proved to be an accurate assessment, but unfortunately an unusually large number of artifacts and features dating from the Late Archaic to the later Woodland were found, documenting the repeated, intensive use of this location (Figure 44). Due to the artifact rich, compressed nature of the deposits, sorting out Early Woodland artifacts and features from the multitude of remains proved extremely difficult. Several small clusters of pottery and/or Yadkin Triangular projectile points were observed that may represent the remains of comparatively brief occupations, given the absence of structure outlines, midden staining, areally extensive artifact scatters, or other evidence for extended habitation in unequivocal association with the artifacts. Some of these clusters also had check, linear check, and simple stamped pottery present, and hence probably dated to later in the Woodland; Yadkin points themselves have a broad temporal range, both locally and over the general region (Coe 1964; Claggett and Cable 1982; Blanton et al. 1986).

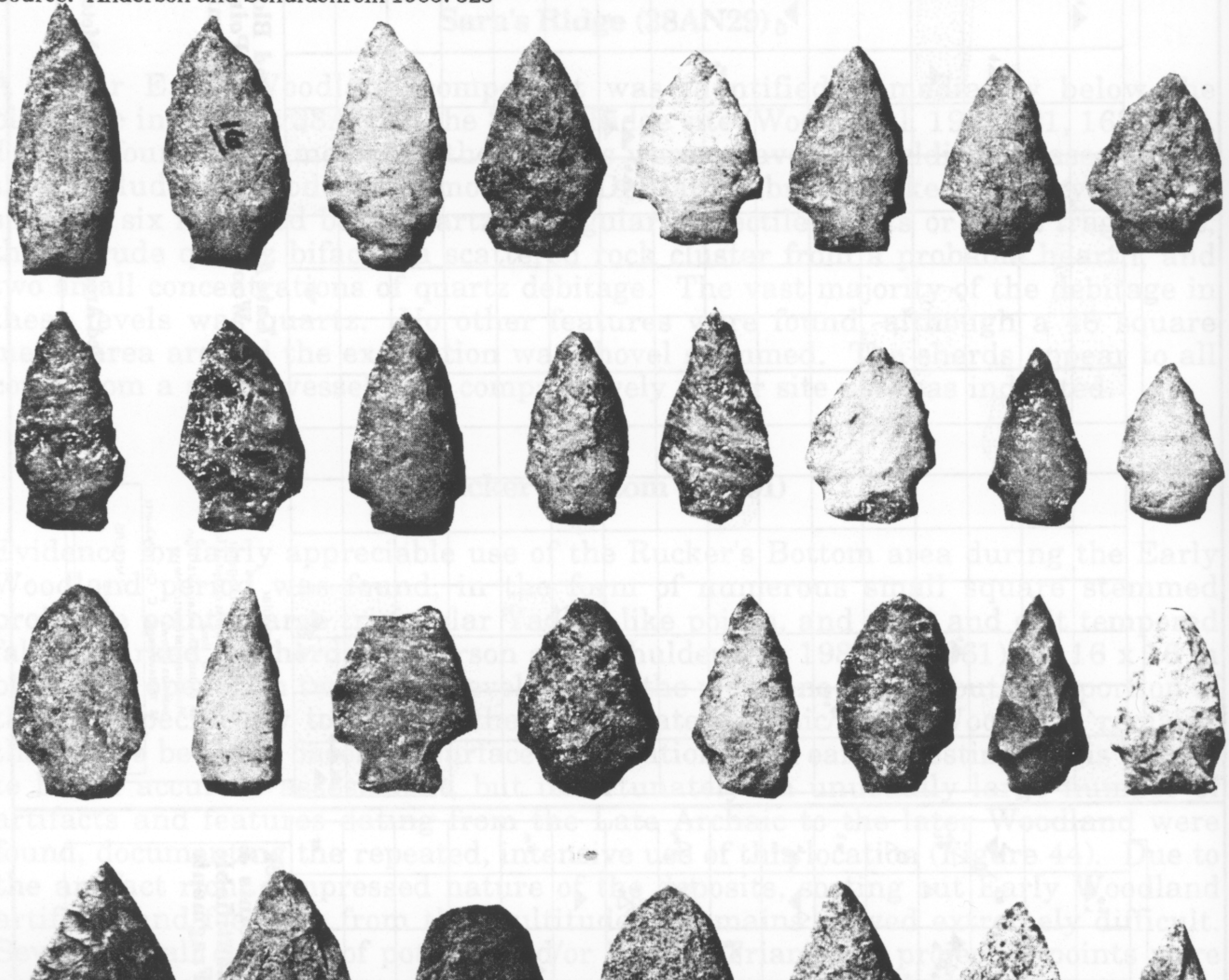
Small, square to slightly expanding or contracting stemmed hafted bifaces were extremely common at Rucker's Bottom, with over 200 recovered from the southern portion of the terrace; and over 100 in the 16 x 16 m excavation block (Figures 44, 45). These were treated as a combined "Otarre/Swannanoa" category due to ambiguities with the existing type descriptions from the region. The assemblage was roughly intermediate in size between its two constituent types, and was in closest conformity with Oliver's (1981:154-156) Gypsy Stemmed type. While these small square stemmed points were found in a number of later features at the site, where they were assumed to have been intrusive, one was dated to A.D. 340 in Feature M-11 with linear check stamped pottery of the Cartersville series.



Source: Anderson and Schuldenrein 1985: 357, 370

Figure 44. Projectile Points and Fragments, and All Ceramics, 16 x 16 m Block, Rucker's Bottom Site, 9EB91.

Source: Anderson and Schuldenrein 1985: 325



Late Archaic /Early Woodland Otarre-Swannanoa hafted bifaces from the Rucker's Bottom site, 9EB91.

Figure 45. Terminal Late Archaic/Initial Woodland Projectile Points in the Richard B. Russell Area.

Evidence for a long occurrence of cord and fabric marking in the local sequence was suggested at Rucker's Bottom, where almost 2,000 cord and fabric marked sherds were recovered in units located all over the terrace (Anderson and Schuldenrein 1985:335-340). Cord and fabric marked sherds were found in appreciable quantities in the various test pits and in the large Archaic and Woodland excavation block opened at the south end of the site, where few Mississippian sherds were found. A wide range of (sandy) pastes and finishes were evident, suggesting that several different periods may have been present. Alternatively, and the explanation preferred here, this variability may have been due to highly idiosyncratic manufacturing procedures accompanying the initial Woodland adoption of ceramic technology. Cord and fabric marked finishes were also found in presumably pure Mississippian proveniences on the site, however, such as on the floor of Structure 2 (Anderson and Schuldenrein 1985:565). While sorting proved difficult, the later Mississippian wares tended to be better made, with less blurring or overstamping, and with well smoothed to near burnished interiors. The presumably earlier wares, in contrast, were cruder in appearance and considerably sandier in texture. The evidence from the site indicates that equating the presence of fabric marked pottery with the existence of an Early Woodland component, in the absence of other supporting evidence, should only be done with care in the upper Savannah River area.

Big Generostee Creek (38ABN126)

Dunlap Fabric Marked pottery was found stratigraphically below levels dominated by later Woodland and Mississippian wares in Test Pit 2 at Big Generostee Creek. Fifty one fabric marked sherds, the largest concentration found at any site outside of Rucker's Bottom, were found in levels IV and V; most of the remaining (later Woodland and Mississippian period) sherds from the unit were found in levels I and II. Level IV in the same test pit yielded a large quartz Yadkin-like triangular point, while level VI produced a Savannah River Stemmed point (Wood et al. 1986:181-182). While fabric marked sherds and large triangular points were found in other units at the site, they were infrequent and, when found, were mixed in with later materials. Two kinds of surface finish were observed, a "bold, crudely woven fabric or basket made of large cord" and "a more finely woven fabric" (Wood et al. 1986:207), and the breakage of two or more vessels was inferred. In the absence of midden staining or associated features, site use was probably fairly minimal.

9EB17

A possible co-occurrence of cord marked pottery with Dunlap Fabric Marked pottery was observed in XU1 and XU2 at 9EB17 (Wood et al. 1986:223, 238), although the materials were in general level fill with later Cartersville and Swift Creek materials. Cord marked pottery was reported by Wood (1981) with fabric marked material in the Long Shoals phase assemblage at the Cane Island site in the Wallace Reservoir, so an Early Woodland cord marked/fabric marked association in the Russell Reservoir is not improbable.

Gregg Shoals (9EB259)

A small number of Dunlap Fabric Marked sherds were found in the disturbed upper two zones (0 to 40 cm) of the 8 x 8 m excavation block at Gregg Shoals; most in the lowest level from 30 to 40 cm (Tippitt and Marquardt 1984:7-16 to 7-21). While large triangular projectile points resembling the Yadkin type were found in these levels (Figure 29), no associations could be determined due to the disturbed nature of the deposits and the large number of later Woodland ceramics that were also present. Debitage in these levels was almost entirely vein or crystal quartz, with only trace amounts of metavolcanics and chert.

THE EARLY WOODLAND IN THE UPPER SAVANNAH RIVER IN LIGHT OF THE RUSSELL RESERVOIR INVESTIGATIONS

Chronology and Sequence Definition

Ceramic Artifacts. Dunlap Fabric Marked pottery, as defined by Jennings and Fairbanks (1940), currently appears to be the only initial Woodland ceramic indicator in the upper Savannah River. As noted previously, fabric marked pottery was found at 50 sites in the project area, most of which are assumed to represent Early Woodland components (Table 2, Figure 4). The evidence from sites such as Rucker's Bottom, however, indicates that its position as an unambiguous diagnostic indicator is none too secure. An early position for the finish was documented stratigraphically at Big Generostee Creek, and fabric marked sherds were noted in early levels in isolated units at a number of other sites in the reservoir (Gardner et al. 1983; Thompson and Gardner 1983). At most locations, however, the evidence was more equivocal, with isolated or small numbers of artifacts found in mixed contexts (i.e., Schuldenrein et al. 1985:191; Anderson et al. 1985b:222; Wood et al. 1986:215-219).

At Rucker's Bottom fabric marked pottery was found in Mississippian context, and evidence from this and other sites in the basin, particularly those from the inner coastal plain (Hanson and DePratter 1985; Anderson 1988a) indicates that fabric marking cannot be unequivocally assigned to the Early Woodland whenever it is found. A long occurrence for the finish, spanning virtually the entire ceramic prehistoric era, has been documented throughout much of eastern and central North Carolina (Coe 1964; Reid 1967:8-9; Keel 1976; Phelps 1983; Ward 1983), as well as in the coastal plain of South Carolina (Anderson 1982:293-301, 1988a; Trinkley 1983a, 1988). Within the Georgia piedmont, however, the primary occurrence for the finish appears to be during the Early Woodland, with only occasional materials noted in later Woodland and Mississippian contexts (i.e., Connestee Fabric Marked, Keel 1976:254; Etowah Net Marked, Wauchope 1966:71). In the upper Savannah River Valley, fabric marked pottery appears to occur primarily in the Early Woodland period, as in north Georgia, with the occasional later occurrences of the finish perhaps representing influences from areas to the east.

Cord marked pottery, which co-occurs with fabric marked pottery in the coastal plain of South Carolina and in much of eastern North Carolina, is comparatively uncommon in the piedmont of western South Carolina and northern Georgia (Wauchope 1966:52,71; Taylor and Smith 1978:297; Goodyear et al. 1979:116-117; Wood 1981:14), a finding supported by the Russell Reservoir investigations (Table 2). The finish was only present in low incidence in project area Woodland assemblages, which was somewhat surprising given the dominance of the ware in both Woodland and early Mississippian assemblages in the lower Savannah River basin (i.e., Stoltman 1974; DePratter 1979; Anderson 1975, 1988a).

Cordmarked pottery found in Woodland context in the Russell Reservoir assemblages tended to have a fairly sandy paste, with irregularly spaced or overstamped impressions and a poorly to well smoothed but never burnished interior finish (e.g., Anderson and Schuldenrein 1985:339-340). Close similarity with the fabric marked sherds found in the same proveniences was evident. Cordmarked sherds were only rarely observed within later Middle Woodland Cartersville assemblages, and an occurrence with the Early Woodland Dunlap or the later Woodland and Mississippian Connestee and Savannah series is inferred for most of the cord marked pottery found in the upper Savannah River area. Comparable Early to Middle Woodland cord marked wares from the surrounding region include the Mossy Oak, Swannanoa, and Deptford Cord Marked types (Wauchope 1966:52; Keel 1976:260-263; Phelps 1966; DePratter 1979:126).

No evidence for a transitional ceramic assemblage between the Stalling's and the Dunlap assemblages was found in the project area. Curiously, not a single sherd of initial Woodland Refuge pottery, dated to between 1000 and 600 B.C. along the lower Savannah, was identified in the project collections. Refuge materials, which are characterized by dentate and simple stamping, identify transitional components occurring temporally between Late Archaic Stalling's and Thom's Creek and Early/Middle Deptford occupations in the coastal plain. The absence of Refuge or a comparable initial Early Woodland ceramic assemblage in the Russell Reservoir area was surprising, since pottery was common at this time in the coastal plain of both South Carolina and eastern Georgia, and particularly along the lower Savannah River (Waring 1968c; DePratter 1976, 1979; Lepionka 1983; Anderson 1982, 1988a). This may indicate that the widespread adoption of ceramics did not occur in the upper Savannah River until well into the Early Woodland period, after Refuge times. Given the infrequent occurrence of Stallings and Thom's Creek ceramics in the piedmont, and the apparent late (ca. 600 B.C.) appearance for fabric marked pottery in northern Georgia, this seems to be a plausible inference (Garrow 1975; Bowen 1982). Even if fabric marked pottery was present by or shortly after 1000 B.C. in the upper Savannah River area, the differing assemblages in the coastal plain and piedmont suggest the existence of differing social/cultural systems in these areas, a pattern that had apparently emerged during the preceding Late Archaic.

Projectile Points. A range of projectile point forms were present during the Early Woodland period in the upper Savannah River and over the surrounding region. Unfortunately, none are currently recognized as particularly diagnostic of this specific period. Small, square-to-contracting stemmed projectile points have been found in both Late Archaic and Early Woodland contexts in the region (e.g., Keel 1976:171, 196; White 1982:46-70; Alterman 1987:210-240), while large triangular points have been documented in both Early and Middle Woodland contexts, and possibly into the Late Woodland (Coe 1964; Bowen 1980; Anderson 1985a; Blanton et al. 1986). At the present the primary distinction between the various stemmed projectile point types used to characterize the Late Archaic through earlier Woodland era in the South Appalachian area, given that most have similar stem morphologies, appears to be size. The type descriptions and measurements used to separate "Late Archaic" Otarre or Small Savannah River points from transitional or "Early Woodland" Swannanoa, Gypsy Stemmed, or Plott Short Stemmed points exhibit a considerable degree of overlap in size range and morphology, however, rendering strict application of these forms (i.e., mutually exclusive sorting) a difficult proposition at best (Table 3; see also Anderson and Schuldenrein 1985:326-331).

Table 3. Archaic and Woodland Type Assemblage Measurements from the South Appalachian Area

	Morrow Mountain Type I	Morrow Mountain Type II	Savannah River Stemmed	Small Savannah River	Otarre Stemmed	Gypsy Stemmed	Swannanoa Stemmed	Plott Short Stemmed
L	45.0 (30.0-70.0)	60.0 (30.0-80.0)	100.0 (70.0-170.0)	50.9 (43.0-57.0)	51.4 (37.0-70.0)	38.6 (27.0-46.0)	32.6 (21.0-43.0)	30.5 (25.0-36.0)
SW	30.0 (22.0-45.0)	20.0 (18.0-30.0)	50.0 (35.0-70.0)	28.6 (22.0-34.0)	30.5 (22.0-44.0)	21.2 (16.0-26.0)	19.0 (9.5-24.0)	19.3 (15.0-24.0)
TW	n/a -	n/a -	n/a -	16.1 (30.0-70.0)	14.9 (30.0-70.0)	13.1 (30.0-70.0)	12.6 (30.0-70.0)	16.5 (30.0-70.0)

KEY

N= Number of Points in Sample
L= Maximum Axial Length (mm)
SW= Maximum Shoulder Width (mm)
TW= Maximum Tang Width (mm)

Average Measurement
(Range of Measurements)

Sources: Coe 1964, Keel 1976, Oliver 1981

Examining the average and range values for axial length, shoulder width, and tang width for local Late Archaic and Woodland stemmed point types, as given in the published type descriptions, a clear continuum, from larger to smaller forms is evident within local typologies (Table 3). Savannah River Stemmed points are the largest, almost twice the size of the small Savannah River or Otarre Stemmed categories, which are in turn approximately 50 percent larger than the Gypsy, Swannanoa, and Plott Short Stemmed types. As noted previously, these measurement data have prompted many local investigators to see an evolutionary trend, from larger to smaller stemmed points, within the local sequence. While this observation is undeniably correct in broad outline, problems arise when points are arbitrarily assigned to one end of this continuum or the other solely on the basis of size. Points classifiable in the Small Savannah River - Otarre - Swannanoa range were found at the three sealed preceramic Late Archaic sites in the Russell Reservoir, as discussed in the previous chapter; in levels dated to between 3800 and 3300 B.P. at Warren Wilson and Stallings Island (Keel 1976; Bullen and Greene 1970), and from 3300 to 3100 B.P. at 38LX5, a fall line site in central South Carolina (Anderson 1979a:78-82), to cite a few examples.

While the smaller stemmed forms like the Gypsy, Swannanoa, and Plott Short Stemmed have been repeatedly dated in late, predominantly Early Woodland contexts (e.g., Keel 1976:198; Oliver 1981; Trinkley 1983b), these types also overlap considerably in size, rendering sorting difficult. Individual points that fall in the area of overlap cannot, therefore, be distinguished. Shoulder width on these forms exhibit the smallest degree of overlap, but unfortunately this attribute is highly dependent on the extent of resharpening a point has undergone. Stem morphology is also of little use, since a range of forms are described or illustrated for these types. In the absence of unambiguous sorting criteria, dating small, square stemmed Late Archaic/Early Woodland points in the upper Savannah River area thus remains a highly subjective, context dependent activity. Examination of average point size over assemblages, rather than individual artifacts, it is suggested, may prove a more reliable method of determining chronology than the use of traditional typologies.

Early Woodland Settlement

Little evidence for extended use of the upper Savannah River area during the Early Woodland period was documented during the Richard B. Russell Reservoir investigations. No evidence for structures, large subterranean storage pits, and dense occupational middens was found, attributes characteristic of the Kellog phase in northwest Georgia (Caldwell 1958:23-25). Relatively uncomplicated, short term occupations by small groups are indicated, a pattern which stands in considerable contrast to the record left by the seemingly dense Refuge populations present at this time in the coastal plain portion of the drainage. No evidence for stratigraphic continuity between Stalling's, Thom's Creek, and Dunlap assemblages was found, although these wares sometimes co-occurred on the same site. A continuation of Late Archaic lifeways more or less unchanged has been inferred (Campbell and Weed 1984:130), although Early Woodland use of the Russell Reservoir area, if anything, was far less substantial than during the immediately preceding Late Archaic. Although the archaeological recognition and interpretation of sites of this period is in its infancy, it is possible that the upper Savannah River was comparatively depopulated at this time. If people were present, they apparently had little interaction with groups in the lower portion of the drainage, as evidenced by the absence of Refuge wares in the project area, and the rarity of contemporary or slightly later finishes such as cord marking.

This apparent depopulation or cultural isolation was also indicated in stone tool assemblages. A major switch in lithic raw material preferences was documented between the Late Archaic and Woodland periods in the reservoir area. During the Late Archaic assemblages were typically either dominated by metavolcanics, or by a range of raw materials with metavolcanics a distinct minority. During the succeeding Woodland, in contrast, particularly during the Early and Middle Woodland, assemblages were almost overwhelmingly quartz. This trend was observed in stratigraphic column samples and on diagnostic artifacts at a number of sites within the reservoir, including at Rocky River, Rucker's Bottom, and Gregg Shoals (Figure 27; Anderson et al. 1985b:233; Anderson and Schuldenrein 1985:314; Tippitt and Marquardt 1982:21). The use of locally available materials indicates that interaction (exchange or travel) with other areas was fairly minimal, at least when compared with the preceding terminal Late Archaic era. The lithic evidence, together with the mutually exclusive ceramic distributions characteristic of the period, suggests that a decline in long-distance interaction occurred locally at the end of the Late Archaic.

THE MIDDLE WOODLAND (ca. 2,300 - 1,500 B.P)

Introduction

Middle Woodland occupations in the northern Georgia area have been traditionally identified by the presence of Cartersville and Swift Creek ceramics (Wauchope 1966). The chronological, spatial, and typological relationships between these series and the adaptations they represent is poorly understood at the present (Anderson 1985a:40-44). In the Appalachian Summit area of western North Carolina the plain, brushed, simple stamped, and check stamped ceramics of the Pigeon and Connestee series, which are assumed to date from between ca. 300 B.C. and A.D. 500 (Keel 1976:239-241; Chapman and Keel 1979:160), are thought to be contemporaneous with the northern Georgia Cartersville materials. Evidence for influence from both areas was expected in the project area, given the results of earlier work in the upper Savannah River. This included the investigations in the Keowee-Toxaway Reservoir where evidence for the applicability of the Appalachian Summit sequence was found (Beuschel 1976), and the survey results reported by Wauchope (1966), which documented the occurrence of northwest Georgia types in the eastern piedmont.

Swift Creek ceramics, originally reported from the type site near Macon (Kelly and Smith 1976), are characterized by a wide range of complicated stamped design motifs, and are common in southwest Georgia and on the Florida Gulf coast, where they have been dated to between A.D. 100 and 450 at sites like Mandeville (Smith 1979). The ware continues into the Late Woodland in central and northern Georgia, well after its replacement in the Gulf Coastal region by Weeden Island types (Willey 1949; Milanich and Fairbanks 1980). In eastern Georgia, Swift Creek and later, Late Woodland Napier finishes are less common, and are almost nonexistent along the lower Savannah River (Stoltman 1974; DePratter 1979; Hanson and DePratter 1985; Anderson 1988a).

While no unambiguously diagnostic projectile points have been found dating exclusively to the Middle Woodland period in northern Georgia, there is a fair body of evidence indicating that small square stemmed projectile points like the Swannanoa and Gypsy Stemmed types were largely replaced by triangular points of the Yadkin, Garden Creek, Connestee, and related types during this period or slightly earlier (Coe 1964; Wauchope 1966:102-109; Keel 1976; Oliver 1981, 1985; Hanson and DePratter 1985; Anderson 1985:34-35). The Yadkin Large Triangular type was originally defined by Coe (1964:45-49), based on excavations at the Doerschuk site in the North Carolina piedmont, where it was found in association with Badin and Yadkin series pottery. While the temporal range for the type is not well delimited, an occurrence between ca. 200 B.C. to as late as A.D. 1200 in piedmont North Carolina has been suggested (Claggett and Cable 1982:46-47, Figure 4.5). Comparable forms from the Appalachian Summit include the Garden Creek Triangular, attributed to the late Swannanoa to early Connestee periods from roughly 300 B.C. to A.D. 400, and the slightly smaller Connestee Triangular, dated from A.D. 200 to 600 (Keel 1976:130-132, 239). Wauchope (1966:105-109) described similar triangular forms from northern Georgia that he attributed to an Early Woodland age, contemporaneous with Deptford and Cartersville materials. Large triangular points have also been found with Early Woodland Dunlap Fabric Marked assemblages in northwest Georgia and dated to as early as 600 B.C. (Bowen 1982; Wood et al. 1988).

In the coastal plain and fall line areas of Georgia and South Carolina Deptford pottery (the coastal plain equivalent or near-equivalent of Cartersville), which has a temporal range of almost a thousand years, from ca. 600 B.C. to A.D. 500, is found with both stemmed and triangular points (Milanich 1971; Trinkley 1980b, 1981, 1988; Anderson et al. 1982; Hanson and DePratter 1985). Triangular points have been found in Deptford assemblages like the G. S. Lewis West site along the lower Savannah River, together with Gypsy Stemmed-like points (Hanson and DePratter 1985). At 38LX5 in central South Carolina, Deptford ceramics and Gypsy Stemmed-like points were found in a hearth and dated to 660 B.C., uncorrected (Anderson 1979a; Trinkley 1980). There appears to be considerable variation in the time of appearance of triangular points in the general region, with some suggestion that they appear earlier in northern Georgia than in the coastal plain and piedmont regions of the Carolinas. What is indicated by this pattern, if it is indeed accurate, remains unknown; considerable temporal and taxonomic refinement within the region's triangular points is clearly needed.

Hopewellian Influence in the Local Middle Woodland

The Middle Woodland period in the eastern Woodlands saw the re-emergence of long distance exchange networks, typified by sites of the Hopewell ceremonial and interaction sphere (e.g., Caldwell 1964; Struever and Houart 1972; Brose and Greber 1979). Major sites of this network identified in the South Appalachian area include Mandeville in southwestern Georgia (Kellar et al. 1962; Smith 1979) and Tunacunnhee in extreme northwestern Georgia (Jefferies 1976, 1979). While elaborate burials characterized by grave goods such as copper panpipes and earspools, prismatic blades, galena, cut mica, and platform pipes were found at these sites, these classic Hopewellian materials occurred within otherwise purely local Woodland assemblages. At Mandeville, dated from A.D. 100 to 450 (Smith 1979:183), the period of greatest Hopewellian influence was also the period with the most pronounced occurrence of Santa Rosa/Swift Creek materials, while at Tunacunnhee, Cartersville, Connestee, and Candy Creek ceramics were found at a nearby habitation site assumed to be contemporaneous (Jefferies 1979:165). These sites are thought to represent local trading nodes in the regional ceremonial and exchange network originating within and serving the Hopewellian heartlands of the midwest. An adoption of midwestern Hopewellian ceremonialism by local populations is clearly documented, indicating that more than material goods were moving through the region.

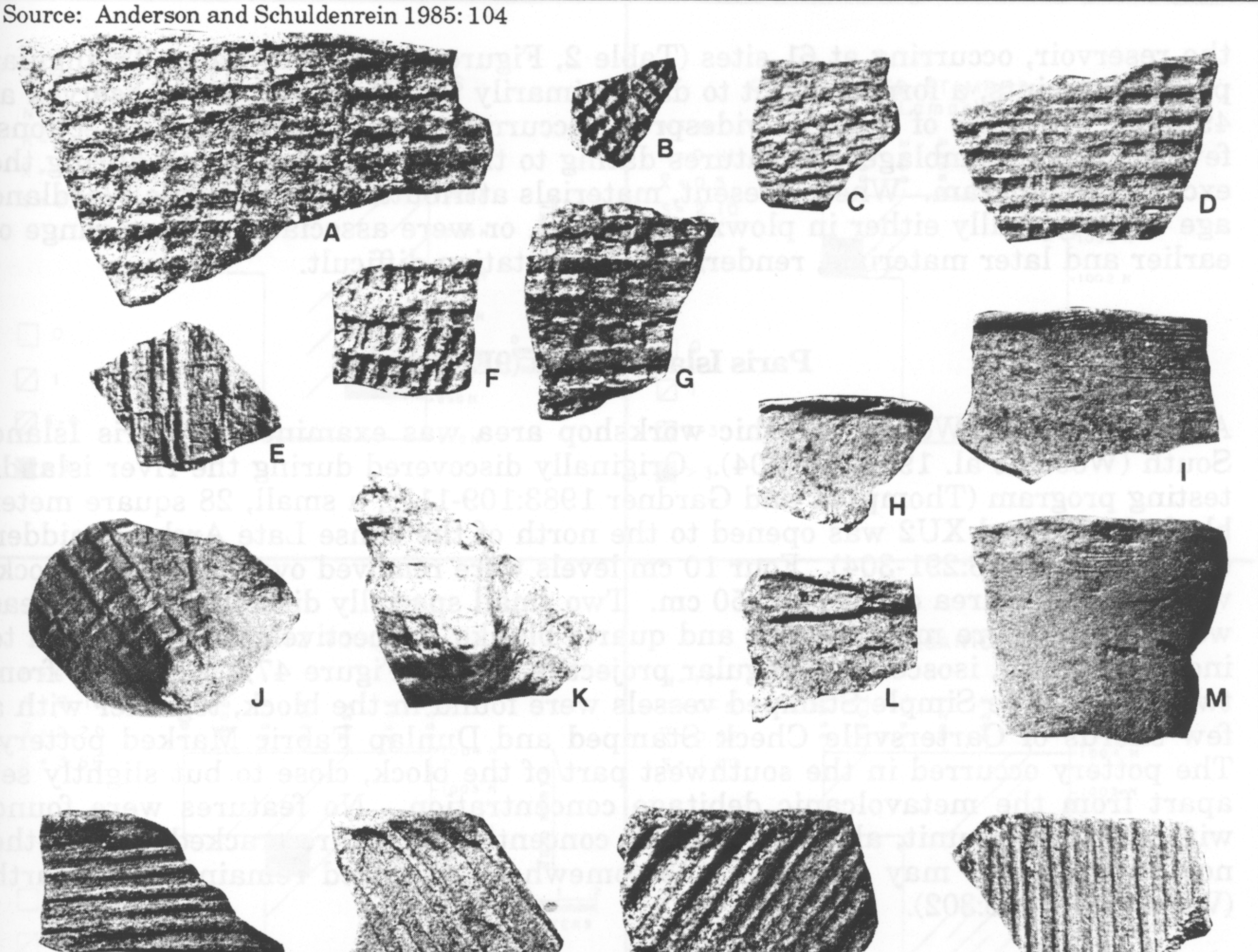
The nature of Hopewellian influence in the Savannah River Valley is not well understood. While it appears that populations throughout much of the eastern Woodlands participated at some level in the Hopewellian ceremonial and exchange network, no evidence for this involvement has been found along the upper Savannah River, nor was any evidence found during the Russell Reservoir investigations. Middle Woodland sites throughout eastern Georgia and South Carolina, in fact, are almost completely devoid of Hopewellian influence, suggesting that the material correlates of this ceremonial/interaction network, at least, did not enter into the area, or have much local significance (Anderson 1985a:36). The only evidence for local participation within these much wider social and ceremonial networks came from the coastal plain portion of the drainage. Minor occurrences of zoned incised punctated ceramics, some red painted, with decorative motifs reminiscent of Hopewellian and Gulf Coastal wares, have been reported from Deptford period sites, including at Deptford and G. S. Lewis West, on the lower Savannah River (Waring and Holder 1968:140-141; Hanson and DePratter 1985) and at Cal Smoak on the Edisto River (Anderson et al. 1979:78, 140-141). The presence of these wares, with their apparent ritualistic or status-linked design motifs, suggest that local Deptford populations, at least in the lower part of the Savannah drainage, were participating to some extent in the regional exchange and ritual network.

EVIDENCE FOR MIDDLE WOODLAND OCCUPATION IN THE RUSSELL RESERVOIR

Introduction

Middle Woodland components characterized by Cartersville or Deptford plain, check, linear check, and simple stamped ceramics (Figure 46) were common in

Source: Anderson and Schuldenrein 1985: 104



Cartersville Series Types from the Upper Savannah River. a-g,j,k Cartersville Check Stamped; h,i,l,m Cartersville Plain; n-u Cartersville Simple Stamped. Sherds j,k,r and s are tetrapods. Sherds a-g,j,k are from Rucker's Bottom (9EB91); the remainder are from 9EB75.

Figure 46. Cartersville Plain, Simple Stamped, and Check Stamped Ceramics, Richard B. Russell Reservoir Area.

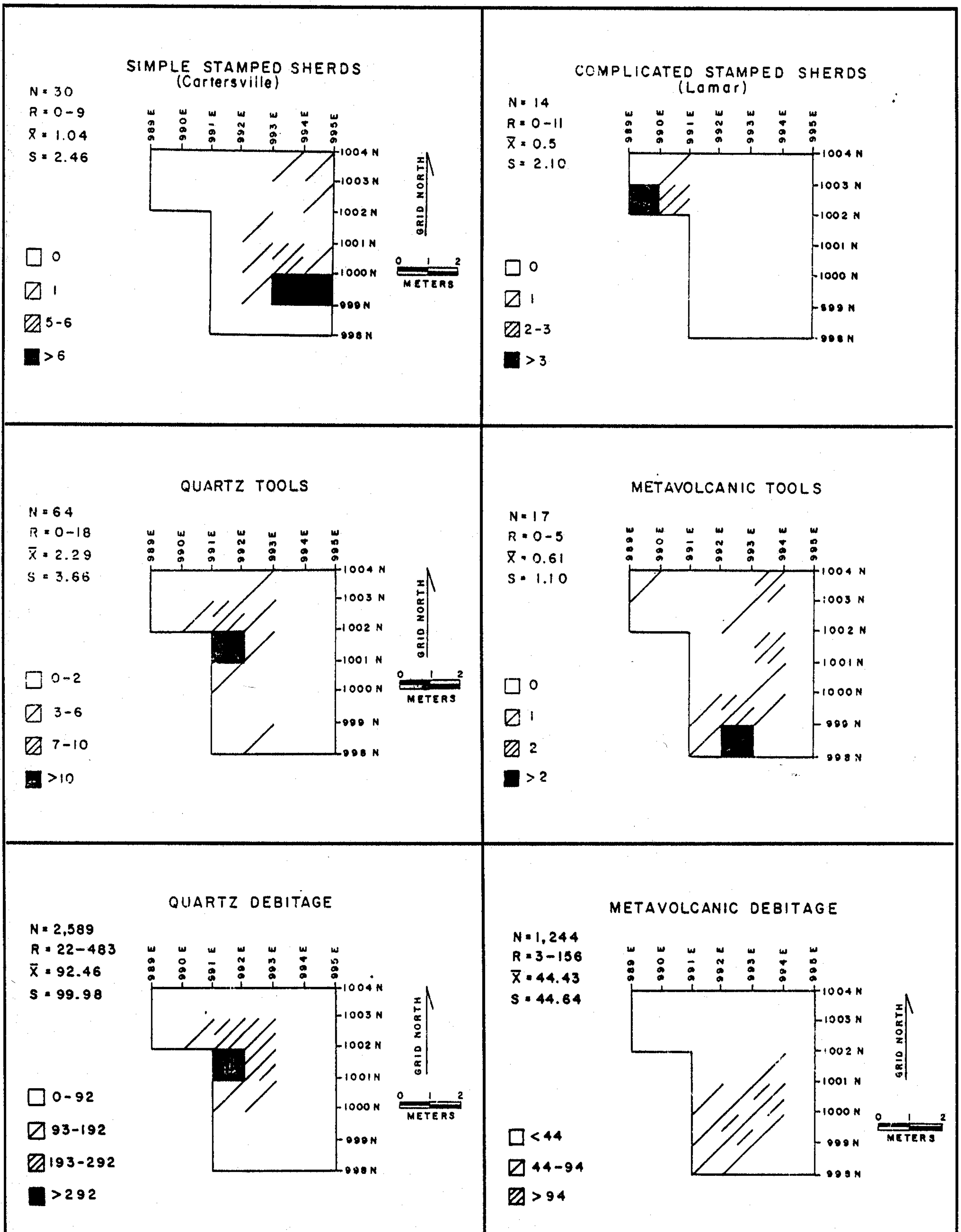
the reservoir, occurring at 61 sites (Table 2, Figure 4). Yadkin Large Triangular projectile points, a form thought to date primarily to this period, were observed at 49 sites. In spite of a fairly widespread occurrence in the reservoir collections, few isolated assemblages or features dating to this period were found during the excavation program. Where present, materials attributable to a Middle Woodland age were typically either in plowzone context, or were associated with a range of earlier and later materials, rendering interpretation difficult.

Paris Island South (9EB21)

A minor Middle Woodland lithic workshop area was examined at Paris Island South (Wood et al. 1986:291-304). Originally discovered during the river islands testing program (Thompson and Gardner 1983:109-117), a small, 28 square meter block designated XU2 was opened to the north of the dense Late Archaic midden (Wood et al. 1986:291-304). Four 10 cm levels were removed over the entire block, with a smaller area carried to 150 cm. Two small spatially discrete activity areas were found where metavolcanic and quartz blanks, respectively, were reduced to indented based, isosceles triangular projectile points (Figure 47). Ceramics from two Cartersville Simple Stamped vessels were found in the block, together with a few sherds of Cartersville Check Stamped and Dunlap Fabric Marked pottery. The pottery occurred in the southwest part of the block, close to but slightly set apart from the metavolcanic debitage concentration. No features were found within the block unit, although a small concentration of fire cracked rock in the northwest corner may represent the somewhat scattered remains of a hearth (Wood et al. 1986:302).

The flaked stone assemblage was dominated by bifacial preforms, finished points and point fragments, and debitage, and appeared to result entirely from the reduction of blanks to projectile points (Wood et al. 1986:296). While minor overlap of debitage occurred, each material was reduced in a separate area. Comparatively brief site use, possibly with some associated food preparation or storage activity (given the ceramics), was indicated. The assemblage was somewhat unusual in that metavolcanics were present in some quantity, accounting for 31.3 percent of the debitage and 20.0 percent of the chipped stone tool assemblage (Wood et al. 1986:292, 296). An overwhelming majority (typically > 80 percent) of comparable triangular points from this part of the Georgia/South Carolina Piedmont are made from quartz (Taylor and Smith 1978: 236; Goodyear et al. 1979:226; Wood 1981:75-76; Anderson and Schuldenrein 1985:314). In the Russell collections, 89.9 percent of all Yadkins were made on quartz, with only 7.5 percent made on metavolcanics (Table 2). Metavolcanics were, however, a distinct minority in local projectile point assemblages (chert use being virtually non-existent), so the discovery of a production area within the reservoir, while unusual, was not impossible. The factors promoting the choice of one raw material over another remain unknown.

The triangular projectile points from Paris Island South were similar to those recovered with Cartersville materials at the Cane Island site in the Wallace



Source: Wood et al. 1986: 295, 301, 305

Figure 47. Middle Woodland Lithic Workshop, Paris Island South, 9EB21.

Reservoir (Wood 1981:75), and also resembled forms variously described as Camp Creek, Greenville, and Nolichucky in eastern Tennessee (Lewis and Kneberg 1957:17), Garden Creek and Connestee Triangulars from western North Carolina (Keel 1976:130-132), and Yadkin Large Triangular from Piedmont North Carolina (Coe 1964:45-49). An association of these triangular forms with Cartersville pottery has been documented by Wauchope (1966:102-109). A small stemmed point was also found within the metavolcanic activity area. This form, resembling Keel's (1976:196-198) Swannanoa Stemmed type, and the Thelma or Deptford Stemmed types (South 1959; Milanich 1971:175; Trinkley 1980c), is also associated with Middle Woodland assemblages in the general region.

9EB17

An association of indented based isosceles triangular projectile points with Cartersville Check and Simple Stamped, and Dunlap Fabric Marked pottery, was observed in general level fill in XU1 at 9EB17 (Wood et al. 1986:221-223). Comparable points are widely reported at this time level in north Georgia (Wauchope 1966) and they have been found in the early Cartersville Long Shoals phase assemblage at Cane Island in the Wallace Reservoir (Wood 1981). XU1 was a 10 x 10 m block opened in 1 m squares to better define a subplowzone fabric marked assemblage located in earlier testing activity (Gardner et al. 1983:197). The plowzone was stripped away with a small bulldozer and the underlying deposits shovel skimmed, and two 10 cm levels were then removed (Figure 48).

No cultural features were observed beyond a diffuse rock scatter in the southwest corner of the unit that may have been a hearth, although a moderate artifact assemblage was recovered (284 sherds, 92 flaked stone tools, 4520 pieces of debitage, and approximately 11.3 kg of rock; Wood et al. 1986:219-236). Almost all the tools and debitage associated with these Early/Middle Woodland ceramics were made from quartz, and were points, point rejects, or other bifaces (Wood et al. 1986:227-230). Unifacial tools were comparatively rare (N=8), and were expediently utilized retouch flakes. The ceramic and lithic artifacts were somewhat separated from one another, suggesting use of these artifact classes in differing contexts. The distribution of tools and debitage within the block, coupled with the absence of features, indicated site use was fairly brief and directed primarily to stone tool manufacture. Two discrete activity areas could be differentiated, a chipping station and a possible hearth and associated debris ring, or artifact drop zone. The chipping station, a small lithic workshop area characterized by large number of tools and debitage, was located in the northern part of the block, while the possible hearth was located in the southwest corner, with a number of sherds and stone tools scattered about it (Figure 48).

Harper's Bottom (9EB75)

A pure Cartersville component characterized by plain and simple stamped ceramics was found at Harper's Bottom, on a prominent terrace overlooking the

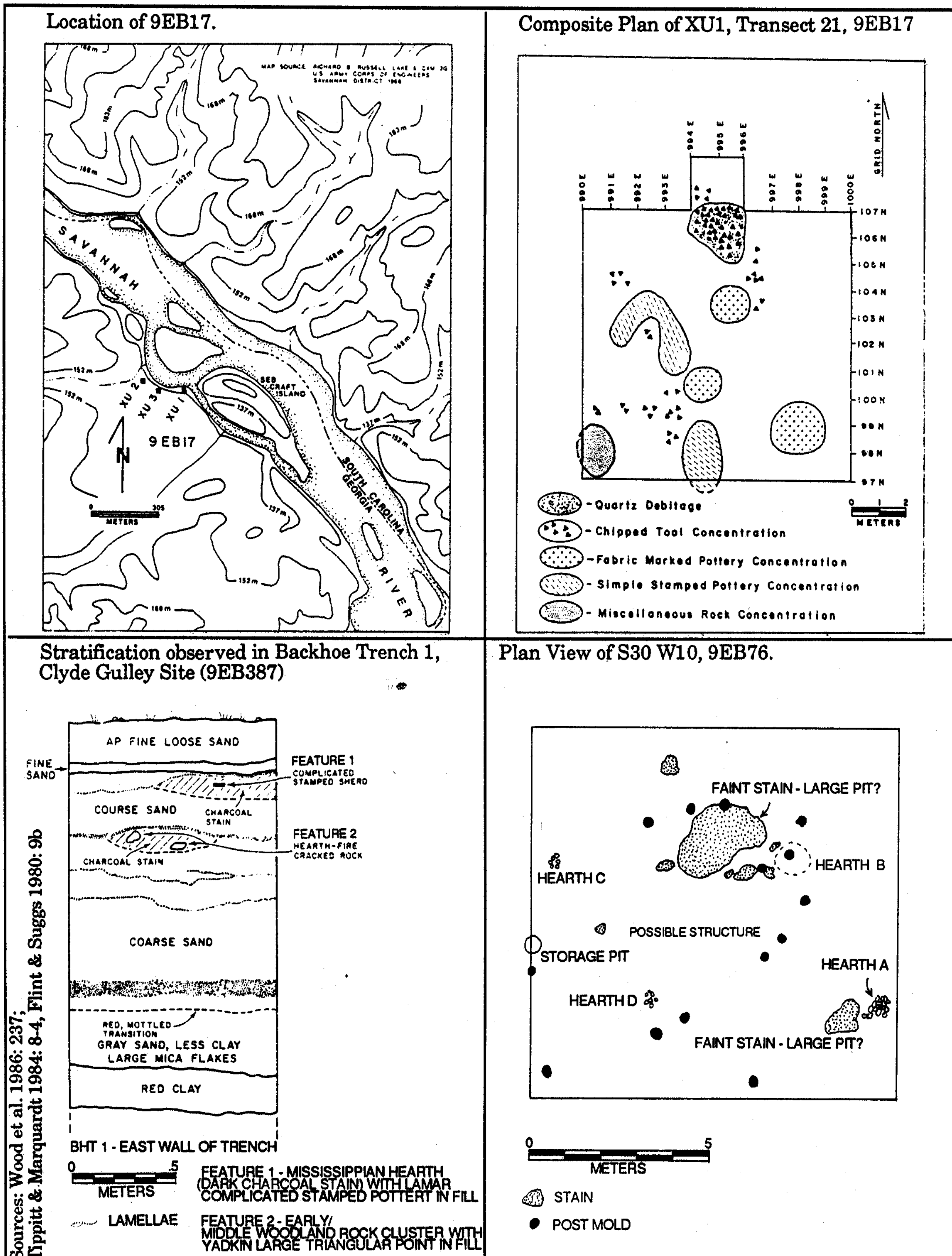


Figure 48. Middle and Late Woodland Features, 9EB17, 9EB76, and 9EB387.

Savannah River (Anderson and Schuldenrein 1985:99-113). The site area was elevated 5 m above the river channel and was backed by a poorly drained swale that would have been flooded during periods of high water. The dense Middle Woodland component found at the site was almost missed. Only 16 artifacts were found in three 1 m and two 0.5 m test units opened at the site during initial testing operations in 1977 and 1979 (Taylor and Smith 1978:368; Gardner et al. 1983:133-141), together with a small number of surface artifacts. The site was reexamined in 1980 in one last effort to see whether deeply buried deposits were present.

The 1980 testing included a controlled surface collection and the excavation of twelve 2 m units dispersed along the terrace. At the south end of the site, well beyond the area tested previously, in a location thought to lie beyond the scatter, a large quantity of plain and simple stamped ceramics, and lesser amounts of quartz and metavolcanic debitage were found in a dark buried A-horizon located immediately below the base of the plowzone. Ten of the twelve 2 m units were opened in this area, with all fill screened through 1/4 inch mesh. No identifiable features were found, although orange fired clay lenses were observed at the top of the A-horizon in several units that were thought to have been plow disturbed remains of wattle and daub structures. Using a motor grader, a 150 by 20 m area was opened, first to the top of the buried A horizon and then to its base. No features beyond obvious tree roots were found, however, which was surprising given the artifact density in the test units. Woodland period use of the area may not have included major structures, pits, or other features or, alternatively, may have been centered elsewhere on the terrace, possibly in the woodline overlooking the river. Backhoe slot trenches opened in this wooded area only infrequently encountered artifacts, however, suggesting the primary occupation was actually in the area examined in detail.

Most of the diagnostic ceramics recovered at the site were characterized by a fine, micaceous paste and plain, simple stamped, and (rarely) brushed finishes (Figure 46). The only vessel form present consisted of flat bottomed simple stamped jars with tetrapodal supports, a globular body and excurvate flaring rims. The shoulder and rim areas of these vessels were typically plain, with simple stamping restricted to the lower two-thirds of the vessel and extending onto the feet. In paste the assemblage closely resembled Keel's (1976:252-254) Connestee series, while the surface finish was identical to materials classified as Cartersville in northwest Georgia (Caldwell 1958; Wauchope 1966; Garrow 1975). No check stamped ceramics were recovered on the site and, given the evidence from over the region for a replacement of Cartersville plain, check, and simple stamped assemblages by assemblages dominated by plain and simple stamped ceramics (see pp. 245-247 below), a late Cartersville occupation was indicated.

A detailed analysis of the debitage assemblage, which was minimal, indicated little initial reduction activity occurred on the site. No cortical debris was found, and most of the flakes were small. Quartz was the predominant raw material (N=206, 70.3 percent), with metavolcanics (N=83; 28.3 percent) second; only four chert flakes were found. The only tools found at the site were two unidentifiable quartz point tips, a quartz Morrow Mountain, and a metavolcanic stemmed point resembling the Otarre and Swannanoa types. The two diagnostics were found in the plowzone overlying the Middle Woodland component, and a direct association cannot be assumed. A moderate amount of cracked rock (14.7 kg) was found in the test units, suggesting hearths were present in the area. Comparatively brief, limited occupations, characterized by relatively impermanent wattle and daub structures, were indicated.

Gregg Shoals (9EB259)

A small number of Cartersville simple stamped and check stamped sherds were found in the upper three zones (0 to 60 cm) of the 8 x 8 m excavation block at Gregg Shoals (Tippitt and Marquardt 1984:7-15 to 7-21). Most of the simple stamped pottery appeared to derive from a single tetrapodal jar, whose paste had a moderate amount of quartz inclusions (ca. 10 - 20 percent) ranging in size from 0.5 to 1.0 mm in diameter. Both large and small triangular projectile points resembling the Yadkin and Caraway types were found in the same levels (Figure 29), but could not be assigned to any specific period. Debitage in these levels was almost entirely vein or crystal quartz, with only trace amounts of metavolcanics and chert.

Clyde Gulley (9EB387)

A minor Early or Middle Woodland component was found at this site, located near the confluence of Pickens Creek with the Savannah. In Backhoe Trench 1, one of 14 opened to determine the nature and extent of the cultural deposits, a cluster of fire cracked river cobbles with associated charcoal staining was found at a depth of 50 to 60 cm (Figure 48; Tippitt and Marquardt 1984:8-1 to 8-3). Artifacts found with the feature included a quartz Yadkin Large Triangular base, six small plain sherds, and 18 quartz flakes. A Mississippian hearth was found higher in the same unit at a depth of 30 cm.

Big Generostee Creek (38AN126)

A small number of Connestee simple stamped and brushed sherds were found at the Big Generostee Creek site, in the extreme northern part of the project area. Classic Connestee materials were only rarely noted in the reservoir assemblages, but the materials from Big Generostee Creek closely resembled the type materials:

> The Connestee simple stamped sherds were decorated on the exterior surface with deeply impressed, narrow to medium width grooves which left alternating raised bands of the same size. This decoration appeared to have been produced by stamping with a paddle wrapped with small diameter, non-textile cord-like material. This decoration was applied as parallel impressions, criss-crossed impressions, and as a combination of both in a zoned fashion. ...Paste usually

contained a fine to medium sand with occasional inclusions of quartz grit.

...Decorations on Connestee brushed sherds consisted of shallowly impressed, parallel grooves, usually of narrow to medium width. The width of these impressions was very similar to that of the simple stamped impressions, but was, on the average, slightly narrower. This design seemed to have been applied either by lightly dragging a paddle wrapped with a fine fiber across the moist vessel surface or by stamping with a similarly prepared paddle. These impressions seemed to have been applied both parallel and obliquely to the rim line. Criss-cross stamping occurred rarely. ...the paste was consistently sandy... (Wood et al. 1986:206).

Cartersville bold simple stamped and check stamped sherds were found on the same site, and were characterized by a grit tempered paste. A similar pattern of decreasing paste inclusion size over the Middle and later Woodland was noted at Rucker's Bottom (Anderson and Schuldenrein 1985:346). No clear evidence for stratification was observed within the later Woodland assemblage at Big Generostee Creek, although a single Swift Creek sherd was found above two Connestee sherds in Test Unit 2 (Wood et al. 1986:182). At the same site some stratigraphic evidence was obtained to suggest that coastal plain and ridge and valley chert was utilized more in the later Woodland and Mississippian periods than earlier in the Woodland (Wood et al. 1986:202).

Rocky River (38AB91)

At the Rocky River site, where a dense preceramic Late Archaic occupational midden was found, later Cartersville and Mississippian materials were found in the upper levels of the deposits (see Chapter V, pp. 176-181; Anderson et al. 1985b:215-249). These later occupations were found in fair stratigraphic context, together with a number of features including a possible burned house floor (Anderson and et al. 1985b:222-224). The later prehistoric occupations were almost completely confined to the top 50 cm of the deposits. The only identifiable projectile points in these levels were six Yadkin Large Triangulars, all of quartz. In several of the units a gradual replacement of Cartersville Check Stamped by Cartersville Simple Stamped pottery was observed, which was in turn replaced by Mississippian ceramics. The stratigraphic record also documented a high incidence of quartz utilization in the upper, Woodland and Mississippian levels, a pattern that contrasted markedly with the incidence of metavolcanics observed in the Late Archaic deposits.

Two major field seasons of excavations were conducted at the site, in 1980 and 1981. In 1980 11 test units and a 4 by 4 m block were opened through the Woodland deposits, while in 1981 these deposits were examined using ten 2 x 2 m units, one with a 7 square m addition to better define a possible burned house floor, Feature 8 (Glander et al. 1981; Anderson et al. 1985b:221-224). Six possible Woodland features were identified at the site in 1980, four postmolds and two dense scatters of lithic and ceramic debris. Charcoal from the fill around one of these scatters, which had plain, check, and simple stamped pottery associated, produced an uncorrected date of 50±80 B.C. (BETA-2529; Glander et al. 1981). Little paleo-subsistence data was recovered in 1980, in spite of a conscious effort to collect this kind of information. Minor quantities of hickory nutshell fragments were found in level and feature fill, but sampling for pollen failed to yield identifiable grains.

Only four probable Middle Woodland features were found in the 47 square m area examined in 1981, a cluster of cracked rock from a probable hearth, an oval basin shaped pit 78 x 60 x 53 cm in size, a fairly large postmold, and a large burned area (Anderson et al. 1985b:224). Plain, check, and simple stamped pottery was found in the fill of three of the features, with only plain and simple stamped sherds in the fill of the post. The burned area, Feature 8, was located to the west of the Late Archaic midden on the bluff edge overlooking the shoals. Found at a depth of 50 cm, the feature was an irregular patchy area of fired clay, ash, and charcoal with appreciable quantities of associated debitage (798 pieces) and cracked rock (23.6 kg), and modest amounts of plain, check, and simple stamped pottery. Two 4 liter flotation samples collected from the zone yielded hickory nutshell fragments as well as oak and pine wood charcoal. The feature, which extended over an approximately 3 x 5 m area, was very badly disturbed by treefalls and bank erosion. While interpreted as a burned house floor of Woodland age, its original extent could not be determined.

The Woodland ceramic assemblage at the Rocky River site was dominated by Cartersville tetrapodal jars, with check and simple stamping only rarely extending beyond the shoulder to the rim. The stone tool assemblage was minimal, consisting of a small number of bifaces, expedient unifaces, and Yadkin Large Triangulars. Debitage was common and widespread, however, with quartz the predominant raw material, followed by metavolcanics in much lower incidence. Exactly what was being manufactured, and where it was discarded remains unknown. A fairly extensive Middle Woodland site occupation, probably consisting of one or more hamlets or a small village, was indicated. While horticulture may have been practiced, no evidence for it was found. Use of the riverine area may have been important.

McCalla Bottoms (38AB288)

Minor Woodland components were indicated at this site by the presence of small quantities of plain, cord marked, fabric impressed, simple stamped, and linear check stamped finishes (Glander et al. 1981; Schuldenrein et al. 1985:175-213). These sherds, of the Dunlap, Deptford, and Cartersville series, were found in and just below the base of the plowzone, immediately above the dense Late Archaic deposits described previously (see Chapter V, pp. 181-184). Sherds with considerable sand in their paste resembled classic Deptford types from the coastal plain, while a few sherds with a near temperless micaceous paste resembled Cartersville types recovered at other sites in the reservoir. Charcoal from the fill of a small pit feature observed at the base of the plowzone was dated to 70±70 B.C., uncorrected (BETA-2531; Glander et al. 1981). While no diagnostic artifacts were present in the fill, the date indicated that Woodland features had been present on the site prior to cultivation.

THE MIDDLE WOODLAND IN THE UPPER SAVANNAH RIVER IN LIGHT OF THE RUSSELL RESERVOIR INVESTIGATIONS

Chronology and Sequence Definition

The boundary between the Early and Middle Woodland periods in the upper Savannah River area does not appear to have been abrupt. Initial Middle Woodland assemblages were characterized by both stemmed and triangular projectile points, as well as sand and grit tempered plain, simple stamped, fabric impressed, and check and linear check stamped pottery of the Dunlap and Deptford series. Sometime after 300 B.C. and certainly by A.D. 100 to 300 these wares were replaced by assemblages characterized by smaller temper elements and better smoothed finishes provisionally described as Cartersville. Within this local Cartersville tradition two distinct assemblages were present, the earliest characterized by plain, simple stamped, check stamped, and linear check stamped finishes. These were replaced by assemblages characterized by plain, simple stamped, and (less commonly) brushed finishes that resemble Keel's (1976:247-255) Connestee series in some respects.

The dating of the Cartersville assemblages in the upper Savannah River area is currently poorly documented, although ranges of from ca. 200 B.C. to A.D. 400 for the earlier plain, check/linear check, and simple stamped material, and from ca. A.D. 400 to A.D. 600 - 1000 for the later plain, simple stamped, and brushed material are indicated (see pp. 246-247 below). Considerable taxonomic and chronological refinement of the Woodland sequence in the upper Savannah River area is needed. The probability that two or more distinct ceramic taxa had been lumped under the rubric of Cartersville was recognized by several of the project teams working in the reservoir (Gardner 1984:71; Anderson and Schuldenrein 1985:340-347; Wood et al. 1986:249). Unfortunately, criteria for resolving these taxa remain ambiguous, although some progress has been made. While the Early and Middle Woodland sequence in the upper Savannah River area can be broadly defined based on the work in the Russell Reservoir, additional field and laboratory work is clearly needed.

Middle Woodland Settlement

Appreciable numbers of sites assumed to date to the Middle Woodland period were found in the reservoir, suggesting a fairly high population density, possibly coupled with a moderate degree of residential mobility or seasonal movement (Table 2, Figures 3, 4). The nature of these occupations, however, remains largely unknown. Short term camps where limited lithic reduction/manufacturing activities occurred were found at sites like Paris Island South and 9EB17, while evidence for a possible structure was found at the Rocky River site. Isolated pit, post, or hearth features were observed at several other locations, indicating other limited activity areas and structures were present, but little information about site structure was found. At Rucker's Bottom Cartersville ceramics and features were found over a fairly appreciable area, suggesting the presence of a number of isolated hamlets or possibly a village during the Middle and the Late Woodland period; a comparatively small portion of this scatter was examined, yielding evidence for two or more structures (see pp. 241-243 below). Wide area excavations directed to Woodland period components need to be conducted to unravel questions of site structure and community organization during this period.

No evidence for the use of domesticates was found in any of the Early and Middle Woodland features examined in the project area, and horticulture or agriculture appears to have played only a minor role in local economies. Use of local lithic raw materials characterized most assemblages, and evidence for interaction or trade over appreciable distances was minimal. No evidence for prestige items or for Hopewellian influence was found, suggesting minimal local participation in this interaction network.

Middle Woodland burial ceremonialism remains largely unknown locally. Woodland period sand burial mounds have been reported from the Georgia and South Carolina coastal plain, including from the lower Savannah River Valley (Moore 1898; Thomas and Larsen 1979; Brooks et al. 1982). These mounds contained both extended, flexed, and secondary bundle burials, and have been interpreted as the results of collective mortuary ceremonialism by local populations. Specifically, these mound ossuary complexes are thought to represent the principal burial places for local lineages or larger social entities (Thomas and Larsen 1979; Brooks et al. 1982:56-57). No evidence for comparable features, or for burials of any kind for that matter, was found prior to the Late Woodland in the Russell Reservoir.

THE LATE WOODLAND (ca. 1,500 - 1,000 B.P.)

Introduction

During the Late Woodland period, the economic, organizational, and possibly ideological foundations of the cultural adaptation known as Mississippian developed over the southeastern United States. In northern Georgia late Swift Creek and Napier ceramics are considered secure indicators of Late Woodland components, and these wares were found in the Russell Reservoir, albeit in low incidence (Table 2, Figure 4). While Swift Creek ceramics have been documented from ca. A.D. 100 to A.D. 750 in the Georgia area, enough work has been done to differentiate earlier from later assemblages within this series (Kelly and Smith 1975; Rudolph 1985, 1986; Wood et al. 1986:339).

Early Swift Creek ceramics, delimited at sites like Mandeville, are characterized by complicated stamped designs with concentric circles, ovals, and (usually) simple curvilinear design motifs. Rims are typically notched or scalloped and tetrapods are common. Late Swift Creek ceramic assemblages, which date from ca. A.D. 500 - 750, were defined in large part through work with materials from the Swift Creek and Kolomoki sites. These assemblages are characterized by an increase in the incidence of plain pottery and folded rims, a decline in the incidence of notched and scalloped rims, and (usually) more complex complicated stamped designs with some zoned stamping. A fine-lined variant of Swift Creek, called B-Complex to differentiate it from classic south and central Georgia materials, was defined in the Buford Reservoir on the upper Chattahoochee River (Caldwell 1978). This material, which appears transitional between Swift Creek and Napier, is most typically found in the northern and eastern Georgia piedmont, including within the Russell Reservoir (Rudolph 1986; Wood et al. 1986:340-341), and appears to be a regional variant. Similar Swift Creek/Napier materials were found at the Anneewakee Creek site in northwest Georgia, where uncorrected dates of A.D. 605±85 and 755±110 were reported (Dickens 1975; Wood et al. 1986:341).

Napier ceramics, originally recognized during the excavations at Macon Plateau in the 1930s, are characterized by narrow, well executed rectilinear complicated stamping and a (typically) dark gray to black color, suggesting firing in a reducing atmosphere (Kelly 1938; Wauchope 1948:204, 1966:57-60; Caldwell 1958:44, n.d. 313-314; Fairbanks 1952:288). Very little is currently known about the people who made this ware. Some overlap is evident with both earlier Swift Creek and later initial Mississippian Woodstock series ceramics has been documented (Wauchope 1966:60, 437), suggesting the series represents terminal Woodland occupations in the area. An occurrence some time between roughly A.D. 600 to 900, and probably from ca. A.D. 700 to 800, is indicated (Wauchope 1966:60-63, 337-338). The ware is uncommon in northern and particularly eastern Georgia (Ferguson 1971:67; Garrow 1975:24; Keel 1976:221), although it has been found on a number of sites in low incidence (Rudolph 1986).

EVIDENCE FOR LATE WOODLAND OCCUPATION IN THE RUSSELL RESERVOIR

Introduction

Late Woodland assemblages were found at a small number of sites in the reservoir. Swift Creek components were found at 13 sites, while Napier sherds were reported from seven locations (Table 2). Small stemmed points thought to date to this period were found at six sites. While the incidence of diagnostics and components was low when compared with other periods, people do appear to have been present. Unfortunately no major, well defined occupations dating to this period were examined in detail. At two sites, Rucker's Bottom and Simpson's Field, dense Late Woodland components were recognized, but only a comparatively minor amount of work was actually done. Structures were found at both sites, associated with late Swift Creek materials at Simpson's Field and with a probable late "Cartersville" occupation at Rucker's Bottom.

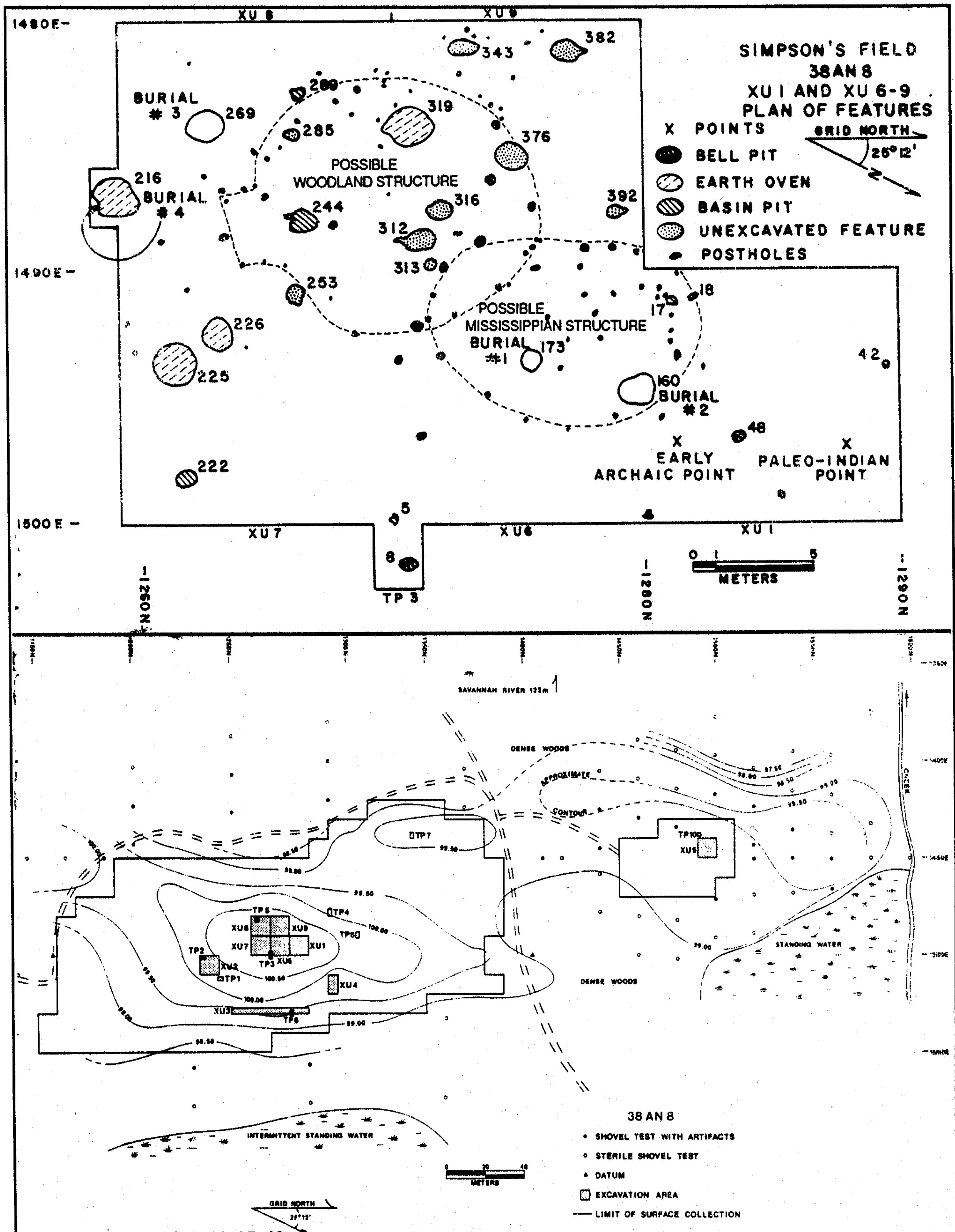
Simpson's Field (38AN8)

Introduction. At the Simpson's Field site (38AN8) an extensive Late Woodland artifact and feature assemblage was found on an older Pleistocene terrace adjacent and parallel to the Savannah (Figure 49; Wood et al. 1986:49-107). Cultural materials were typically confined to the plowzone, with features intruding into the underlying sandy/clay subsoil. While artifacts ranging in age from the PaleoIndian to the historic periods were found, the primary occupations on the site were during the Late Woodland and Mississippian periods.

Field investigations included controlled surface collection, proton magnetometer remote sensing, and the excavation of systematically dispersed shovel tests, intuitively placed test units, and wide area stripping and shovel skimming. An extensive controlled surface collection, consisting of all artifacts within 10 m grid units, was made over a 2.4 ha area of the scatter that was under cultivation. Some surface separation of the Late Woodland and Mississippian components was recognized, permitting subsequent examination to focus on major concentrations of debris within each occupation (Figure 7; Wood et al. 1986:49). Eighty five shovel tests and 10 test units were opened following the surface collection to further define the deposits (Figure 49). Using a small bulldozer, the plowzone was then removed from a 50 x 50 m block opened in the most productive part of the site, on a low rise. Some 300 square meters within this area, at the south end of the low rise, were shovel skimmed, with all features mapped and examined.

A total of 134 cultural features (out of 399 stains) were found at Simpson's Field, 16 of which could be conclusively attributed to the Late Woodland period. Of the total feature assemblage, 109 stains were found to be postholes, most of which could not be identified to period, but which were assumed to be Late Woodland in age. The Late Woodland features were found primarily in the western part of the block unit in XU's 1, and 6-9 (Figure 49). A probable Mississippian structure and three apparently associated features from the eastern portion of this same block are described in Chapter VII (pp. 304-308).

Woodland Features at Simpson's Field (38AN8). Features attributable to the Late Woodland period at 38AN8 included three bell-shaped pits, five shallow basin-shaped pits, four apparent earth ovens, a cluster of rocks and sherds, and two burials. In addition, 109 postmolds were identified, many of which probably dated to the Late Woodland era, although diagnostics were only infrequently noted in the fill (Wood et al. 1986:63-75). Although no Woodland structures were identified in the report on the work at the site, a suspicious ring of posts and other features was present in center of block that could be a possible structure ca. 8 to 10 m in diameter (Figure 49). Postmolds were widely scattered over the site, and were found in test units in most of the areas examined. Given the subsequent



Source: Wood et al. 1986: 27, 62

Figure 49. All Excavation Units and Late Woodland/Mississippian Features, XU1, Simpson's Field Site, 38AN8.

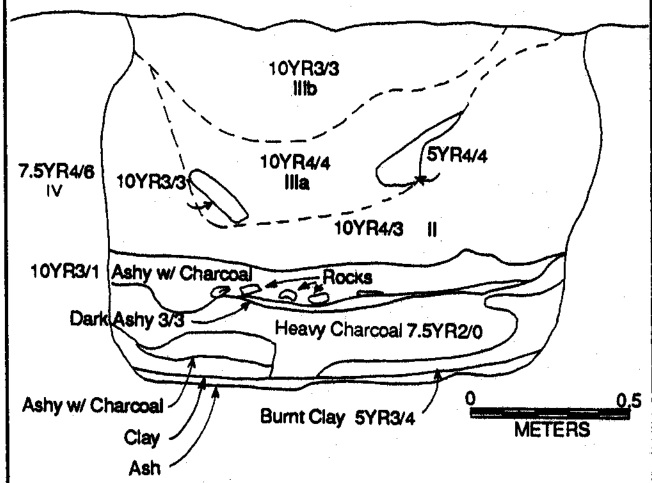
Mississippian occupation on the site, which apparently included a small structure, attributing all of the remaining posts to the Woodland component can not be justified. Wood et al. (1986:107) argued that the site Late Woodland assemblage was probably formed by at least one and possibly multiple households clustered near the crest of the rise. The clustered nature of the earth ovens may indicate communal cooking activity, or alternatively the rebuilding of the cooking facilities of a single household.

The discovery of two burials of probable Late Woodland age suggested extended site use. A human skull and mandible were found in the wall of Feature 216, a probable earth oven, and a number of extremely fragmentary pieces of bone were observed in the general fill of this feature (Wood et al. 1986:69). The remains were attributed to a child of approximately seven years of age. The earth oven, which contained both Swift Creek and Napier pottery, was assumed to have intruded the burial, and thus postdate it. In the absence of much in the way of earlier Woodland materials, the burial was dated to a somewhat earlier period of Late Woodland site use (i.e, sometime before the earth oven was built). The second burial, Feature 269, was a poorly preserved adult apparently buried in a semiflexed position facing the southeast. No grave goods were found, and the condition of the bone was so friable as to preclude its successful collection (Wood et al. 1986:74-75).

<u>Subsistence Remains</u>. Carbonized plant remains were examined from three Late Woodland features at Simpson's Field (Gardner 1986a), while pollen samples were processed from two others (Sheehan 1986). In Feature 216, a probable earth oven (Figure 50), a 25 cm thick charcoal lens near the base produced approximately nine kilograms of charcoal. Analysis of two samples totaling ca. 275 grams identified pine bark and stems (*Pinus sp.*), oak (*Quercus sp.*), unidentified ring porous and ring diffuse species, an unidentified conifer, cane (*Arundinnaria sp.*), an unidentified grass seed, an intact acorn meat, and persimmon (*Diospyrus virginiana*) and sumac (*Rhus sp.*) seeds. The presence of persimmon and sumac seeds, which ripen in the fall, and a high (ca. 1:1) nutshell to wood weight ratio, indicated pitfill probably occurred in the fall (Gardner 1986a:391).

Feature 244, a small basin-shaped pit, yielded acorn and hickory nut fragments and unidentified wood. The absence of seeds and a comparatively high nutshell to wood ratio of 1:2 suggested a winter/early spring deposition (Gardner 1986a:390-391). Feature 319, a second earth oven, yielded acorn, hickory, and butternut shell fragments, a squash rind, and maypop (*Passaflora incarnata L.*), grape (*Vitis sp.*), and polygonum (*Polygonum sp.*) seeds. The presence of grape and maypop, late summer through fall species, and a comparatively low nutshell to wood ratio of ca. 1:3.5, suggested pit deposition during the late summer or early fall (Gardner 1986:390). Some or all of the material from Feature 319, however, may date to the Mississippian period, since a sample of the charcoal yielded an uncorrected date of A.D. 1260±60 (Wood et al. 1986:106).

Profile of Feature 216, a probable earth oven, 38AN8.

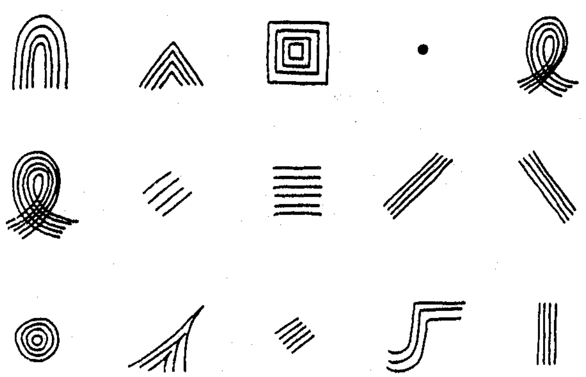


I CHARCOAL AND ASH ZONE
II MIDDEN FILL WITH ABUNDANT POTTERY
III MIDDEN SLUMP
IV SUBSOIL ORANGE SANDY CLAY

Frequency of Rim Treatment on Late Woodland Vessels From 38AN8.

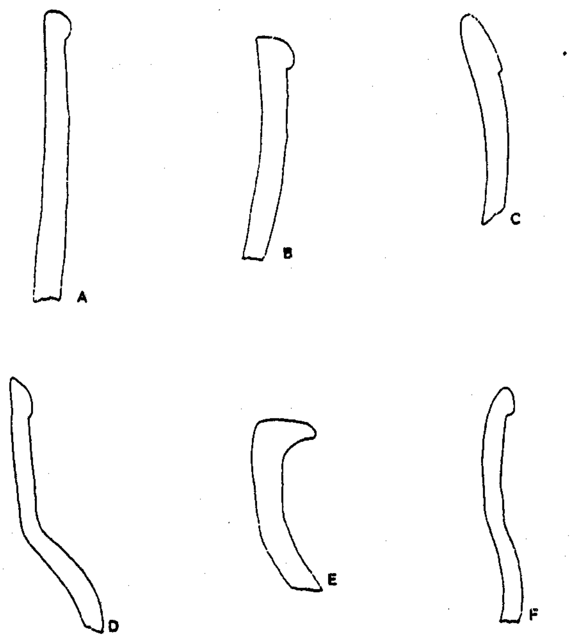
Rim Treatment	N	Percentage
Medium Fold (0.5-1.0 cm)	49	54
Large Fold (>1 cm)	6	7
Small Fold (<0.5 cm)	16	18
Fold to Interior	4	4
Straight No Fold	12	13
Flared No Fold	3	3
Totals	90	99

Swift Creek Design Elements, 38AN8.



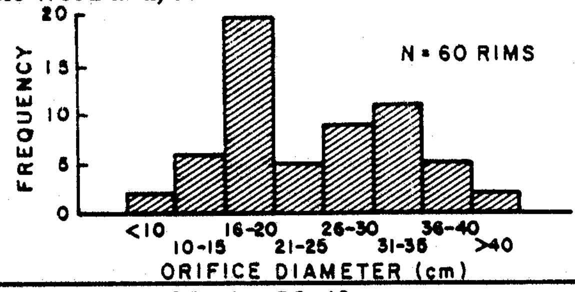
Source: Wood et al. 1986: 70, 80, 81, 100, 103, 104

Swift Creek Rim Profiles, 38AN8.



A, B: STRAIGHT SIDED JAR
C: INVERTED RIM, RESTRICTED NECK VESSEL
D, E, F: BOWL WITH SHOULDER AND RESTRICTED NECK

Frequency Distribution of Orifice Diameters, Late Woodland, 38AN8.



Co-occurrence of Design Motifs in Late Woodland Features, 38AN8.

Feature	Barred Oval with Chevron Fillers	Nested Squares	Barred Oval with Curvilinear Fillers
TRC 1	X	X	X
7	X	X	
8	X		
111	X	X	
216	X	X	X
225	X	X	
226	X	X	
244	X		
269	X		
289			
319	X		X
399	X		X
Frequency	11/12	6/12	4/12

Figure 50. Swift Creek Features and Ceramic Attributes, Simpson's Field Site, 38AN8.

The range of carbonized ethnobotanical materials in the Late Woodland features at Simpson's Field indicated site occupation took place over several months and probably over two or more seasons, including late summer, fall and winter. Year-round occupation, in fact, cannot be dismissed, although neither can it be proven. Plant species diversity was low, well below the range of species exploited elsewhere in the region at this time level, notably in the Little Tennessee River Valley (Chapman and Shea 1981). This was probably due to sampling considerations, however, specifically the low number of features that were examined, and the fact that two of them were the same category of feature, earth ovens (Gardner 1986a:392). Examination of additional Late Woodland samples from Simpson's Field, which have been curated with the reservoir assemblages, may some day lead to a more inclusive picture of subsistence practices at the site.

Pollen samples were taken from two Late Woodland features, a cluster of rocks and sherds (Feature 7), and a large bell-shaped pit (Feature 8) (Sheehan 1986:396). Although preservation was poor and counts were low, some useful information was recovered. The arboreal pollen spectra indicated the presence of a pine-oak-hickory forest, much like that present in the region today, although the occurrence of pollen from herbaceous species such as ragweed *(Ambrosia)*, the daisy tribe of the Composite family *(Tubuliflorea)*, grasses (*Graminae*), and the Cheno-Am group (*Chenopodiaceae-Amaranthaceae*) also points to open, possibly highly disturbed terrain in the immediate site area. This was interpreted as disturbance in the immediate area of structures, and possibly clearing associated with cultivation (Sheehan 1986:394; Wood et al. 1986:106).

Two grains of *Cucurbita*-type pollen from either squash or pumpkin were found in the fill of Feature 8; complementing the squash rind fragment found in the carbonized sample from Feature 319. This was the only unambiguous domesticate identified in Late Woodland context at the site, although the ragweed, daisy/sunflower, and Cheno-Am pollen may have also come from cultivated species. A heavily corroded possible maize (*Zea* sp.) pollen grain was found in Feature 7, a half-meter diameter cluster of Swift Creek and Napier sherds and small rocks. Because there is considerable interest in the occurrence of *Zea* in Woodland context in the eastern Woodlands, this association requires evaluation. Feature 7 was about 24 cm thick, and was confined to a faint stained area; its boundaries were not particularly well-defined. Charcoal from the fill yielded an uncorrected date of 80 B.C. (BETA-2625, 2030±50 B. P.; Wood et al. 1986:74), which was far too early given the Swift Creek and Napier sherds present in the fill. In light of the the poor feature definition, the spurious radiocarbon date, and the absence of additional supporting ethnobotanical evidence from the site, in the form of carbonized maize remains or additional pollen in secure context, a Late Woodland Zea association at Simpson's Field (38AN8) cannot be considered demonstrated.

Late Woodland Artifacts at Simpson's Field. Small, contracting stemmed quartz projectile points were found in apparent association with the Late Woodland component at Simpson's Field (Wood et al. 1986:75). Although recovered in surface context, they were the dominant hafted biface form on the site next to small triangular points, which were probably associated with the Mississippian occupation. Similar stemmed points were recovered at the Swift Creek type site near Macon, Georgia (Kelly and Smith 1975:66-81), and have been attributed to this period in the Big Bend area of the Oconee River (Snow 1977:99).

Other presumably Late Woodland artifacts found at the site included bifacially chipped cutting tools, a soapstone elbow(?) pipe fragment, a soapstone pin fragment, a piece of cut mica, a ground stone disk, and a quartz crystal. Quartzite grinding stones with battering and grinding facets were found in six features, and were interpreted as plant processing tools. A pitted soapstone cobble was also found that may have been a nutting stone (Wood et al. 1986:77). The presence of a range of artifacts complements the feature data in indicating extended site use in a number of activities. Debitage recovered from the site was described as "overwhelmingly quartz and represented maintenance activities rather than tool manufacture" (Wood et al. 1986:77).

<u>Late Woodland Ceramics at Simpson's Field</u>. The ceramics recovered from Simpson's Field comprise the best documented Swift Creek/Napier assemblage found in the reservoir, and one of the best documented assemblages on this time level in north Georgia. A total of 298 Swift Creek and 59 Napier Complicated Stamped sherds were found at the site. These types were typically found in direct association with one another in feature fill, suggesting contemporaneous manufacture, use, and discard. Design motifs included ovals, teardrops, chevrons, concentric circles, squares, rectangles, and parallel lines (Wood et al. 1986:77; Figures 50, 51). Vessel forms present included straight sided jars, incurvate bowls, shouldered bowls, and jars with restricted orifices and shoulders. Design and MNI vessel analyses were conducted with the ceramics found in 12 of the identifiable Late Woodland features on the site. Identical design motifs were found in a number of features (Figure 50; Wood et al. 1986:100), suggesting a single comparatively brief but intensive occupation (under one or a few years), rather than several short term, widely separated occupations. More extended occupation, lasting more than one or a few years, was also not indicated (Wood et al. 1986:102).

Plain vessels were typically extensively smoothed or burnished; the great majority of the rims were folded (ca. 83 percent; Figure 50). Vessel size and shape were difficult to determine from the sherds present. A bimodal vessel diameter distribution was indicated, with modal sizes around 16 - 20 cm and 31 - 35 cm (Figure 50), possibly reflecting individual and family cooking utensils, or serving versus storage vessels, respectively.

The Late Woodland vessels from Simpson's Field were characterized by the following attributes:

> (1). Curvilinear complicated stamping motifs were commonly used with ovals or teardrops and filled with parallel lines. Filler elements were often rectilinear chevrons or curvilinear lines. Rectilinear nested squares, rectangles, or diamonds were also popular.

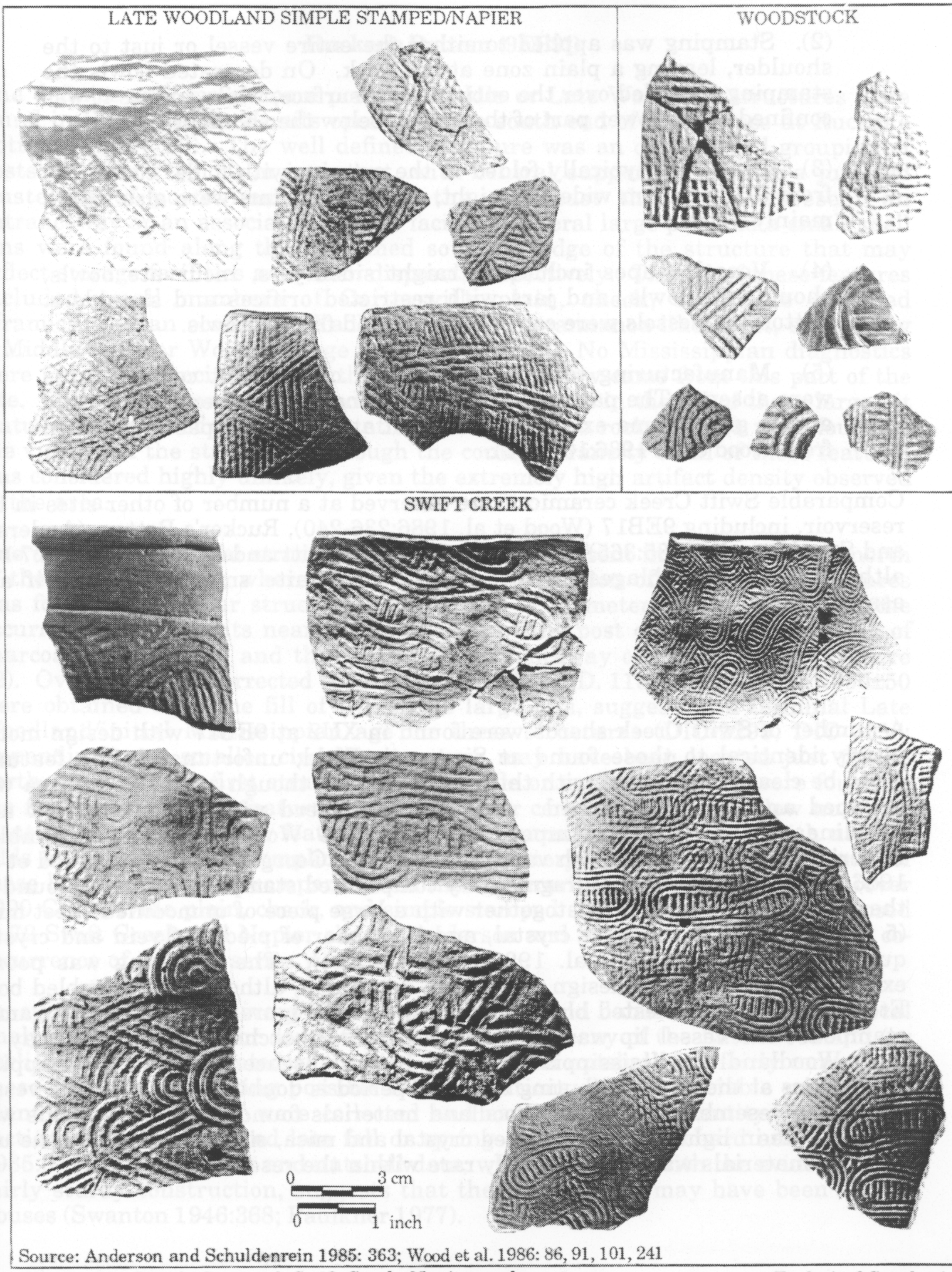


Figure 51. Simple Stamped, Swift Creek, Napier, and Woodstock Ceramics, Richard B. Russell Reservoir Area.

(2). Stamping was applied to either the entire vessel or just to the shoulder, leaving a plain zone at the neck. On decorated bowls the stamping extended over the entire vessel surface, while on jars it was confined to the lower part of the vessel, below the shoulder.

(3). Rims were typically folded to the exterior with folds commonly from 0.5 to 1.0 cm wide. Straight, unmodified rims were also found, mainly on jars.

(4). Vessel shapes included straight sided jars, incurvate bowls, shouldered bowls, and jars with restricted orifices and shoulders. Bottoms of vessels were conical for jars and flat for bowls.

(5). Manufacturing techniques included coiling, but coil fractures were absent. The paste was hard and generally tempered with sand and/or grit. Some examples exhibited a very sandy paste (adapted from Wood et al. 1986:104-105).

Comparable Swift Creek ceramics were observed at a number of other sites in the reservoir, including 9EB17 (Wood et al. 1986:236-240), Rucker's Bottom (Anderson and Schuldenrein 1985:365), and Gregg Shoals (Tippitt and Marquardt 1984:7-15), although the assemblages at these sites were quite small, with few if any associated features.

9EB17 (Transect 21)

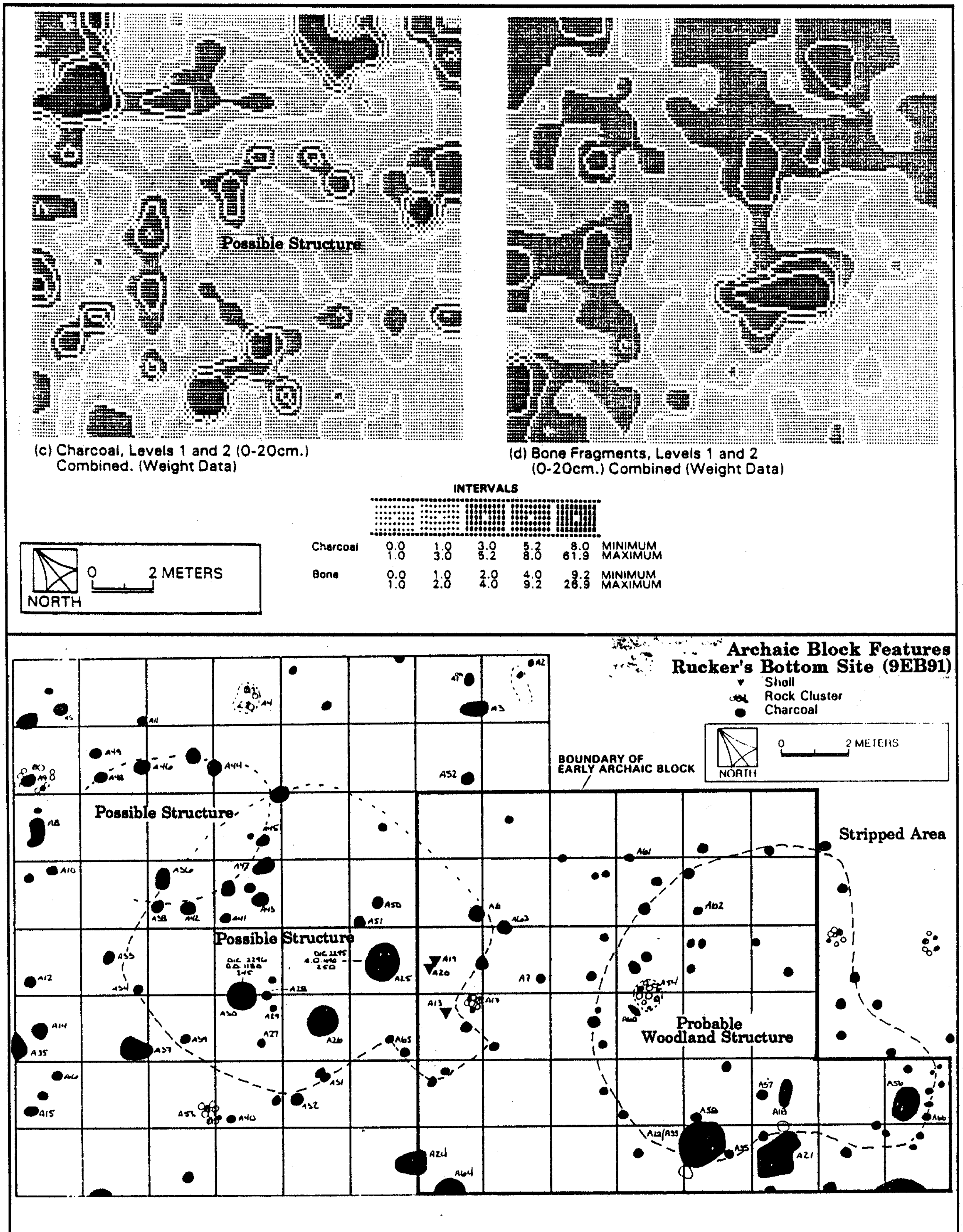
A number of Swift Creek sherds were found in XU2 at 9EB17 with design motifs nearly identical to those found at Simpson's Field; unfortunately, no features could be clearly associated with this material, even though a 10 x 20 m area was stripped and shovel skimmed. One unusual sherd with a zoned check and rectilinear complicated stamped motif may be Woodstock, and resembled materials found in the Etowah valley of northwest Georgia (Figure 51; Wood et al. 1986:240-241). An unusual fragmentary complicated stamped vessel was found in the fill of Feature 13 in XU2, together with a large piece of unmodified sheet mica (5 x 4.5 x 1.5 cm), a quartz crystal, and a number of pieces of vein and crystal quartz debitage (Wood et al. 1986:240, 242, 244). The stamping was poorly executed, rendering the design difficult to determine, although it resembled both Etowah stamped or nested blocks (Wauchope 1966:Figure 217) and crude Lamar stamped. The vessel lip was irregularly scored or hatched. The vessel may be later Woodland or Mississippian in age. In the absence of other Mississippian diagnostics at the site, attributing it to this period is doubtful, although the vessel in no way resembled the other Woodland materials found on the site. This was unfortunate in light of the associated crystal and mica, since evidence for the use of these materials was comparatively rare within the reservoir.

Rucker's Bottom (9EB91)

One definite and one or more possible Middle or Late Woodland structures were found in the large block units opened at the south end of the terrace at Rucker's Bottom (Figure 52). The well defined structure was an oval-shaped grouping of posts roughly 7 by 10 m in extent, with central support posts and a jumbled clustering of posts immediately to the southeast that may represent an entranceway or an associated storage facility. Several large pits and a small shell lens were found along the presumed southern edge of the structure that may reflect storage facilities and trash disposal, respectively. The fill of these features included small numbers of Cartersville plain, check, or simple stamped ceramics, and an occasional Yadkin or Otarre/Swannanoa-like point, suggesting a Middle or later Woodland age for the structure. No Mississippian diagnostics were found in association with these features, and few came from this part of the site. Only trace amounts of wood charcoal were found in the fill of these large pit features, in spite of extensive flotation efforts. Three rock clusters were found in the vicinity of the structure, although the contemporaneity of all of these features was considered highly unlikely, given the extremely high artifact density observed in the area.

One or more additional structures may have been present in the area to the north of the first structure, where an irregular concentration of pit and post features was found. A circular structure roughly 8 m in diameter was suggested by the occurrence of large pits near the south side of the post concentration, an arc of charcoal in this area, and the hint of an entranceway on the southeast (Figure 52). Overlapping uncorrected radiocarbon dates of A.D. 1180±45 and A.D. 1090±50 were obtained from the fill of two of the large pits, suggesting a terminal Late Woodland/initial Mississippian age for these structures (DIC-2295, DIC-2296; Appendix I). A smaller circular structure may have been located just to the north. As with the first structure, Cartersville or earlier ceramics were found in the fill of many of the features. Probable later ceramics present in low numbers in at least a few of these features included a burnished plain ware with narrow folds and Swift Creek Complicated stamped pottery. Given the low incidence of these later wares when compared with the Cartersville materials on the site (over 2000 Cartersville plain, check, and simple stamped sherds were found, as opposed to 72 Swift Creek and Napier sherds; Anderson and Schuldenrein 1985:321), a co-occurrence of the two series was suggested.

In spite of an intensive program of flotation and laboratory ethnobotanical analysis, no evidence for domesticates was found in any of the Late Woodland (or earlier) features excavated at the site. Carbonized nutshell was fairly common in these features, indicating possible fall occupations, and appreciable use of wild plant foods. Shellfish were collected and eaten in small quantity, and a thin section analysis indicated late fall or spring collection (Blanchard and Claassen 1985:672). The shellfish and nutshell data, when combined with the evidence for a fairly sturdy construction, suggests that these structures may have been winter houses (Swanton 1946:368; Faulkner 1977).



Source: Anderson and Schuldenrein 1985: 351, 372

Figure 52. Charcoal, Bone, and Feature Distribution 16 x 16 m Block Area, Rucker's Bottom Site, 9EB91.

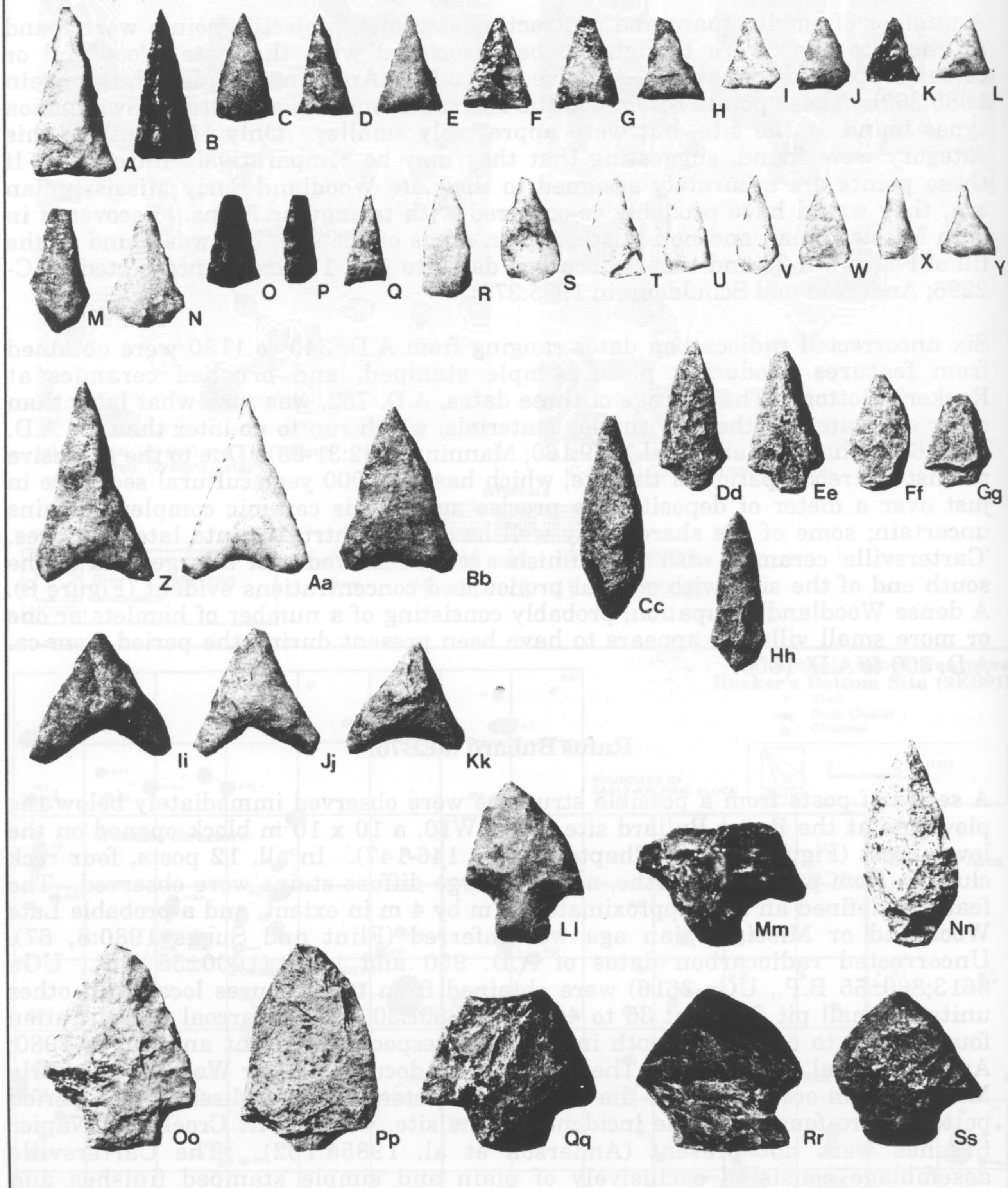
A number of small square and contracting stemmed projectile points were found at the site that were thought to be associated with the Late Woodland or Mississippian occupations (Figure 53:cc-hh; Anderson and Schuldenrein 1985:369). These points resembled the Morrow Mountain and Otarre/Swannanoa types found at the site, but were appreciably smaller. Only 15 points of this category were found, suggesting that they may be comparatively infrequent. If these points are accurately assigned to the Late Woodland/Early Mississippian era, they would have probably co-occurred with triangular forms. Recovered in both Mississippian and non-Mississippian areas of the site, one was found in the fill of Feature A-30 and was radiocarbon dated to A.D. 1180±45, uncorrected (DIC-2296; Anderson and Schuldenrein 1985:379).

Six uncorrected radiocarbon dates ranging from A.D. 340 to 1180 were obtained from features producing plain, simple stamped, and brushed ceramics at Rucker's Bottom. The average of these dates, A.D. 782, was somewhat later than other estimates for these or similar materials, which run to no later than ca. A.D. 500 - 600 (Chapman and Keel 1979:160; Manning 1982:31-35). Due to the extensive prehistoric reoccupation of the site, which has a 10,000 year cultural sequence in just over a meter of deposits, the precise age of this ceramic complex remains uncertain; some of the sherds may well have been intrusive into later features. 'Cartersville' ceramics with these finishes were observed over a large area at the south end of the site, with several pronounced concentrations evident (Figure 8). A dense Woodland occupation, probably consisting of a number of hamlets or one or more small villages, appears to have been present during the period from ca. A.D. 300 to A.D. 1000.

Rufus Bullard (9EB76)

A series of posts from a possible structure were observed immediately below the plowzone at the Rufus Bullard site in S30W10, a 10 x 10 m block opened on the levee crest (Figure 48; see Chapter V, pp. 146-147). In all, 12 posts, four rock clusters from probable hearths, and two large diffuse stains were observed. The features defined an oval approximately 7 m by 4 m in extent, and a probable Late Woodland or Mississippian age was inferred (Flint and Suggs 1980:8, 67). Uncorrected radiocarbon dates of A.D. 950 and 1090 (1000±55 B.P., UGa 3613;860±55 B.P., UGa-3616) were obtained from two features located in other units, a small pit found at 35 to 40 cm in S80E30 and a charcoal concentration found at 47 to 52 cm in depth in S40W30, respectively (Flint and Suggs 1980; Anderson et al. 1985a:154). These dates may document later Woodland or early Mississippian occupations at the site. Both Cartersville and Mississippian period pottery were found in some incidence at the site, while Swift Creek and Napier finishes were not present (Anderson et al. 1985a:162). The Cartersville assemblage consisted exclusively of plain and simple stamped finishes and appears to have been fairly late, possibly dating to the Late Woodland period.

Source: Anderson and Schuldenrein 1985: 378



Woodland and Mississippian period hafted bifaces from the Rucker,s Bottom site (9EB91). a-y Mississippian Triangular; z-bb,ii-kk Yadkin Triangular; cc-hh unidentified Woodland Stemmed; ll-ss Otarre Stemmed-like hafted bifaces recovered from the floor of Mississippian period Structure 2.

Figure 53. Woodland and Mississippian Period Projectile Points, Richard B. Russell Reservoir Area.

Gregg Shoals

A number of curvilinear and rectilinear stamped sherds were found in the upper three zones (0 to 60 cm) of the 8 x 8 m excavation block at Gregg Shoals (Tippitt and Marquardt 1984:7-15 to 7-21). The curvilinear designs were similar to Early Swift Creek motifs, while the rectilinear designs resembled those found in Late Swift Creek. Both large and small triangular projectile points resembling the Yadkin and Caraway types were found in the same levels (Figure 29), but could not be assigned to any specific period due to the mixed nature of these levels. Debitage in these levels was almost entirely vein or crystal quartz, with only trace amounts of metavolcanics and chert (Figure 27).

THE LATE WOODLAND IN THE UPPER SAVANNAH RIVER IN LIGHT OF THE RUSSELL RESERVOIR INVESTIGATIONS

Chronology and Sequence Definition

The nature of the Woodland cultural sequence along the upper Savannah, even after the Russell Reservoir investigations, remains the subject of considerable ambiguity and confusion (Gardner 1984b:48-61; Anderson and Schuldenrein 1985:338-365; Anderson 1985a; Rudolph 1985). Only one major component readily accepted as Late Woodland in age was found, the initial Late Woodland Swift Creek assemblage at Simpson's Field that was dated from ca. A.D. 600 to 750. While probable Late Woodland components were found at Rucker's Bottom and Rufus Bullard sites, the associated ceramic assemblages - plain, burnished plain, simple stamped, and brushed pottery - more closely resembled supposed Middle Woodland Cartersville materials from the surrounding region.

The relationship between the seemingly contemporaneous Swift Creek and Cartersville assemblages found in the upper Savannah River will need to be resolved for an effective local chronology to emerge. The apparent absence of Cartersville ceramics in the Swift Creek features at Simpson's Field, and the low incidence of Swift Creek ceramics at Rucker's Bottom and Rufus Bullard, suggests that temporal or cultural differences of some kind existed between the makers of these wares. A cultural rather than a temporal difference appears the most likely, since the contemporaneity of Swift Creek and Cartersville or related ceramics has been noted at a number of sites in the general region (e.g., Kelly and Smith 1976:48; Chapman and Keel 1979:157; Kelly 1979:2; Manning 1982:31). The nature of this interaction remains unknown, however. The regional distribution of these wares may reflect the occurrence of differing groups or cultural entities. In this view, the assemblages found in the upper Savannah River area may represent overlap in the annual ranges or placement of settlements by the Swift Creek populations living predominantly in central and southwest Georgia area and the makers of Cartersville and Connestee ceramics living predominantly in the piedmont and Appalachian Summit area. Alternatively, the Swift Creek wares found in the northeast Georgia piedmont may be special "ceremonial" or trade vessels used by local populations making less elaborate ceramics. Given their occurrence in general feature fill at Simpson's Field, this latter explanation appears unlikely

Few sites with Swift Creek or Napier ceramics were found in the Russell Reservoir area, and the wares are uncommon in the vicinity of the eastern Georgia and western South Carolina piedmont (Wauchope 1966:436-438; Ferguson 1971:67; Garrow 1975:24; Keel 1976:221-222). While recent analyses suggest they actually occur on appreciable numbers of sites (Rudolph 1985, 1986), a decrease in incidence is clearly evident proceeding from west to east into the South Carolina piedmont. The infrequent occurrence of Swift Creek and Napier ceramics from the Savannah River east suggests that either the region was sparsely populated during the Middle/Late Woodland or that other wares were in use. The assumption here is that other wares, characterized by plain, simple stamped, and brushed finishes were in use. Advocating depopulation based on the absence of diagnostics found in other areas can only have merit if it can can be convincingly shown that no contemporaneous assemblages were present. As recounted previously, Woodland sequences characterized by other diagnostics have been well-documented along the lower Savannah River, across the South Carolina coastal plain, and in the piedmont and mountainous regions of western North Carolina.

An alternative explanation for the low incidence of Late Woodland sites in the reservoir attributed their general absence to depositional conditions (T. Rudolph 1986). This inference, that later Woodland sites characterized by Swift Creek and Napier ceramics were common but were archaeologically invisible because of extensive historic period sedimentation in floodplain areas, does not appear to be borne out. Few Late Woodland artifacts were found in the numerous floodplain testing columns excavated in floodplain and island areas (Thompson and Gardner 1983; Gardner et al. 1983), and during other large scale data recovery projects.

The evidence from the project area suggests that plain and simple stamped wares traditionally documented as Cartersville or Connestee may extend later in time than previously thought in the upper Savannah River, to ca. A.D. 800 to 1000. Eight radiocarbon dates for plain and simple stamped ceramics from the Russell Reservoir were late Middle Woodland to early Mississippian in age (Appendix I). A Late Woodland/Early Mississippian simple stamped series has been documented from the coastal plain of South Carolina (Anderson 1982:308), and similarly late dates have been cautiously advanced for the end of the Connestee series in the Appalachian Summit (Keel 1976:225). While the Connestee series is traditionally dated much earlier, from ca. A.D. 200 to 600, 18 of the 27 radiocarbon dates attributed to the period postdate A.D. 600 (Keel 1976:Table 32; Purrington 1983:142). Over the course of the Woodland changes in paste were evident in the Russell Reservoir area, from coarser to finer sand, a trend also noted in the Appalachian Summit (Keel 1976:247, 256, 260). A replacement (with some co-occurrence) of a heavily sand and grit tempered linear check, check, and simple stamped Deptford-like assemblage by a finer tempered Cartersville series with the same finishes was observed, with these replaced in turn by plain, simple stamped, and brushed Cartersville materials. Elsewhere in north Georgia, at Cane Island (Wood 1981:29), Booger Bottom (Caldwell et al. 1952:320, 326), and apparently at Two Run Creek (Wauchope 1966:226), a replacement of check and simple stamped ceramics by simple stamped ceramics has been documented. Given this evidence, the existence of a Late Woodland horizon characterized by plain, simple stamped, and brushed 'Cartersville' finishes, and contemporaneous with Swift Creek and Napier assemblages, is plausible in the upper Savannah River Valley (see also Anderson 1985a:40-44). Projectile points in use during the Late Woodland period appear to have been larger Yadkin-like Triangulars, and possibly Mississippian Triangulars, although no good evidence for use of these smaller forms was found. Small stemmed points were found in probable Late Woodland context at both the Simpson's Field and Rucker's Bottom sites, suggesting this form was in use as well.

Late Woodland Settlement

Given the absence of a reliable local cultural sequence, it is difficult to talk about Late Woodland settlement in the upper Savannah River region with any degree of confidence. At the present the only unambiguous occupations dating to this period are those characterized by late Swift Creek and Napier ceramics. Anderson phase terminology has been tentatively advanced to accommodate sites in the upper Savannah River area dating from ca. A.D. 600 to 750 and characterized by the co-occurrence of Swift Creek and Napier pottery (Wood et al. 1986:236, 342, 390). Named for the occupation at the Simpson's Field site in Anderson County, South Carolina, very little is actually known about these occupations, and phase definition would appear premature. The presence of structures, earth ovens, and burials, and limited evidence for the cultivation of domesticates such as squash indicates extended occupation of the area was occurring. Subsistence pursuits directed to a range of wild plant foods were well documented, and there was also evidence for cultivation. No reliable evidence for the cultivation of corn was found, although a possible maize pollen grain was found in a feature dating to this period.

The small number of sites where identifiable Swift Creek or Napier ceramics were found suggests a low local population density, at least by groups using these wares. The infrequent occurrence of Napier and Swift Creek complicated stamped wares in the Savannah River region and areas to the east may indicate comparatively minimal interaction between groups using these wares, which are common in southwestern and western Georgia, and local Woodland groups. These local populations, it has been argued, employed ceramics characterized by plain, simple stamped, and brushed ceramics that have been traditionally subsumed within the Cartersville and Connestee series. In this view, where Swift Creek and Napier ceramics have been found in the Savannah River region, they may document brief occupations by groups based elsewhere. They may also signal groups involved in trade and ceremonial networks, and possibly more responsive to change (Wood et al. 1986:343).

VII. THE RISE AND DEMISE OF CHIEFDOMS: MISSISSIPPIAN OCCUPATIONS

INTRODUCTION

The last 500 years or so before European contact saw the emergence of complex chiefdom level societies throughout the southeast. The appearance of sedentary communities, intensive maize agriculture, platform mounds, and a ranked hierarchical society characterized this adaptation throughout the region (Griffin 1967; Smith 1978). Major settlements tended to occur on the terraces and levees of major drainages, and intensive utilization of both cultigens and wild plant and game resources was indicated (Figure 54). In the South Appalachian area the complicated stamped pottery tradition established in the Woodland continued, and variations in design motif, rim treatment, and other incidental decoration have proven to be highly sensitive chronological markers.

Large numbers of Mississippian sites were found during the investigations in the Richard B. Russell Reservoir, with only the Middle Archaic period yielding a greater number of identified components (Table 2, Figures 3, 4). Mississippian ceramics were found at 110 sites, while small triangular projectile points were found on 43 sites. Examining component distributions within the overall Mississippian assemblage, using diagnostic ceramics to provide fine grained temporal control, a clear pattern of increase can be noted over the Early and Middle Mississippian, followed by a precipitous decline in the Late Mississippian (Figure 4). The numbers of components present in the project area rose continuously for several centuries, from a low of five during the Woodstock period to 14 during the Etowah (Jarrett phase), 27 during the Savannah (Beaverdam phase), and 46 during the Early Lamar (Rembert phase) periods. After A.D. 1450 a dramatic change occurred. Only six post-Early Lamar components could be identified (all apparently small sites), indicating a massive population decline had taken place. This has been linked to larger, region-wide phenomena occurring at this time. Archaeological evidence collected from over the South Appalachian area in recent years has documented a near-total abandonment of the middle and lower course of the Savannah River Valley during the Late Mississippian, which has in turn been tied to patterns of warfare and competition between societies throughout the Georgia-South Carolina area (e.g., Hudson et al. 1985, 1987; Hally et al. 1985; Anderson et al. 1986; Anderson 1986a, 1986b, 1987a, 1987b, 1988b). This topic is discussed in greater detail at the close of this chapter, following the presentation of evidence from the reservoir.

Using the massive, well controlled excavation assemblage from the Beaverdam Creek Mound excavations as an analytical starting point, coupled with the examination of collections from the Rembert, Chauga, Tugalo, and Estatoe mound sites, and comparisons with sites from further afield in the South Appalachian area, Hally (in Rudolph and Hally 1985:261-280, 456-459; Anderson et

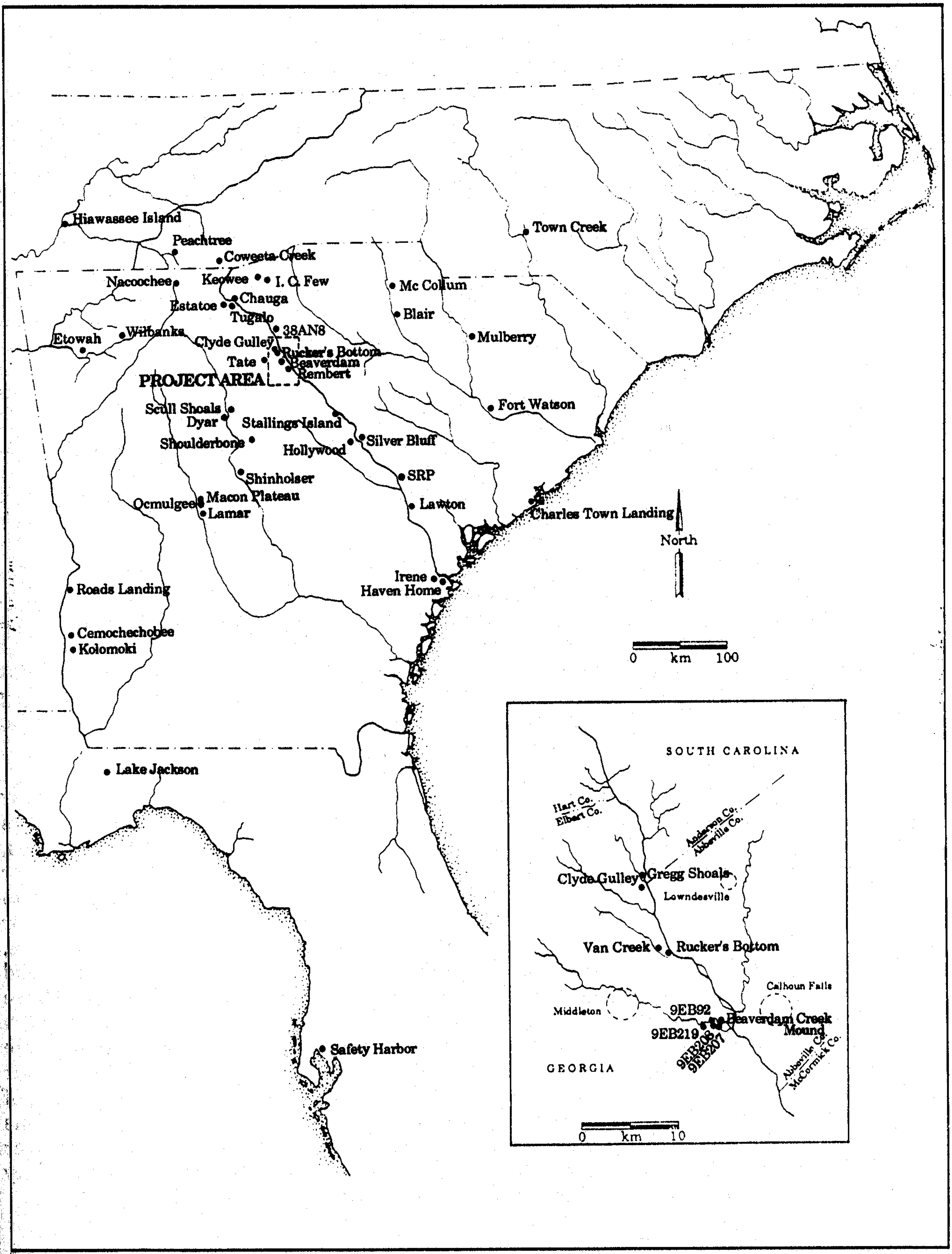
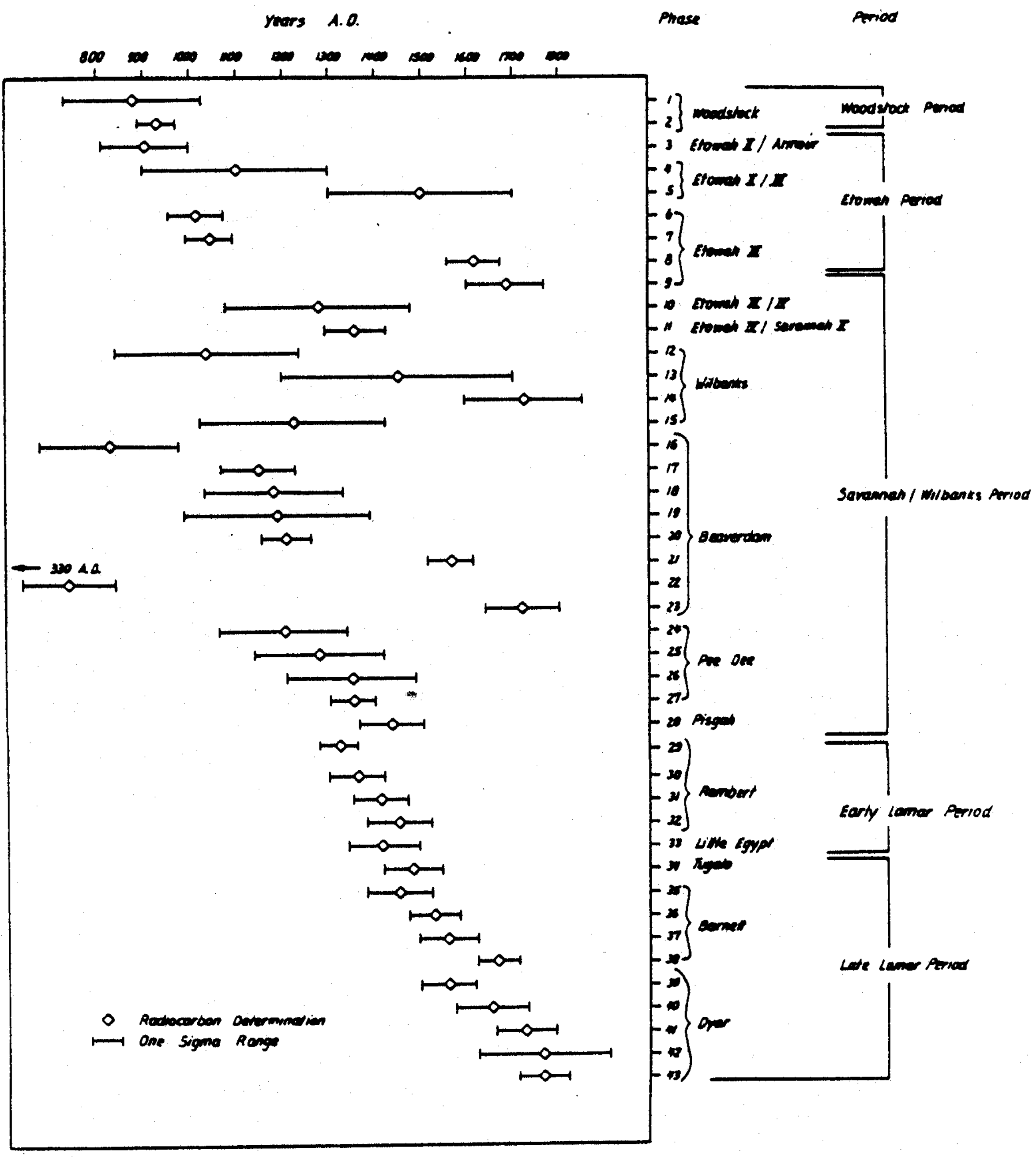


Figure 54. Mississippian Sites, Richard B. Russell Reservoir and Vicinity.

al. 1986:38-42) has developed a Mississippian cultural sequence for the Russell Reservoir area that has structured analyses and interpretations of late prehistoric assemblages in the middle Savannah River region. Documented phases include Jarrett (ca. A.D. 1100 -1200), Beaverdam (ca. A.D. 1200 - 1300), Hollywood (ca. A.D. 1250 - 1350), Rembert (ca. A.D. 1350 - 1450) and Tugalo (ca. A.D. 1450 - 1600). This cultural and chronological sequence has been supported by a lengthy series of radiocarbon dates (Figure 55; Rudolph and Hally 1985:462-470). The ceramic sequence developed by Hally is briefly recounted here, to delimit how components of these periods were identified.

Woodstock phase components in the upper Savannah River Valley are identified by the presence of Woodstock Complicated Stamped ceramics, which have been shown to be ancestral to Etowah in northwest Georgia (Sears 1958). Components of the succeeding Jarrett phase are characterized by Etowah Complicated Stamped (primarily variations on the nested diamond motif), check stamped, and a red filmed ware. Complicated stamped designs were dominated by rectilinear motifs, which accounted for the vast majority of all complicated stamped sherds. Corncob impressions around vessel necks and shoulders and collared rims forms occurred in low numbers. In the ensuing Beaverdam phase the red filmed ware disappeared and Etowah Complicated Stamped declined appreciably. Check stamping increased and Savannah Complicated Stamped appeared, with concentric circles the most common motif. The incidence of curvilinear design motifs increased markedly, while the incidence of collared rims (with notched, fine incised, or punctated designs) and corncob impressing increased slightly. During the Hollywood phase check stamping became predominant, followed by Savannah Complicated Stamped, the latter dominated by variations on the filfot cross motif. Cane punctations, riveted nodes, and rosettes appear, resembling materials from the Pee Dee phase in North Carolina (Reid 1965, 1967). Corncob impressing continues in low incidence, while collared rims disappear.

During the Rembert phase assemblages were characterized by Lamar Complicated Stamped pottery, with both curvilinear and rectilinear motifs present. Design motifs included concentric circles, figure nines, filfot crosses, line blocks, and herring bones. Check stamping nearly disappears, while Lamar Bold Incised makes its first appearance in low quantity. Incised vessels dating to this period are characterized by simple designs formed using typically two or three broad lines. Cane punctations, rosettes, and nodes continue on vessel rims, and finger pinching appears. Rims included both folded and unfolded forms, and narrow appliqued strips appear. Late prehistoric/protohistoric Tugalo phase Mississippian components were characterized by a pronounced increase in Lamar Complicated Stamped (generally similar to that observed during the Rembert phase, although with slightly wider design elements) and by Lamar Incised, which has more complex designs made from a larger number of (typically) narrower lines (see also Duncan 1985). Folded and pinched rims dominate jar assemblages, and rim fold and appliqued strip width increases over earlier periods (Rudolph 1983:90-93). Red filming again appears, as a minority ware (adapted from Hally, in Anderson et al. 1986:38-42).



Source: Rudolph & Hally 1985: 467

Figure 55. Mississippian Radiocarbon Chronology for the Georgia/South Carolina Piedmont.

EVIDENCE FOR MISSISSIPPIAN OCCUPATION IN THE RUSSELL RESERVOIR: MAJOR EXCAVATION ASSEMBLAGES

Introduction

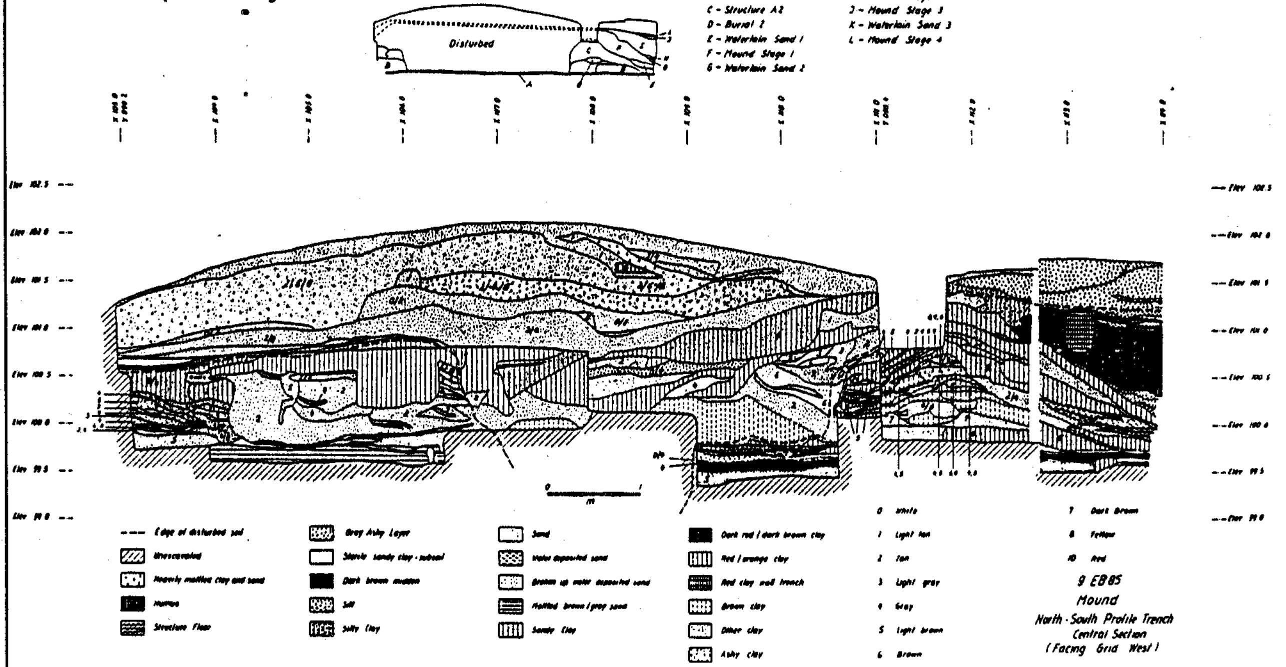
Two major Mississippian assemblages were examined in detail in the Russell Reservoir area, the Beaverdam Creek Mound site, and Rucker's Bottom, a small agricultural village located 12 m upstream. The two sites, taken together, provide insight into the structure, operation, and evolution of a small Mississippian society in the Savannah River basin. These sites, a small ceremonial center and one of its presumed subsidiary village, illustrate in microcosm the sacred and secular sides of a local Mississippian polity. The relationship between the elite and ordinary citizens can be seen in the records of these two sites, in life as well as in death. The site histories, in turn, document the emergence, peak, and decline of these settlements, shedding light, in a small way, on the evolution of chiefdom-level societies.

Beaverdam Creek Mound (9EB85)

Introduction. The Beaverdam Creek mound and village site was located on a broad floodplain overlooking Beaverdam Creek approximately 0.8 km from the confluence of the creek with the Savannah River (Figure 56). The site, which consisted of a small mound and ca. 1.5 ha village area, was occupied during the twelfth and thirteenth centuries A.D. when two superimposed earthlodges followed by four platform mound stages were erected. Extensive excavations at the site in 1980 and 1981 documented the surviving record of the mound's construction and use, while stripping at several locations in the village area exposed large numbers of features, including one structure (Rudolph and Hally 1985).

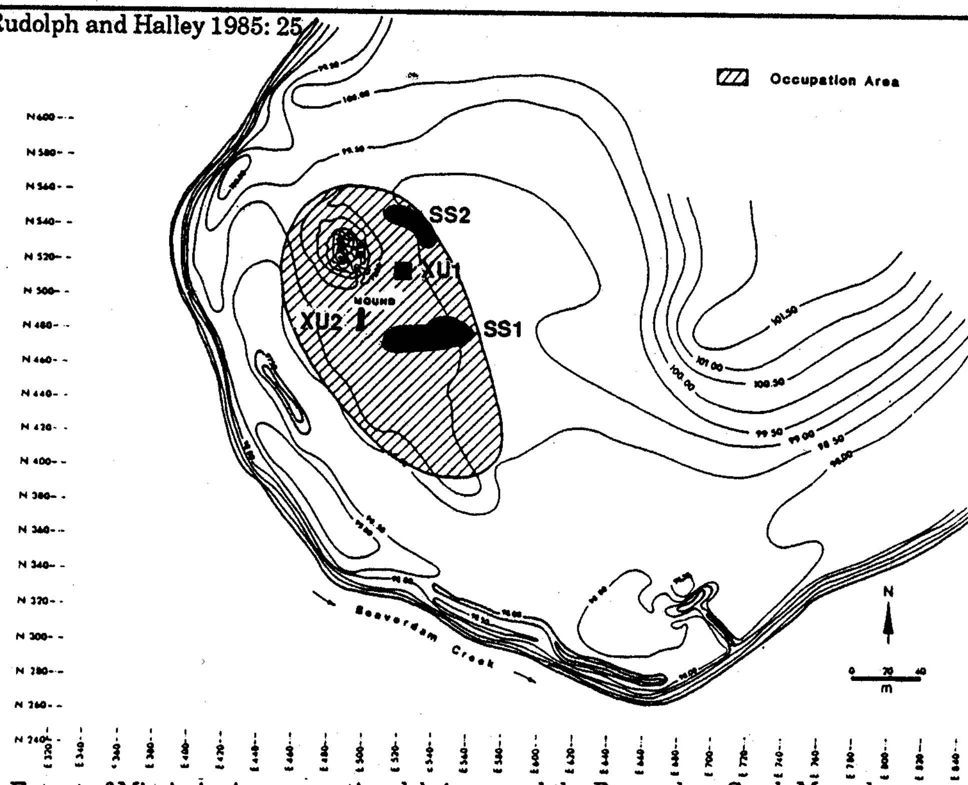
Prior to the construction of the Russell Lake, Beaverdam Creek was about 48 km long with a narrow drainage basin. The floodplain around the Beaverdam Creek site consisted of well drained Toccoa fine sandy loams, and a comparatively high incidence of floodplain soils characterized this section of the river valley (Rudolph and Hally 1986:16). Heavy flooding would have occasionally inundated the area surrounding the mound, and waterlain sands were found on the margins of several of the mound stages, as well as overlying the historic plowzone at the site. An old flood chute of Beaverdam Creek was located to the north of the site that may have held water during the period of occupation. At the time of the excavations the site area was densely overgrown, with the last cultivation occurring some time in the 1940s. Palynological investigations conducted at the site indicated a mixed pine and oak community had been present during the premound era. Both pine and non-arboreal pollen were heavily represented, indicating that the area around the site was in an early stage of succession, something possibly related to field clearing. When the platform mound stages were under construction the incidence of pine was even higher, and traces of

Source: Rudolph & Hally 1985: 57



North-South profile trench, central section, Beaverdam Creek Mound.

Source: Rudolph and Halley 1985: 25



Extent of Mississippian occupation debris around the Beaverdam Creek Mound. Most materials were found over an approximately 15,000 square meter area stretching to the southeast of the mound.

Figure 56. Mound Cross Section and Village Midden Area, Beaverdam Creek Mound and Village Site, 9EB85.

maize pollen were found, suggesting increased field clearing associated with intensive agriculture (Fish 1985:411-416; Rudolph and Hally 1985:27-28).

Field Investigations. The Beaverdam Creek site was first recorded by Hutto (1970:21-23), who noted that the site had been extensively vandalized. In 1971 Joseph Caldwell conducted an eight week field school at the site, opening twelve 10 x 10 ft squares in a trench through the mound. This work was hampered by vandalism and poor weather, and the badly disturbed deposits rendered interpretation difficult. A report of the fieldwork, prepared after Caldwell's death (Lee 1976) concluded that the site represented the largely destroyed remnant of a multistage Savannah period platform mound with elaborate burials in the fill. A copper covered celt, in fact, was found in a pothunter spoil pile. The site was revisited by Taylor and Smith (1978) who conducted shovel testing in the area around the mound, documenting a thin midden at distances of up to ca. 50 m from the mound. This was described as probable associated village debris, and the area away from the mound was thereafter called the village. In 1979 the site was revisited by archaeologists from Thunderbird Research Corporation, who opened three shovel tests, several auger holes, and a 1 x 2 m and a 1 x 1 m test unit into the village area, finding evidence for intact feature and midden deposits up to 50 m southeast of the mound (Gardner et al. 1983:276-284).

During 1980 and 1981 the site saw extensive excavation by a team of archaeologists from the University of Georgia under the direction of David J. Hally and James L. Rudolph. Mound excavations began by cleaning out Caldwell's 1971 3.0 x 27.0 m trench through the mound, and cutting back the walls to expose new profiles. Cross trenches were then hand excavated along cardinal directions to further delimit the stratigraphy. Disturbed soil from potholes was then removed by hand and with the backhoe. As the excavations proceeded, it became apparent that the mound orientation had shifted somewhat during construction. A series of diagonal trenches were opened to clarify the stratigraphic picture, and excavation proceeded by peeling back exposed construction episodes where surviving portions could be delimited. Following documentation of these stages, a backhoe was used to remove the remaining mound fill, and a large area below the mound was shovel skimmed and mapped (Figure 58).

All fill was processed using 1/4 inch mesh, with flotation samples taken from feature and midden areas. Much of the fill was removed by hand, with heavy machinery used to remove disturbed or sterile deposits, or deposits that had been thoroughly sampled. Village areas were examined using post hole tests, test pits, backhoe trenches, block excavation units, and machine stripping (Rudolph and Hally 1985:46-51). Fifty two post hole tests aligned on a 50 m grid, followed by 12 ca. 1 x 2 m test pits and 10 backhoe trenches 12 to 46 m in length were opened over the site to delimit the extent of surviving midden deposits (Figure 56). Two large blocks, XU1 and XU2, placed in areas of apparent feature concentrations were hand excavated, following removal of overburden to the top of the midden with a backhoe. XU1, to the east of the mound, measured 10 x 13 m, while XU2, to the south of the mound, measured 6 x 20 m (Figures 56, 57). A bulldozer and a motor grader were then used to remove the overlying plowzone and midden from two

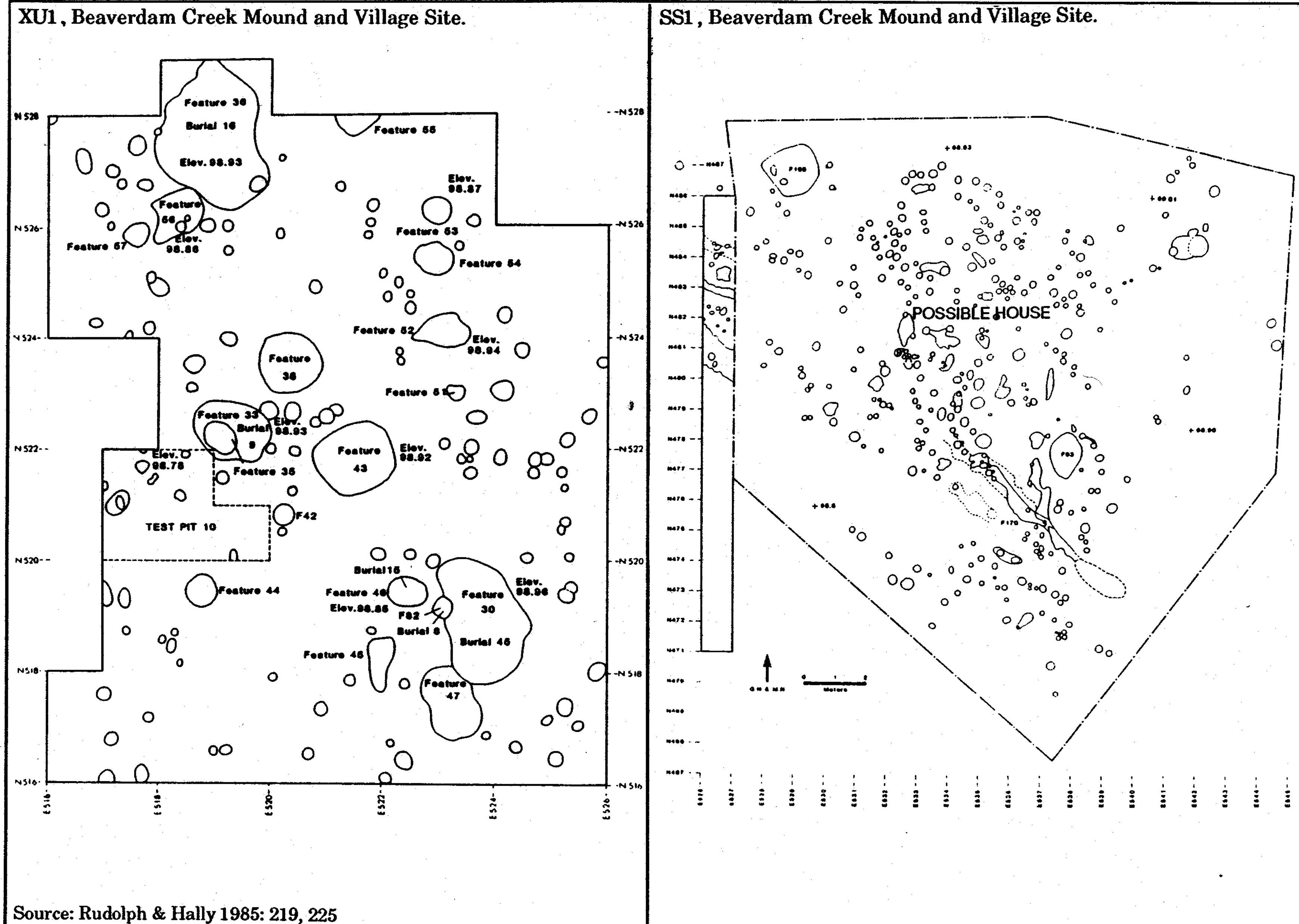


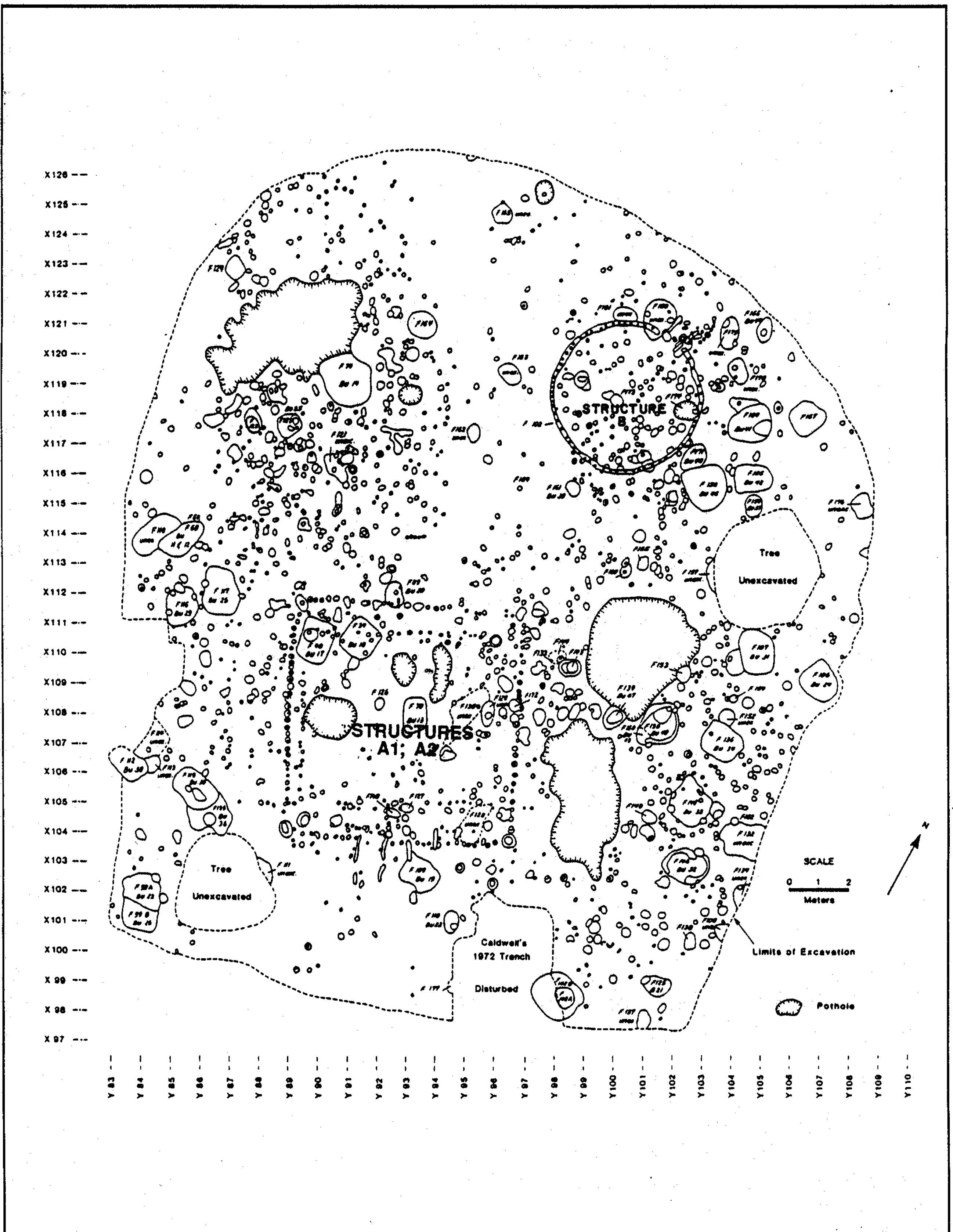
Figure 57. Village Area Excavation Blocks, Beaverdam Creek Mound and Village Site, 9EB85.

other areas. In SS1, southeast of the mound, an approximately 1380 square m area was examined, while in SS2, to the east of the mound, a 212 square meter area was examined (Figure 57).

Mound Construction Episodes. Two superimposed earthlodges and four successive mound stages were documented during the excavations at Beaverdam Creek (Rudolph and Hally 1985:69-197). The premound midden was from 15 to 20 cm thick, and was contiguous with the village midden surrounding the mound. Several burial pits, portions of three structures, and a large number of miscellaneous postmolds were found on this surface, representing occupations at the time of and immediately prior to the construction of the mound. Most of the postmolds appeared to be contemporary with the first ceremonial structures erected at the site, two superimposed earthlodges (Structures A1 and A2), and the initial stages of mound construction. Two uncorrected radiocarbon dates obtained from features in premound context were A.D. 300±100 and A.D. 1190±200 (DIC-2118; BETA-1791); while the first date was too early the second was thought to accurately date the period of initial construction (Rudolph and Hally 1985:75).

While it was not possible to prove that the initial two earthlodges were actually covered with dirt, they were surrounded by earth embankments, prompting their name (Rudolph 1984). The first structure, A1 (Figures 58, 59) was square, 7.5 m on a side (56 square meters), and had a wall trench entranceway on the south side. The structure was built of individually set posts 10 to 15 cm in diameter and spaced 10 to 30 cm apart, with appreciably larger corner posts ca. 30 to 60 cm in diameter. The northern wall was oriented 24 degrees west of magnetic north, while the entranceway faced south-southeast, 156 degrees east of north. The embankment itself was ca. 1.7 to 1.8 m wide, and was constructed of midden fill to a height of from 40 to 70 cm above the ground surface. It was erected flush with the wall line, after the posts had been set in place. The floor of the structure was highly disturbed, but from surviving fragments it was possible to determine that it had been elevated ca. 10 cm above the midden with a thin layer of orange sand. A moderate amount of lithic, ceramic, bone, and other refuse was found on the upper surface, suggesting occupational debris. The only feature found on the small amount of intact floor examined inside the structure was a dense concentration of fish scales and bone in the northwestern corner. The structure was not burned or abandoned, but appeared to have been quickly replaced.

Burial 2, a high status male aged 30 to 35 years, was found in fill above the Structure A1 embankment (see Figure 61). This individual was interred with approximately 7000 shell beads, a whelk columella, several *olivella* shells, two copper covered ear spools and a crescent-shaped copper head ornament, and a shell gorget and button (Rudolph and Hally 1985:83-85). The burial was placed in an oval basin shaped pit in a layer of dark brown sand forming part of the covering over Structure A1. The burial pit was covered with a yellow clay cap, and the embankment for Structure A2 was built over it. The number and extent of the associated grave goods indicate this individual occupied a very high status position in the local society, whose death may have triggered the abandonment and rebuilding of the earthlodge.



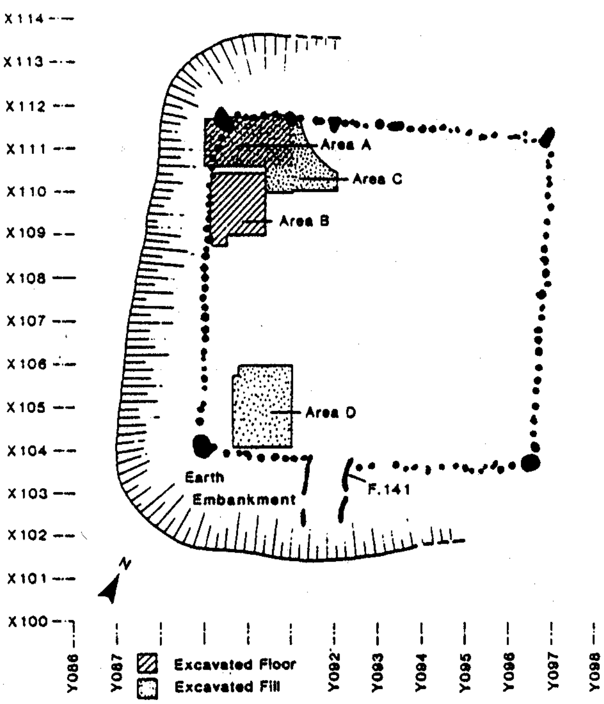
Source: Rudolph and Hally 1985: 77

Figure 58. Premound Features,
Beaverdam Creek Mound and Village Site, 9EB85.

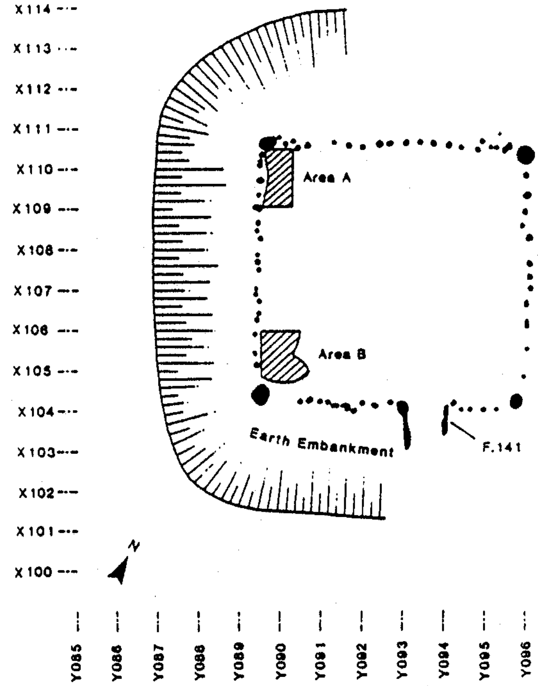
Structure A2 resembled Structure A1, although it was smaller, measuring 6.2 m on a side (38.4 square m) (Figures 58, 59). Oriented the same direction, with a wall trench entranceway to the south, the building differed primarily in having a more massive embankment, from 2.2 to 2.7 m wide, and 1.25 m high. This embankment was constructed of intentionally laid down alternating layers of brown or gray clay, and sloped gradually away from the wall line. The floor of the structure was raised above the fill over Structure A1 by a thin layer of mottled grayish brown sand up to ca. 15 cm thick. Two successive occupation surfaces were found above this layer, separated by a thin band of charcoal flecked sand, suggesting an episode of cleaning and minor restoration. The floor areas of these structures were badly disturbed, and no features other than a sherd cluster and some lumps of gray ashy clay were found on these surfaces. Structure 2 did not burn, but appeared to have been abandoned for no more than a short period of time, and was then replaced by a substructure platform mound. Waterlain sands around the northern side of the structure indicated it may have been inundated and damaged. A radiocarbon date from a cluster of charred pine cones found in these sands was dated to A.D. 1570±50, uncorrected (DIC-2117; Rudolph and Hally 1985:91), and was interpreted as too recent.

A small circular wall trench building, Structure B, was found to the north of Structures A1 and A2 (Figures 58, 59). The age of this building in relation to the other early structures in the premound area was uncertain, although it clearly predated Mound Stage 3, which covered it. The building was 5 m in diameter with a floor area of 18.8 square m, and had been built on a layer of tan-gray sand placed on top of the premound midden to level it out. The wall trench was about 30 cm wide and 54 cm deep, tapering to 10 cm wide at the base. Fifty six postmolds ca. 8 cm in diameter and spaced 15 to 20 cm apart were found in the trench fill; the posts that were sectioned were found to have been jammed into the base of the trench. A wall trench entranceway 1 m wide and 0.8 m long was found in the north side of the building. The inside of the structure had waterlain sand over the floor, suggesting it was flooded after abandonment, or that the flooding had prompted abandonment. A prepared clay hearth 45 cm in diameter and 9 cm deep with a pronounced rim 4 cm thick was found just west of the center of the structure. The floor itself was a thin layer of gray brown and reddish sand some 2 to 4 cm thick, and had a moderate amount of occupational debris on it.

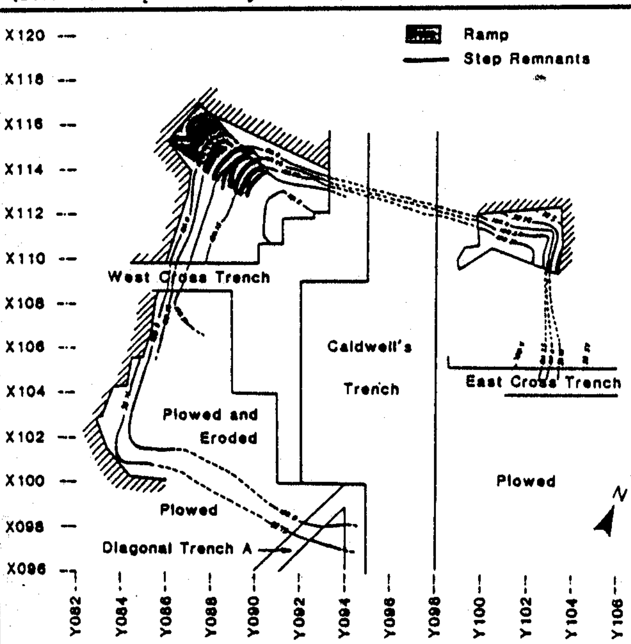
The floor of Structure B was excavated in 1 m squares, with all fill floated. No large or unusual artifacts were found on the floor, and the building may have been cleaned following abandonment. The structure did not appear to have been burned, but instead may have been dismantled prior to the construction of one of the nearby earthlodges or the early mound stages overlying it. Animal bone, carbonized plant remains, debitage from late stage manufacturing activity, triangular points and point fragments, and pottery were found on the floor. Detailed distributional analyses of all major artifactual and paleosubsistence categories were conducted, documenting a range of primarily domestic activities (Rudolph and Hally 1985:92-110). Other than three battered crystal fragments, a single small bead, and a small piece of mica, no evidence for ritual or ceremonial behavior was found. In spite of its unusual shape and location near the



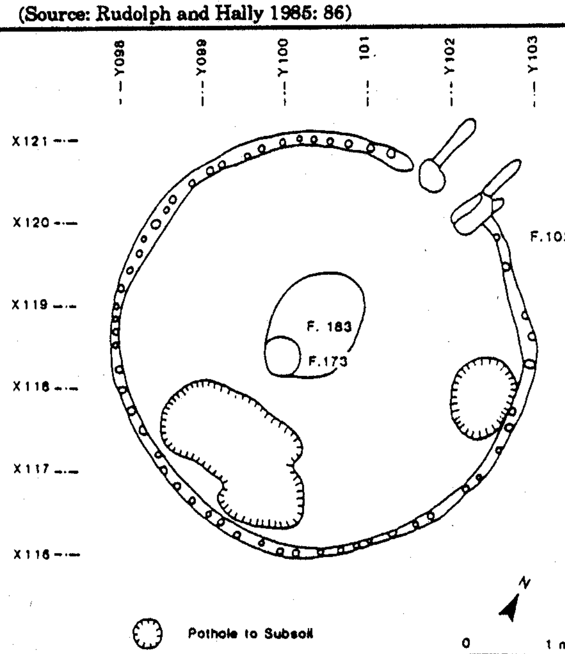
Structure A1, an earth-embanked building elevated 10 cm above the premound midden, on a layer of sand. Structure A1 was dismantled and the area inside the embankment filled prior to the construction of Structure A2.
(Source: Rudolph and Hally 1985: 80)



Structure A2, a second earth-embanked building erected immediately above and soon after the dismantling of Structure A1. Following one episode of minor restoration, the structure was replaced by a substructure mound, shortly after a major flood.
(Source: Rudolph and Hally 1985: 86)



Mound Stage 2, a substructural mound approximately 18 m on a side. Built of red clay, it was built soon after the building on the first mound stage was abandoned. A stepped ramp was located in the northwest corner.
(Source: Rudolph and Hally 1986: 124)



Structure B, a circular wall trench building located on sand-leveled ground to the north of structures A1 and A2. Built prior to mound stage 3, the occurrence of flood deposited sands around the entrance suggests contemporaneity with Structure A2. A clay-rimmed hearth was located in the center of the structure.
(Source: Rudolph and Hally 1985: 94)

Figure 59. Earthlodges A1 and A2, Structure B, and Mound Stage 2, Beaverdam Creek Mound and Village Site, 9EB85.

ceremonial structures, Structure B appears to have seen use as a domestic building.

Structure A2 was replaced with a platform mound, termed Mound Stage 1, that was raised approximately 20 cm higher than the embankment. The stage was very badly disturbed, with only traces of the northwestern corner found intact. Measuring an estimated 17 m east-west by 14 m north-south, the platform was oriented the same direction as the two earthlodges, with the northern side facing 24 degrees west of magnetic north. Fill was basketloaded sand or sandy clay. Two possible structures were found associated with this stage, a hard-packed floor-like surface, and two lines of posts found in the 1971 excavations. Charcoal obtained from the hard-packed floor yielded an uncorrected date of A.D. 1150±80 (BETA-1792; Rudolph and Hally 1985:113). A low ridge of sandy clay oriented 55 degrees west of magnetic north was found at the edge of this surface, which may represent the base of walls erected on the summit; alternatively, the ridge may be associated with the filling of Structure A2. Two adjacent lines of posts found by Caldwell at the approximate level of Mound Stage 1 were oriented 6 degrees west of magnetic north, and may also be from a structure. Little convincing evidence for structures was found surviving from this stage.

Waterlain sand with clay and ash mixed in was found around the base of Mound Stage 1 that was thought to represent burned material washed down from the summit. Whether this meant the summit structure for Mound Stage 1 was abandoned or burned prior to rebuilding is unknown. Above the waterlain sands was a gray ashy layer from ca. 1 to 28 cm thick that was rich in pottery, bone, and other debris, including a number of pine log fragments. An uncorrected radiocarbon date of A.D. 1210±55 (DIC-2119; Rudolph and Hally 1985:119) was obtained from one of the unburned pine pieces. The logs and the rest of the debris in the gray ashy layer were interpreted as debris from the mound summit, rather than steps or a facing like that found at Tugalo (Rudolph and Hally 1985:119; Anderson et al. 1986:40). Given the excellent preservation in the gray ashy layer, Mound Stage 1 was thought to have been covered fairly quickly with Stage 2 (Rudolph and Hally 1985:126).

The summit of Mound Stage 2, like Mound Stage 1, had been largely destroyed by pothunting, and no evidence for structures was found (Rudolph and Hally 1985:122-129). The mound was composed of dark red clay and rose approximately 13 cm higher than the highest point on Stage 1. Three of the corners were still intact, permitting measurements of size and orientation. The Stage 2 mound measured approximately 18 x 18 m and was oriented 13 degrees west of magnetic north, a shift in orientation of about 11 degrees from earlier stages and structures (Figure 59). A ramp 2.25 m wide with step remnants cut into the clay was built on the northwest corner of the mound. A minor addition to the mound was added in this area, possibly to provide support for the ramp. The ramp was oriented 58 degrees west of magnetic north and faced directly on Beaverdam Creek. The shift in orientation might have been to accommodate this alignment (Rudolph and Hally 1986:125). The sides of Stage 2 were steep and furrows were evident in the red clay face, suggesting intentional roughening.

More recent mound stages were progressively more heavily disturbed. Mound Stage 3 measured approximately 21 m on a side, and may have been at least 12 cm higher than Stage 2. The orientation of the mound itself could not be determined due to disturbance and spreading of the lower sides, but a fragmentary wall line from a structure on the summit was oriented 11 degrees west of north, almost exactly the same direction as Mound Stage 2. The summit structure was represented by two wall line fragments and a small patch of floor surface. The floor was a thin layer of tan clay ca. 3 cm thick and was set about 6 cm lower than the surrounding summit. The wall trenches were filled with red and yellow clay, with posts ca. 10 cm in diameter spaced 5 to 20 cm apart. A small bracing log was placed at the base of the wall trench to provide support. Some of the posts were charred, and a radiocarbon sample run on one of them yielded a date of A.D. 1720±80, uncorrected (DIC-2120; Rudolph and Hally 1985:131), which was several centuries too recent. Waterlain sands were found on the north side of the mound, suggesting sheet wash from the summit. On the southeastern side of the mound a dark midden layer was found, with lenses indicating at least two or more episodes of deposition occurred. Whether this reflected normal trash discard from the summit or debris from the destruction of a structure could not be determined.

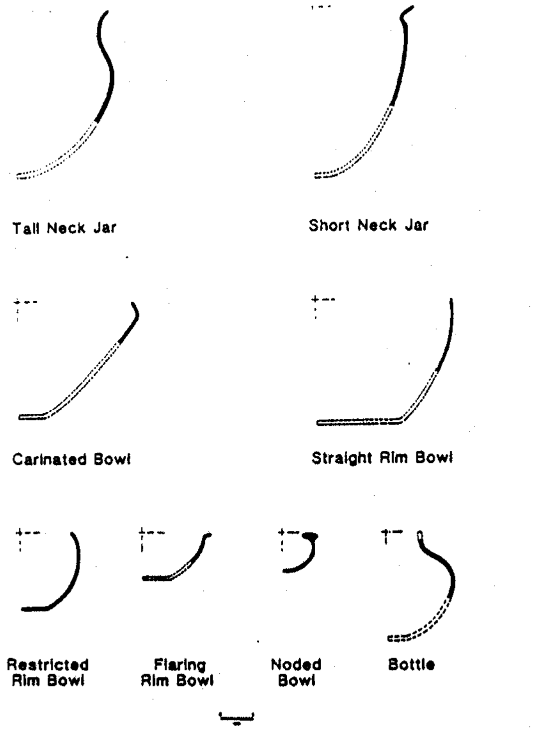
Mound Stage 4 was very poorly preserved, and was thought to have been no more than ca. 2 cm above Mound Stage 3, and about the same overall size (Rudolph and Hally 1985:136-142). Fragments of a wall trench structure found on the summit were oriented 3 degrees west of north, presumably also the orientation of the mound. The wall trench was ca. 22 cm wide and 55 cm deep, and represented the southwestern corner of a structure. Patches of red and yellow, and gray sandy clay flooring material were found, with Savannah (Beaverdam phase) ceramics in association. A dense concentration of small boulders was found on the northwestern side of Mound Stage 4, over an approximately 90 square m area. Most of the boulders had been moved about by pothunters, but appeared to have originally been on the side of the mound. Not enough rocks were present to provide a mantle like that found at Garden Creek (Dickens 1976:79-83), nor do they seem to have been used to control erosion, cover a smaller structure, or serve as post supports (Rudolph and Hally 1985:141-142). Their purpose remains unknown, although they may have been a mantle flanking the entranceway.

Village Area Results. The four block units opened in the village area at the Beaverdam Creek site found a large number of features, including one possible structure (Rudolph and Hally 1985:199-259). Lithic, ceramic, and subsistence related-artifacts were found throughout the midden, indicating a range of domestic activities were occurring. Although structure density was thought to be low, the site does not appear to have been a vacant ceremonial center. Much of the midden in the village area had been disturbed by historic plowing, and it is probable that many shallower features were destroyed prior to excavation.

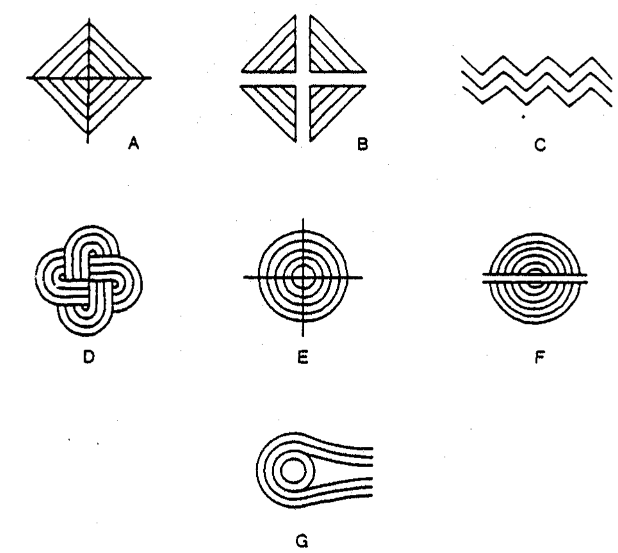
Although a number of features were found in XU1, no obvious structures could be resolved, however several lines and arcs of posts were found indicating they may have been present (Figure 57). In a portion of XU1 the village midden was separated into two strata by a yellow clay cap. Examining the artifacts above and below this cap, a decrease in check stamped and burnished plain pottery, and an increase in plain pottery over time was noted. The decline in check stamping is expected at this general time level (see discussions in the Rucker's Bottom section below). The decline in burnished plain was somewhat unusual, however, and may indicate that the fortunes of the center itself were on the wane, if the ware was a high status indicator. No evidence for structures was found in XU2, which had a much lower feature density than the other three units. This block, opened immediately south of the mound, may have encompassed part of a plaza area. Discoidals or chunky stones were common on the site, indicating some kind of a plaza/gaming area had probably been present.

In SS1 approximately 400 features were found. Of these, 228 were sectioned and 165 or 72 percent were found to be cultural features (Figure 57). This incidence of features to non-features was comparable to that observed at Rucker's Bottom (see p. 273 below). A dense, roughly square cluster of postmolds approximately 9 m on a side was present in the northern part of the block that appeared to be a structure that had undergone one or more episodes of rebuilding. No evidence for a central hearth or a wall trench entranceway was found, although any shallow features would have been destroyed by plowing in this area. While somewhat larger than the premound Structures A1 and A2, or the residential structures at Rucker's Bottom, the size and shape were within the range for domestic structures at other sites in northern Georgia (Rudolph and Hally 1985:226). Midden in the general area was characterized by occupational debris, and the structure could have seen either domestic or ceremonial use, or both. SS2, opened near an old flood chute in the northwestern edge of the site, had a low feature density, suggesting use of this area was fairly minimal. Backhoe trenches dispersed across the floodplain found no other evidence for occupation, suggesting Mississippian settlement was restricted to the area immediately around the mound (Rudolph and Hally 1986:239).

Artifact Analyses. A detailed ceramic analysis was conducted on a sample of 25,002 sherds from the premound midden, the midden strata in XU1, and the gray ashy layer associated with Mound Stage 1 (Rudolph and Hally 1985:261-280). The Beaverdam phase assemblage consisted of five principal types: Etowah Complicated Stamped, Savannah Complicated Stamped, Savannah Check Stamped, Savannah Plain, and Savannah Burnished Plain. Corncob impressions, typically below the lip in the neck and shoulder area of jars, and collared rims were also characteristic of this phase (Rudolph and Hally 1985:263). Complicated stamping occurred primarily on tall and short neck jar forms; neck areas on these vessels were sometimes corncob impressed or smoothed. Complicated stamped motifs attributed to the Etowah ceramics, in order of their incidence in the assemblage, were the two bar cross diamond, the herringbone, and the one bar cross diamond (Figure 60; see also Figure 64, a,f). Close similarities with the Etowah III phase from northwest Georgia, and the late Etowah Stillhouse phase from the Wallace Reservoir were inferred (Caldwell n.d.; Smith 1981:182-184; Rudolph and Hally 1985:265-267).

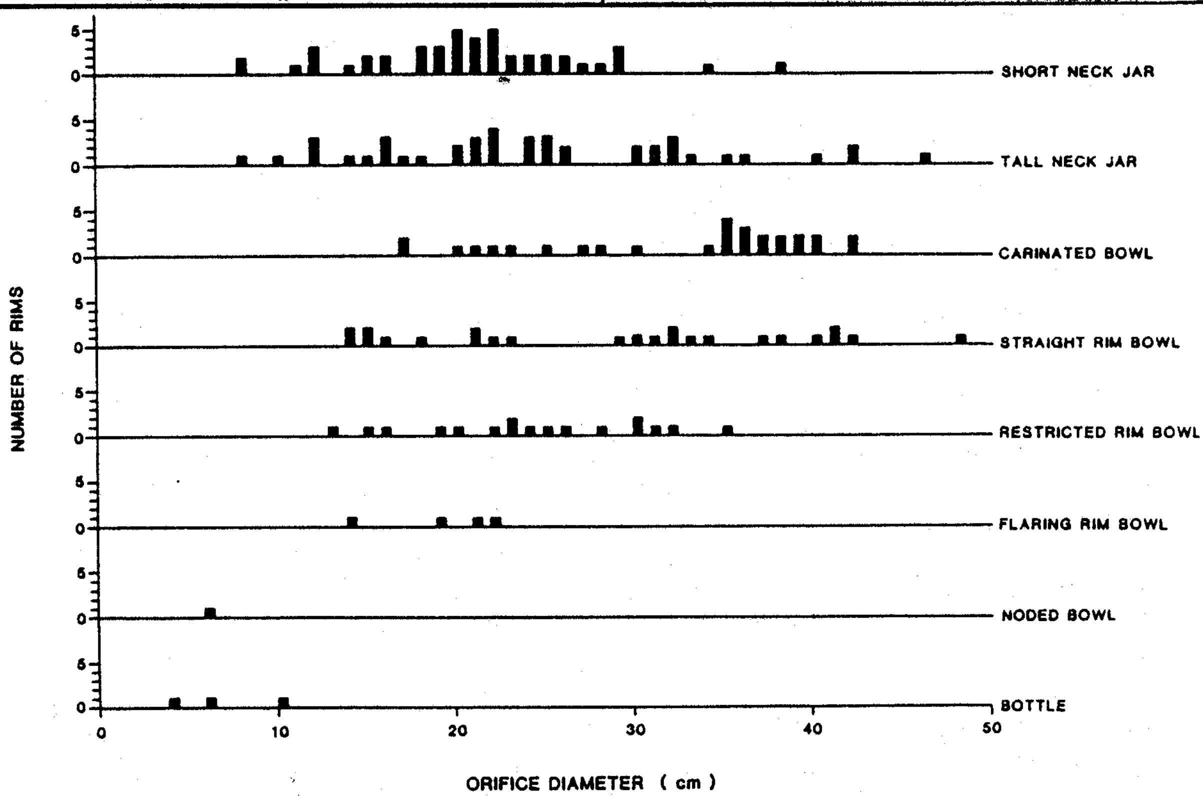


Beaverdam phase vessel forms, Beaverdam Creek Mound Site.
Source: Rudolph and Hally 1985: 370



A, one bar cross diamond; B, two bar cross diamond; C, herringbone; D, filfot cross; E, one bar cross concentric circle; F, two bar concentric circle; G, keyhole

Beaverdam phase complicated stamped design motifs, Beaverdam Creek Mound Site.
Source: Rudolph and Hally 1985: 266



Beaverdam phase vessel size variability by form, Beaverdam Creek Mound Site.
Source: Rudolph and Hally 1985: 378

Figure 60. Mississippian Vessel Characteristics
Beaverdam Creek Mound and Village Site, 9EB85.

Motifs attributed to the Savannah materials, in order of incidence, were concentric circles, filfot cross, two bar concentric circle, one bar cross concentric circle, and keyholes (Figure 60; see also Figure 64:b, k-q). Close similarities with the Savannah occupations at the Irene site at the mouth of the drainage were inferred. While the filfot motif is thought to occur during the early Lamar period at Irene, it is common in late Etowah and Savannah assemblages in northwest Georgia, and the late attribution at Irene may be an oversight (Rudolph and Hally 1986:269-270). The Savannah Check Stamped pottery from Beaverdam Creek was also very similar to the material found at Irene, although the designs were typically not as well executed.

Plain finish, the most common ware at the site, occurred on short and tall neck jars, and on carinated and straight rim bowls (Figure 60). Highly smoothed burnished plain pottery was only about one-sixth as common, and was restricted to bowl and bottle forms. Corncob impressions occurred exclusively on jars, and primarily in neck areas, suggesting that corncobs were used to shape the vessel (Rudolph and Hally 1985:273). The finish appears to commonly occur only in the central and upper Savannah River. Collared rims, formed by the addition of a strip of clay below the lip, were a minority rim form at the site, although the attribute is common in Pisgah assemblages to the north (Dickens 1976:178; Moore 1981). Collar width ranged from 18 to 49 mm, with decorations including cane punctations, fine incised lines, or vertical ridges (Figure 65 y,bb; Figure 66:a-c,n,v). The low incidence of notching differentiates the Beaverdam Creek material from typical Pisgah assemblages in western North Carolina. Folded rims were present but rare in the assemblage, with those that were found either plain or notched. Folded rims were more common in the ensuing Lamar period.

Stratigraphic analyses, conducted using sherds from the premound midden, the gray ashy layer, and the stratified midden in XU1, showed a decline in the cross barred diamond motifs from the earlier premound midden to the later gray ashy layer. Barred concentric circles and herring bone motifs showed the opposite relationship, occurring more commonly in the later gray ashy layer. Filfot cross motifs occurred in about the same incidence over all three proveniences, while the herring bone pattern was restricted largely to the mound area. A replacement of nested and barred diamond motifs by concentric circles has been documented over much of the north Georgia region, reflecting a replacement of Etowah by Savannah assemblages (Hally and Rudolph 1986:51-63; Rudolph and Hally 1986:447-462). No evidence for a decline in the incidence of check stamping was observed within the mound, although this pattern was noted in the stratified midden deposits in XU1, in the village area. Check stamping declined appreciably after the Beaverdam phase in the upper Savannah River area, occurring only in low incidence in the Rembert phase assemblages at Rembert and Rucker's Bottom (see p. 287 below).

A detailed analysis of vessel form and function was conducted using all of the intact or reconstructable vessels from the site, and those rimsherds (N=198) large enough to permit accurate vessel shape determinations and orifice diameter measurement (Rudolph and Hally 1985:367-398; see also Hally 1983a, 1983b, 1984).

Eight distinct vessel forms were identified, each exhibiting a fair degree of size variability (Figure 60). The absence of size standardization has been interpreted as reflecting household rather than community or specialist patterns of manufacture and use (Rudolph and Hally 1985:384). It may alternatively or in addition indicate the use of several size categories within a given vessel form. The existence of individual, household, and multihousehold serving or cooking vessels, in this view, could produce such a pattern (Million 1980:18-5 to 18-15). Multiple size categories were, in fact, inferred for the tall neck jar, straight rim bowl, and carinated bowl forms (Rudolph and Hally 1985:382).

Sooting was commonly observed on all of the vessel forms except the flaring rim bowl, bottle, and noded bowl. Sample sizes for these latter categories were low and hence possibly unrepresentative, but they do not appear to have been appropriate forms for use over a fire. The evidence from the remaining categories, however, indicated that a range of jar and bowl forms saw use over fires. None of these appear to have been used exclusively for either cooking or storage, but instead saw use in both functions. A comparison with later Mississippian Barnett phase vessel assemblages from northwest Georgia indicated considerable continuity in vessel size and form. Basic characteristics of both the Beaverdam and Barnett phase Mississippian vessel assemblages included:

1. A large jar form for storage of liquid foods.
2. At least one jar form for heavy duty cooking.
3. A large vessel, presumably a bowl, for heating and serving liquid foods.
4. Numerical unimportance of pottery bottles and individual eating bowls (Rudolph and Hally 1985:398).

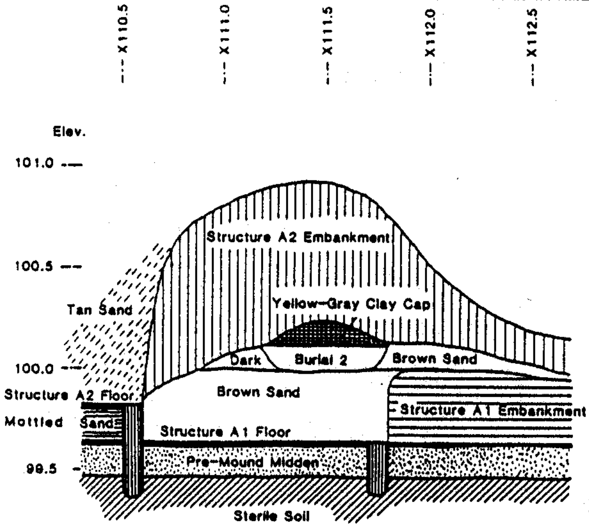
A considerable antiquity for food preparation and consumption habits, spanning much of the local Mississippian period, was inferred from these common features.

Moderate numbers of small Mississippian triangular points were found at Beaverdam Creek (N=139) and at Rucker's Bottom (N=308). While a number of varieties could be differentiated, separable primarily by basal morphology (i.e., straight, concave, convex), analyses to date with these materials have not been able to resolve temporally or behaviorally significant categories (Rudolph and Hally 1985:287-289; Anderson n.d.). Other flaked tools found in the mound assemblage included a small number of drills and perforators, other bifaces, and utilized flakes. The perforators may have been used to work shell or bone, although no evidence for bead manufacture was found. Given the large number of beads found in Burial 2, some local manufacture may be plausible (Rudolph and Hally 1985:313). The number of flaked stone tools found on the site (N=133) was fairly low, suggesting that many tools may have been made from wood or cane (Rudolph and Hally 1985:295-298). Pecked and polished discoidals, in contrast, were fairly common (N=31), suggesting chunky and related games were played in the immediate area, possibly in a plaza.

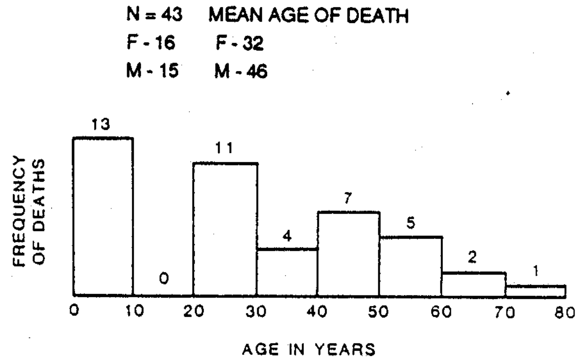
Other artifact categories found at the site, typically in low numbers, included grooved soapstone objects resembling earlier Late Archaic notched "weights" (i.e., Claflin 1931:31-32), hammerstones and anvils, ceramic and carved stone pipes, celts, beveled and grooved abraders, grinding stones, probable polishing stones, quartz crystals, lumps of pigment, and sheet mica fragments (Rudolph and Hally 1985:305-311). An appreciable quantity of small unworked soapstone fragments was found, indicating on-site manufacturing activity. An outcrop of this material was located approximately 1 km away opposite Paris Island, and would have represented a convenient raw material source (see Chapter V, p. 200). Pipes, all variations on a segmented elbow form, tended to occur more commonly in the mound and premound areas of the site than in the village, although this may reflect the much greater volume of fill processed from the former areas. A small number of bone tools were recovered, including four awls, eight beads, a polished antler tine, a hollowed deer phalanx, and a cylindrical piece of bone.

Shell beads were found in appreciable numbers in Burial 2, and much lower numbers in several other burials. Three types of beads were present, perforated disks, perforated barrel shapes from whelk or conch shells, and whole *olivella* shells (Rudolph and Hally 1985:312-313). Most of the beads found at the site came from two burials; Burial 2 had 7043 disk and barrel-shaped beads, while 450 barrel-shaped beads were found with Burial 31. Only small numbers of bone or shell beads (one to eight specimens) were found with the remaining burials. Other shell artifacts from the site, all found with burials, included a columella pendant, a whelk shell cup, two square shell ornaments, a button-like object, two earspools, and three gorgets. Three copper ornaments were found with Burial 2. These included a crescent-shaped sheet ca. 20 x 6.3 cm in size from a probable headdress and two circular copper discs ca. 5.5 cm in diameter that were probably earspools (Rudolph and Hally 1985:314-315). The discovery of a largely intact copper covered celt in pothole spoil dirt during the 1971 fieldwork indicated that other elaborate burials were once present in the mound (Lee 1976:41-42; Rudolph and Hally 1985).

<u>The Burial Assemblage</u>. Fifty two burials were excavated at the Beaverdam Creek site, ten in the village area and the remainder in the mound or premound areas (Blakely et al. 1985; Rudolph and Hally 1985:317-351). Preservation was highly variable, ranging from excellent to extremely poor. Age determinations were possible for 43 individuals and the resulting mortality curve, with a high infant and childhood peak followed by decreased mortality in adolescence and increasing mortality thereafter, is fairly typical of initial agricultural populations (Figure 61; Cohen and Armelagos 1984). Nine of the 11 burials dated to between 20 and 30 years at time of death were female, probably reflecting deaths resulting from childbirth. Average age of death for adult females was 32 years, while for males it was 46 years. Stature estimates could be calculated for seven males and five females, with males ranging from 166 to 178 cm and females from 156 to 163 cm (Blakely et al. 1985:343). Males buried at the mound tended to be taller than those buried at Rucker's Bottom, where the average height, measured on three individuals, was 170.6 cm. This height difference may be due to a better diet or living conditions for those interred in the mound. Little difference in female stature was noted between the two sites; it should be cautioned, however, that the



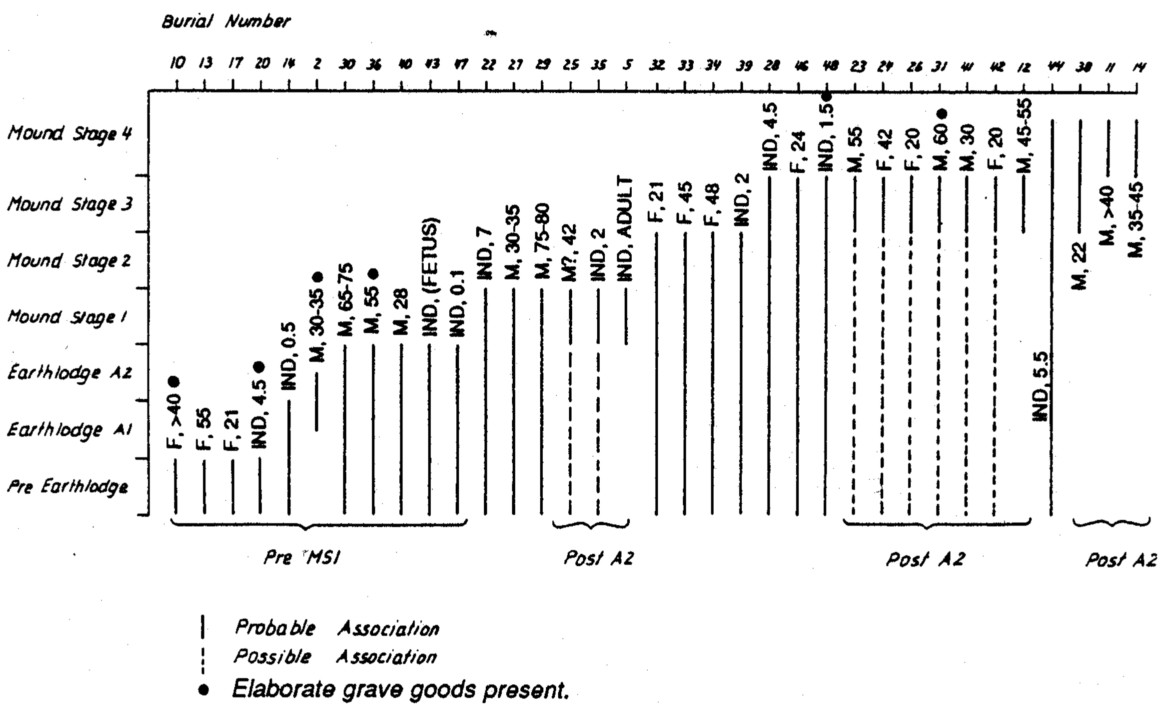
Burial 2, Beaverdam Creek Mound. The burial was that of a high status male whose internment occurred between the dismantling of Structure A1 and the construction of Structure A2.
Source: Rudolph and Hally 1985: 84



Mortality curve for the Beaverdam Creek Site.
(Source: Rudolph and Hally 1985: 342)

M		F		INDETERMINATE	
BURIAL	AGE	BURIAL	AGE	BURIAL	AGE
NO IDENTIFIABLE MALE BURIALS WERE FOUND IN THE VILLAGE.		3	30-35	1	SUBADOLESCENT
		4	20-25	7	ADULT INDETERMINATE
		6	35-45	8	3-5
		9	20-30	15	5.5
		16	20	45	INDETERMINATE

Age and sex of burials in the Village Area at the Beaverdam Creek Site.
Source: Rudolph and Hally 1985: 317-340



Age and sex, and relative dating of the burials at the Beaverdam Creek Mound Site.
Source: Rudolph and Hally 1985

Figure 61. Burial Assemblage Information, Beaverdam Creek Mound and Village Site, 9EB85.

sample sizes employed were very small.

Fronto-occipital cranial deformation was common among females at Beaverdam Creek, and appeared to have been caused by binding a board to the back of the head. Nine of 16 identifiable adult females and one of 15 adult males had this trait; the adult male was elderly (>65 years of age) and the deformation may have been due to age-thinning and post-depositional warping. General skeletal pathologies such as arthritis, localized periostitis, chronic osteomelitis, blastomycosis, and possibly tuberculosis were diagnosed but were uncommon, as was evidence for dental decay. This situation contrasted markedly with that observed in the Beaverdam phase population at Rucker's Bottom, and indicated that the individuals interred in the mound were, on the average, in much better health.

Burial in the mound apparently demarcated high status at the Beaverdam Creek site, and this status was age and sex-linked. Approximately one-third of the interments in the mound were characterized by grave goods or unusually elaborate burial treatment. Only one of the burials found in the village, in contrast, had associated grave goods. All of the identifiable burials found in the village area were either female or subadolescents; no identifiable adult males were found in this area (Figure 61). Within the mound the average age of death for males receiving special mortuary treatment (N=6, 46.7 years) was virtually identical to that for males buried with no special treatment (N=8, 46.2 years) (Rudolph and Hally 1985:345). In contrast, the average age of death of adult females receiving special mortuary treatment (N=5, 40.2 years) was considerably higher than that for adult females buried without special treatment (N=11; 27.7 years). Female status seems to have depended, in part, on surviving peak child-bearing years. Adults of both high and low status tended to be buried considerably deeper than subadults, with burial pit depth averaging 79 cm as opposed to 39 cm (Rudolph and Hally 1985:348).

Burials were typically extended to semi-flexed. Approximately two thirds of the burials were oriented along a northwest to southeast axis with the tops of the skulls pointing northeast; of those oriented along this axis there was about an equal preference for southwest and northeast facing positions (Rudolph and Hally 1986:345). An analysis of the relative age of the burials in the mound documented a decline in interments with elaborate grave goods over time (Figure 61; elaborate interments were defined as those with shell or copper ornaments). A pattern of progressive impoverishment of the center prior to its ultimate abandonment is suggested. While this may accurately reflect the local political situation, the extensive destruction of the upper stages and the difficulties attendant in dating many of the surviving burials renders this interpretation open to question.

Paleosubsistence Analyses. A wide range of carbonized plant remains were identified at the Beaverdam Creek site, including maize, squash, gourd, sunflower, sumpweed, hickory, acorn, walnut, hazelnut, maypops, persimmon, grape, bramble (raspberry), strawberry, plum, maygrass, panic grass, chenopodium, purslane, carpetweed, amaranth, and eyebane (Gardner 1985:400-

411). Wood charcoal was not identified to species, but both hardwoods and softwoods were noted in the collection. Both acorn and hickory nuts were common at 9EB85, occurring in over 80 percent of the samples; hazelnut and walnuts were much less common, and may not have played a major role in subsistence. Corn was the most frequently occurring plant food, present in 93 percent of the samples, and accounting for 53 percent of the food remains by weight. Cobs were common, with the majority eight rowed Northern Flint or Maiz de Ocho; lesser quantities of 10 and 12 rowed corn were also present (Gardner 1985:405). Squash and gourd were represented by one rind and one seed, and one rind fragment, respectively. The sunflower and sumpweed were present in incidental quantity; while the single identified sunflower seed was within the range of other reported Mississippian examples, the three sumpweed seeds (two of which were measurable) were small and more typical of Late Archaic or Early Woodland forms from the region.

Fruits appeared to have been extensively utilized. Maypop seeds were present in almost three quarters of the samples, with grape found in almost 40 percent. The other fruits that were identified occurred in fairly low incidence. The presence of amaranth, chenopod, maygrass, and panic grass seeds may have been due to ground disturbance associated with the use of the site area, although utilization as a food source cannot be ruled out (Cowan 1978; Asch and Asch 1985). Purslane, carpetweed, and amaranth could have been used as potherbs, while eyebane was a medicinal herb; all could have grown in the disturbed habitat about the site, and may have been encouraged (Gardner 1985:407). The fairly wide range of plant foods that were exploited indicated that something of a generalist foraging strategy was practiced, with clear dietary preferences for certain plants, particularly maize, nuts, and fruits. Neither a focal nor a diffuse strategy was followed, but rather a mixture of the two (Cleland 1976; Gardner 1985:409-411).

A sample of 7573 bones representing a minimum of 161 animals were collected and examined from the Beaverdam Creek site, from both 1/4 inch and flotation sample proveniences (Reitz 1985:416-428). A wide range of species from a number of habitats were exploited, most occurring in close proximity to the site. Both aquatic and terrestrial resources were exploited in some quantity, although terrestrial mammals, particularly deer, probably contributed the bulk of the food. Assemblage diversity and equitability were high, indicating a diffuse, or generalist subsistence strategy was practiced (Reitz 1985:427). An analysis of deer elements suggested that kills were returned intact to the site. The approximately equal occurrence of both hind and forequarters indicated that meat probably did not leave the site (i.e., as tribute), as was suggested at Rucker's Bottom. Many of the bones were burned, suggesting that roasting over an open fire was a common cooking practice. Carnivore gnawing was also observed, but no dog remains, one of the probable scavengers, were found.

Community Organization. The Beaverdam Creek Mound site throughout its history undoubtedly served as a ceremonial focus for populations in this part of the Savannah River Valley. The extent of its influence is unknown since only minimal investigations have been undertaken at the other two centers located in this part of the drainage, at Tate and Rembert. Whether it was the primary ceremonial center for this part of the drainage during this period, or one of three relatively autonomous centers (i.e., Beaverdam Creek, Rembert, and Tate) remains unknown. Given the evidence for a near-continuous history of occupation, the site does not appear to have been alternately in use and then abandoned, with activities and populations shifting to other nearby centers (e.g., Williams and Shapiro 1986a).

The number of people actually living at the center remains unknown. The intensive examination of ca. 1140 square m of the village area revealed large numbers of features but only one definite house pattern. Another 1500 square meters were stripped and less intensively examined for features, again with no obvious evidence for structures found. Structure B, the small circular wall trench building near the earthlodges in the premound midden area also probably represented a habitation. The presence of only two readily identifiable domestic structures, given the area examined, may point to low resident populations. The presence of a ca. 2500 square m midden area around the mound, however, coupled with the large numbers of postmolds found below it, alternatively argues for a fairly intensive occupation of the site area. Rudolph and Hally (1985:356) have suggested that the postmolds found at the site lacking obvious patterning may have supported "racks, screens, platforms, arbors, and other short-lived constructions." If the site was the ceremonial focus for a larger area, evidence for these kinds of structures would be expected, to provide temporary shelter for groups visiting the site for ritual or other public activities.

Rucker's Bottom (9EB91)

Introduction. Rucker's Bottom was a large, multicomponent prehistoric site in Elbert County, Georgia that extended for almost a kilometer along the river terrace immediately to the north of Van Creek, a small tributary. Extensive excavations were conducted along the terrace from 1980 to 1982, documenting a sequence of prehistoric occupations ranging from the Early Archaic through the Mississippian periods (Anderson and Schuldenrein 1985:251-590). The landform defining the site was elevated 4 to 6 m above the river channel, with a pronounced low-lying swale situated between the levee and the Van Creek floodplain, which drained the terrain to the west. This swale would have been a seasonally flooded marsh, enhancing the microenvironmental variability in the site area. The soils in the immediate site area were Toccoa fine sandy loams, a well drained floodplain soil, while those in the swale were Cartecay poorly drained clayey loams (Frost 1979:40,45).

Field Investigations. The Rucker's Bottom site, which had been in pasture since the mid-1960s, was discovered in January 1969 when Hutto (1970:28) located nine "scattered chips... along eroded areas on the Savannah riverbank." In January 1977 the site was revisited by Taylor and Smith (1978:188, 388, 427), who noted that surface visibility was effectively zero. A 1 x 2 m testpit opened to a depth of 1.25 m in the northern part of the terrace produced an appreciable number of Mississippian sherds, pieces of debitage, and other artifacts. Based on these findings the site was revisited in 1979, and three 2 x 2 m and one 1 x 1 m test pits were opened (Gardner et al. 1983:116-132). Almost 3,000 artifacts were found in the units, the highest artifact density encountered during the 1979 floodplain testing program. Dense Mississippian remains and several possible postmolds were found in the fill of the three larger units opened in the northern part of the terrace, while stratified Middle and Late Archaic remains at depths of up to a meter were found in the 1 x 1 m unit, which was opened some 160 m to the south. It is now known that the tests yielding Mississippian artifacts were placed almost exactly in the middle of the fortified late prehistoric village.

An intensive testing program was conducted at the site in 1980, followed by two seasons of large scale excavations in 1981 and 1982. The 1980 testing included controlled surface collections over the entire site area followed by the excavation of twenty 4 x 4 m and two 2 x 2 m test pits dispersed at roughly 20 m intervals along the terrace, 25 backhoe trenches to collect geoarchaeological data and probe for deeply buried deposits, and four bulldozer transects across the site to look for subplowzone features. To facilitate the controlled surface collection the field was disked and allowed to lie fallow until rained on. The disked area was arbitrarily divided into grid blocks 10 m on a side, with a 4 m diameter collection circle shot in and collected within each block (providing a 12.6 percent sample of the site area) followed by a general collection over the surrounding area (see Chapter II, pp. 41-44). The vast majority of the surface collection consisted of Late Archaic through Mississippian pottery, projectile points, cracked rock, and debitage. Most of the earlier Archaic and Woodland material occurred at the south end of the terrace, while Mississippian remains tended to occur in the central and northern areas (Figure 8).

Extensive late prehistoric, predominantly Woodland remains were found in the plowzone at the south end of the site, underlain by stratified Late, Middle, and Early Archaic assemblages at depths of up to 1.0 m below the surface. The test units opened in the central and northern parts of the terrace produced extensive Woodland and Mississippian period remains, including a dark, well defined midden extending over almost 20,000 square meters. The thickness of the midden varied, with the deepest deposits near the terrace crest, and thinning out as the swale or the river margin was approached. Most of the pre-Mississippian Archaic and Woodland remains occurred to the north and south of the midden area, particularly to the south, near Van Creek. Pits, posts, hearths, and daub concentrations were observed in many of the units, most recognized at or near the base of the midden, intruding into the underlying lighter soils.

To overcome the problem of feature detection and interpretation posed by the comparatively small test units, three 3.75 m transects were opened across the terrace and a fourth was opened into the swale using a bulldozer. The cuts were taken to the base of the plowzone, with all features flagged, cleaned, and mapped. Over the 850 square meter area examined 170 features were found, most characterized by Mississippian pottery. The densest concentrations of features were noted at and near the terrace crest. A thin stratum of Mississippian pottery was found at a depth of almost a meter in the swale, suggesting trash disposal or extensive use of the swale margin during this period.

The 1980 testing results prompted two additional field seasons at the site. A 16 x 16 m block was opened into the later Archaic and Woodland deposits at the south end of the terrace. Following machine stripping of the plowzone, the block was opened in two 10 cm levels. Eighty of the 256 squares were taken to depths to 50 to 90 cm below the plowzone, to document the earlier deposits. Based on this work a second, 12 x 12 m block was laid out adjacent to and partially overlapping with the first block and, following machine stripping of the upper 40 cm of subplowzone deposits, a 160 square m area was removed in three 10 cm levels. Both blocks were opened using 1 m squares, with all fill waterscreened through 1/8 inch mesh. In all, 141 features, 254 diagnostic projectile points, 785 tools, and 134,102 pieces of debitage were found in these units. Almost all of this material was Woodland or earlier in age; only three of 308 Mississippian Triangulars and less than 50 of the more than 15,000 diagnostic Mississippian sherds found on the site came from these blocks, indicating the degree of spatial separation between the Mississippian and earlier pre-Mississippian components on the terrace (Anderson and Schuldenrein 1985:255, 321).

In 1981 an area of almost 4500 square meters was examined in the central part of the site, using a motor grader to remove overburden, followed by shovel skimming. Features exposed at the base of the plowzone were flagged, scribed with a trowel, and then mapped using a plane table and alidade or a transit. Features were characterized by concentrations of rock, pottery, shell, bone (including burials), charcoal, or other debris, or faint to pronounced gray or brown organic staining. A total of 1201 features were found, including a largely intact house floor about 8 m in diameter and set about 30 cm into the ground, and a semicircular ditch line. Features tended to occur at different depths, with a superpositioning in rough agreement with age. This created problems in interpretation in 1981, since the stripping operations were typically halted when concentrations of features first appeared, which was usually before all the midden had been stripped away. When the remaining midden was stripped away, other lower-lying features were frequently exposed, or faint features stood out better against the underlying yellowish sandy soils. Even though large numbers of features were found in 1981, when the same areas were restripped to the underlying yellow sands in 1982 it became apparent that only a small fraction of the total feature assemblage had been documented. In retrospect, two or three episodes of stripping and mapping or deeper initial stripping was called for; the latter procedure was employed in 1982.

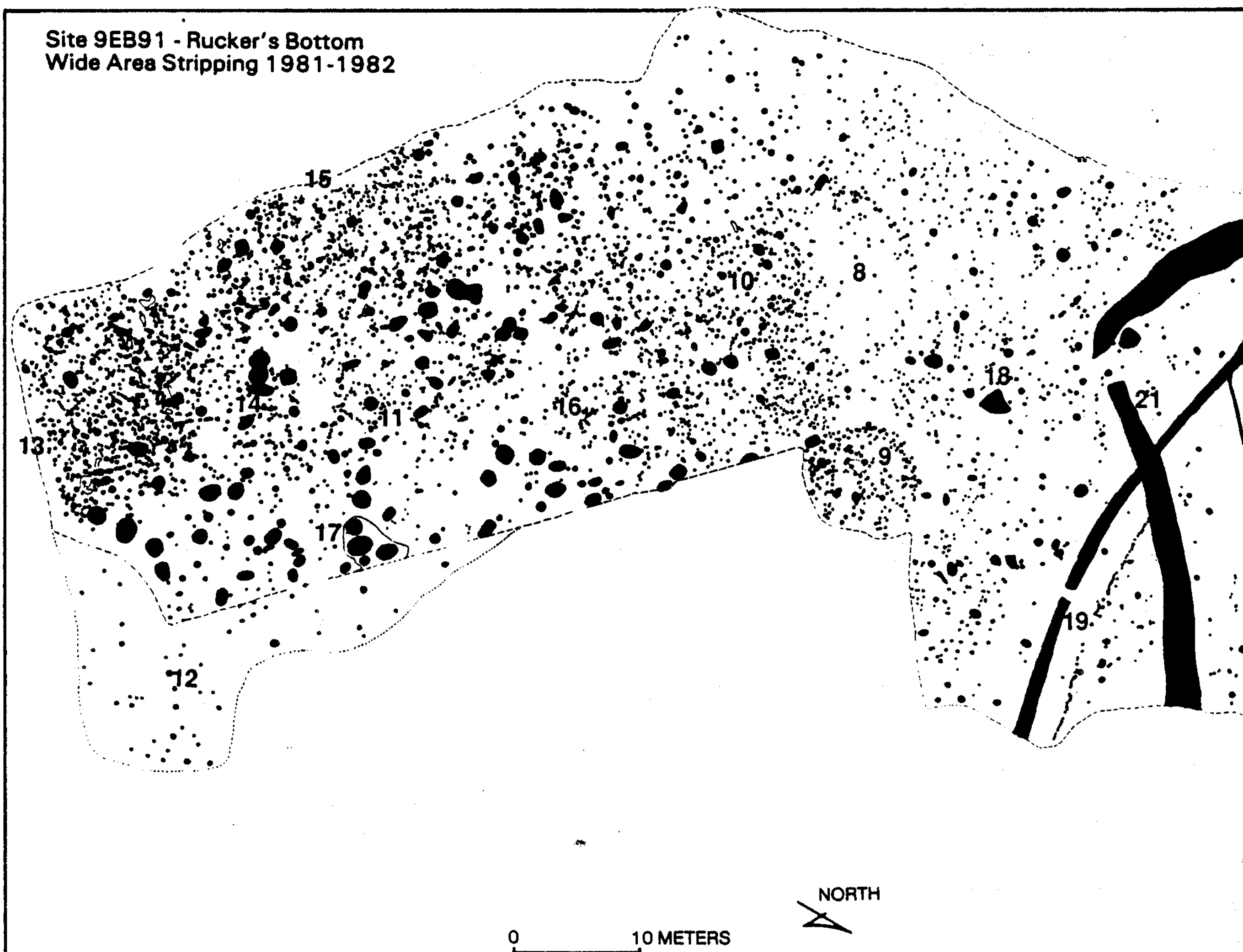
Using first a D-6 bulldozer and then a motor grader, the plowzone was removed from an approximately 10,000 square meter area in the central and northern portions of the terrace (see Figure 8). The area examined formed a contiguous if somewhat irregular block approximately 200 x 50 m in extent, encompassing all of the area examined in 1981 and most of the area inside the semicircular ditch line (Figure 62). Once the feature level was reached with the heavy equipment, final clearing was done with a small tractor pulling a scraping blade, followed by shovel skimming. The revised stripping program located several thousand features including a second ditch and stockade line, evidence for upwards of 20 structures, and well over 100 large pits, exposing for the first time the internal organization of the Mississippian village.

Features were selected for excavation employing both judgemental and random sampling procedures. While most of the features that were ultimately examined were intuitively selected, a simple random sample of 212 features was excavated in 1981 to evaluate the overall assemblage. Three quarters of this sample proved to be cultural features, most dating to the Mississippian period, indicating that feature density at the site was high, and that the incidence of noncultural features was fairly low. The same approximate ratio of features to non-features, as noted previously, was also observed at the Beaverdam Creek Mound site. The random sampling procedure provided a standardized method for evaluating the exposed feature assemblage, and additionally ensured the examination of features that might have otherwise been avoided. In all, 584 features were examined within the stripped area, 457 of which could be identified as Mississippian in age. Counting the three Mississippian features found in the Archaic blocks, a total of 460 Mississippian features were excavated at the site.

The fill from all features was waterscreened through 1/8 inch mesh. To maximize the recovery of paleosubsistence data and small artifacts flotation was routinely employed, with 402 four liter samples collected and processed using a modified SMAP machine (Watson 1976). Project zooarchaeologists were on the site throughout the first and second field seasons (Scott 1985), while the ethnobotanist visited the project the second season to test the data recovery procedures as well as collect samples of the local flora (Moore 1985). The effectiveness of the flotation machine itself was tested using carbonized poppy seeds mixed into samples; an average of 82 (of 100) seeds were recovered from each sample, a fairly high recovery rate (Moore 1985).

Geoarchaeological research formed an important part of the Mississippian investigations (see Chapter III, pp. 81-86). In all, 58 backhoe trenches were opened over the Rucker's Bottom site area to examine the archaeological, geomorphological, and paleoenvironmental deposits. The backhoe was used with great success in 1981 to follow the arc of the 1 to 2 m wide, semicircular Mississippian palisade ditch, a small portion of which had been exposed in the stripping. Extrapolating the arc beyond the block, additional segments were detected using short cross trenches, quickly defining a semicircle 120 m wide and fronting on the river.

Site interpretation was partially constrained by the nature of the preservation encountered, and the field methods employed in data recovery. Historic plowing had occurred over the entire area, and plow scars were evident in the upper parts of many features. Shallow features, including posts, pottery vessels, and house floors were lost due to historic plowing and during the stripping operations, when up to 10 to 15 cm of midden was removed. While this information loss was regretted, an extensive feature assemblage was documented over large areas, permitting effective examination of the site's community plan and occupational history.



MISSISSIPPIAN ANALYTICAL STRATA (KEY)

1. Structure 1. Circular House (?) in the Western Sector of the Inner Village.
2. Structure 2. Squared House (?) in the Western Sector of the Inner Village.
3. Structure 3. Circular House (?) in the Southern Sector of the Inner Village.
4. Structure 4. Circular House (?) in the Southern Sector of the Inner Village.
5. Structure 5. Squared House (?) in the Eastern Sector of the Inner Village.
6. Structure 6. Circular House (?) in the Eastern Sector of the Inner Village.
7. Structure 7. Large (14 Meter Diameter) Public (?) Building in the Southern Sector of the Inner Village.
8. Structure 8. Large (14 Meter Diameter) Semicircular Enclosure in the Area Between the Two Villages.
9. Structure 9. Circular House (?) in the Northwestern Sector of the Outer Village.
10. Structure 10. Circular House (?) in the Northwestern Sector of the Outer Village.
11. Structure 11. Rectangular House (?) in the Southern Sector of the Outer Village.
12. Northeastern Sector of the Outer Village - Incompletely Stripped.
13. Southeastern Sector of the Outer Village (High Feature Density Area).
14. Large (13 Meter Diameter) Circular Public (?) Building in the Southern Sector of the Outer Village.

Source: Anderson and Schuldenrein 1985: 475

Figure 62. The Mississippian Village Feature Assemblage, Rucker's Bottom Site, 9EB91.

15. Southwestern Sector of the Outer Village (High Feature Density Area).
16. Northwestern Sector of the Outer Village (High Feature Density Area).
17. Central Portion of the Outer Village (Low Feature Density Area) - Possible Plaza (?).
18. Area Between the Two Villages (Low Feature Density Area).
19. Semicircular (Early) Ditch Fill - Southern Side of the Enclosure.
20. Semicircular (Early) Ditch Fill - Northern Side of the Enclosure.
21. Rectangular (Later) Ditch Fill-Southern Side of the Enclosure.
22. Rectangular (Later) Ditch Fill-Northern Side of the Enclosure.
23. Southern Sector of the Inner Village, Within the Two Enclosures (High Feature Density Area).
24. Western Sector of the Inner Village, Between the Two Enclosures.
25. Central Portion of the Inner Village (Low Feature Density Area) - Possible Plaza (?).
26. Eastern Sector of the Inner Village (High Feature Density Area).
27. Northern Sector of the Inner Village (High Feature Density Area).

Community Organization. The Mississippian assemblage at Rucker's Bottom, with its numerous features, house patterns, burials, and ditch and stockade lines clearly represented extended village occupation. Topographically, the site was located in one of the largest tracts of bottomland along this stretch of the Savannah, adjacent to both the main river channel and a swampy, partially filled oxbow or swale. The location thus offered access to extensive arable land and to a range of both riverine and backswamp resources. The occurrence of a dense Mississippian occupation in such a setting was thus not altogether unexpected (Murphy and Hudson 1968; Larson 1972; B. Smith 1978:480-486). To facilitate analysis of the Mississippian feature assemblage at Rucker's Bottom, the stripped area was subdivided into a series of analytical strata, each consisting of a major feature such as a structure or ditch line, or else a concentration of features such as the plazas or the high feature density areas around them (Figure 62).

Through a variety of procedures the Mississippian artifact and feature assemblage was dated to between ca. A.D. 1200 and A.D. 1450 (see Ceramic Analyses/Chronological Controls section pp. 287-291 below). Occupation appears to have been continuous over this interval, with settlement shifting from an open, roughly circular arrangement of houses about a central plaza in the south central part of the terrace to houses within first a semicircular and later a rectangular ditched and stockaded enclosure in the north-central part of the terrace (Figure 62). The early Mississippian community to the south of the enclosures was centered about a comparatively open area that may have been a plaza. Besides having a markedly lower feature density, several large rock filled pits were found in this area that may have functioned as trophy or gaming post supports (Bartram 1789/1853:34-35). Around this area were large numbers of features interpreted as the remains of numerous structures. Unfortunately, resolving patterns in the dense feature scatter proved difficult, and it is probable that many structures were only partially represented. When found reasonably intact, structures were typically circular in shape and from 4 to 8 m in diameter. Burials were found scattered over this area, some obviously below house floors. Several tight clusters of burials were found, suggesting family interments. One large public building, identified by a ring of posts and features approximately 14 m in diameter, appeared to have been present in the south-central part of the village, facing the plaza (Stratum 14, Figure 62). This structure was roughly similar in plan to descriptions of 18th century Cherokee and Creek town houses or rotundas (Bartram 1792:452-454; Hawkins 1848:71-72; Swanton 1928:170-188). No ditch lines or obvious evidence for a stockade line was found associated with this early village.

A moderate decrease in feature density was evident between the presumed center of the early community and the area inside the enclosures (Stratum 18, Figure 62). This area was not unoccupied, as partial patterns from a number of structures were present, including a very large arc of posts. This arc, which was poorly defined on its south side, may represent another public building or possibly some kind of an open enclosure (Stratum 8, Figure 62). A massive pit feature was also present in this area. This feature was located approximately 10 m south of the southern opening in the later rectangular ditchline, and may have been a major post support.

The later village on the northern part of the terrace was initially characterized by a semicircular and then later a rectangular ditch and stockade network. The ditches were from 1 to 2.5 m across and from 0.5 to 1.2 m deep. Distinct gaps were found in both ditch lines, three in the earlier and one in the later, that may delimit entranceways. Ditch fill near these gaps contained large quantities of refuse (far more debris than observed in other sections), suggesting a pattern of intentional refuse disposal near entranceways. Rows of posts from probable banked stockade lines were found (where preserved) from 3 to 6 m inside these ditch lines. The rectangular enclosure clearly intruded the semicircular one, and contained later ceramics. A similar change from semicircular to rectangular stockades or enclosures at this approximate time level was noted at the Irene site (Caldwell and McCann 1941:71-72), and has been inferred at the Shoulderbone Mound group on the upper Oconee River (Williams and Shapiro 1986b).

Like the earlier village, a pattern of houses (i.e., areas of high feature density, including a number of identifiable structures) about a plaza (i.e., an area of comparatively low feature density) was found. As in the "plaza" in the earlier village, several large rock filled pits were found in this area inside the enclosures. Other than up to several hundred kg of large rocks, these pits typically had only low to moderate amounts of sherds, bone, or other debris in their fill. Low artifact density characterized many of the features found in this open area, suggesting somewhat less surface debris, or intentional refuse disposal elsewhere. Such a pattern is in keeping with historic accounts of Cherokee and Creek village maintenance (Bartram 1789, 1852:36).

A large circular structure, a possible town house or rotunda, was found in the southern part of the enclosed village, in approximately the same position with respect to the plaza as was observed in the earlier village (Stratum 7, Figure 62). Smaller circular and square, presumably domestic structures were also found within the ditch lines. Over the site assemblage there was a suggestion that the squared shape became more prevalent over time. At least two of the three squared structures found within the enclosure were dated to the Rembert phase, based on the presence of modified rims in associated features.

Plaza Areas. A marked decline in the density of post stains was evident in the northern and eastern parts of the southern village, and across the central part of the northern enclosed village (Strata 17 and 25, Figure 62). Fewer structures and far less rebuilding of structures occurred in these areas than around them. These open spaces were interpreted as plazas, a feature characteristic of both Creek and Cherokee village organization (e.g., Swanton 1928:170-190, 1946). A fair number of large pits were present, some of which contained burials while others were supports for major posts. While evidence for domestic or public structures was minimal, the area did contain some architectural features (i.e., large posts, and probably a few temporary structures), and additionally served as a burial ground.

No evidence for a formal enclosed square ground - four sheds/seating areas in a square or rectangular arrangement - was found, although this was a near universal feature on eighteenth and nineteenth century Creek town sites (Bartram 1789:54-56; Swanton 1928:170-183). While nothing resembling such a feature was found in the southern village, a squared structure (Stratum 5, Figure 62) was found south of the rotunda in the northern village. Given the recovery of only post stains from this structure, interpretation is difficult. The absence of pronounced interior supports suggests it could well have been an open structure. Bartram (1789:34-36) has provided a detailed description of a Creek plaza, or chunky yard, that included several of the features noted at Rucker's Bottom:

> The Chunky-Yard of the Creeks, so called by the traders, is a cubiform area, generally in the centre of the town, because the Public Square and the Rotunda, or great winter Council-house, stand at the two opposite corners of it. It is generally very extensive, especially in the large old towns, is exactly level, and sunk two, sometimes three, feet below the banks or terraces surrounding it, which are sometimes two, one above and behind the other, and are formed of earth cast out of the area at the time of its formation; these banks or terraces serve the purposes of seats for the spectators. In the centre of the yard there is a low circular mount or eminence, in the centre of which stands erect the chunky-pole, which is a high obelisk, or four square pillars declining upwards to an obtuse point, in shape and proportion much resembling the Egyptian obelisk. This is of wood, the heart or inward resinous part of the sound pine-tree, and is very durable; it is generally from thirty to forty feet high, and to the top of this is fastened some object to shoot at with bows and arrows, the rifle, etc., at certain times appointed. Near each corner of the lower and further end of the yard stand erect a lesser pillar or pole, about twelve feet high: these are called the slave-posts, because to them are bound the captives condemned to be burnt, and these posts are usually decorated with the scalps of their slain enemies; the pole is usually crowned with the white dry skull of an enemy. In some of these towns I have counted six or eight scalps fluttering on one pole in these yards. Thus it appears evidently enough that this area is designed for a public place of exhibition of shows and games, and formerly some of the scenes were of the most tragical and barbarous nature...I am convinced that the Chunky-Yards now, or lately, in use amongst the Creeks, are of very ancient date - not the formation of the present Indians. But in most towns they are cleaned out and kept in repair, being swept clean every day, and the poles kept up and decorated in the manner I have mentioned (Bartram 1789:34-36; cited in Swanton 1928:188-189.

The central location of the chunky yard in the village, near a large public building, was a pattern duplicated at Rucker's Bottom, where the 'plaza' areas in both the northern and southern villages were located just to the north of large circular buildings that may have been rotundas (Strata 7 and 14, Figure 62). Chunky poles, or major posts were suggested by the presence of large, rock-filled pits that were located almost exactly in the center of the exposed low feature density areas; upon excavation these appeared to be post supports. A comparable feature, it should be noted, was located in the center of the plaza at the King site in northwest Georgia (Hally et al. 1975:60), and major posts have been reported from the center of Mississippian plaza areas from elsewhere in the southeast, including at the Ledford Island site in southeastern Tennessee (Sullivan 1987:20), the Cemochechobee site in southwest Georgia (Schnell et al. 1981:34-35), and the Zebree site in northeast Arkansas (Morse and Morse 1980:21-23).

Domestic Structures. Over 40 roughly circular or rectangular clusters of posts from possible buildings were found surrounding the apparent plaza areas at Rucker's Bottom. Many of the larger feature concentrations may have been the locations of domestic or public structures, while the smaller concentrations may have been storage buildings, food processing areas, or other non-residential structures or features. Structures over 3 or 4 m in diameter or extent were presumably domestic residential structures or, if very large (i.e., over 10-12 m across), public buildings. Considerable variability in size and construction was evident over the structures recognized at Rucker's Bottom; some had well-defined wall lines with closely set posts, while others were much more open.

Mississippian village life was described in some detail by early explorers (e.g., see Swanton 1946; Hudson 1976, n.d.; DePratter 1983 for summaries); differences in housing and construction were linked to seasonal considerations and to the status of the residing groups. A 1540 account from the De Soto entrada of a Mississippian village in southern Georgia illustrates some of the variability observed:

> The houses of this town were different from those behind, which were covered with dry grass; thenceforward they were roofed with cane, after the fashion of tile. They are kept very clean: some have their sides so made of clay as to look like tapia. Throughout the cold country every Indian has a winter house, plastered inside and out, with a very small door, which is closed at dark, and a fire being made within, it remains heated like an oven, so that clothing is not needed during the night-time. He has likewise a house for summer, and near it a kitchen, where fire is made and bread baked. Maize is kept in barbacoa, which is a house with wooden sides, like a room, raised aloft on four posts, and has a floor of cane. The difference between the houses of the masters, or principal men, and those of the common people is, besides being larger than the others, they have deep balconies on the front side, with cane seats, like benches; and about are many barbacoas, in which they bring together the tribute their people give them of maize, skins of deer, and blankets of the country (Elvas 1557, in Bourne 1904,I:53).

Summer and winter houses have been reported from throughout the southeast (Faulkner 1977), and comparable structures were undoubtedly present at Rucker's Bottom. The larger well-defined post concentrations on the site may be from winter houses, while the less well-defined clusters as well as many of the seemingly isolated or unconnected posts may be from summer houses, or possible storage or other features.

Structure 2. One square to slightly rounded building, Structure 2, was found in a low area at the north end of the Rucker's Bottom site with almost 30 cm of undisturbed fill over the floor (Stratum 2, Figure 62, Figure 63; Anderson and Schuldenrein 1985:561-578). Measuring approximately 6 by 7 m, the structure had an entrance on the southeast and a well defined central hearth, and had been rebuilt at least once. The entire area of the structure was excavated in 1 m squares, with all fill from 5 cm above the floor to the floor retained as a separate provenience, and all artifacts over 5 cm in size piece plotted. General fill was processed through 1/8 inch mesh, and flotation samples were taken from the floor of each square. The structure did not burn, but instead appeared to have been abandoned and then used for some time as a refuse dump. While dense quantities of refuse, such as broken sherds, bone, and debitage were found on the floor, no large artifacts or complete vessels were found.

Some of the smaller artifacts found on or in the floor may have been left behind when the structure was abandoned, or may have been trampled into the floor while it was in use. Intact Mississippian triangular projectile points, for example, were typically found near the outer walls, where they may have been lost or swept, while broken point fragments occurred all over the floor, with a strong incidence on the northern side (Figure 63). Large quantities of pottery, quartz debitage, animal bone, and carbonized plant remains (corn and nutshell) were also found to the north of the hearth, suggesting that a considerable range of activities, including many related to food processing, took place in this area, assuming the major portion of the debris predates the abandonment of the structure. Discoidals, pipe fragments, and a range of vessel forms, finishes, and rim treatments (i.e., notched, incised, folded, and pinched) were present; the rim treatments indicated a later Middle Mississippian Rembert phase age for the structure. The use of a number of vessels, with a range of decorative treatments, as well as gaming and smoking implements, was indicated. So few recognizably non-Mississippian artifacts were found that the structure could almost be regarded as a single large Rembert phase feature.

Little variation in average sherd size was evident over the floor, supporting the inference that at least a moderate proportion of the ceramic assemblage may have been post-abandonment refuse, since few large sherds and no vessels were found. The greatest quantity of pottery came from the northern half of the structure and from along the walls and in the corners. This may suggest a greater use of vessels (for food storage or preparation?) in the northern area, as well as the sweeping of debris into corners. While this finding tends to contradict that based on average sherd size, the two analyses together suggest that the floor assemblage included both later refuse as well as materials present when the structure was abandoned.

Pottery discoidals were scattered over the floor, indicating that game playing may not have been restricted to any one area. Pottery in general tended to occur in the northern half of the structure, as noted, suggesting more or larger vessels were

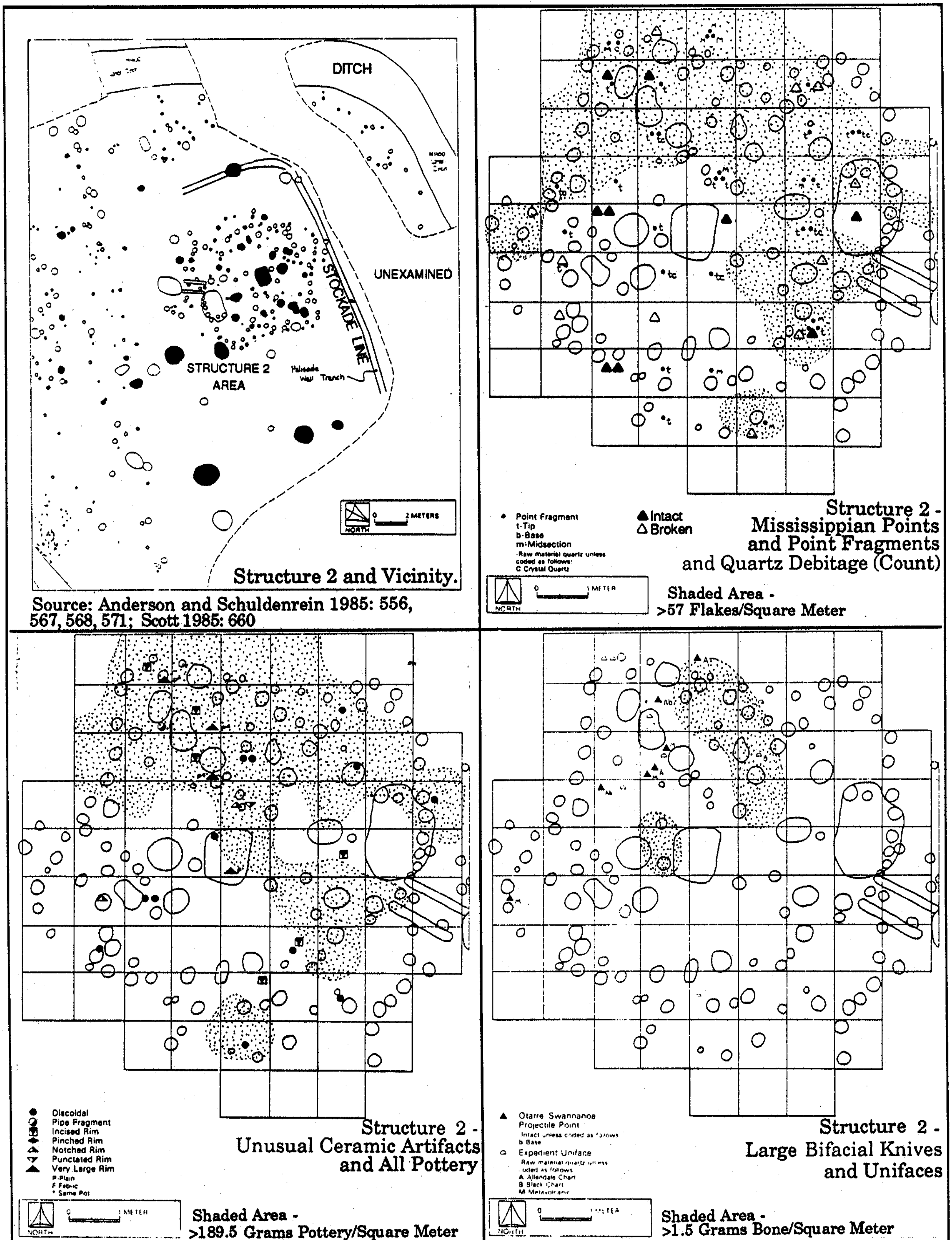


Figure 63. Structure 2 Features, Points, Pottery, Bone, and Quartz Debitage Distributions, 9EB91.

used or stored in this area. Plain pottery, in contrast, was more evenly dispersed over the floor. Since most of the plain Mississippian period pottery at the site appeared to derive from bowls or small jars, this distribution may point to the use of individual eating dishes. An appreciable quantity of cracked rock was found in and around the structure, where it may have seen use as hearth stones or as construction supports. A pronounced concentration of cracked rock, in fact, was picked up in this area in the controlled surface collections. Quartz debitage, in contrast, tended to occur in greatest quantity adjacent to or away from structures, suggesting chipped stone tool manufacture or use was typically conducted outside of habitation areas (Anderson and Schuldenrein 1983b:106; 1985:471).

Several small clusters of chert and metavolcanic debitage were found on the floor of Structure 2 that may have come from single manufacturing episodes. Quartz debitage, which was the predominant raw material type, was more widely distributed, although again the most material came from the northern half of the structure. An examination of the distribution of the quartz debitage by average flake size, however, found that larger pieces tended to occur in the southern half of the structure. More initial manufacture may have taken place in this area, with final manufacturing occurring in the northern half. Many of the tools were distributed seemingly randomly over the floor, although some association with the debitage was indicated.

A dense concentration of bone surrounded by several cutting and scraping tools was found in the north central part of the structure (Figure 63; Scott 1985:665-660). This concentration consisted almost exclusively of large mammal bone (most deer or probable deer), and may reflect a butchering episode some time after the structure was abandoned. Interestingly, several of the points found in and around the bone were square-to-contracting stemmed Otarre/Swannanoa-like forms (Figures 53:ll-ss, 63). Re-use of earlier points is suggested; these artifacts would have been a common discovery in any fields or pits opened on the southern part of the terrace. A second cluster of bone from both large and small animals was found just outside the door area, suggesting intentional trash disposal. Large mammal skull fragments, missing from the interior cluster, were present in this deposit. Cold weather use of Structure 2 was indicated by the very low incidence of fish and small mammals, and the presence of deer elements indicating probable fall/winter kills (Scott 1985:659). On the basis of its sturdy construction, and the results of the paleosubsistence analyses, Structure 2 appears to have been a winter house (Faulkner 1977).

<u>Council Houses or Rotundas</u>. Evidence for possible public buildings, in the form of large rings of posts from structures ca. 12 to 15 m in diameter were found on the south sides of both the southern and northern villages at Rucker's Bottom (Strata 7 and 14, Figure 62). Concentric post arcs were readily apparent in Structure 7, in the northern village, while the existence of a large central post was suggested in Structure 14. Several large pits and a number of lesser posts were also present in the center of Structure 14, and one or more of these may have served as supports. A detailed description of Creek town life, and the rotunda or assembly room (also sometimes called a "hot house"), was made by Benjamin

Hawkins around 1799:

> The Micco, counsellors and warriors, meet every day, in the public square; sit and drink a-cee, a strong decoction of the cassine yupon, called by the traders, black drink; talk of news, the public and domestic concerns, smoke their pipes, and play Thla-chal-litch-cau, (roll the bullet.) Here all complaints are introduced, attended to, and redressed. They have a regular ceremony for making, as well as delivering the a-cee, to all who attend the square...the rotunda or assembly room, called by the traders, "hot-house." This is near the square, and is constructed after the following manner: eight posts are fixed in the ground, forming an octagon of thirty feet diameter. They are twelve feet high, and large enough to support the roof. On these, five or six logs are placed, of a side, drawn in as they rise. On these, long poles or rafters, to suit the height of the building, are laid, the upper ends forming a point, and the lower ends projecting out six feet from the octagon, and resting on posts five feet high, placed in a circle round the octagon, with plates on them, to which the rafters are tied with splits. The rafters are near together, and fastened with splits. These are covered with clay, and that with pine bark; the wall, six feet from the octagon, is clayed up; they have a small door into a small portico, curved round for five or six feet, then into the house.

Comprehensive archaeological and ethnohistorical summaries of evidence pertaining to Dallas and Cherokee townhouses have been prepared by investigators working in eastern Tennessee (Schroedl 1978, 1985:228-234; Baden 1983; Polhemus 1987:247-259). Large circular structures roughly comparable to those found at Rucker's Bottom have been reported from the Cemochechobee site (Schnell et al. 1981:63-66), at Bessemer (Dejarnette and Wimberly 1941:53), and Hiawassee Island (Lewis and Kneberg 1946:70-72), and an occurrence throughout the Mississippian era, and on sites of widely varying sizes, is indicated.

A second quotation, from Bartram, provides additional detail about Creek rotundas:

> The great council house or rotunda is appropriated to much the same purpose as the public square, but more private, and seems particularly dedicated to political affairs. It is a vast conical building or circular dome, capable of accommodating many hundred people; and constructed and furnished within, exactly in the same manner as those of the Cherokees already described, but much larger than any I had seen of them; there are people appointed to take care of it, to have it daily swept clean, and to provide canes for fuel, or to give light (Bartram 1792:448-449).

The use of cane for fuel was supported by the findings of the ethnobotanical analysis at Rucker's Bottom; charred cane was found in appreciable numbers of Mississippian features, including in several possible hearths (Moore 1985). The careful cleaning of the rotunda area (and the nearby plaza) would probably result in comparatively lower artifact densities in these areas (Dickens 1976:66); this inference, however, was only somewhat ambiguously supported by the surface distributional evidence from the site (Figure 8).

Smaller villages, particularly in relatively uncomplicated Mississippian societies, may have had public buildings (town/council houses) instead of mound/temple complexes. DePratter (1983:209) has suggested that council houses were present only in "weakly centralized chiefdoms" in the southeast during the interval from roughly A.D. 1000 to A.D. 1600. The Rucker's Bottom site may have been a part of such a polity. Alternatively, the use of council houses (or at least large public buildings) may have been an integral part of Mississippian community life throughout this period, in both complex and less complex chiefdoms. In smaller villages away from sacred/ceremonial centers it is probable that communal decision-making was more prevalent than at the centers, where the chiefly elite would have been concentrated.

The decline of the Beaverdam Creek Mound center and its possible replacement by Rembert suggest major changes in local chiefdom organization; this flux may have permitted the Rucker's Bottom site to develop some measure of autonomy (necessitating stronger internal organization). The site record indicated that probable council houses or public buildings were present throughout the period of Mississippian occupation (ca. A.D. 1200-1450), including the period when the Beaverdam Mound center was in ascendancy. The existence and use of public buildings, it is suggested, probably occurred throughout the Mississippian period in this general region. Their role as decision making centers, or 'council' houses, however, may have been diminished in more complex chiefdoms and at ceremonial centers, where their use for religious activity may have been paramount.

Ditch and Stockade Lines. Two overlapping ditch lines were found in the central portion of the Rucker's Bottom site during the 1981 and 1982 stripping operations that formed semicircular and rectangular enclosures fronting on the river (Strata 19-22, Figure 62). Traces of stockade lines were found inside both ditches, suggesting probable ditch and bank arrangements, with the ditch fill used to elevate and support the stockade posts. A shallow wall trench roughly 30 cm wide by 10 to 20 cm deep was found some 5 m within and paralleling portions of the rectangular ditch; the surviving sections, on the northern and southern margins, indicate that the fence line paralleled the ditch. Scattered posts were also found paralleling the inside of the semicircular ditch line. In both stockade lines the posts were extremely shallow, with few surviving sections. The presence of only portions of the stockade lines was probably due to historic plowing, which appeared to have removed shallower features on the site.

The posts making up the stockade lines were fairly small, averaging 15 cm in diameter in the semicircular enclosure, and under 15-30 cm in diameter in the rectangular enclosure. No separate post stains were observed in the fill or bottom of the 30 cm wide rectangular wall trench, a 5 m section of which (near Structure 6) was shovel-skimmed out. The post sizes in this enclosure were estimated from the size of the wall trench itself. The fill in the wall trench was quite mottled, suggesting one or more episodes of rebuilding (i.e., with posts pulled up and replaced), and/or the tamping of soil and other debris around the posts. Gray and/or orange clay was common in the fill of the wall trench (contributing to the mottling) and in a number of the individual post molds making up the semicircular stockade line. The clay may reflect a conscious attempt to coat and hence extend the life of the posts (Lafferty 1973:102; Cole and Albright 1981). Alternatively, it may represent an attempt to solidly fix the posts which, if shallow or short, might have been fairly easily uprooted from the sandy soils of the terrace. No evidence for large masses of clay were noted in the deposits, however, as might have been present if the entire fence line was coated.

Three pronounced gaps were found in the semicircular ditch, on the northern, western, and southern sides of the enclosure. These were interpreted as entranceways, although post lines from possible screening walls were observed inside these gaps. The largest surviving sections of the semicircular stockade, in fact, were typically noted just inside the openings. Entrance areas, if that is what the gaps represent, may have been better constructed than other sections of the stockades as a defensive measure. The fill on either side of these gaps was typically darker and more debris-laden than in ditch sections further away, suggesting intentional refuse disposal just outside the village. Comparable gaps were reported in the ditch at the Etowah site in northwest Georgia by the Reverend Elias Cornelius in 1818.

Three uncorrected radiocarbon dates obtained from debris found in the fill of the semicircular ditch indicated that it was dug between ca. A.D. 1360 to A.D. 1450 (average = A.D. 1407; see Appendix I). The rectangular ditch was probably built no more than 25 to 50 years later, given the lifespan of timbers in this climate, since no evidence for rebuilding was noted along the surviving semicircular wall line. The three dates point to an early Rembert phase age for the enclosures, an attribution that was supported by the ceramics found in the fill. No evidence for bastions was noted along the stockade line of either enclosure, although two curious features were found on either side of the northern entrance gap in the semicircular ditch that may have been sentry posts of some kind. About 3 to 4 m on each side of this gap, on the outside of the ditch, diffuse stains suggesting projections were found; the area to the north resolved into a square cluster of posts. A small, fairly flimsy structure was probably present here; its location near the 'entrance' is suggestive, but may be fortuitous. No comparable features were observed near the other gaps, or elsewhere along the ditches.

The nature of the stockade/defensive system along the river to the north of the stripped area was unknown. Several backhoe trenches were opened from the bluff edge out into the field, but failed to detect evidence for a ditch or stockade line. The comparatively high (ca. 4 m), steep bank would have afforded some protection, but it is probable that a stockade of some kind was also present. A large, semicircular blowout or hollow (ca. 20 m across and cutting 5 to 10 m into the bank) was present in the bank/bluff margin below the center of the semicircular enclosure; this depression (used to collect runoff from the waterscreens in 1980) may have been from an eroded entrance area. Canoes were probably kept tied up in this general area, for use in both fishing and travel, and trips to the river margin by the village inhabitants for water, bathing, subsistence pursuits, and other activities would have undoubtedly been common and would have been facilitated by a path of some kind. A description of what the Rucker's Bottom village might have looked like from the river was provided by Henry Woodward, who in 1684 visited an Indian village on the upper Savannah somewhere north of Augusta. Although referring to a different, later village, many of his observations could apply to the Rucker's Bottom community:

> ...we came in sight of the Westo town...which stands upon a point of the river...upon the western side...the next day I viewed the Town, which is built in a confused manner, consisting of many houses whose sides and tops are both artificially done with bark, upon the tops of most wherof fastened to the ends of long poles hang the locks of hair of Indians that they have slain. The inland side of the town being doubly pallisaded, and that part which fronts on the river having only a single one. Under whose steep banks seldom lie less than one hundred fair canoes ready upon all occasions...

Ditches like those found at Rucker's Bottom were noted in early historic and early archaeological accounts (e.g., Hawkins 1848:33; Blanding 1848), and have been reported at a number of Mississippian sites in the southeast (e.g., Lafferty 1973; Morse and Morse 1980, 1983; Cole and Albright 1981).

The rectangular enclosure, encompassing an estimated area of about 7200 square m, surrounds an area about a quarter again larger than that within the semicircular enclosures (ca. 5600 square m); these figures suggest at least some increase in local population. With the apparent eclipse of the Beaverdam Mound by Rembert, a site over twice as far away, the Rucker's Bottom community may have attained greater prominence in the local settlement system (possibly becoming somewhat more autonomous and/or isolated). The greater emphasis on fortifications may, therefore, reflect a somewhat greater isolation of the community; it may also, consequently, have had to serve as a center or defended area for a somewhat larger surrounding population. Mississippian components, most appreciably smaller than the scatter at Rucker's Bottom, have been found throughout the floodplain along this stretch of the Savannah that appear to represent isolated hamlets or smaller communities. The inhabitants of these nearby sites may have gravitated to Rucker's Bottom in times of stress, and possibly at other times for communal activities or ceremonies.

The absence of obvious bastions, multiple stockade lines, or direct evidence for warfare such as burned houses or stockade lines at Rucker's Bottom suggests that community defense, while perhaps acknowledged, was not an overwhelming preoccupation. The De Soto chroniclers did not report substantial aboriginal fortifications until they reached the province of Coosa in north Georgia and Tennessee (Elvas 1557, in Bourne 1904, I:85). Ranjel, De Soto's secretary, noted that "in the land of this Chiaha was where the Spaniards first found fenced villages" (Ranjel ca. 1540, in Bourne 1904, II:109; see also Biedma 1544, in Bourne

1904, II:15). The apparent absence of substantial fortifications in the central Georgia and South Carolina areas in 1540 is interesting, since a pronounced rivalry was reported between the provinces of Ocute, centered on the Oconee in Georgia, and Cofitachequi, centered on the Wateree in South Carolina (Hudson et al. 1985, 1987). Direct travel and/or warfare between these complex chiefdoms appears, however, to have been infrequent; De Soto's guides (and several hundred bearers) from Ocute got thoroughly lost attempting to reach Cofitachequi (see Elvas 1557, in Bourne 1904, I:59-64). The need for fortifications in either area may not have been pressing; their absence in 1540 may reflect a relative stabilization of provincial boundaries, and possibly less conflict than during the fourteenth and fifteenth centuries. Alternatively, the Spaniards simply may not have regarded fence lines like those noted at Rucker's Bottom as serious or substantial fortifications; they may have only taken notice when obvious military features like bastions or archery loopholes were evident. The fortifications at Rucker's Bottom, therefore, were probably fairly uncomplicated by regional standards, perhaps serving as much to demarcate the community as to provide for its defense.

Ceramic Analyses/Chronological Controls. Internal chronological control at Rucker's Bottom was provided primarily by the ceramic analyses, although three radiocarbon dates placed the construction of the first, or semicircular ditch at about A.D. 1400 (Appendix I). All sherds over 1/2 inch in size from the site were examined and categorized by paste and surface finish, with rims and recognizably stamped sherds subjected to additional attribute analyses (43,461 specimens; Anderson and Schuldenrein 1985:321). Overall, the Mississippian ceramic assemblage at Rucker's Bottom was dominated by plain, burnished plain, check stamped, and complicated stamped finishes. Corncob impressions, cord marking, and modified (i.e., pinched, folded, punctated, notched or incised) rims were also present, but were much less common. The most common design motifs observed within the complicated stamped assemblage were nested diamonds, concentric circles, herringbone patterns, and the filfot cross (Figure 64). The assemblage included both Beaverdam and later Rembert phase materials, and bore strong similarities to Reid's (1965, 1967) Pee Dee series, and to Savannah period assemblages from Irene and other lower Savannah River sites. Affiliations with Pisgah assemblages were also suggested by the moderate incidence of rim notching, and nested diamond motifs were also common.

Examining the distribution of plain, complicated stamped, check stamped, corncob impressed, and modified rims, clear differences were evident between the northern and southern parts of the terrace. The area outside of the ditches, for example, had a much higher proportional incidence of check stamped pottery (8.4 percent) than the area inside the enclosures, where the finish accounted for only 3.7 percent of the total (Table 4). While some of the 'Mississippian' check stamped pottery on the site, particularly from the area outside of the enclosures, was probably earlier Deptford or Cartersville material, this incidence was thought to be low. At the Beaverdam Creek mound, where the period of Mississippian occupation was one to two centuries earlier than the Rembert phase occupations at Rucker's Bottom, the proportion of check stamping relative to other wares was between 6.9 and 9.7 percent. At the Rembert Mounds, a large multiple mound

Source: Anderson and Schuldenrein 1985: 457

0 3 cm
0 1 inch

Mississippian Complicated Stamped Design Motifs from the Rucker's Bottom Site (9EB91). a Nested Diamonds; b Filfot Scroll; c Line Block; d-i Herring Bone; j Ladder; l-q Concentric Circles; k Quartered Circles; o Bisected Circles.

Figure 64. Complicated Stamped Design Motifs, Richard B. Russell Reservoir Area.

Table 4. A Comparison of Mississippian Ceramic Finishes at the Rucker's Bottom, Beaverdam Creek, and Rembert Mound Sites, Elbert County, Georgia.

	9EB91 Rucker's Bottom-1		9EB85 Beaverdam Creek Mound-2			9EB1 Rembert Mounds-2	
Design Motifs	Outside Enclosures	Inside Enclosures	Pre-mound Midden	Mound-3 Fill	Village Area	Mound-4	Village-5
All complicated stamped	2968 (29.4%)	5846 (33.0%)	708 (12.4%)	531 (18.9%)	428 (6.5%)	136 (46.9%)	196 (45.6%)
All check stamped	852 (8.4%)	652 (3.7%)	553 (9.7%)	194 (6.9%)	529 (8.1%)	3 (1.0%)	8 (1.9%)
All fabric/ corncob impressed	272 (2.7%)	717 (4.1%)	105 (1.8%)	125 (4.5%)	179 (2.7%)	2 (0.7%)	7 (1.6%)
Modified rims	55 (0.5%)	196 (1.1%)	12 (0.2%)	18 (0.6%)	14 (0.2%)	18 (6.2%)	24 (5.6%)
Plain	5961 (59.0%)	10,277 (58.1%)	4342 (75 9%)	1941 (69.1%)	5391 (82.5%)	131 (45.2%)	195 (45.3%)
TOTALS (100.0%)	10,108 (100.0%)	17,688 (100.0%)	5720 (100.0%)	2809 (100.0%)	6541 (100.0%)	290 (100.0%)	430 (100.0%)

-1
All 1980 EU's, 1981-1982 Features, and Structure 2 fill
-2
Data derived from Rudolph and Hally's (1984) Beaverdam Creek report which included a re-analysis of Caldwell's (1953) excavation sample
-3
Gray ashy layer
-4
Pits 2, 6
-5
Pits 1, 3-5, 7-9

Table 5. A Comparison of Mississippian Complicated Stamp Design Elements at the Rucker's Bottom, Beaverdam Creek, and Rembert Mound Sites, Elbert County, Georgia.

	9EB91 Rucker's Bottom		9EB85 Beaverdam Creek Mound-2			9EB1 Rembert Mounds-2	
Design Motifs	Outside Enclosures	Inside Enclosures	Pre-mound Midden	Mound Fill	Village Area	Mound-3	Village-4
Nested Tri-angles	127 (63.2%)	89 (54.3%)	42 (49.4%)	17 (22.7%)	25 (49 0%)	6 (21.4%)	17 (60.7%)
Concentric circles/ figure 8's	37 (18.4%)	36 (22.0%)	26 (30.6%)	30 (40.0%)	20 (39.2%)	5 (17.9%)	4 (14.3%)
Herring bone	14 (7.0%)	34 (20.7%)	8 (9.4%)	19 (25.3%)	1 (2.0%)	- (0.0%)	1 (3.6%)
Filfot cross	23 (11.4%)	5 (3.0%)	9 (10.6%)	9 (12.0%)	5 (9.8%)	17 (60.7%)	6 (21.4%)
TOTALS (100.0%)	201 (100.0%)	164 (100.0%)	85 (100.0%)	75 (100.0%)	51 (100.0%)	28 (100.0%)	28 (100.0%)

-1
All 1980 EU's 1981-1982 Features, and Structure 2 fill
-2
Data derived from Rudolph and Hally's (1984) Beaverdam Creek report and Hally's re-analysis of Caldwell's (1953) excavation sample
-3
Pits 2, 6
-4
Pits 1, 3-5, 7-9

group approximately 20 km downstream from Rucker's Bottom on the Georgia side of the Savannah, the incidence of check stamping was only between 1.0 and 1.9 percent.

A decrease in check stamping over the course of the Mississippian was evident along the Savannah and has been documented at both the mouth and at the Beaverdam Creek Mound (DePratter 1979:111; Rudolph and Hally 1985). Rim modification, in contrast, particularly the occurrence of folded and pinched, punctated, and notched rim strips, increased over time (Figures 65, 66). This phenomenon was originally noted by Kelly (1938:11) and by Caldwell and McCann (1941:41-42) in the Irene Mound report, where "transitional" rim forms were illustrated. Wauchope (1966), Reid (1967), South (1976), and others have also noted this trend, which has recently been documented in some detail in the upper Oconee drainage by University of Georgia researchers (Smith 1981, 1983; Rudolph 1983; Rudolph and Blanton 1980; Shapiro 1983). In particular, Rudolph and Blanton (1981:16) have noted that "in the Oconee Valley punctated rims tend to occur in earlier contexts than pinched rims" while Smith (1981:185-188) has documented an increase in pinching and a decrease in punctation over time at the Dyar site.

The evidence from the Beaverdam Creek and Rembert mound sites showed that collared, fine incised rims were earlier (i.e., Beaverdam phase, ca. A.D. 1200-1300) than folded pinched, notched, and punctated rims, which were characteristic of the Rembert phase (ca. A.D. 1350-1450). At Beaverdam Creek most of the modified rims were collared and incised. While incised rims were about evenly distributed between the northern (fortified) and southern (unfortified) village areas at Rucker's Bottom, folded pinched, punctated, and notched rims were common in the northern village, suggesting a later date. Incised rims were about evenly distributed over the site, while folded, pinched, punctated, and notched rims were about three times (N=168, 73.6 percent of the 228 modified rims) more common in the area inside the enclosures (Anderson and Schuldenrein 1985:463).

In the Russell Reservoir, the proportional incidence of rim modification increased from between 0.2 and 0.6 percent of the total ceramic assemblage at the Beaverdam Creek Mound to 0.5 percent in the southern and 1.1 percent in the northern village at Rucker's Bottom (Table 4). Some of the decorated or modified rimstrips found in the area to the south of the enclosures at Rucker's Bottom, it should be noted, came from burial pit fill, suggesting a late age for at least some of these interments. The highest incidence of rim treatment observed in this portion of the drainage occurred at the Rembert Mound Group. Rudolph and Hally (1985:453-459) have argued that Rembert was the political center for later Mississippian occupations along this stretch of the Savannah, just as the Beaverdam Mound may have been for the earlier Mississippian populations. From the ceramic evidence, the Rucker's Bottom components overlapped with both centers.

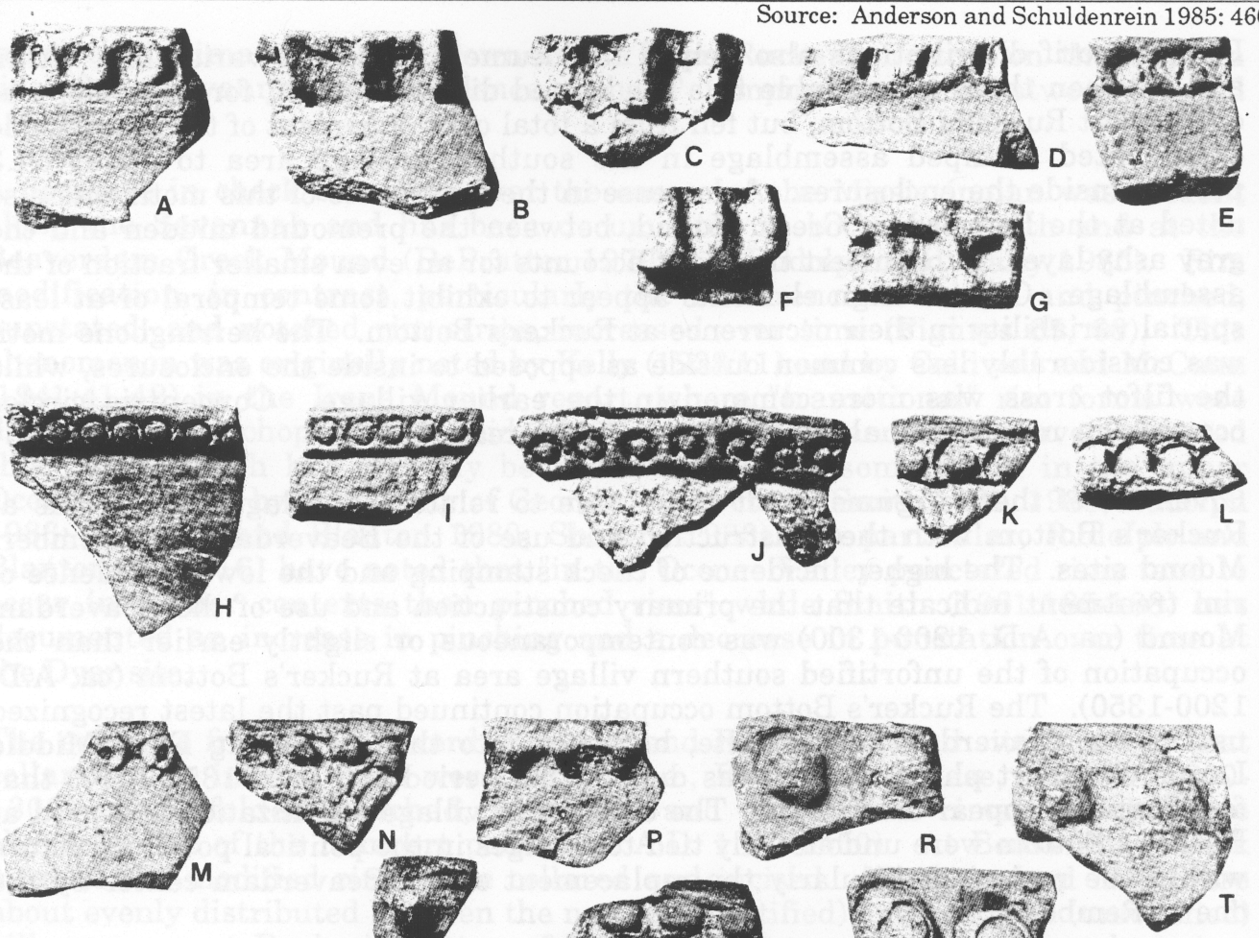
Design motif distributions also helped to document temporal variability within and between these sites (Table 5). The nested diamond motif, for example, was common at Rucker's Bottom, but fell from a total of 63.2 percent of the identifiable complicated stamped assemblage in the southern village area to about 54.3 percent inside the enclosures. A decrease in the occurrence of this motif was also noted at the Beaverdam Creek Mound, between the premound midden and the gray ashy layer. At Rembert the motif accounts for an even smaller fraction of the assemblage. Other design elements appear to exhibit some temporal or at least spatial variability in their occurrence at Rucker's Bottom. The herringbone motif was considerably less common outside as opposed to inside the enclosures, while the filfot cross was more common in the earlier village. Concentric circles occurred in roughly equal proportions in both areas.

Given all of these arguments, it is possible to relate the village occupations at Rucker's Bottom with the construction and use of the Beaverdam and Rembert Mound sites. The higher incidence of check stamping and the lower incidence of rim treatment indicate that the primary construction and use of the Beaverdam Mound (ca. A.D. 1200-1300) was contemporaneous or slightly earlier than the occupation of the unfortified southern village area at Rucker's Bottom (ca. A.D. 1200-1350). The Rucker's Bottom occupation continued past the latest recognized use of the Beaverdam Mound site, however, into the succeeding Early/Middle Lamar Rembert phase, and it was during this period (ca. A.D. 1350-1450) that fortifications appear on the site. The changes in village organization observed at Rucker's Bottom were undoubtedly tied to changes in the political power structure within the region, particularly the replacement of the Beaverdam center by the one at Rembert.

<u>The Burial Assemblage</u>. A total of 41 human burials were positively identified during the fieldwork at Rucker's Bottom, and isolated human bones were found in another eight features (Weaver et al. 1985). Twenty-four of these burials were removed and were cleaned and examined by Dr. David S. Weaver, Ms. Carol Roetzel Butler, Mr. William R. Culbreth, and Mr. David C. Crass of Wake Forest University, Winston-Salem, North Carolina. Numerous burials were apparently present on the site, occurring in isolation or in small clusters. No mortuary buildings like those reported from Irene or Town Creek (Caldwell and McCann 1941:25-26; Graham 1973:Figure 2) were found. Burial at the site appeared to have been far less formal an affair than at the larger centers; the clusters of burials found at the site may be fortuitous, or may reflect kin or sodality groupings. Large pits, excluding those filled with rocks from the plaza areas, typically contained burials upon testing (41 of 69 tested, or 59.4 percent). Over 125 pits large enough to have contained burials were mapped during the fieldwork, and it is therefore probable that upwards of a hundred burials were originally present on the site.

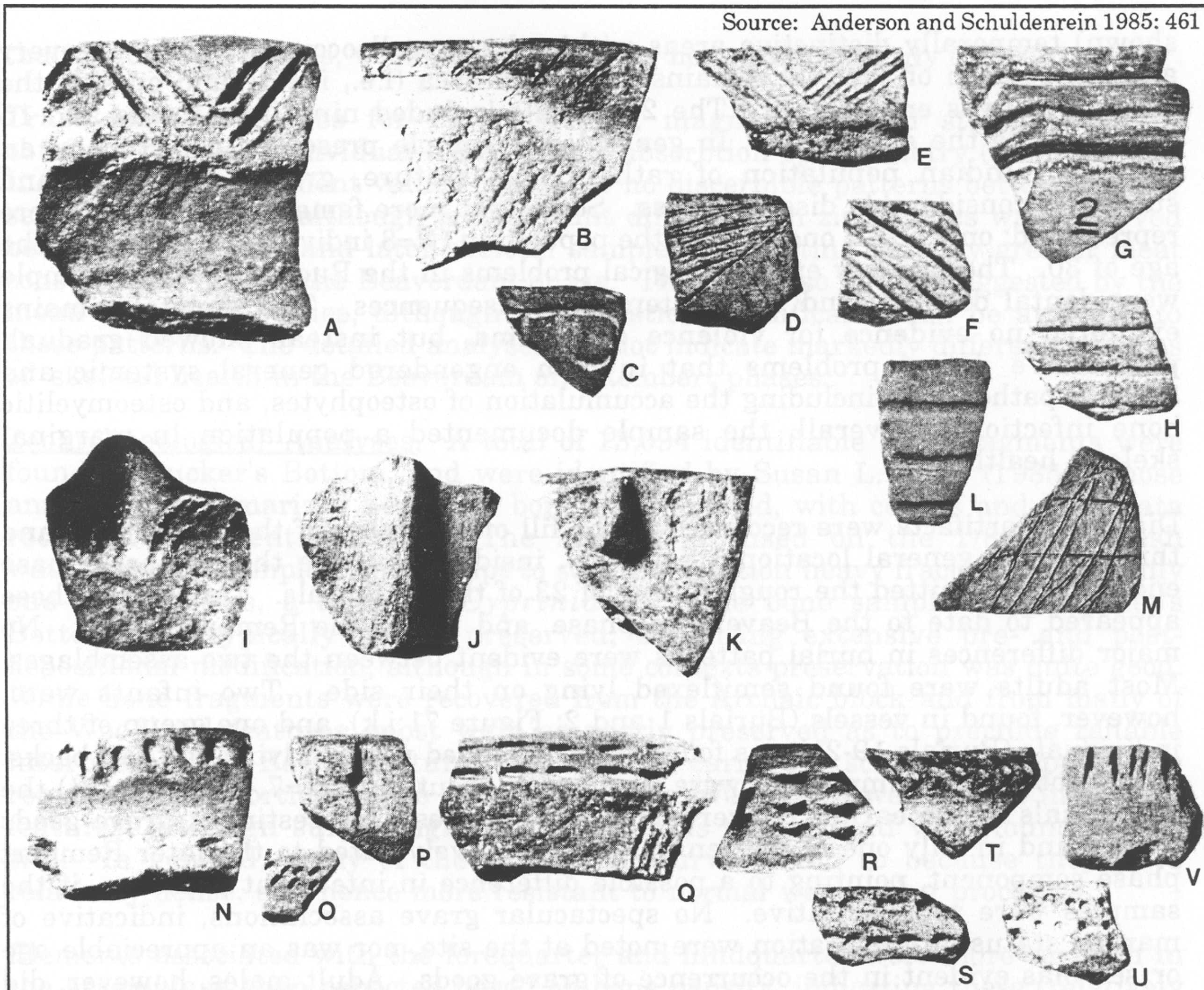
Poorly preserved burials, requiring considerable labor to expose and remove, often for little information return, were typically left unexcavated upon discovery and evaluation, although a few were removed as controls. Since the detection of the ditch and stockade lines during the fieldwork pointed to two spatially and (as later

Source: Anderson and Schuldenrein 1985: 460



Pinched and Punctated Mississippian Rimsherds from the Rucker's Bottom Site (9EB91). a-g Folded, pinched rims; h-l,bb Folded or appliqued rims with cane punctations; m-t Unfolded rims with rosettes; u-aa Unfolded rims with cane punctations; w,z Nodes; y,bb Fine incising.

Figure 65. Mississippian Pinched and Punctated Rims, Richard B. Russell Reservoir Area.



Notched and Incised Mississippian Rimsherds, and Lugs, from the Rucker's Bottom Site (9EB91). a-h,l,m Incised rims; i-k lugs; n-v Unfolded, notched rims; w-dd Folded, notched rims. Sherd c came from 38AB22. Incised sherds a,b,e are thickened or folded.

Figure 66. Mississippian Notched and Incised Rims, Richard B. Russell Reservoir Area.

shown) temporally distinctive areas within the overall occupation, the recovery and comparison of skeletal remains from each area (i.e., inside and outside the enclosures) was emphasized. The 24 burials included nine from inside and 15 from outside the enclosures. In general, the sample presented a picture of an American Indian population of rather short stature, gracile physique, and subject to considerable disease stress. Somewhat more females than males were represented; only about one/third of the population (N=8 individuals) lived past the age of 30. The primary epidemiological problems in the Rucker's Bottom sample were dental diseases and their attendant consequences. The skeletal remains exhibited no evidence for violence or trauma, but instead showed gradual, progressive dental problems that in turn engendered general systemic and skeletal pathologies, including the accumulation of osteophytes, and osteomyelitic bone infections. Overall, the sample documented a population in marginal skeletal health.

Diagnostic artifacts were recovered in the fill of a number of the burial pits, and this, and the general locational data (i.e., inside or outside the Rembert phase enclosure), permitted the rough dating of 23 of the 24 burials. Thirteen of these appeared to date to the Beaverdam phase, and ten to the Rembert phase. No major differences in burial patterns were evident between the two assemblages. Most adults were found semiflexed lying on their side. Two infants were, however, found in vessels (Burials 1 and 2; Figure 71:j,k), and one group of three individuals (Burials 19-21) was found in an extended position lying on their backs. Grave goods were simple and were found with about half (N=7, 53.8 percent) the individuals in the earlier Beaverdam phase samples. Interestingly, grave goods were found in only one of the ten burials tentatively dated to the later Rembert phase component, pointing to a possible difference in interment practices, if the samples were representative. No spectacular grave associations, indicative of marked status differentiation were noted at the site, nor was an appreciable age or sex bias evident in the occurrence of grave goods. Adult males, however, did tend to have slightly more elaborate grave goods - pots or beads as opposed to bone pins, rattles, or cobble tools - than adult females.

Stature estimates were calculated for eight of the adults and yielded a range from approximately 156 cm to 175 cm. Based on this very small sample, the mean stature for males was 170.6 cm (s_x = 3.02), while the mean stature for females was 163.9 cm (s_x = 2.39). Each individual was examined by Weaver and Roetzel for the presence of gross skeletal pathology, radiographic anomaly and pathology, microscopic anomaly and pathology, dental enamel hypoplasia, and for the concentrations of several trace elements. Osteomyelitis was surprisingly frequent in the skeletal sample, occurring in eight of the twenty-four individuals. These skeletal pathologies, the class of non-specific systemic bone infections known as osteomyelitis, are often fatal and would have contributed to morbidity at the site (Steinbock 1976). However, there was not a statistically significant association of osteomyelitis between the two phases. Enamel hypoplasia was observed on about half of the burials in each phase, again showing no differences in health. Combined with the somewhat surprising rarity of Harris' lines in the radiographs of the long bones, the incidence of dental enamel hypoplasia implied that childhood stresses, while moderate, were not extraordinarily difficult.

Trace element values for zinc, calcium, magnesium, and strontium were obtained for each individual using atomic absorbtion spectrometry (Butler 1986). Individual trace element values presented no discernible patterns between age or sex defined groups, although a significant difference in zinc values was observed between the earlier and later skeletal samples, suggesting possibly greater meat consumption during the Beaverdam phase. This was also faintly suggested by the mean strontium values, although no statistical significance can be attached to these patterns. The detailed analyses did not indicate markedly different patterns of skeletal health in the Beaverdam and Rembert phases.

Zooarchaeological Analyses. A total of 13,094 identifiable bone fragments were found at Rucker's Bottom, and were identified by Susan L. Scott (1985), whose analysis is summarized here. All bone was weighed, with counts and MNI data recorded for identified taxa. The analysis focused on the 1/8 inch mesh waterscreened sample. An attempt to sort the flotation heavy fraction yielded only one new species, a minnow (*Cyprinidae*). The bone sample from Rucker's Bottom was typically poorly preserved, exhibiting extensive pre- and post-depositional modification, although in some contexts preservation was quite good. While bone fragments were recovered from the Archaic block and from many of the Woodland features, most were so poorly preserved as to preclude reliable interpretation. Beside natural weathering, carnivore scavenging apparently removed some portion of the assemblage. Gnawed bones were found in several features, although surprisingly no dog remains of any kind were found on the site. In general, many of the bones that survived did so because they were relatively dense, and hence more resistant to normal weathering processes.

Elements associated with the forequarter and hindquarter were more common in the assemblage than expected based on bone density, indicating these (relatively meaty) sections were probably brought onto the site in greater quantities than other, less economically valuable parts. Limb elements from Rucker's Bottom also exhibited a high degree of intentional fragmentation, suggesting a concern for subsistence maximization. Given the evidence for subsistence stress observed in the skeletal sample, this procedure may have helped reduce famine. The degree of fragmentation may have been influenced by the size of the cooking vessel used to boil the bones, which may have in turn been related to the size of the consumer group. The degree of fragmentation was similar to that observed at the Yarborough site (Scott 1981, 1982) where family unit cooking practices were documented. Comparable family or household-sized groups may have been present at Rucker's Bottom. A very high frequency of burned deer phalanges was also observed in the assemblage that suggests the roasting of whole limbs over open fires.

Intra-assemblage comparative analyses were restricted to 30 features producing large (>25 g), comparatively well preserved faunal remains; these features accounted for over 90 percent, by weight, of the total Mississippian faunal assemblage. Features dating to the later Mississippian Rembert component (which included the Structure 2 house floor), typically contained species procured during cooler weather. Earlier Mississippian Beaverdam phase features, in contrast, yielded both warm and cool weather species. Small mammals and fish were common in these deposits, as were shellfish. Warm weather indicators from the Beaverdam phase features included a sunfish vertebra, probably from a mid-summer catch, and a tarsal from a fawn probably killed either in late summer or early autumn. Cold weather indicators (deer mandibles and frontals with antler attached indicating fall/winter kills) were found in the fill of the initial, semicircular ditch, indicating the move to fortifications at the site may have been accompanied by changes in subsistence. Three species dominated the Mississippian faunal assemblage at Rucker's Bottom: white-tailed deer, turkey, and box turtle. In terms of actual economic importance white-tailed deer was undoubtedly the most important species, followed by wild turkey; the apparent abundance of box turtles was probably related more to factors of preservation, and the use of carapaces for vessels and rattles, than to subsistence importance.

The Beaverdam phase faunal assemblage from Rucker's Bottom was very similar to that recovered from the Beaverdam Creek Mound (Reitz 1985). A greater abundance of fish at the Beaverdam Creek Mound (2.0 percent vs. 0.7 percent) was the major difference between these assemblages. This may reflect proximity to suitable fishing grounds; major shoals occur both to the north and south of the Beaverdam Creek site on the Savannah, but were not present for several km above or below Rucker's Bottom (Rudolph and Hally 1985:444). Beaverdam phase occupations at both Rucker's Bottom and Beaverdam Creek were characterized by fairly high species diversity, and appeared to derive primarily from warm weather occupation. A shift toward an increasingly focused subsistence economy in the later Mississippian Rembert period was indicated within the Rucker's Bottom faunal assemblage, which had a much lower species diversity. This may have been due to an intensification of large mammal procurement, to maximize hunting return and reduce the amount of labor it entailed that might have been needed elsewhere, possibly for farming or defense (c.f., Speth and Scott 1985). Alternatively, if the seasonality data are accurate, the differences between the two phases may signify a change in the overall subsistence-settlement system, from primarily summer occupations during the early Mississippian to winter occupations during the later Mississippian. This shift may reflect increased agricultural effort, and possibly the need to defend stored food in the winter village. While this latter explanation may partially account for the site record, given the intensive occupational debris seasonal occupation appears unlikely. A change from a diversified subsistence economy in the earlier Mississippian to an increasingly focused subsistence economy in the later Mississippian is thought to be the most plausible explanation (Rudolph and Hally 1985:444; Scott 1985).

The site faunal remains also help to delimit the apparent position of the Rucker's Bottom community in the local political hierarchy. The distribution of skeletal elements on contemporaneous, related sites has been shown to be related to the nature and direction of the flow of subsistence resources from one community to another (e.g., Scott 1981, 1982). At Rucker's Bottom deer/large mammal skeletal element distributions differed between the earlier and later occupations. During the Beaverdam phase component there was some evidence that meaty elements were leaving the site, possibly as tribute. In the later Mississippian Rembert phase, in contrast, this pattern was not evident and the sample was more similar to that expected at a ceremonial center. Scott (1985:664) has noted:

> The differences between the early and later Mississippian components at Rucker's Bottom suggest a change in settlement function through time, from a more subservient role during the earlier period (with greater quantities of meat being transported from the village) to a higher position in the socio-political hierarchy in the later period (perhaps with meat coming in, but certainly with less meat going out).

This patterning is consistent with changing political relationships along the Savannah, notably the decline of the Beaverdam Creek site and an apparent relocation of power to Rembert after the Beaverdam phase. These changing political fortunes may have resulted in increased autonomy for the Rucker's Bottom community (e.g., Steponaitis 1978).

Shellfish Analyses. Shellfish remains were found in a number of Mississippian features at Rucker's Bottom, in varying but typically low quantity (Blanchard and Claassen 1985). Three species were found, all belonging to the Genus *Elliptio*, and including *E. fraterna* (Lea), *E. congaraea* (Lea), and *E. icterina* (Conrad), all of which are native to the river systems in the Atlantic Slope region. *E. fraterna* was the most common, with *E. congaraea* and *E. icterina* only incidentally represented. *E. fraterna* is found in swiftly moving water, typically on sand bars in large rivers (Johnson 1970:312). Given this, it is likely that the specimens found at the site came from the Savannah River. *E. icterina*, in contrast, occurs in a wide range of habitats and, where present, is usually the dominant species (Johnson 1970:328). This is not indicated in the site shellfish assemblage, suggesting they were collected from some other source than the Savannah, such as from Van Creek. *E. congaraea* is also a sandy substrate swift water species, and probably came from the Savannah River. Over the site assemblage as a whole, shell was more common in the earlier Mississippian Beaverdam occupation than in the later Rembert phase occupation.

Ethnobotanical Analyses. Flotation samples were collected from 119 Mississippian features at Rucker's Bottom, and from 54 of the 1 m squares opened on the floor of Structure 2 (Moore 1985). Three standardized measures were employed in comparative analyses: species density, diversity, and ubiquity. Species density is the count or weight of a species in a standardized sample, with count/liter and weight/liter used at Rucker's Bottom. Species diversity is a measure of the number of differing species of a given analytical category (i.e., cultigens, seeds, nuts, wood types) in a given sample. Species ubiquity refers to the percentage of all samples or features in which a specific species was present. Four identifiable species of seeds were found in the Mississippian features, maypops, grape, lambs-quarter, and doveweed. Maypops and grape were found in both the early and later occupations, while lambs-quarter was identified only in Beaverdam phase features, and doveweed in later Rembert features. Seeds were more common in the later occupation (ubiquity of 33 percent, as opposed to 21 percent in the Beaverdam phase), suggesting some subsistence intensification was occurring.

Corn was common at the site, occurring in over half of the features (ubiquity = 57 percent; see Figure 67). Corncob fragments represented the bulk of the sample, with only a few kernels and one small complete cob recovered. Although corn was found in a greater number of Early Mississippian features (ubiquity of 65 percent in the Beaverdam phase as opposed to 48 percent in the Rembert phase features), considerably more corn was found in the later occupation, with species density increasing 34 percent. Carbonized nutshells were recovered from just under half the Mississippian features at Rucker's Bottom, with no difference in ubiquity between the earlier and later occupations. Hickory and acorn were the only species identified. While hickory nut showed a fairly constant pattern of utilization between the early and later Mississippian occupations, use of acorns increased dramatically, measured over both ubiquity and density (Figure 67).

Examining the ubiquity of the wood versus nut charcoal for hickory and oak between the earlier and later Mississippian occupations, a slight decline in oak occurred, together with a sharp drop for hickory (Figure 67). If wood charcoal ubiquity can be considered an indicator of species availability and nutshell a measure of species utilization, then a decline in both tree species, but particularly hickory, appears to have occurred in the site area. The utilization of hickory nuts, in contrast, increased slightly while acorn use increased dramatically. Scarry (1980) has suggested that changes such as these in wood and nut utilization may have been due to intensive land clearance associated with agricultural intensification. As larger areas were cleared, the availability of wild resources would have declined. Plant succession would have been affected by this farming activity, with subclimax plant communities (which include pine and oak) becoming dominant. The high incidence of pine observed in the wood charcoal from the site, a pattern also noted in the pollen samples collected at the Beaverdam Creek Mound (Fish 1985), was probably due in part to this clearing.

The data indicate that the early Beaverdam phase population emphasized corn over nuts, and hickory nuts over acorns. In the later Rembert phase, in contrast, a relative decline in the use of corn and an increase in the use of nuts occurred, with a particular emphasis on acorns. This pattern may be seen in Figure 67, illustrating the proportional occurrence of corn, acorns, and hickory nuts at the Beaverdam Creek Mound site and in the Beaverdam and Rembert phase components at Rucker's Bottom. The increased use of wild plant resources in the later Mississippian occupation at Rucker's Bottom, notably the increased use of acorns, may reflect an attempt to augment carbohydrate yields, which may additionally indicate the population was under some stress. Alternatively, if the local Rembert phase community had become relatively free of tributary obligations, given the abandonment of the Beaverdam Creek mound center, less emphasis may have been placed on corn production. Yet another possibility may be that this apparent decline in the use of corn may have been due to localized soil exhaustion, brought about by the ca. 200 years or so of continuous occupation at the site. While seasonal flooding may have caused some soil replenishment, it

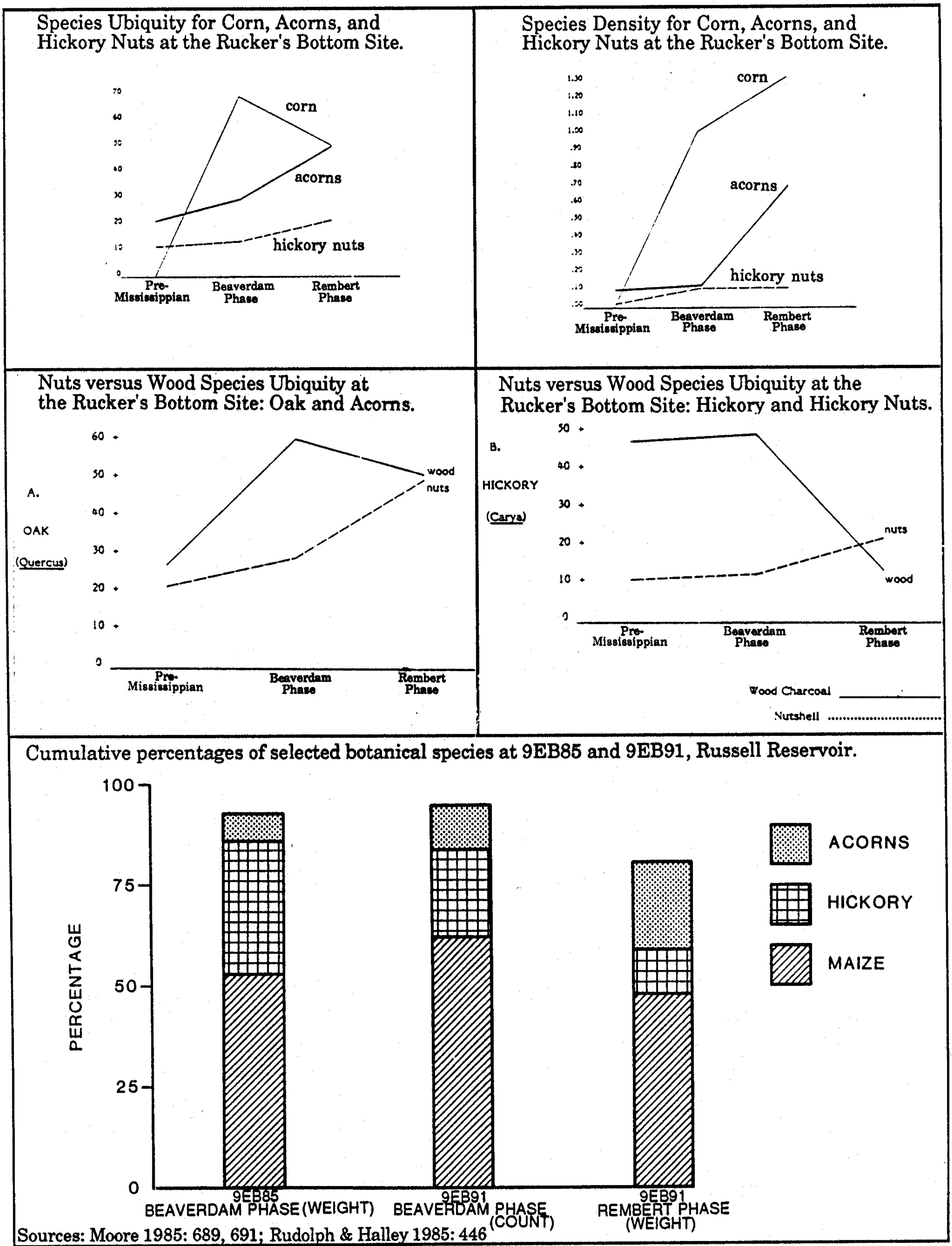


Figure 67. Paleobotanical Comparisons, Rucker's Bottom and Beaverdam Creek Mound and Village.

also probably resulted in some scouring of loose topsoil. All of these possibilities warrant consideration. As noted, the Rucker's Bottom site, and indeed the entire central and lower Savannah drainage was abandoned after the Rembert phase; and the subsistence data may indicate some of the events leading up to it.

EVIDENCE FOR MISSISSIPPIAN OCCUPATION IN THE RUSSELL RESERVOIR: MINOR EXCAVATION ASSEMBLAGES

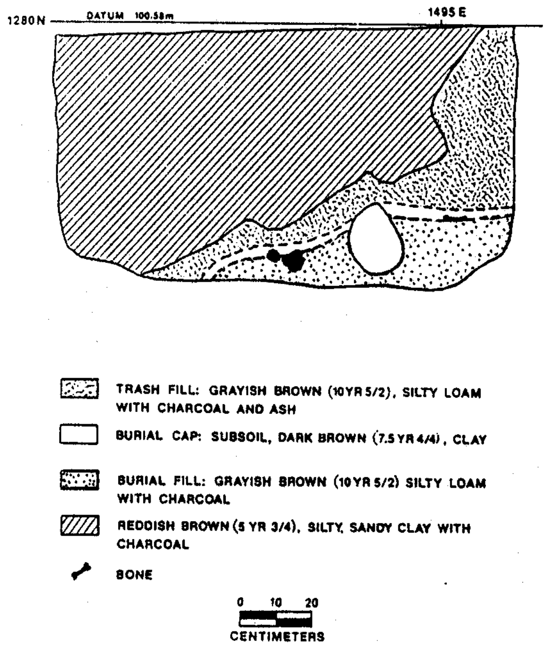
Several minor Mississippian components were examined in the Russell Reservoir, augmenting the picture provided by the work at Beaverdam Creek and Rucker's Bottom. With the exception of Clyde Gulley, which appeared to have been a small village, all of these assemblages were fairly small, possibly from hamlets or limited activity areas. No evidence for other major villages comparable to Rucker's Bottom was found, although given the general absence of wide-area stripping at many identified Mississippian sites, it is possible that other fairly large communities could have been missed. The presence of probable hamlets during the local Mississippian, albeit in low number, was clearly indicated by the reservoir excavations.

Clyde Gulley

A major Early Mississippian Jarrett phase component was discovered at the Clyde Gulley site, on a low rise on the terrace approximately 400 m below the confluence of Pickens Creek with the Savannah River (Tippitt and Marquardt 1984:8-9 to 8-14; 8-20 to 8-37). A dark Mississippian midden stain with associated artifacts and features was found extending over a roughly half hectare area that may have been the remains of a small village or several hamlets (Figure 68). The midden staining was initially found in two of 14 backhoe trenches opened over the terrace to delimit the nature and extent of the site deposits. Near the river on the levee crest the midden was found at a depth of 70 cm, below a recent plowzone and a thick zone of coarse bedded sand from historic flooding. These flood deposits thinned away from the river on the levee backslope, and in many respects the stratigraphy was similar to that observed in the Mississippian deposits at Rucker's Bottom.

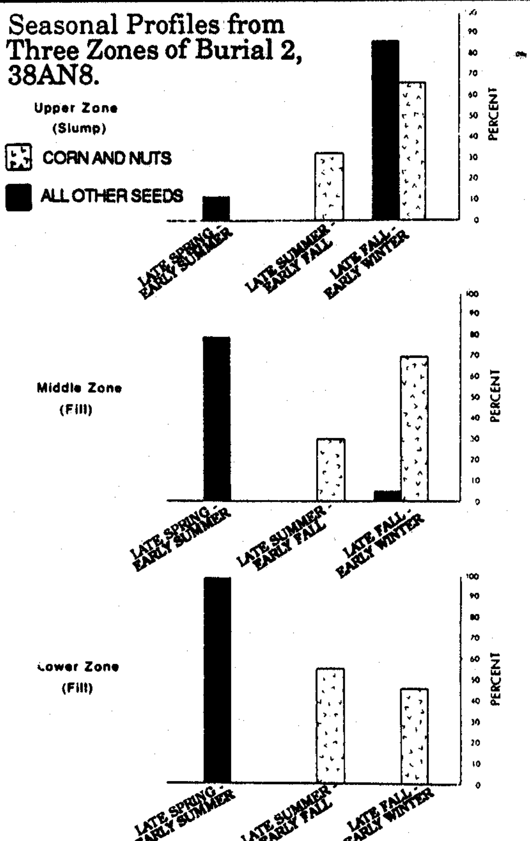
The thickness and extent of the midden was determined from systematically dispersed samples measured using a split spoon sampling auger (Figure 68). The midden was thickest on the low rise on the levee crest and thinned rapidly away from this area; concentrations, or slightly thicker deposits were observed in three areas that may represent the locations of structures or refuse disposal areas. Overburden to the top of the midden surface was then removed using a pan, with the final 10 to 15 cm of the fill removed with a road grader, to minimize damage to the deposits. To better examine the stratigraphy within the densest part of the midden, a 25 m long backhoe trench was opened through this area, connecting the two trenches where the midden had been first observed.

Burial 2 Profile, Simpson's Field, 38AN8.

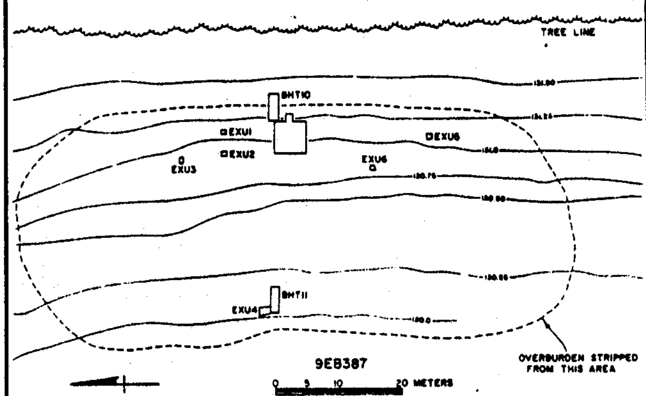


Sources: Tippitt & Marquardt 1984: 8-13, 8-25; Wood et al. 1986: 110; Dickens 1985: 57

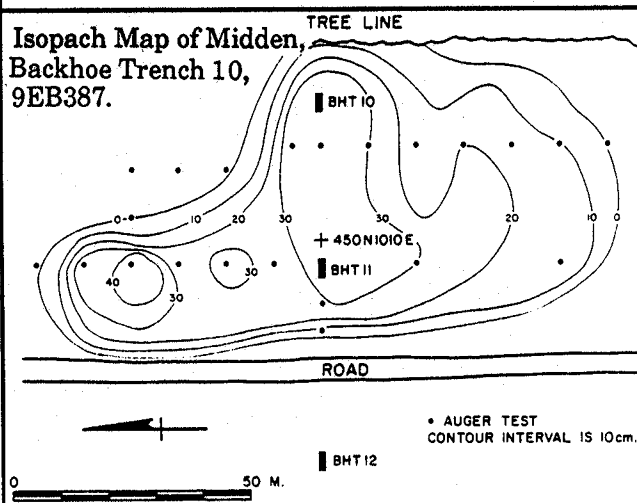
Seasonal Profiles from Three Zones of Burial 2, 38AN8.



Excavation Units at 9EB387.



Isopach Map of Midden, Backhoe Trench 10, 9EB387.



Probable Mississippian Structure, 9EB387.

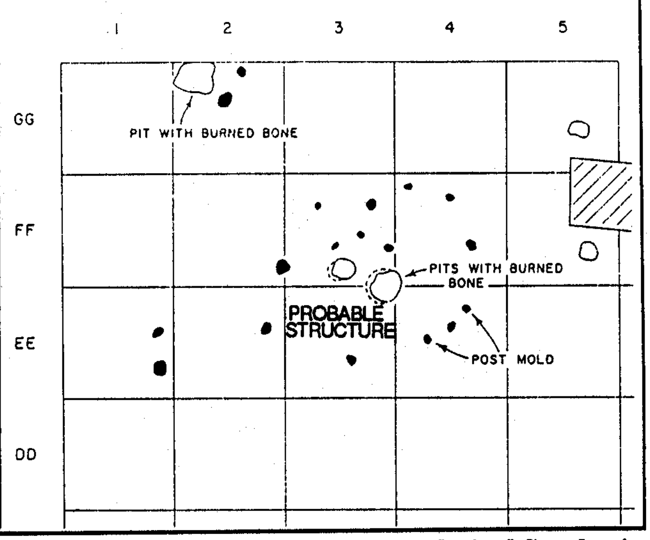
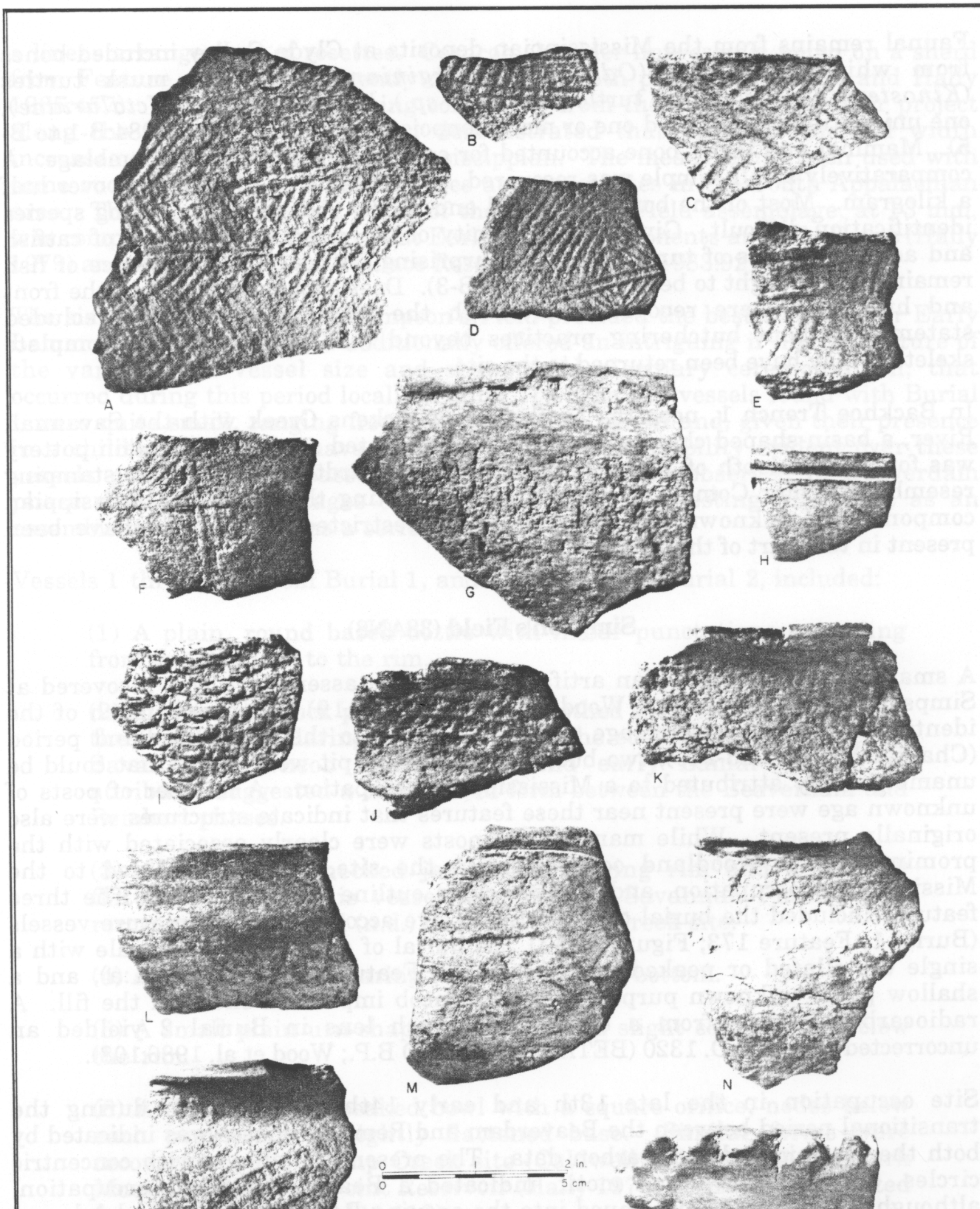


Figure 68. Mississippian Features and Paleobotanical Analysis, Simpson's Field and Clyde Gulley Sites.

While a number of features and artifacts were observed in the midden, their resolution was difficult. Rather than strip the midden away and look for features that extended below it over a large area, a program of hand excavation was implemented to document the deposits. A 10 x 10 m block unit was opened in 2 m squares and 10 cm levels near Backhoe Trench 10, on the levee crest near the river, and six other 2 x 2 m units were randomly placed across the midden to further examine the deposits (Figure 68). The units were taken through the midden, with all features encountered recorded and excavated. A number of pits, postmolds, and artifact concentrations, including the outline of one structure, were found in the block. Two pits within the structure contained burned earth and bone, while a ground stone tool fragment, several large sherds, and a number of small triangular points were found on the floor (Tippitt and Marquardt 1984:8-23). Given the low artifact density, the structure appeared to have been thoroughly cleaned prior to abandonment.

Over 8,300 sherds were collected from the midden, the majority plain or burnished. Decorated surface treatments included a roughened plain ware that may have been a smoothed-over cord or fabric impressed finished, and complicated stamping. The majority of the complicated stamped sherds were ladder-based and two bar nested diamonds, suggesting a later Etowah, Jarrett phase occupation (Figure 69). Comparable ceramics were found at 9EB388, a small surface scatter on a ridge overlooking the Clyde Gulley site that may have been an outlying hamlet or some other kind of activity area, such as a seasonally occupied agricultural camp (Tippitt and Marquardt 1984:9-5). Burnished bowls were represented in the Clyde Gulley assemblage, one with a duck head effigy. Other artifacts recovered included plain and incised pipe fragments, pottery discs, small isoceles triangular points, and a number of small bipolar cores and small blades with lateral wear retouch. Almost all of the flaked stone artifacts were made of very fine vein or clear crystal quartz. Use of the small blades in composite tools for a range of tasks, including cleaning fish, drilling, scarification, or working shell or bone was suggested (Tippitt and Marquardt 1984:8-37).

Flotation samples were taken from all of the unit levels and features, but comparatively few identifiable charred plant remains were recovered, something attributed to the minimal evidence for burning found at the site (Tippitt and Marquardt 1984:8-37). Identified remains included seeds from maypops, passion flower, and grass, together with hickory nutshell and pine cone fragments (Aulbach-Smith 1984). Only one corn fragment was found, from the area of the structure. Other identified remains included *Croton glandulosus* var. *septentrionalis*, *Panicum ramosum*, *Vinga*, and *Ampelopsis aborea*. The fruit seeds suggested late summer to fall occupation, something also indicated by the nutshell. The low incidence of corn may reflect preservation, or may indicate a lower dependence on this plant in the earlier Mississippian, as opposed to during later periods, when it was almost ubiquitous in reservoir feature assemblages (Moore 1985; Gardner 1985).



Source: Tippitt & Marquardt 1984: 29

Figure 69. Early Mississippian Ceramics from the Clyde Gulley Site.

Faunal remains from the Mississippian deposits at Clyde Gulley included bones from white-tailed deer (*Odocoileus virginianus*), mud or musk turtles (*Kinosternidae*), softshell turtles (*Trionyx sp.*), bullhead catfish (*Ictaluridae*), one unidentifiable bird, and one or more nonpoisonous snakes (Ruff 1984:B-1 to B-5). Mammal and turtle bone accounted for over 98 percent of the assemblage. A comparatively small sample was recovered, 1479 fragments totaling just over half a kilogram. Most of the bone was small and poorly preserved, rendering species identification difficult. Given the proximity of the river, the presence of catfish and aquatic species of turtles was not surprising, although the incidence of fish remains was thought to be low (Ruff 1984:B-3). Deer elements from both the front and hind legs were recovered, although the small sample size precluded statements about butchering practices beyond the suggestion that complete skeletons may have been returned to the site.

In Backhoe Trench 1, near the confluence of Pickens Creek with the Savannah River, a basin-shaped charcoal stain with complicated stamped and plain pottery was found at a depth of 30 cm (Tippitt and Marquardt 1984:8-1). The stamping resembled Lamar Complicated Stamped, suggesting that a later Mississippian component of unknown but probably fairly restricted extent may have been present in this part of the site.

Simpson's Field (38AN8)

A small Middle Mississippian artifact and feature assemblage was recovered at Simpson's Field (Figure 49; Wood et al. 1986:107-119). Although much of the identifiable feature assemblage at the site dated to the Late Woodland period (Chapter VI, pp. 233-240), two burials and a small pit were found that could be unambiguously attributed to a Mississippian occupation. A number of posts of unknown age were present near these features that indicate structures were also originally present. While many of the posts were clearly associated with the prominent Late Woodland occupation on the site, some also dated to the Mississippian occupation, and one structure outline was delimited. The three features included the burial of a child with five accompanying miniature vessels (Burial 1, Feature 173; Figure 71:e-i), the burial of a middle aged female with a single castellated or peaked bowl (Burial 2, Feature 160; Figure 71:a), and a shallow pit of unknown purpose with a corncob impressed sherd in the fill. A radiocarbon sample from a charcoal and ash lens in Burial 2 yielded an uncorrected date of A.D. 1320 (BETA-2803; 630±40 B.P.; Wood et al. 1986:108).

Site occupation in the late 13th and early 14th century A.D. during the transitional period between the Beaverdam and Rembert phases was indicated by both the ceramic and radiocarbon data. The presence of sherds with concentric circles, a typical Savannah motif, indicated a Beaverdam phase occupation, although the motif also continued into the ensuing Rembert phase (Rudolph and Hally 1985:457; Anderson et al. 1986:41). Early Lamar (Rembert phase) occupation at Simpson's Field was inferred by the presence of sherds exhibiting folded and pinched, and folded and notched rimstrips, and an unmodified stamped rim with a linear arrangement of rosettes. Corncob shoulder impressing, noted on a sherd from Feature 48, also apparently occurred in both periods (Rudolph and Hally 1985:457). Rudolph (1983), using collections from the Wallace Reservoir project along the central Oconee River, demonstrated that average rim fold width increases over the course of the Mississippian. The measure has been used with some success to help date assemblages at several sites in the South Appalachian area. The average rim fold width of the Simpson's Field assemblage, at 13 mm, was comparable to that observed at Early Lamar components at Little Egypt (Hally 1979) and at 9PM222 in the Wallace Reservoir (Rudolph 1983:92).

The six vessels recovered at Simpson's Field provided the best evidence for Early Lamar site occupation, and additionally offered an intriguing if limited picture of the variation in vessel size and shape, and mortuary ceremonialism, that occurred during this period locally (Figure 71). The five vessels found with Burial 1 were quite small, ranging from 6.5 to 13 cm in height and, given their presence in a child's burial, may have been toy pots. The variability evident over these vessels partially encompassed the range of variation observed in Beaverdam phase domestic assemblages (Hally 1983, 1984), suggesting interment as an assemblage, rather than as a series of discrete offerings.

Vessels 1 through 5, from Burial 1, and Vessel 6, from Burial 2, included:

(1) A plain, round based bottle with linear punctations extending from the shoulder to the rim.

(2) A restricted neck plain jar with smoothed corncob impressions on the neck and a flaring, pinched rim. The combination of typically Savannah (corncob impressions) and early Lamar (pinching) attributes suggested a transitional form between the Beaverdam and Rembert phases.

(3) A plain, high-necked jar with a flaring rim and a slightly flattened base. This vessel resembled a Savannah Plain vessel recovered by Caldwell (n.d.) from the Stamp Creek site.

(4) A jar with a wide flaring rim and rounded bottom.

(5) A small plain urn-shaped vessel with a slight constriction below the rim.

(6) A castellated or peaked bowl with a square orifice, nodes below each peak, and a slightly flattened base. Similar forms were recovered at the Stamp Creek site (Caldwell n.d.) and at the Park Mound in the West Point Reservoir (Hally 1979)(descriptions adapted from Wood et al. 1986:111-112).

The single uncorrected radiocarbon date from a Mississippian feature, A.D. 1320, was complemented by the two anomalous dates obtained on charcoal samples from two presumably Late Woodland features of A.D. 1260±60 and A.D. 1230±50 (BETA-6397, 7010; uncorrected). If all three samples accurately date the Mississippian occupation, then site use during both the Beaverdam phase (as indicated by the two earlier dates and some of the ceramics) and into the Rembert phase (as indicated by the latest date and some of the ceramics) appears probable.

An oval-to-rectangular cluster of postmolds was found in the northeast corner of the primary excavation block that may have been the remains of a Mississippian structure; Burials 1 and 2 lay within this cluster while Feature 48 lay just outside of it to the north (Figure 49). Since most of the identifiable Woodland features were located in the western portion of the block while the three Mississippian features occurred in the eastern portion, the cluster of posts around these features were assumed to date to the Mississippian era. The fact that the two Mississippian burials were within the apparent postmold pattern defining the structure also supported this interpretation, since subfloor burial was found to be common during this period elsewhere in this part of the drainage, notably at Rucker's Bottom (Wood et al. 1986:119; Weaver et al. 1985). The Rembert phase structure at Simpson's Field was indistinct but was roughly rectangular in shape, and from 10 to 12 m in length (NW/SE) by ca. 7.5 m wide (NE/SW)(Wood et al. 1986:119). Floor deposits that may have been present had been destroyed by historic cultivation; features were typically found intruding into subsoil at the base of the plowzone. A number of internal posts were present that may represent benches or dividers, but no other pit features beyond the two burials were found.

Burial 1 was only minimally preserved and consisted of 15 teeth and a few small cranial fragments. These remains were attributed to a child of about ten years (Tyzzer 1986:362). Burial 2 was in much better condition, and represented the remains of a middle aged women about 157-160 cm in height (Tyzzer 1986:363-366). There was some indication of cranial deformation, specifically posterior flattening, but the skull was too fragmentary to be certain about this. Antemortum tooth loss and bone resorbtion, and the presence of excessive wear, caries, and abcesses in the remaining teeth suggested a fairly stressful existence, similar to that in many of the burials recovered at Rucker's Bottom, particularly in the Beaverdam phase village assemblage (Weaver et al. 1985:593-594). If a hamlet or small village was present at Simpson's Field, occupation by commoners, rather than high status individuals, appears probable.

Faunal remains were rare at Simpson's Field, although 571 comparatively small fragments (average weight = 2.41 grams; MNI= 11 individuals) were found in the fill of Burial 2, the only feature with preserved animal bone. The sample was dominated by deer (*Odocoileus virginianus,* MNI=6), with other identified species present including rabbit (*Sylvilagus spp.*, MNI=1), oppossum (*Didelphis virginiana,* MNI=1), raccoon (*Procyon lotor,* MNI=1), turkey (*Meleagris gallopava,* MNI=1), and box turtle (*Terrapene sp.*, MNI=1), and unidentified mammal, bird, and turtle (Wood 1986:374). Mammals dominated the assemblage, accounting for 82 percent of the MNI and 97 percent of the biomass (Wood 1986:372). The absence of identifiable riverine species was somewhat surprising, given the close proximity of the river channel. Specialized upland-oriented game procurement was suggested, a pattern similar to that observed in the Rembert phase occupation at Rucker's Bottom (Scott 1985:659-663). While this may reflect sample size and preservation, a hunting economy focused on the exploitation of a few species may be indicated. This may be attributable to either a winter occupation, or a highly focused subsistence system, possibly accompanying a general increase in agricultural food production over the region (Speth and Scott 1985; Scott 1985:663-664).

Floral remains from the fill of Feature 160 (Burial 2) were examined by Gardner (1986b:377-386). Identifiable domesticates included corn (*Zea mays L.*; five eight-rowed cob fragments, one twelve-rowed cob butt, and five kernels) "of the type variously referred to as Eastern Complex, Northern Flint, or Maiz de Ocho" (Gardner 1986b:378), and a gourd rind fragment (*Lagenaria sp.*). Wild plant foods present included acorn and hickory nut fragments; acorn fragments were only minimally represented, although hickory was more than twice as abundant, by weight, than corn. A high incidence of nut remains was also observed in the Rembert phase component at Rucker's Bottom (Moore 1985:686-692), something attributed to increasing agricultural intensification and a concomitant increase in population carbohydrate requirements. A single chenopodium seed was recovered, and was interpreted as probably more indicative of localized agricultural disturbance than consumption of this species (Gardner 1986b:378). Fleshy fruits recovered included grape (*Vitus sp.*), persimmon (*Diospyros virginiana*), strawberry (*Fragaria sp.*), bramble (*Rubus sp.*, i.e., raspberry, blackberry, and dewberry), and maypops (*Passiflora incarnata*). The presence of these open-habitat species suggested possible localized field clearing and abandonment, and the exploitation of early successional communities (Gardner 1986b:378).

An analysis of the ethnobotanical remains by fill zone within Feature 160 (Burial 2) was conducted by Dickens (1985:55-57), to demonstrate the kind of information that can be gained when careful control is exercised in field excavation (Figure 68). Seasonal differences were noted between the two lower zones, around and above the burial, and an upper zone that accumulated sometime later:

> This pit, which appears to be of the shaft-and-side chamber variety (Dickens 1976:103), contained three garbage-laden soil zones: (1) a zone of fill in the lower part of the pit around the skeletal remains, (2) a zone of fill in the central part of the pit, and (3) a zone of postburial slump in the upper part of the pit.
>
> ...Plant remains from the lower fill zone produced a seasonal profile indicating Late Spring-Early Summer deposition (i.e., interment). The middle zone (probably fill) also produced a Late Spring-Early Summer profile. The upper zone, undoubtedly representing post-burial slump, produced a Late Fall-Early Winter profile. It is important to note that the ratio of corn to nuts shifts from the lower to the upper zones. This feature provides an excellent example of the importance of separating, in recovery and analysis, fill from slump material in any feature (Dickens 1985:55-56).

From this example it is evident that paleosubsistence remains may indicate periods of feature use, abandonment, and filling.

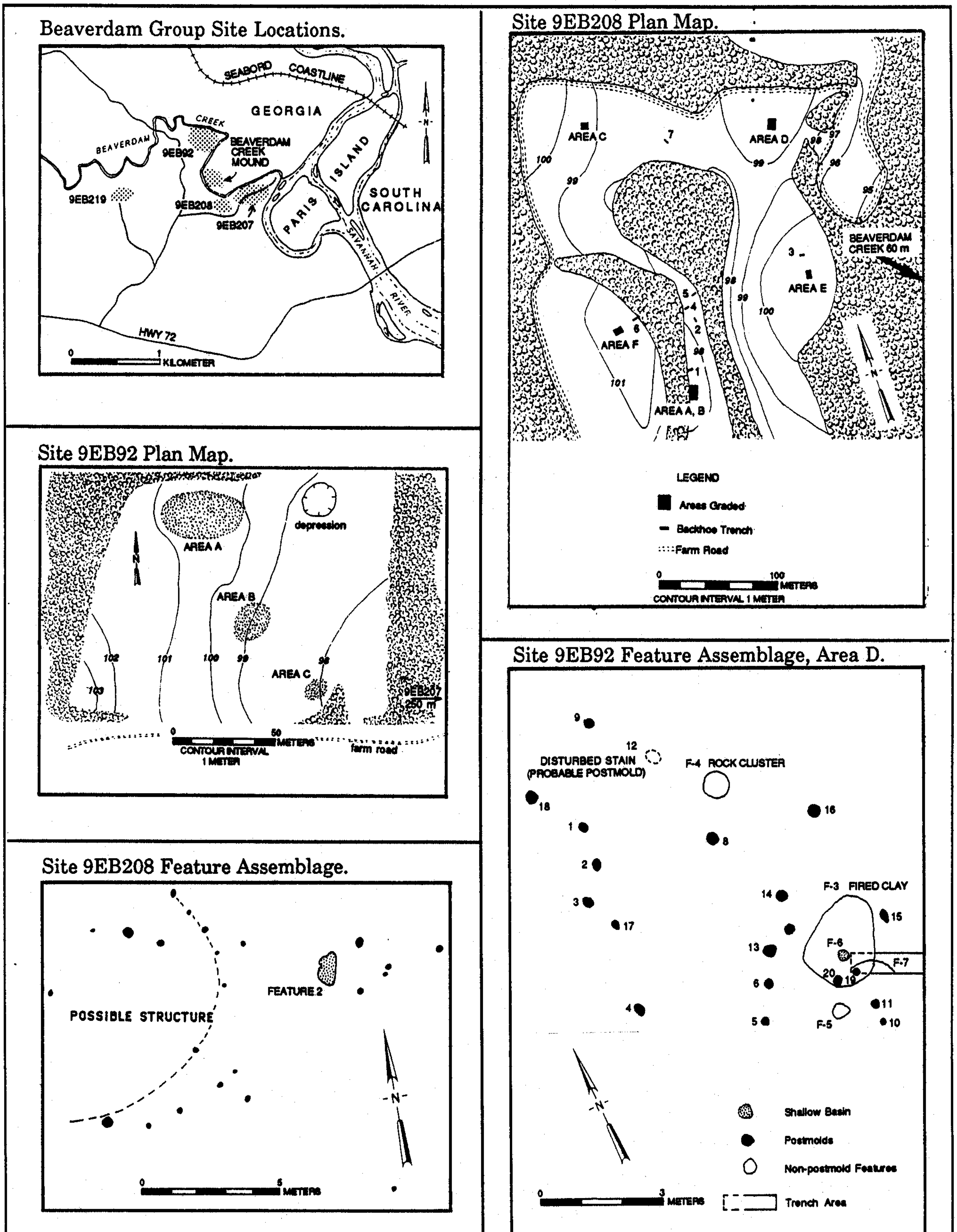
The diversity of plant foods represented in the Feature 160 samples led Gardner (1986b:379-380) to question Cleland's (1976) assumption that Mississippian subsistence was focused on maize agriculture. Instead, Gardner suggested that either (1) the case for Mississippian focal strategies was overstated, something other investigators have noted (e.g., Smith 1975; Dickens 1976, 1978); (2) that subsistence was more diversified in the South Appalachian area than in the Middle Mississippi heartland (see also Ferguson 1971; Ferguson and Green 1984); and/or (3) that subsistence diversity was probably related to site function, and greater diversity was likely at habitation sites than at ceremonial centers. The evidence from the reservoir indicated that all three of these observations were probably to some extent valid.

Beaverdam Site Group (9EB92, 9EB207, 9EB208, 9EB219)

Four sites in the vicinity of the Beaverdam Creek Mound where Mississippian artifacts had been found in earlier survey and testing activity were examined in 1980 (Gardner et al. 1983; Campbell and Weed 1984). All were located along Beaverdam Creek within two km of the mound center (Figure 70). A primary goal of the research was determining whether any relationship existed between these sites and the center, particularly whether the four sites represented outlying villages or hamlets in a local Mississippian settlement hierarchy. Systematically dispersed surface collection or shovel tests units were dispersed over each site area to locate concentrations, which were then examined by small, machine stripped block units or hand excavated test pits.

Mississippian components were found at all four sites, complementing the results of the earlier testing. Mississippian artifact and feature concentrations tended to be fairly small, and household or hamlet-sized occupations were indicated. Post stains were found at all four sites, with evidence for structures found at two of the four. A fairly well defined circular postmold pattern from a probable domestic structure was found at 9EB208, while less conclusive evidence was found at 9EB92. The evidence for hamlet-size occupations found in the Beaverdam Site Group was the only clear indication of these site types found in the reservoir. The evidence from these sites has been used to help posit a three fold settlement hierarchy for the Mississippian in the upper Savannah River, consisting of mounds such as Beaverdam Creek and Tate, large villages such as Rucker's Bottom and possibly Clyde Gulley, and hamlets (Campbell and Weed 1984:138-139).

9EB92. Site 9EB92 was located on a large alluvial terrace overlooking a major bend in Beaverdam Creek. The site area was bisected by a depression running into the creek, and was bounded to the west by upland slopes. Fourteen test pits and an extensive general surface collection was made at the site during initial survey and testing operations (Taylor and Smith 1978:368, 388; Gardner et al. 1983:48-55), recovering Early Archaic through Mississippian remains. Following



Source: Campbell & Wood 1984: 4, 63, 64, 99, 103

Figure 70. Beaverdam Site Group Locations and Features.

controlled surface collection, the plowzone was stripped from five 6 x 5 m blocks scattered over the site area and placed, where possible, within artifact concentrations. In the northeast corner of the site (Area D), 20 postmolds, a rock cluster, and three pits were found, scattered about a patch of burned clay from a possible hearth (Figure 70; Campbell and Weed 1984:62-66). Pottery was found in 13 of the 25 features. While most of this was plain, the presence of several burnished, check and complicated stamped sherds, and one folded rim, indicate that most of the feature assemblage derived from a Beaverdam or Rembert phase occupation. The only exception, the rock cluster, contained a Savannah River point and was assumed to date to the Late Archaic.

No patterning was observed over the postmold assemblage, although at least three possible wall lines were suggested. Two of the three pit features (Features 5 and 6) were small, averaging 20 and 40 cm in diameter, respectively, while the third, Feature 7, was a large bell-shaped pit ca. 1.5 m in diameter (Campbell and Weed 1984:65-66). Feature 5 intruded into the fired clay zone, while Feature 7 was found below it. Probable Mississippian ceramics were found in the fill of all three features, and traces of bone were found in Feature 5; Feature 7 was only partially examined, and its function was uncertain. Three maize kernels were found in one of the post stains, together with wood charcoal (Campbell and Weed 1984:134). Fairly extended Mississippian use of the site was indicated by the number of features in the block, and the three successive features found centered on the hearth. Several Mississippian structures may have been present on the site, given the various possible wall post lines that were observed; unfortunately, no further investigations were conducted. The feature assemblage was tentatively interpreted as the remains of a hamlet.

9EB207 At site 9EB207, a low alluvial terrace along Beaverdam Creek, only inconclusive evidence for Mississippian structures was found. Investigations at the site included a general surface collection (Taylor and Smith 1978:369), the excavation of 24 1 m units in initial testing (Gardner et al. 1979:39-47), followed by a controlled surface collection, 20 additional 1 m or 1 x 2 m test pits, 15 backhoe trenches, and two 5 x 10 m blocks that were machine stripped in an effort to locate subplowzone features (Campbell and Weed 1984:73-98). Only six small pit features and seven postmolds were found in the units, none identifiable to a specific period. The only concentration of features detected was three scattered postmolds and a pit found at the base of the plowzone in one of the two 5 x 10 m blocks. Small quantities of check stamped, Savannah complicated stamped, and well smoothed plain pottery were found in the upper levels of several of the units and on the surface, suggesting a probable Beaverdam phase component. Earlier Archaic and Woodland materials were also found in these same contexts, however, rendering the dating of the feature assemblage equivocal. Given the infrequent occurrence of both Mississippian artifacts and possible features, little more than a hamlet or special activity area was indicated.

9EB208 Evidence for a Mississippian structure was found at 9EB208, on an upland ridge nose some 450 m south of Beaverdam Creek (Campbell and Weed 1984:98-110). A quartz outcrop was present on the ridge, and a large quantity of chipping debris was observed about it, together with Early Archaic through Woodland projectile points and a number of ceramics, most presumably Mississippian in age (Taylor and Smith 1978:416, 427; Campbell and Weed 1984:99-100). During county soil removal operations at the site in 1980 a large number of features were observed, prompting hurried shovel skimming and mapping at two areas within the site. Three scattered posts were found in one area, and 26 posts and a pit in the other; the majority of the posts in the latter area formed a semicircular outline approximately 7 m across (Figure 70). The presence of one or more structures was clearly indicated, although given the extent of disturbance little more could be determined.

The post arc, if complete, would have formed an outline comparable in size to several of the circular structures observed at Rucker's Bottom, suggesting a hamlet may have been present at the site. A Beaverdam phase occupation was indicated; two Savannah check stamped sherds were found in the fill of one of the posts, while a Savannah Complicated Stamped sherd was found in the fill of Feature 2. Feature 2, was an irregular basin ca. 90 x 50 x 40 cm in extent with several lenses of ash, charcoal, and fired clay in the fill; no evidence for bone was observed. Located about three meters east of the post arc, with several small post stains nearby, it appeared to have been a hearth that saw repeated use. The nearby posts may have been from a windbreak, drying racks, or other facilities associated with the hearth. While contemporaneity cannot be determined, the feature may have been an exterior (warm weather?) hearth used by the occupants of the structure. At Rucker's Bottom a comparable feature, M-1042, was found the same distance to the east of a well defined house floor, Structure 2. This feature, which contained dense quantities of charcoal, bone, and fired clay, was almost certainly an exterior cooking pit associated with the structure (Anderson and Schuldenrein 1985:559).

<u>9EB219</u> At 9EB219, the fourth site examined in the Beaverdam Group, evidence for a small Etowah component was found (Campbell and Weed 1984:110-126). Investigations included general surface collection (Taylor and Smith 1978:426), the excavation of six 1 m and two 0.5 m units (Gardner et al. 1983:56-61), systematic shovel testing, and the excavation of eight 2 m units (Campbell and Weed 1980:115-116). Four postmolds, one amorphous basin-shaped pit feature, and portions of a crushed Etowah Complicated Stamped vessel with a rectilinear nested square design were the only features found in the units (Gardner et al. 1983:57; Campbell and Weed 1980:118). Two of the postmolds and the crushed vessel were found in a single 2 m unit, while the other features were isolated. A range of Archaic, Woodland, and Mississippian diagnostics were found mixed together in the upper levels of the test units, making the dating of the features difficult. While the presence of Mississippian structures at the site was suggested, it could not be confirmed. Moderate Mississippian occupation was indicated by the presence of small triangular points, burnished plain and complicated stamped sherds, and the crushed vessel. Two bar nested diamond motifs were present, together with a number of unidentifiable curvilinear design fragments, suggesting Jarrett and Beaverdam phase (Etowah and Savannah) components.

Big Generostee Creek (38AN126)

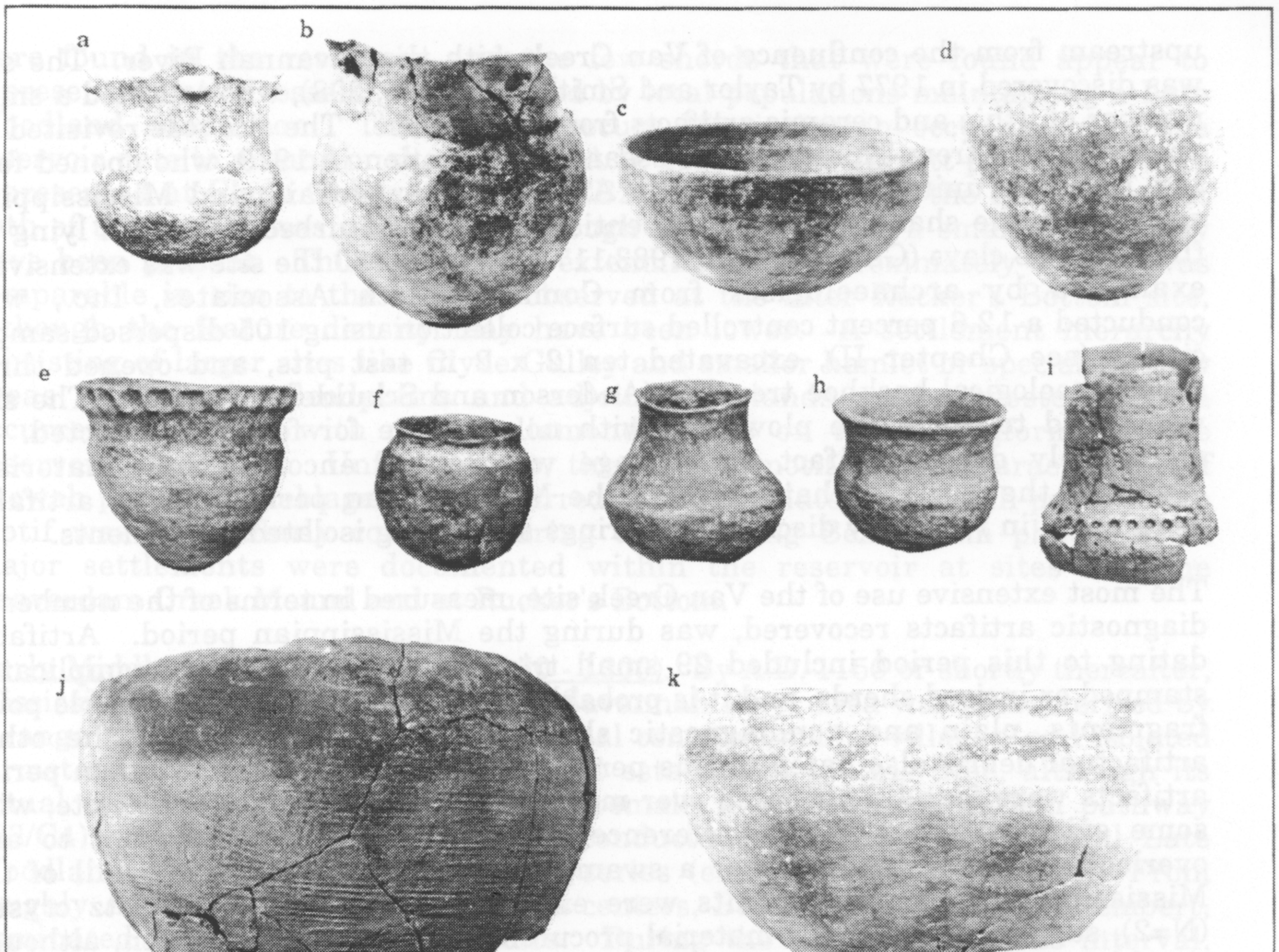
A single disturbed burial of an adult female was found in a 2 x 2 m test unit opened at the Big Generostee Creek site (38AN126; Wood et al. 1986:197). The degree of preservation, the presence of Mississippian small triangular points, and a ceramic assemblage characterized by notched appliqued rimstrips, finger pinched appliqued rimstrips, bold incising, corncob impressions, and bisected concentric diamonds in the upper levels of the five test units opened at the site argued for a probable later Mississippian, Rembert phase age for the interment (Wood et al. 1986:203-205). Although numerous Mississippian sherds and two triangular points were present in the fill, the dating of this burial must be considered provisional since earlier Connestee and Dunlap materials, and two historic square nails, were also present (Wood et al. 1986:178, 185-186). The burial, which had been badly disturbed by a historic excavation, was apparently of an adult female of comparatively short stature (150 - 155 cm) and indeterminate age, although probably somewhere between 20 and 40 years (Tyzzer 1986:367-369). In the absence of pelvic remains the sex determination was tentative, having been based on the presence of a gracile cranial and facial morphology. Antemortum molar and premolar loss with significant resorbtion, caries, and wear to the secondary dentine on many of the surviving teeth, and fairly severe dental pathologies, implied a stressful existence, comparable to that noted on most apparent commoner burials from this period.

Gregg Shoals (9EB259)

Two small Mississippian vessels were found near the primary excavation block at Gregg Shoals during the stripping operations conducted to expose the Early and Middle Archaic occupation surfaces (Figure 71:b,c; Tippitt and Marquardt 1984:7-6). The vessels were found lying side by side, although no pit outline, human bone, or other evidence for a feature was detected. The vessels, a small plain jar with four reed impressed nodes and a small plain bowl, appeared to date to the Beaverdam or possibly early Rembert phase, given the presence of nodes, a classic Pee Dee attribute (Reid 1967). Within the primary excavation block at the site, Mississippian artifacts were confined to the disturbed upper levels; four small Caraway Triangulars, a Randolph Stemmed, and a number of sherds of complicated stamped pottery were found in these levels, suggesting minor site use during this period (Figure 29; Tippitt and Marquardt 1984:7-15 to 7-21).

Van Creek (9EB382)

A minor Mississippian component was found at the Van Creek site in a plowed field on an old Pleistocene terrace overlooking Van Creek (Anderson and Schuldenrein 1985:115-147). The diagnostic assemblage was unusual in that it was dominated by lithic artifacts, a pattern accentuated by the fact that the site was located just 400 m west of the dense village occupation at Rucker's Bottom, across a swampy swale. The site was a predominantly surface and plowzone artifact scatter extending over approximately half a hectare about 1.0 km



a,e-i Simpson's Field (38AN8); b,c Gregg Shoals (9EB259); d,j-m Rucker's Bottom (9EB91).

Figure 71. Mississippian Vessels from the Russell Reservoir Area.

upstream from the confluence of Van Creek with the Savannah River. The site was discovered in 1977 by Taylor and Smith (1978:376, 398), who collected a small number of lithic and ceramic artifacts from the surface. The site was revisited by archaeologists from Thunderbird Research Corporation in 1979, who opened four 1 x 1 m test units and found Early Archaic, Late Archaic, and Mississippian artifacts in the shallow deposits, essentially a plow-disturbed A-horizon lying on thick, sterile clays (Gardner et al. 1983:117-118). In 1980 the site was extensively examined by archaeologists from Commonwealth Associates, Inc., who conducted a 12.6 percent controlled surface collection using 105 dispersed sample circles (see Chapter II), excavated ten 2 x 2 m test pits, and opened three geoarchaeological backhoe trenches (Anderson and Schuldenrein 1985). The site was found to lie in the plowzone, with no evidence for features detected. A moderately dense artifact assemblage was found, encompassing materials spanning the Early Archaic through the Mississippian periods. Some artifacts were noted in relatively discrete clusterings suggesting isolated components.

The most extensive use of the Van Creek site, measured in terms of the number of diagnostic artifacts recovered, was during the Mississippian period. Artifacts dating to this period included 29 small triangular points and 11 complicated stamped or incised sherds, and it is probable that many of the unidentifiable point fragments, plain and nondiagnostic sherds, and at least some of the other artifactual debris also dated to this period. The diagnostic Mississippian period artifacts were found distributed over much of the northern part of the site, with some evidence for a slight preference for lower elevations, adjacent to and overlooking either the swale or a swampy tributary of Van Creek. All of the Mississippian Triangular points were either quartz (N=27) or quartz crystal (N=2), suggesting local raw material procurement. Many were broken, although roughly equivalent numbers of tips and bases were found, suggesting extensive hafted biface use and breakage, and probably discard, in the immediate site area. Other probable Mississippian tools present included expedient unifaces and crude bifaces. The high incidence of projectile points, and the low incidence of ceramics, was the opposite of the pattern observed at the Rucker's Bottom village located across the swale. Contemporaneous use of the Van Creek site area was indicated, apparently for short-term tasks such as hunting or otherwise exploiting the swale margin. The area may have served as an animal butchering and processing station, located a discrete distance from the main village.

THE MISSISSIPPIAN IN THE UPPER SAVANNAH RIVER IN LIGHT OF THE RUSSELL RESERVOIR INVESTIGATIONS

Chronological and Cultural Subdivisions

Initial Mississippian (A.D. 900 - 1150). Very little evidence for initial Mississippian settlement was found in the Richard B. Russell Reservoir. Woodstock ceramics, an initial Mississippian diagnostic in the northwest Georgia area, were only rarely noted (Table 2, Figure 4). No Woodstock occupations or features were found in the reservoir, and the few sherds that were found appear to represent isolated vessels, possibly used by local populations maintaining a Late Woodland adaptation. The earliest secure Mississippian occupations in the reservoir date to around or shortly after A.D. 1100, to the Jarrett phase, and were represented at Clyde Gulley and site 9EB219. The nature of the occupations at both of these sites was uncertain, although at Clyde Gulley a small village may have been present. This occupation, extending over approximately 0.5 ha, was comparable in size to the villages observed at the later Rucker's Bottom site, although the feature density may have been lower. A settlement hierarchy consisting of larger sites like Clyde Gulley and smaller hamlet or special activity areas in both the floodplains and adjoining uplands was suggested by the occurrence of sites with nested diamond motifs on these landforms in the reservoir collections. Unfortunately, this design motif, while characteristic of Etowah period assemblages, also occurred during the later Savannah period. The motif was particularly common during the ensuing Beaverdam phase, when major settlements were documented within the reservoir at sites like the Beaverdam Creek Mound and at Rucker's Bottom.

<u>Early Middle Mississippian (A.D. 1150 - 1300)</u>. By A.D. 1150 or shortly thereafter, Mississippian settlement in the upper Savannah River area was characterized by a range of site types, including ceremonial centers, smaller villages, and isolated farmsteads. Maize agriculture was well established by this time, although its actual contribution to subsistence will remain unknown until carbon pathway (C3/C4) and related analyses can be conducted on securely dated local Late Woodland and Mississippian skeletal series (e.g., Lynott et al. 1986). From roughly A.D. 1200 to 1450 two mound centers, Beaverdam Creek and Rembert, dominated local Mississippian affairs. During the early part of this interval, from roughly A.D. 1200 to 1300, the Beaverdam Creek Mound site was at the peak of its influence, and may have been the dominant center in this part of the drainage. A second Mississippian mound site, Tate (9EB86), was located about 7 km upstream, and was apparently occupied about the same time as the Beaverdam Creek Mound (Rudolph and Hally 1985:436). The relationship between these two sites is presently unknown, although they are assumed to have had close ties. Occupation, in fact, may have alternated between Tate and Beaverdam Creek, although this cannot be demonstrated (e.g., Williams and Shapiro 1986a). The southern village at Rucker's Bottom was occupied at this time, and was characterized by a highly diversified subsistence economy. Some indirect paleosubsistence evidence was found to suggest that the Rucker's Bottom community was submitting tribute elsewhere, probably to the Beaverdam Creek center. Beaverdam phase occupations at both sites apparently made use of a wide range of plant and animal resources in addition to agricultural domesticates, suggesting a generalized subsistence strategy.

The general absence of evidence for fortifications at both Beaverdam Creek and Rucker's Bottom during this period suggests competition and warfare may have been minimal within the drainage and over the region in general. Population was apparently increasing, given the rise in the number of components observed (Figure 4). Beaverdam and later Rembert phase components were present at a fair number of sites in the reservoir, most spatially restricted assemblages indicative of hamlets or special activity areas. A three level settlement hierarchy has been inferred, consisting of hamlets or special activity stations like the occupations found at 9EB209 and Simpson's Field, small villages like that at Rucker's Bottom, and ceremonial centers like Tate and Beaverdam Creek.

Later Middle Mississippian (A.D. 1300 - 1450). Some time after A.D. 1300 the Beaverdam Mound site was abandoned, and the Rembert Mound group further to the south presumably became the dominant center in this part of the drainage (Figure 72). Roughly concurrently, the village at Rucker's Bottom was relocated to the northern part of the terrace, and simple fortifications appeared. This may reflect an increase in conflict within the drainage or over the surrounding region, and an increased need to protect not only the villagers themselves, but also the occupants of surrounding hamlets. Evidence for tributary status was no longer evident at Rucker's Bottom, and the existence of a council house or rotunda may indicate the village enjoyed a fair degree of autonomy, although a similar structure was apparently present earlier.

A shift to a more focused subsistence economy was evident, possibly a result of increasing agricultural intensification. Changes in nut utilization were observed, particularly a decrease in hickory nut and an increase in acorn remains, that may reflect increasing caloric demands by local populations. The changes in nut use and wood species diversity observed at the Rucker's Bottom site indicate increasing exploitation of the surrounding forest. A shift from mature to immature successional communities was suggested at both the Rucker's Bottom and Beaverdam Creek Mound sites, something possibly due to increased land clearance associated with agricultural food production (Moore 1985:686-693; Fish 1985). Local population density may have been at an all time high for the prehistoric era, given the number of Early Lamar components found in the reservoir area (Figure 4).

During the later Middle Mississippian period and particularly in the Late Mississippian prior to the historic era settlement nucleation becomes increasingly evident throughout the southeast. Fortified villages are common and farmsteads disappear in many areas, although this pattern was by no means universal. This has been linked to increasing regional population density, and a concomitant expansion of warfare, arising in part over political rivalries, and ultimately based on the control of important resources such as trade routes, agricultural lands, or hunting territories (e.g., Larson 1972; Smith 1978; Anderson 1987a, 1987b, 1988b). The fortifications observed at the Rucker's Bottom site may be related to this regional trend.

Late Mississippian and Protohistoric Occupations. Evidence for the later prehistoric and protohistoric native American occupation of the Russell Reservoir area, as documented archaeologically and historically, was virtually nonexistent (Figure 72; The History Group 1981:64-75; Hally et al. 1985; Anderson et al. 1986). Only six Late Lamar components were found in the reservoir area (Figure 4). All of these were identified by the presence of one to a few sherds of Lamar Bold Incised pottery, a type that actually appeared during the Rembert phase

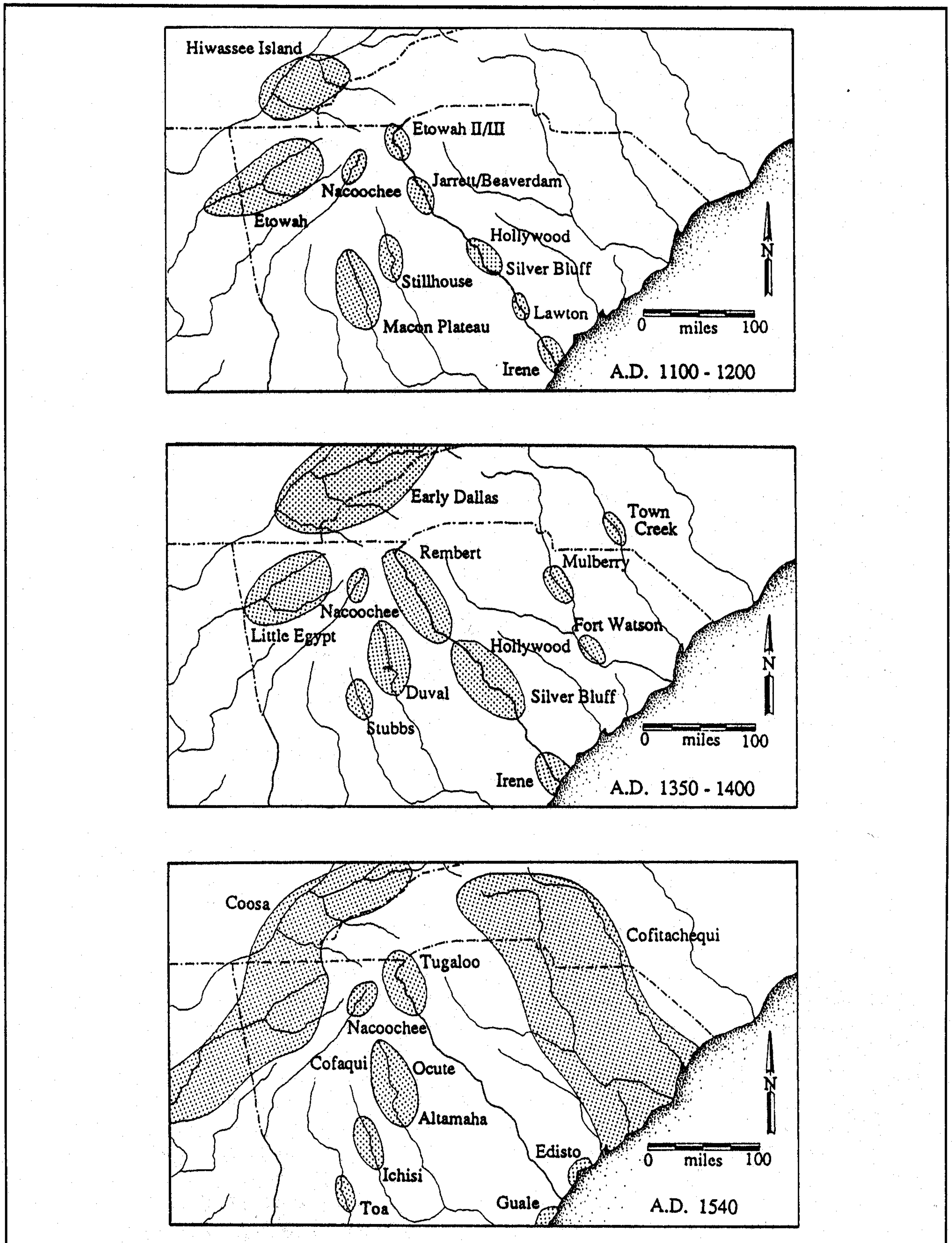


Figure 72. Mississippian Polities in the South Atlantic Area.

(indicating these sites may be earlier than inferred). The entire lower Savannah River basin, from the Russell Reservoir south, appears to have been largely abandoned from ca. A.D. 1450 - 1650, and was only briefly occupied after that time, primarily by displaced groups moving in from other areas such as the Westo settlement near Augusta (Woodward 1674; see also Milling 1940, Smith 1986; DePratter 1988a). Only the extreme upper reaches of the Savannah appear to have been occupied throughout the late prehistoric and protohistoric era (Hally et al. 1985; Anderson et al. 1986; DePratter 1988b).

Ceramic Taxonomy

Regarding the utilization of ceramic artifacts in sequence development, unquestionably one of the most significant advances to come out of the reservoir work was the development of a fairly refined Mississippian sequence for the upper Savannah River, research largely accomplished by Hally. The work in the reservoir clearly demonstrated, however, that use of this sequence proceeded best when applied on an assemblage level, and not on a sherd by sherd basis. Nested or cross diamond motifs, for example, were common during both the Jarrett and subsequent Beaverdam phase, although a decrease in incidence was evident over time. This motif, traditionally inferred to document Etowah components, has been found to encompass a much broader range in the general region. The nested diamond motif continues to occur in post-Etowah period assemblages in the middle Oconee drainage of east-central Georgia (Smith 1981:183-184, 1983). At the Dyar Mound, for example, nested diamonds were reported as the most common motif throughout both the Early and Middle Mississippian Stillhouse and Duvall phases, which roughly correspond to the Etowah/Early Savannah Beaverdam and late Savannah/early Lamar Rembert phases in the Russell Reservoir area. What these findings indicate is that the presence of specific complicated stamped (or incised) motifs, by themselves, should not be taken as clear evidence for specific periods of site use.

The position of cord marked pottery within the Mississippian sequence remains largely unknown. A small quantity of sherds with this finish was found in unequivocal Mississippian context at Rucker's Bottom on the floor of Structure 2. Unlike the earlier Woodland cordmarked sherds from the site, the material was characterized by carefully applied, closely spaced parallel cord impressions and well smoothed interior surfaces. Many of the sherds resembled Savannah Fine Cord Marked, which has been shown to be widespread throughout the lower portion of the drainage (Caldwell and Waring 1939; DePratter 1979; Anderson 1988a), although the incidence of cross stamping was lower in the Russell Reservoir sample. While Savannah Fine Cord Marked has been dated from ca. 1150 to 1300 at the mouth of the river and from ca. A.D. 800 to 1300 in the interior (DePratter 1979:111, Anderson et al. 1986:42-43), no cord marked pottery was reported among the more than 25,000 sherds recovered at the Beaverdam Mound, which was occupied from ca. A.D. 1200 - 1300. Thus, in spite of a considerable popularity throughout prehistory in the coastal plain, cord marked finishes were uncommon along the upper Savannah. The position of this and other finishes such as check stamping, fabric marking, and simple stamping within the local late prehistoric sequence need to be better resolved. Although the current sequence is an excellent beginning, many questions remain to be addressed. There is a particular need throughout the region to narrow the chronological intervals employed to well under the 100 to 150 year intervals currently in use, to more effectively approach the study of local Mississippian political and cultural evolution.

The Abandonment of the Savannah River

The middle Savannah River was densely settled by Mississippian populations during the twelfth through fourteenth centuries, but was then precipitously abandoned around A.D. 1450 (Figure 72). This event was clearly documented within the Russell Reservoir. Mississippian components, which showed a pattern of increase over the centuries from ca. A.D. 900 to 1450, exhibited a pronounced drop after this time (Figure 4). Artifacts dating from the interval A.D. 1450 - 1650 were virtually nonexistent in the reservoir collections and throughout the central piedmont, a finding that has been duplicated in the middle and lower course of the drainage where hundreds of collections have been analyzed in recent years. About the same time that the Savannah was depopulated, there is evidence that a number of chiefly centers in western South Carolina were also abandoned (DePratter 1987b, 1988b). At the time of the De Soto entrada the middle Savannah was uninhabited, and formed part of an extensive buffer zone separating the rival provinces of Ocute and Cofitachequi (Hudson et al. 1985, 1987; Hally et al. 1985; Anderson et al. 1986; DePratter 1987b, 1988b). Possible evidence for the emergence of this buffer was observed at Rucker's Bottom where increasingly complex fortifications appeared in the last century prior to site abandonment, which occurred about the same time that the entire lower drainage was depopulated. Increasing tension, and possibly hostilities between local chiefly polities (i.e., presumably between those along the Savannah, the Oconee in central Georgia, and along the Santee/Wateree in central South Carolina) has been inferred by this appearance and elaboration of fortifications (Anderson 1986b, 1987a, 1987b).

Several Mississippian ceremonial/political centers emerged, saw use for a century or two, and were then abandoned along the Savannah prior to the final depopulation in the fifteenth century. These sites include the Lawton Mound Group, occupied ca. A.D. 1100-1300; the Hollywood Mound Group, occupied ca. A.D. 1250-1350; and the Beaverdam Creek Mound site, occupied ca. A.D. 1200-1300 (Rudolph and Hally 1985; Anderson et al. 1986). A marked decline in sumptuary goods accompanying burials was evident in the upper stages of two of these mounds, at Beaverdam Creek and particularly Hollywood. These patterns suggest increasing elite impoverishment and concomitant social disruption, following arguments developed by Peebles and Kus (1977:425, 430). Why these centers were abandoned remains unknown, although it appears that the activities undertaken at them were subsumed by other, much larger centers elsewhere along the drainage, at the Irene, Silver Bluff, and Rembert Mound Groups. This suggests that, locally, the development of increasing social complexity was coupled with increasing centralization of authority, at the expense of smaller centers.

Since no obvious evidence for warfare has been found anywhere along the Savannah (although our data samples are small), an immediate question that arises is what happened to the people when these centers, and ultimately the whole lower portion of the drainage was abandoned? Where did they go, and why? Were they relocated, forcibly or voluntarily? Did they flee to other areas? Rudolph and Blanton (1981) have documented a major increase in population in the central Oconee drainage during later Mississippian times; some of this increase may be due to population relocation from other areas, including possibly from along the Savannah. There is tenuous evidence, in the form of the appearance of similar ceramic assemblages, for the relocation of at least some people into central Georgia (Ledbetter and Wynn 1987). Comparable questions can be asked about the decline of Macon Plateau, Etowah, and other South Appalachian Mississippian polities.

The depopulation of the lower Savannah River after ca. A.D. 1450 may have been caused, at least in part, by an increasing encroachment on the Savannah polities traditional hunting preserves by expanding Mississippian populations in central South Carolina and Georgia. This circumscription appears to have occurred gradually, leading to increasing problems for the elites in the Savannah River Basin. About this same time (A.D. 1400-1450) a general decline in rainfall occurred over the southwestern South Carolina area, as documented in dendrochronological records obtained from bald cypress trees (Stahle and Cleaveland: personal communication 1987; see also Anderson 1987a, 1987b). By itself the effects of this decline, which was from an above average to average level of rainfall, would have probably been minimal. In conjunction with the increasing pressures brought on by other causes, however, even a slight increase in the probability of crop failure would have likely exacerbated tensions within local agriculturally-based political structures.

The populations of Cofitachequi and Ocute observed in the early contact era were extensive and, at least in the case of Ocute, were apparently also increasing dramatically (Rudolph and Blanton 1981; Ranjel 1544/in Bourne 1904, II:89-102, 140; Elvas 1557/in Bourne 1904, I:55-69). The size of the buffers surrounding these polities, due to the abandonment of the Savannah, were much larger than those in place over the region previously (Hally and Rudolph 1986). The patterns of chiefly competition that apparently led to the abandonment of the Savannah do not appear to have been over prime agricultural land, the explanation for Mississippian warfare in the southeast advanced by Larson (1972). The entire lower and central Savannah River, containing some extremely rich farmland, was abandoned for two centuries, while complex Mississippian chiefdoms existed in each of the adjoining major drainages. Exactly why and how the central and lower drainage was abandoned remains unknown, although the problem is receiving increasing attention.

VIII. 'NEW GEORGIA IS A PLEASANT PLACE, IF WE COULD BUT ENJOYE IT': FRONTIER AND EARLY DEVELOPMENT TO 1810

The area which would become the Russell Reservoir remained an obscure frontier throughout most of the Colonial Period. While both the Spanish and French made successful incursions into South Carolina and Georgia during the sixteenth and seventeenth centuries, their settlements focused on the coastal fringe, and explorations of the interior left behind little in the way of European culture. It was not until the English colonization of South Carolina (1670) and Georgia (1733) that roots were laid for a gradual population expansion into this frontier. The line of Anglo-American settlement slowly encroached upon the region during the latter decades of the Colonial Period, then moved more rapidly in the wake of the Revolutionary War and more aggressive policies toward the native population. The Revolutionary War period marks the beginning of RBR historical archaeology, with Beverly Bastian's excavations at Fort Independence providing our sole source of knowledge for the material world in the Frontier Period; her report (Bastian 1982) serves as the lynchpin of this chapter.

While settlement and the archaeology of the Frontier Period were limited, historical and ethnohistorical accounts provide for a schematic account of the region in the early years of Anglo-American occupation. Taylor and Smith (1978) and The History Group (1981) parallel each other in describing the region as a territorial limbo during both the protohistoric and frontier periods. Taylor and Smith (1978) suggest that the region served as a "buffer zone" during the protohistoric period, while The History Group (1981) argues that sparse early historic settlement was perhaps a result of a leap-frogging migration toward a rapidly expanding frontier. Their overviews set the tone for a consideration of life at Fort Independence and in the years immediately beyond.

THE PROTOHISTORIC OCCUPATION OF THE RUSSELL RESERVOIR

Taylor and Smith (1978) contend that the region which would be subsumed by the Russell Reservoir was only sparsely inhabited at the time of European contact. Considering the early historical accounts produced by Spanish and English explorers, they note a general paucity of references to aboriginal settlement in the project area. The 1540 exploration of Spanish conquistador Hernando De Soto, marking the earliest ethnohistoric account, appears to have crossed the general vicinity of the RBR; Hudson's (1985:34) reconstruction of De Soto's route shows it skirting the southern flank of the reservoir. Taylor and Smith (1978:113) note that after plundering the town of Cofitachique (a Sand Hills community located either near Silver Bluff on the South Carolina side of the Savannah River or, as is now thought, in the vicinity of Camden, South Carolina [Swanton 1922; Hudson 1976, n.d.; Baker 1974]), De Soto marched north towards the Appalachian mountains. He passed the province of Chalaque and the hamlet of Guaquili, apparently associated with Cofitachique, and then into definite Cherokee lands in the Appalachians. Hudson notes that the ease with which De Soto reached the Cherokees within the Blue Ridge suggests established trails and perhaps trading relations between the Cherokees and the Indians on the southeastern slope of the Appalachians. He also suggests that the ease with which the Spanish passed through the Cherokee nation might indicate that tribe was already weakened by European disease (Hudson 1976:112).

De Soto's account thus indicates a break in aboriginal settlement between the lower Piedmont, the area apparently under the dominion of Cofitachique, and the Cherokees of the Appalachians. The area appears to have been the boundary between separate socio-political entities. Subsequent exploration of the region followed a hiatus of over a century, but supports this settlement gap. In 1674 English explorer Henry Woodward visited a Westo Indian town on the lower Savannah river, where he learned that "Cowatoe and Chorakae Indians" lived in the headwaters of the Savannah River, i.e. within the Appalachians (Taylor and Smith 1978:113; Swanton 1922). Although he did not cross the project area, John Lawson (1972; in Taylor and Smith 1978:113) provided a similar account of aboriginal settlement in 1701, noting that the Cherokee were settled on the Savannah's headwaters. Both accounts suggest the Cherokee were concentrated in the Appalachians, and that aboriginal settlement to the south was not noteworthy. Colonel George Chicken, who visited the Cherokee in 1715 attempting to extinguish French efforts to instigate hostilities, mentioned no Cherokee towns below the Cherokee Lower Towns. Colonel Chicken passed immediately through the project area, and given the nature of his mission, the omission of any mention of Cherokee settlement in this area is noteworthy (Taylor and Smith 1978:113; Chicken 1916).

The naturalist William Bartram visited the project area twice during the close of the Colonial period. In 1773 he journeyed into north Georgia with the survey party which outlined the Cherokee and Creek cessions of that year. Traveling north from Augusta, Bartram noted in detail the ruins of a native American village and mound complex, which he felt "perhaps long preceded the discovery of this continent," yet made no reference to contemporary aboriginal settlements (Van Doren 1955:56). In fact, his only mention of human habitation in the area at this time was "a newly settled plantation" noted at the confluence of the Broad and Savannah Rivers (Van Doren 1955:63), south of the project area.

Bartram returned to the area in April and May of 1776. Journeying from Savannah up the Savannah River on his way to the Cherokee nation, he mentions passing Golphin's trading post, Fort Moore, and Augusta, before embarking into the frontier area known as "the New Purchase." From Augusta, Bartram travelled to Fort James, located at the confluence of the Broad and Savannah Rivers. While there he visited an aboriginal mound complex (apparently the Rembert Mound Group) again marveling at the social complexity and extensive construction of a vanished people, suggesting there was little evidence of more recent aboriginal occupation to attract his attention. From Fort James, Bartram crossed the Savannah River to the South Carolina side, and followed the "high road" toward Keowe. Eight or so miles up river (in the general area of the RBR) Bartram was surprised by a sudden storm, "attended with terrific thunder," which he fortunately passed at the shelter of a farmhouse. From this point he travelled another 35 miles or so, to the home of Mr. Cameron, deputy-commissioner of Indian affairs for the Cherokee. Bartram noted of his journey that the frequent storms "rendered travelling disagreeable, toilsome and hazardous, through an uninhabited wilderness, abounding with rivers and brooks" (Van Doren 1955:266-267).

The image projected by these historical accounts, that the project area occupied a territorial limbo between various Indian groups of the Piedmont and the Cherokee in the Appalachians, is supported by contemporary reconstructions of aboriginal settlement and socio-political boundaries. Swanton's (1922) map of Southeastern tribes shows no close associations of tribal names with the project area, and in particular no tribal associations for the eastern slope of the Appalachians. Mooney (1975:1-2) places the project area within the Cherokee nation, but notes that the principal Cherokee towns were found along the headwaters of the Savannah, Hiwasee, and Tuckasegee Rivers, and along the Little Tennessee River. Taylor and Smith (1978:114) contend that the Cherokee were involved in sustained hostilities with their neighboring tribes on each border, and suggest that "it appears from the low utilization of the project area at early historic times and the rampant early historic intertribal conflict, the project area may have served as a buffer zone between major tribes and/or tribal groupings such as the Creek Confederacy. Such a zone would be one to be crossed cautiously by relatively small hunting or raiding parties, but not a place to settle and build towns."

An alternative explanation, offered by Taylor and Smith (1978:114) and alluded to by Hudson (1976:112) suggests the aboriginal depopulation of the project area may have been the product of catastrophic epidemics of European diseases. As early as 1540, de Soto noted the effects of plague among the Indians, which probably originated through contact with de Ayllon's expedition of 1526. Adair reports that nearly half the Cherokee population was carried off by smallpox in 1738. Archaeological and historical sources indicate the prehistoric occupation within the RBR was substantial, and thus the depopulation during the protohistoric period was either related to changing socio-political organization following the Mississippian Period; epidemics spread through contact with Europeans; or a combination of the two. Taylor and Smith (1978:114) argue that the latter instance provides support for their buffer-zone hypothesis, since such a zone would not only reduce intertribal tension and conflict, but also limit the spread of disease from one population concentration to another. While an exact reconstruction of the causes of this population interstice cannot be drawn from either historical or archaeological data, both sources do support its existence.

EARLY HISTORICAL PERCEPTIONS OF THE RUSSELL RESERVOIR VICINITY

While the historical settlement of the RBR would derive from increasing population pressure, frontier expansion, and immigration from the north and south, the nature of the individuals likely to seek and settle the area was in part conditioned by the historical perception of its environment. Accounts such as Bartram's *Travels* were widely read both within America and abroad, and provided the images which prodded many settlers. The Russell Reservoir vicinity was not especially well reported in travel accounts or other sources, yet the historical views offered for the region area are an indication of its historical perception, and in turn a key to the types of persons who might seek out such lands.

Bartram's account provides the best description of the region as well as an assessment of its potential. Writing in 1773, Bartram noted that "After leaving Broad River, the land rises very sensibly, and the country being mountainous, our progress became daily more difficult and slow; yet the varied scenes of pyramidal hills, high forests, rich vales, serpentine rivers, and cataracts, fully compensated for our difficulties and delays." While commenting little on the flora at that time, Bartram did present a rather ferocious fauna in the area: "The dreaded and formidable rattlesnake is yet too common, and a variety of other serpents abound... The alligator, a species of crocodile, abounds in the rivers and swamps, near the sea coast, but is not seen above Augusta. Bears, tygers, wolves, and wild cats (felis cauda truncata) are numerous enough..." (Van Doren 1955:62-63). Thus at this early juncture, the project area was distinctly presented as something of a wilderness.

In his return of 1776, Bartram tempered this wilderness with its prospects for civilization. Writing of his journey to Fort James, to the south of the Russell Reservoir, Bartram noted (Van Doren 1955:263-264):

> the wild country now almost depopulated, vast forests, expansive plains and detached groves; then chains of gravelly, dry, barren summits present detached piles of rocks, which delude and flatter the hopes and expectations of the solitary traveller, full sure of hospitable habitations; heaps of white, gnawed bones of ancient buffalo, elk and deer, indiscriminately mixed with those of men, half grown over with moss, altogether, exhibit scenes of uncultivated nature, on reflection, perhaps, disagreeable to a mind of delicate feelings and sensibility, since some of these objects recognize past transactions and events, perhaps not altogether reconcileable to justice and humanity.

Despite its current inhospitable appearance, Bartram also recognized the bounty and potential of these new lands, especially as it passed into the possession of European colonists. He wrote (in The History Group 1981:66):

This new ceded country promises plenty and felicity. The lands on the River are generally rich and those of its inumerable branches agreeable and healthy situations, especially for small farms, everywhere little mounts and hills to build on and beneath them rich level land fit for corn and any grain, with delightful glittering streams of running water through cain bottoms, proper for meadows, with abundance of water brooks for mills. The hills suit extremely well for vineyards and olives as nature points out by the abundant produce of fruitful grape vines, native mulberry trees of an excellent quality for silk. Any of this land would produce indigo and no country is more proper for the cultivation of almost all kinds of fruits.

Bartram's dialectic between wilderness and fruitful plain reflected the reality and ideal of the settlement of Georgia's frontier. While a prosperous plantation economy devoted primarily to the production of rice had developed along the coastal plain of Georgia and South Carolina, other crops required by Britain had not been grown with great success in the colonies. Indigo was produced in some quantities along the coast, yet Great Britain desired to see the successful production of wine and silk from the colonies. Thus the backcountry's role in the British economy was perceived as the producer of silk, as well as the bastion of Anglo-American white society. Writing to Lord Hillsborough in 1772, Governor James Habersham observed (in The History Group 1981:67; British Public Records Office, C. O. 5/661, p 116):

If ever the Silk culture becomes a considerable branch of commerce here it must be done in the back country where the lands from their fertility and healthy situation can be profitably cultivated by, and admit a great number of white people without the assistance of negroes, which cannot be done for a considerable distance from the sea coast, where rice is the principal staple commodity, and the lands being flat and moist, and especially those that are proper for the cultivation of rice, on which stagnated water is sometimes necessarily kept, cause the white inhabitants in particular to be subject to severe automnal fevers, and consequently shortens their lives.

Georgia, like South Carolina, had witnessed a black majority by the close of the Revolutionary Period. While slavery had originally been prohibited in the colony, the financial successes achieved by the Carolina planters, coupled with the demands of Georgia's limited colonial population (and perhaps in particular the efforts of two esteemed communities: the German Salzburgers who settled the area of Ebenezer to the north of Savannah and the Puritans who settled the Midway community to Savannah's west) persuaded Georgia's colonial government to capitulate, and from 1750 onward slavery was permitted in the colony. The opening of the backcountry thus offered the possibility of redemption from the perceived threat of a black majority, and was touted as the bastion of white farmers. In civilizing this wilderness, these settlers were also hoped to provide a stabilizing influence on the colony.

Bartram's assessment was echoed by the surveyors of the New Purchase, who provided the following commentary on their map of the New Purchase lands (in The History Group 1981:67-68; British Public Records Office, M. P. G., p. 2):

> The Lands in General consist of Oak and Hickory in many Places intermixed with black walnut, Chestnut and Tupelo, especially in Vallies - level lands and cane brakes, the Hilly lands consisting of Oak and Hickory with some few pines; the Soil is of a Dark Chocolate colour from six to seven inches deep with gravel and a kind of red clay.... The soil in the Vallies is somewhat lighter in colour, very rich being intermixed with a fat marl, gravel and clay.... The soil on the level lands of which there are many fine spots, appears to be equally good with the Cane Swamps on the Savannah River below Augusta, on which grow large Tupelo and black walnut.... The Cane brakes which are extremely good the Soil being very deep and of a black hue.. The Soil on the Pine lands intermixed with a few oaks is of a light Grey Sand some places red commonly called molatto.... The poorest Pine land is Rocky and Soil consisting of gravel and grey sand, foundation yellow and red clay.... The whole of the Lands appear finely watered by abundance of Streams which are very convenient places for erecting Saw and Grist Mills. Also on the River Savannah are Several convenient places for Mills where Rocks and Islands in the River stand near Banks.

The environment described suited the type of settlement which had succeeded in the northeast: small farmsteads and cottage industry. It was a picture which was meant to entice settlers, and one which would especially appeal to southern farmers pushed out of the coastal plain by the plantation economy, as well as northerners searching for more fertile soils and industrial opportunities. Bartram's wilderness was intended for civilization by a pattern successfully established in New England and the Mid-Atlantic.

While these perceptions set the stage for our discussion of frontier settlement, it is insightful to step ahead for a moment and consider the response of one of these settlers. Edward Butler was a Virginian who journeyed to Georgia in search of better lands and opportunity. Finally settling in the area of Upton Creek, near present Thomson, Butler recorded his impressions of the new territory in prose and poetry. Like Bartram, Butler saw the problems and the promise of life in the New Purchase; like Bartram he saw the wilderness and the garden. Unlike Bartram, and other boosters of this land, Butler appears to have been less convinced as to which aspect of the dialect would prove dominant. In a poem written as he prepared to move his household from Virginia to Georgia, Butler recorded his thoughts and sentiments on his new home (in The History Group 1981:68-69; Edward Butler Diary, Special Collections, University of Georgia):

New Georgia is a pleasant place, If we could but enjoye it
Indians & Rogues they are so great, They almost have destroyd it.

All you that want to purchase wit[h], here you may buy aplenty
& let you[r] purse be Ere so full, You soon may have it Em[]ty

Their is one thing more attends this place, Which we do call an Evil
When we make Corn Wheat & Rice, Its eaten by the Weavel

Not only so we must work hard, & Take great Care to make it
So let us all with one accord, Conclude for to forsake it

Altho this province is so bad, You may rais heaps of cattle
They'l rais themselves without Expense, and that is half the battle

Here you may keep five hundred head, As Easy as keep Twenty
Here you may soon fill up your dish, When that it doeth get Empty

The flies in Sumer time they are so bad, They all most kill our creatures
they can not go into the swamps, for fear of the musqueators

They are best of[f] in winter time, They have no need of feeding
& I am sure in sumertime, They have no need of bleeding

Now to new Georgia I bid farewell, Hoping times may alter
Hoping all the worst of Rogues, Soon may get the halter

Could but the Indians be subdued, & Rogues could have their portion
Their could not be a better place, Athis side of the otion

Now I conclude & finish my song, I wish I was in Virginia
If I have said anything that's wrong, I am sure I'll forfit [illegible]

If I have sung anything that's wrong, I am shure I should be sorry
I have partly seen what I have [sung], & I have made my Song in a Horey

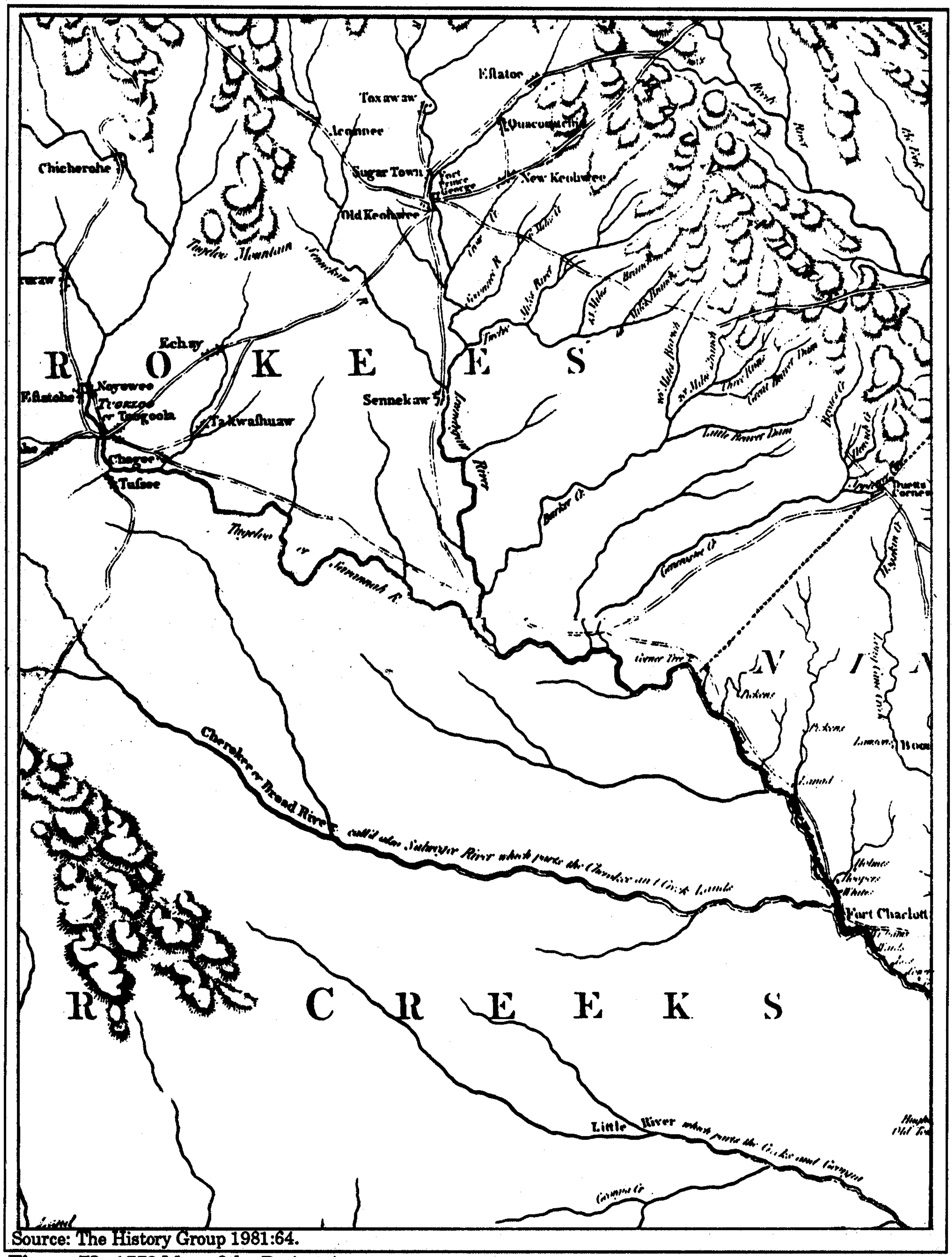
LAND CESSIONS PRIOR TO THE REVOLUTION: FRONTIER SETTLEMENT IN THE RUSSELL RESERVOIR

The Russell Reservoir area must be considered as two frontiers, of Georgia and South Carolina respectively, since land cessions and settlement proceeded at a different pace on the opposing banks of the Savannah. The South Carolina side was settled at an earlier date than the Georgia territory, and by a somewhat different social and ethnic stock. By the late eighteenth century, this area lay at the end of a long arc of migration which originated in Pennsylvania, proceeded along the Shenandoah to the Appalachians, then south into the South Carolina Piedmont. This route was known as the Great Philadelphia wagon road. Once within the boundaries of South Carolina, the road ran from the Catawba Valley to Camden, then split in two, one fork continuing to Augusta, the other along an Indian trail to the community of Ninety Six, east of the Russell Reservoir. Ninety Six had begun as a frontier outpost of the Indian trade, and marked the terminus of the wagon road for settlers moving into the Russell Reservoir area (The History Group 1981:71-72).

In 1747 South Carolina negotiated a treaty with the Cherokees which provided for the cession of lands in the Long Canes Creek and Little River watershed in what is now southern Abbeville County. Initial European settlement was sparse, as conflicts between the Cherokees and settlers threatened the livelihood of this frontier, but following the Cherokee War of 1760-61 this area was secured as far north as the modern Abbeville-Anderson County line. The security of this region, coupled with the headright system of land grants enacted in 1763, propelled a wave of settlers into the region. Most originated from the northern colonies, and were of Germanic or Scots-Irish stock. While prior to 1761 there were reportedly only twenty-three white families in the entire South Carolina backcountry, the *South Carolina Gazette* of April 2, 1763 claimed that over 1,000 families had settled the region of Long Canes Creek in the previous year, and that another 400 families were currently en route from the northern colonies to settle this region. In order to formalize this settlement, and minimize the prospects for warfare between the settlers and the Cherokee, the British government negotiated an official boundary between Cherokee and British lands in South Carolina, the boundary drawn as a straight line between the Savannah and Reedy Rivers, a line followed by the present Abbeville-Anderson County line (Figure 73). With this act, settlement of the Abbeville County portion of the Russell Reservoir was secured for the Colonial Period (The History Group 1981:72; Simms 1860:120; DeVorsey 1966).

The statistics cited by the *South Carolina Gazette* not withstanding, the settlement of the Russell Reservoir portion of this frontier appears to have been limited. The 1773 map of Indian lands and boundaries (Figure 73) indicates only three settlers in the area: two Pickens and a Langd. The archaeological evidence also supports a sparse population in the years prior to the Revolutionary War, with only two sites identified which possessed ca. 1760s components (Brooks 1978:116-117). In his official report on the South Carolina-Cherokee boundary of 1766, deputy Indian superintendent Alexander Cameron noted: "I could not learn that we took in any land, that had been surveyed by any White man before; but there is one Atkins, settled within four miles of the Line, near to Savannah" (Bastian 1982:14; DeVorsey 1966:132). Given that the opposite bank of the Savannah remained Creek territory until 1773, it is likely that settlers avoided any close proximity with the Savannah for fear of an outbreak of Indian hostilities, such as occurred in 1764 when the Creeks massacred several families in the Long Canes Creek vicinity (Bastian 1982:14; Davis 1949:5). Thus the project area remained a frontier in a very real sense of the word.

In Georgia, the line of the frontier was expanded by a series of treaties. The 1763 Treaty signed between the Creeks and the British at Augusta, established the



Source: The History Group 1981:64.

Figure 73. 1773 Map of the Project Area. Note Fort Charlotte and the presence of a Pickens and Langd in the reservoir area.

boundaries which the Creeks agreed not to penetrate (Brooks 1978:117; M'Call 1909:207-209):

> This treaty concluded on the 10th of November 1763; and it was agreed that a farther acquisition of territory should be annexed to Georgia; the boundary to be settled by a line extending up Savannah and Little rivers, to the fork of the latter; thence to the head spring or source of the Ogecee river, and down said river to Mount Pleasant; thence a line to be run direct to Saint-Savilla on the Altamaha river; and thence in a direct line to the extremity of the tide water on the river St. Mary's.

A second treaty between the Creeks, Cherokee, and British was made in 1773; this treaty extended the boundaries of Georgia into the project area. William Bartram journeyed with the survey party which marked the boundaries of this treaty, recording (in Brooks 1978:117; Bartram 1943:140):

> I returned to camp at the great lick, where I found our people and the indians in a wharm contraversy concerning the direction of the Lines of Lands to be marked out[;] however, by the address & wise conduct of Coll. Barnet, the dispute was soon decided to the seeming satisfaction of both parties & the Corner Tree was pitch'd on, from whence the Surveyors took their courses. Here our company divided [.] A party of Surveyors with the Creek Indians run the line down the so: side of Ogeche a certain distance [,] thence another course to the river Altamaha; the Coll... his surveyors. with the party of Cherokees [,] continued up the Ridge to the mark't tree of the old Line, thence a No: course, to Savannah River a mile below the mouth of Tugilo, where the River divides and loses its name [,] both heading in the Cherokee mountains.

Brooks (1978:118) notes that five archaeological sites recorded on the Georgia side of the river may date to this (pre-1773) period.

While the land cessions on the Georgia side of the river appeared to provide a more secure boundary for the frontier settlement, this security was illusionary. By 1775, the growing hostilities between the British, Americans, Cherokees and Creeks threatened the stability and safety of the Russell Reservoir settlement.

THE REVOLUTIONARY WAR IN THE AREA OF THE RUSSELL RESERVOIR: PRELUDE TO FORT INDEPENDENCE

The Revolutionary War in South Carolina can be said to have begun in the backcountry. The first overt act of the war occurred at Fort Charlotte, south of the project area, on July 12, 1775. On that date a company of South Carolina Rangers, under orders of the newly formed Council of Safety, seized the fort's arms and stores (Bastian 1982:10; Davis 1949:12-14). The backcountry also witnessed the first patriot casualty in the entire south. A dispute between Whigs and Tories at Ninety Six, in November of 1775, resulted in the Whigs being besieged behind a hastily erected stockade. The siege lasted several days; one Whig was killed, and twelve wounded, in the confrontation (Bastian 1982:10; Landrum 1897:325; Davis 1949:13). Loosely organized and sporadic confrontations between local Whigs and Tories typified much of the military activity of the backcountry, as this region in particular was divided in its sentiments regarding the revolution. The War in the backcountry was also characterized by considerable hostilities between the Whigs, Creeks and Cherokees.

With the Declaration of Independence and the drafting of the Continental forces, the military activities assumed a more organized nature. The Cherokee responded to the War quickly, attacking settlements in Georgia, the Carolinas, and Virginia. These four colonies responded in kind. In July, 1776, the Ninety Six militia, under the direction of Andrew Williamson, marched against the Cherokee in response to attacks following the British assault on Charleston. Williamson's goal was to destroy both villages and food supplies, and thus cripple the Cherokee's efforts to aid the British. An advance base was established at the subdued Cherokee town of Seneca, the fortification, completed in August of 1776, being known as Fort Rutledge. From this point Williamson coordinated with North Carolina troops, and was successful in harassing the Cherokees. The Cherokee sued for peace shortly, and in May of 1777 South Carolina and Georgia concluded a treaty which pushed back the boundaries of the Cherokee nation. Most of the area of Greenville, Pickens, Oconee and Anderson counties was acquired by this treaty, with European settlement following quickly. Thus by 1777 the entire area of the Russell Reservoir was in European control (Bastian 1982:10; Brooks 1978:119-120).

The period of 1774-1776 witnessed the construction of a line of fortifications along the Savannah, to protect against Creek, Cherokee, and British attacks. The Savannah had been perceived as a line of defense a decade earlier, when Fort Charlotte was erected at the confluence of the Broad and Savannah rivers in response to the Creek attack at Long Canes in 1764. Additional hostilities between the Creeks and settlers had led to the construction of twelve stockaded forts between the Savannah and Reedy rivers in early 1774 (Bastian 1982:14; *South Carolina Gazette*, February 21, 1774). Among these may have been Fort Royal, a fortification apparently within the Russell Reservoir which could not be located during the archaeological studies. Fort Royal was described as "being about eighteen miles above Fort Charlotte on Savannah-river, on the frontiers of this colony" (The History Group 1981:168; Hemphill and Wates 1960:255). As it was in existence in 1776, and one of the fortifications inspected by a delegation from the Continental Congress in that year, Fort Royal was probably constructed during the 1774 confrontations. While the form of the fortification is unknown, the report of Lieutenant Governor Bull on the defense of this frontier is enlightening. Bull wrote that he was sending "powder and ball" to the "Poorest of the Irish, French, and German... new-comers"; ordering the militia to patrol the banks of the Savannah; and encouraging the settlers in the "building of stockade forts in New Bordeau and other most convenient places" (The History Group 1981:172; *Records* *of the British Public Records Office Relating to South Carolina*, 1774:34:8). Thus this early line of fortifications probably consisted of no more than stockaded farmsteads constructed by the settlers themselves, and located at convenient points for their mutual defense of the region.

In his 1833 Revolutionary War pension application, William Gabriel Pickens (brother of Andrew Pickens) recounted (in Brooks 1978:118; Sharpe 1963:143):

> About the 2nd of July [1775] preceding my entering the service, the inhabitants along the frontiers and back settlements of Georgia and the Carolinas, had generally forted up, in consequence of the Cherokee Indians, who were extremely troublesome at this time; having been instigated by the British. To protect themselves from indian warfare, and to defend the country as much as possible, the frontier inhabitants had constructed a line of forts along the Savannah River and had mustered themselves into companies, stationed principally at these forts. As soon as I joined the service [October 1776], which was to aid in guarding the frontiers and in repelling the indians, Captain Anderson stationed himself at one of these forts called Fort Independence, situated on the Savannah River, where we remained fourteen months in constant service against these Indians -- in scouring the country and protecting inhabitants.

The location and construction dates of all of these forts is unknown, with both 1774 and 1776 referenced as periods of military construction. Bastian's work at Fort Independence (discussed in detail below), however, supports the interpretations of Fort Royal presented above, and suggests that many of these "forts" may have been no more than fortified homesteads originally established in 1774 and perhaps reinforced in 1776.

The war in the backcountry thus took on a dual nature at an early juncture. While participating in the fight against the British (although frequently somewhat far afield from the Ninety Six District), the war also offered an opportunity to organize and repel the Cherokees and Creeks from the region, who had long been perceived as a threat to settlement.

The years of 1777 and 1778 passed within the region without much conflict. The Ninety Six militia maintained surveillance of the region, as there were sporadic rumors of Creek uprisings, but most of its true military activity was played out on distant fields, with both Andrew Pickens and Andrew Williamson assisting General Howe in the aborted attempt to retake St. Augustine, Florida.

In 1779 the War entered the backcountry. Colonel William Boyd, a prominent Spartanburg Tory, traveled with 700 South Carolina Loyalists across the backcountry, attempting to link with the British forces occupying Augusta. Colonel Andrew Pickens and 400 South Carolina and Georgia militiamen were in the area, attempting to counter a small British contingent who were trying to persuade the backcountry settlers to cease their resistance to British control. Upon hearing of Boyd's troop movements, Pickens abandoned his cause and went in pursuit of Boyd. Boyd was attacked first at Cherokee Ford by a party of Ninety Six militiamen under the command of Captain Robert Anderson, but Boyd easily repulsed this smaller force and successfully crossed into Georgia. On February 14th, however, Boyds' troops were engaged at Kettle Creek by Pickens' forces. Boyd was mortally wounded in battle, and his demoralized troops either surrendered or retreated in disarray. The Battle of Kettle Creek halted British efforts at securing an alliance with the backcountry settlers, (Waring 1962:27, in Bastian 1982:11):

> which was the only check on the British advance in Georgia, broke the spirit of the Tories and secured peace for a time in the interior of the Carolinas and Georgia. Some years later, Pickens himself said he believed 'it was the severest check and chastisement the Tories ever received in South Carolina or Georgia'.

The Ninety Six militia was occupied with more distant battles for the remainder of 1779. In June they covered the retreat of General Benjamin Lincoln's troops at the battle of Stono Ferry near Charleston, and in September and October of 1780 they joined Lincoln's futile storming of Savannah. With the fall of Charleston in May of that year, the British considered Georgia and South Carolina to be conquered territories, and Whigs in the upcountry were paroled to return home in a hopefully peaceful relation with their Tory neighbors (Bastian 1982:11):

> The ensuing period was one of travail and humiliation for the Patriots. Continuing Tory abuse and atrocity were largely ignored by the British occupation officials. But the Whig spirit persisted and broke free again in 1781, when the British and Tory oppression could no longer be tolerated.

Colonel Andrew Pickens and the Ninety Six militiamen rejected their paroles in late 1780, and immediately aided the war effort at the crucial Battle of Cowpens, South Carolina. Here the militia and Continental forces were successful in defeating the British. Other decisive battles of the years 1781 and '82 included: Guilford Courthouse (North Carolina), on March 15, 1781; the siege of Augusta in early May of that year; the Siege of Ninety Six in May and June of 1781; and the Battle of Eutaw Springs (South Carolina) in September. In December of 1782 the British abandoned Charleston, and the War in South Carolina and Georgia was over.

It was a devastating war for the backcountry, as much a civil war as a Revolution, pitting family against family and brother against brother. Nowhere else had sentiments been so evenly divided, nor had the war taken such a toll. In its wake, the Revolutionary War in the backcountry left behind 1,400 widows and orphans (Bastian 1982:12; Bass 1978:422).

FORT INDEPENDENCE

The overview of the Revolutionary War in the backcountry, as presented above, provides a broad panorama of history at the time. Yet history is more than a tapestry in which the major events are played out against a muted background. History is also somewhat of a patchwork quilt, a series of places, pieces, and episodes whose connecting borders form meaningful patterns. To this point in its history, the Russell Reservoir must be understood in terms of major events; there are no detailed studies of its pre-revolutionary inhabitants. With the Revolutionary War, the particular history of the region becomes available. Fort Independence represents our Revolutionary War era patch.

Fort Independence is a good example of how this particularistic history can contribute to the understanding of larger events. The site has no particular significance within the war, and was not the location of any decisive battle or great military feat. Within the region its historical importance is overshadowed by the activities at Forts Charlotte and Rutledge, and at an unnamed and unknown stronghouse at Cherokee Ford. Anomalous in history, Fort Independence also fails to conform to models of frontier and military existence proposed by archaeology. Yet Fort Independence does speak to the larger events of the time. As Principal Investigator Robert Newman reminds us in his foreward to Bastian's (1982:ii) report:

> The reason that Fort Independence fails to fit many of the accepted concepts is clear: Fort Independence was strongly influenced by a unique set of historical events that significantly shaped the archaeological record. While Fort Independence is an extreme example, all historic sites have their unique histories and these should play a stronger role in site specific research and the development of explanatory models.

A Chronology of Fort Independence

While the date of Fort Independence's abandonment and destruction are explicitly revealed in the documentary record, the origin of the fort is less certain. Bastian's (1982) archaeological excavations revealed that the fort was in fact a fortified homesite, consisting of a stockaded house and semi-subterranean soldiers' huts beyond the stockade walls. This observation was critical to reconstructing the history of Fort Independence, since it is unlikely that such a compound would have been constructed solely for military purposes. As Bastian (1982) observes, the homesite most likely existed first, the fortifications, and the military nomenclature of "Fort Independence," coming at a later date.

The fort was constructed by, and on the lands of, Robert Anderson. Anderson initially patented lands on Rocky Creek in 1767, acquiring 150 acres at that time (Bastian 1982:13; *Colonial Plats*, Vol. 15:312). In July, 1774, an additional 150 acres on Rocky Creek were acquired by Anderson (Bastian 1982:13; *Colonial Land Grants*, Vol. 31:447) while in December of that year he submitted a memorial for yet another 150 acres on Great Rocky Creek (Bastian 1982:13; *Memorials*, Vol. 13:154). It is uncertain which of these plats contained the Fort Independence tract, although this information does bracket Anderson's recorded land acquisitions on Rocky Creek to the period between 1767 and 1774.

The nucleus of Fort Independence, and indeed a stockaded homestead, could have been constructed in 1774. Several historical references indicate a line of fortifications were erected in that year to defend against Creek attacks on the frontier. As noted above, the *South Carolina Gazette* of February 21, 1774, mentions a line of twelve stockaded forts between the Savannah and Reedy rivers. Another reference, correspondence from Major Andrew Williamson to Captain John Bowie, commandant of Fort Charlotte, supports an existing line of fortifications by 1776, Williamson writing on July 3rd of that year that his militia was eager to engage the Indians, with the exception of "some of your nearest neighbors who are patching up old fforts" (Bastian 1982:15; *Bowie Papers*, Document 10).

However, other references suggest that Fort Independence was erected *in toto* in 1776. The pension application of William Pickens (cousin of the William Gabriel Pickens cited above) states that in 1776 "this applicant together with many families was compelled to erect a fort for their safety and defence called Fort Independence" (Bastian 1982:14; Sharpe 1963:142).

While the archaeological evidence failed to provide definitive answers as to the construction date of the fortification, it did suggest that the central structure within the stockade was constructed as a homesite at some time prior to the advent of military hostilities. The stockade itself most likely followed in 1774, and was perhaps refurbished in 1776, thus answering William Pickens testimony of a 1776 construction date. It should also be remembered that Robert Anderson was the architect of a true military fortification, Fort Rutledge, built at Seneca during the Cherokee War of 1776, and it is unlikely that he would have built the simple stockaded homesite found at Fort Independence had construction been entirely engaged in 1776 (Bastian 1982:15). Homesite, probably stockaded in 1774, and then refurbished and dubbed Fort Independence at the advent of the Revolutionary War, appears to offer the most plausible reconstruction of events.

Fort Independence served various militia functions in its inaugural year. In 1777 the governor and legislature of South Carolina took more formal steps to control the frontier, and detatched three companies from the 5th Continental Regiment of South Carolina and assigned them as independents to assist the militia in the backcountry. Captain Benjamin Tutt's company was assigned to Fort Rutledge (Bastian 1982:16; *Tutt Account*, 1824 deposition of Thomas Farrar; *Tutt Account*, 1824 deposition of Robert Looney); the assignment of troops under Captain John Moore is unknown; while Captain John Bowie's company was assigned to Fort Independence. Bowie's first surviving communication while in command of Fort Independence was received by him on November 13, 1777, suggesting he was not in residence until the latter part of that year.

In late 1778, General Andrew Williamson wrote Bowie regarding various business matters, and referenced a proposal Bowie had made at an earlier date to build a new fort elsewhere. Williamson noted that such an undertaking could not be engaged immediately, but that it would be considered. At the end of 1778 Williamson wrote Bowie as follows (Bastian 1982:17; *Bowie Papers*, Document 50):

White Hall
Decembr 31st 1778

Dear Sir:

As I understand it is the General Opinion of the Inhabitants, as well as your own that plan[t]ing the Garrison now kept up at Fort Independence, on some spot near the old Boundary line, on or near the banks of Savannah River would tend more effectually to secure the frontier Inhabitants of this State. I desire you will as speedily as Possible look out the proper place Whereon to erect a fort agreeable to the plan you furnished me with Yesterday - you will get the soldiers belonging to your company to do the Work, for which I will see them paid according to the agreement you make with 'em, and have wrote Cap.t Moore to immediately put himself and Company under your command, and assist all in his power to effect this Business as quickly as Possible. I have also wrote to Cap.t Robt Anderson, Whose abilities in such Matters is Well known and requested him to assist you in the Choice of Ground, and also to Carry on the Work for Which I Will see him paid - as Colo Pickens has the direction and arranging the troops who do the line duty, you will before you send Cap.t Moore's letter to acquaint him, and also take his orders when occasion makes it necessary.

I am Dear Sir
Your Mo Hble Servant,
A. Wmson

Thus, with little more than a year's time spent at Fort Independence, plans were made to reconstruct the fort at a more advantageous position. While not mentioned as a factor in Williamson's December 31st letter, it is possible that the humble stockaded homesite was insufficient to serve Bowie's garrison, and the speed with which the construction of a new fortification was proposed suggests Bowie might have been concerned about the possibility of an attack. No mention is made of preserving the original Fort Independence as a military post, again supporting an interpretation that it was poorly suited to war-time activity.

Fort Independence appears to have been abandoned quickly. In mid-February 1779, Colonel William Boyd's Loyalist forces burnt the original Fort Independence on their journey to Augusta (Bastian 1982:18; Waring 1962:25). The whereabouts of Bowie's troops during Boyd's crossing is unknown, and Boyd was opposed only by a small force of militiamen led by Captain Robert Anderson at Cherokee Ford and Van's Creek, before being routed at Kettle Creek by Andrew Picken's troops. Clearly Bowie's men had abandoned Fort Independence by this time, or some mention would have been made of a military encounter. Subsequent references to Fort Independence in the Bowie Papers indicate that it was an ongoing entity in the years after 1779, most likely at some new location selected on the Savannah, as Bowie had proposed. The last reference to Fort Independence, January 22, 1780, is included in a discussion of supplies needed for the reinforcement of Augusta, in which General Williamson instructed then Major Bowie to "send down all the articles for the building or repg [repairing] the fort" (Bastian 1982:20; *Bowie Papers*, Document 59). The reference suggests that the new Fort Independence had only recently been completed, not a surprising reference, since Ivers notes that few South Carolina forts were built within a year (Bastian 1982:21; Ivers 1970:30).

Of the original Fort Independence, the tract containing its remains was sold by South Carolina following the war to a John Vanderhorst, who procured the land on December 8, 1793, described in the deed as "formerly the property of Robert Anderson and known by the name of Fort Independence" (Bastian 1982:21). Of the second Fort Independence, no mention of its disposition was recovered, and its location remains unknown.

Military Life at Fort Independence: Aspects from the Documentary Record

The Bowie Papers contain comments on certain aspects of military life at Fort Independence: subsistence and supplies, political intrigue, and the relations between Bowie and his fellow officers. The papers do not document the day-to-day occurrences of military life: drill and patrol, which is not surprising considering these communications generally conveyed instructions and information of interest to the Fort Independence garrison. The documentary record does provide certain particulars useful for an understanding of life at Fort Independence.

Supplies generally came to Fort Independence by wagon from either Ninety Six or White Hall, although on instances it was necessary for the commandants to journey to Ninety Six or White Hall and have their supplies allotted to them. Captain Bowie was sometimes thrown back on his own resources for providing sustenance, particularly so with cattle. It is clear that no attempts were made at either herding or farming at Fort Independence, and that the fortification was by no means self-sufficient. Frequently mentioned supplies sent to Fort Independence included meat, either in barrels of salt beef or as live cattle, flour, sides of arms (muskets with bayonets), and cash money. Other supplies mentioned in the correspondence included shelled and ground corn, buttons, a cask of rye (not specified as to grain or whiskey), shoes, clothing, sealing wax, rum, hemp, and sugar. On occasion General Williamson requested supplies from the stores at Fort Independence: 14 panes of glass, arms, clothing, and hardware for military construction (Bastian 1982:23).

Political events mentioned in the Bowie Papers include an election scheduled to take place in late 1778. In November of that year, General Williamson wrote Bowie regarding the election of Whig Assemblymen from the Ninety Six District. Several Whigs were opposing the incumbent assemblymen, on the grounds that the incumbents, all officers, would be inclined to favor continuing the war rather than suing for peace. Williamson sent Bowie a list of desirable candidates, comprised primarily of officers of the Ninety Six militia, and including Williamson himself, and suggested that Bowie "countenance [it] wt your interest." Williamson also advised Bowie to send his men who were eligible to vote early, so they could help defeat this scheme, with the implication that they be advised to vote appropriately (Bastian 1982:23; *Bowie Papers*, Document 69).

Although no statistics are given in this correspondence regarding the population of Fort Independence, estimates can be produced on the basis of other Revolutionary War militia companies. For example, each company of the North Carolina militia consisted of 50 rank and file (minimally), two sergeants, two corporals, one drummer, one fifer, and three commissioned officers: a captain, a lieutenant, and an ensign (Bastian 1982:24; Gobbel 1919:52). Thus a company would consist of at least 59 men. While Bowie's company was independent and not militia, it presumably possessed a similar contingent. Thus, if staffed at full force, Fort Independence sheltered 59 individuals for the duration of its existence, and possibly twice that number for a month or two in late 1778, when Moore's troops were placed under Bowie's command. If these companies were at full strength, then Fort Independence would have been badly over-crowded. However, Revolutionary War companies rarely achieved full strength due to desertions, resignations, and personal leaves, and Bastian (1982:24) estimates that perhaps 40 individuals, give or take 10, were stationed at the Fort, with the majority living outside the stockade walls.

The Bowie Papers also provide some clues to the command structure of the military in the backcountry, and Bowie's and Fort Independence's relation to other commandants and outposts. Captains Bowie, Tutt, and Moore headed three independent companies in the backcountry. Their orders were received from General Andrew Williamson, head of the Ninety Six militia, or through his aide-de-camp Malcolm Brown. Bowie and Tutt appear to have been on equal ground, neither receiving precedence in transmitting or receiving orders, whereas Moore sometimes received his orders through Bowie, a possible indication that he occupied a lower station. Both Tutt and Bowie had permanent assignments, Fort Rutledge and Fort Independence respectively, whereas Moore appears to have traveled about. Bowie's and Moore's companies sometimes acted in conjunction, whereas Tutt always remained near Fort Rutledge, and when acting in conjunction, Bowie assumed command. Both Bowie and Tutt provided support for militia activities, including men, supplies, military expertise, and musicians for military functions. Both actively recruited new enlistments, although Bowie also requested, on at least one occasion, five additional men from Ninety Six, a request granted by General Williamson. Most of the action Bowie's troops saw was in conjunction with Picken's militia, although Bowie himself was wounded at the battle of Stono Ferry, and if his company was also present, then this was at least one instance when they participated with the regular Continental forces (Bastian 1982:24-25).

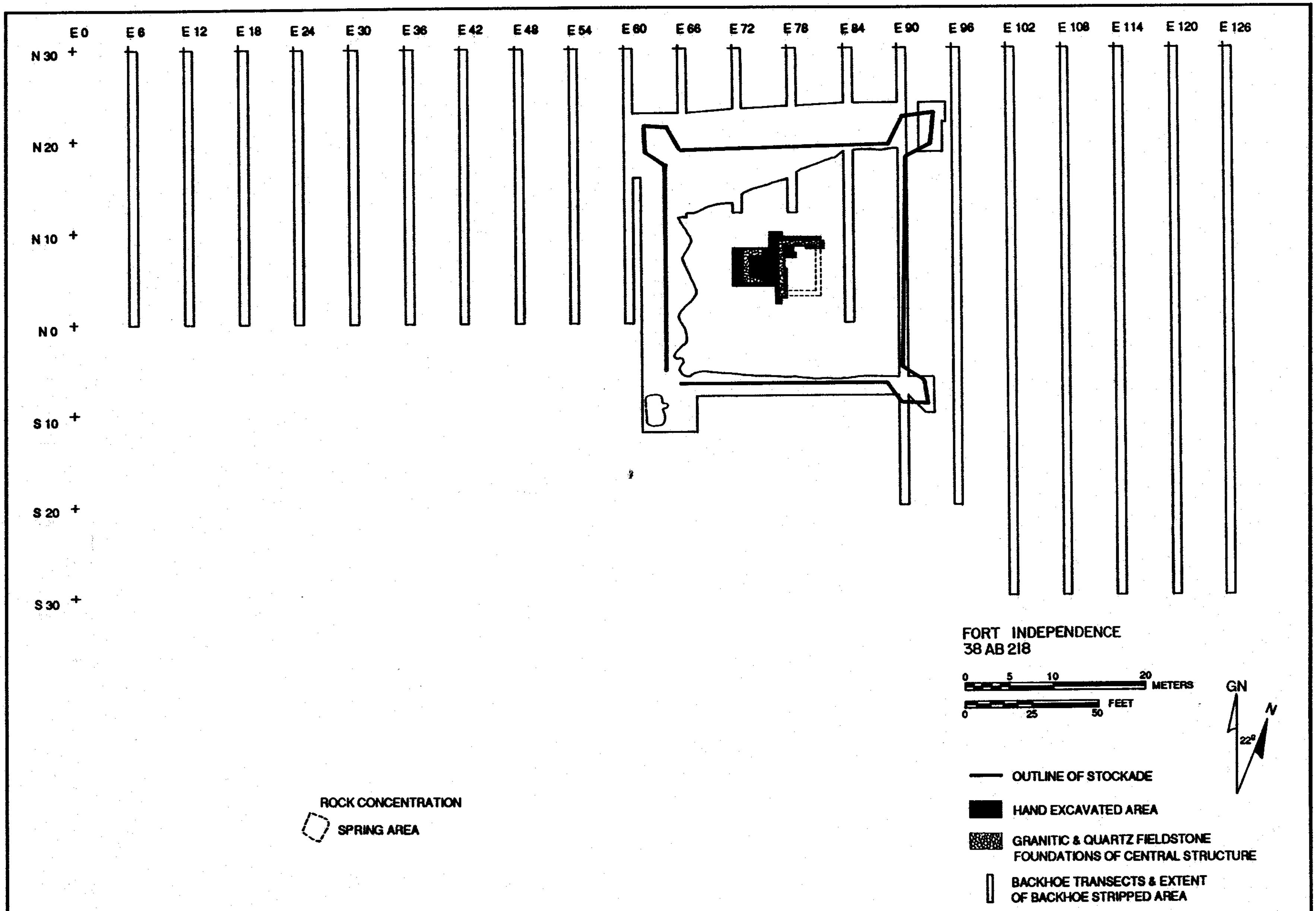
Other military actions engaged by Bowie's men included guard duty for prisoners (apparently Tory sympathizers) held at the Ninety Six jail, and providing defense for farmers of the backcountry during harvest. While their routine was generally uneventful, Bowie's independents appear to have traveled further and participated in more memorable battles toward the close of the war, as their possible presence at Stono Ferry and at the storming of Savannah (Bowie was there, as well as Tutt's independents, suggesting Bowie's independents participated in the battle as well) indicates (Bastian 1982:26).

The Structure and Construction of Fort Independence

Bastian's (1982) archaeological excavations at Fort Independence combined machine and hand excavations to delimit the extent of the fortification during the testing phase, and primarily employed hand excavations for the investigation of identified archaeological features during data recovery. The machine work consisted of a series of twenty-one backhoe excavated test trenches, spaced on six meter intervals, and excavated to subsoil (Bastian 1982:28). These were extremely successful at defining the limits of the palisade; Figure 74 shows the extent of machine and hand excavations advanced during the testing phase, as well as identified archaeological resources. While this strategy appears to be well suited for the recovery of monumental architecture, Bastian (1982:34) notes that backhoe excavations were less successful during the data recovery phase, when arid soil conditions prevented a clean exposure of the subsoil surface. The utility of this technique should thus be considered in conjunction with soil conditions and climate.

The testing phase investigations identified a series of archaeological remains associated with Fort Independence. These included: (1) a three bastioned stockade enclosing two structures; (2) an apparent earlier homesite within the stockade, built on a stone foundation, which probably served as Bowie's residence and command headquarters; (3) a second structure within the stockade, built with posts, adjacent to the northwest bastion; and (4) an apparent semi-subterranean soldier's hut located outside the stockade at its southwest corner, which apparently served as an entrance. Each of these is discussed below.

<u>The Stockade</u> The Stockade at Fort Independence measured 76 feet (26.2 m) on each curtain wall, and featured bastions on the northeast, northwest, and southeast corners. The northeast bastion was somewhat larger than those on the northwest and southeast, as the figures in Table 6 indicate (Bastian 1982:63, 65). The fort encompassed some 5,776 square feet, excluding the bastions, with approximately 453.25 square feet consumed by the stone foundationed homesite (Bastian 1982:138), and perhaps an additional 200 square feet devoted to the structure adjacent to the northwest bastion. Thus approximately 5,123 square feet beyond these structures were available for shelter during an attack. This space would have sheltered a reasonably large population during hostilities, although it



Source: Bastian 1983:29.

Figure 74. Plan of Stockade, Interior Features, and Excavations at Fort Independence.

would have proved cramped if occupied on a full-time basis by a company of 40 to 60 individuals. Bastian (1982:62) suggests that most of the troops probably lived outside the compound.

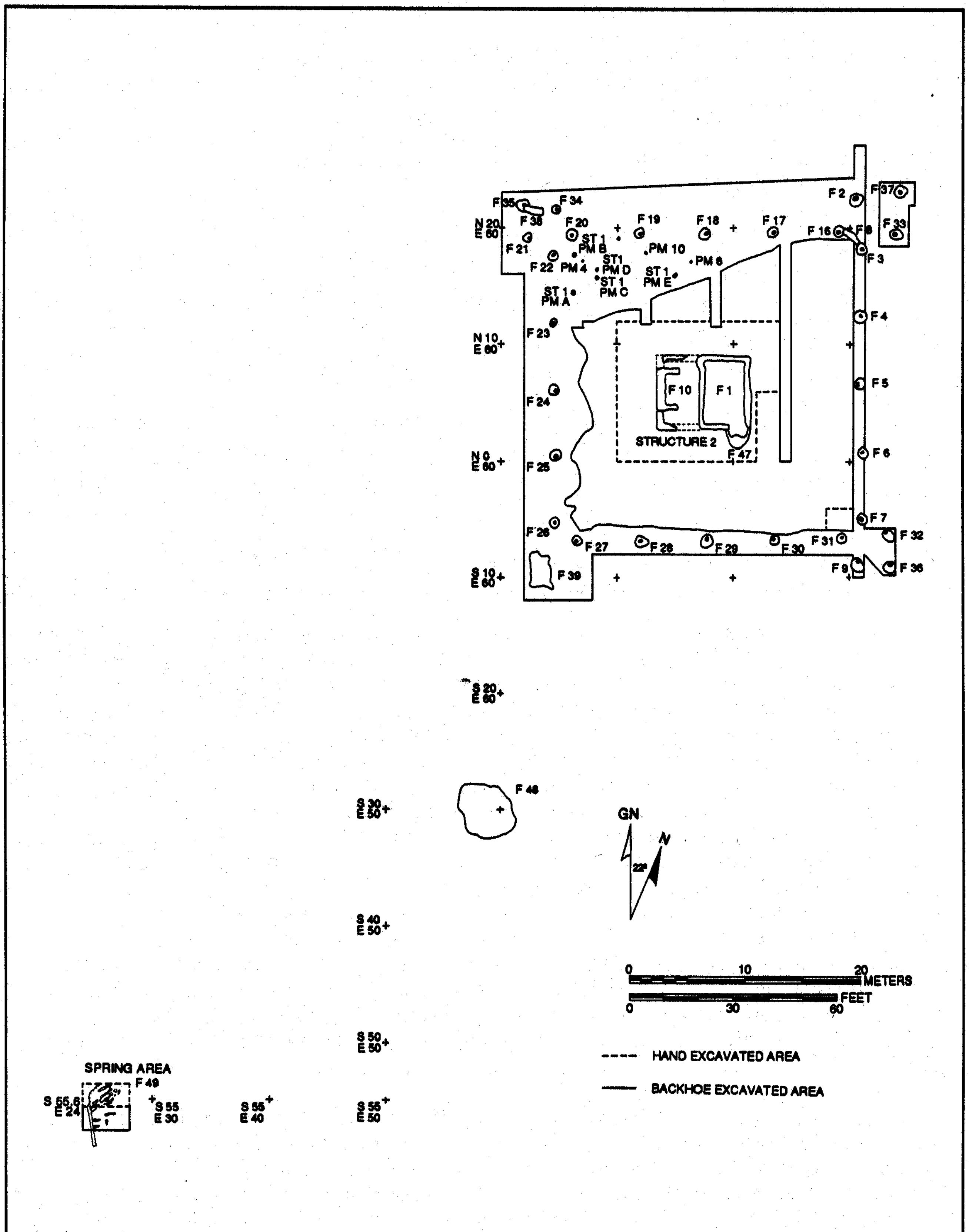
Table 6: Dimensions of bastions recorded at Fort Independence (from Bastian 1982:63)

Bastion	Length * North Flank	Length * North Face	Length * South Flank	Length * South Face	Length * Of Gorge
Northeast	3.25 m (10' 8")	3.71 m (12' 2")	3.20 m (10' 6")	3.76 m (12' 4")	2.39 m (7' 10")
Northwest	2.59 m (8' 6")	2.82 m (9' 3")	2.59 m (8' 6")	2.79 m (9' 2")	2.4 m (7' 10.5")
Southeast	2.74 m (9')	2.74 m (9')	2.54 m (8' 4")	2.82 m (9' 3")	2.43 m (8')

* Measured between midpoints of postmolds

The stockade was constructed of large posts on approximately 5 m (16.5 ft) spacings. A total of 29 such posts were used in the construction (Bastian 1982:65; Figure 75), with three posts placed on each curtain wall, five forming each bastion, and an additional two posts framing the entrance to the fort at the southwest corner. These posts measured from 24 to 50 cm (31.5 to 47.25 in) in diameter, and were generally buried 60.7 cm (23.87 in) within the subsoil. The posts themselves were probably trimmed trees, and Bastian (1982:67) hypothesizes that the spacing between posts was probably bridged by cross pieces to which smaller trimmed trees (or possibly planks) were nailed. If smaller trimmed trees were employed, the fort would appear to consist of a true palisade of posts, but in actuality would be less durable, since spaces between the main posts could be easily breached. It is uncertain whether this construction was a deliberate attempt to create the illusion of a more securely constructed palisaded fort, or simply a matter of expediency and/or limited man power, but in either instance it was probably less than ideal for military purposes. All but two of the excavated postholes yielded charcoal or charred post remains within the fill, supporting the documented burning of this fortification by Colonel William Boyd's troops Bastian 1982:65).

<u>The Homesite</u> Located in the center of the stockade and on the crest of the knoll on which the fort was built, the homesite consisted of several features built with an unmortared granitic and quartz fieldstone masonry: a fireplace foundation, an adjacent cellar hole with entrance, and sections of a continuous foundation. The dimensions of this structure, as interpreted from the intact sections of stone foundation, measured approximately 26' 6" (8.08 m) east-west by 20' 6" (6.25 m)



Source: Bastian 1982:30.

Figure 75. Archaeological Features Within Fort Independence.

north-south. The average width of this wall was 1' 8.5" (.052 m). The surviving foundation sections included the southwest corner of the structure and part of the north wall. These had apparently been constructed in a very shallow builder's trench, and consisted of large interlocking stones with smaller stone fragments employed as chinking. There was no indication that these stones were mortared, and the missing sections of the foundation were presumably robbed for reuse at a later date, or possibly cleared for agricultural purposes (Bastian 1982:44). Documentary references to a loft indicate that the structure was at least one and a half stories tall (Bastian 1982:56; *Bowie Papers*, Document 15).

The fireplace was constructed within an excavated pit, with the foundation abutting the walls of this excavation on three sides. As with the house and cellar foundations, construction consisted of large inter-locking field stones with stone chinking. In dimensions the fireplace foundation measured 12' (3.66 m) in length and ranged from 6' to 6' 6" (1.83 to 1.98 m) in width. The average width of the stonework was 1' 10" (0.56 m), with the height of the surviving stonework measured at 2' 3.5" (0.70 m) (Bastian 1982:43).

The cellar exhibited a continuous stone facade interrupted only at the southeast corner, where a gap provided for an outside entry. The occasional gaps between the exterior walls of the excavated cellar hole and the cellar masonry itself were filled with yellow clay. This use of prepared clay would have helped bond the cellar foundation to the walls of the excavation, as well as seal gaps and prevent water leakage into the cellar. The dimensions of the cellar were 20' 6" (6.25 m) north-south and 14' 7" (4.45 m) east-west, while the tallest surviving section of the wall was 4' 0.75" (1.24 m). The average width of the cellar wall was 1' 5.5" (0.44 m) (Bastian 1982:43-44).

Following its destruction by Colonel William Boyd's troops, Fort Independence was apparently policed, and the cellar hole filled with debris from the burnt fortification: burnt wood, stone, and some artifactual debris from within the structure and from the surrounding yard. It is difficult to determine why this was done, or by whom, although Bastian (1982:51) notes that the absence of water-laid deposits or weathering within the cellar fill suggest it was backfilled shortly after the fort was destroyed. Bastian (1982:51) feels that Bowie's troops were the most likely to have backfilled the cellar, perhaps during a return to the fortification to scavenge nails and other hardware for the construction of the new Fort Independence. It is also possible that the fort was backfilled by Captain Robert Anderson's troops, shortly after their battle with Boyd's forces. Anderson would likely have visited the site of Fort Independence, his earlier homestead, to determine how it had been treated by Boyd, and he may have wished to salvage materials and police the area. Finally, it is possible that the cellar was backfilled by Boyd's troops to prevent its use as a defensive location at some later date. While the motive is uncertain, the archaeological research indicates a deliberate filling of the cellar shortly after the fort was destroyed.

<u>The Structure Adjacent to the Northwest Bastion</u> During the testing phase excavations at Fort Independence, Bastian identified a second structure located

within the stockade. This structure was situated adjacent to the northwest bastion, and located just outside its entrance. Identified by the presence of nine postmolds, these did not outline an easily recognizable structure type (Figure 75). Two postmolds (designated ST1 PMA and PMB respectively) apparently formed an entrance on a north-south axis immediately behind the bastion entrance. A second pair of posts (PMC and PMD) formed some type of partition wall approximately 8' 3" (2.5 m) within the entrance formed by postmolds A and B, while a fifth postmold, PME, appears to represent a portion of the rear wall of this structure. Four additional postmolds, PMs 4, 6, 7, and 10 are randomly arranged around this structure, and do not appear to be directly associated. Bastian (1982:39) suggested that this structure might be some kind of animal pen; it is also possible that it was intended to provide shelter for soldiers on duty in the northwest bastion. While artifacts recovered from this structure do not indicate its function, they do support a construction date contemporary with the fort itself.

<u>The Semi-Subterranean Soldier's Hut:</u> This feature was identified just outside the entrance to the fort at its southeast corner. Backhoe stripping in this area had anticipated the identification of a fourth bastion, similar to those observed on the fort's other corners. Hence the backhoe excavations continued removing a dark soil similar in appearance to the plowzone of the site, even as this soil continued below the subsoil grade. These excavations revealed a shallow, trough-like feature, which had been partially removed during the backhoe excavations. Once recognized, machine excavations ceased, and the remainder of the feature was excavated by hand.

This feature proved to be roughly rectangular in plan (see Figure 75), and was a shallow, flat-bottomed basin with sloping sides, which had been excavated into the down slope of the knoll on which Fort Independence stood. Bastian (1982:60-61) interpreted this feature to be a semi-subterranean soldier's hut, similar to examples documented by Calver and Bolton (1950:19-22) at a Revolutionary War period British winter encampment in Manhattan. There, a row of huts had been dug into the hillside, combining an excavated hole in the subsoil with three walls of mounded earth, with the fourth wall and roof constructed of scavenged lumber. Entrances to these huts were through the front, wooden wall, while fireplaces were built on the rear earthen wall. Fireplaces were built of stone or brick, while chimneys were made of these materials, and in some instances, of barrels plastered with clay. Niches were carved into the subsoil to serve as bunks and for the storage of various artifacts (Bastian 1982:61).

The hut at Fort Independence was probably not as elaborate as those documented by Calver and Bolton (1950). It appears to have been extremely shallow, and Bastian (1982:61) believes it was used for basic shelter and not as a habitation. No evidence of a fireplace was revealed during these excavations, although such evidence may have been destroyed during the preliminary backhoe work. The interior dimensions of the hut, as interpreted from the dimensions of the excavated basin, would have been 7' 10.75" by 7' 4.75" (2.42 X 2.26 m), which would have provided cramped shelter for two or three men (Bastian 1982:62).

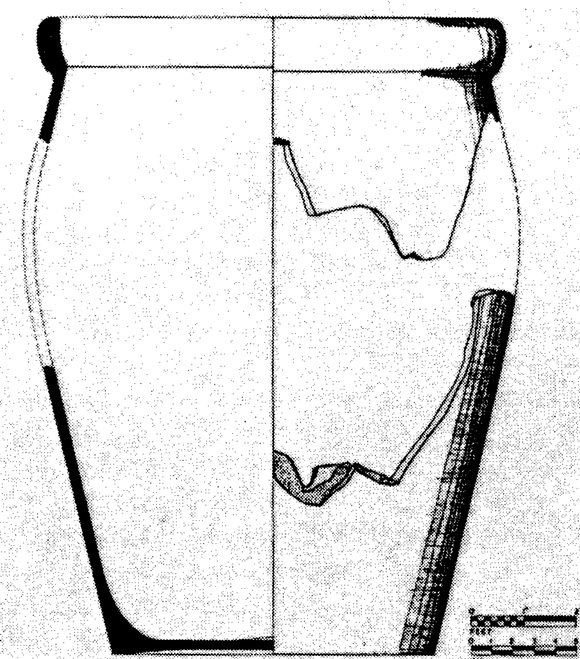
Based on its location, Bastian contends that this hut was intended to provide shelter for soldiers guarding the entrance to the fort, located at the southwest corner. Similar huts were probably scattered around the perimeter of the fort, and local informants reported finding spoons, bullets, and metal gun parts in the surrounding area whenever it was plowed. Bastian (1982:62) notes that the only reference to housing at Fort Independence was a mention of "the House in the fort", which was the residence of Captain John Bowie and his wife. This reference suggests that all other housing was located outside the fort's walls. The contrast in housing is dramatic, Bowie's dwelling consisting of a reasonably commodious and well constructed building with a total floor space of approximately 1,117 square feet (Bastian 1982:138), whereas the soldiers at Fort Independence lived in damp, cold, and somewhat squalid shelters, sharing a space of approximately 60 square feet. This status contrast is underscored by a comparison of artifacts from the two loci.

Fort Independence Material Culture

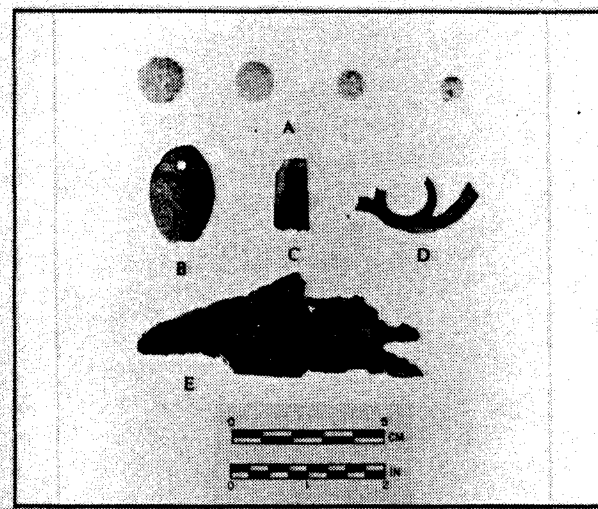
Fort Independence yielded a relatively rich assemblage of frontier military and domestic material culture. These artifacts are discussed in detail by Bastian (1982:82-122) accompanied by numerous illustrations (see Figure 76), and her report should be referenced by those seeking a comprehensive description of material culture on the frontier. The following section presents this material culture in broad terms, seeking general trends which relate the material culture of Fort Independence to the material culture recovered elsewhere. Specifically, three aspects of material culture are examined in depth: subsistence, pattern, and architecture.

Subsistence at Fort Independence: A limited amount of data was produced from the excavations at Fort Independence which illuminates the diet of soldiers on the Revolutionary War's southern frontier. Faunal material recovered from the homesite included cow, pig, deer, rabbit, chicken, turkey, box turtle, and snake remains. The latter two were most likely not part of the dietary fabric at Fort Independence. A limited quantity of faunal material was also recovered from the excavation of the semi-subterranean soldier's hut. Here, cow, pig, chicken, and possible deer remains were found. The types of fauna represented indicated that there was little variation in the meats used by the soldiers and their officers. The faunal assemblage of the homesite was slightly more diversified, and was far more numerous than the assemblage recovered from the semi-subterranean soldier's hut. However, the latter may represent only a single meal, while the material accumulated in the cellar of the homesite could have developed over a much greater length of time (Bastian 1982:123).

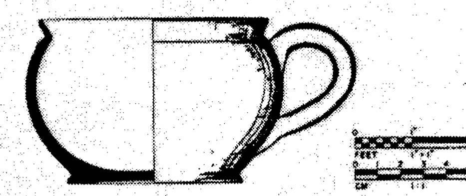
No evidence was recovered to indicate a difference in the cuts of meat preferred or allocated to soldiers and officers. In fact, few meat cuts were identified within the faunal assemblage. This maybe a product of the use of salted meat at Fort Independence and other Revolutionary War era fortifications. For example, at Fort Ligonier, Pennsylvania, a British encampment of the French and Indian



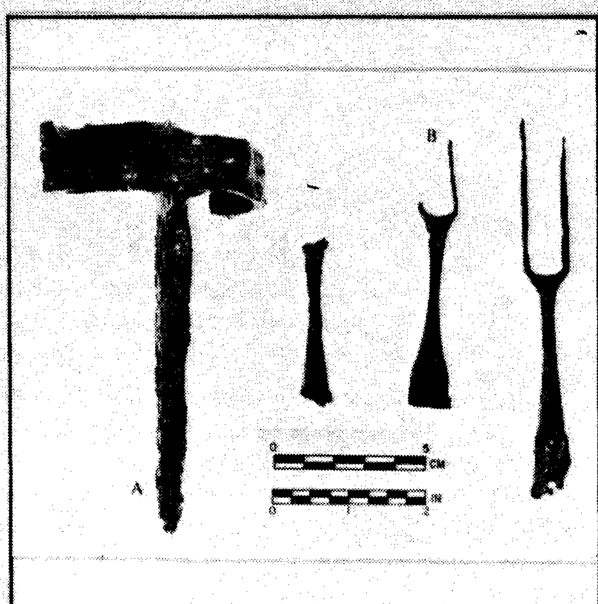
I. Lead glazed coarse earthenware storage jar.



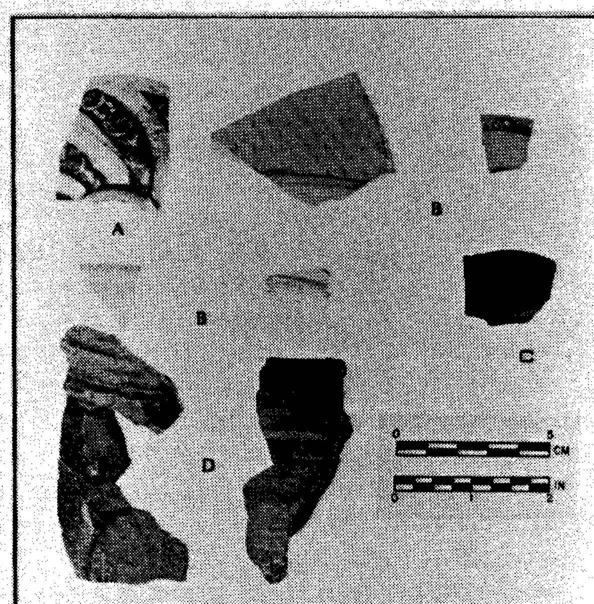
II. Lead shot and musket hardware.



III. Earthenware porringer.



IV. A - Eighteenth century food chopper, B - Forks.



V. Ceramics. A - Chinese porcelain, B - Saltglazed stoneware, C - Jackfield ware, D - Earthenware.

Source: Bastian 1983: 84, 90, 91, 109, 112.

Figure 76. Artifacts from Fort Independence.

War, salt pork and flour were the staples of the military diet. Guilday (1977:123) contends that salt pork would leave little in the way of archaeological data, since the identifiable faunal elements, the bones, were removed from the meat prior to salting. While salted meat was the staple of some military encampments, it was used as an emergency provision at others, as demonstrated by the faunal analysis and documentary account of Fort Loudon in east Tennessee. Also a British encampment of the French and Indian War, Fort Loudon was attacked and under siege by the Cherokee Indians during the latter months of 1761. At the beginning of the siege the garrison killed all of its cattle, and barreled the beef in brine. This strategy was apparently a calculated attempt to make this meat last longer, as well as reduce the population pressure within the fortification, which would have been significant had a herd of cattle been sheltered as well as the troops. Faunal material recovered from the excavation of Fort Loudon indicate that the butchering took place within the fort, and that there was no uniformity in size or preference for particular meat cuts revealed from the faunal analysis (Bastian 1982:124).

A similar butchering strategy may have occurred at Fort Independence. Fort Independence was supplied with both live cattle and salted beef from Ninety Six. Cattle were mentioned twice in the Bowie Papers, while salted beef was mentioned four times. References to salted beef indicate that the daily ration at Fort Independence was one pound of salt beef and one and one half pounds of flour per man. One reference to cattle regarded preparations for a possible Creek Indian attack, and suggested Captain Bowie stock up on flour, salt, and cattle "in case of the worse" (Bastian 1982:124; *Bowie Papers*, Document 38). This reference implies that the beef was to be salted if a siege was imminent. References to salt beef in the *Bowie Papers*, as well as contemporary comments from an officer at Fort Ligonier (Guilday 1977:123), indicate that fresh meat was preferred, but that salted beef was a necessity in certain times, during hostilities, and also during winter and other cattle shortages. This interpretation, that salted beef was least preferred, is supported by a reference in the Bowie Papers which indicates which of several barrels of beef was the "last salted," and hence the least salty in flavor (Bastian 1982:125). It is interesting to note that the wild game recovered in the faunal assemblage: deer, rabbit, and turkey, probably served to augment the diet, especially in times when fresh beef was scarce. In this regard the quantity of wild game associated with the homesite, in comparison to the amount recovered from the semi-subterranean soldier's hut, may be indicative of the higher status of Captain Bowie.

Botanical remains recovered from several excavations at Fort Independence provide a glimpse at the plant materials consumed at the site. Peaches, black walnuts, persimmons, acorns, grapes, and grains: wheat, oats, barley, and corn, were all part of this repertoire. These items were all recovered in limited quantities, and there is no evidence that any were grown on the site. As with the faunal materials, they suggest the bland diet common to the fort was enhanced by wild resources: acorns, walnuts, persimmons, etc.

Artifact Patterning The concept of artifact patterning in historical archaeology is one first applied by Stanley South (1977). As used here, the term refers both to South's "artifact patterns," in particular the Carolina and Frontier Artifact Patterns, and also to the general distribution and arrangement of the historic artifacts recovered from Fort Independence.

South (1977) suggested that the artifacts recovered from historic site excavations could be arranged by functional groups, and that the distribution of the total assemblage among these groups would in turn reflect aspects of the cultural identity of a particular site. South identified eight functional groups: kitchen, architecture, furniture, arms, clothing, personal, tobacco, and activities, which comprised the major behavioral arenas of the Colonial world. By classifying and quantifying the percentage distribution of artifacts in each of these categories, it would be possible to produce a profile of a particular site type, which in turn could reveal cultural variation. Specifically, South (1977) noted that British American sites of the colonial period located near developed population centers exhibited a distinctly different artifact pattern than sites situated on the frontier. South (1977) designated these two patterns the Carolina and Frontier Artifact Patterns respectively.

Comparison of the artifact pattern recovered from Fort Independence with these patterns indicates that Fort Independence was most similar to the Frontier Pattern, as would be expected. Table 7 presents the artifact pattern from Fort Independence, as well as the Carolina and Frontier Artifact Patterns.

Table 7: Comparison of Frontier and Carolina Artifact patterns with Fort Independence Artifact patterns (from Bastian 1982:135).

ARTIFACT GROUP	CAROLINA PATTERN		FRONTIER PATTERN		FT. INDEPENDENCE PATTERNS	
	Mean %	% Range	Mean %	% Range	Homesite %	Site %
Kitchen	63.1	51.8-69.2	27.6	22.7-34.5	30.06	28.44
Architecture	25.5	19.7-31.4	52.0	43.0-57.5	68.07	69.62
Furniture	0.2	0.1-0.6	0.2	0.1-0.3	0.02	0.03
Arms	0.5	0.1-1.2	5.4	1.4-3.8	0.59	0.67
Clothing	3.0	0.6-5.4	1.7	0.3-3.8	0.4	0.4
Personal	0.2	0.1-0.5	0.2	0.1-0.4	0.18	0.16
Tobacco	5.8	1.8-13.9	9.1	1.9-14.0	0.37	0.38
Activities	1.7	0.9-2.7	3.7	0.7-6.4	0.31*	0.27*

* The Ethnobotanical class, made up mostly of 1000+ cereal grains, greatly inflated the Activities Group, and was deleted from the total.

As can be seen in Table 7, Fort Independence most closely resembles the Frontier Pattern, although variations exist in several important aspects. While the Kitchen Group percentage is easily within the range established for the Frontier Pattern, the Architecture Group percentage is significantly greater than the upper end of the predicted range. The Arms Group is less evident than anticipated for a military site, and more closely resembles the Carolina Pattern percentage than the Frontier Pattern. As Bastian (1982:136) notes, South (1977:154) observed that Revolutionary War era military sites often resembled domestic sites in the percentage of Arms Group artifacts recovered, while military sites of the French and Indian War exhibited far greater quantities of Arms materials. While South did not speculate on the reason for this variation, it perhaps reflects a higher degree of curation of arms related artifacts by American troops during the Revolutionary War, whose existence was more threatened and supplies less available than their British counterparts of the French and Indian War.

Bastian (1982:135) separated the artifact pattern revealed at the homesite from the overall pattern of Fort Independence. In doing so, she speculated that this pattern might more closely resemble the Carolina Artifact Pattern since it was associated with a domestic occupation. However, both the homesite pattern and the overall pattern are more indicative of South's frontier model.

In general, the pattern produced by Fort Independence reflects a more restricted range of material culture than observed for either the Carolina or Frontier Patterns. Kitchen and Architecture contributed 98.06 percent of the total artifacts recovered from Fort Independence, while these groups yielded 88.60 and 79.60 percent of the Carolina and Frontier Patterns respectively. This relative paucity of non-utilitarian artifacts is most likely a product of the meager existence of soldiers on the Revolutionary War's frontier, as well as the relatively short occupation of Fort Independence as a military outpost. Bastian (1982:138-139) speculates that the length of this occupation may be a factor in the high ratio of architectural to kitchen-related artifacts observed at Fort Independence. She views the architectural assemblage as somewhat constant, composed of the number of nails and other hardware elements required to initially construct a building. The quantity of kitchen materials, however, should increase over time, as more plates are broken, bottles disposed of, etc. Thus Bastian (1982:139) suggests "that the placement of any site along South's Frontier-Carolina continuum (1977:147) is merely a function of the length of occupation."

South's patterns were subsequently revised by Garrow (1982:52-67) to account for the place of Colono-wares on historic sites, and to remove sites with inadequate, or questionable, samples. Colono-wares had originally been identified by Ivor Nöel Hume (1962), who suggested they were an aboriginal ceramic type found on colonial historic sites as residue of Anglo-American and Indian trading. In gauging the placement of various artifact types within his functional groups, South (1977:97) argued that "Colono-Indian pottery... might functionally be included under the *Kitchen* group, but is kept under *Activities* due to the expected variability of this class of artifact, and its role in indicating Indian contact" (Italics in the original). However, subsequent research by Leland Ferguson (1978) determined that at least some of these wares were produced by Afro-American slaves. Thus, Garrow (1982:57-58) argued that these ceramics should be included in the Kitchen group calculation, as they reflected utilitarian wares used either by impoverished individuals, or by persons whose contact with Anglo-American trade networks (such as those living on the frontier) was limited. Garrow also deleted several sites from South's (1977) Carolina and Frontier patterns, on the basis of insufficient sampling and estimated artifact quantities. His revised artifact patterns are presented in Table 8 below.

Table 8: Revised Carolina and Public Interaction Patterns*
(from Garrow 1982:58, 61).

ARTIFACT GROUP	REVISED CAROLINA ARTIFACT PATTERN		PUBLIC INTERACTION ARTIFACT PATTERN	
	Mean %	% Range	Mean %	% Range
Kitchen	59.51	51.80-64.97	40.7	35.50-40.70
Architecture	27.58	25.18-31.38	42.40	41.60-43.00
Furniture	0.35	0.18-0.63	0.6	0.1-1.3
Arms	0.19	0.09-0.34	5.0	1.4-8.4
Clothing	2.94	0.55-5.38	0.9	0.3-1.6
Personal	0.29	0.19-0.54	0.1	0-0.1
Tobacco	7.85	1.91-13.94	7.9	1.3-14.0
Activities	1.29	0.94-1.71	2.4	0.5-5.4

* Garrow (1982) referred to the revised Frontier Pattern as the Public Interaction Pattern, as he felt the latter was a more correct interpretation of these sites' functions.

The Fort Independence assemblage is not in agreement with either of the revised patterns. It should be noted that no Colono-Indian ceramics were recovered at Fort Independence, and so no adjustments are required for the Fort Independence artifact pattern as presented by Bastian (1982:135). The reasons why Fort Independence varies from the Revised Frontier Artifact Pattern are several. First, the time factor noted by Bastion may be responsible for the limited quantity of Kitchen artifacts, and thus the inflated ratio of architectural to kitchen-related materials. According to Bastian's hypothesis, the artifact pattern of Fort Independence would have approached the Revised Frontier Pattern had it been occupied over a greater length of time.

A second factor may have to do with Fort Independence's place in the frontier universe. Fort Independence was constructed as a military garrison at a time of conflict with the Indian population. Thus trade with the Indians would not be expected, and it should be noted that no Colono-Indian or Cherokee ceramics were recovered from Fort Independence's historic components. The ceramic assemblage at Fort Independence was thus limited to those items received as part of the provisions sent over from Ninety Six, and to personal belongings brought to the garrison, as well as some possible items owned by Robert Anderson which were left at Fort Independence when the war began. Thus, two types of military occupations should be anticipated for the frontier: those established in peacetime, which served as distribution and trade centers as well as providing a protective presence for European settlement; and those established during periods of war.

For the former, a degree of cultural interaction and exchange should be anticipated, as the military occupants could augment their meager belongings with goods acquired from the Indians which filled basic needs, most likely cooking vessels. Because they were established in less turbulent times, these fortifications may also have enjoyed more stable supply lines and a less rationed material universe for supply, and hence the overall material wealth of such sites is anticipated to be greater than sites established and manned during a period of hostilities. Sites occupied during periods of hostilities would primarily depend on supply lines and European or American goods for provisioning, and these items were probably less numerous or available than during peacetime. Hence, such sites would be anticipated to have a lower quantity of kitchen-related artifacts, and an overall lesser degree of non-kitchen and architectural materials within their artifact patterns.

In order to test these assumptions, the artifact pattern produced from Fort Independence was compared with a military site occupied under similar conditions, Fort Ligonier. Fort Ligonier was a British occupied military fortification of the French and Indian War, whose occupation spanned the period of 1758 to 1766 (Grimm 1970). With the exception of its final years, the fort was thus occupied for the duration of that conflict. The artifact pattern from Fort Ligonier and the pattern from Fort Independence are compared below.

Table 9: A comparison of the artifact patterns from Fort Ligonier and Fort Independence

ARTIFACT GROUP	FORT LIGONIER ARTIFACT PATTERN*	FORT INDEPENDENCE ARTIFACT PATTERN
	Mean %	Mean %
Kitchen	25.60	28.44
Architecture	55.60	69.62
Furniture	0.20	0.03
Arms	5.40	0.67
Clothing	3.80	0.40
Personal	0.40	0.40
Tobacco	1.90	0.38
Activities	4.10	0.27

* From South (1977:145)

The two sites are remarkably similar. Fort Ligonier possesses a greater quantity of arms-related artifacts than Fort Independence, a difference which South noted as existing between sites of the French and Indian War and those of the Revolution, and a slightly more diverse material assemblage than Fort Independence, but overall the sites are comparable and distinct from the revised Carolina and Frontier Artifact Patterns. Thus it appears that this aspect of frontier existence: trade relations with the aboriginal population, should be considered when formulating artifact patterns, and in the general explanation of frontier material culture.

An additional measure of the imprint of wartime activities on the material world is suggested through the calculation of South's (1977:210-17) Mean Ceramic Date Formula (MCD). The MCD uses the known production span for a variety of historic ceramics of the seventeenth, eighteenth, and early nineteenth centuries; calculates the mean date for each type within this span; multiplies this number by the total number of sherds of the particular type; and finally divides the sum of all such calculations by the total number of sherds included in the calculation, to produce a mean production date for the entire assemblage. The mean date calculated in this manner for Fort Independence was 1747. This date is clearly earlier than the documented mean occupation of the site, which, assuming the earliest possible occupation date to be 1763, would be 1771. If the site was first occupied in 1774, then the mean occupation date would be 1776.5. Either date is nearly three decades later than the MCD would suggest. Adams and Gaw (1977) conducted a study of ceramic time lag from materials recovered at the late nineteenth-century town of Silcott, Washington, and observed a time lag of 21 to 23.5 years when the age of ceramics were compared with bottle glass from the same context (Bastian 1982:140; Adams and Gaw 1977:228). Adams and Gaw (1977:218) divided time lag into two components: manufacture and retail time lag (including transit, storage and sale), and use time lag (including purchase, use, and discard). The retail component of time lag was presumed to be of a shorter duration than the use component.

However, Bastian (1982:141) suggests that the time lag revealed at Fort Independence is neither a factor of retail or use. Rather, she contends that this temporal variation is a product of the wartime environment and disruptions in established or traditional trade networks. Concerning the effects of the war, she writes (Bastian 1982:141):

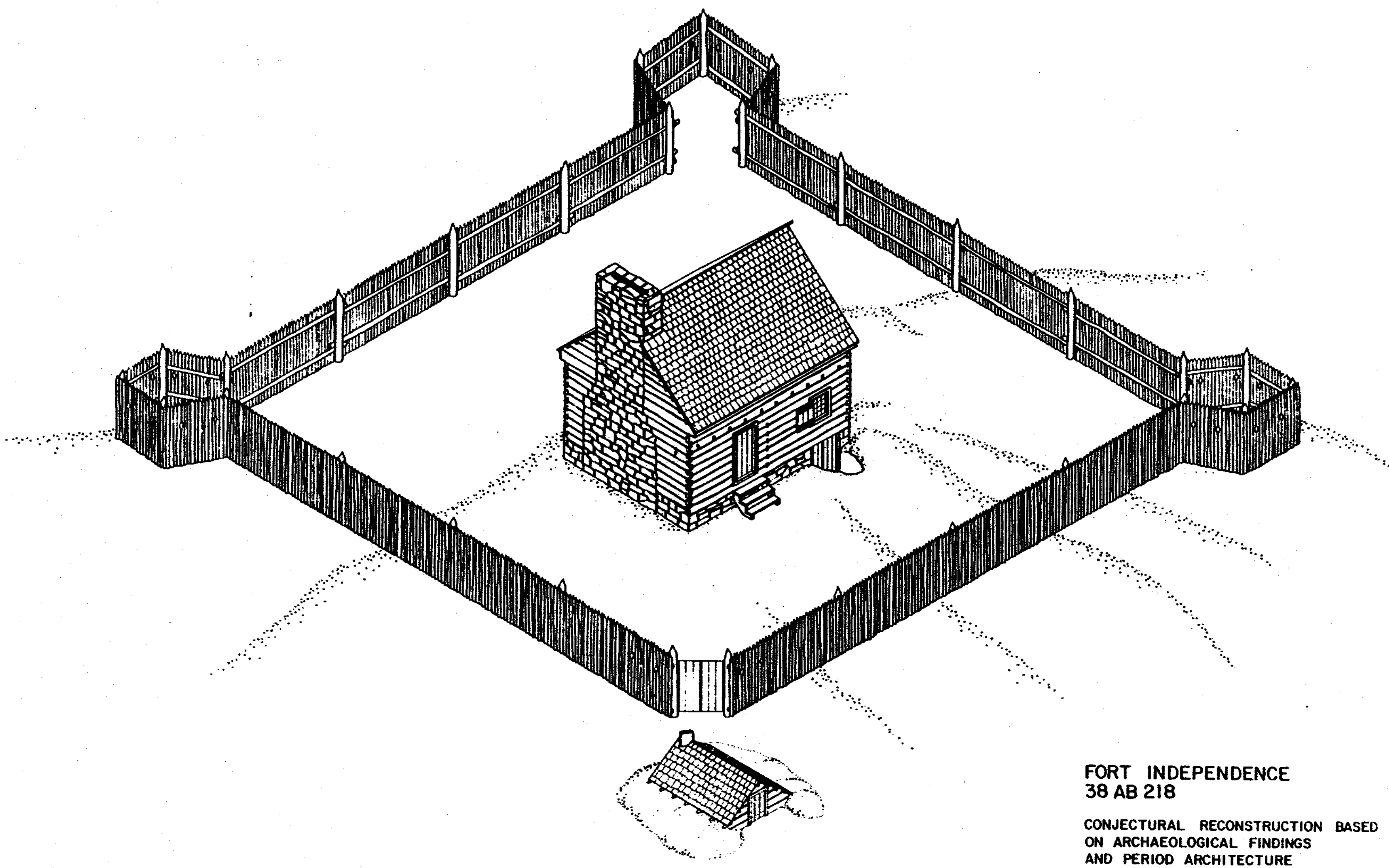
> during the Revolutionary War, the newest British ceramics weren't being imported and the newest French or other European ceramics were being restricted in their importation by blockades. Consequently, the inhabitants of Fort Independence made do with their old ceramics, resulting in an earlier mean ceramic date than had the site been occupied just a decade later.

The image that emerges of Fort Independence through examination of the archaeological record is one of a frugal existence. The soldiers, and even their officers, appear to have come to this isolated frontier outpost with few personal possessions. Their supply line from Ninety Six furnished the bare necessities, but little in the way of luxury. Meals were simple, spartan, and perhaps sometimes less than palatable. They were prepared in crude coarse earthenware pots, and eaten from wooden trenchers, pewter plates, and delft, a ceramic more familiar to the previous century than to the early industrial era. As they were in conflict with the local native population, this existence could not be augmented with Indian ceramics. Only nature offered a slight respite from this monotony, an occasional deer, rabbit or turkey to break the dependence on salted beef. The inhabitants of Fort Independence occupied a frontier in conflict, a frontier which was different than that of a more peaceful time.

Architecture (Figure 77) The structure and construction of the architecture at Fort Independence were discussed above under a separate heading. This section serves to compare this architecture with other domestic and military occupations, to determine how and to what degree the frontier of South Carolina was integrated with broader cultural patterns.

The homesite at Fort Independence was similar in most regards to other Colonial housing constructed by individuals of modest means, although it did exhibit certain idiosyncrasies. In plan, the structure was probably either a one room or a hall-and parlor design. The gable end chimney, loft, and cellar are all characteristics of colonial housing in the English tradition. The interpreted use of hewn logs reflects the position of this structure on the frontier, as frame and clapboard would have been employed in urban or more developed regions. In size, (20' 6" X 26' 6") this structure was larger than the traditional rural log house dimensions of 16' X 16' (Bastian 1982:143; Swaim 1978:30), but smaller than contemporary urban structures (cf. the Hepburn-Reonalds House, 23' X 30' and Nath Moore's Front, 24' 7" X 38' 7", both in Brunswick Town, North Carolina - South 1977:51, 57; Bastian 1982:143).

The size and the sturdy foundation of this structure indicate it was not built as a temporary dwelling to be replaced by a better home once circumstances permitted. The construction also suggests an interesting balancing of needs and means. As noted above, this house was larger than most contemporary single-chimneyed rural homesteads, but smaller than urban homes which were built with two chimneys. The traditional rural homestead size of 16' X 16' is thought to be a product of the amount of space which could be heated by a single fireplace. At the Fort Independence homesite, the fireplace was larger than usual, and would have projected well into the interior of the house. The increased span of the fireplace hearth perhaps reflects an attempt to heat a larger than normal rural home with a single fireplace. The articulation of the fireplace chimney with the exterior walls is also at odds with traditional architecture. While the gable-end chimney is common for most colonial housing, in New England the chimney was enclosed by the exterior wall, while in the southern colonies it was most frequently built on the exterior. The northern use of an enclosed chimney was a product of a severe climate and the absence of adequate supplies of lime for mortar. Thus chimneys were enclosed to protect them from the elements and to provide greater heat to the interior. At Fort Independence three sides of the chimney were enclosed, with the rear facade the only exposed surface. This compromise probably served to protect the chimney from the elements (Bastian 1982:144), since the single exposed side could have been shielded by a projecting eave, and also provided greater heat to the interior, since the warm air traveling through the chimney heated the interior of the structure. This would have offered an advantage in the winter, but a disadvantage in the summer, when the fireplace, in use for cooking, would have more thoroughly heated an already tepid environment. Again, this construction reflects a compromise between needs and means. While twin gable chimneys would have best suited the Fort Independence



Source: Bastian 1982:69.

Figure 77. Conjectural View of Fort Independence.

homestead, the cost of constructing a second chimney was apparently greater than its builder could afford.

The second domestic structure at Fort Independence, the semi-subterranean soldier's hut, represents the continuation of a concept developed during the early period of colonial settlement. Contemporary accounts of the first settlers in the Massachusetts Bay area reported they (Kimball 1966:50, as cited in Bastian 1982:145):

> burrow themselves in the Earth for their first shelter under some Hill side, casting the Earth aloft upon Timber; they make a smoaky fire against the Earth at its highest side.

A similar construction was noted among the first settlers of Philadelphia, Kimball (1966:50, as cited in Bastian 1982:145) noted that the earliest shelters established in that city in 1682:

> were formed by digging into the ground, near the verge of the river-front bank, about three feet in depth; thus making half their chamber underground, and the remaining half above ground was formed of sods of earth, or earth and brush combined. The roofs were formed of layers of limbs, or split pieces of trees overlaid with sod or bark, river rushes, etc.

This semi-subterranean construction was used in most instances as temporary shelter, and was not likely to survive for any great length of time. As Bastian (1982:145) points out, the recognition of this architectural form in the archaeological record is difficult, since once abandoned, the basin remnants of these structures probably served as refuse pits, and hence might not be recognized as architectural remains. This construction was most frequently associated with military encampments following the seventeenth century, and was found at the French and Indian War encampment of Fort Loudon, where the men involved in the construction of the fort lived for several months until more permanent housing could be constructed, and at the British winter encampment in Manhattan during the Revolutionary War (Calver and Bolton 1950). The adaptability of these structures was not lost on the military strategists of the American Civil War era (Bastian 1982:145; Scott 1861:140-141). It is interesting to note that, even in the military context, such housing was usually considered temporary. Perhaps the scale of Fort Independence and the inadequate space for permanent barracks within the stockade influenced the decision to relocate and reconstruct the fortification after only slightly more than a year's occupancy.

The fortification itself, as noted, varied considerably from other contemporary fortifications. The plan of the fortification, "a regular polygon with bastions at the projecting angles (except for one)" (Bastian 1982:145-146) follows traditional military architecture, but otherwise the construction is relatively rare, and more in common with seventeenth-century holeset-post domestic architecture (Carson et al. 1981) than Revolutionary War military architecture. The construction of

Fort Independence was perhaps better suited to Indian warfare than to the European style of engagements, since the Indians were more inclined to guerilla tactics than to sieges. Thus the illusion of a palisade was most likely sufficient to deter Indian attacks (Bastian 1982:146). With the addition of the British as antagonists in 1776, Fort Independence's construction was less suited to the war being waged, and a rebuilding became imperative.

The combination of evidence supports the interpretation that Fort Independence was originally constructed as a fortified homestead in 1774, with a limited amount of repairs done in 1776 as its status was upgraded to Revolutionary War fortification. The locations and designs of the other Savannah River forts of 1774 are unknown, although presumably they followed a plan similar to that of Fort Independence. The concept of the fortified homestead is one which has a substantial history in English settlement. Consideration of the form and construction of other sites indicates that there was no common plan or architectural requirements, and that a variety of forms which filled the basic prerequisites were used. Two factors appear to be the catalysts for fortified homestead construction: (1) the threat of attack by hostile forces on isolated and outnumbered intrusive settlers, and (2) the necessity of creating some common ground for mutual defense (Bastian 1982:146-147).

Such fortified homesteads were built by English colonists in northern Ireland in the early seventeenth century, where they were known as "bawns." In northern Ireland, the homestead chosen for fortification was usually that of one of the leaders of the group, presumably someone who could muster the support of enough individuals to construct the fortification (Bastian 1982:147; Nöel Hume 1979:765, 767; 1982). A contemporary plan for one of these bawns (Bastian 1982:147; Garvan 1951:127) shows it as having earthen walls approximately 90 feet on a side, four bastions, and a surrounding ditch with drawbridge entrance. The homesite was built into the rear wall of the fortification, leaving a large protected courtyard. This plan is more elaborate than most fortified homesteads, and is closer to a reduced version of a true fortification. However,for the British in northern Ireland, the cessation of hostilities was not readily evident, and the fortifications were built with endurance in mind (Bastian 1982:147).

Similar, although less elaborate, fortifications were built in colonial North America from the earliest period of settlement. At Martin's Hundred in Virginia, a four sided trapezoidal palisade surrounded a central homestead dating to the period of 1619 to 1622. The construction of the palisade was similar to that of Fort Independence, with posts set out on nine foot spacings in a design Ivor Nöel Hume described as "laid out by someone trained in the 'why don't we stop about here' school of military engineering" (Nöel Hume 1979:762; Bastian 1982:147). Later in the seventeenth century, the "Clifts" house at Stratford Plantation was built behind a rectangular palisade, at a time (ca. 1670) when fear of an Indian uprising was spreading through the colony (Nieman 1980:20). Bastian (1982:148) views this fortification as of "more psychological than defensive value."

The fortified homestead concept appears to have followed the American frontier in its westward expansion. For example, Fort Buenaventura was a mid-nineteenth century fortified homestead built by Connecticut immigrant Miles Goodyear. Archaeological investigations indicate the fortification measured some 55' X 60', and was anchored with hole-set posts similar to the construction of Fort Independence. The fort apparently did not have bastions, but cabins were located in each of the four corners (Bastian 1982:149-150; DeBloois 1979, 1980); an interesting observation considering the structure tucked inside Fort Independence's northwest corner.

An ancillary of the walled fortified homestead was the "garrison house" found in mid-seventeenth-century New England. Here, defense was provided through an exceptionally sturdy, thick-walled domestic structure. Windows in this structure were narrow slits which were commonly barred, while doors were heavy enough to resist battering. The "garrison house" derived from the log-constructed "castles" built by the Norman conquerors, and were the only type of log construction the English brought to the New World. Like the "bawns" they were commonly the homes of prominent community leaders, and gathering points in times of conflict (Bastian 1982:147; Foley 1980:54).

Given this consideration of other fortified homesteads, a greater appreciation can be given to Fort Independence. With the exception of the massive "bawns" of northern Ireland, Fort Independence's protective sheathing was actually quite elaborate. Of the other sites mentioned above, Martin's Hundred featured only a watch tower and gun platform extending from two corners of the fort, so that the two other corners were not treated defensively (Nöel Hume 1979:739; 1982), the "Clifts" also featured semi-circular bastions on only two corners (Nieman 1980:19), while no bastions guarded Fort Buenaventura (DeBloois 1979:2-15). Thus Fort Independence's three-bastioned construction afforded considerable protection. The size of the fort, 76' X 76' along the curtain walls, also compares favorably with other fortified homesteads. The stockade at Martin's Hundred measured roughly 70' X 110' (Nöel Hume 1979:739), and that at the "Clifts" 55' X 60', dimensions shared by Fort Buenaventura (DeBloois 1979, 1980). With the exception of Martin's Hundred, Fort Independence offered the largest protected enclosure.

Finally, although it is impossible to say from the archaeological evidence, the homesite at Fort Independence may have shared characteristics of the New England "garrison house." Certainly the foundations would have supported massive walls, which were probably constructed of hewn logs. It is impossible to determine the size or shape of this structure's windows, but a heavy log structure in the middle of a fortified compound would have offered a final source of refuge if the stockade were breached.

Although little is known of him, Robert Anderson appears to fit the description ascribed to other builders of fortified homesteads, that of a military leader on the frontier. His military genius was recognized and appreciated by the Continental Army, his courage and leadership abilities witnessed in his harassment of Boyd's troops while severely outnumbered. Thus, the combination of man and fortification meshes well with the historic perception of the fortified homestead.

Fort Independence must be understood as it was built, and not in its final role. As a fortified homestead on an isolated frontier, Fort Independence was probably well suited to discourage Indian raids, and to provide refuge when discouragement was not enough. As a protective enclosure for a small number of settlers and their families, Fort Independence provided more than adequate space and protection. As a Revolutionary War fort threatened by siege, and home to 40 to 60 men, Fort Independence must have seemed cramped, fragile, and vulnerable. The fortified frontier homestead was not well suited to the hostilities of European war.

Conclusions

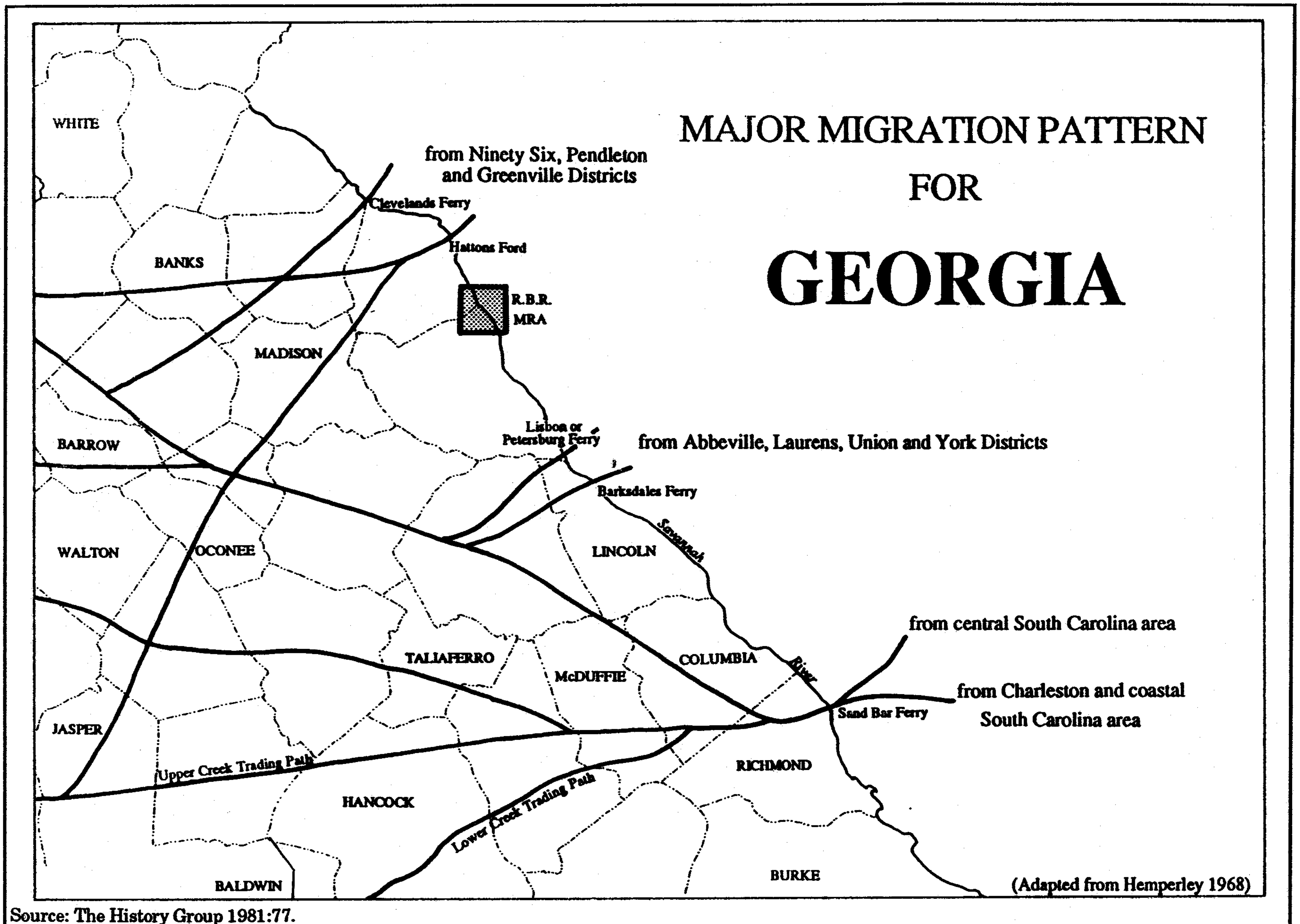
Fort Independence does not articulate well with models of frontier existence, as presented in either the historical or archaeological literature. Waselkov and Paul (1981) and Lewis (1976) have both proposed models of the frontier, which contend that as new cultural groups enter the frontier, cultural systems undergo simplification and become more self-sufficient. It is difficult to document either at Fort Independence. As Bastian notes (1982:151-152), it is difficult to measure "simplification" in the archaeological record. Certainly Fort Independence displays a more restricted material baggage, at least if artifact patterning is any indication, but these restrictions should not readily be interpreted as simplifications. Tea sets, a compass case lid, surveyor's instruments, possible medical paraphernalia, and brass furniture hardware all suggest that, rather than abandoning their cultural trappings, the occupants of Fort Independence attempted to bring specifically those items which expressed their cultural identity, items such as teaware. Limitation, but not simplification, would appear to be the result. As for self-sufficiency, Fort Independence clearly was not. Supplies from Ninety Six fed the troops, with the occasional wild game breaking the monotony but not providing any measure of real sustenance. Key to this aspect of frontier survival is Fort Independence's relation to the Indian population. With the possible exception of five glass beads, no trade items or Indian ceramics or other evidence of contact with the Indians were recovered from Fort Independence. The documentary record mentions only one point of communication with the Indians: a drummer from Fort Independence was loaned for a military escort provided to South Carolina's upcountry agent for Indian affairs on a visit to the Creeks in Georgia (Bastian 1982:151; *Bowie Papers*, Document 45). Fort Independence did not augment its material existence through trading with the native population.

This aspect perhaps best describes Fort Independence's variance from archaeological models of the frontier, such as the Public Interaction Artifact Pattern proposed by Garrow (1982). By including aboriginal and possible Afro-American ceramics in the Kitchen Group calculation, Garrow (1982) demonstrated that the Revised Frontier Pattern was not so greatly different from the Carolina Artifact pattern, or other patterns of colonial material culture, and that European ceramics were augmented by aboriginal wares in the frontier setting. The evidence from Fort Independence and Fort Ligonier suggests that perhaps there are two frontier patterns: one for the "passive" frontier where cultural exchange exists between native and European cultures, a second for the "active" frontier where these cultures are in conflict. Thus the frontier itself must be understood as a varying cultural phenomenon. During initial exploration and settlement, the invading culture would not necessarily be a threat to the native population. An interchange of goods would be likely to occur, and the invaders would perhaps adopt some of the native culture's customs and materials as a means of survival. Such a situation certainly occurred between the Cherokee and the European settlers arriving in the upcountry, with both groups exchanging and adapting to each other's material world (Harmon 1986). As the invading population increased, it would begin to threaten the cultural system of the native culture. At this time conflict was likely to occur, the passive frontier shifting into the active mode, and exchange would no longer take place. Fort Independence is an example of the frontier in this latter state.

This overview of Fort Independence has served to develop a keener understanding of daily life in the Russell Reservoir region during the Revolutionary War. It's presence, and that of other forts and forces elsewhere in the thirteen colonies, served to secure victory for the American republic over the British. With the end of the war, settlement of the project area expanded at a much faster scale, and the region quickly passed from frontier to an agrarian culture.

THE POST REVOLUTIONARY WAR ERA IN THE RUSSELL RESERVOIR

The end of the Revolutionary War removed the Indian threat from the project area on both sides of the Savannah River, and left open broad expanses of land for settlement. Migration into the area followed several routes, none of which appear to have directly crossed the area of the RBR proper. Two major roads passed to the north and south of the area, one crossing the river at Hattons Ford, the second passing over at Petersburg, Georgia (Figure 78). The project area itself appears to have been bypassed by the primary transportation corridors for several reasons. First, it was nestled within a pocket created by steep terrain to the east of the project area and to the west of the Saluda River. Rather than crossing this terrain, transportation lines skirted it to the north and south. Second, no population centers or distribution points developed in the project area. Because it had stood on the frontier of the Indian territory, and was thus continuously threatened during the colonial period, settlement of the Russell area was sparse. With the close of the Revolution, the frontier expanded rapidly, and most settlers traveling to this frontier debarked, regrouped, and reconsidered their destinations from the developing towns in the region. Abbeville, South Carolina, east of the project area, and Petersburg, Georgia, to its south, were the major population centers at this time (The History Group 1981:75-76).



Source: The History Group 1981:77.

Figure 78. Major Migration Paths into Georgia.

A third factor was the changing perception of the frontier. This boundary was rapidly expanding in the late eighteenth century, and settlers appear to have been in constant pursuit. The frontier was viewed as offering many advantages over settled regions: fertile and inexpensive land; new commercial and industrial opportunities; and distance from developed, and for some overly populated, areas. By the 1790s the frontier was the Oconee River in Georgia, and not the Savannah, and thus many settlers focused on this as their destination (The History Group 1981:76).

Despite this "leapfrogging" effect of settlement following an expanding frontier, the Russell Reservoir did receive a dramatic population increase in the period following the Revolutionary War. These settlers came from a variety of ethnic backgrounds, with persons of English, Scots-Irish, and Scottish descent predominating. German and Dutch settlers were also present, and a group of French Huguenots had migrated to the interior from Charleston, lending their nomenclature to land: New Rochelle, New Bordeaux, and Abbeville, named for Abbeville, France. These immigrants frequently arrived as extended families, choosing and settling land in proximity to one another. It is possible to get a sense of this kin-based network of settlement from a special census of Elbert County compiled in 1790. Between the Broad River and Beaverdam Creek, the Burtons (Cogbill, Henry, Robert, and Thomas), the Colemans (John and James), and the Hudsons (Drury, Farley, John, Robert, William Jr. and William Sr.) were the main families. The Clevelands, Colberts, Cooks, Thortons, and Whites occupied the regions between Coldwater Creek and Beaverdam Creek, while above Coldwater Creek the Cunninghams, Davises, Rileys, and Teasleys held sway. Settlement was also dictated by ethnic ties: the McDonalds, McDougals, McEwins, McGareys, McGoverns, McGuires, and McKenzies formed a Scots contingent located above Coldwater Creek, near the community of Edinburg. Settlers appear to have ameliorated the journey into unfamiliar lands by traveling with kin and countrymen (The History Group 1981:78-79).

In a study conducted for the War Eagle Creek Region of Madison County, Arkansas, Joyce (1981) determined that kinship was perhaps the most critical factor in determining settlement location and preference. Considering a variety of environmental variables: distance to water, soil quality, vegetation, etc. in conjunction with cultural aspects: distance to nearest community, distance to roads, kinship, etc., she determined that settlers were willing to accept inferior land if it placed them in relatively close proximity to kin. Such settlement patterning also appears to have existed in the Russell Reservoir, and should be considered by archaeologists, who traditionally formulate settlement models on the basis of environmental determinants.

Familial ties were extended and expanded as the settlement of the Russell Reservoir area progressed. Often a family member, or several family members, acted as scouts to determine the quality of the new lands. They reported back, and if satisfied, other family members joined them in the new territory. The knowledge and perception of the frontier was often dependent on having sources in the region, and this factor also applies to the kin and ethnic settlement connections (The History Group 1981:79).

The settlers of the Russell Reservoir were by no means settled. For many, the region represented only another stop on a continuing quest for the holy grail of the eighteenth and nineteenth centuries: the frontier. This constant migration was spurred by the availability of inexpensive lands on the frontier, rumors of its fertility, and the destruction and erosion of the agricultural fields in the project area, and would continue throughout the nineteenth century (The History Group 1981:80). Even successful planters like James Henry Hammond, who owned Silver Bluff Plantation in the area of Augusta, were constantly vexed and drawn by the allure of westward lands. Hammond wrote: "I have been trying to get over my desire for a western plantation, but every time I see a man who has been there it puts me in a fever" (in Faust 1982:109). For smaller farmers, occupying less fertile lands from the onset, the attraction of the frontier was even greater. With the advent of the cotton era, the frontier offered social mobility, a chance for small farmers to join the plantation aristocracy.

In the Piedmont it was erosion, more than depleted soil fertility, that spurred immigration, and erosion occurred at an earlier point in time than in areas of less relief. Geographer Stanley Trimble has referred to the mid-Georgia Piedmont as an "erosional tinderbox" (The History Group 1981:80; Trimble 1974), and soils geologist Arthur Hall has noted that the effects of erosion were likely to occur soon after a tract had been settled and prepared for agriculture (in Hall 1940:2; The History Group 1981:81):

> The upland areas generally begin to show effects of washing as soon as the forest litter, roots, and stumps had had time to decay, that is, the second or third year after clearing.

Erosion was effected by the agricultural practices of the time. Much of the Russell Reservoir area was densely forested at the time of historic settlement. The forest canopy shielded the land from rain, while root systems and ground cover helped to hold this soil together. Such forests were ill-suited to agriculture, however, and the settlers arriving in the backcountry first needed to clear their land of trees and stumps, and prepare it for plowing. Thus the canopy was removed, the consolidating effect of the root mat and overburden was lost, and the soils themselves loosened through plowing. In the sloping uplands, these fields enjoyed little protection from erosion.

The best successes were realized on the bottom lands, where the soil was exceptionally fertile. John Drayton wrote in 1802 that the fertility of these lands was so great that (Drayton 1973:22; in Taylor and Smith 1978:122):

> all the art of manuring, and rotation of crops, have hitherto been little attended to; and when one piece of land has been exhausted by culture, another has been cleared of woods, for similar purposes.

This fertility did not extend to all lands in the project area. F. A. Michaux, who also visited the area in 1802, noted (Michaux 1974:42; in Brooks 1978:122):

> Those that occupy the intermediate spaces [the uplands] are much less so [fertile]. The latter are not much cultivated; and even those who occupy them are obliged to be perpetually clearing them, in order to obtain more abundant harvests; in consequence of which a great number of the inhabitants emigrate into the western country.

Thus while the bottomlands maintained fertility and were well suited to agriculture, the uplands were quickly exhausted and abandoned. For those who had not obtained bottomlands in the Russell Reservoir area, the promise of other bottomlands to the west was catalyst enough for moving.

At the close of the eighteenth century, the Russell Reservoir was populated by a patchwork of small farms owned by an ethnically varied population. Some of these farmers were situated on the bottomlands of the Savannah and Broad rivers and their numerous tributaries, while others were perched on the sloping uplands. The latter had already witnessed severe erosion, and undoubtedly the constant toil of clearing new forest lands for cultivation forced them to consider moving westward, to new and better lands. Socially the inhabitants of the Russell Reservoir were of similar status and station, and the quality of land they owned, and amount, were perhaps the only variables which distinguished them. Bottomlands and uplands alike, they probably cultivated corn, tobacco, wheat, rye, and sweet potatoes, keeping chickens and some livestock to augment this existence. The upcountry offered survival, not great riches. It was a good home for the yeoman farmer.

Yet discoveries to the immediate south changed this existence. Eli Whitney's cotton gin, built in 1793, made cotton agriculture in the upcountry a profitable pursuit. By the first decade of the nineteenth century, the social scale of the upcountry was expanding. Those with access to the rich bottomlands, and who could afford slaves, could make a healthy profit. For those without, the lure of the west grew greater. To understand the Russell Reservoir after 1810, it must be considered as the land of King Cotton.

IX. "A DELIGHTFUL MELLOW EARTH": THE LAND OF KING COTTON, 1810-1865

The history of the South and the story of King Cotton are inextricably linked. Cotton did not beget slavery, which was a well established economic and ideological tradition in the South long before the nineteenth century, nor did it create the plantation, a unit of social and labor organization which developed in the Carribean and was successfully transplanted to the southeastern United States. But cotton carried slavery and the plantation away from the rice ponds of Georgia's and South Carolina's coast and into the interior of the Old South, where these institutions took root and thrived. Prior to the advent of King Cotton there were two Souths: the plantation South of the lowcountry, and the upcountry land of small farmers and subsistence crops. Like Bismarck, King Cotton ascended to power through the unification of his country.

King Cotton's reign was noted for two events: (1) the consolidation of large land tracts for plantation organization, and (2) a dramatic increase in the slave population. Land consolidation and the out migration noted in Chapter VIII were symbiotic. Plantation agriculture was best suited to the river bottoms and level terraces of the upper Piedmont, where broad expanses of fertile soil made the large scale production of cotton possible and profitable. The successful employment of such lands required substantial work forces, since cotton is a labor intensive crop. Hence those planters who were able to combine suitable land and slaves were the ones likely to profit from the cotton economy. Farmers situated on the sloping uplands were not as capable of competing in the cotton economy. These lands required extensive clearing for any large scale agricultural endeavor, and were thus susceptible to erosion. Erosion depleted most upland fields of their nutrients within the course of a few years, hence clearing had to be engaged on a cyclical basis. The labor effort necessary to create and maintain an upland agricultural plot of any size was probably beyond the profits to be gained in the cotton economy. As King Cotton's dominance spread, social and economic stratification intensified. Yet in the Old South, the frontier was the great equalizer, and offered the possibility of social migration.

While the plantation was the most visible aspect of the Old South and the project area, it would be incorrect to assume that it swallowed the South like some sort of agricultural amoeba. The plantation is worthy of much attention due to its economic success, and to the impact of slavery on Southern society but, statistically, small farmers dominated the landscape. Historian Kenneth Coleman has noted that two-thirds of Georgia land was divided among small farm holdings in 1860, and that three-fifths of all Georgians owned no slaves. Coleman also notes that ownership of 20 or more slaves, a figure often used as the dividing line between farmer and planter, was restricted to 6,363 individuals in that year (Coleman 1978:38). As Taylor and Smith have noted, it is difficult to determine the number of plantations which were present in the study area. They estimate there were "at least five and most likely twenty more" (Brooks 1978:124) plantations present during the antebellum period. Small farms are even more difficult to identify. Leaving behind scant traces in the documentary record, and often difficult to ascertain through archaeological techniques, the plethora of antebellum archaeological remains revealed in the Russell Reservoir indicates that historic farmsteads far outnumbered the plantations. While it is impossible to venture an accurate guess, the archaeological evidence would indicate that farmsteads occurred at a ratio of somewhere between ten and twenty times the frequency of plantations.

The importance of King Cotton to the RBR is reflected in the attention it received in the archaeological research. Grey (1983), Drucker et al (1983), and Orser et al. (1987) span the archaeology of the agricultural continuum, ranging in scale from small farms to plantations as their foci. Information from Worthy (1983) and Ramsey et al. (1986) provide added dimensions to this archaeological discussion, while The History Group (1981) and Brooks in Taylor and Smith (1978) provide the description and the basic time line against which the archaeological excavations are pegged.

FROM FRONTIER TO FIELD: HISTORICAL EVOLUTION IN THE RUSSELL RESERVOIR, 1810-1865

While the increase of cotton cultivation in the upcountry preceded immediately upon the heels of Eli Whitney's invention of the cotton gin in 1793, not all inhabitants of the region were initially persuaded of the profitability of cotton agriculture. Cotton prices were sound during the early years of the nineteenth century, then depressed during the War of 1812, when exports to Great Britain were curtailed. Following the war, however, prices rose dramatically. From a low of eight cents per pound in 1808, cotton prices more than doubled by 1815, reaching a mark of 19 cents per pound. By 1816 the price had increased to 21 and a half cents, while 1817 saw cotton sell for the sum of 31 and a quarter cents per pound (The History Group 1981:92). After this point prices moderated, but the boom following the War of 1812 established cotton as the upcountry's favored crop.

With the rise of a cotton economy, the population matrix of the region changed. Table 10 presents the population statistics of the four counties contributing to the study area for the period from 1790 to 1850. All four share a number of attributes. The population in 1790 was heavily weighted toward white inhabitants. Elbert County possessed the largest slave percentage (23 percent), and the high overall population density in Elbert County (more than three times as great as any of the adjoining counties) may have been a factor of settlement clustering in preparation for the expansion of Georgia's boundaries which occurred in 1790. With the exception of Elbert County, the total population of these counties increased by 1810, with a substantial portion of this increase coming at the expense of bonded labor. Clearly, slavery and the origins of a plantation economy were in motion prior to the War of 1812. While the total population of these counties remained relatively stable between 1810 and 1850, the slave population of all of the counties dramatically increased. Abbeville County, which experienced the greatest total population increase between 1810 and 1850 (11,162 individuals) actually witnessed a decrease in the white population (from 14,407 inhabitants in 1810 to 12,604 in 1850) but a dramatic expansion of the slave population (from 6,664 individuals in 1810 to 19,391 in 1850). The white population of all but Hart County declined during the period between 1810 and 1850 (Hart County's population remained nearly stable), undoubtedly as a product of the migration of white farmers to the frontier.

Table 10: Population Statistics - Abbeville, Anderson, Hart, and Elbert Counties - 1790-1850 (from The History Group 1981:257)

	Census Year	Total Population	White %	Free Black %	Slave %
Abbeville County (SC)	1790	9,197	81.60	0.30	18.10
	1810	21,156	68.10	0.40	31.50
	1850	32,318	39.00	1.00	60.00
Anderson County (SC)[1]	1790	9,568	91.25	0.03	8.72
	1810	22,897	84.60	0.20	15.20
	1850	21,475	64.60	0.40	35.00
Elbert County (GA)[2]	1790	31,500	76.40	0.60	23.00
	1810	12,156	62.00	0.40	37.60
	1850	12,959	51.90	0.10	48.00
Hart County (GA)[3]	1790	1,041	85.00	-	15.00
	1810	10,815	84.50	0.20	15.30
	1850	11,513	78.80	0.50	20.70

[1] Figures for 1790 and 1810 are for Pendleton County and Pendleton District; Anderson and Pickens Counties were created from the Pendleton District in 1826

[2] Figures for 1790 for Wilkes County, which included Elbert County at that time.

[3] Figures for 1790, 1810, and 1850 for Franklin County, from which Hart was created in 1853.

While the statistics presented above illuminate the general trends of dramatically increasing slave populations and a gradual decline in the white habitation of the region, they do not provide any concrete evidence for the formation of plantations, or for the distribution of slaves among the white residents. For example, in Abbeville County in 1850, which had the highest percentage of slaves as part of the total population for the counties contributing to the Russell Reservoir, there were only approximately one and a half slaves for each white resident of the county.

Considering that 20 slaves was a number commonly used to separate planters from slave-holding farmers, it is obvious that there were either few plantations in the county in 1850, or else a large number of white farmers owned no slaves. The distribution and relation of blacks to whites and of planters to farmers cannot be readily discerned from the census data. Statistics gathered for Elbert County in the early nineteenth century and in 1850 provide a more in-depth view of slave holding and the agrarian economy in that part of the reservoir.

The Elbert County Tax Digests were employed by Worthy (1983:13-16) to illustrate the relations between the increase in slave populations and plantations during the antebellum nineteenth century. These digests provide a number of pertinent statistics - the number of slaveowners, number of slaves owned, quality of lands owned, etc. - which are critical to establishing the parameters of plantation agriculture in the project area. Although developed for Elbert County, they are illustrative of general trends in the agriculture of the region, and hence may be applied to the other counties contributing to the project area. Table 11 below outlines slave and land ownership for Elbert County in 1809 and 1851 respectively.

These statistics support and elaborate upon the population trends noted for the Russell Reservoir area as a whole. The white population decreased, and the slave population increased, between 1809 and 1851. (It should be noted that the 1851 statistics are taken for the Militia Districts of Elbert County within the RBR, and are not county totals, as are the figures for 1809. Thus the decrease of the white population cannot be substantiated. However, the increase in the slave population was certainly greater than is shown.) There were more slaveowners in 1851 than in 1809 as a percentage of the total land-owning population. While in 1809 only slightly more than half of Elbert County's land-owning population possessed slaves, by 1851 nearly 80 percent were slave holders. The distribution of the slave population had also adjusted during the interim. In 1809, half of all slaveowners in Elbert County owned five slaves or less. By 1851, this group was reduced to only 31 percent of the slaveowning population. While fewer individuals owned more slaves in 1851 than in 1809, the population shifts do not necessarily signal the growth of a sizable plantation economy. Accepting ownership of 20 or more slaves as the boundary between plantation and farm, this percentage increased only from 16 to 24 percent during the period from 1809 to 1851. The most substantial increase was in the percentage of the population owning from six to 19 slaves, which rose from 35 to 45 percent. In 1851 76 percent of all slave-holders owned less than 20 slaves. The slave-holding population of the Russell Reservoir thus changed during the course of the first half of the nineteenth century. More landowners came to own slaves, and to own larger groups of slaves. The percentage of Russell Reservoir slaveowners owning 20 or more slaves, 24 percent by 1851, was significantly higher than the national average, which one historian has calculated as no more than 12 percent of all Southern slaveowners (Starobin 1970:5). However, this average was higher than the national average as early as 1809, when it accounted for 16 percent of the area's slaveowners. The significance of this observation is debatable. While much has been made of the rise of cotton prices following the War of 1812, as a catalyst to the plantation economy, in Elbert County this appears to have had less of an impact. Perhaps Elbert County's

Table 11: Slave and Land Ownership in Elbert County, 1809 and 1851 (from Worthy 1983:15)

Description	1809[1] N	1809[1] %	1851[2] N	1851[2] %
Total Landowners	198		129	
Owning Second Quality Land	28	14	15	12
Owning First Quality Land	2	1	6	5
Total Nonslaveowners	86	43	30	23
Total Slaveowners	112	57	99	77
Owning 5 or fewer slaves	55	49	31	31
Owning from 6 to 19 slaves	39	35	45	45
Owning 20 or more slaves	18	16	24	24
Owning 35 or more slaves	4	4	9	9
Owning 50 or more slaves	1	.90	7	7
Owning 100 or more slaves	0	--	3	3
Total Slaves Owned	1041		2008	
By owners of 5 or fewer slaves	132	13	95	5
By owners of from 6 to 19 slaves	413	40	583	29
By owners of 20 or more slaves	496	48	1330	66
By owners of 35 or more slaves	173	17	868	43
By owners of 100 or more slaves	0	--	529	26

1 The data for Elbert County for 1809 are taken from a volume entitled *Tax Digest for 1794-1813*, on file at the Elbert County Courthouse. According to Worthy (1983:15), the volume clearly contains the assessments of only one year. At least one individual listed in this volume is assessed for lands purchased in 1807, hence the digest must have been prepared after 1807. Worthy arbitrarily chose 1809 as the date between 1807 and 1813 to which to assign these statistics.

2 These data are compiled for Georgia Militia Districts 199, 196, 195, and 190, which more closely comprise that portion of Elbert County contained within the Russell Reservoir study area. This is thus a reduction in the overall land being considered, which accounts for some of the variations between the data presented for 1809 and 1851 above.

proximity to the birthplace of the cotton gin served to implant cotton agriculture at an earlier date than elsewhere in the South. It is also likely that the importance of the price increase following the War of 1812 was highlighted by the westward expansion of the South, and that this increase, in tandem with Whitney's cotton gin, served to spread plantation agriculture across the southern United States at an accelerated rate. The project area represents the hearth of upland cotton agriculture, and hence may predate agricultural trends generally attributed to the cotton economy.

The statistics presented in Table 11 remind us that as the world of planters changed, so to changed the world of slaves. The majority of all slaves in Elbert County (88 percent) were found on farms or plantations housing from six to more than 20 slaves in 1809. This trend was amplified by 1851, by which time 95 percent of all Elbert County slaves in the project area were found on agricultural units in this range. Most dramatic is the percentage of slaves belonging to plantations, that is, held in groups of 20 or more. By 1851 66 percent of Elbert County slaves in the study area were found on such plantations. Notable is the number of slaves held in units of 100 or more. Twenty six percent of all Elbert County slaves from the RBR were found in such units in 1851. Since only three slaveowners possessed these 529 slaves, the average number of slaves on these three largest plantations was slightly more than 176. The consolidation of slaves into larger agricultural units should have several implications for slave life in the project area. First, slaves housed under such conditions were less likely to interact with whites, and hence become acculturated into Anglo American traditions. Slaves held by small farmers, in groups of five or less, were likely to live in close conjunction with (if not within) the master's dwelling, and were more prone to daily interaction with whites (Deetz 1988). In contrast, slaves found on large plantations probably occupied separate slave villages, and were more segregated from white culture. A second implication of this population distribution has to do with the natural increase of America's black population in the nineteenth century. Slaves held in small units (five or less) were less likely to find mates, establish familial relations, and naturally increase the black population. Those on larger plantations had greater access to a larger pool of prospective mates, and perhaps enjoyed a more stable environment in which familial relations could endure. The black population nationwide increased from 1,377,808 to 3,638,808 between 1810 and 1850, almost entirely due to natural increase, since slave importation was banned following 1808 (The History Group 1981:259). Such increases were made possible by large slave holdings, and in turn contributed to them.

While the plantation economy was clearly ensconced in 1851, there was still a large number of landowners who must be defined as farmers. Of the 129 landowners recorded in 1851, 61 (47 percent) owned less than five slaves, with half of these (30) owning no slaves at all. The project area, as represented by Elbert County, can be considered as having a social division of approximately six tiers. The lowest tier would have consisted of whites who did not own land, and hence were not registered in the Tax Digests. It is difficult to establish their number within the project area, although they most likely contributed only a small percentage to the total white population. The second tier consisted of landowners who did not own slaves (23 percent of all landowners), while the third tier consisted of landowners who owned less than five slaves (24 percent of the total). The fourth tier would have been composed of a large group of well-to-do farmers on the brink of planter status; those owning from six to 19 slaves (35 percent of the total). A fifth tier consisted of planters, those who owned more than 20 slaves (16 percent of the total) while the final stratum consisted of those extremely wealthy individuals who possessed more than 100 slaves, and who comprised only two percent of the total landowning population.

The project area by 1850 appears to have exhibited the social qualifications of plantation society: a ranked social scale among whites, with the ownership of slaves being the key determinant of social place; an overall decrease in the white population, and a corresponding increase in the number of slaves; and a more sharply defined separation and segregation of whites and blacks. While slaves were an important variable in determining the social and economic scale of the Old South, they were only one component of the plantation. The second, equally critical variable, was land.

As Worthy (1983:17) notes of Elbert County:

> In general, increased slaveholding was accompanied by increased land ownership. Of those who owned more than 20 slaves in 1809, fewer than one-third owned more than 950 acres. In 1851, roughly two-thirds of those owned more than 950 acres, and all but one of those owning more than 35 slaves owned over 1000 acres. (The individual who owned 38 slaves and only 25 acres of upland also owned 800 "town lots"). These statistics indicate that during the first half of the nineteenth century, the concentration of wealth, and the degree of monopolization of the slave labor force, increased in the MRA.
>
> This development of a sizable class of large slaveholders who monopolized land and slave labor suggests the intensification of the cotton plantation system between 1809 and 1851. This conclusion must remain tentative due to the nature of the taxation system. The assessment of land according to its "quality" prevents making a definitive correlation between the development of what appears to be a planter class and the actual incidence of plantation agriculture in the MRA.

Within the 1851 Tax Digest, land was classified into either "Upland" or "River/Swamp" categories, and ranked within each by class: first, second, or third quality. This classification indicates that the upland/bottomland dichotomy used elsewhere in this discussion was one employed by the inhabitants of the area themselves. More importantly, only two individuals were assessed as owners of "River/Swamps" in 1851. These were Singleton W. Allen, the owner of 211 slaves, and Joseph Rucker, who owned 214 slaves. These two individuals, Elbert

County's largest planters, monopolized the prime agricultural land of the region, possessing a combined 1,000 acres of bottomland between them. Within this particular category of landownership, there is a strong correlation between land quality and the development of plantation agriculture (Worthy 1983:17, 19).

Unfortunately, the Tax Digests do not provide information on the criteria used to distinguish between first, second, and third quality land. Worthy (1983:17) notes that third quality land does not appear to have been unimproved, as might be hypothesized, since in 1851 only 12 percent of all landowners owned second quality land and only five percent possessed land ranked as first quality. According to her review of the Tax Digest, land appears to have been ranked on the basis of the types of crops which it was capable of producing. Third quality land appears to have been best suited to subsistence crop production, while both first and second quality acreage was employed in the production of cash crops. Worthy notes that the number and average size of first and second quality parcels increased from 1809 to 1851, supporting the growth of a plantation system (Worthy 1983:18).

There is, however, not an absolute correlation between first and second quality land and plantation agriculture. In 1851, for example, I. W. Warren owned 22 slaves and 1,080 acres of third quality land; William Bowen owned 40 slaves and 1,199 acres of third quality land; and B. G. Wall owned 54 slaves and 2,004 and one half acres of third quality land. All of these individuals, who would have to be considered planters by the size of their slave labor forces, owned no first or second quality land (Worthy 1983:18). There are several possible explanations for this phenomenon. These individuals may have been recent arrivals to the area, who had not yet cleared, planted, and improved their lands to a higher tax status. It is unlikely, however, that so much land capable of being transformed to first or second quality could still be found in the Russell area by 1851. A second possibility is that these individuals were engaged in large scale timbering, to which third quality land was suited and which also required large work forces. Starobin (1970:25) has noted that Georgia led the South in lumber production in the 1850s, and M'Call (1909:68) observed that it required 20 hands working for a full year to transform 40 acres of densely forested land into agricultural fields. Thus the antebellum timber industry in Georgia would have required large labor forces. A third possibility is that these individuals were engaged in early industrial efforts in the Russell Reservoir area. Worthy notes that mills appear to have been situated on third quality lands (Worthy 1983:18). However, there was only a minimal amount of industrial activity in the Russell area prior to the Civil War, and it is unlikely that the slave population outlined above were all involved in industrial pursuits. Finally, it is possible that the individuals cited above actually possessed first and second quality lands, but through some sort of debt of gratitude or obligation from the tax assessor, managed to have these lands evaluated in the lower taxable category (see Gray 1983:85).

By 1851 the project area was evidently part of the plantation South. While the discussion above focused exclusively on Elbert County, the trends exhibited here were undoubtedly repeated in Hart, Anderson, and Abbeville counties. There may have been some separation within the Russell Reservoir area regarding the amount of participation within the plantation economy, as figures presented by

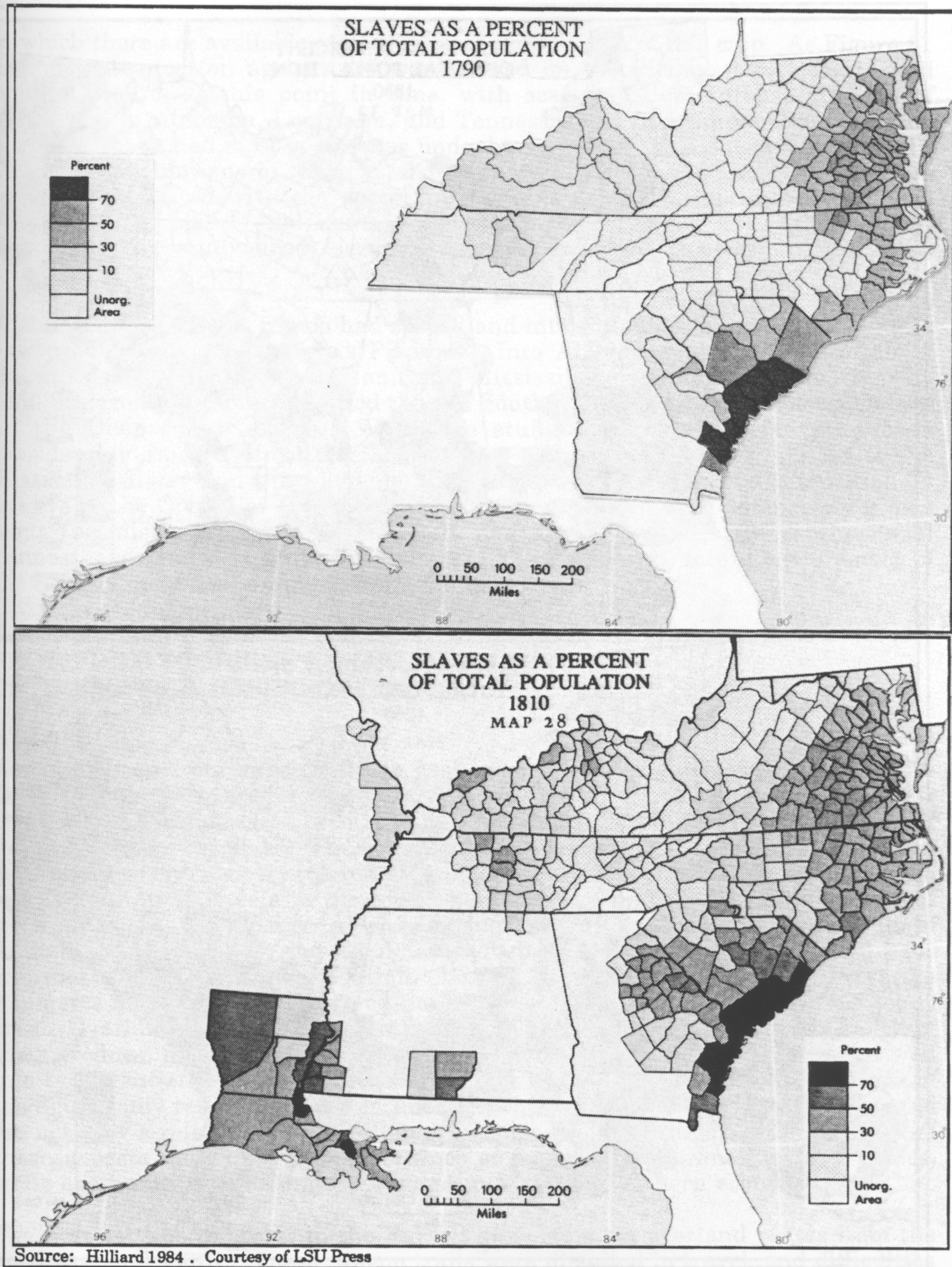
Hilliard (1984) indicate a gradual dissolution of the force of this economy as it proceeded northward. Hilliard's maps allow this variation to be placed in perspective, and also provide the opportunity to compare trends in the agriculture of the Russell Reservoir with those occurring across the South.

The first measure of the Russell Reservoir's participation in the plantation economy is the distribution of slaves as a percent of the total population. Figures 79 and 80 reflect this distribution. The earliest map dates to 1790. By that year the project area had been settled, and was situated as the South's western frontier. The slave population contributed less than 30 percent of the total population across most of the reservoir area. High density slave populations at this time were restricted to the South Carolina and Georgia coast, and to the Tidewater region of Virginia and Maryland.

By 1810 (Figure 79) Louisiana had been added to the South, as well as eastern Tennessee and central Georgia. The area of highest slave density continued to concentrate along South Carolina and Georgia's coast, and in sections of Louisiana along the Mississippi River. Slave population density in the lower sections of the project area now ranged from 30 to 50 percent of the total population, and from 10 to 30 percent in the upper sections of the Reservoir.

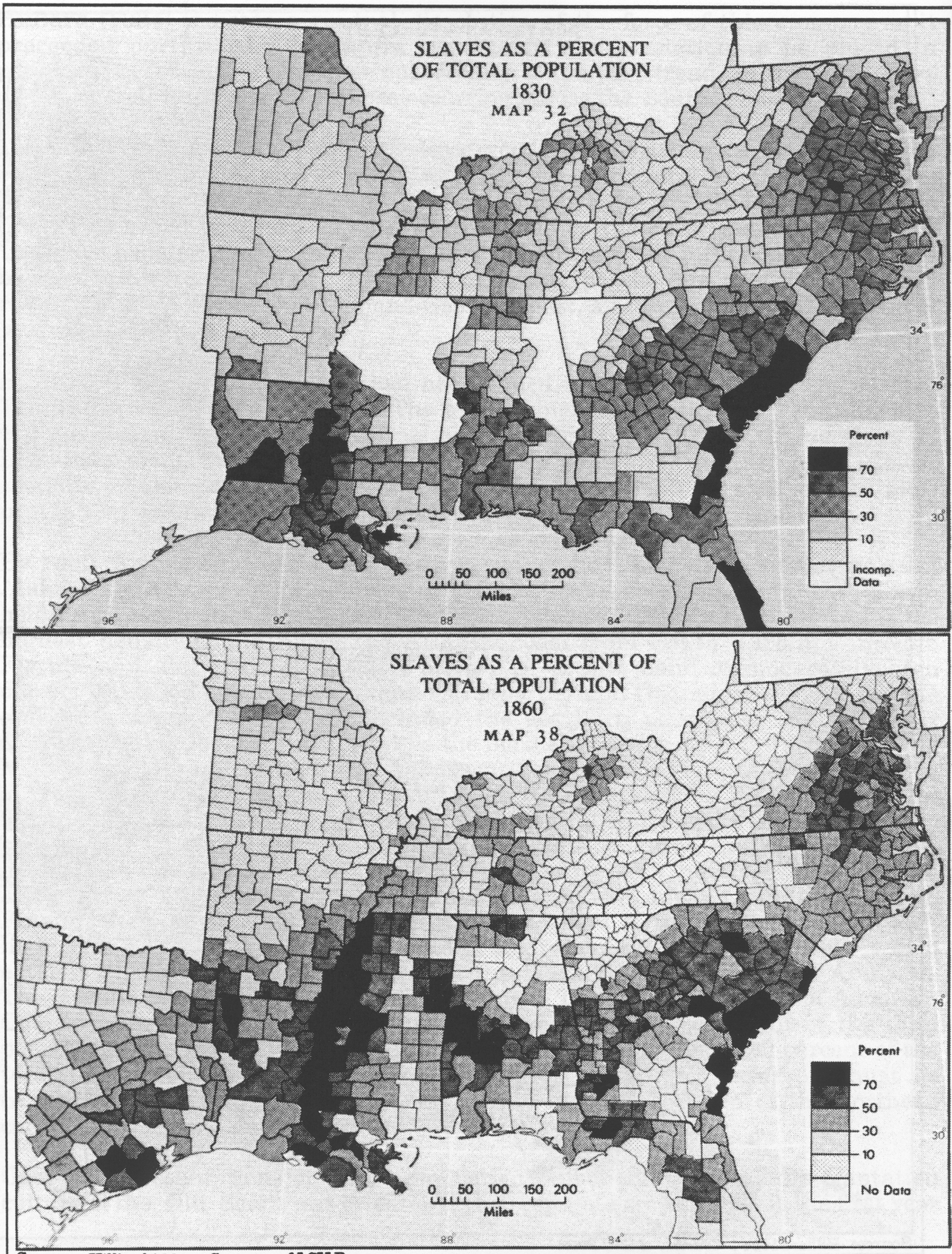
By 1830 (Figure 80) the South had expanded greatly, and now included parts of Alabama and Mississippi, and all of Florida, Arkansas, and Missouri. Slave-holding trends continued to reflect the distribution noted in earlier years, with the highest density found along the Atlantic coast from South Carolina through Florida and along the Mississippi River. A second band of moderately high density extended from central South Carolina through Georgia and into Alabama and Mississippi. This band included the southern portion of the Reservoir (Abbeville and Elbert Counties), while the northern portion was characterized by a lower slave density. These trends had intensified by 1860 (Figure 80). Three zones of high-density slave holdings existed on the eve of the Civil War. The coastal fringe of South Carolina and Georgia continued to demonstrate an adherence to slave labor, although the slave ratios for some counties in this region had declined. The greatest concentration of slavery was now found along the Mississippi, and included parts of Louisiana, Arkansas, and Mississippi. Finally, a concentration in western Alabama (part of the famed "Black Belt") highlighted the termination of an arc of high density slave populations which extended from South Carolina through the Piedmont of Georgia and Alabama. This arc included Elbert and Abbeville County. The slave population of Anderson County was not as great, contributing between 30 and 50 percent of the total population, while that of Hart County amounted to no more than 30 percent of the total population. Thus the southern counties within the Reservoir must be considered within the cotton economy, while the participation of the northern counties was more marginal.

Graphic representations of cotton production reflect the fact that the plantation culture of the Old South was oriented to two separate crops. 1820 is the first year



Source: Hilliard 1984 . Courtesy of LSU Press

Figure 79. Slave Population as a Percent of Total Population, 1790 and 1810.



Source: Hilliard 1984 . Courtesy of LSU Press

Figure 80. Slave Population as a Percent of Total Population, 1830 and 1860.

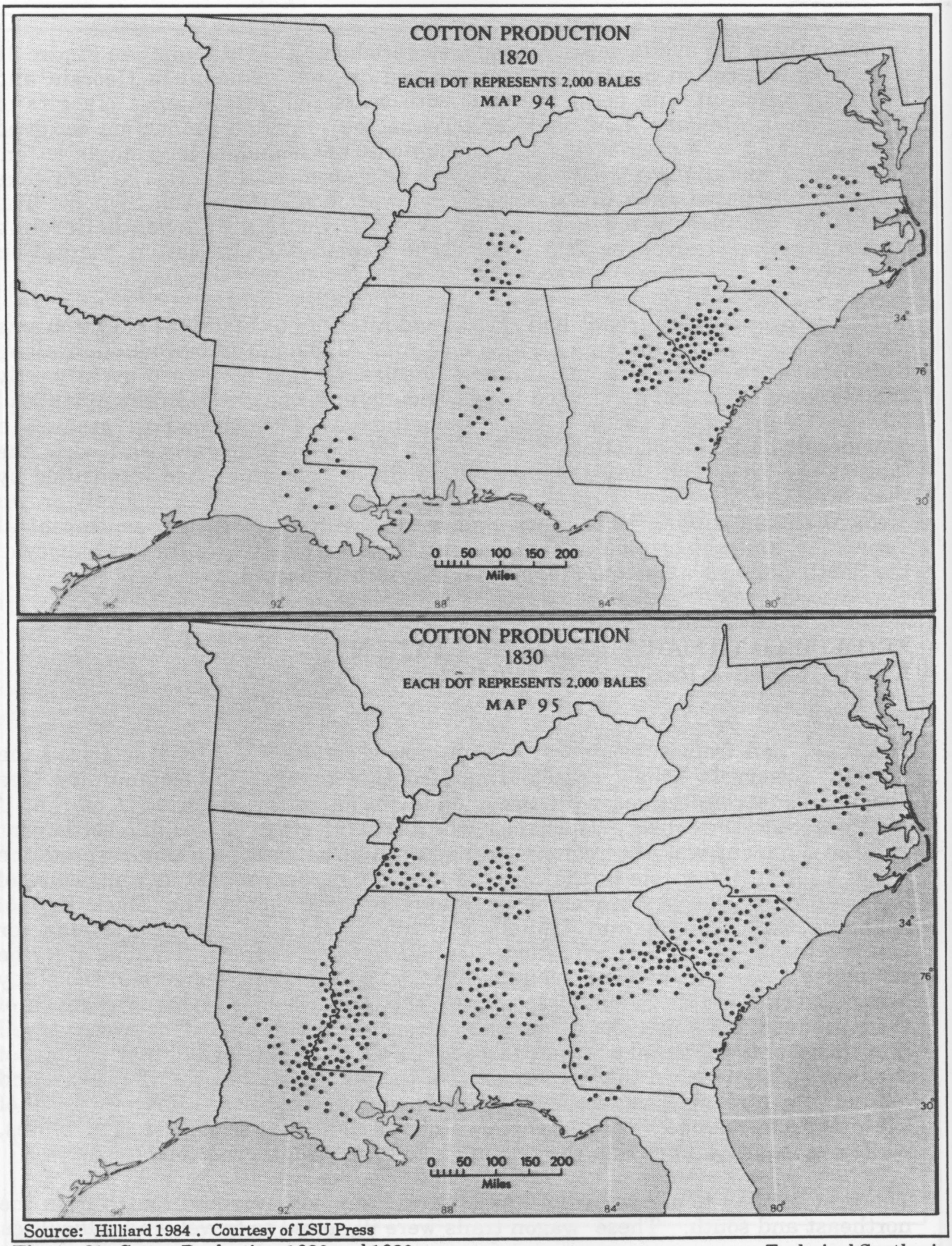
in which there are available statistics for the production of this crop. As Figure 81 demonstrates, cotton agriculture was focused on the Piedmont of Georgia and South Carolina at this point in time, with scattered, less intense clusters of production in Alabama, Louisiana, and Tennessee. Limited production occurred along the coast, and most of this was undoubtedly sea island, or long staple cotton. The slave populations of the coastal fringe of Georgia and South Carolina thus must be attributed with the successful cultivation of rice in this region. The Piedmont was clearly the home of cotton, with Georgia and South Carolina (including the study area) serving as the hearth for the cotton plantation economy.

Within ten years these trends had spread and intensified (Figure 81). Cotton was now produced across Georgia's Piedmont, into Alabama, and production along the Mississippi River in Louisiana and Mississippi had increased greatly. By 1850 (Figure 82) cotton dominated the Old South, and was grown in the uplands of all the Deep South states. While the study area continued to produce a considerable amount of cotton, the focus for this crop had clearly shifted to the Mississippi River and the Alabama Black Belt, a shift which had intensified by the eve of the Civil War (Figure 82). In 1860 cotton was most intensively grown along the Mississippi, in the Black Belt, and in southwestern and south-central Tennessee, and was expanding into eastern Texas. By this date the supremacy of the South Carolina - Georgia Piedmont had evidently passed.

FROM FIELD TO MARKET: TRANSPORTATION IN THE RUSSELL RESERVOIR, 1810-1865

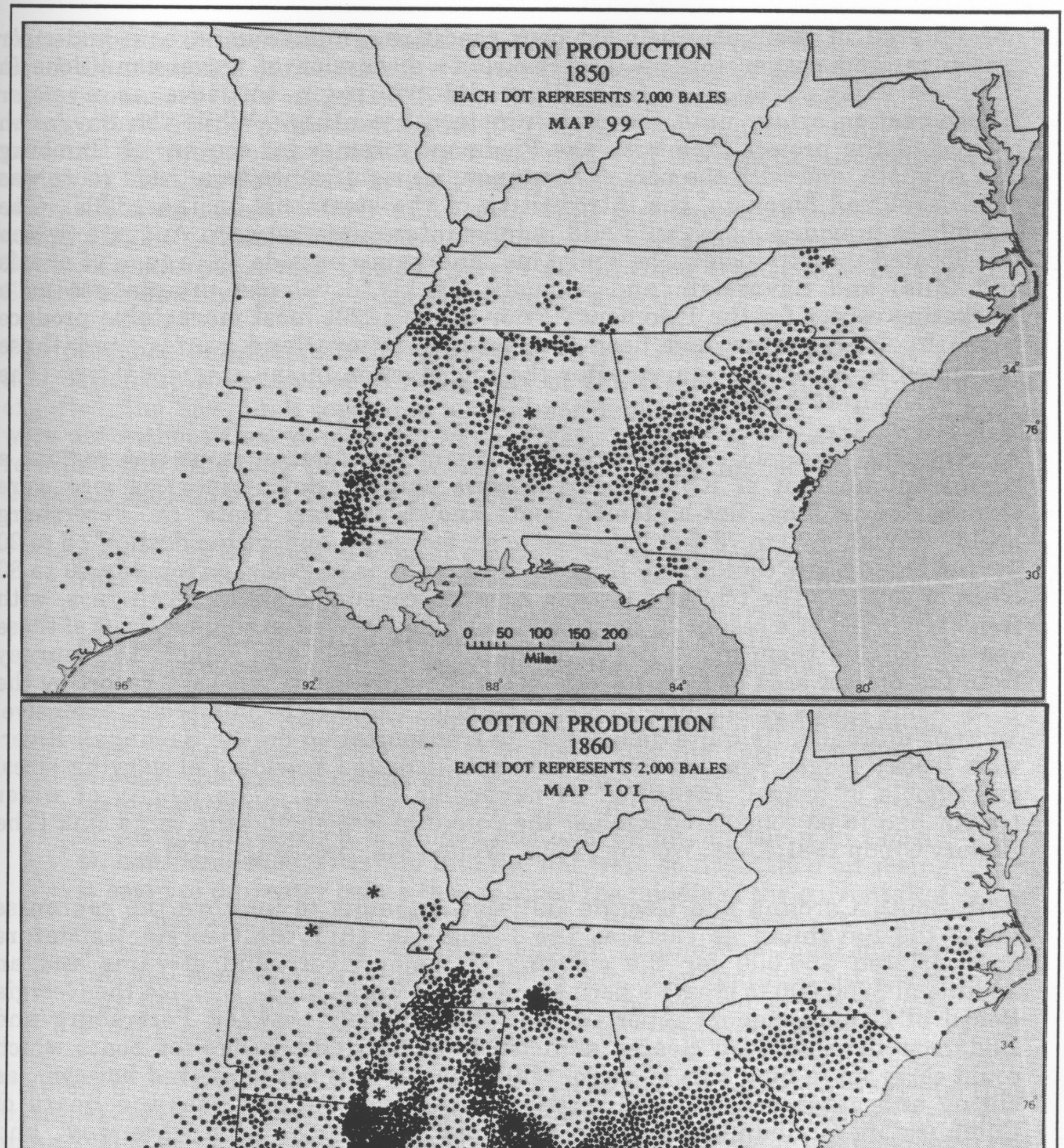
The transition from subsistence to cash crop economy which characterized the Russell Reservoir area's change from frontier to agrarian community was dependent on connections with the outside world; cotton required a market if profits were to be realized. Thus one of the key catalysts to antebellum settlement and development was the regional transportation network. In one respect, the region's diminishing role in the cotton South can be understood as a measure of its isolation. The western empire of the Cotton Kingdom, the Black Belt of Alabama, Mississippi, and Louisiana, focused on major river systems for transportation as well as irrigation. Unlike cotton's western domains, riverine commerce never adequately served the needs of planters and farmers in the study area. Overland routes brought settlers to the region, and carried away much of their produce, but this access was difficult, sporadic, and poorly maintained well into the twentieth century. The railroad, the economic savior of other regions of the South, only reached the far perimeter of the project area by the Civil War, and did not play a role in the antebellum development of the Russell Reservoir. All of these aspects magnified the importance of the available transportation routes, while eventually minimizing the region's role in the Southern economy.

The first settlers to arrive in the Russell area came via overland routes from the northeast and south. These wagon trails were ill-suited to travel, and difficulties



Source: Hilliard 1984. Courtesy of LSU Press

Figure 81. Cotton Production, 1820 and 1830.



Source: Hilliard 1984 . Courtesy of LSU Press

Figure 82. Cotton Production, 1850 and 1860.

encountered in their use included poor conditions, numerous stream and river crossings, and rugged terrain (see Bartram's discussion of travel conditions in Chapter VIII). The Savannah River did not begin to serve as a major transportation artery until the early nineteenth century. While the Savannah connected the project area with the Piedmont commercial centers of Hamburg and Augusta, and with the port of Savannah, its significance as a trade route was only developed following the introduction of the steamboat in the 1820s. The steamboat provided more rapid and regular intercourse between Augusta (which was located directly below the Fall Line, and hence outside the range of shoals and falls) and Savannah, and Augusta quickly developed prominence as a marketing center for the Piedmont. Prior to the 1820s most marketable produce from the RBR region had been transported by overland routes, and these continued to be of importance after the introduction of the steamboat era (The History Group 1981:46).

As Augusta emerged as the principal commercial entrepot of the region, a significant amount of RBR resources were shipped down river. These were transported in long, flat-bottomed boats known as "keel boats" or "Petersburg boats." Roughly 70 to 75 feet long, five to six feet wide, and with a draft of 15 to 20 inches, these boats could carry from eight to ten tons of goods, or roughly 60 to 80 bales of cotton. The trip to and from Augusta consumed six to seven days, with freight handled at a cost of 75 cents to $1 per bale. While the shallow draft of these vessels carried them above many of the river's shoals and rapids, the journey from the project area to Augusta was not without dangers. An 1879 report by the U. S. Army Corps of Engineers noted "obstacles found to be numerous, extensive, and not unfrequently quite dangerous" to transportation on the Savannah River, with "rocky ledges running across channels, isolated bowlders of varying sizes, and shoals of gravel" identified as particular hazards. The felicity of water transit had to be considered against the potential loss should the cargo sink (The History Group 1981:47-48; Worthy 1983:9; White 1849; Brooks 1978:131).

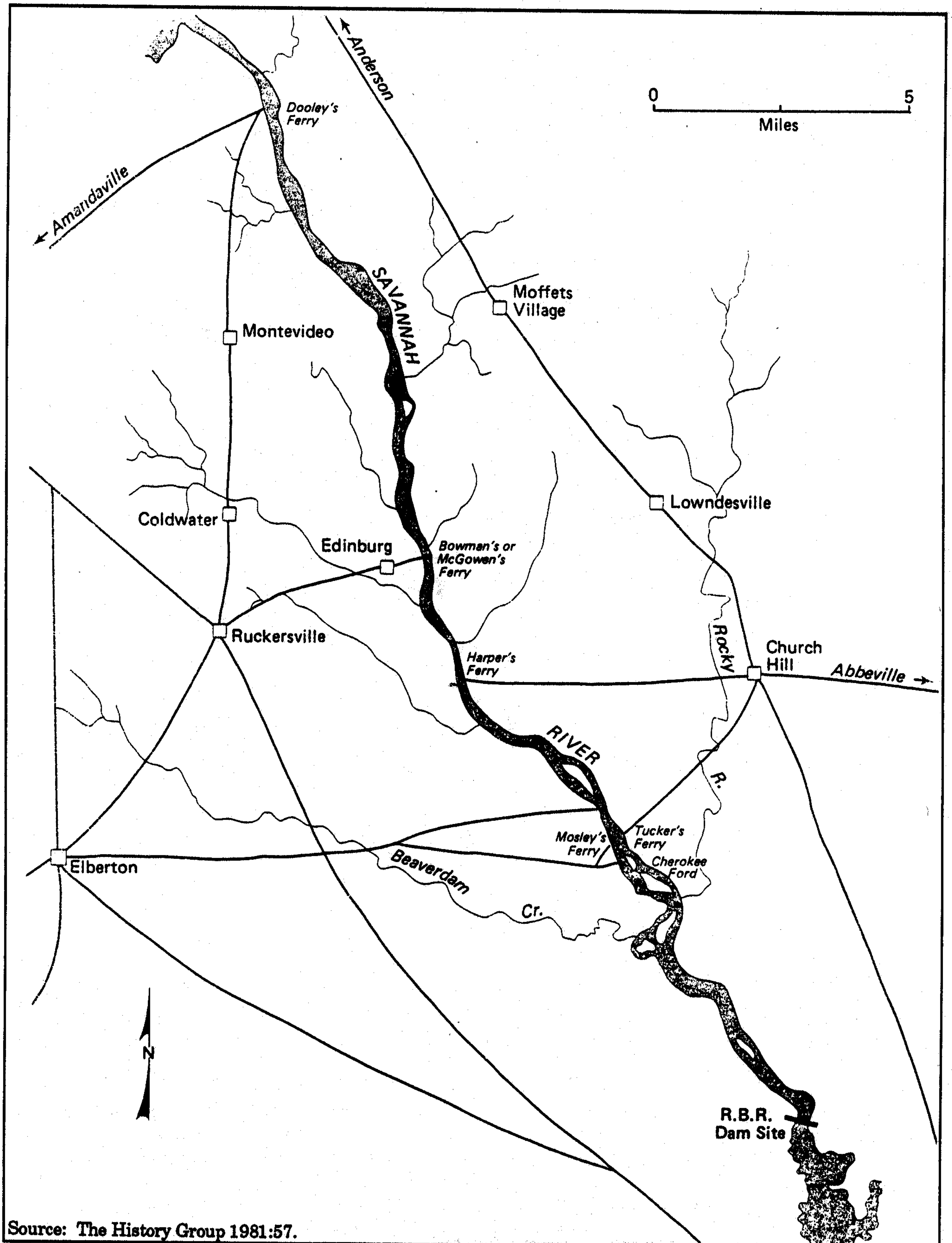
Both South Carolina and Georgia initiated attempts to improve the concourse along the Savannah as early as the 1780s. In 1817 the Georgia legislature appropriated $66,000 for the clearing of major rivers and streams and an additional $250,000 to create a permanent public works fund. By 1824 the Georgia Board of Commissioners reported that the channels between Petersburg and Andersonville had been cleared sufficiently to provide passage for boats which could carry up to nine tons of cargo. This clearing was not long-lived however, as silting and other debris again restricted passage. At this date the Board of Commissioners abandoned their attempts to improve the waterway, and determined that the solution to internal transportation lay with the railroad (Coulter 1965:55-56; Green 1938; The History Group 1981:48-49).

Given the difficulties in riverine transportation, roads acted as the region's primary connecting links. Road ways in the Russell Reservoir area served two functions. First, they connected plantations and farms with local communities and ferries, serving as a feeder system into the larger economic network. They also played critical roles in the larger transportation web. Within the project area there appears to have been at least one major thoroughfare, which ran along the South Carolina side of the Savannah River before crossing over to Augusta. Other routes connected the region with the Columbia-Charleston wagon road, along which much of the produce of South Carolina's Piedmont traveled. Figure 83 presents an interpreted perspective of the road and settlement patterning of the region in 1850, as developed by the History Group (1981:57). On each side of the river, the main access is north and south, while smaller routes connect the area's communities. The importance of ferrys is evident; Mosley's, Tucker's, Bowman's, Harper's, and Dooley's ferrys all provided connections between the South Carolina and Georgia sides of the project area in 1850.

The presence of numerous ferries attest to the fact that there was greater interaction between the opposing banks of the river than might initially be expected; the Savannah separated but did not divide the region. Ferry crossings were not without their dangers, however. Mary Moragne of the Abbeville District recorded the following incident in her journal during an 1838 trip to August (Moragne 1951:53-54; in The History Group 1981:102):

> As soon as we came in view of the creek we were forced to halt, as the road was block'd with horses, and waggons, in all the confusion of a newly struck camp. A dozen or so of nearly savage men were lounging around, either eating or smoking, and one in a red flannel shirt, who seems to be the buffoon of the company, afforded entertainment by his grotesque antics in rubbing the horses.... Cousin D. was resolutely bent on trying the stream at all hazards. The current is so strong that at lowest water they are compelled to support the flat by means of a rope stretched across the water, and fastened securely to trees, on either side; but now the additional force of the stream seemed to render this unavailing, for the men Cousin D. had persuaded with him into the flat were so frightened on seeing it begin to dip water before they reached the middle of the current that they turned immediately for the bank.... But Cousin was not "scared at trifles" - and being fortunate enough to find one sober-minded rational man who was willing to oblige him, they ventured out again, this time placing the head of the flat to the current and with very violent exertions they succeeded in going and returning safely.

Planters of the area thus chose between the river and the roads when it came time to transport their crops. Their choice depended on a number of factors: proximity to navigable water, the availability of water craft, and the water level on which the crops would pass, since the Savannah was nearly impassable at times of low water (The History Group 1981:550). Frequent rains might make the roads hazardous, but improve the conditions of the Savannah, while drought provided better roadways and poor river negotiation. In this aspect the two represent a dichotomy, into which cost and availability must be factored. For example, James Edward Calhoun of Millwood Plantation recorded in 1830 that "Stanton [had agreed] to carry cotton for one dollar the bale while the river too low for a full load, but for 87 1/2 when the river sufficiently full" (James Edward Calhoun plantation



Source: The History Group 1981:57.

Figure 83. Generalized Transportation and Settlement Pattern, RBR Area, ca. 1850.

diary, October 1, 1830; in The History Group 1981:51). Within the course of one week in September of 1832 Calhoun shipped cotton to Augusta by both boat and wagon, suggesting that availability was the key determinant in selecting a transportation medium (James Edward Calhoun plantation diary, September 7 and 11, 1832; in The History Group 1981:51). River and road were clearly interchangeable.

By the eve of the Civil War some Russell area planters may have taken advantage of railroad lines which encroached upon the area. To the west, the Georgia Railroad had reached Athens by 1841, and linked that city to Augusta and points beyond. To the east, the Greenville and Columbia Railroad provided a connection between Anderson, Columbia, and Charleston following its completion in 1853 (Figure 84) (The History Group 1981:51). Neither appears to have had any lasting impact on the economy of the region, as they were too distant to provide economically realistic alternatives. In part, the railroads ignored the regionbecause the terrain made it difficult to access. But they also bypassed this point in the Piedmont because there was no central community for them to serve.

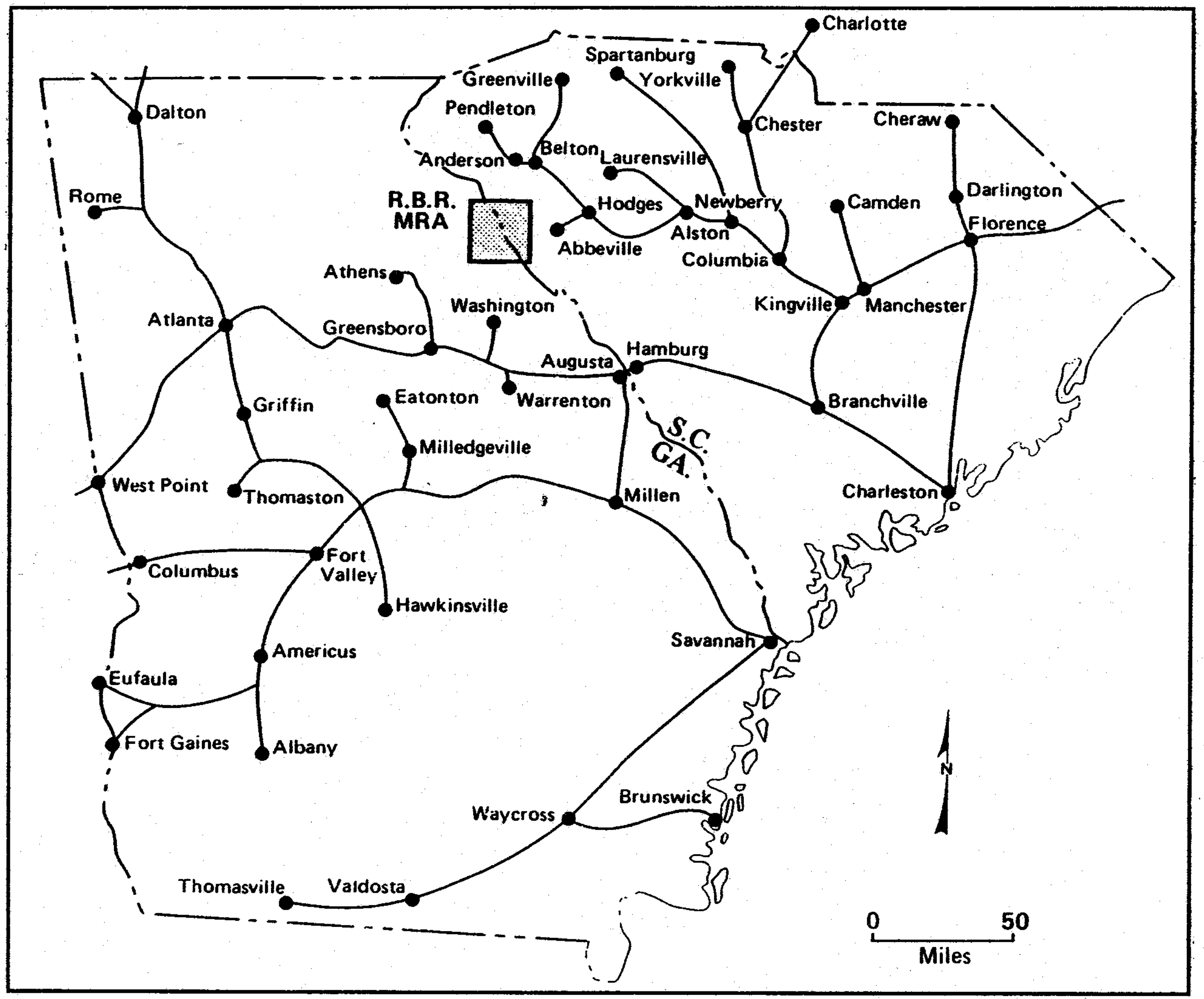
FROM MARKET TO FACTORY: TOWNS AND INDUSTRY IN THE RUSSELL RESERVOIR, 1810-1865

The vicinity of the Russell Reservoir can be considered as a wheel without a hub. Whether the lack of a viable antebellum commercial center was a measure or a contributor to the region's isolation is uncertain, but in either instance the results were the same. The project area appears to have been most closely intertwined with the markets and factors of Augusta, with Abbeville, Anderson, and Athens all also receiving a portion of the area's trade. No site in the immediate region provided a mercantile focus.

The lack of a central place says much about the development of the region; or to be more accurate, the loss of central place is most telling. In the early nineteenth century the region had a clear urban focus, situated at the confluence of the Broad and Savannah Rivers, to the immediate south of the project area. Here Petersburg, Lisbon, and Vienna all offered the promise of urban leadership to the rural hinterland (Figure 85).

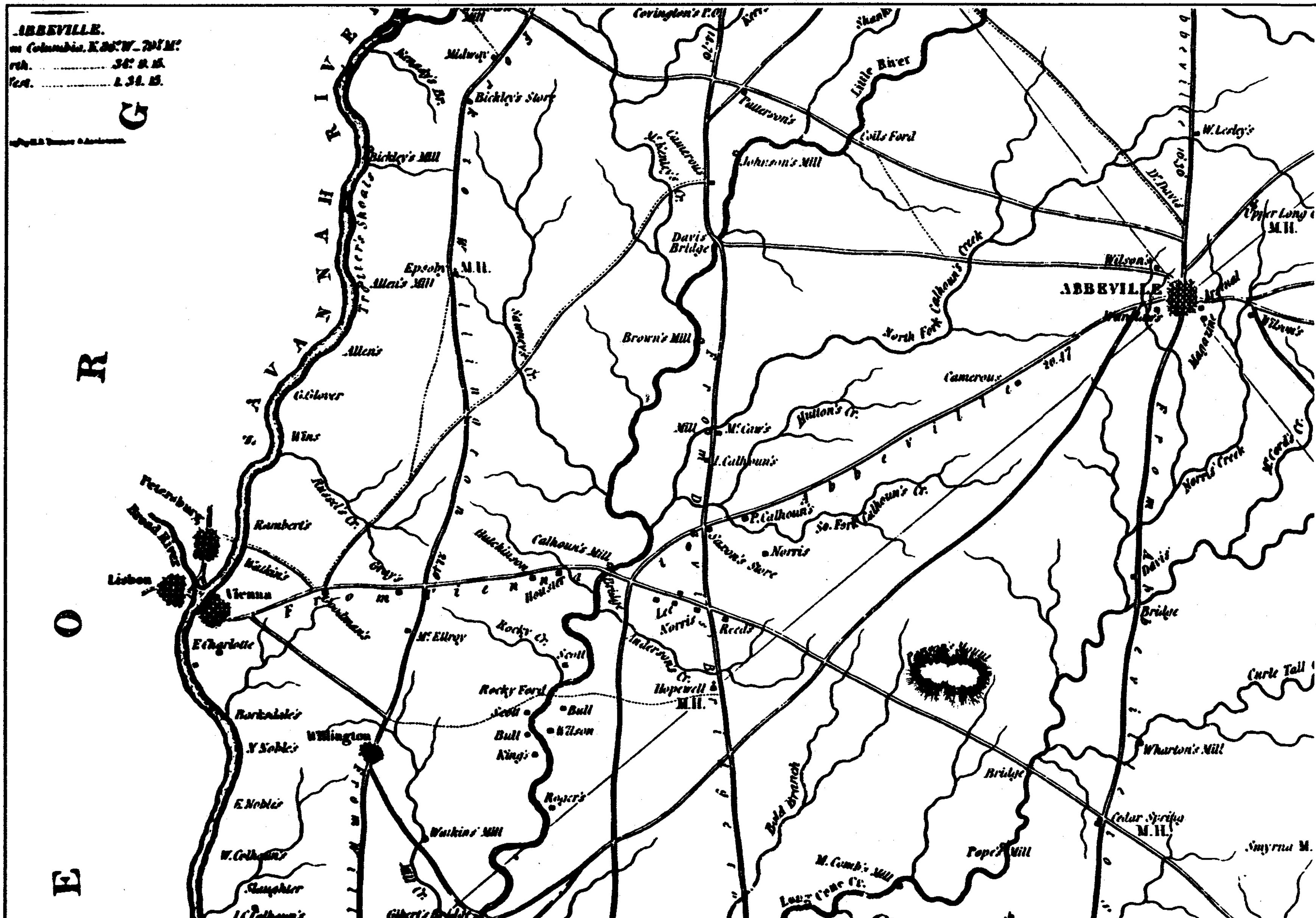
Petersburg was the earliest and most important of the three. Founded in the 1780s by Virginia entrepreneur Dionysius Oliver, the town was laid out in 86 half acre lots, with large plantations arranged along its outskirts. By 1808 Oliver had sold all of the town lots, as well as the remainder of his adjoining 9,000 acres, and the town offered every prospect of health and economic growth (Worthy 1983:8).

The initial success of Petersburg derived in part from Oliver's state patent to establish a tobacco inspection station in the town. Concerned with establishing a solid reputation for this crop, the Georgia legislature provided a series of acts regulating tobacco and providing for its inspection during the period from 1778 to



Source: The History Group 1981:60.

Figure 84. The Railway System in Georgia and South Carolina, 1860.



Source: Mill's Atlas of South Carolina 1825.

Figure 85. Detail Showing the Settlement Concentration of Petersburg, Lisbon, and Vienna at the Confluence of the Broad and Savannah Rivers. See also Figure 87.

1797. Prior to the rise of King Cotton, tobacco was the cash crop of Georgia and South Carolina's Piedmont, and Petersburg was well situated to receive the leaf grown in northeast Georgia. By 1800 the town boasted a doctor's office, billiard hall, post office, warehouses, domestic residences, and a public well. In the year of 1805 it produced a paper, *The Georgia and Carolina Gazette*, which was discontinued following that year for lack of public support. The U. S. Census of 1810 reports 332 residents in the town, and nearly 45,000 inhabitants in the surrounding Broad River Valley (Elliott 1987:24; Worthy 1983:9).

Despite this initial prosperity, Petersburg's decline was swift and complete. In his 1849 *Statistics of Georgia*, George White noted that little remained of the community (White 1849:227, in Worthy 1983:9):

> This was once among the prosperous towns in Georgia; but it is now in a state of dilapidation. A feeling of melancholy and loneliness is experienced by the visitor when he remembers what the town was in former days.

The decline of Petersburg has been the subject of attention for several historians. At least part of this decline can be explained by the shift from tobacco to cotton agriculture which characterized the region in the nineteenth century. Cotton required no inspection, hence Petersburg did not exert the magnetic draw on this crop that it had on tobacco. The arrival of the steamboat also boosted the prominence of its chief competitor, Augusta, since steam travel was not viable above the Fall Line. Augusta's position was bolstered by its rail connection to Charleston, established in 1831 and acclaimed as the world's longest railroad. Historian E. Merten Coulter views Petersburg's decline as a product of enterprise and westward expansion, and notes that many of the town's prominent citizens had resettled in the Alabama territory as early as 1810 (Coulter 1965:174-176; Worthy 1983:9-10). Finally, the growth of the plantation economy which characterized the region after 1800 deemphasized the role of towns. The plantation provided many of the support facilities: mills, forges, cotton gins, etc., which previously were concentrated in urban centers, and shifted allegiances from communities to plantations. All of these factors explain not only the decline of Petersburg, but of other antebellum towns in the region: Edinburg, Lisbon, Vienna, etc.

The Russell Reservoir and surrounding area possessed few industrial improvements in the antebellum era. This characterization was also true of the South in general, as southern capital was reinvested in the plantation economy and not industrial growth. What mills and factories did exist appear to have developed as components of the plantation system, although at least one cotton spinning mill, the White-Thompson factory on the Broad River, was established in Elbert County as early as 1830 (Worthy 1983:21). Plantation industry included cotton gins, grist mills, and saw mills, all of which were available for use by less fortunate neighbors, at an economic and social cost. Their presence helps explain the communal force the plantation exerted beyond the parameters of its boundaries (Worthy 1983:22).

The area of the Russell Reservoir in the antebellum era can thus only be understood in terms of the plantation economy. Cotton dominated trade and transportation; slavery shaped regional demographics; plantation industry replaced the role of towns. To develop a keener appreciation of the form and function of the plantation South, it is crucial to examine the plantation, and its lesser brethren, the farm, in greater detail.

PLANTERS AND FARMERS: THE ARCHAEOLOGY AND ARCHITECTURE OF ANTEBELLUM LIFE IN THE RUSSELL RESERVOIR

The plantation and the world that surrounded it can be understood from a number of perspectives: economics, ideology, politics, social structure, to name a few. The goal of this section is to consider plantation life from the perspective of material culture. The plantation was a physical entity, composed of buildings, fields, roads, and the natural environment. The arrangement of these cultural features on the landscape, especially in comparison with smaller agrarian units, offers insights into the role and relations of planters, farmers, and slaves. Likewise, the form, construction, and arrangement of domestic and non-domestic architecture illuminates aspects of plantation life such as status and social control. The material remains associated with various members of the plantation, the broken dishes, bottles, and personal items, contribute a greater understanding of diet, economics, and behavior. These material manifestations of plantation life, as revealed through plats, inventories, oral history, old buildings, and archaeology, form the basis of this discussion.

Four texts support this platform of analysis. *Exploring the Rustic Life*, authored by Charles Orser, Jr., Annette Nekola, and James Roark (1987), provides a discussion of Millwood Plantation, the antebellum estate of James Edward Calhoun, and the largest plantation studied during the cultural resources investigations of the Russell Reservoir. *The Banister Allen Plantation and Thomas B. Clinkscales Farm*, authored by Lesley Drucker, Woody Meiszner, and James Legg (1983), documents the archaeological research conducted at an antebellum plantation and postbellum farm, and offers contrasting views of planters' and farmers' associated lifeways. *The Old Home Place*, by Marlesa Gray (1983), considers five agricultural sites in the Russell Reservoir, ranging from small farms to plantations, and brings the social scale of regional agriculture into clearer focus. It should be noted that all of these reports also illustrate the difficulties inherent in applying historical chronologies to archaeological deposits. While the Civil War is generally considered as a sharp temporal boundary in historical treatments of the South, its presence is less easily detected in the archaeological record. While the proverbial (and sometimes real) shackles and chains were thrown off at the end of the War, material culture remained in many ways the same. All the sites treated by the reports above continued into the postbellum period, and thus the archaeological research was unable to securely segregate antebellum from postbellum material and behavior. Despite this weakness, these studies do describe the material world of an agrarian society, for consideration in both this chapter and the next.

The archaeological reports outlined above offer only one perspective of the material world. A complementary view is offered by Linda Worthy's (1983) edited volume, *All That Remains*, the story of architecture in the Russell Reservoir. In addition to augmenting the archaeological perspective of material culture, Worthy's volume also points out the false segregation between archaeological and architectural sites. Little archaeological research was carried out at those antebellum and postbellum agrarian sites with standing architecture, while the archaeological research often produced views of foundations and interior construction details not accessible on standing structures. This section attempts to integrate both sets of knowledge into a single coherent body, but it also hopes to illustrate the interconnectedness of historic material culture. Archaeology, architecture, oral history, and the written record must all considered if we are to flesh out the body of the past.

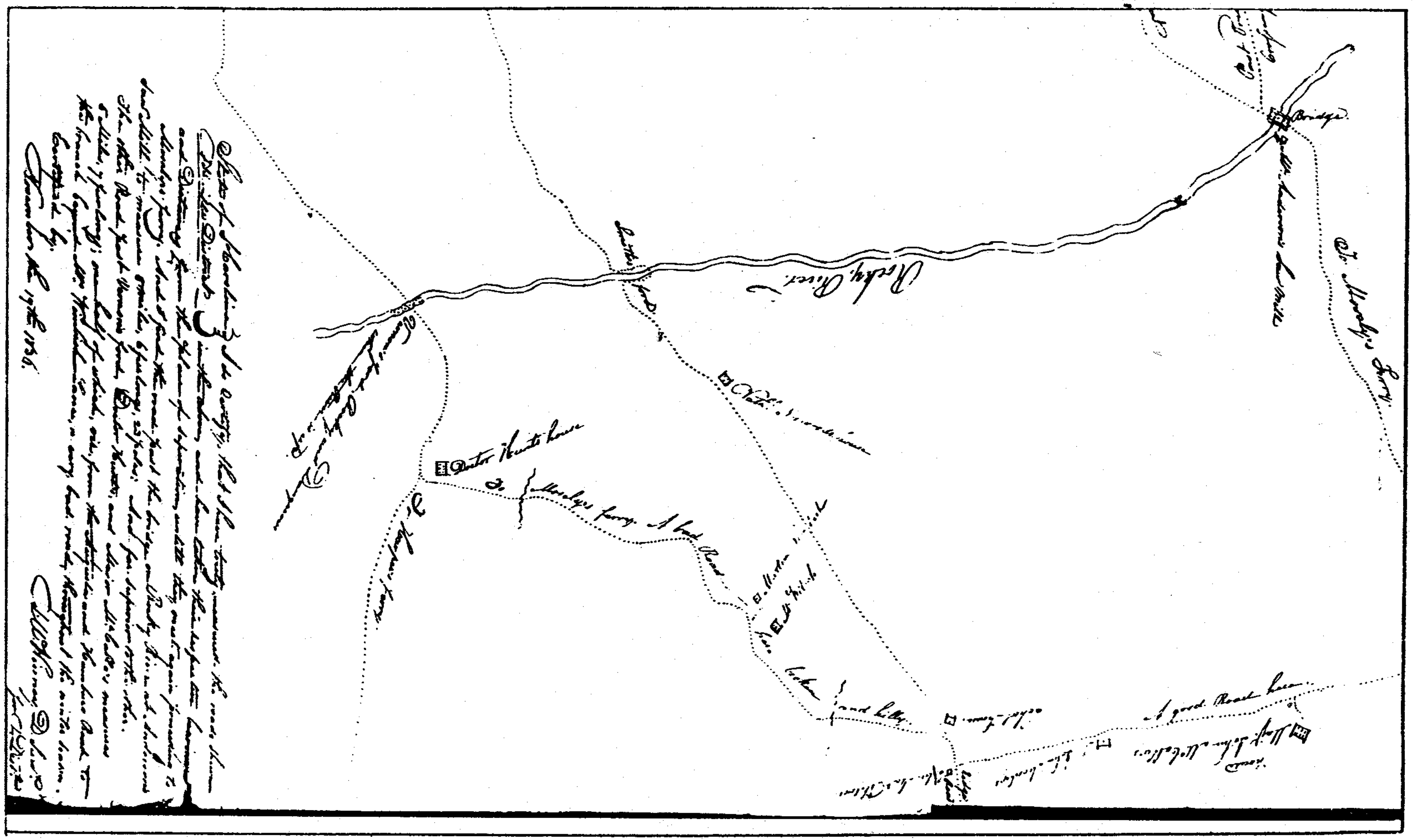
While the four texts cited above serve as the main pillars of this section, information culled from other sources provides planks and trim to our discussion. The importance of the material world is perhaps best understood by the numerous ways it appeared in the writings and remembrances of the past inhabitants of the region. The project area appears to have been a physical place of mental landmarks; a landscape where the material and the ideological met.

Planters and Farmers

Four planters were treated by the archaeological research of the Russell Reservoir: James E. Calhoun (also spelled Colhoun), son of U. S. Senator John E. Calhoun and cousin of famed southern politician J. C. Calhoun; Bannister Allen; and father and son John and George McCalla. The lives of these four men provide a glimpse of the range and variation in planter's knowledge, skills, ambitions, and production, as examined in the Russell Reservoir.

John and George McCalla John McCalla appears to have arrived in the project area in the 1820s or 1830s. He is listed as a resident of Abbeville County and the owner of 26 slaves in the 1820 census, although his name does not appear on a map of the district prepared in 1820 for Mill's Atlas of 1825. The first definite correlation of McCalla and the project area occurs in 1833, when he had surveyed 768 acres of land between the Savannah and Rocky Rivers. His residence in this area was built at least by 1836, when a petition to the South Carolina legislature for a road closure in the area was circulated. Although McCalla did not sign the petition, his home is shown on an attached plat (Figure 86). This plat indicates McCalla's house was two stories in height; his nearest neighbor was John Mosely; and a saw mill and school house were located in the general vicinity (Gray 1983:77).

John McCalla died in 1839, leaving his estate to his wife Susan, and his sons, George and Issac. His inventory (Table 12) provides a detailed accounting of the



Source: Gray 1983:81.

Figure 86. 1836 Map Included in an Abbeville County Road Improvement Petition, Showing John McCalla's House. Note Vernon's Ford, described as "Rocky and Dangerous when the River is up." The petition asks that the road past Vernon's Ford and Doctor Hunt's be closed, noting that it is "a very bad road, throughout the winter season."

Table 12: "A true Inventory of the Personal Estate of John McCalla, dec'd. Appraised this 29th day of November 1839" (from Gray 1983:82-83)

	$	Cts
Bookcase & Library	150	00
Slab [?] and contents	140	00
1 Set dining tables	60	00
1 Tea Table	15	00
1 dozen chairs	90	00
1 Clock	60	00
2 Maps	12	00
Washington's farewell address	20	00
4 Candlesticks	1	00
1 pair andirons shovel & tongs	25	00
1 Sofa	20	00
3 Guns & shot bags	25	00
1 Brace pistols & dink [?]	25	00
1 Stand	5	00
Fire dogs fender shovel & tongs	3	00
1 dozen split bottom chairs	6	00
5 Feather Bed & bedsteds	250	00
Lot sundries	11	00
1 Easy Chair	25	00
Lot files screws etc.	2	00
4 Bedsteads	4	00
3 Sides Leather	10	00
1 Slab water and fire dogs	2	00
1 Glass Stand	2	00
1 Kitchen Basin Table	2	00
4 Trunks	10	00
2 Chests	7	00
1 Slate [?]		90
350 lbs iron	25	00
1 Lot Flours [?]	60	00
hoes & spades	10	00
Axes wedge & pieces of iron	8	00
2 Saws	12	00
Several eva___	7	50
Lot Single-trees	5	00
Lot old axes	2	00
Lot of Carpenter's Tools	3	00
2 pair Steelyards	2	00
4 pair Guns [?] etc.	2	00
Lot Sundries	1	50
1 Scrapin [?] & old irons	12	00
Shop Tools	50	00
Lot Husks [?]	10	00

	$	Cts
2 hundred bushels oats 50 per bushel	100	00
125 bushels wheat at 1.00 per bushel	125	00
1 Carriage and horses	150	00
90 thous of Cotton at 2 doll hundred	1,800	00
14 hundred bushels corn @ $1.60	875	00
Waggon and cart	15	00
1 Colt	65	00
1 Grey horse	60	00
Sorrel horse	51	00
5 Mules at a hundred dollars	500	00
1 Lot hogs	90	00
2 horses @ 40.00	80	00
1 Loom	8	00
1 Carding machine	10	00
Kitchen utensils	10	00
Set knives & forks	20	00
6 meal bags	1	00
Salt	25	00
6 Spinning wheels	12	00
Lot Cattle	250	00
5500 lbs pork at 6 dollars per hund	330	00
20 thousand lbs fodder 75 per hund	150	00
Biddy	200	00
Patty	300	00
Rachel	350	00
Herrod [Harwood?]	500	00
Tom	400	00
Winny	250	00
Fanny	500	00
Jim Strong	350	00
Zack	650	00
Mary	400	00
Betty	250	00
Dely	700	00
Milly	700	00
Carolina	650	00
Henry	800	00
Charles	900	00
Alek	900	00
Jim H	500	00
Table & cupboard	10	00
	16,_74	75
	[$16,129	90]

We certify the above to be a just and true Inventory of of [sic] the personal Estate of John McCalla dec'd, as shown to us by the acting Executor and appraised this 29th Novr. 1839. Josiah Peterson, A. Giles, and William Speer wealth of a nineteenth-century planter. McCalla was obviously educated, and among his possessions were a library appraised at $150, a bookcase, and a copy of Washington's farewell address with a value of $20. Other items included furniture, guns (including a possible brace of dueling pistols), tools (agricultural, wood-working, and iron-working), wagons and carriages, equipment associated with the manufacture of cloth (a carding machine, spinning wheels, and a loom), livestock, and agricultural produce, including $1,800 in cotton. Eighteen slaves were listed, eight men and ten women, with an average value of about $560. The remaining slaves of his plantation were owned by his wife, Susan, with a total value of $10,200, suggesting this group consisted of approximately 20 additional individuals, for a total plantation slave population of approximately 40 persons. Slaves represented the bulk of John McCalla's material wealth, as indicated by his inventory (Gray 1983:81-83).

As executor, Issac McCalla filed returns on the estate for several years following the death of his father. These provide additional insights into the functioning of this plantation. In 1839 the estate received $1,203.88 on the sale of cotton produced in that year (it is uncertain whether this included the $1,800 in cotton listed in John McCalla's inventory). The costs of items purchased included a pair of shoes for son George at $2.50, $94.75 to Archibald Scott for building a new wagon and repairing an old one, $70.70 to John Mosely for corn, $25.16 for 1839 taxes, $100 for a new well, $131.12 1/2 to James English for plastering the dwelling house, $6.50 to J. E. Calhoun for the "spring season of a horse" (Calhoun was apparently operating a stud service), and $36.90 1/2 for the cost of a coffin. In 1841 the estate made $881.94 from the sale of 26 bales of cotton, paid $92.67 for cotton seed, $159.82 to Benjamin Baird for paints and lime, $78.58 to W. Pearce for painting the dwelling house, $27.89 for the general poor and bridge tax, $48.72 to E. Adams for groceries, and $81.72 to James Hodge for overseeing the field hands. In 1842 the estate received $798 for 36 bales of cotton (while productivity had increased, prices appear to have declined from the previous year, dropping from 34¢ to 22¢ a pound), and paid $22.81 to William Bostwicks for groceries, $8.50 to Sam Hill for smith work, $32.54 to J. English for repairing the cotton gin, $30.00 to Dr. Arnold for medication and treatment, and $33.31 for the bridge and poor tax (Gray 1983:83-84).

These returns, in combination with the inventory produced at John McCalla's death, provide an indication of the lifestyle to which the McCalla family was accustomed. Like other planters, John McCalla appears to have augmented the agricultural pursuits of his plantation with craft and industrial ventures: carpentry, black smithing, cloth manufacture, and possibly timbering. Agriculture provided the bulk of his capital gains, while his wealth appears to have been concentrated in his slaves. The McCalla home was apparently well maintained, with some of the largest expenses in 1840 and 1841 being assigned to plastering and painting the house. The family employed an overseer for at least part of one year following the death of John McCalla, although by 1841 it appears that the sons were managing the plantation's production. The McCalla's dealt with other planters, and merchants of the area for minor provisions and services, but their plantation appears to have been largely self-sufficient.

Following the death of Susan McCalla, the brothers Issac and George reached a final settlement of their parent's estate. They sold the household furniture, tools, and livestock, dividing the proceeds, and split the slave population evenly between themselves. Although not recorded, George McCalla apparently purchased his brother's portion of the real estate, and by 1850 he was operating the family plantation (Gray 1983:84).

In 1850 George McCalla was 29. The previous year he had married Mary Jane Allen, then age 16. In 1850 George McCalla owned 27 slaves: 12 men ranging in age from 3 to 75, and 15 women from 1 to 75 years old. He also owned at that time 1,155 acres of land, of which 400 acres were improved, and he produced a diverse array of crops focused primarily on corn, oats, wheat, and cotton (Gray 1983:85). On the basis of his 1850 census return (Table 13), George McCalla appears to have been a moderately successful planter.

By 1856 George McCalla's fortunes had risen substantially. In the 1856 tax digest for Abbeville County, George was listed as the owner of 1,760 acres and 74 slaves. Within six years his acreage had increased by two-thirds, and his slave population by two and three fourths (Gray 1983:85). The source of this increase is uncertain. On the basis of the 1850 census returns, George was fairly successful at agriculture, although these profits would have required careful management to produce the increase noted in his slave population and real estate. He produced a fair quantity of cotton in 1850, 50 bales, and also had considerable amounts of livestock and grains. The cotton produced in 1850 would have yielded from $5,000 to $6,000, possibly enough money on an annual basis to secure the increases noted by 1856, if wisely invested. The 1860 census suggests that McCalla profited most from cotton production, as it was the amount of this crop which increased the most between 1850 and 1860. By 1860 McCalla owned 3,000 acres of land (800 improved) and 85 slaves. His profits from cotton would have been substantial, and by 1860 McCalla was among the wealthiest men in Abbeville County.

George McCalla's increased wealth may also have come through inheritance, either from his brother Issac or perhaps through his wife's family. It is possible that he rented slaves from brother Issac during the early 1850s, and perhaps later purchased these, as the amount of cotton produced per slave in 1850 is considerable when compared with other planters (see below). The main thrust of George McCalla's wealth appears to have come from cotton agriculture, and it is illuminating to note the acceleration with which wealth could be gained in the plantation South.

<u>Banister Allen</u> The Allen family arrived in the area of the Russell Reservoir from Virginia in the early nineteenth century, first settling in Elbert County before relocating to Abbeville County in 1802. The patriarch, Arva Allen, journeyed on to Mississippi at some point after 1810, but his son Banister remained behind to continue the family lineage in Abbeville County (Drucker et al. 1983:17).

Table 13: George McCalla's Agricultural Production, 1850 and 1860, from the Census Returns (Gray 1983:85, 86).

	1850		1860	
	N	$	N	$
Acres of improved land	400		800	
Acres of unimproved land	755		2,200	
Cash value of farm		$13,860		$31,000
Cash value of farm machinery		360		500
Horses	9		9	
Asses and mules	5		14	
Milk cows	8		18	
Working oxen	6		6	
Other cattle	30		42	
Sheep	38		90	
Swine	173		140	
Value of livestock		$1,952		$4,870
Value of livestock slaughtered		[illegible]		800
Wool (pounds)	100		200	
Butter (pounds)	1,000		700	
Beeswax (pounds)	--		10	
Honey (pounds)	-		50	
Wheat (bushels)	250		400	
Rye (bushels)	--		150	
Indian corn (bushels)	1,200		1,400	
Oats (bushels)	250		50	
Cotton (bales)	50		110	
Peas and beans (bushels)	70		50	
Irish potatoes (bushels)	5		15	
Sweet potatoes (bushels)	40		100	
Barley (bushels)	50		--	
Hay (tons)	14		21	
Value of orchard products		--		--

Arva Allen was apparently a modest farmsteader, a tradition in which his son initially followed. In the 1810 census Arva's household contained four white adults, five white children, one slave, and one free black. By 1820 son Banister had established his own household along the Rocky River (Figure 87), which by that date sheltered his five children, four agricultural employees, and seven female slaves. His first wife, Rachel, died in 1822, and Banister married Nancy Scudder in 1824. Nancy bore him four children, and by 1830 their household included seven children and 26 slaves. Nancy died in 1838. Banister's third and final marriage was to Ann Elizabeth Overby in 1845, who bore him five children, and outlived him by 21 years (Drucker et al. 1983:17).

Banister Allen steadily acquired wealth during the nineteenth century. By 1850 he was the master of 64 slaves, including 33 males and 31 females ranging in age from infancy to age 60. His 1850 agricultural census return (Table 14) indicates he owned 2,400 acres at this date, including 1,300 improved acres. Banister owned substantial numbers of livestock, and like George McCalla, produced a diverse array of crops. He grew a considerable amount of oats and corn, and also produced 64 bales of cotton in that year. As a measure of productivity, Allen produced one bale of cotton for each slave he owned, whereas George McCalla enjoyed a better rate of production, 1.85 bales per slave owned in 1850.

By 1860 Banister Allen's fortunes appear to have declined somewhat. He had lost 575 acres of land by this date, most from his improved acreage, although his agricultural production does not appear to have suffered greatly. The owner of 58 slaves in that year, he produced 57 bales of cotton, indicating very little fluctuation in the productivity of his lands and laborers. For comparison, George McCalla produced 1.3 bales of cotton per slave in that year. The contrast between the fortunes George McCalla had made between 1850 and 1860, and Banister Allen's maintenance of the status quo, indicates that the cotton economy required management if substantial profits were to be made, and thus not all planters shared equally in the benefits of this economy.

<u>James Edward Calhoun</u> James E. Calhoun was born in the Abbeville District of South Carolina in ca. 1798, the son of John Ewing and Floride Bonneau Calhoun. The family was among the earliest white settlers of Abbeville, having arrived in 1755 from Virginia. At his death in 1802, John Ewing Calhoun was one of Abbeville's leading planters, the owner of a considerable number of slaves, and a U. S. Senator (Orser et al. 1987:446).

While James Edward inherited his father's estate, he pursued for several years a maritime career, serving in the U. S. Navy from 1816 through 1830. During this time the family's estate was managed by overseers and relatives, but Calhoun appears to have maintained an active interest and management of his property. Orser et al. (1987:741) note that, like many planters of this period, Calhoun was "land long and labor short." His principal plantation of Midway, which possessed only a fraction of his total lands, was "sufficiently large to employ to advantage from 9 to 10 hands more" according to a report of his uncle in 1823 (Andrew

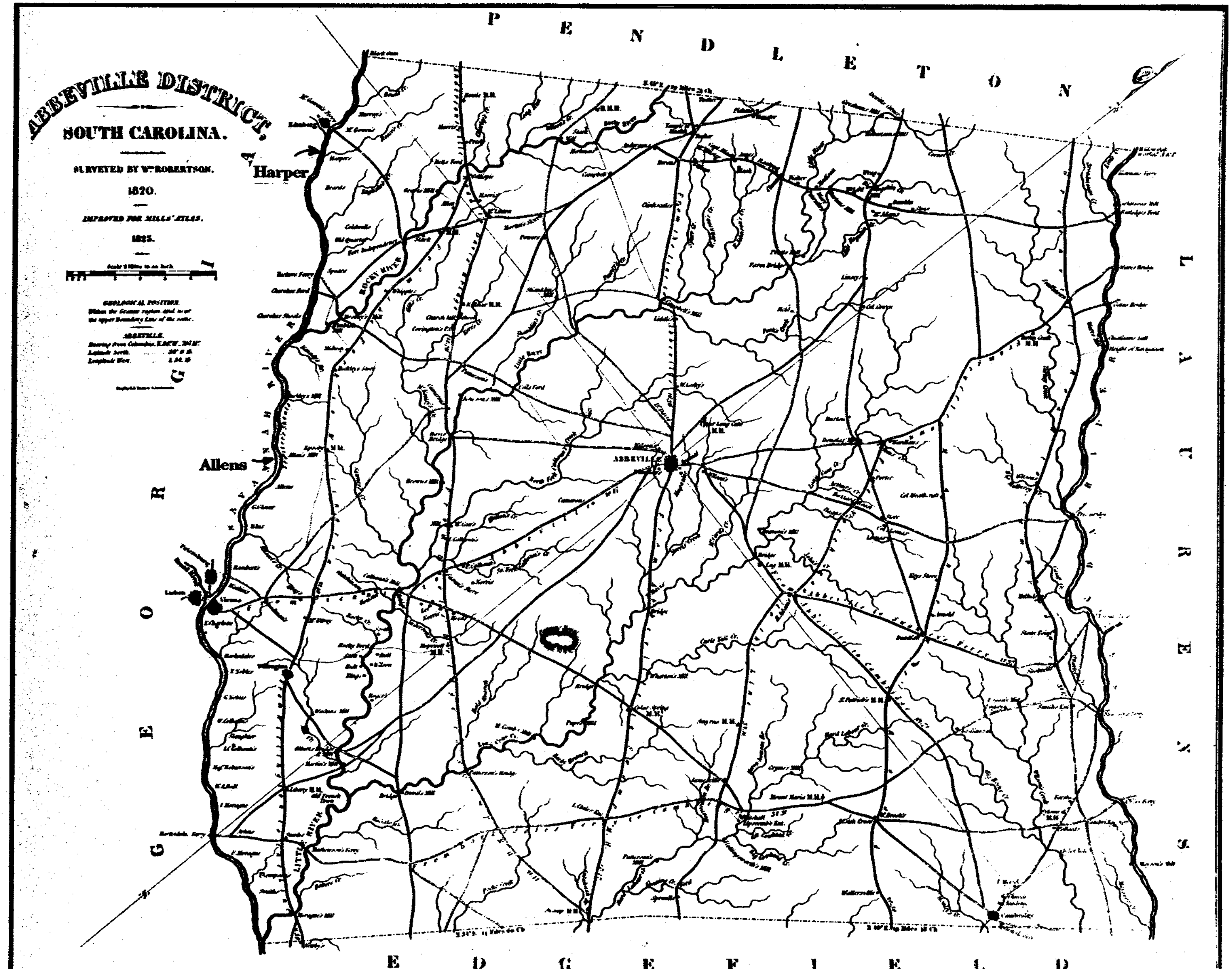


Figure 87. Map of Abbeville District prepared in 1820 for Mill's Atlas of South Carolina, 1825. Note the location of the Harper and Allen sites.

Table 14: Banister Allen's Agricultural Production, 1850 and 1860, from the Census Returns (Drucker et al. 1983:19, 21).

	1850		1860	
	N	$	N	$
Acres of improved land	1,300		800	
Acres of unimproved land	1,000		925	
Cash value of farm		$25,000		$17,270
Cash value of farm machinery		1,400		910
Horses	14		12	
Asses and mules	19		12	
Milk cows	10		12	
Working oxen	2		4	
Other cattle	63		18	
Sheep	63		13	
Swine	200		130	
Value of livestock		$3,000		$5,544
Value of livestock slaughtered		850		350
Wool (pounds)	320		26	
Butter (pounds)	96		520	
Beeswax (pounds)	--		--	
Honey (pounds)	--		--	
Wheat (bushels)	600		600	
Rye (bushels)	300		--	
Indian corn (bushels)	1,000		3,000	
Oats (bushels)	1500		1,000	
Cotton (bales)	64		57	
Peas and beans (bushels)	300		500	
Irish potatoes (bushels)	31		30	
Sweet potatoes (bushels)	14		20	
Barley (bushels)	--		5	
Hay (tons)	37		6	

Norris to JEC, February 27, 1823, JECP; in Orser et al. 1987:741). Calhoun attempted to sell some of his lands in order to purchase new slaves, but the economy of the 1820s apparently did not favor such sales, as his brother John reported that the "times are so dreadful that there is no possibility of selling any kind of property" (John Ewing Calhoun to JEC, May 4, 1827, JECP; in Orser et al. 1987:741). Crops of the late 1820s were only sufficient to pay the bills and keep the plantation in operation; they did not provide the means to expand.

Orser et al. (1987:741) speculate that it was this limited profitability which prompted Calhoun to resign his naval commission and return to Abbeville County in 1830. Calhoun settled at Midway, and immediately pursued a more scientific approach to agriculture. He invested in mechanical additions to the plantation, including tools, mules, oxen, and a cotton gin, and he made inquiries regarding the plans for constructing a mill for grinding corn. A considerable amount of effort was expended on experimental crops, and new varieties planted at Midway included rye, oats, barley, red and white clover, mulberries, tea plants, peaches, cedars, pecans, grapes, and "thirty wild orange sprouts." Calhoun also focused his efforts on devising a new system of agriculture. He read and corresponded extensively, and determined that fertilization and crop rotation were critical aspects of this new system (Orser et al. 1987:743).

On January 3, 1832, Calhoun took stock of his work at Midway (JEC Diary, January 3, 1832, John Ewing Calhoun Papers; in Orser et al. 1987:743-744):

> Being able, at last, to bestow individual attention to my affairs, I have commenced the improvement of my lands, which have been shamefully abused by overseers.... So little regard has been paid to resting the soil, that I find much of it inclined to 'bake' or 'run together,' tho' naturally a delightful mellow earth. I am therefore taking pains to sow down in small grain as much of it as I can spare from corn and cotton and turning in the surface growth in order to impregnate the soil with vegetable matter.

In addition to rotating groups and fertilizing, Calhoun devised a new system of plowing, "horizontalizing," which he described as a scheme of "lay[ing] off the rows that the rain falling on each shall continue in it, drawing off with a gentle drip." Since there was no term for this scheme, Calhoun devised one, referring to it as "Loxotising," a combination of Greek and Latin terms which meant plowing obliquely (JEC Diary,January 3, 1832, John Ewing Calhoun Papers; in Orser et al. 1987:744). In his experimentation, Calhoun received the advise of other agriculturalists (he subscribed to at least one journal, the *Southern Agriculturalist*) and was undoubtedly influenced by his cousin John C. Calhoun, who was also concerned with the development of agriculture in South Carolina.

In the early 1830s Calhoun began acquiring property along the Savannah River, within the current confines of the Russell Reservoir. These acquisitions came mostly in parcels of 200 to 400 acres, and shared contiguous boundaries. In 1832 Calhoun began operations at a new plantation, which he referred to as

"Millwood," sending two men, one woman, and one girl to the settlement under the supervision of Absolom Roberts, who was paid $100 per year, but was expected to work in the fields as well as supervise. The small number of hands committed to Millwood is a reflection of Calhoun's labor shortages, since in 1830 he owned only 55 slaves, of whom only 36 were old enough to work. He could also not afford substantial labor investments at Millwood for commitments he had made to Midway. In 1833 Calhoun began a refurbishing of the latter plantation, stating that he would not "cease until I have good Barns, Stable shed, a Tool house and waggon Shed with geer room and Plow house" (JEC Diary, August 5, 1833, John Ewing Calhoun Papers, in Orser et al. 1987:745). Thus within three years of his return to Abbeville Calhoun had embarked on the ambitious path of refurbishing one plantation while building a second.

Calhoun intended for Millwood to serve as both a plantation and industrial site, proposing to build a mill on the upper portion of Trotter's Shoals, "where Trotter had built before the Revolutionary War." Within the first year he managed to clear 60 acres at Millwood, but did not fare as well with his mill construction, as the river carried away "some of the Dam, which proves badly built" (JEC Diary , August 1, 1833, August 19, 1833, John Ewing Calhoun Papers, in Orser et al. 1987:745). However, Calhoun would not be discouraged in his attempts to transform Millwood into an industrial setting, and throughout 1833 and 1834 his diary and papers contain numerous references to these attempts. In 1833 he wrote that "Delaney Chisenhall, a good Millwright, moved to Millwood to superintend there." Efforts to bring other artisans to Millwood were less successful, and his Charleston factors, Mathews & Bonneau, informed him in March of 1834 that they were unable to find a slave carpenter at public auction. In October, 1834 a white mechanist wrote Calhoun that he had received his invitation to come to Millwood, but was already under contract. He did send along a list of the timber Calhoun would require to construct a building he had described to the mechanist (JEC Diary January 1, 1833, March 25, 1834, John Ewing Calhoun Papers; Thomas Watson to JEC, October 14, 1834, JECP, in Orser et al. 1987:747).

By 1834 Calhoun was also developing the settlement at Millwood. In February of that year he recorded in his diary that "Last Fall the overseer at Millwood killed two rattlesnakes, one afternoon, under houses at the settlement" (JAC Diary, February 22, 1834, John Ewing Calhoun Papers, in Orser et al. 1987:747). This is the first reference to indicate that a settlement was formed at the lower plantation. In 1834 he built the overseer's house at Millwood, which was to serve as Calhoun's residence "until I have the leisure to build there a better house" (JEC Diary, March 13, 1834, John Ewing Calhoun Papers, in Orser et al. 1987:747). Millwood apparently concentrated on the production of food stuffs, particularly corn, and on industrial pursuits in 1833 and 1834. Calhoun's diary ends in 1834, and thus the development of the plantation beyond this date is less certain (Orser et al. 1987:748).

By the 1830s Calhoun had discovered at least one means of augmenting his income, and began renting land at Millwood, Midway, and a third plantation, Spotsdale, for shares and for cash. In January, 1833, he rented part of his land to

Absalom Roberts (who had been his overseer the previous year), and received one fourth of the corn, one third of the cotton and half the oats produced from this land. An adjoining field was rented to Elihu Beard for $35, while John Lyon rented other lands for $50 (JEC Diary, January 23, 1833, January 5, 1834, John Ewing Calhoun Papers, in Orser et al. 1987:745). While this provided a means of economic return for the asset he possessed in greatest quantity, it does not explain Calhoun's ability to greatly increase his slave holdings between 1830 and 1840. In the former year he possessed 55 slaves, and faced a constant labor shortage. By 1840 this figure had nearly tripled, and Calhoun owned 155 slaves. He was the master of 183 slaves in 1850, and of 194 slaves by 1860. How he came to acquire so many slaves in the years between 1830 and 1840 is unknown, as are the reasons for the stability of the population between 1840 and 1860, when population increases were more marginal. His papers reveal few references to slave trading, although he did contemplate selling some slaves in 1843; the slave trader he contacted was too busy with transactions in Alabama and Mississippi (J. Hunter to JEC, February 3, 1843, JECP, in Orser et al. 1987:748). Census documentation, as well as a slave ledger book maintained for Calhoun's plantations for the period from 1834 through 1847, suggest that his slaves lived in two-parent, extended family households. His slave population of 1860 was fairly evenly divided, consisting of 88 males, 94 females, 7 mulatto males, and 5 mulatto females. These individuals were housed in 29 dwellings, or at a ratio of 6.68 person per dwelling, a ratio consistent with although somewhat higher than slave occupancy rates in other portions of the South (Orser et al. 1987:749). It is uncertain where among Calhoun's Abbeville estates these slaves lived, although it is likely that the population was constantly evolving and shifting, as different plantations required more or less labor, and as particular fields were used up and abandoned. For example, in 1842 Calhoun received a letter from a prospective renter who had heard that "most of your force has been removed near the river," suggesting that a particular slave village had been relocated (Edward Harleston to JEC, February 15, 1842, JECP, in Orser et al. 1987:749). Settlement most likely moved as Calhoun's interests and means expanded and contracted.

Despite his increased land and wealth, Calhoun was not a major producer of cotton. In 1850 he owned 450 acres of improved land and 9,650 acres unimproved in Abbeville County, with a value of $100,000. On this estate he produced only 70 bales of cotton (consider that George McCalla, with one sixth the slaves and less land still managed to produce 50 bales in this year). While his production of other crops was considerable, none indicate the size of labor force. By 1860 his real estate had declined, now accounting for 1,450 improved acres but only 1,400 unimproved, with a cash value of $40,000. Despite his increased improved acreage, his cotton production fell to 63 bales, and only corn (accounting for 5,500 bushels) and hay (400 tons) showed any significant increase over the 1850 census return (Orser et al. 1987:753). As a measure of comparison, in 1850 Calhoun produced only 0.38 bales of cotton per slave, and in 1860 a paltry 0.32 bales per individual, compared to a range of 1 to 1.84 bales noted for the other planters studied in the reservoir: George McCalla and Bannister Allen.

It is likely that much of Calhoun's work force was diverted to his industrial pursuits. "Pursuit," in this instance, is an accurate term, since it is unclear whether or not Calhoun ever realized his goals for industrialization. What is clear is that these plans were becoming more and more ambitious throughout the 1840s and 1850s. James E. Calhoun and his cousin John C. Calhoun both pursued gold mining in the 1840s, although James does not appear to have had a sound knowledge of minerals, John C. writing him in 1843 that "I doubt whether the specimen you sent contains metal of any discription" (John C. Calhoun to JEC, John J. Calhoun Papers, in Orser et al. 1987:751). However, as Orser et al. note (1987:751): "at least one individual thought that Calhoun had found something of value somewhere, for in 1843 he had a request to lease his gold mine" (P. S. Garvin to JEC, January 4, 1843, JECP).

In March, 1837, John C. wrote "I attended to your business in Washington, and have collected a good deal of information in relation to the manufacture of cotton seed oil, of the success of which I have very flattering accounts" (John C. Calhoun to JEC, March 22, 1837, John C. Calhoun Papers, in Orser et al. 1987:751). John C. appears to have been especially concerned with the industrial pursuits of his cousin and brother-in-law (he had married James' sister in 1811). On a later occasion he wrote a letter of introduction for John Hastings of Philadelphia, a superintendent of cotton manufactures, assuming that James might be "disposed to commence one" (John C. Calhoun to JEC, March 27, 1838, John C. Calhoun Papers, in Orser et al. 1987:751). A month later John C. stated his position on industrialization adamantly: "If I were in your situation, I would not hesitate. You could commence almost for nothing, and make your women & children your most valuable hands" (John C. Calhoun to JEC, April 21, 1838, John C. Calhoun Papers, in Orser et al. 1987:751).

James appears to have heeded his brother-in-law's advice. In 1840 he set out to construct a saw mill and cotton mill, and wrote "I have never been more constantly busy, laying out the work for the Receiving Room, laboring on the Saw Mill etc. Having put it in complete fix, I shall now have to finish the Merchant Mil, & feel confident can do all with my own Negroes" (JEC to Maria Calhoun, April, 1840, JECP, in Orser et al. 1987:751-752). In 1841, a mechanic from the Pendleton factory informed Calhoun that he had arranged for a Mr. Mason to build him mills and improvements, while another mechanic from Pendleton informed Calhoun in the following year that he was attempting to build too large of a factory. This mechanic recommended that Calhoun focus on the production of cotton bagging, predicting that cotton would replace hemp, and noted that the "expense of machinery for making two hundred yard per day would not exceed about three thousand whilst you could not possibly start Even a small Factory for less than twenty five or thirty thousand dollars with new Machinery" (John Kershaw to JEC, September 10, 1842, JECP, in Orser et al. 1987:752).

It is difficult to judge from the correspondence how far Calhoun's industrial vision had taken him. The letters are almost entirely one-sided, responses to queries Calhoun had made. Evidently he intended at first to construct a grand industrial complex, someplace which could convert his various agricultural products into finished goods. He was also counseled against doing so by some of those whose advice he sought. Calhoun clearly proceeded with some of his industrial strategies. In October, 1843, a New York loom manufacturer wrote that he had received Calhoun's order for a "loom for weaving cotton Bagging, osnaburgs and Negro clothing," and requested more information before filling the order (J. B. Boisseau to JEC, October 24, 1843, JECP, in Orser et al. 1987:752). In 1845 Calhoun was again in correspondence with John Hastings, the Philadelphia textile superintendent who was now in Florida running a slave-outfitted textile mill. Hastings wrote "You say you have about $2,000 of Machinery on the spot fitted for the fabrication of woolen & coarse cotton goods.... From the facilities you have, having a blacksmith & carpenter I could get the machinery running at a small outlay of money when placed on the spot -- what small shaft & drums would be required we could make there with my assistance & instructions" (John Hastings to JEC, May 5, 1845, JECP, in Orser et al. 1987:752). Calhoun had apparently followed the advice of the Pendleton mechanic, purchasing machinery for the production of cotton bagging, but lacked the know-how to make the machinery work. If purchases of osnaburgs and bagging made by Calhoun in the late 1840s are an indication, this part of his industry may never have gotten off the ground (Orser et al, 1987:753).

The censuses provide conflicting information on Calhoun's industrial success. On his 1850 census return, Calhoun listed an unspecified number of mills producing corn and wheat flour and boards, with a value of only $1,000. However, the 1860 census lists an Abbeville enterprise of Rogers & Calhoun, which possessed grist mills, a saw mill, a tannery, and a smith shop, with a total capital investment of $5,200 and production worth $8,400 (Orser et al. 1987:753). If Calhoun was partner in this industry, then many of his dreams must have been realized.

For all his energy, industry, and wealth, Calhoun lived a relatively simple life for a planter. He married only once, to Maria Edgewood Simkins, in 1839. Her death in 1844 left him childless and widowed, and Calhoun abandoned work on the grand house he was intending to replace their more humble dwelling. Calhoun continued on at Millwood in the house once built to house his overseers, engaged in a variety of pursuits, a visionary, out of step with his neighbors and with his region.

The four men discussed above indicate there was no common pattern or formula which produced a successful planter in the Russell Reservoir area in the nineteenth century. Nor were their lives dictated by the "trends" of history, economics, politics, and other forces commonly considered in historical overviews. Banister Allen's fortune declined during the decade from 1850 to 1860; George McCalla's rose mercurially; and James Calhoun's wealth is difficult to document due to his scattered energies and possessions. These four individuals provide a range of planters from the Russell Reservoir, not a template. They were not the only agrarian inhabitants of the region. In order to more fully document the agrarian world, three more individuals must be considered in this section: William Clinkscales and Lyndsey and Henry Harper, farmers.

<u>William Franklin Clinkscales</u> William Clinkscales and his family arrived in the area of Lowndesville, Abbeville County, between 1850 and 1856, purchasing 450

acres along the Savannah River. There the family settled, building a home which would shelter three generations, and be known as "The Old Home Place." Clinkscale's first recorded presence in the county appears in the 1856 tax digest, at which time he was assessed a tax of $64 on 450 acres and six slaves. Of this land, only 100 acres were improved (Gray 1983:28).

Clinkscales' status had changed little by 1860. As of that date he was listed as owning 420 acres, with 100 improved, and eight slaves. He possessed limited amounts of livestock, and produced a range of crops, led by corn, but including 18 bales of cotton (Table 15; Gray 1983:30-31). These two documents,the 1856 tax record and the 1860 census return are our only insights into the life of William Clinkscales.

Lyndsey and Henry Harper The Harper family arrived in Abbeville County in the early nineteenth century, with their presence positively documented as early as 1817. Lyndsey Harper's father, Henry, had arrived at Edinburgh, Georgia from Albemarle County, Virginia, at sometime prior to 1792, and established a ferry in Edinburgh. In 1808, his son Lyndsey, married Jane Harris of Abbeville County, and it is possible that he moved to Abbeville, and perhaps her parents home, at that date. Evidence that the Harper plantation was originally the Harris homestead comes from the inscription on Jane Harris Harper's tombstone, in the family cemetery located nearby the Harper site. This inscription reads "she was born, lived, and died within 300 yards of her grave." No documents were revealed during the research of this site which could confirm its transfer from the Harris family to Lyndsey Harper (Gray 1983:55-56).

The Harper site is shown on the 1820 map of the Abbeville District prepared for Mill's Atlas of 1825 (Figure 87). The site was located at the confluence of Ross' Creek and the Savannah River, below the town of Edinburgh on the South Carolina side of the river. By 1820 Lyndsey Harper's household was listed as containing eight slaves and four free persons of color. This slave population remained stable through 1840, and Lyndsey's fortunes appear to have witnessed few changes in the decades between 1820 and 1840 (Gray 1983:57).

Lyndsey Harper died in 1850. He left his plantation to his wife Jane, for use during her life or widowhood, after which the plantation was to be divided among their six children. His son James C. was willed the lands north of Ross' Creek, at a price of $7 per acre, if he wanted them, and otherwise these lands were to be sold and the proceeds divided according to the arrangements provided for the rest of the estate. Lyndsey also left behind a detailed inventory, which provides an excellent source for the interpretation of his material wealth (Table 16).

Unlike most inventories, which lump categories, Lyndsey Harper's estate is broken out by rooms and activities. The house had a dining room, parlor, hall, two bed rooms, a "North Upper Room," a left and right hand shed room, a piazza, a "little room," an "upper south room," a kitchen, a smoke house, and a milk house. The most expensive furniture was in the "North Upper Room," which was possibly a study or guest bedroom located on the second floor of the house. Other

Table 15: W. H. Clinkscales' and Henry Harper's Agricultural Production, 1850 and 1860, from the Census Returns (Gray 1983:31, 66, 71).

	Clinkscales 1850		Henry Harper 1850		Henry Harper 1860	
	N	$	N	$	N	$
Acres of improved land	150		165		400	
Acres of unimproved land	270		635		1,000	
Cash value of farm		$6,300		$8,000		$21,000
Cash value of farm machinery		140		250		950
Horses	5		6		9	
Asses and mules	1		2		3	
Milk cows	5		5		12	
Working oxen	4		2		8	
Other cattle	21		30		30	
Sheep	50		18		50	
Swine	50		11		35	
Value of livestock		$1,326		$840		$2,678
Value of livestock slaughtered		372		[illegible]		760
Wool (pounds)	100		40		60	
Butter (pounds)	250		200		365	
Beeswax (pounds)	--		120		30	
Honey (pounds)	--		--		400	
Wheat (bushels)	--		200		300	
Rye (bushels)	--		6		50	
Indian corn (bushels)	1,200		1,500		1,500	
Oats (bushels)	100		200		200	
Cotton (bales)	18		19		30	
Peas and beans (bushels)	150		70		200	
Irish potatoes (bushels)	25		10		50	
Sweet potatoes (bushels)	75		40		--	
Barley (bushels)	--		--		--	
Hay (tons)	6		--		8	

Table 16. "An Inventory of the Personal Property of Lyndsey Harper deceased" (From Gray 1983:59-60).

	$	Cts
Dining room Furniture	134	55
Hall Room "	149	00
Parlor " "	134	00
The North Corner Bed Room Furniture	30	00
The Family bed Chamber Furniture	171	00
One fine silver lever Watch	47	00
The right hand shed room Furniture	40	00
The left hand shed room Furniture	40	00
Front Piazza Furniture	6	00
The little room "	2	00
The upper south Room "	90	00
Kitchen Furniture	62	621/2
Smoke House furniture	2	00
Milk House Furniture	70	00
A young boy, Peter	800	00
" " " Anderson	1000	00
" " " Solomon	550	00
" " " Ben	550	00
A young girl, Eliza	630	00
" " " Margarette	565	00
" " " Lucy	450	00
" " " Mary Ann	400	00
An old man Jim	400	00
A diseased woman Aggy	251	00
A woman Blanc & child Martha	700	00
" " Elizabeth & two children, Angeline & Reuben	1200	00
A young boy Monk	800	00
John & Charlotte Old people	2	00
Jack An old man	1	00
One Bay horse Dave	30	00
One Sorrel Mare Bimcomb	20	00
One Grey horse, Tom	50	00
On Large Bay Horse, Bob	50	00
Eight Milk cows with calves	64	00
One yoke oxen	30	00
Twelve head of dry cattle	48	00
One lot of hogs	72	00
" lot of sheep	73	75
" " " old corn 232 bu at 50 cents per bu	116	00
" " " new corn 756 bu at 62 1/2 pr bu	570	00
" " " fodder Sup 900 lbs at 62 1/2 pr wt	56	25

	$	Cts
" " " Bacon Supposed 12000 lbs at 8 cts pr lb	96	00
" " " Lard Supposed 100 lbs at 8 cts pr lb	8	00
" " " Tallow Supposed 35 lbs at 10 cts pr lb	3	50
" " " Shelled peas Supposed 45 bu at 50 cts pr bu	22	50
" " " Oats in the sheaf	60	00
Shucks in the pen	2	00
One first rate set of Carpenter's tools	39	75
Two cross cut saws	6	00
" Grind stones	2	50
" Cutting blades	1	75
One lot of Barrel staves	3	00
Two large poplar troughs	2	00
One lot of coal	8	00
" " " Bar Iron	32	50
" " " Old iron & three iron wedges	5	00
One set of Smith's tools	40	00
One half keg of nails	2	50
" Barouche and harnes	125	00
A couple of ox-carts	30	00
A little one horse wagon	40	00
One lot of Sundries	2	00
" " " Hogheads	3	00
" " " Lumber	8	50
One lot of bees and hives	10	00
One lot of Plough-irons, stocks and swingletrees	27	00
" " " Spades hoes axes & crowbars	11	00
" " " Plough gear	5	00
One cutting knife and wheat fan	10	00
Two knives for currying and preparing leather	1	00
	[$11064	62]

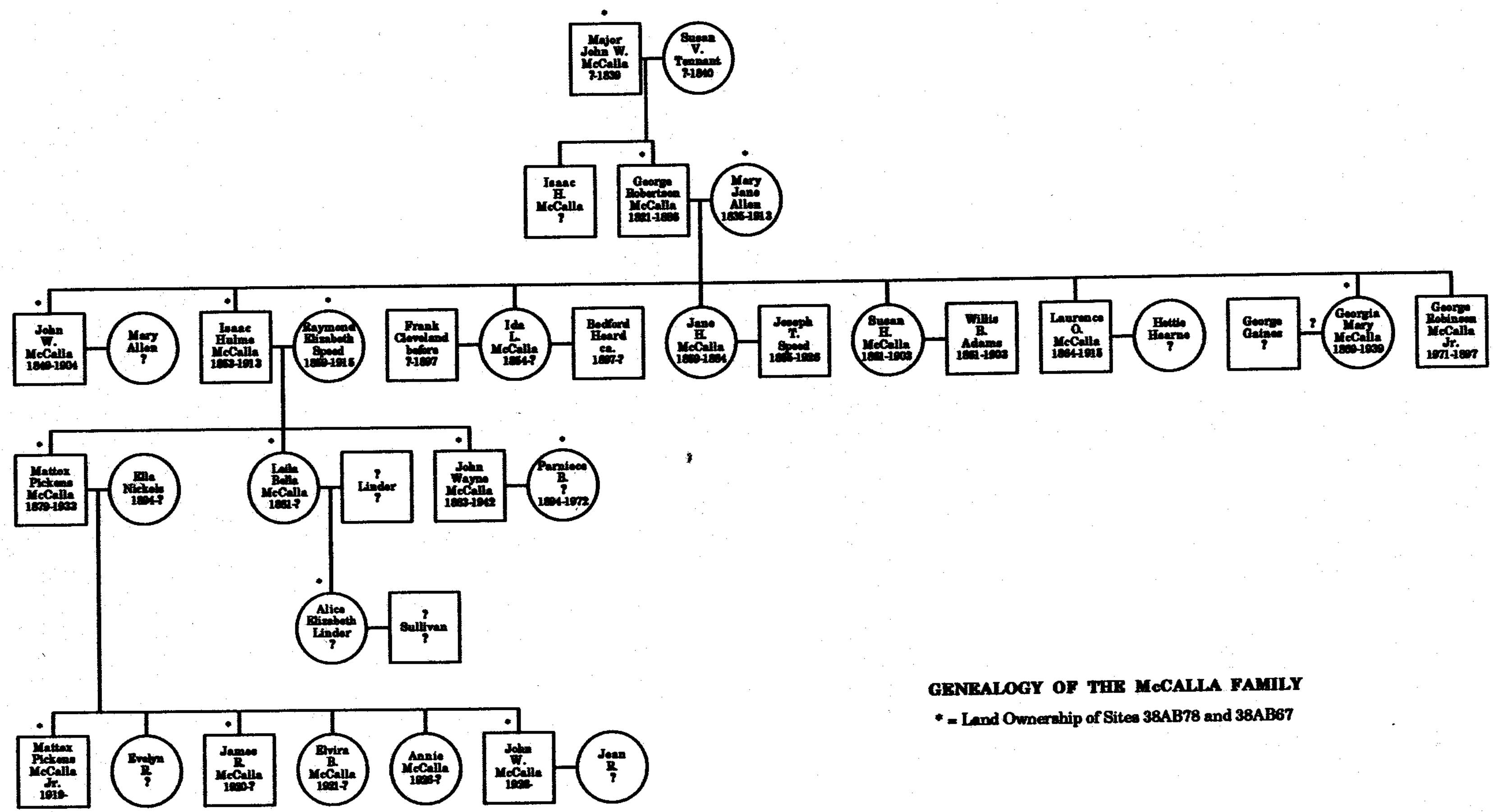
We the undersigned appraisers being duly qualify & do certify that we have appraised the personal Estate of Lyndsey Harper deceased as showed us by the Exrs of Said Estate according to the forgoing Inventory 9th May 1850. Wm. Speer, Alexr. Oliver, Peter S. Burton Appraisers.

rooms in the upper bracket in the value of furniture included the dining room, hall, and parlor, which would have been the main focus of social activities in the house, all located on the first floor. Only two bed rooms are specifically mentioned: the north corner bed room and the family bed chamber. In 1850 Lyndsey and Jane Harper's youngest son was 20, and their remaining nine children ranged in age from 42 to 23 (see Figure 88), thus it is unlikely that the house sheltered more than three to five inhabitants. Possibly the "upper south Room," and "little room" were once bedrooms as well. It is uncertain what purposes the left and right shed rooms served, although these may have been enclosed sections of the front porch (referred to as the front piazza on the inventory) which were common on many antebellum southern homes. Such rooms were used to house travelers, and the right hand shed room has furniture with approximately the same value as that of the two bedrooms, suggesting it may have served such a function.

The appraisers appear to have followed a logical progression through the house and grounds. Following this assumption, it is possible to reconstruct the form and features of this farmstead. Beyond the main house were a smoke house and milk house, apparently relatively close by. Assuming that the slaves are then listed because of proximity, the slave village must have been situated just beyond the smoke house and milk house at the rear of the yard. It is difficult to determine whether the listing of slaves reveals any patterns of residence, however, it is interesting to note that four "young boys" are listed together, then four "young girls," suggesting possible dormitory-style housing by sex. The remaining slaves are not broken out by any conceivable pattern; an old man and diseased woman are listed, then two family units composed of mothers and children, then another young boy, and finally three more old people. All of these may have been divided by extended family groupings, or by age, or randomly distributed.

Next encountered appears to have been the livestock shelters: stable, barn, animal pens etc., where the agricultural produce was also stored: corn, peas, etc. However, bacon and lard are listed here, which should have been found in the smokehouse. There was also apparently a small blacksmith's shop, and probably an additional structure housing other farm implements: stocks and swingletrees, hoes, axes, log chains, etc.

The sale of Lyndsey's estate in 1851 provides additional information on the family. Most of the property was purchased by members of the family, with son Henry H. Harper buying six slaves and 227 acres of land. Jane Harper purchased the eight remaining slaves: all of the women and old people. The price received for the six slaves purchased by Henry Harper and the five remaining others was consistently higher than their appraised value, on an average $256 more than valued the previous year. The returns on the estate indicate that Lyndsey Harper loaned a considerable amount of money, and also demonstrate that he was a successful producer of cotton, his estate owning 55 bales in 1850. Lyndsey also was apparently a miller, having produced 30 barrels of flour valued at $195 in that year. Several payments were made to individuals referred to as "landlord" or



Source: Gray 1983:78.

Figure 88. McCalla Genealogy.

Note: This genealogy was constructed solely as a reference for the chain-of-title history of the sites studied by Gray, and does not show all McCalla family members.

"landlady," one as far away as Augusta, who presumably managed property for the Harper family. Payments made by the estate in 1852 included $80 for a cotton gin, $120 for one paneled tombstone, $10.62 for freight on the tombstone, and $8 for a land survey (Gray 1983:65).

Lyndsey was already dead when the 1850 census was taken,and Henry H. Harper was managing the farm. The 1850 census (Table 15) indicates the estate possessed 850 acres, of which 165 were improved, and produced a mixed quantity of crops. According to the 1850 Agricultural Schedule, only 19 bales of cotton had been made, less than the 55 bales listed in the estate returns for that year.

Jane Harper died in 1853. The inventory of her estate provides an interesting contrast to that of her husband's, and a rare insight to the woman's world in the Russell Reservoir in antebellum period (Table 17). Jane Harper's possessions were mostly household items: furniture, kitchen utensils, etc. She also possessed several books, as noted in the sale bill for her estate: biographies, a four volume history, the "Life of Christ," a dictionary, and a volume on the Greek Revolution. A carding machine, loom, spinning wheels, and flax wheels all attest to her production of cloth for the family's use. Noticeably missing from her inventory are the slaves and livestock she purchased from her husband's estate; these must have been transferred to her children at some time before her death.

Henry H. Harper acquired much of the family land following the death of his mother. The 1856 tax return lists Henry as the owner of 705 acres and 34 slaves, so by this date he had attained the status of planter. According to the 1860 agricultural schedule, Henry owned 42 slaves (who were sheltered in seven dwellings), and 1,400 acres of land, of which 400 were improved. He produced 30 bales of cotton in that year (0.71 bales per slave), and a fair amount of indian corn (1,500 bushels) (Table 15).

Summary The histories of the planters and farmers outlined above indicates that there were no peculiar traits that served to separate one class from another. Each followed a fairly distinctive course; James Calhoun inheriting a substantial estate which became as much his toy as livelihood, George McCalla consolidating his father's lands and quickly advancing into the upper echelon's of planter status, Banister Allen maintaining his family estate with little upward progress after substantial strides in the 1830s. What distinguished these men as planters versus farmers appears to have been a certain drive and the resources with which that drive was put in motion. Table 18 outlines comparative statistics on land, labor and agricultural productivity of these five estates between the years of 1850 and 1860. These figures are credible only for broad generalizations, since they do not account for the years before 1850, but they provide a measure of activity and changing patterns of wealth and land use within this particular decade. In 1850 three of our five individuals had attained planter status (McCalla, Allen, and Calhoun), while Henry Harper was poised on the brink of this ranking. William Clinkscales had not yet appeared on the landscape. By 1860 all but Clinkscales had acquired enough slaves to be considered planters. Interestingly, the greatest increase in slave holding and the value of real estate, the two primary measures

Table 17. "Appraisement Bill of the Estate of Mrs. Jane Harper Deceased late of Abbeville District, South Carolina, Appraised July 7th 1853. By E. P. Speed, W. F. Clinkscales, & Josiah Burton -" (From Gray 1983:67-68).

	$	Cts
One Dining Table	2	50
Water Bucket & Stand	1	00
Lot of crockery, spoons, knives & waitins	25	00
Lot of candle sticks	1	50
lot of Jars	1	00
Bed of furniture	12	00
3 Tables, bowls, & pitchers	7	00
Lot of Bed clothing & chest	25	00
2 Chests		50
3 Barrels		75
Ropes, works, pail, & c.	5	00
5 Demi-jons	5	00
1 Thermometer	1	00
Lot of castings	10	00
10 Split bottom chairs	2	00
1/2 Doz Windsor chairs	3	00
Side board & contents	35	00
1 Dining Table & 1 small do	8	00
1 Clock	5	00
silver Candle sticks & snuffers	1	50
Set of Draws, glass, Tables & arm chair	20	00
1 Dining Table	25	00
1 Doz flag chairs	12	00
1 Carpet & Rug	3	00
Fender fire dogs shovel & tongs	15	00
2 Silver Candle Sticks	2	00
2 pictures	3	00
Lot of Books	5	00
Seat of draws, whash stand & bowl	30	00
Bed of furniture	20	00
Be of furniture	18	00
Lot of sundries in smoke House	3	00

	$	Cts
Carding Machine	8	00
5 Spinning wheels & scale	7	00
Loom, Gin, & flax wheels	12	00
2 Tables, Barrels, Mortar & Tub	3	00
Lot of Jars & Tins	5	00
Lot of Bowls	1	50
Andirons Shovel & tongs	2	00
" " & poker	1	50
	[$347	75]

South Carolina Abbeville Dist.
We the subscribers Sworn appraisers of the Estate of the late Mrs Jane Harper do herby Certify that the above is to the best of our belief a true apprasment of her Estate

Sworn to before T N Gante M A P
July 7, 1853

E P Speed
W. F. Clinkscales
Josiah Burton

_____Appraisers__

Table 18: The Use of Land and Labor in the Russell Reservoir - A Comparison of Holdings and Agricultural Production for the McCalla, Allen, Calhoun, Clinkscales, and Harper Families, 1850 and 1860

	McCalla	Allen	Calhoun	Clinkscales	Harper
1850					
No. Improved Acres	400	1,300	450	--	165
No. Unimproved Acres	755	1,000	9,650	--	635
Value of Real Estate	$13,860	$25,000	$100,000	--	$8,000
No. Of Slaves	27	64	183	--	19
Bales of Cotton	50	64	70	--	19
Bushels of Corn	1,200	1,000	2,500	--	1,500
Bales of Cotton/Slave	1.85	1	0.38	--	1
Bushels of Corn/Slave	44.4	15.6	13.6	--	78.9

	McCalla	Allen	Calhoun	Clinkscales	Harper
1860					
No. Improved Acres	800	800	1,450	150	400
No. Unimproved Acres	2,200	925	1,400	270	1,000
Value of Real Estate	$31,000	$17,270	$40,000	$6,300	$21,000
No. Of Slaves	85	58	194	8	42
Bales of Cotton	110	57	63	18	30
Bushels of Corn	1,400	3,000	5,500	1,200	1,500
Bales of Cotton/Slave	1.3	1	0.3	2.25	0.7
Bushels of Corn/Slave	16.5	51.7	28.3	150	35.7

	McCalla	Allen	Calhoun	Clinkscales	Harper
Percentage of change 1850 to 1860					
No. Improved Acres	+100%	-38%	+220%	--	+142%
No. Unimproved Acres	+191%	-7%	-85%	--	+57%
Value of Real Estate	+123%	-31%	-60%	--	+162%
No. Of Slaves	+215%	-9%	+6%	--	+121%
Bales of Cotton	+120%	-10%	-10%	--	+58%
Bushels of Corn	+16%	+200%	+120%	--	0

of wealth in the antebellum South, were made by George McCalla and Henry Harper, who were among the least wealthy in 1850. The value of McCalla's real estate had increased by 123 percent, while Harper's landholdings had demonstrated even greater gains, increasing by 162 percent. Both men had augmented their slave labor force, McCalla investing the bulk of his capital in this area (for a 215 percent gain) and Harper also showing considerable improvements (a 121 percent increase). Surprisingly, the two wealthiest individuals in 1850, James Calhoun and Banister Allen, had lost wealth by 1860, Allen losing 31 percent of his real estate value and nine percent of his slaves, Calhoun losing 60 percent of his real estate value and only marginally augmenting his slave force (a 6% increase). While a variety of factors obviously contributed to these transformations (we have already considered Calhoun's industrial ventures, and McCalla's possible inheritances), at least one measure of their success appears to have come from productivity. In 1850 McCalla produced the greatest amount of cotton per slave, and the second largest amount of corn per slave, while Harper produced the most corn per slave and tied Allen for cotton productivity. The 1860 statistics are interesting, in that William Clinkscales, the poorest of the lot, led in both categories of production. Clinkscales was probably assisted by a number of family members, none-the-less, the productivity he enjoyed in 1860 suggests that he might have entered the planter class at some point in the future, had plantation culture remained intact.

Productivity can be considered in part as a measure of land fertility and improvements. McCalla and Harper had both substantially increased their acreage in improved lands, indicating they'd prepared new fields and avoided soil depletion. Allen had lost improved acreage, possibly through sale, or through the erosion and exhaustion of improved acreage listed in 1850. Calhoun demonstrated the greatest increase in improved acreage, yet his overall agricultural productivity did not improve substantially. It should be considered, however, that Calhoun was in the habit of leasing his lands, and thus some of these improved acres may have benefited other farmers and planters.

These statistics, and the histories outlined above, indicate there was no single shared common lifeway for planters and farmers in the Russell Reservoir. Some, like Calhoun, married only once, bore no children, and lived in a very modest household considering his wealth. Banister Allen had three wives and fourteen children in his lifetime. Lyndsey Harper, Henry's father, possessed a fairly substantial and well outfitted home at a time when his wealth was not considerable. In instances when patriarchs passed on, and sons inherited plantations, there is no evidence of primogeniture or other patterns for the transition of wealth. George McCalla was the second youngest son, Henry Harper the sixth, yet each recreated their father's estate. The lives of other children occurred outside the project area, and are less easily reconstructed. The historical record clearly indicates there was no pattern in the lives of these men. The question remains, was there pattern in their material world? Did norms and ideals exist on the arrangement of structures, the provisioning of slaves, the rotation of crops, which all obeyed?

Planters and farmers are the best documented inhabitants of the project area. The lives of their slaves are less well known. Slave life and material culture on the southern plantation has been portrayed as a homogeneous unit -- the daily routine. It should be cautioned that this homogeneity was almost certainly untrue, that it is a product of a paucity of historical documentation. Never-the-less, it provides a basic introduction to the material world of the plantation.

Slave Life on the Plantation: The Daily Routine

As historian Bennett Wall has noted (1975:232; in The History Group 1981:17), the agrarian South was united by annual patterns of labor: planting, harvest, and maintenance. Small farmers and the South's wealthiest planters alike shared these patterns. The annual "routine of growing cotton," as reconstructed by historian Julia Floyd Smith, applied to the project area as well as to other portions of the cotton South (Smith 1973:66-67; in The History Group 1981:17):

> During January and February, any cotton remaining on the plants was picked, sunned, ginned, and packed for shipment; fields were cleaned, plowed, and prepared for spring planting. Planters who used fertilizer had it spread at this time. Wood was cut, hauled, and split for fence rails; logs were burned, fences repaired, and new ones built; buildings and tools were repaired; vegetables were planted.
>
> During March and April, light furrows were made in corn and cotton fields, and seeds were planted and covered by hand with a harrow; vegetables were cultivated and cornfields plowed. In May, cotton was 'barred.' Barring off cotton or siding cotton was done by running single furrows with a one-horse turn-plow close alongside the rows of young cotton plants, throwing the earth to the 'middles.' This lessened the labor of the first 'chopping.' Chopping was followed by 'splitting the middles,' throwing earth back again to the ridges on which the cotton plants stood. As cotton plants grew, cultivation was done with shallow plows, or 'sweeps.' Between May and August cotton and corn were cultivated until ready to be picked. The first picking of cotton began in August.
>
> From September to January cotton was picked, ginned, pressed, and shipped to market. Teams of mules or oxen were used to haul the wagons of baled cotton to market. 'Goading six or eight yoke of oxen all day and camping by night' while hauling cotton was 'the winter routine' of many plantation slaves. During the fall, peas were gathered, sweet potatoes were dug and stored in straw-lined mounds of earth called 'banks,' corn was gathered and shucked, fodder was stored, ditches cleaned and repaired, wood cut and hauled, and new ground cleared. Thus, one growing cycle overlapped the next, [and] though there was some variation from this general schedule, the work of cotton growers was essentially the same everywhere.

Most cotton plantations organized and deployed their labor forces under the "gang" system, essentially working sunup to sundown at daily tasks such as chopping or planting while under the supervision of the plantation owner, his overseer, or a slave "driver." Gang labor also provided a means of controlling potentially rebellious workers, by forcing them to labor from "can to can't" (Orser et al. 1987:642). Men, women, and children above the age of ten to twelve worked side by side in the fields. Most planters gauged the capability of their slaves in relation to the work which could be performed by a healthy male "hand." Thus children might be classified as "quarter hands," indicating they could accomplish only a fourth of the work for which an adult was capable. The work was physically demanding. For example, during harvest slaves in the best physical condition were expected to pick 300 or more pounds of cotton per day. Planters often weighed each slave's produce at the end of the day, and delivered lashes as a punishment for not making quota (Bennett 1970: 74; Steward 1969:12; Brooks 1978:124; Eaton 1966:211).

While most slaves were engaged in the daily routine of cotton cultivation, others were assigned more skilled duties. In general, slaves can be divided into three groups: those whose duties required them in the main-house, where some of this group also resided; those whose skills separated them from the field hands, the carpenters, blacksmiths, masons, and others; and the field hands, who formed the bulk of the community. Field hands were not always continually assigned to the agricultural services of the plantation; each plantation functioned as a self-contained community, and carried out a variety of industrial tasks which the agrarian pursuits proved necessary. Benny Dillard, an Elbert County slave, remembered that (in Rawick 1972:285-299; as cited in The History Group 1981:99):

> Master's gin was turned by a mule. That big old gin wheel had wooden cogs what made the gin work when the old mule went 'round and 'round hitched to that wheel. That old cotton press was a sight. First they cut down a big old tree and trimmed off the limbs and made grooves in it for planks to fit in. It was stood up with a big weight on top of it, over the cotton what was pressed. It was worked by a wheel what was turned by a mule, jus' like the one what turned the gin. A old mule pulled the pole what turned the syrup mill too. Missy, them old mules done their part 'long side the Niggers them days, and Marster seen that his mules had good keer too. When them mules done turned the mill 'till the juice was squz out of the sugarcane stalks, they strained dat juice and boiled it down 'til it was jus' the finest tastin' syrup you ever did see. Marster's mill where he ground his wheat and corn was down on the crick, so the water could turn the big old wheel.

The plantation world was governed by the rhythms of planting and harvest. While the slaves were mostly engaged in work, there were also times of relaxation, and shared conditions promoted a strong sense of community. Carrie Hudson, another Elbert County slave, remembers that (in Rawick 1972:220-231; as cited in The History Group 1981:97):

> Saddy nights the young folkses picked the bango, danced and cut de buck 'till long after midnight, but Christmas times was when chilluns had their bestes' good times. Marese Elbert 'ranged to have a hog killin' close enough to Christmas so there would be plenty of fresh meat, and there was heaps of good chickens, turkeys, cake, candies, and just everything good. And during the Christmas, slaves visited 'roun from house to house, but New Year's Day was work again, and there was always plenty to do on that plantation. Most all the Niggers loved to go to them cornshuckin's, 'cause after the corn was all shucked they give 'em big suppers and let em dance. The cotton picken's was on nights when the moon was extra bright 'cause they couldn't do much lightin' up a big cotton field with torches like they did the places where they had the cornshuckin's. After cornshuckin's, they might be dancin' by the light of torches, but us danced in the moonlight when the cotton was picked and the prize done been give out to the slave what picked the most. Logrollin's was the most fun of all. The men and womens would roll them logs and sing and they give 'em plenty of good eats, and whiskey by the kegs, at logrollin's. The Marsters, they planned the cornshuckin's, and cotton pickin's, and log-rollin's and provided the eats and liquor, but the quiltin' parties belonged to the slaves. They 'ranged 'em their own eats, but most of the Marster would let 'em have a little somepin' extra like brown sugar or 'lasses and some liquor. The quiltin's was in the cabins, and they always had 'em in winter when there warn't no field work. They would quilt a while and stop to eat apple pies, peach pies, and other good things and drink a little liquor.

Slaves depended on the planter for housing, food, and clothes. While the rationing of these resources varied from plantation to plantation, all appear to have been governed by the planter's desire to keep his work force adequately enough clothed, fed, and housed to remain healthy, while distributing the least of his personal capital. Frederick Law Olmsted described the dress of female field workers as (1959:110; as cited in Brooks 1978:124) :

> ...coarse gray gowns, generally very much burned and dirty; which, for greater convenience of working in the mud, were reefed up with a cord drawn tightly about the body, a little above the hips -- the spare amount of skirt bagging out between this and the waist proper. On their legs were loose leggins or pieces of blanket or bagging wrapped about, and lashed with thongs; and they wore very heavy shoes. Most of them had handkechiefs, only, tied around their heads; some wore men's caps, or old slouched hats, and several were bareheaded.

Clothes were either provided ready-made, or fashioned by the female slaves from cloth distributed by the master. Some plantations employed a seamstress who made the garments of all the plantation's slaves. Many planters appear to have allocated ready-made clothes to the men, and cloth to the women. Planters recognized only two seasons: winter and summer, and allotted the bare necessities for each. A South Carolina planter described the yearly clothing allowance distributed to his slaves as follows (as cited in Bennett 1970:74; in Brooks 1978:125):

> Each man gets in the fall 2 shirts of cotton drilling, a pair of woolen pants and a woolen jacket. In the spring 2 shirts of cotton shirting and 2 pr. of cotton pants.... Each woman gets in the fall 6 yds. of woolen cloth, 6 yds. of cotton drilling and needle, skein of thread and 1/2 dozen buttons. In the spring 6 yds. of cotton shirting and 6 yds. of cotton cloth similar to that for men's pants, needle, thread, and buttons. Each worker gets a stout pr. of shoes each fall, and a heavy blanket every third year.

Food was similarly rationed, and usually provided on a weekly basis. Some planters assigned a cook responsible for preparing the evening meal for all the plantation slaves, although many seem to have left meal preparations to each individual or family. Austin Steward, a slave for 22 years, recalled that (1969:11-13; in Brooks 1978:125):

> The slaves on our plantation were provided with very little meat. In addition to a peck of corn or meal, they were allowed a little salt and a few herrings. If they wished for more, they were obliged to earn it by over-work. They were permitted to cultivate small gardens, and were thereby enabled to provide themselves with trifling conveniences. But these gardens were only allowed to some of the more industrious.
>
> It was the usual practice to have all of the old slaves set apart to do the cooking. All the field hands were required to give into the hands of the cook a certain portion of their weekly allowance, either in dough or meal, which was prepared in the following manner. The cook made a hot fire and rolled up each person's portion in some cabbage leaves, when they could be obtained, and placed it in a hole in the ashes, carefully covered with the same, where it remained until done. Bread baked in this way is very sweet and good. But then cabbage leaves could not always be obtained. When this was the case, the bread was little better than a mixture of dough and ashes, and not very palatable.

Charlie Hudson, an Elbert County slave born in 1858, described the diet provided by his mother, who was also the main-house cook, and may have had access to a greater variety of foodstuffs (in Rawick 1972:220-231; as cited in The History Group 1981:98):

> Most times it was meat and bread with turnip greens, lye hominy, milk, and butter. All our cookin' was done on open fireplaces. Oh! I was fond of 'possums, sprinkled wid butter and pepper, and baked down 'till the gravy was good and brown. You was lucky if you got to eat 'possum and gnaw the bones after Ma done cooked it.

The basic constituents of the slave diet appear to have been corn meal and salt pork, and fresh vegetables and meat were most likely obtained through the slave's energies in gardening and hunting.

Slave housing on cotton plantations was most frequently of log construction (McDaniel 1982). The reasons why this particular mode was preferred are several. Timber was one the upland plantation's most available and least expensive resources. The gathering of logs for cabin construction required only the slaves' time and labor, and did not burden the planter with any monetary cost. Since most planters were engaged in clearing land in preparation for new fields, logs were a reliable and abundant resource. Cotton also quickly depleted the fertility of agricultural fields, and hence cotton fields rarely were employed for more than three to five consecutive years. As the fields moved, slave villages often followed. The planter thus gained no economic incentive from constructing a more permanent architecture, if such structures were abandoned at intervals of three to five years. Wood planking, a common resource of the coastal region, was less readily found in the Piedmont, and the cost of brick was beyond the means of most planters in the project area for their own homes, much less slave dwellings. Together these factors conspired to dictate the form of the slave cabin commonly associated with the Old South, the earth-floored, log structure of meager dimensions.

Contemporary descriptions of slave housing illuminate the rugged simplicity which characterized these structures. Writing of cabins he saw at a Virginia plantation, Olmsted noted (1959; in Brooks 1978:127):

> The houses of the slaves are usually log-cabins, of various degrees of comfort and comodiousness. At one end there is a great fire-place, which is exterior to the wall of the house, being made of clay in an enclosure, about eight feet square and high, of logs. The chimney is sometimes of brick, but more commonly of lath or split sticks, laid up like log-work and plastered with mud. They enjoy great roaring fires, and, as the common fuel is pitch pine, the cabin, at night when the door is open, seen from a distance, appears like a fierce furnace. The chimneys often catch fire, and the cabin is destroyed.... Several cabins are placed near together, and they are called "the quarters."... The situation chosen for its reference to convenience of obtaining water from springs and fuel from woods.

This view was echoed by Steward, who described the cabin he lived in as (1969; in Brooks 1978:127-128):

> ... a small cabin, built of rough boards, with a floor of earth, and small openings in the sides of the cabin were substituted for windows. The chimney was built of sticks and mud; the door, of rough boards; and the whole was put together in the rudest possible manner. As to the furniture of this rude dwelling, it was procured by the slaves themselves, who occasionally permitted to earn a little

> money after their day's toil was done. I never knew Capt. H. to furnish his slaves with household utensils of any description.

Carrie Hudson, born in 1863 on Joseph (Squire) Rucker's plantation in Elbert County, described the slave (and later freedman) village in which she was raised. Her description echoes Steward's mention of the limited furnishings found in slave cabins (in Rawick 1972:211-219; as cited in The History Group 1981:96-97):

> Us lived in log cabins scattered 'round the plantation. The biggest of them had two rooms and every cabin had a chimbly made of sticks and red mud. Most of the chillun slept on pallets on the floor, but I slept with my Pa and Ma 'cause I was so pettish. Most of the beds were made of poles, this away: they bored two holes in the wall, wide apart as they wanted the bed, and in these holdes they stuck one end of the poles what was the side pieces. They sharpened the ends of two more poles and driv' 'em in the floor for the foot pieces and fastened the side pieces to 'em. Planks was put across this frame to hold a coarse cloth tick filled with wheat straw. Ma had a ruffle, what was called a foot bouncer, 'round the foot of her bed.

While these and other contemporary descriptions highlight the crude nature of slave housing, it would be incorrect to associate such conditions specifically with slavery. The upcountry as a whole, and in particular the project area, was isolated from markets, industries, and other sources of raw materials. While the agrarian life rewarded a few, it provided a mean existence for the many. Olmsted, in his travels through South Carolina, noted the general poverty of housing, and from his descriptions it is clear that little separated slave housing from the dwellings built by poor whites (1959; in Taylor and Smith 1978:128):

> The large majority of the dwellings were of logs, and even those of the white people were often without glass windows. In the better class of cabins, the roof is usually built with a curve, so as to project eight to ten feet beyond the log-wall; and a part of this space, exterior to the logs, is enclosed with boards, making an additional small room -- the remainder forms an open porch. The whole cabin is elevated on four corner-posts, so that air may circulate under it. The fireplace is built up at the end of the house, of sticks and clay, and the chimney is carried up outside, and often detached from the log walls; but the roof is extended at the gable, until the line with its outer side. The porch has a railing in front, and a wide shelf at the end on which a bucket of water, a gourd,and hand basins, are usually placed. There are chairs, or benches, on the porch.... The logs are usually hewn but little; and, of course, as they are laid up, there will be wide interslices between them -- which are increased by subsequent shrinking. These, very commonly, are not "chinked," or filled up in any way; nor is the wall lined on the inside....
>
> Cabins, of this class, would almost always be flanked by two or three negro-huts. The cabins of the poorest class of whites were of a

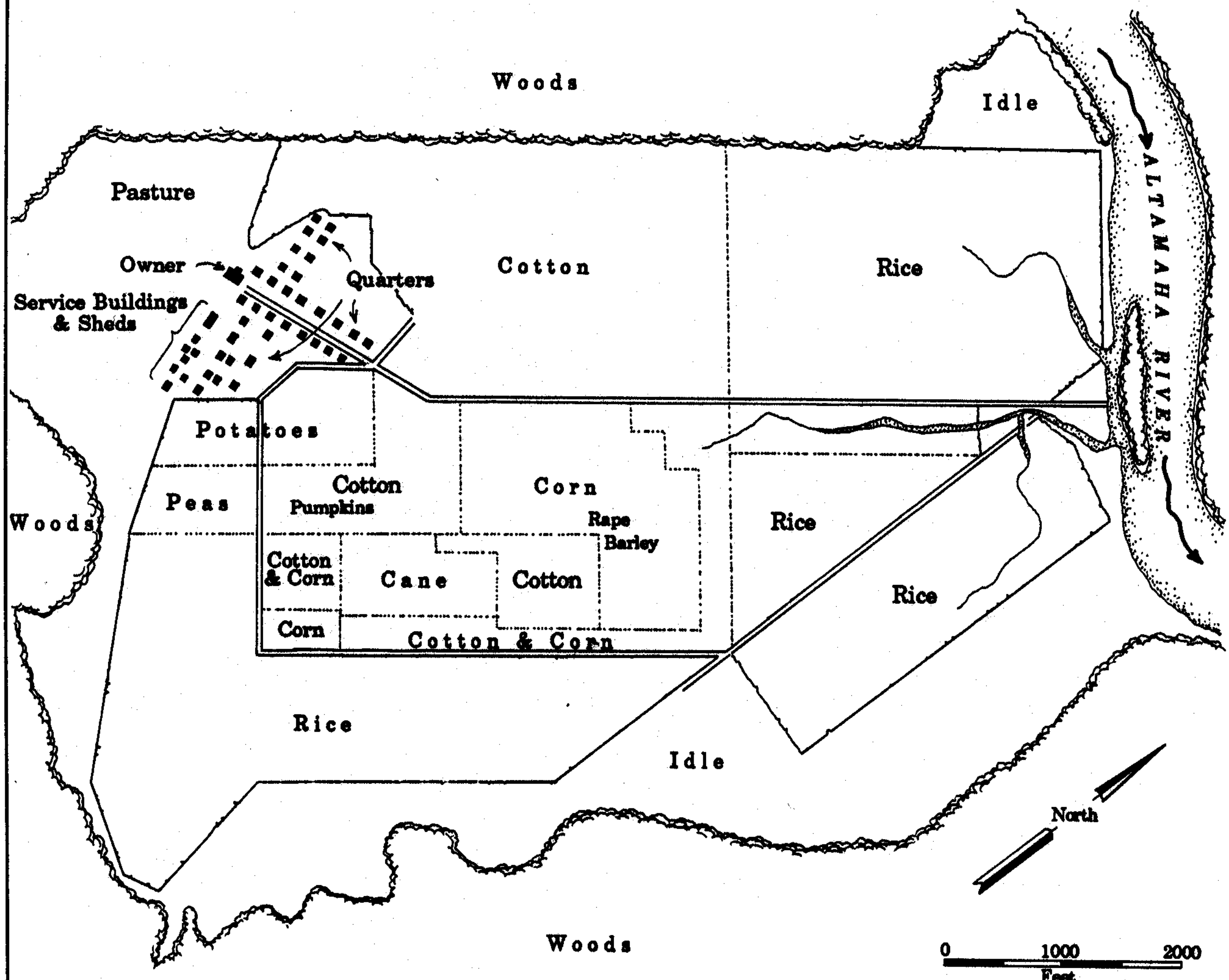
meaner sort -- being mere square pens of logs, roofed over, provided with a chimney, and usually with a shed of boards, supported by rough posts, before the door.

Plantations consisted of individuals against a backdrop of agricultural patterns. The individual's world was idiosyncratic, dependent on education, ambitions, political orientations, intelligence, wealth, and status. The agricultural world was dominated by the rhythms of the seasons, the fertility of the soil, by planting, chopping, harvest, and maintenance. The individual's world and the agricultural world coincided in the material world of the plantation.

Settlement

Antebellum farms and plantations were composed of domestic structures, agricultural facilities, industrial features, fields, pastures, roads, and other natural landmarks. The arrangement of these aspects has long been of interest to cultural geographers, historians, architectural historians, and archaeologists. The most influential research on plantation settlement to date has been Merle Prunty's (1955) article on the "Renaissance of the Southern Plantation," in which plantation settlement is viewed as nucleated, i.e. consisting of a relatively tight arrangement of domestic and service structures. Within this nucleus there is some recognition of social variation and stratification, most scholars viewing this cluster as consisting of a least two distinct zones: planter's residence and slave quarters (Orser et al. 1987:588-589). Prunty's consideration of antebellum plantation settlement was based on Hopeton plantation, a coastal Georgia rice and cotton plantation (Figure 89). Settlement at Hopeton featured a single concentration of structures, consisting of: the owner's house, which was situated adjacent to the slave quarters and service buildings; the slave quarters, "grouped compactly in rows along short roads;" and the barns and sheds, which were situated centrally "in relation to pasture, cropland, and labor quarters.... Cultivating power was centrally located within the area to which it was applied and among human elements whose effective employment depended upon it" (Prunty 1955:465-66).

As Gray has noted (1983:169), the nucleated pattern was one of only several alternate forms which agrarian settlement could accept. Based on her research of antebellum and postbellum agricultural settlements in the Russell Reservoir, Gray outlined four historic settlement patterns: nucleated, semi-nucleated, conglomerate, and dispersed (Figure 90). The semi-nucleated form consisted of an association, but not concentration, of settlement components; the conglomerate settlement featured several clusters of activities; and the dispersed form was characterized by a random spread and separation of independent structures. Of these, the conglomerate pattern may present a more accurate reflection of upland south plantation settlement, as Gray (1983:173) noted of the McCalla plantation. Several features of Prunty's (1955) nucleated example, Hopeton Plantation, would not have been as likely to appear on upland plantations. The first of these is the permanence of slave housing. As noted above, the most common slave dwelling of



Note: This coastal Georgia plantation was used by Prunty as an example of nucleated settlement, however, its attributes may not have been entirely applicable to upland plantations.

Source: Prunty 1955.

Figure 89. Hopeton Plantation Settlement and Cropland, 1827.

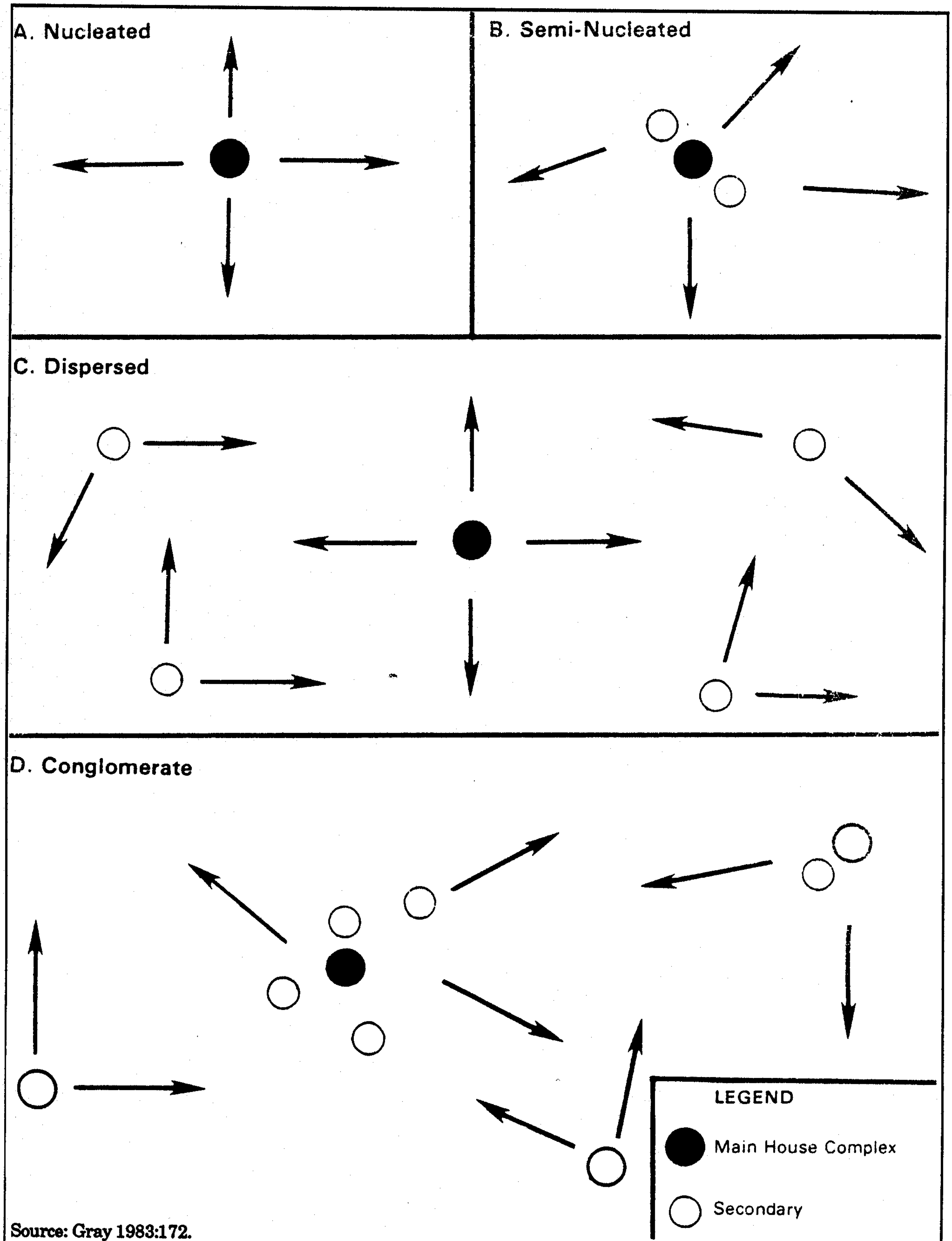


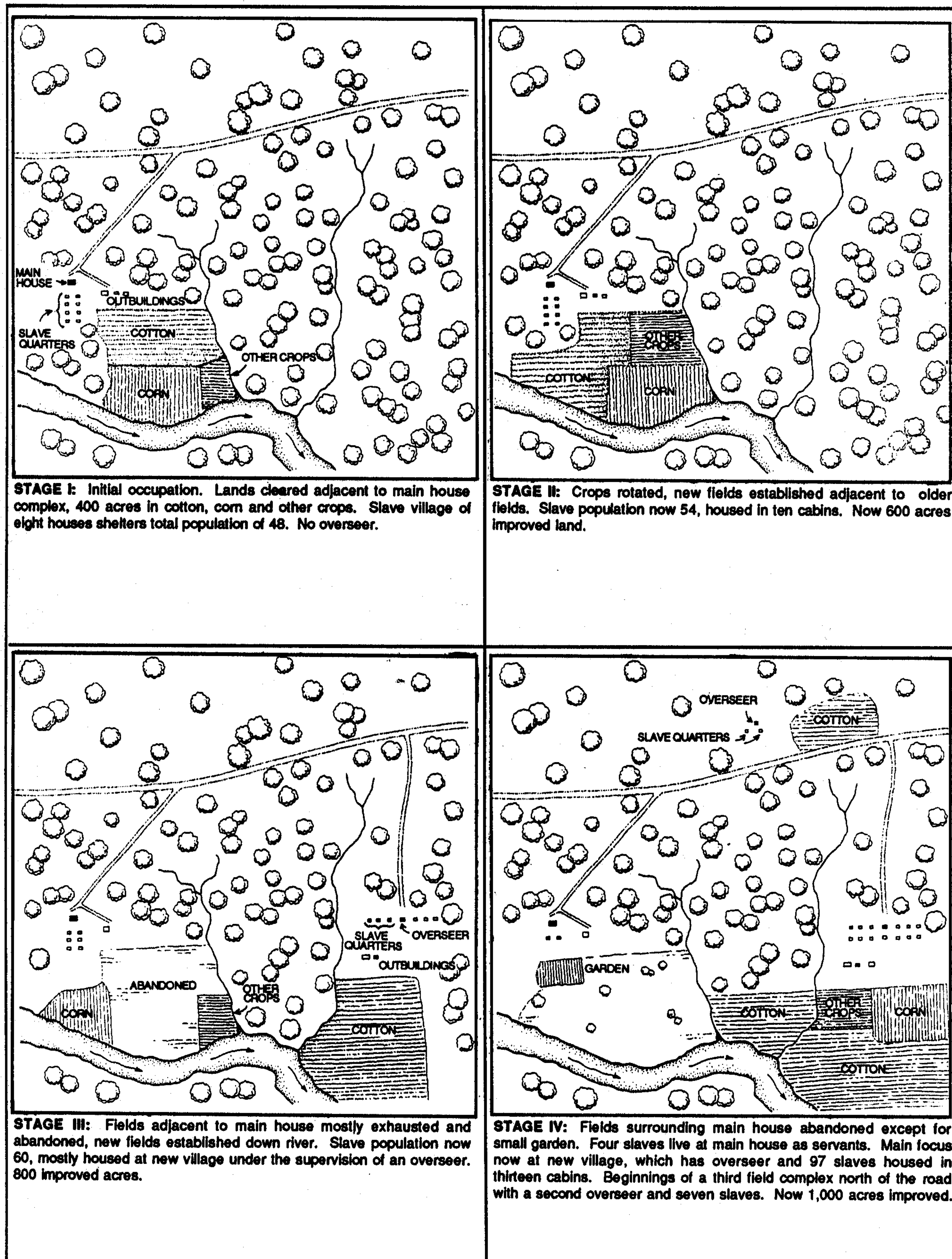
Figure 90. Settlement Pattern Models for RBR Historic Agricultural Sites.

the upland south was the log cabin, a structure not designed for permanence (although one which has proved to be quite durable in some instances). Coastal rice plantations featured elaborate system of dikes, trunks, and canals, necessary to support the flooding and drainage of rice ponds during the growth cycle. These required considerable investments of labor and materials, and hence were intended for long-term use. Rice ponds were irrigated through either the tidal flow or gravity system, both of which brought in nutrients: silt, leaf matter, etc. Thus rice ponds were essentially self-fertilizing, and could be used for years consecutively. Slave villages on rice plantations tended to be of a more permanent nature, with frame, tabby, and even brick construction being employed. Because rice plantations were by their nature situated in wetland environments, arid land was limited, and hence all settlement aspects were frequently concentrated on higher elevations among the marshes and streams. These environmental and agricultural requirements help explain the nucleated settlement patterning of coastal plantations.

Cotton, however, was an entirely different crop. Extremely exhaustive of soil nutrients, cotton fields were rotated on an average of every three to five years. An evolutionary pattern for a cotton plantation might feature an initial concentration of all structures adjacent to prime soils suited for clearing and agriculture (Figure 91). Within three to five years of occupation, however, these fields would be exhausted, and it would be necessary to rotate crops and create new croplands. At this stage such croplands may have been cleared from the forests surrounding the main concentration, and occupation would have shifted little. However, if the plantation was to continue to function successfully, additional land would have to be acquired and developed, and this additional cropland could not always be found adjacent to the main concentration of structures. Thus as the land holdings and slave populations of plantations increased, they were likely to take on a conglomerate appearance, featuring a nucleus consisting of the main house, some slave quarters, and service structures, and satellite communities of slave villages with associated overseers and service quarters. A pattern which occurred on coastal plantations (Otto 1975) may have been found in the uplands, in which an overseer's dwelling was established central to two or more slave villages. It is unlikely that slave villages were left unsupervised.

As agricultural fields were depleted of nutrients and abandoned, associated slave villages were also probably left behind. Such practice helps explain the use of impermanent architecture for slave housing. At some point in the evolutionary sequence the main house complex itself would probably be ancillary to the primary agricultural foci of the plantation, and at this point the planter may have considered relocating and building a new main house.

Upland plantations could thus have exhibited nucleated or conglomerate patterns depending on their size and stage of development. Small plantations probably never expanded beyond the limits of the agricultural lands surrounding them. Larger plantations may have featured several satellite communities, and may even have witnessed shifts in the location of the main house complex. One reason why the nucleated settlement system has received the bulk of attention in the



STAGE I: Initial occupation. Lands cleared adjacent to main house complex, 400 acres in cotton, corn and other crops. Slave village of eight houses shelters total population of 48. No overseer.

STAGE II: Crops rotated, new fields established adjacent to older fields. Slave population now 54, housed in ten cabins. Now 600 acres improved land.

STAGE III: Fields adjacent to main house mostly exhausted and abandoned, new fields established down river. Slave population now 60, mostly housed at new village under the supervision of an overseer. 800 improved acres.

STAGE IV: Fields surrounding main house abandoned except for small garden. Four slaves live at main house as servants. Main focus now at new village, which has overseer and 97 slaves housed in thirteen cabins. Beginnings of a third field complex north of the road with a second overseer and seven slaves. Now 1,000 acres improved.

Figure 91. The Evolution of Upland Cotton Plantations from Nucleated to Conglomerate Settlement Patterning - Graphic Model.

archaeological literature has to do with the nature of archaeological investigations. While main house compounds are fairly readily recognized due to the substantial (in both size and number) architecture involved, satellite communities, especially those consisting of small slave villages, would leave few traces and be difficult to locate. As Hodder and Orton (1976:17) note: "Any map is, in a sense, an attempt at quantification. It provides empirical evidence on which some theory can be built. But such a map can be totally misleading due to the uneven way archaeological information survives and is collected." Plantation archaeology, by the nature of archaeological survival and identification, is likely to support the theory of nucleated plantation settlement and disregard conglomerate distribution.

Data from the Russell Reservoir supports this hypothesized shift from nucleated to conglomerate settlement among the plantation sites studied. The best evidence comes from the historical documentation associated with James Calhoun and Midway and Millwood Plantations. Calhoun expanded on inherited land in the vicinity of Millwood Plantation through the purchase of at least six tracts of land containing more than 1,000 acres between 1832 and 1834. At that time he was in residence at Midway Plantation, of whose settlement we have little evidence. In the spring of 1832 Calhoun sent an overseer and four slaves to "form a settlement" at Millwood, on lands a few miles south of Midway (JEC Diary, August 1, 1832, John Ewing Calhoun Papers, in Orser et al. 1987:599). Initial work consisted of clearing 60 acres and beginning the construction of a crib dam. This settlement suggests that lands surrounding Midway were becoming exhausted, and that Calhoun was actively seeking new lands for improvement and planting. At this point in its history, Millwood was a satellite of Midway Plantation, and Midway's settlement pattern can be considered as conglomerated.

In 1834 Calhoun wrote that he was preparing materials for building at Millwood in preparation of moving there. Calhoun's relocation from Midway to Millwood may have indicated the abandonment of the former due to impoverished fields, although it is as likely that Calhoun moved to Millwood for the industrial potential the new plantation offered. By 1835 Calhoun wrote that he was enjoying the "cottage life" at Millwood (JEC to John C. Calhoun, January 31, 1835, John C. Calhoun Papers, in Orser et al. 1987:601).

Millwood developed a main house complex consisting of Calhoun's home, the house of his overseer, slave dwellings, and service structures (Figure 92). Even if considered as an independent plantation, however, Millwood does not appear to have exhibited a nucleated settlement due to the size of its labor force and of Calhoun's land holdings. As Orser et al. note (1987:603): "By 1860 his landholdings had the shape of modern Chile, more than 10,000 acres in a stringbean configuration along both sides of the Savannah River while hardly a mile in width." With such extensive holdings along either bank of the Savannah, it is likely that Calhoun dispersed his labor force to take advantage of his best lands. Thus Millwood must have exhibited a conglomerate network of slave villages dependent on the main house concentration. Slave villages were likely to have moved as new fields were developed; in February of 1842 Calhoun received

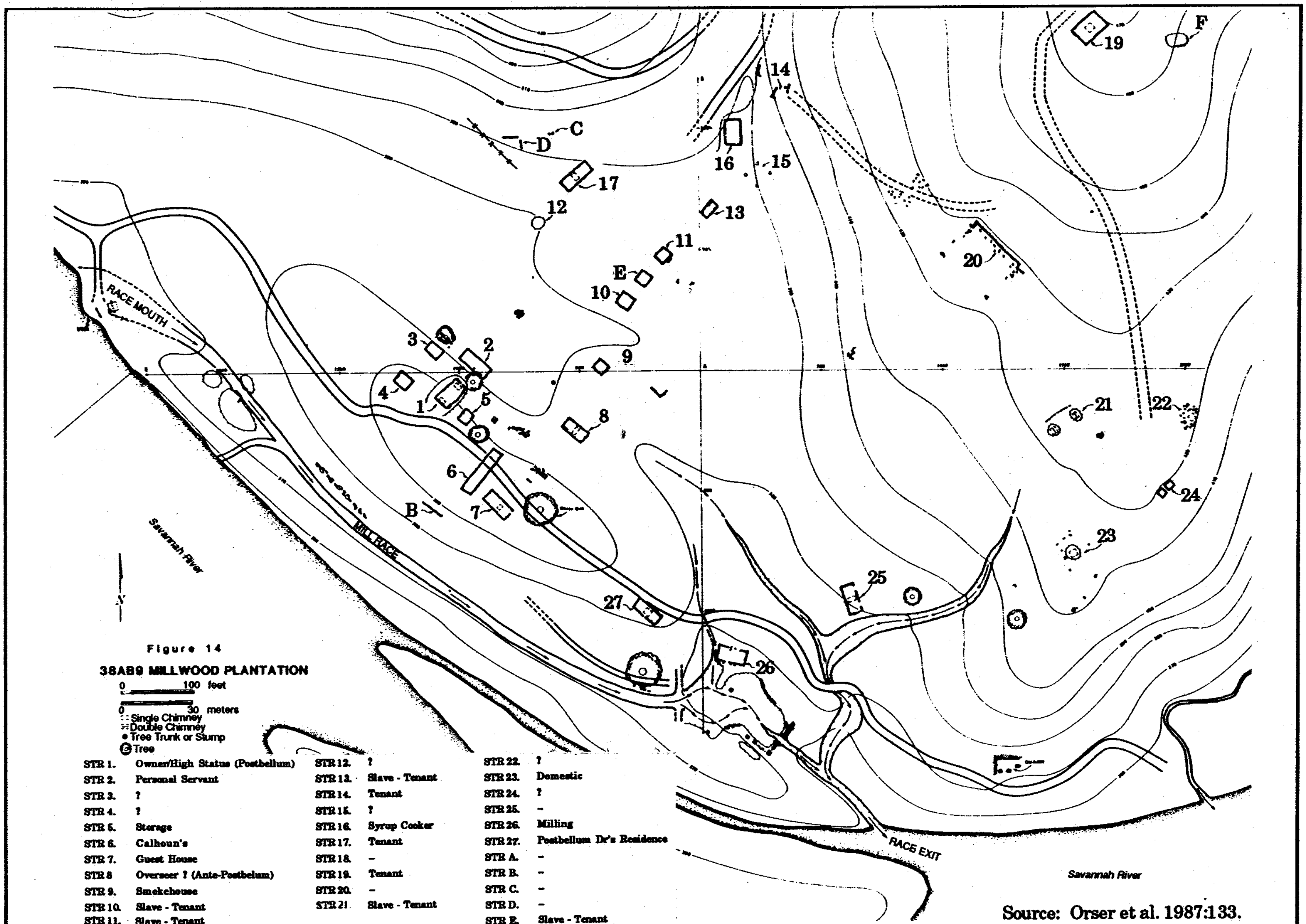


Figure 92. Millwood Plantation Settlement.
Note: Designations of structure functions are abstracted from Orser et al. 1987:132-375.

an inquiry on the availability of some of his lands from a gentleman who had heard that "most of your force has been removed near the river," suggesting that a particular slave village had been relocated (Edward Harleston to JEC, February 15, 1842, JECP, in Orser et al. 1987:749).

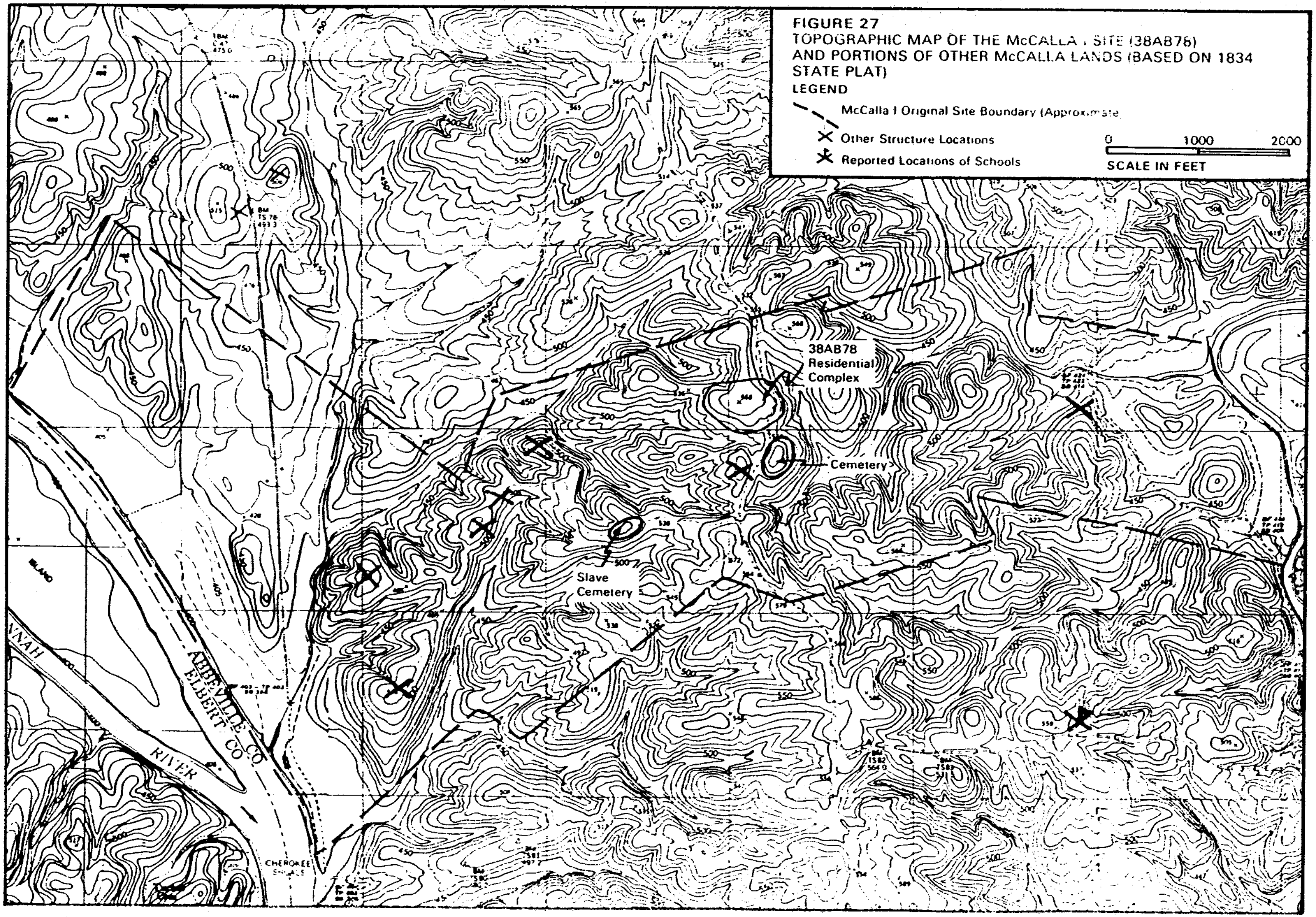
Archaeological evidence from the Banister Allen Plantation, McCalla Plantation, and Millwood all support this conglomerate distribution, although through negative evidence. Specifically, excavations at Bannister Allen and McCalla failed to reveal evidence of slave occupations at these sites, despite the fact that both plantations possessed substantial slave populations by the 1860s. It is possible that such evidence was missed during the archaeological research, however, as Gray notes (1983:147):

> Especially critical is the fact that the locations of most of the slave quarters associated with the McCalla I site [the George McCalla home], of which there were at least 23 (U. S. Bureau of Census 1860), have not been positively identified. The reason for this is simple. When one examines the extent of the plantation prior to the Civil War (roughly 3,000 acres), it becomes apparent that the greatest efficiency would have been achieved if slaves were housed near their work locations, rather than in a concentration around the main house complex.

Gray did identify the slave cemetery associated with the McCalla Plantation (Figure 93), as well as several historic sites in the immediate area which were not investigated during the archaeological studies, and suggests that these possibly were outlying slave settlements (Gray 1983:147-148).

While numerous antebellum and postbellum structures were identified at Millwood (see Figure 92), it does not appear likely that the 29 slave dwellings listed in the 1860 agricultural schedule are all represented in the main house concentration. As Figure 92 indicates, only seven of the 32 structures identified at Millwood can be positively associated with the antebellum period, and Orser et al. (1987:603-604) note that it was unlikely that Calhoun housed all of his slaves (194 individuals in 1860) in the area immediately surrounding his house. The archaeological evidence, through the absence of numerous verified slave dwellings in the main house complex, supports the interpretation of the historical documentation that Millwood's settlement pattern was conglomerate.

The evidence from the McCalla, Bannister Allen, and Millwood plantations offers possible evidence for the size (in terms of land and labor) at which plantations shifted from a nucleated to conglomerate pattern. By 1860 these plantations possessed an average of 1,016 acres, and an average slave population of 112. We know that Calhoun began to develop Millwood in the 1830s, at which time he owned 55 slaves, and that Millwood was established as a separate plantation by 1840, when Calhoun was master to 158 individuals (Orser et al. 1987:748). Coastal Georgia rice plantations featuring a conglomerate settlement appear to have slave villages housing from 30 to 50 individuals sheltered in six to ten dwellings (Joseph



Source: Gray 1983:145.

Figure 93. Topographic Map of the McCalla I (George McCalla) and McCalla II (Isaac McCalla) Sites, Showing Additional Historic Sites Within the Property Boundaries, as Well as the Location of the McCalla Slave Cemetery. Note: Gray postulates that some of

1986). The evidence from Calhoun would support a shift from nucleated to conglomerate settlement near the upper end of this range. The second variable in the shift from nucleated to conglomerate settlement, improved land, is less certain. Considering land and slave holdings among our five families in 1860 (see Table 16), these individuals averaged 9.3 improved acres per slave. Thus a plantation with 50 slaves would be expected to have 465 improved acres under this scheme. Since land is the critical factor in the shift from the nucleated to conglomerate pattern, it is suggested that those planters with at least 50 slaves and more than 465 acres of improved land would be likely to shift to a conglomerate settlement.

While plantation settlement may be considered as fitting either a nucleated or conglomerate pattern, the analysis presented above would not apply to farmsteads within the project area. Gray's (1983:173) research suggest that farms were either nucleated or semi-nucleated in their occupance form, and such distribution would be in line with the considerations of land, labor and settlement expressed above.

Glassie's (1975) research in Virginia suggests the possibility that farmstead settlement patterning evolved over time. He notes that (Glassie 1975:144; in Worthy 1983:74):

> Indications are that the old farm had two centers, the house and the barn, around which smaller dependencies were dropped. Beside the house are the outbuildings needed by the woman in order to get food on the table; beside the barn at the outbuildings needed by the man to keep the cattle fat. The nineteenth-century plan still shows this duality, but the farm would be best described as consisting of a house with a straggling row of outbuildings behind it.

Worthy (1983:75; based on Smith et al. 1982:9-12; Newton 1974:151; Weaver and Doster 1982:63-64; Hart 1977) outlines a number of characteristics which she feels embodied the Upland South farmstead settlement pattern:

> 1. Random clustering of domestic and service occupations, frequently situated on hilltops or other prominent points. Placement is a factor of changing views on "convenience."
>
> 2. Individual buildings for separate functions: dwellings, storehouse, livestock barn, pens for fowl, smokehouse, etc., although sometimes these structures are combined to serve more than one function.
>
> 3. Dwelling, well, privy, storage shed, and chicken house closely placed, as these represent areas primarily associated with household activities. The yard surrounding these structures is frequently swept.

4. Barns, larger animal pens, equipment buildings, forges, and other male activity areas at a slightly greater distance from dwelling cluster. Access to these facilities is around rather than through the yard.

5. The house faces the probable path of human approach, and is frequently shaded by trees.

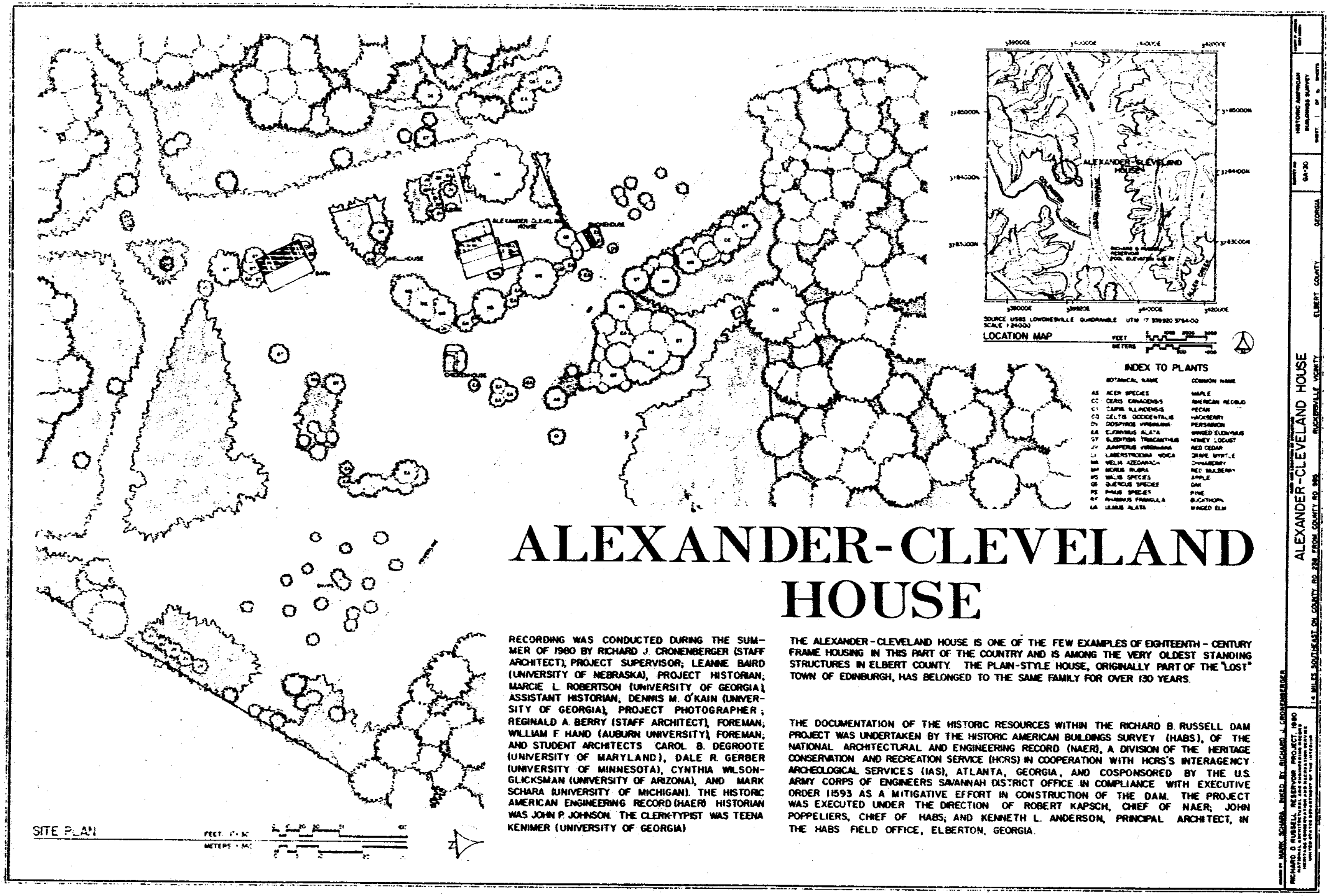
6. Fields are irregularly arranged and follow natural topography. Fields are situated to make use of the best available lands; farms are situated to provide best access to fields.

These attributes were likely to have been found on antebellum farmsteads in the project area. Unfortunately, the archaeological research at the identified antebellum farms in the reservoir can not clearly illuminate farmstead settlement, since the Clinkscales and Harper sites were both occupied well in to the postbellum period.

Historic American Buildings Survey (HABS) recordation of three antebellum farmsteads provide some measure of settlement patterning. All of these sites: the Caldwell-Hutchinson Farm, the Harper-Featherstone Farm, and the Alexander-Cleveland House, were initially developed in the late eighteenth to early nineteenth centuries. The Alexander-Cleveland House was one of the oldest surviving structures in Elbert County, with the apparent construction date, 1791, carved into both exterior chimneys (Worthy 1983:101). All three sites feature late nineteenth- and twentieth-century additions, and hence cannot be considered as pure representations of antebellum farmsteads, however, the position of the mainhouse, landscape treatment, and the possible location of later service structures over antebellum features of similar function all provide means of considering antebellum farmstead patterning.

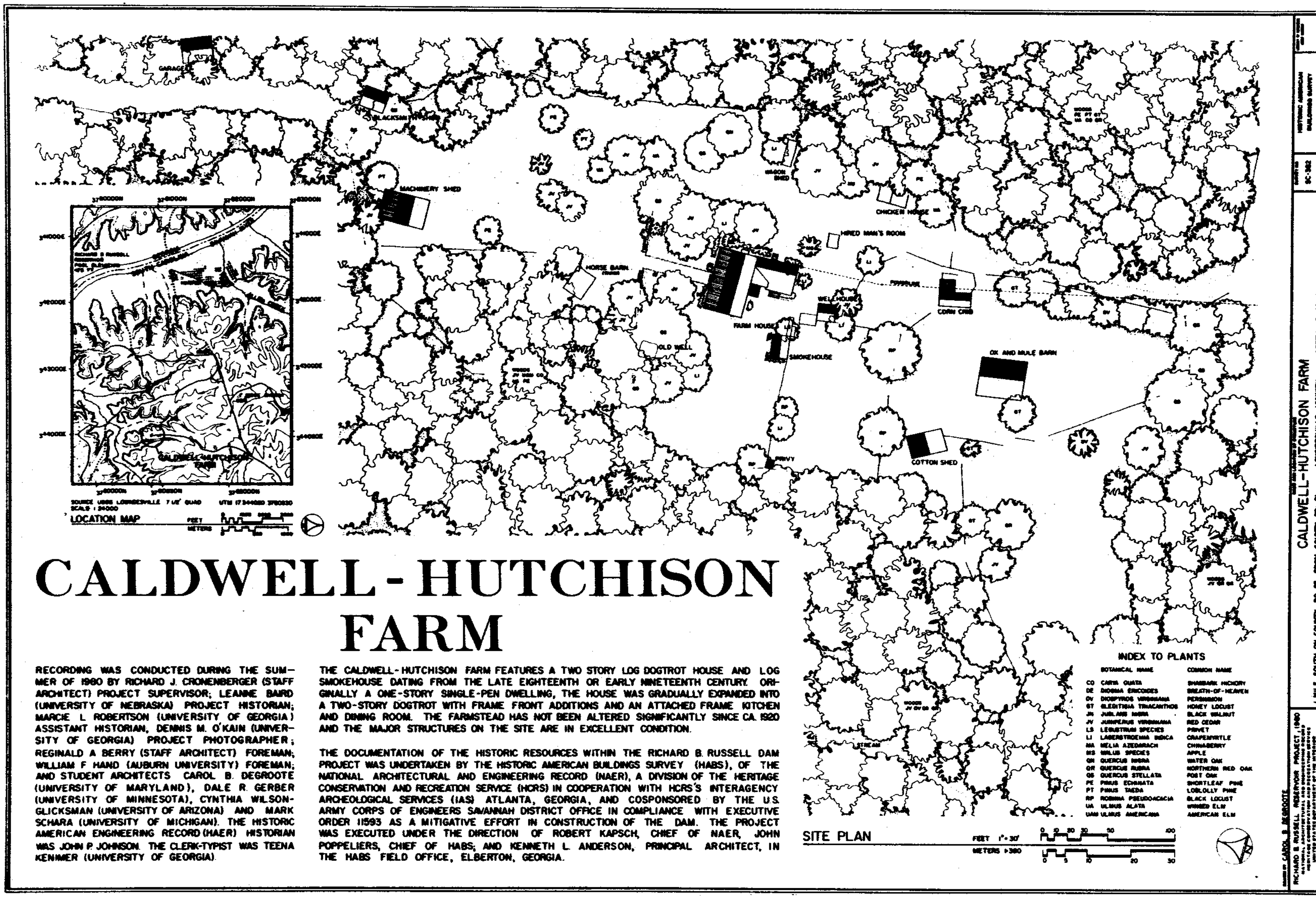
The Alexander-Cleveland House (Figure 94) features few of the original ancillary structures which would have been associated with this occupation. Situated at the end of a ridge overlooking the confluence of Coldwater Creek and the Savannah, the house stood in a protective enclosure of vegetation at the time of its recording. Either within or on the immediate periphery of this yard were the wellhouse and smokehouse, while the chicken house was located just beyond a row of mulberry trees. These three structures were all within a 20 m radius of the main house, while the barn was located at a distance of approximately 50 m. This plan conforms with the general attributes of farmstead settlement outlined above.

The Caldwell-Hutchinson Farm (Figure 95) features a two-story log dogtrot home which originally began as a single-storied single-pen dwelling. The construction of the core of this structure most likely dates to 1800. The farm was owned by the family of John and James Caldwell from 1800 through 1860; by Joseph Burton from 1860 through 1876; and by R. B., Malley, Katherine, and Bandon Hutchinson from 1876 through 1980. Expansion of the main house occurred between 1800 and 1810, when the Caldwell family increased through the addition of five children.



Source: Worthy 1983: 119.

Figure 94. Site Plan for the Alexander-Cleveland House. Drawing prepared for the Historic American Buildings Survey.



Source: Worthy 1983: 220.

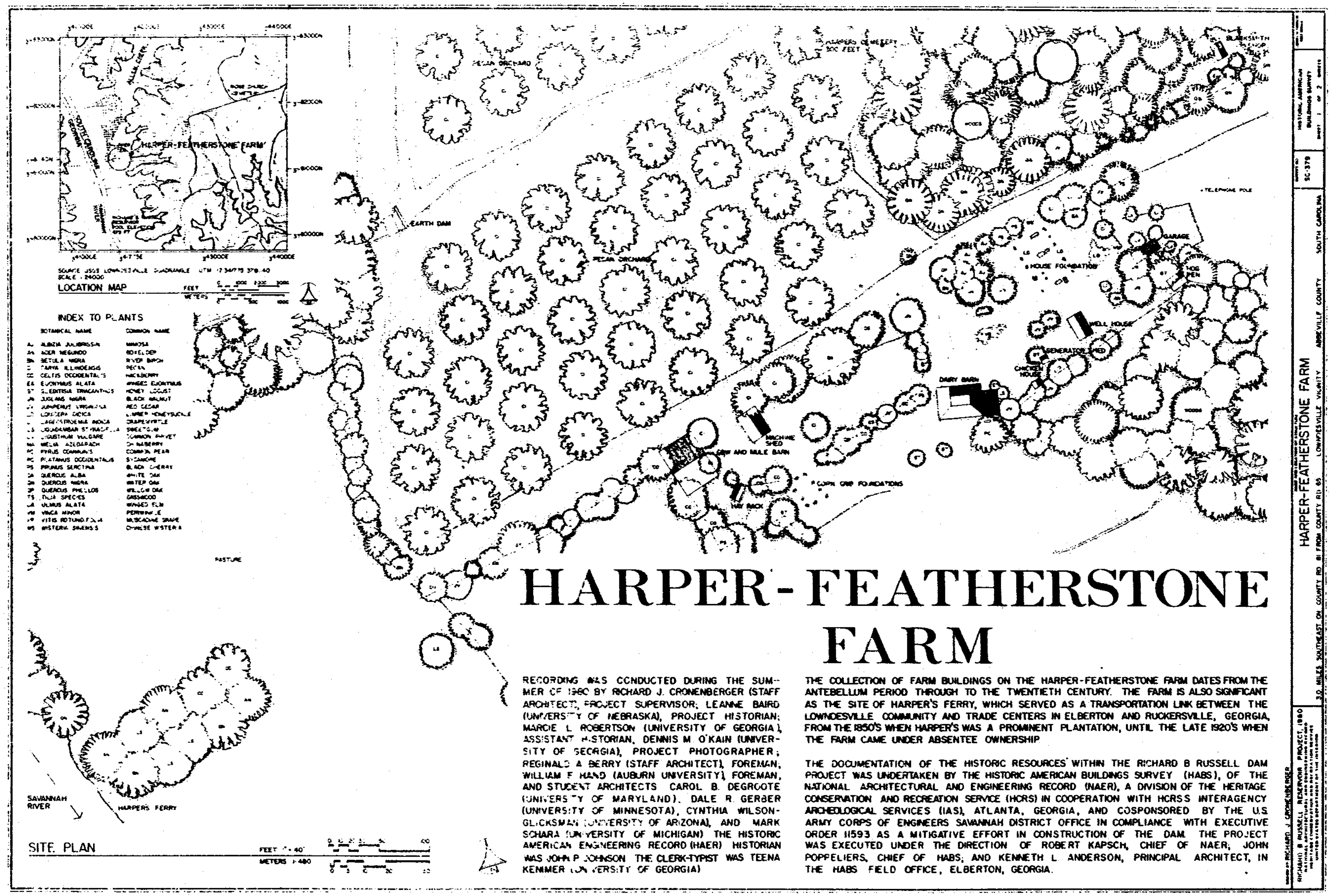
Figure 95. Site Plan for the Caldwell-Hutchinson Farm.
Drawing prepared for the Historic American Buildings Survey.

Other features dating to the antebellum occupation of this site include the smokehouse, the old well (northwest of the main house), the wagon shed, the ox and mule barn, the cotton shed, and the blacksmith shop (Worthy 1983:204-207).

The organization of this farm follows may of the traits outlined by Worthy. The smokehouse and well were both located within a central core formed around the main house. Other postbellum structures within this core include the chicken house, hired man's room, and privy. These appear to conform to Worthy's dichotomy of household/field activities, or the female/male separation noted by Glassie (1975). Field/male related structures are more disperse; the ox and mule barn, cotton shed, and corn crib are all situated on the rear periphery of the main house; the wagon shed it located at a distance of approximately 20 m from the main house and on a right angle, while the horse barn was located just north of the house (these may have situated in close proximity for the convenience of transferring materials to and from the main house). One antebellum feature, the blacksmith shop, and two twentieth-century structures, the garage and machinery shed, are located along the road entering the site, and at a distance of approximately 70 m from the main house. The blacksmith shop was probably placed at such a distance to counter against the threat of fire, while the location of the machinery shed, and to a degree that of the garage, probably reflect their dependence on activities engaged at the smithy. The farm is located on high ground near the end of a ridge, and is flanked by two streams. In all of these respects its location fits the model outlined above.

The Harper-Featherstone Farm (Figure 96) is of interest, since this site was occupied by Lyndsey, Henry, and Jane Harper, discussed above. The main house burnt in 1968, and had been a one and a half story log structure with weatherboard covering, which possessed a detached kitchen (Worthy 1983:241-242). Of the remaining structures at the farm, only the cow and mule barn appears to be antebellum in origin, while the other structures all apparently date to the late nineteenth to early twentieth century. It is interesting to note that the settlement of the farm, as hypothetically outlined from Lyndsey Harper's inventory, above, fits Worthy's model of farmstead settlement. The inventory treats the smoke house and milk house, then the slave village, and then the barns and forges sequentially, suggesting that this order reflects their relationship to the main house. The current organization of the farm fits this pattern, with the well house, garage, chicken coop, hog pen, and dairy barn all surrounding the main house, and the machine shed, cow and mule barn, corn crib, and hay rack forming a second concentration of buildings. Unfortunately, archaeological research at this site failed to reveal evidence of any slave quarters in the immediate proximity, and hence this critical aspect of settlement relations cannot be accessed.

While the discussion of settlement outlined above is limited to the perspective gained from the examination of a few sites, historical documentation, and models which exist in the literature, it can be used to make some general observations concerning the differences between planters and farmers. Plantations appear to have followed more structured concepts of social and physical organization. The



Source: Worthy 1983: 257.

Figure 96. Site Plan for the Harper-Featherstone Farm.
Drawing prepared for the Historic American Buildings Survey.

key determinant of plantation structure appears to have been the relationship between white masters and black slaves. Slave villages were frequently ordered along streets or squares, at least partially because such organization provided a more suitable means for surveillance and control. While it would be difficult for a planter or overseer to supervise the lives of slaves if their habitations were dispersed across a plantation's vast estate, an orderly linear arrangement made such monitoring practical. Structure also reflected planter's perceptions of and justification for their exploitation of slaves. Eighteenth-century scientific theory viewed the natural world as purposefully created and ordered, as expressed in the "Great Chain of Being" (Jordan 1974). This order was rationalized as legitimizing white's domination of blacks; that such domination were biologically inherent in the natural order. The plantation world was one divided, compartmentalized, aligned, and opposed. Structure appeared not only in plantation settlement, but also in the Georgian symmetry of many planter's homes, and clearly underlies plantation organization.

Farmsteads, on the other hand, were more organic in nature. Farmers seem to have placed their buildings, as one scholar has noted, for "convenience" (Newton 1974:151). While farmsteads contained certain specific activity centers, these were not aligned in any particular fashion. Buildings exist at odd angles, at various placements, and with little evident forethought on ideological relations. The single organizational feature which can be recognized in farmstead settlement is the separation of household/female and field/male activities. While the separation between white and black, supervisor and worker, appears to have set the parameters of plantation settlement, it is the segregation between field and home, male and female, which characterized the farm.

Settlement is only one measure of understanding social relations. Settlements were composed of structures, and the form of these structures can also indicate something of the social relations on plantations and farms.

Architecture

An 1859 publication, *Pine Farm; or, The Southern Side* offered observations on a number of aspects of southern life. Interesting among these is the author's evaluation of the association of housing and status in southern society. The anonymous author observed that (Anonymous 1859:20; in Worthy 1983:85):

> Who that has ever traveled through South Carolina and Georgia but has remarked the uniformity of design as respects the dwellings of the country-people -- varied chiefly by the pecuniary circumstances of the owners? The little log cabin, with a single room and a clay chimney. This represents the lowest class.
>
> Two log pens, and two back shed rooms, with a passage through the center and a piazza in front; clay chimney at each end of the house. This is the second in the ascending scale.

> Two story house, built of pine boards, with four rooms in the body of the house, and two shed rooms behind; brick chimney at each end, piazza in front, and passage through the center. This is the third class -- men who are getting "well-to-do in the world."
>
> Large two story double house, eight rooms, chimney running up through the roof, giving a fireplace to each room; piazza or portico in front, and passage through the center. This complete the series, and here we find the lordly planter, with all the appointments of comfortable and stylish living. Occasional deviation from these descriptions may of course be found, according to the peculiarity or amount of taste in individuals; but the picture in the main is, we think, correctly drawn.

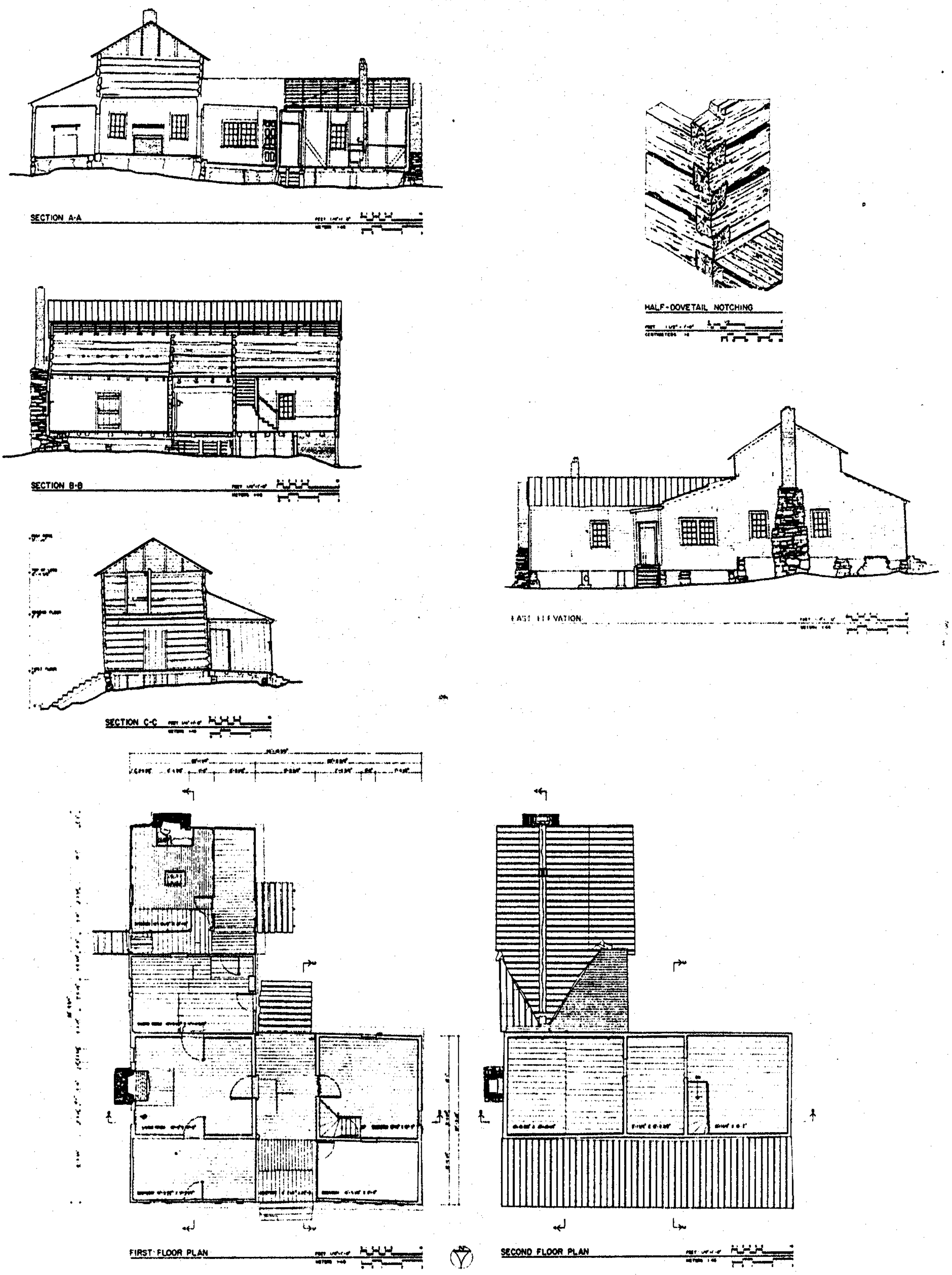
Thus even at the time particular housing types were associated with certain social statuses. The structures recorded within the Russell Reservoir provide a gauge not only of the assumptions outlined above, but also of the social and cultural concerns which produced these architectural preferences.

The Caldwell-Hutchinson House (see the discussion above) was originally built as a one-story, single-pen structure in ca. 1800 (Worthy 1983:27; Figure 97). The structure was later enlarged to become a two-storied, double-pen, dog trot dwelling. The structure incorporates both frame and log construction, with the log portions of the building hewn and featuring half dovetailed notching (the combination of plank-hewn logs and half-dovetailed notching is one which Glassie (1968:112-113) attributes to the Blue Ridge region of Tennessee and North Carolina).

The Alexander-Cleveland House (Figure 98) features frame construction with mortice-and-tenon joints. The original structure was two-storied in height, while subsequent construction attached a single-storied shed kitchen to the south elevation (Worthy 1983:107-109). The Alexander-Cleveland House is a good example of the Carolina I house type, which features a single story porch across the facade, and a single story shed on the rear (Worthy 1983:63-64).

The William Allen House (Beverly Plantation) (Figure 99) was constructed in circa 1790 by William Allen, a successful Elbert County planter. At his death in 1826 Allen owned 2,042 1/2 acres and 25 slaves. The plantation was inherited by Allen's son Beverly in 1826, and he also enjoyed the life of well-to-do planter. Beverly Allen was active in politics, serving as a State Representative from 1817 to 1819, as a State Senator from 1822 to 1824, 1826 to 1827, 1830 to 1831, and in 1834, and as Justice of the Inferior Court from 1821 to 1828 and from 1833 to 1837 (Worthy 1983:129-130).

The Allen House has been described by one architectural historian as "plantation plain-style" (Nichols 1976:125; in Worthy 1983:29):



Source: Worthy 1983: 221, 223, 224.

Figure 97. Caldwell-Hutchinson House, East Elevation, Sections and Details, 1st and 2nd Story Plan. Drawings prepared for the Historic American Buildings Survey.

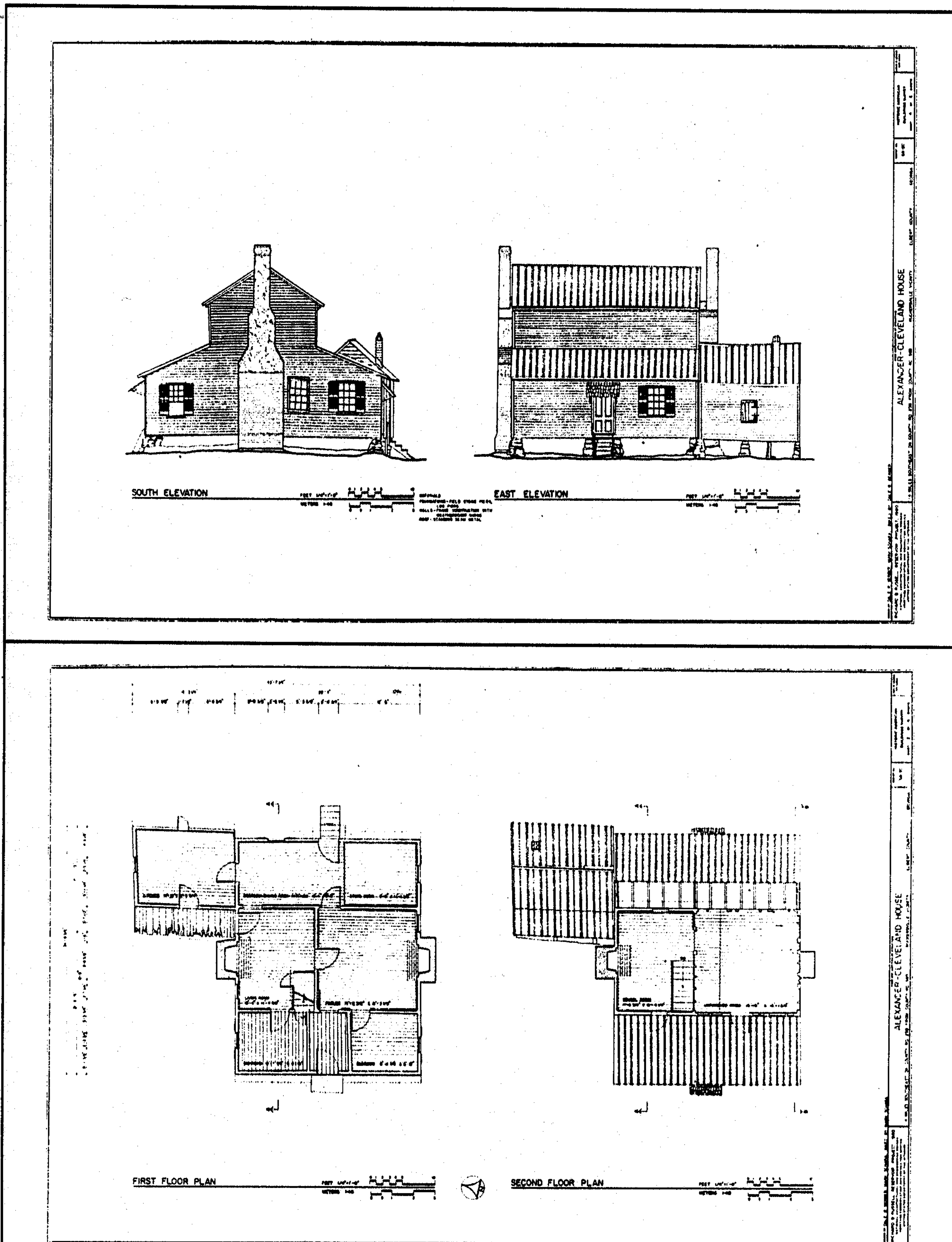
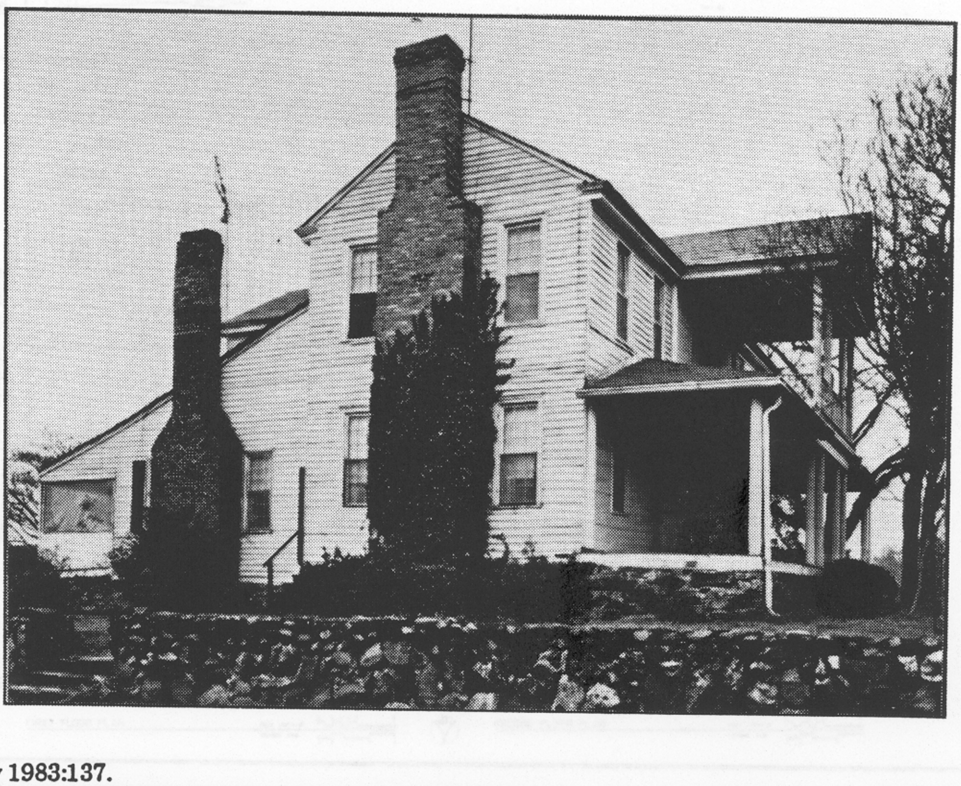


Figure 98. Alexander-Cleveland House, South and East Elevations, 1st and 2nd Story Plans. Drawings prepared for the Historic American Buildings Survey.



Source: Worthy 1983:137.

Figure 99. William Allen House, Photographs of Facade and South Elevation. Prepared for the Historic American Buildings Survey.

> Throughout the first half of the nineteenth century, all across Georgia and the South, the plain people of the plantations built vernacular houses now generally called 'plantation plain-style'.... The plantation plain-style can be described as frame, two-story, gable-roof dwelling with exterior end chimneys. In plan it has two rooms of unequal but corresponding size on each floor, with shed rooms on the rear and a shed porch across the front facade. Raised slightly on flat bedrock or brick, the plantation plain-style house was usually unpainted. On the interiors, the plain walls were of plaster or often of flush siding with a chair rail and a simple mantel treated with only an architrave and a shelf. These houses reflect the final continuation in a tradition of Anglo-American hand craftsmanship, which was ended by the industrial revolution, which overtook the work of patient hands and apprenticeship training in the mid-nineteenth century.

The Caldwell-Hutchinson House, Alexander-Cleveland House, and William Allen House provide architectural statements on the influence of socio-economics and class in the project area. The Caldwell-Hutchinson House reflects the world of farmers. Like the farms themselves, this house appears to have grown organically, without any deliberate effort to unify these additions with the whole. The dog-trot central breezeway meant that the house was open and easily accessible to strangers. From the breezeway either a bedroom or the home's living room could be accessed, both private spaces which became public in this architecture. The Alexander-Cleveland House employed a more rigid floorplan and social differentiation. Originally this structure featured a porch across the front facade, and this space could have been used to deal with visitors whose status did not permit access to the interior of the home. This is contrasted with the open breezeway of the Caldwell-Hutchinson House, which also acted as a porch, but as one contained within the house. Once inside, the home was divided into parlor (social) and hall (private) spaces, and into bedrooms and kitchens, which were also private spaces. The house thus sought to segregate guest from inhabitant. Although no floor plan exists for the William Allen House, it was clearly the most socially imposing of the three structures. The tiered gable porch, massive columns, and symmetrical arrangement all cast a haughty shadow over the visitor.

These structures exhibit similar concerns to those noted of plantation and farm settlement patterns. The planters' houses are structured, symmetrical, homogeneous, and seek to segregate those on the inside from those on the outside. The farmer's house is organic, assymetrical, and relatively open; this house makes no attempt at segregation. These concerns represent not only socio-economics, and the means of construction, they are also measures of social relations. Farmers were likely to have interacted with other farmers, and with the few slaves they might own. If slave-owners, then they probably worked together with their slaves in the field and were familiar with one another. Farmers had no reason to build houses which excluded them from the outside world, because the outside world was not a threat. Planters were more aware of social status. In their roles as local patriarchs and politicians, they dealt with a broader cross-section of the community. Uncertain of the intentions of their guests, and eager to illustrate their social attainments, planters' homes established a series of boundaries which reflected the social spheres of their world. Like their supposed natural order, these boundaries ranked and segregated them from their fellow men.

Summary and Conclusions

Planters and farmers were individuals, their lives shaped by a variety of factors which cannot be easily abstracted from broad historical trends. While their life histories are idiosyncratic, the material world which formed around them shows more pattern and meaning. This interpretation illustrates the difference between the individual and his culture; that while the individual may marry, buy and sell land, grow rich or poor, die, and be buried in a variety of ways, the norms and traditions of culture establish the proper and approved forms of marriage, land transfer, the accumulation and display of wealth, the accounting of death, and burial. Cultural patterns distinguish the material world of the plantation from the farm.

The settlement and architecture of antebellum culture in the Russell Reservoir suggests that structure and segregation dominated planter's lives, while farmer's recognized the division between field and home. It would be interesting to pursue these interpretations through other evidences of the archaeological record. Unfortunately, the archaeology of the Russell Reservoir better illustrates another aspect of agrarian culture in the region; the continuation of antebellum patterns into the postbellum years. While the Civil War is presented as a sharp boundary in traditional histories of the South, the archaeology reminds us that Southerners rebuilt with what they had and what they knew. All of the sites discussed above continued to be occupied into the postbellum period, and no secure contexts from the antebellum were identified during this research. Patterns of material culture are thus best considered in the following chapter, since they represent a blend of behaviors from before and after the war.

The Civil War disrupted patterns of land and labor established in the antebellum years. The response to this disruption offers a rare insight to the world of planters and freedmen, since their adjustments indicate what each valued most. The following chapter charts the resurgence of the cotton economy, as the region's agrarian culture coped with new patterns of labor and social interaction.

X. 'MY COTTON, MY CORN, MY CROP': THE RESURGENCE OF THE COTTON ECONOMY, 1865-1890

The transition from the "Rise" to "Resurgence" of King Cotton downplays the pivotal event between the periods, the Civil War. In reality, King Cotton never died. While the war did not have a direct, physical impact on the project area, it was evidenced in the abolition of slavery and the transformation of plantation culture. This transition was marked in the project area primarily by five phenomena: (1) the division of plantations into smaller units; (2) the cultivation of these smaller units by separate individuals and families, either as owners, tenants, or sharecroppers; (3) increased soil erosion due to careless agricultural practices; (4) the development of crossroads hamlets providing stores and services for the neighboring community; and (5) the growth of a more heterogeneous culture (The History Group 1981:109-110).

The project area was spared from Sherman's southern transit and other maneuvers of the Civil War, and entered the postbellum period physically unscathed. This factor in part explains the similarities between the antebellum and postbellum in the Russell Reservoir. Plantations, such as Millwood, remained as physical and psychological landmarks of the antebellum era. The planters themselves: Calhoun, Harper, McCalla, Allen, and others, survived the war. While slavery was abolished, there was little Federal presence in the project area to persuade former slaves that things had really changed. Force was employed by the whites to convince them otherwise. King Cotton continued his reign.

Without the plantation, towns and hamlets were needed to fill the role of providers of goods and services. A number of these developed in the project area in the immediate postbellum years. Without the plantation, the profits of cotton agriculture were less attractive. Southern capital was diverted, industrialization spread, and the regional character became less homogeneous. Without the plantation, and with the growth of urban centers and industrialization, transportation networks became more centralized, and the railroad entered the region as an emissary of the new South. Without the plantation, settlement became less stable, and blacks, once securely anchored to their fields and quarters, were free to move. The settlement patterning of individual plantations changed; the settlement patterning of the region changed as well. The Russell Reservoir in the immediate postbellum period was a space in flux. The choices made, choices once unavailable, offer insights to wants and needs of the area's inhabitants.

FROM PLANTATION TO TENANCY: HISTORICAL EVOLUTION IN THE RUSSELL RESERVOIR, 1865 - 1890

The years immediately following the Civil War were marked by a struggle for supremacy, a struggle waged between blacks and whites and between northerners and southerners. The Federal Government attempted to enforce emancipation through contractual agreements between former slaves and former masters. These contracts, such as that drawn up for Elbert County's Joseph Deadwyler in the summer of 1865, stipulated the resources the planter would provide in return for labor (in The History Group 1981:110):

> This agreement made and entered into the ____ day of August, 1865 between Joseph R. Deadwyler of the above State and County of the one part and his former servants of the other part, witnesseth that the said Joseph R. Deadwyler agrees to furnish them clothing and food and humane treatment as heretofore and in addition to their own patches I will give to each ten bushels of corn and five gallons syrup and meat, and they agree to labor as heretofore on my farms and as I may direct until the 25th day of December next and to behave themselves.

Freedmen were hesitant to sign contractual obligations. First, these contracts negated the most cherished result of emancipation, the freedom to come and go at will and to answer to no white man. Second, the contracts established at the immediate end of the war were almost invariably between former masters and former slaves. If the master had been kind, then a contract might be acceptable, but if not, the contract only tied the freedmen into a relationship they were trying to avoid. Third, these contracts did not really provide a substantial change from the pre-War conditions; Deadwyler's contract obligated him to provide the freedmen with clothes, food,and humane treatment "as heretofore." Finally, the freedmen expected - anticipated - something more from the Federal Government, at least some version of the promise of "forty acres and a mule." Many blacks simply waited passively, inactively, for the Federal Government to provide; others left the region in search of better opportunities. In March, 1866, Captain C. R. Becker noted that no freedmen "who need want employment,... for in fact I have applications nearly every day from planters who are in want of hands and unable to obtain them" (Capt. C. R. Becker to Lt. Colonel John Devereau, March 20, 1866, Freedmen's Bureau Papers; in Orser et al. 1987:756). For the planters, many with cotton in the fields and no hands for the picking, the sight of former servants idly standing by only provoked a greater anger toward the North, and more violent resistance to the intent of emancipation.

Unfortunately for the freedmen, the Federal Government was disinclined to support the meaning of the Emancipation Proclamation. A long and costly war was over, the wounds of nation needed time to heal, and freedom had been established. Washington was not interested in debating the meaning of freedom. The transition from slavery to free labor was supervised by the Bureau of

Refugees, Freedmen, and Abandoned Lands (the Freedmen's Bureau), and in June of 1865 Brevet Major General Rufus B. Saxon was assigned as the chief military officer for the territory comprised of Florida, Georgia, and South Carolina. With an estimated 400,000 freedmen to look after, Saxon had a staff of only 24 assistants and 20 doctors. Clearly, supervision could not be intense (The History Group 1981:110-111).

Saxon appears to have focused his efforts on the coastal regions of the states under his supervision, since these housed the bulk of the slave population. The upcountry of Georgia and South Carolina received less attention. The documentation of this period is thus not as thorough as for other portions of the South, but what little documentation exists indicates that the lack of Federal supervision made the transition a difficult one for blacks. A field report from October, 1865, concluded that (in The History Group 181:111):

> ...colored people in this section of the state [are] not freedmen and women... they are nominally such, but their condition indeed is worse than bondage itself and ever will be unless this subdistrict is flooded with... cavalry, or a civil protective law is enacted at once - and the latter, I fear, will be no preventative of assassination, robbery, burglary, assault and battery with intent to kill.
>
> The U. S. soldiers and the freedmen are alike threatened and despised, and a very little respected. The military authorities are seldom obeyed except when necessity compels - and the garrison is limited, hence a majority of the guilty go unpunished. [The main problem is] a determination among a certain class... to get rid of the freedmen and women now [that] their crops are gathered, hence the immediate necessity of increasing the force in this sub-district. There are those who delight in killing Negroes and they cherish the same old desire to butcher U. S. soldiers.

Although not explicit, the report documents the continuation of two elements of southern society: the plantocracy ("a certain class") and the Confederates ("the same old desire to butcher U.S. soldiers"). In essence, the war was not yet over.

In May of 1866, a field report from Captain C. R. Beesley detailed the types of intimidation freedmen in the project area were likely to experience (in The History Group 1981:111):

> On Saturday, May 12, about ten o'clock a freedman by name of Elbert MacAdams was taken from his house by an unknown man and shot three times and then had his throat cut and was dragged into the woods about a hundred yards from his house, where he was found dead on Sunday morning. The freedman had come to see his wife on Basil Callahan's plantation, about 16 miles from here.... Freedmen report to the office every day that they are being driven off, and my time is entirely taken up looking into the reason and seeing that they get their rights.

Violence in the area continued well into the postbellum years. A memorandum of June 30, 1868 reports thirteen separate incidents of racial violence. In August and September of that year five freedmen were abused, and one shot for joining the Republican Party. Antagonisms intensified as the November elections approached, and the Ku Klux Klan authorized a reign of terror to keep freedmen from voting for black candidates. A report issued in November noted that "innumerable persons have been lying out in the woods since sometime before the election to save being murdered in their beds, their houses having been frequently visited at night for that purpose." As the History Group notes, "a social revolution was underway" (The History Group 1981:113).

The Civil War destroyed the bonds of slavery which had connected many of the area's inhabitants to the land, and planters responded forcefully to this separation. It did not dramatically restructure the population matrix. In general, the population of the region increased moderately in the years between 1850 and 1890, and the relative proportions of blacks to whites remained virtually unchanged. Table 19 compares the population of the area before the Civil War and at the end of the nineteenth century. The populations of all but Hart County increased during this period, with Hart witnessing a modest decrease in the number of inhabitants. The greatest population increase was witnessed by Anderson County, whose total population doubled between 1850 and 1890. Anderson County became one of South Carolina's leading textile centers following the Civil War, and this industrial focus contributed to its population increase.

Table 19: Population Statistics - Abbeville, Anderson, Hart, and Elbert Counties - 1850-1890 (from The History Group 1981:257)

	Census	Total	White %	Black %
Abbeville County (SC)	1850	32,318	39.00	61.00
	1890	46,854	32.10	67.70
Anderson County (SC)[1]	1850	21,475	64.60	35.40
	1890	43,696	57.40	42.20
Elbert County (GA)[2]	1850	12,959	51.90	48.10
	1890	15,376	48.60	51.30
Hart County (GA)[3]	1850	11,513	78.80	21.20
	1890	10,887	72.60	27.20

With the abolition of slavery the demographics for the black population of the reservoir stabilized. The black population of all four counties increased, although at much more modest rates than had been shown during the antebellum years. The continuation of population trends established during the antebellum is reflected in proportion of blacks to whites in the various counties. Abbeville and Elbert Counties, the foci of plantation culture in the Reservoir, maintained relatively similar ratios of blacks to whites from the antebellum to postbellum periods, and exhibited black majorities, whereas Anderson and Hart Counties, which had the least participation in the plantation economy and the lowest percentage of black population in the antebellum period, continued this trend into the postbellum years. In general, the statistics indicate a relatively stable population matrix during the period from 1850 to 1890.

Stable population trends and a stable population are not necessarily the same. The inhabitants of the Russell Reservoir area made several settlement choices in the aftermath of the Civil War. The first was whether or not to remain in the region. The Civil War abolished the bonds which had connected slaves to the land, and as one Elbert County black stated, provided the "privilege to go" (Ramsey et al. 1986:2). In the aftermath of the war many blacks left the South, or their region of the South, in search of better economic opportunities. Cities and industries competed with fields for labor, and even among the fields there was variation in the wages offered. In 1867 the average yearly wage, including rations, paid to farm laborers in Georgia was $125. In Mississippi the yearly average was $149; in Louisiana $150. Blacks moved in response to economic opportunity (Brooks 1914:17; Brooks 1978:123).

Ramsey et al. (1986:2-8) characterize four forms of black migration which occurred in the region in the late nineteenth century. It is likely that similar patterns existed in the immediate postbellum years. The first of these was outmigration, as mentioned above. A second type was out-and-back migration, characterized by removal from the project area and return in later years. A third form of migration was described by Ramsey et al. as "in-out," and featured a move away from the project area for improved earning potential, with the purpose of this move being to save enough money to buy land in the area and then return. The final pattern was a migration of employment opportunities. Blacks moved across the area's landscape in search of better opportunities, yet always remained within the regions' bounds. As Ramsey et al. (1986:6) note: "changing jobs was synonymous with moving."

With the dissolution of the plantation, the focus of community shifted to hamlets, crossroads towns, neighborhoods, and churches. As noted previously, a sense of community played an important role in black culture during the plantation period, and this sense continued and flourished in the Civil War's aftermath. Religion played a key role in establishing community. Speaking in the present, Lillie Pressely's words could also be applied to the area's immediate past (Ramsey et al. 1986:7):

> My daddy was a member of Dove Creek; and my mother [was a] member of Dove Creek; and my older brother [was a] member of Dove Creek; and my sister next to me, she's a member of Dove Creek; and my sister in Ohio, she's a member of Dove Creek. But its just a few miles out in the country. But, like I say, for sixty years I've been in

town, I've been right at Mt. Calvary, but I don't forget my home church. When things [are] doing at my home church, I remember them too.

Heardmont, a black community that developed after the Civil War, apparently had as its focus the Bethel Grove Baptist Church, established during the antebellum era as a house of worship for slaves. While Bethel Grove served as the cultural center of the community, other features included a school for children from surrounding farms (the school featured two sessions: "laid by times," from July to August, and "after harvest," November to March). Three stores were located within the community, all owned and operated by white men, and two of these stores supported cotton gins. Heardmont also had a blacksmith shop, a cooperative cannery, and a building where two white landowners (William Maddox and John McCalla) kept their offices (The History Group 1981:121-123).

Perhaps the most dramatic transition which occurred in the wake of the Civil War was the shift in patterns of labor and agriculture. Sharecropping, share renting, cash renting and land ownership were all avenues in which freedmen continued to participate in the agrarian economy. Traditionally, these responses to the abolition of slavery have been viewed as a product of abolition, but as noted in the previous chapter with regards to James E. Calhoun, all of these were practiced in the antebellum. The difference was that in the antebellum these were minority land-labor relations which were restricted primarily to whites, whereas in the postbellum these became the dominant forms of labor relations and typified rural black's existence in the South. A second traditional view has posited a rather abrupt break between slavery and tenancy; as slavery ended, a dispersed tenant-based agricultural system emerged as an immediate response. This view is also incorrect; the path from slavery to tenancy featured a number of different labor schemes as both planters and freedmen sorted their options and chose those which were most valued. One planter reported in 1865 that "on twenty plantations around me there are ten different styles of contracts" (Trowbridge 1866:391; in Orser and Holland 1984), and historian Ralph Shlomowitz (1979:561-562; in Orser and Holland 1984:113) has identified six major varients of wage compensation alone. Clearly the responses to abolition were numerous and varied.

As Orser (1986:11) notes, planter's initially sought to replace slavery with a wage system of agriculture, since this offered the greatest potential for profit within the cotton economy. Familiar with a gang labor arrangement, and the direct supervision of their workers, planters sought to maintain the basic attributes of the plantation system and simply compensate their employees with a modest wage. Thus freedmen would continue to be housed in the plantation quarters, continue to be outfitted and fed by the plantation master, and continue to work in gangs in the plantation fields. The wages offered were too low to provide any means of escape from this system, and signed contracts and harsh vagrancy laws prohibited freedmen from leaving the plantation if they so chose. In essence, the wage system was merely a thinly veiled continuation of slavery. This system was not appreciated by southern blacks, who sought a greater degree of freedom and self-supervision. The eventual compromise between planters and freedmen was sharecropping and tenancy, which provided blacks with an economic incentive for their labor, and the possibility (although slight) to save and eventually become land owners. One system which emerged as a predecessor to sharecropping was the squad system.

Shlomowitz (1979:571-572, 1982:268-270; in Orser 1986:12) identified the squad system by four traits. First, under this system, blacks worked in groups but received as compensation a share of the crop, rather than a monthly wage. Second, squads were apparently kin-based, whereas gangs were randomly assembled from the available freedmen population. This trait was noted by British journalist Robert Somers (1871:120; in Orser 1986:12), who commented that "a strong family group" that "can bring odd hands to work at proper seasons makes a choice, if not always attainable, nucleus of a 'squad.'" A third characteristic of the squad was that it consisted of fewer laborers than traditionally found among gangs. Finally, this labor system was characterized by a settlement system featuring dispersed small villages, a pattern intermediate between nuclear settlement and a fully dispersed occupancy (Orser 1986:12), and one which replicated, on a smaller and more dispersed scale, the conglomerate settlement patterning of large plantations.

The evidence for the use of the squad system at Millwood Plantation comes from an 1867 contract established between James E. Calhoun and seven freedmen. The contract stipulated that these individuals were to cultivate certain plots of land (the size of which were unfortunately not provided) "with a view to making large crops, out of which they are to pay the said Calhoun a rentage of one half of all they raise" (Contract between JEC and freedmen, February 5, 1867, Freedmen's Bureau Papers; in Orser et al. 1987:758). Each of the seven was expected to gather a crew for the cultivation of their respective plots, and to compensate their laborers (their half of the crop would thus be subdivided many times over). Other stipulations of the contract included that "they are to aid in keeping the portion of the said Estate embraced within the home Range, in making improvements, in fencing & in farm building & in work on roads." They were responsible for work animals lent them by Calhoun, "for which they are answerable to the full value against being stolen or neglected." Supplies were to be purchased from Calhoun's storerooms, hogs and chickens were provided with the following expected returns (Contract between JEC and freedmen, February 5, 1867, Freedmen's Bureau Papers; in Orser et al. 1987:758):

> ...articles in the storerooms of said Calhoun shall be preferred, at the same rate. Said Calhoun having divided his hogs & poultry among the second Parties & lent them his work animals & milch cows, till called for, he shall receive one third part of all the fresh eggs, & of the increase in poultry, every month a roasting pig, & beginning at the 1st of Nov. & closing at the 31st of Dec. a sounded, well fatted Hog, weighing at least 150 lbs. from each one of the second Parties.

The contract also required the seven to be present on the property at all times, and insisted that the freedmen receive Calhoun's permission to either leave the plantation or receive visitors. The seven were responsible for the conduct of their crews, and Calhoun provided penalties for those who disobeyed his rules and regulations (Contract between JEC and freedmen, February 5, 1867, Freedmen's Bureau Papers; in Orser et al. 1987:759):

> For each offense or neglect of themselves, or of their Hands, there may be a fine of twenty five cents, & it shall be the option of the said Calhoun, on continuation of misconduct to dismiss any or all of the second parties or of the Hands they employ, with forfeiture of all claims whatsoever, & to place their effects in the public road.

Calhoun's contract provides an interesting glimpse at the interests of a planter (and to a lesser degree those of the freedmen) in the years immediately following the war. Calhoun maintained many of the measures of authority which he had enjoyed in the antebellum era. Freedmen were not to come and go without his permission, misconduct was a punishable offense (if not by lashes, at least with quarter fines), and workers were expected to maintain the plantation beyond the limits of their fields. The labor organization is not unlike that of the antebellum period, if the seven "Second Parties" are considered as slave drivers, their crews as gangs, and the fields in which they worked as separate quarters. Interestingly, the contract makes no provision for housing, suggesting that facilities already existed, and Calhoun may have merely taken advantage of an established conglomerate settlement pattern in providing for the subdivision of his estate. The freedmen received a share of the crop and the means to support themselves while producing that crop, not great incentives, but an improvement over slavery. In the essentials the plantation system was little changed.

The desire for a hand in their own economic fate led freedmen to push for shares over wages, and characterizes the shift from the gang labor wage system to the squad labor share system which occurred in the late 1860s. It was the desire to control their own lives, to step out from under the planters' watchful eyes, that led to the dispersed residence sharecropping and rental system which characterized the postbellum South after ca. 1870. As Robert Preston Brooks noted: "it is the escaping from supervision, not the larger opportunity of profits that the negro has in mind in shifting from the position of wage earner to share tenant to renter" (1914:60; in Orser and Holland 1984:115). Four forms of tenancy developed: sharecropping, share renting, standing rent, and cash renting (The History Group 1981:113; Orser and Holland 1984:115). In sharecropping, planters provided all of the resources except fertilizer, which was supplied equally by tenant and landlord, and the crop was then evenly divided; in share renting, the landlord provided land, housing, and a quarter to a third of the fertilizer, while the tenant provided labor, livestock, tools, seed, and feed, and the crop was then divided by the proportion of fertilizer contributed by the landlord (either "thirds" or "fourths"); in standing rent the landlord provided land and housing, and the tenant provided a fixed amount of a staple crop as rent; and in cash renting, the landlord provided land and housing, while the tenant supplied the other resources and paid a fixed rent per acre, payable in either cash or cotton. All of these practices might occur on a single plantation, and all were applied to both freedmen and landless whites (Orser and Holland 1984:115).

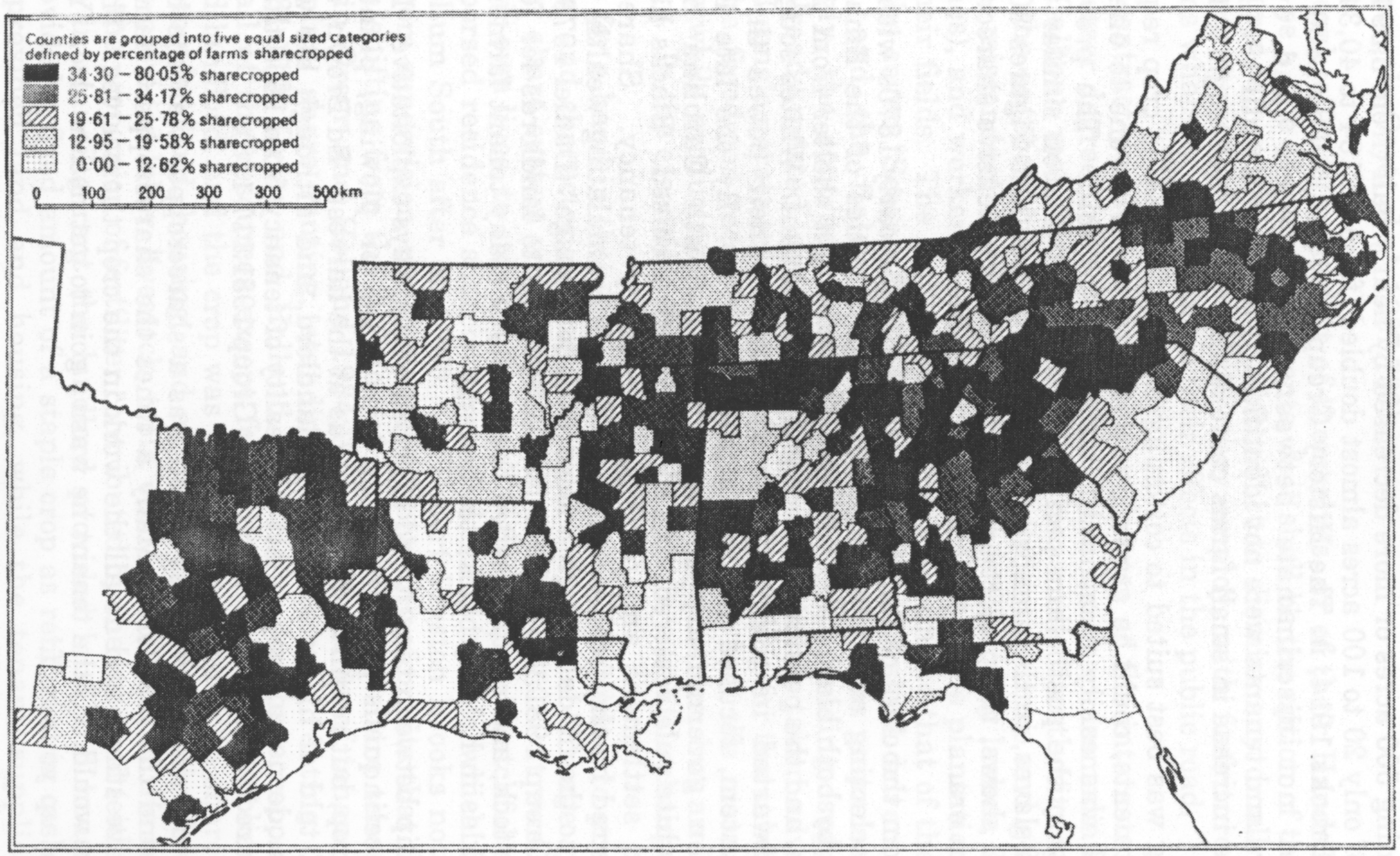
The most noticeable effect of this system of land-labor relations was the fragmentation of the agricultural units of production. Statistics from Georgia for the period between 1860 and 1870 indicate that this fragmentation was striking. Farms containing 500 acres or more decreased by nearly half (from 3,594 to 1,925) while farms of only 20 to 100 acres almost doubled (from 28,134 to 40,342) during this decade (Brooks 1914; in The History Group 1981:114). The 1860 and 1870 censuses did not discriminate between tenancy and land ownership (sharecroppers and tenants were not identified on the census until 1910), but it is likely that the increase in small farms came almost entirely through tenancy.

Sharecropping was best suited to cotton agriculture, since this crop required few capital investments, could be grown by work forces of from one to one hundred laborers, and was easily measured, marketed, and sold. The prevalence of sharecropping in the postbellum period follows a distribution similar to that of cotton, and of slaves, in the antebellum (Figure 100; see also Figures 80 and 82). As Figure 100 shows, the project area was marked by intensive sharecropping in the postbellum era.

The period from the close of the Civil War through the early 1870s witnessed the sorting and selecting of the promises and opportunities of the Emancipation Proclamation by both blacks and whites. Blacks sought shelter from the prying eyes of whites, and the possibility of economic achievement. Whites sought power, and when thwarted in their efforts to resurrect their power through the plantation system, focused their efforts on politics. By the late 1870s the Reconstruction governments of Georgia and South Carolina had been overthrown, white rule restored, and blacks disenfranchised. Blacks had gained the dispersed settlement and privacy afforded by tenancy. Sharecropping, initially preferred by the freedmen as a means of accumulating wealth, proved to connect them to the fields through a form of "debt-peonage" (Daniel 1979:88-89; in The History Group 1981:115). Financial obligations to landlords for feed, seed, fertilizer, livestock, and rent, exceeded the profits of many tenant farmers. Debts replaced shackles in holding blacks to the land.

The relationship between tenant and landlord was always exploitative. Landlords appeared to relinquish power when it was time for plowing, planting, and weeding the crop, but reaffirmed their status at the harvest. Ed Brown, a Georgia sharecropper, told of his relation to his landlord, and although his words are from a more modern era, they reflect the reality of tenancy from 1865 through the present (Maguire 1975:55-59; in The History Group 1981:117-118):

> Your two worstest enemies if you was a sharecropper was the boll weevil and the landlord. Many a times the sharecropper's family would live stingy and do all the work in the crop themselves. Then the boss would tell the tenant he wasn't goin to get nothin else. 'You done eat up your half.'



The prevalance of sharecropping in the South, 1880. (*Source:* U.S. Census Office, Tenth Census [1880], *Report of the Production of Agriculture* [Washington: GPO, 1883], Table 5.)

Source: The History Group 1981:116.

Figure 100. The Prevalence of Sharecropping in the South, 1880. Note: The project area was one of the most densely sharecropped portions of the postbellum South, a reflection of its dependence on the cotton economy.

After the crop is laid by, when you have nothin to do but gather your crop, some men will make you leave. I've been taken for every dime in my part of the crop and wiped out with nothin. And it could be a boss who calls hisself the best man in the world...

Beginnin in January I'd be on my feet by sunup an me and my mule would be goin day after until the land was broke up and turned.

At first Mr. Addison say, 'How is your crop, and how is you gettin along turnin your land? Take care of the mules. Don't rush because I want them to last...'

In February to my mind it was usually too cold to fish. But we went on breakin and turning land and pulverizin it. And we went rabbit and coon and possum huntin.

I'm going regular to the boss about once a month for furnish money. 'Ed, when you goin to start plantin your crop?'

I'm waitin till the moon quarter, about the fifteenth of March.

In March with a four-inch scooter on my hayman stock I'd streak off my rows to plant cotton. About the fifteenth I'd put in some soft corn to give me early feed for my hogs and cows. Then I'd have almost two weeks in March and all of April to plant cotton...

Along about April the bossman would say, 'Ed, is your cotton gettin ready to chop?'

...If I have good weather the cotton will come right up, about half a leg high, I don't plow deep the first time I cultivate it in May.

...Mr. Addison ain't come out yet. He still settin to the office leavin it in my hands.

'Well, it look good,' I tell him. 'It's loaded down with squares and I seen a bloom this week.' In about a month he ask again...

Now the boss ask, 'Is our cotton doin pretty good?'

In July when the furnish money has give out my meat is about to give out too...

I see the boss again and he say, 'Do you know where we can get you a job?'

'Maybe I can get one to the sawmill but I got the mules to take care of and that would mean I got to leave the crop.'...

> 'Put the mules in the pasture. You can notice them and work at the sawmill and make your own way.'
>
> ...Pickin time...
>
> Now [Mr Addison] goes out to the crop... 'My crop is lookin pretty,' [he] say to my wife.
>
> By the latter part of September it's all picked. I gather my peanuts or whatever I've raised and take the rest of my cotton to the warehouse and get it ginned and baled. Now Mr. Addison can handle it and just as sure as you're livin he'll call it his'n. 'My cotton, my corn, my crop.'

While tenancy exploited sharecroppers and renters, it also exploited the land under cultivation. Since their own economic well being was tied to crop productivity, long-term soil conservation offered tenants no economic advantage. As Stanley Trimble has noted, "the period of greatest erosive land use" occurred between 1860 and 1920, and directly corresponded with the rise of tenancy (Figure 101) (Trimble 1974:69; in The History Group 1981:124).

The effects of increased soil erosion in the Russell Reservoir were felt as early as 1888, and probably much earlier. In an address to the Savannah River Valley Association in that year, Harry Hammond discussed the impact of erosion on the area (Hammond n.d.; in The History Group 1981:125). Hammond noted that the "denudation" of the "upper country" had left great gullies, whose red clay washed onto the lowlands and flushed away the nutritive top-soil. This erosive action was accelerated by improvements to the river itself; "clearing out the channel and confining the current with wing dams" had increased the velocity of the river and thus its capacity to drain the runoff of the eroding uplands. As this upland "deluge of mud" spilled into the river, the river became more prone to floods, destroying even more cultivated land. Hammond viewed this problem as a vicious cycle, yet he did not recognize that this cycle was only a spin-off of a much greater circuit, the struggle of the agrarian South for economic survival.

By the late 1880s the railroads began to extend their influence into the project area. The Savannah Valley Railroad (later the Charleston and Western Carolina Railway) crossed the eastern portion of the study area by 1886, and more extensive rail connections developed in the late nineteenth and early twentieth centuries (The History Group 1981:52). The railway combined with essential services, cotton gins, stores, warehouses, etc., to spur the growth of communities in the project area. These towns served as hubs and distribution points for the regional commerce. Lowndesville served as the primary hub for the South Carolina side of the river, while Elberton and Heardmont serviced the western bank of the Savannah (Drucker et al. 1983:15). By the late nineteenth century these towns

Source: The History Group 1981:125.

Figure 101. Soil Erosion in the Project Area. Note: This photograph dates to ca. 1940 and features Malley Hutchinson of the Caldwell-Hutchinson Farm. Note also the poor conditions of local roads even as of this late date.

marketed the produce not only of the agricultural community, but of the industrial centers as well.

"THE PRODUCTION OF YOUR SOIL AND MILL": INDUSTRIALIZATION IN THE RUSSELL RESERVOIR, 1865 - 1890

In 1840, James Calhoun received correspondence from a northern friend, who wrote that he was looking forward to "some of that fine bread, the production of your Soil and Mill" (J. B. Boisseau to JEC, March 18, 1840, JECP; in Orser et al. 1987:752). This comment points out that industrialization in the project area was synonymous with milling, an industrial venture well established in the antebellum period as part of the plantation economy. This concentration within one aspect of industrial behavior was deliberate, a reinforcement and completion of the agricultural economy that dominated the region before and after the War. Thus, the milling of corn and the ginning of cotton were the major tasks carried out at the various millseats along the Savannah and the three major drainages which empty into the river within the project area: Beaverdam Creek, Coldwater Creek, and the Rocky River. The scope of these operations was limited; most were geared to service a local community or the needs of a plantation. This limitation was in part imposed by the absence of an adequate transportation system by land or river which would allow the expansion of industry within this part of the piedmont, and thus industrial activity was constricted to servicing a local market during much of the postbellum period.

Despite this constraint, milling was very much a part of the landscape within the project area and its surrounds. Elbert County is a case in point as documented in the Eighth Federal Census. Twenty flour and meal manufacturies were enumerated in 1860 in Elbert County. This accounted for half of the county's industry, and 55 per cent of the capital invested. Comparative data on Hart and Lincoln Counties, situated on the Savannah to the north and south of Elbert County, respectively, show that neither county equalled Elbert in the amount of mills in operation. Moreover, when all of the county statistics for Georgia were compared, Elbert County ranked first in the number of flour and meal mills in operation in 1860. Elbert also supported a wool manufactory and a cotton mill, the White-Thompson factory on the Broad River (Worthy 1983:21). A predisposition toward industrialization was clearly present within the general project area prior to the Civil War.

The area's potential for water power was first enthusiastically noted by William Bartram in the late eighteenth century, and later descriptions and surveys of the reservoir area underscored Bartram's initial observations (DeVorsey 1966; in Newman 1984:2):

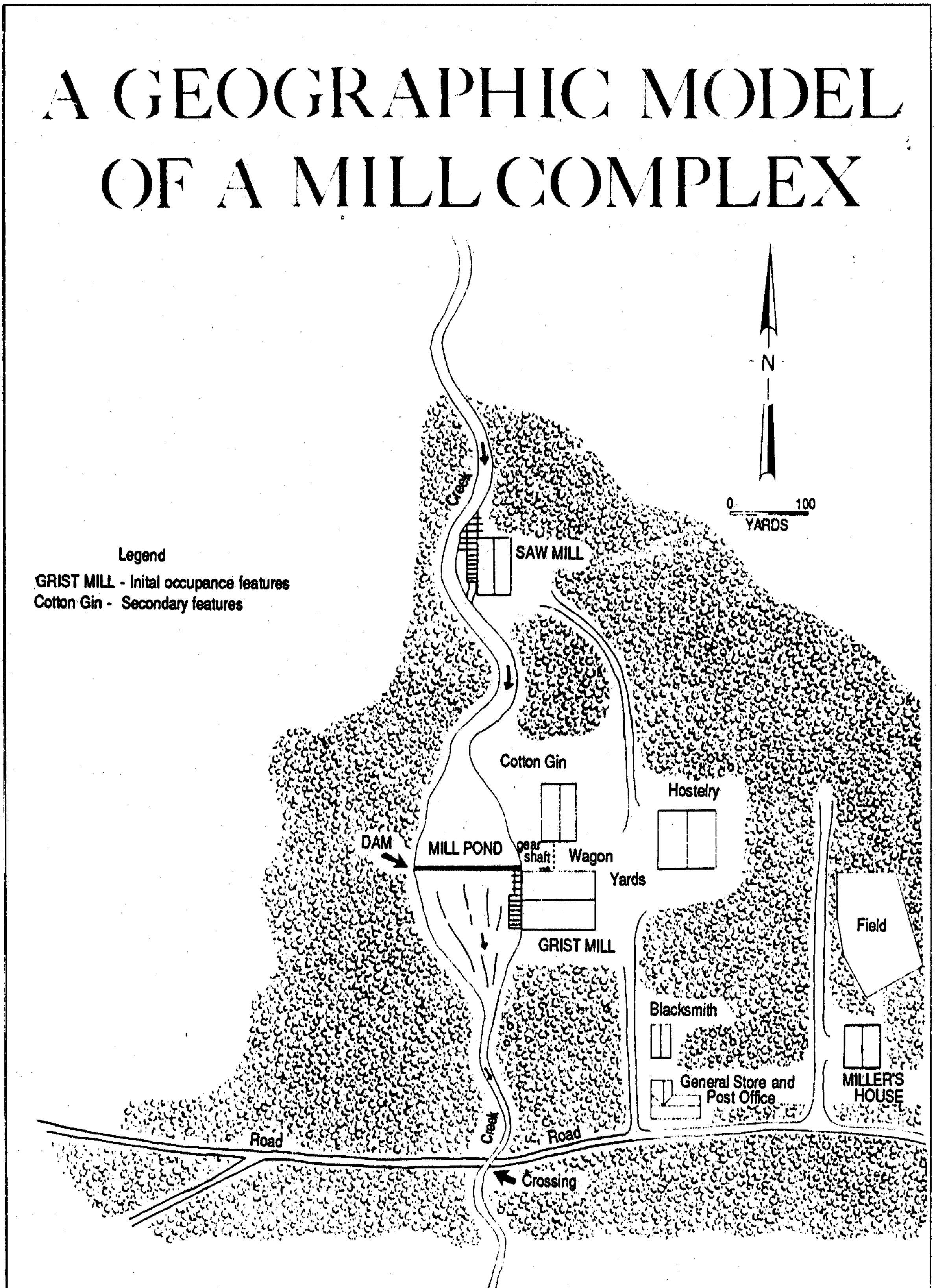
> The whole of the lands appear finely watered by an abundance of streams which are very convenient places for erecting saw and grist

mills. Also on the river are several convenient places for mills where rocks and islands in the river stand near the banks.

The project area's situation within the piedmont on the Savannah River between the mountains and lowlands was favorable to water power development as the river descended into the coastal plain. The gradient of the river was cited within an 1879 Army Corps of Engineers document as averaging 5.25 feet per mile. The same report further described the area between Andersonville and Petersburg as a "torrential stream." A *Survey of Water Power,* published in 1885, described the descent of the Savannah River as being stepped rather than steady, with drops in elevation occurring at various shoals. The stepped character of this portion of the Savannah was extremely well suited to the development of water power sites. However, the environment offered a setback to the industrial entrepreneur; the shoal areas were encased by high river banks which would make the building of millraces problematical (Newman 1984:2).

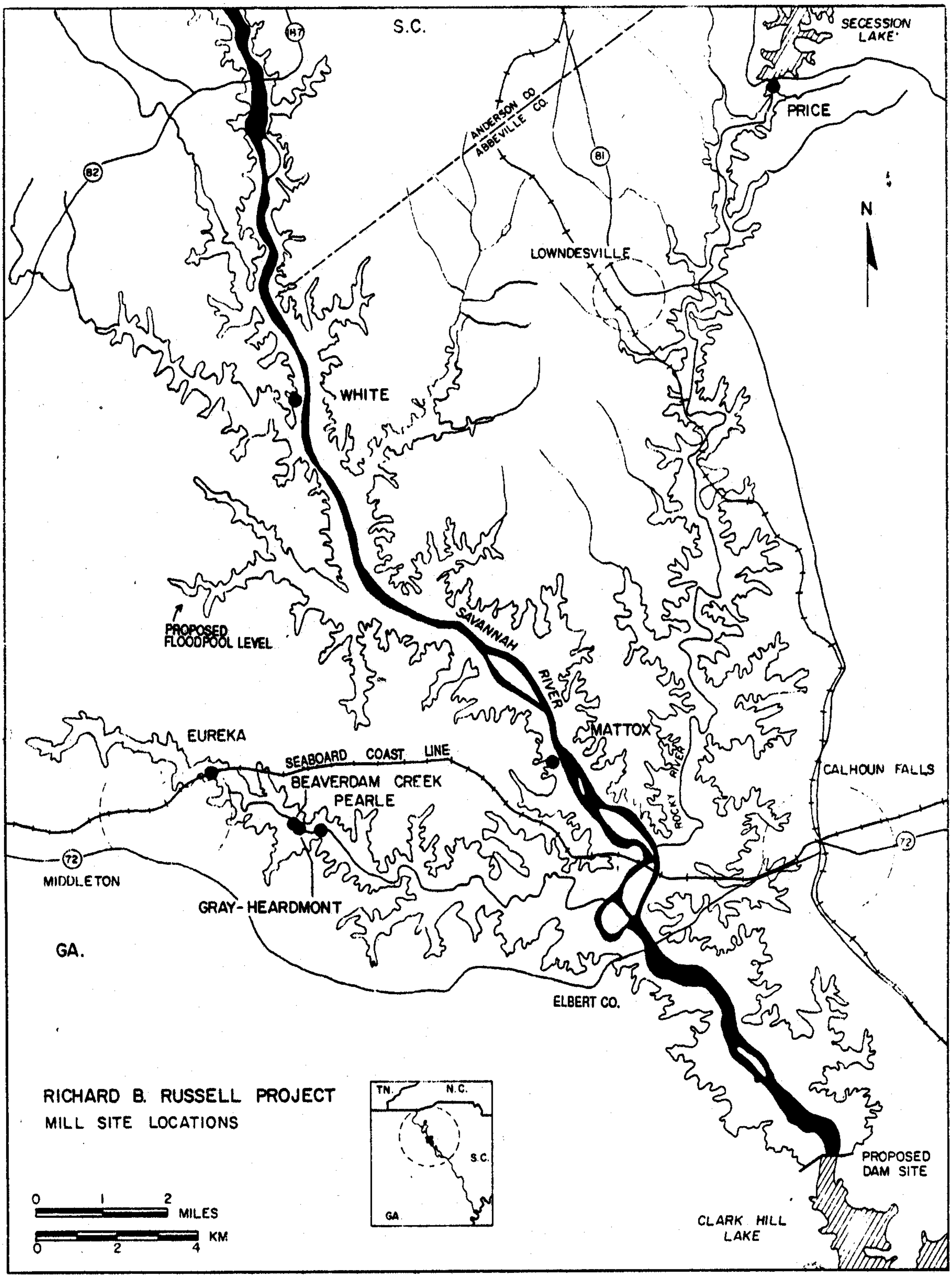
Tightly defined, a dam, headrace, wheelpit, mill, and a tailrace are the specific components of a mill seat (Wallace 1978:14). In a small operation, a miller's house would adjoin the mill. If the site generated sufficient power, further activities such as a sawmill, cotton gin, blacksmith's shop, and a general store would join the mill and function as a service complex for the neighboring community. A geographic model of a mill complex, composed by Gregory Jeane (1974) is offered in Figure 102. In this example, the creek has been utilized as a power source in two locations; first, for a sawmill, and next for a grist mill and cotton gin. The power for the sawmill is drawn directly from the creek, whereas the grist mill and cotton gin's motive power derives from the construction of a dam which channels the fall of the water to the waterwheel. A hostelry, blacksmith's shop, general store, and miller's house adjoin the mill buildings, and a road leads into the complex to allow traffic to and from the mill. Jeane's model, based upon his study of milling in northwest Georgia, is instructive. The larger operation, the grist mill and cotton gin, is powered in a complex and artificial manner, using a full dam to create the fall of water to the waterwheel, whereas the smaller operation upstream uses the natural flow of water along a bend in the creek to garner power. Hence, as Jeane's model shows, terrain and technology determine the physical layout of the principal components of a mill.

Mills within the reservoir area ranged in type from the typical mill seat to the mill complex during this period. While a number of nineteenth-century mills were identified, certain mill sites were chosen for study. Five of this group were operative in the post war period, four were grist and flour mills probably performing custom work with some merchant milling (Newman 1984:102). The fifth was a cotton yarn factory. Their locations are shown on Figure 103. None of these mills were specifically plantation-based but some were owned and operated by prominent planters in the reservoir area. Four of the mills under discussion were located in Elbert County, and three of these were in operation prior to the Civil War. As discussed, Elbert County was heavily involved in industrial development by 1860. It had the largest amount of flour and meal mills in the state as well as a cotton mill and a wool manufactory. Hence, capital which had



Source: Jeane (1974)

Figure 102. Geographical Model of a Mill Complex.
Note: While developed for northwest Georgia, this model contains many of the attributes expected for mills in the project area.



Source: Newman (1984:3).

Figure 103. The location of Russell Reservoir Mill Sites Examined by Newman (1984).

once been solely devoted to the development of agriculture was finding a toehold in the industrial sector. Planter-owned mills would handle the crops from their owner's fields, and would also grind the crops produced locally. The fact that planters began to have the economic vision to broaden their agricultural milling base was the first step in the development of the mercantile milling business.

Nineteenth-Century Water Power Technology

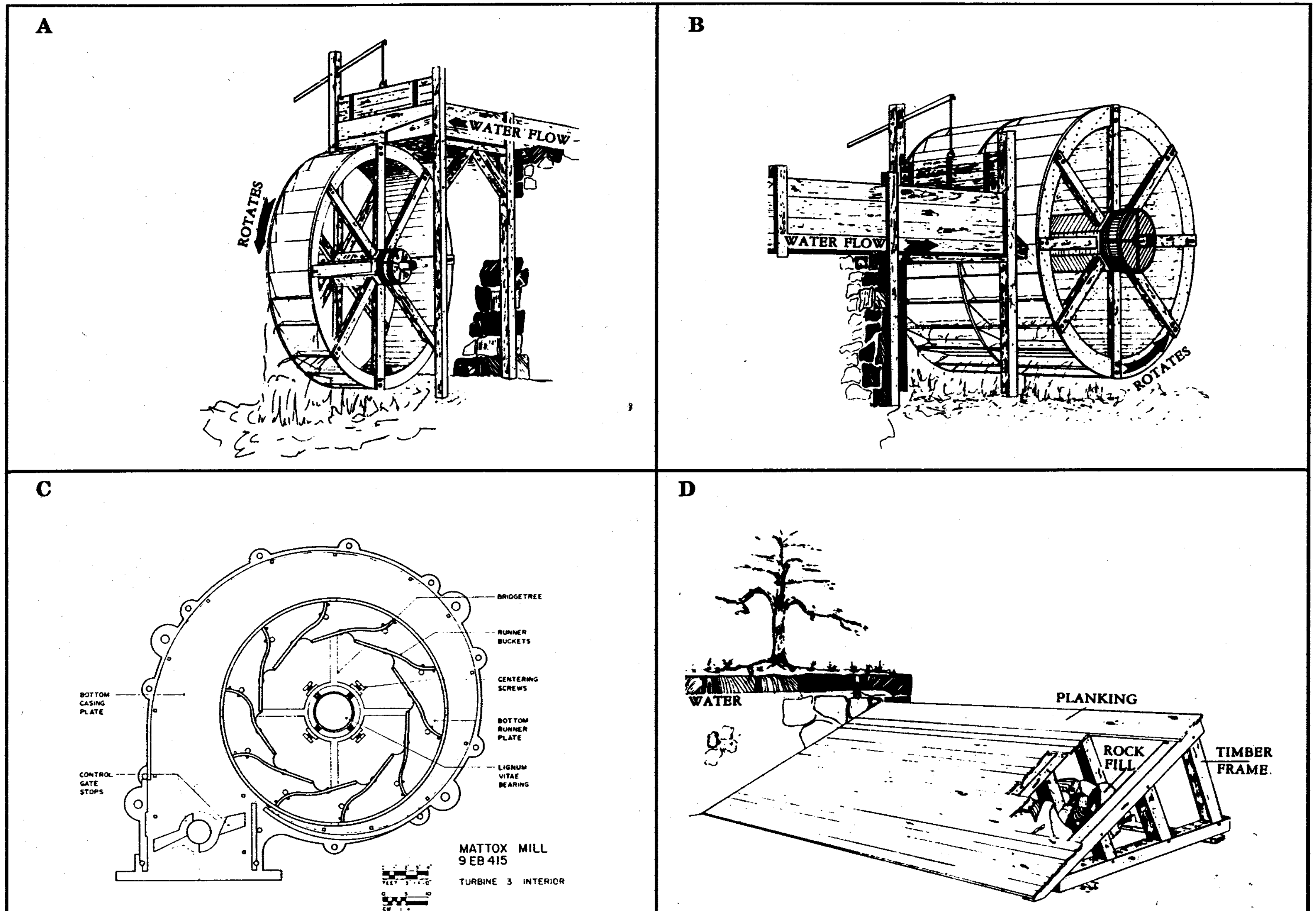
The water wheel was the central focus of the water system (Wallace 1978:125-125) :

> These water wheels which, in their slow and ponderous revolutions, turned the gears that communicated power to the machinery in the mill, were themselves driven by the weight of the water delivered to them by a more or less elaborate hydraulic system. Some were "overshot" wheels: that is to say, that water was brought over the top of the wheel in a wooden sluice, to pour down the front into wooden buckets built into the outer rim of the wheel [Figure 104a]; others were "breast" wheels, revolving in the opposite direction, moved by water delivered to the back of the wheel at about middle height [Figure 104b]. It was the weight of the water that turned the wheel, not its impact. At the bottom, the water fell out of the buckets into the wheelpit and thence flowed out into the tailrace.... The wheels typically were 10 to 15 feet in diameter and 3 to 4 feet in width, and were left exposed or shielded only by flimsy sheds.

The breast wheel, a type of undershot wheel, was considered to be inefficient except in low head situations where an ample supply of water was available (Newman 1984:5). Other variations of wheel types were also used, such as the pitchback and the flutter wheel.

A vertical head of water of approximately 10 to 15 feet was needed to drive the waterwheel. This fall was created between the point where the headrace diverted water from the creek and the point in the tailrace where the used water was released back into the stream. An estimate of the amount of horse power the system could produce theoretically was "a function of the head and the quantity of water delivered per unit of time" (Wallace 1978:127). In the absence of a waterfall, a sufficient head was achieved by excavating a canal along the creek or stream at a shallower angle than the stream. As the canal proceeded, the water it contained would be progressively higher than the water in the stream. When this disparity in height reached the point where it could accommodate a vertical waterwheel, the wheelpit could be constructed.

One cost cutting device in building a mill was to keep the race comparatively short, which helped to decrease construction costs and the amount of land to be acquired for the mill. As an answer, millwrights and master masons chose to dam the stream, making the water flow constant as it was forced over the top of the dam, and concomitantly,increasing the head. The dams could be of various



Source: Wallace 1978:126;Newman 1983.

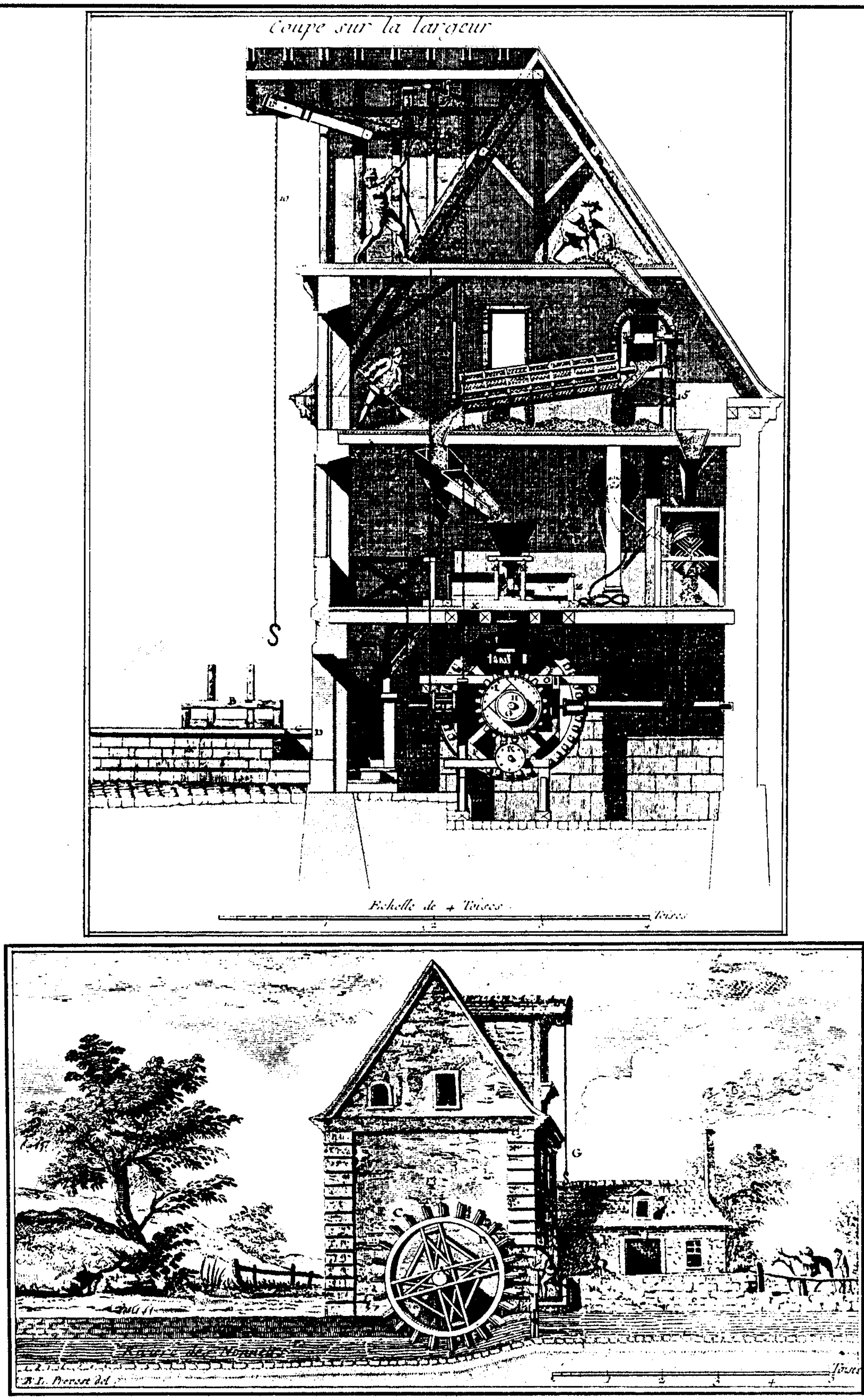
Figure 104. Elements of Water Power Technology. A is an overshot wheel; B is a breast wheel; C is a turbine from Mattox Mill; and D is an example of a crib dam.

types of construction. Many were fairly shallow and informally built of planking in a "V"shape. The interior of these crib dams would be filled with rocks (Figure 104d); the dam would be snugly placed flush with a high river bank or rock to stabilize it and also to eliminate the possibility that a new course could be formedaround the it (Wallace 1978:128). A wingdam extending from one bank outward to the center of the stream on an angle, rather than a full dam across the stream, was another alternative given the proper environmental conditions. The millrace could be about 10 to 12 feet in width. Gates were placed at the dam site and at the pit to allow some control over how much water could reach the wheel. According to Wallace (1978:128), a head race could vary from 50 yards to a quarter of a mile in length.

The above technology was practiced throughout the nineteenth century where the use of a gravity or impact wheel, the types of wheels discussed above, was deemed energy efficient, although other types of waterwheels were being developed. The 1820s saw the introduction of the reaction wheel or turbine. Water was forced into the turbine by pressure. As the water attempts to find an outlet, it relays this pressure to the paddles, blades, or buckets, causing them to turn. Use of the first reaction wheel in the United States is attributed to Zebulon Parker in 1827. Parker's model was considered to be an early example of the scroll case turbine (Newman 1984:10).

While hailed as an innovation, early turbines were problematical in use. For example, those that used axial or downward flow patterns did not suit the low head conditions universally found in the eastern United States. After some experimentation, the "mixed flow" turbine was introduced. This model combined axial and downward flow creating a spiral discharge of water. These turbines, mass produced and easy to install, were constructed with fewer buckets to prevent clogging. Also, gates which allowed water entry to the turbine could be operated in a partially closed position, making the "mixed flow" turbine suitable for a variety of situations including low head conditions. These qualities made the "mixed flow" turbine extremely popular within the last quarter of the nineteenth century. The scroll case turbine is an example of a "mixed flow" turbine; one of these was found within the study area at the Mattox Mill site (Figure 104c). This model can be best described as a horizontal wheel placed within the interior of a snail shaped case. A control gate allows the water to enter the interior aperture; after the water enters, this aperture decreases in size in the approach to the turbine, building water pressure to move the runner buckets. A bridgetree supports the runner buckets which are forced into motion by the incoming water. A bearing of lignum vitae lies in the center of the bridgetree. The water was probably discharged through the center.

With the waterwheel or turbine in motion, power would be communicated to the mill machinery by shafting, which, at the beginning of the nineteenth century, was built of heavy wood or iron shafts and gearing. A diagram of a mill with an undershot wheel and a mill interior is shown in Figure 105. This example is from eighteenth-century France, culled from Diderot's *Encyclopedia*, (Gillispie 1959) but it does illustrate clearly the system of gears and pulleys within a mill



Source: Gillispie 1958:plates 19 and 20. Courtesy of Dover Publications.

Figure 105. Cross Section and Plan of a Water-Powered Mill. Note: While illustrative of eighteenth-century examples, similar technology was employed in the project area.

and the milling of the grain as it moves from floor to floor, from the hopper through the bolter or rotary sifter to the grindstone.

In *The Young Millwright's and Miller's Guide* published in 1850 by Oliver Evans, a power train was described using wooden shafts, gearwheels, pulleys, and belts in order to distribute power throughout the building. This early stab at automation drew support as further innovations, such as the introduction of wrought iron shafting, and later, steel shafting, helped Evan's concept come to fruition. Evan's design still used the traditional milling process; millstones would be used at small merchant mills throughout the nineteenth century. But his major contribution was the introduction of drive belts to be used as elevators to move the grain from floor to floor (Newman 1984:11).

In sum, nineteenth-century water power technology was fairly uniform except in two areas: the wheelpit and the mill interior. In the former, the turbine, after several permutations, replaced the waterwheel in situations where it proved more efficient than a vertical wheel. The interior of the mill changed somewhat in the second half of the century, with the move toward automation, but the traditional methods of grinding were practiced until the twentieth century.

The Mills

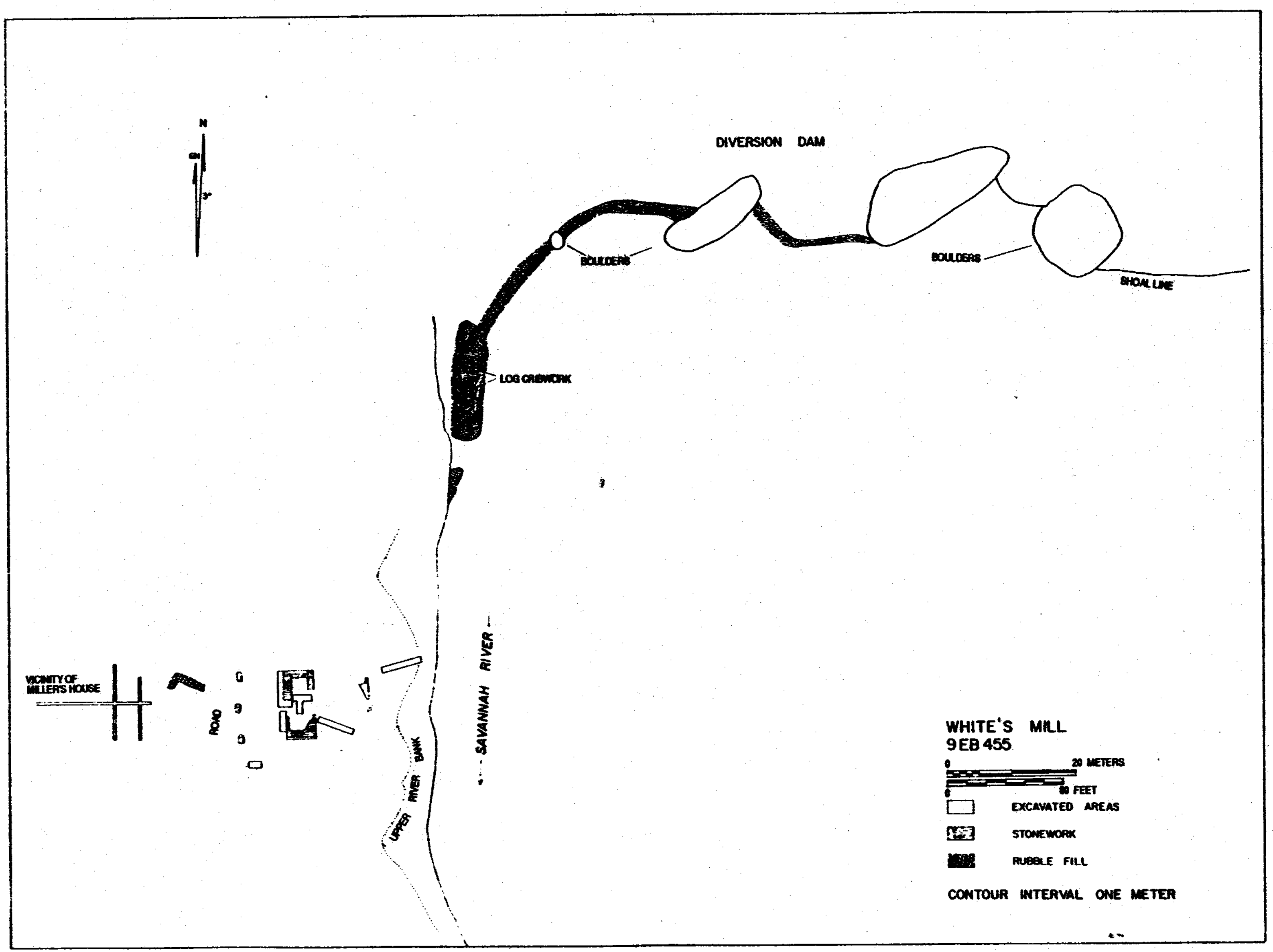
Five of the mills within the reservoir area which were chosen for study were operated during the postbellum period: White Mill, Price Mill, Eureka Mill, Mattox Mill, and the Gray-Heardmont Mill. As pointed out earlier, four of these were located in Elbert County, Georgia, while the fifth, Price Mill, was located on the Rocky River in Abbeville County, South Carolina. White Mill, Price Mill, Eureka Mill and the Mattox Mill were flour and grist mills; Gray-Heardmont was the sole textile factory in this group. The following synthesis outlines the evolution of these mills based on oral historical sources, documentary materials, and archaeological data. The documentary records for some of the mills were sparse. For example, explication of the history of Price Mill suffered from the lack of records for Abbeville County due to a nineteenth-century courthouse fire. Varying preservation had an impact on the archaeological data. Despite these problems, an overall picture of milling emerges from this group which ranges from a typical millseat comprised of simply a mill to a full blown mill complex. While all of the mills were located within one region and were contemporaneous, the variety of mill configurations and technologies represented emphasize that each millseat was uniquely fitted to its environment rather than formulaic in its composition. Finally, at the close of the period a shift from grist and flour milling to textile milling is seen, as entrepreneurs within the reservoir area became enamored with Southern industrialism and the thought of financial profit.

White Mill was extant from the 1820s through 1908. A deed refers to a mill owned by a Zachariah Bowman near the mouth of Coldwater Creek and the Savannah River in 1835 at a "place or town once known by the name of Edenborow but now known by the name of Bowman's Ferry". (Elbert County Deed Book AA:17; in

Newman 1984:19). The fact that the mill was situated at the town site suggests that it was initially supposed to have serviced the milling needs of the community. The mill survived despite the demise of Edinburg in the mid nineteenth century; its situation adjacent to a ferry landing no doubt played into its success. Bowman conveyed the property to Thomas Rouzee in 1844, who subsequently sold the mill tract to William Cleveland in 1857 (Elbert County Deed Book 2:243, CC:546). An historical overview of Edinburg, published as a letter to the editor of the *Elberton Star* on September 20, 1929, stated that William Cleveland, a farmer, operated not only the mill at Edinburg but also a store, a blacksmith's shop, and a ferry. Cleveland died of typhoid fever in 1861(Worthy 1983:106), but the mill remained in the Cleveland family until the mid twentieth century (Newman 1984:19-20).

The mill site is located on a river terrace on the west bank of the Savannah River approximately 200 m upstream of the mouth of Coldwater Creek. The location was less than ideal for a mill seat given the high bluffs along the river which prevented the construction of a raceway. Yet the mill was built despite these obstacles. Newman (1984:27) suggests that the mill's location within this unsuitable terrain can be attributed to the owner/builder's conceptualization of the mill's intended function -- to service the milling needs of the new town. In this instance, proximity won out over environmental fit. The builder tried to compensate for the topography with the several measures. A diversion dam was constructed of boulders which spanned the river, and directed water to the mill through a timber crib race or sluiceway placed in the river (Figure 106). Large spur type gears found at the site suggest that a gravity wheel, either an undershot or breastwheel, supplied the motive power for the mill throughout the nineteenth century, despite the introduction of the turbine. To adopt turbine technology would have entailed the construction of a higher dam or a millrace. Such an alteration would have been made if the volume of business warranted it, but documentary evidence suggests that White Mill was a marginal operation throughout its existence. It was not listed in the water power survey of 1885 or the 1880 Manufacturers Census.

The mill building proper, which was three stories high and measured 33 feet by 46 feet, was constructed of frame with a granite foundation. Oral sources indicated that a miller's home was located to the west of the mill on a bluff; a walkway connected the miller's house to the mill. Archaeological investigations gave credence to this tradition. A scatter of nails, ceramics, and kitchen-related artifacts was found at this location, suggesting the presence of a domestic structure (Newman 1984:23). The dates for these materials indicate an early- to mid-nineteenth century occupation. This dovetails with the fact that William Cleveland, the owner of the tract from 1857 to 1861, resided a mile away from the millseat; presumably the miller's house predates Cleveland's purchase. The mill remained in operation until the flood of 1908, and its longevity must be attributed to a variety of factors: proximity to a landing, suitable technology and capital outlay given the terrain, and the volume of business which was probably turned out by the mill.



Source: Newman 1984:21.

Figure 106. White's Mill Site Plan.

Unlike White Mill, the flour/grist mill and sawmill operated by two individuals listed as Price and Burdett in the 1880 census was located at a shoal extremely well situated to generate water power (Newman 1984:34). The beginnings of this millseat are unknown as county documents have been destroyed; the 1880 Federal Census is the first reference to the mill. The latter states that two turbines furnished the motive power (70 horsepower) for the flour/grist mill while a breastwheel was employed at the adjoining sawmill. The flour/grist mill utilized a fall of 12 feet; the sawmill 14 feet. Newman (1984:31) suggests that this disparity in fall and motive power indicates two separate facilities on the shoal, although they were probably using the same raceway. The 1885 *Reports on Water Power* gave different figures for the fall at the millseat; it stated that it was 47 1/2 feet in 1500 of which the mill used 31 feet and "a small amount of power" (Swain 1885:795; in Newman 1984:31). This variance within the data on the fall at the mill may be the result of differing measurement locations or techniques, or may be the sum of the two falls mentioned in the 1880 census. Remains of a raceway were not discovered during the archaeological research, although the position of the mill away from the river indicates that a raceway had been used at the mill. Finally, an informant gave some skeletal data about the mill building indicating that the Price and Burdett mill had been a two story structure with a wooden dam. The mill had to be rebuilt after the flood of 1908 and continued in operation until the 1930s.

The third mill within the study area was Eureka Mill, which operated from the 1820s to 1908. A mill was first constructed at this site on Beaverdam Creek in Elberton County between 1813 and 1828 by members of the Thornton family. Ownership of the mill tract changed hands frequently; eventually, the tract was owned by investors rather than a single family. In 1865 the mill tract, known as the Rucker and Martin Mill tract, was sold to L. H. O. Martin and William and Clarke Mattox for a consideration of $4,854. John Grogan purchased L. H. O. Martin's share for $1,500 when Martin died in 1867 (Newman 1984:35-36). Grogan retained the controlling interest in the mill until his death in 1896 (Worthy 1983:182).

The mill was formally known as the company of Grogan and Bruce in 1875 when it was valued at $9,350 for tax purposes. Broken down, the company's assets included 425 acres of land, $1,200 worth of merchandise, and $25 worth of tools. The deed of conveyance to Grogan stated that the mill site included a machinery storehouse, shoe shop, blacksmith shop, and a dwelling house. Further information about the operation is afforded by the 1880 Manufacturer's Census, which noted that the company had a capital investment of $11,000 and had two full time employees. Two central discharge turbines, six feet in diameter and generating 20 horsepower, supplied the motive power for the mill. These turbines powered three runs of stone (Newman 1984:36).

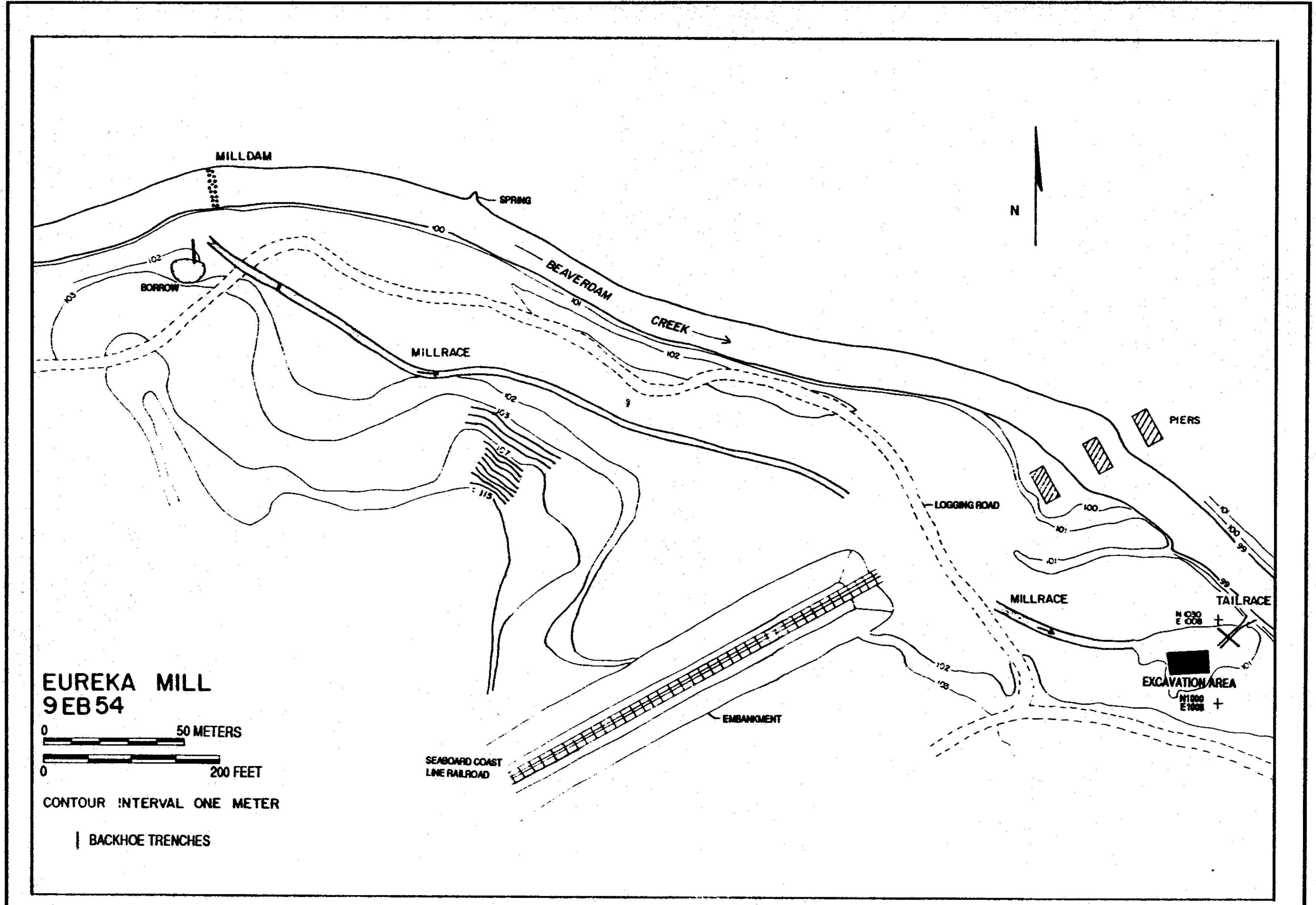
The documentary evidence shows that the mill received an infusion of capital between 1865 and 1875 as the value of the property doubled within a decade. When Sydney Bruce, Grogan's partner, died, his interest was sold to Mallory J. Thornton, who lived at the mill and supervised the mill operation. Evidently cotton ginning was a primary function of the complex (Worthy 1983:182). This specialization probably led to the expansionary plans of Leila Grogan Hobbs, who purchased her father's interest (5/6th) in the mill tract after his death in 1896 and the remaining (1/6th) interest in 1907. Hobbs intention to convert Eureka into a cotton mill was stalled by the 1908 flood, and the documents do not indicate whether the mills were functioning at all after Grogan's death (Newman 1984:36).

Archaeological investigations elicited further information about the mill site (Figure 107). First, the remains of a milldam of timber crib construction (see Figure 104d) were found approximately one kilometer above the actual mill site. The cribbing was attached to the stream bed with mud sills or pilings. The dam diverted water into an earthen millrace which emptied into the turbine pit at the mill. Excavation of the turbine pit, a rectangular wooden box open only at the headrace end, recovered three turbines. One dates to an 1850s installation and the other two to the post-1865 expansion of the mill. Interestingly, the two later turbines, which were center discharge wheels, had metal shafts and hubs unlike most contemporary examples, which were made out of wood. Newman (1984:53) suggests that this replacement of materials was a cost efficient measure allowing the Eureka millers a compromise between an expensive factory manufactured scroll case turbine and the inefficiency of an all-wooden wheel.

One of the post Civil War investors in Eureka Mill, William H. Mattox, went into the milling business as an adjunct to planting sometime after 1865, when he constructed a grist and flour mill at Cherokee Shoals on the Savannah River in Elberton County. Those shoals received the following recommendation in the 1885 *Survey of Water Power*:

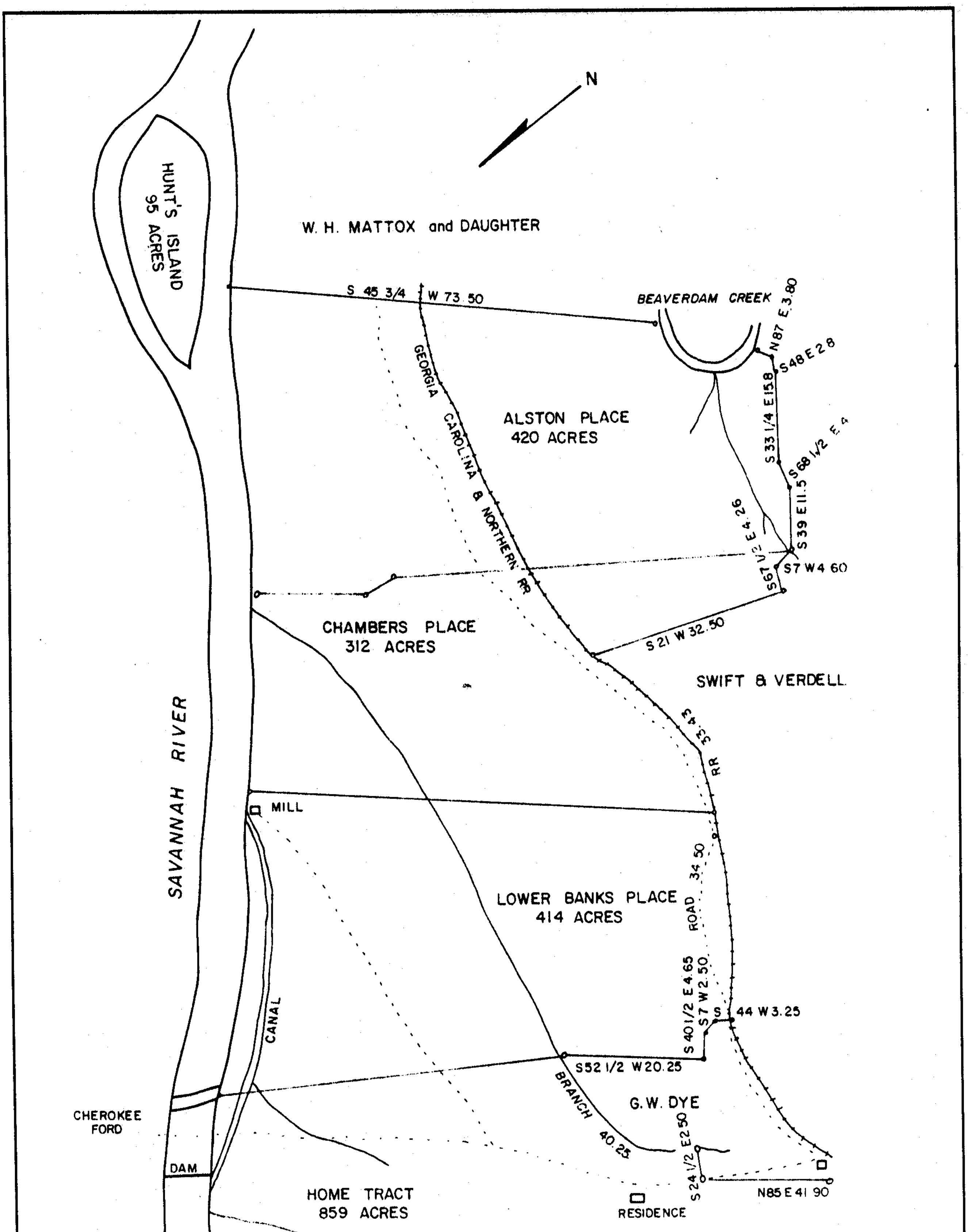
> It is stated by persons acquainted with the river that Gregg's and Middleton's shoals would be hard to utilize on account of the high banks, although both have been used to a small extent for saw mills, but that Cherokee Shoal, on the contrary, could easily be used and the whole fall rendered available. There is now a mill at these shoals with a wing 5 feet high, a canal a mile long, and a fall at the mill of 16 feet (Swain 1885:790; in Newman 1984:55).

A plat of his property completed in 1889 shows the relationship between the mill buildings, race, and dam and also Mattox's residence (Figure 108). No other buildings were associated with the mill on the plat and a road leads from the Mattox house to the millseat. Perhaps Mattox felt that a mill complex on the same scale as Eureka or as diverse was unnecessary at the new location. The 1880 Census gives an interior description of the mill, which had two sets of mill stones powered by five turbines. These generated 100 horsepower giving the mill an operating capacity of 200 bushels a day. The documentary record does not indicate whether Mattox's solo venture into milling was a success, but he did expand his milling interests in 1890 with a new cotton mill, the Heardmont Mill. The latter only operated for three months before it was destroyed by fire. Mattox never recovered financially from this and other setbacks, and his property was



Source: Newman 1984:38.

Figure 107. Eureka Mill Site Plan.



Source: Newman 1984:57.

Figure 108. Property Map for Mattox Mill Area Showing Mill and Mattox's Residence.

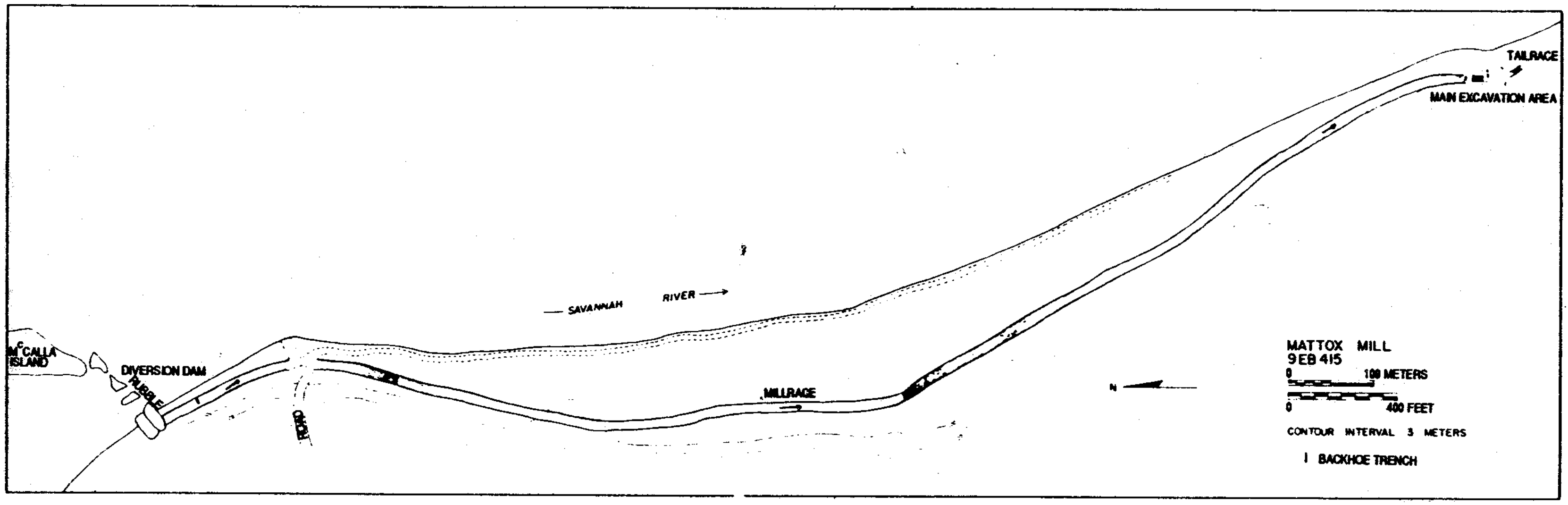
ultimately sold by the Elbert County sheriff. There is no evidence to suggest that the mill was operated after the sale of the land in 1898, and Mattox met his death only at the hands of a family member in 1902 (Newman 1984:55-56).

The general configuration of the Mattox Mill site as well as specific information about its hydraulic system was gained through archaeological excavation. The milldam was a wing dam as described in the water power survey; some remnants of cribbing suggest the remains of a headgate. Its millrace, an earthen ditch, was one mile in length and 30 feet wide in some places along its length (Figure 109). A water chest or turbine pit was uncovered which housed seven turbines. Two of the latter were central discharge turbines, while the remainder were iron scroll case turbines. These iron scroll case turbines would have been installed prior to 1880 given the census information, and the pit was adapted to suit the new turbines rather than rebuilt. The number of turbines indicates that Mattox was running a number of machines at Mattox Mill and the similarity in design suggests one manufacturer for the scroll case turbines.

The final mill under discussion is the Gray-Heardmont Mill which was owned jointly in 1889 by John H. McCalla and William Mattox. This site on Beaverdam Creek historically possessed a grist mill connected to a plantation, although the date of this initial construction is unknown. Members of the Allen family owned it through 1889. Little documentary information emanates from the later period, although the mill does receive mention in the 1885 Reports on Water Power for the Tenth Census. After 1848, the mill became known as Gray's Mill, due to Mildred Allen's marriage to John Gray (Newman 1984:73).

The story behind the Heardmont Mill is dramatic. McCalla and Mattox purchased the site and its water rights with the intention of refurbishing it into a cotton mill. The former was Secretary-Treasurer, and the latter President, of the new venture. Prominent men in the county as well as other millers joined in this financial venture, including: Nathaniel Long, Andrew Cleveland, John Grogan, Eugene Heard, and Jeptha Jones. Mattox was in charge of assembling the machinery, which he purchased in the Northeast. Eight cording machines and spinning frames for 1,000 spindles were acquired so that the company could begin production of cotton yarn from lint cotton which was a by-product of the Elberton Oil Mill. The factory went into production in March of 1890. Little information about the motive power for the mill is known from either historical or archaeological sources, although remnants of the millrace were discernable at the time of the archaeological investigations. The race was approximately 656 feet in length and six feet in depth. After three months in operation, this experimental venture was destroyed by fire when lightning hit the building. As the property was uninsured, all of the investors received a total loss. The millseat remained unused until 1895 (Newman 1984:73-74)..

The data on these five mill sites are diverse and incomplete. Despite the weakness of the sources, an image of milling in the post war period can be gained. First, the mills remained tied to the agricultural economy until the 1890s. Four of the mills under discussion were flour/grist mills of varying size and importance. Of



Source: Newman 1984:63.

Figure 109. Plan of Millrace at Mattox Mill.

these, three had been antebellum millseats. Only the Mattox Mill was constructed in the postbellum period. All of these mills can be broadly compared to the model of a mill complex offered by Jeane (1974), which showed a mill, sawmill and other buildings joined into a service hub for a rural community (Figure 102). While White Mill was demonstrated archaeologically to be composed of a miller's residence and a mill building, the historical data implies that it may have been part of a mill complex including a store, blacksmith's shop and a ferry. Eureka Mill was also diverse in function, incorporating a machinery storehouse, shoe shop, blacksmith shop, and a residence at one time. An infusion of capital between 1865 and 1875 upgraded the motive power for the mill and cotton ginning began to dominate the mill's functions after 1875. The mill operation at Price and Burdett's was also not a single entity; a sawmill was part of that operation. Out of the four operations, only Mattox Mill, a late entry into the milling community in Elbert County, was solely devoted to flour and grist milling, handling 200 bushels a day.

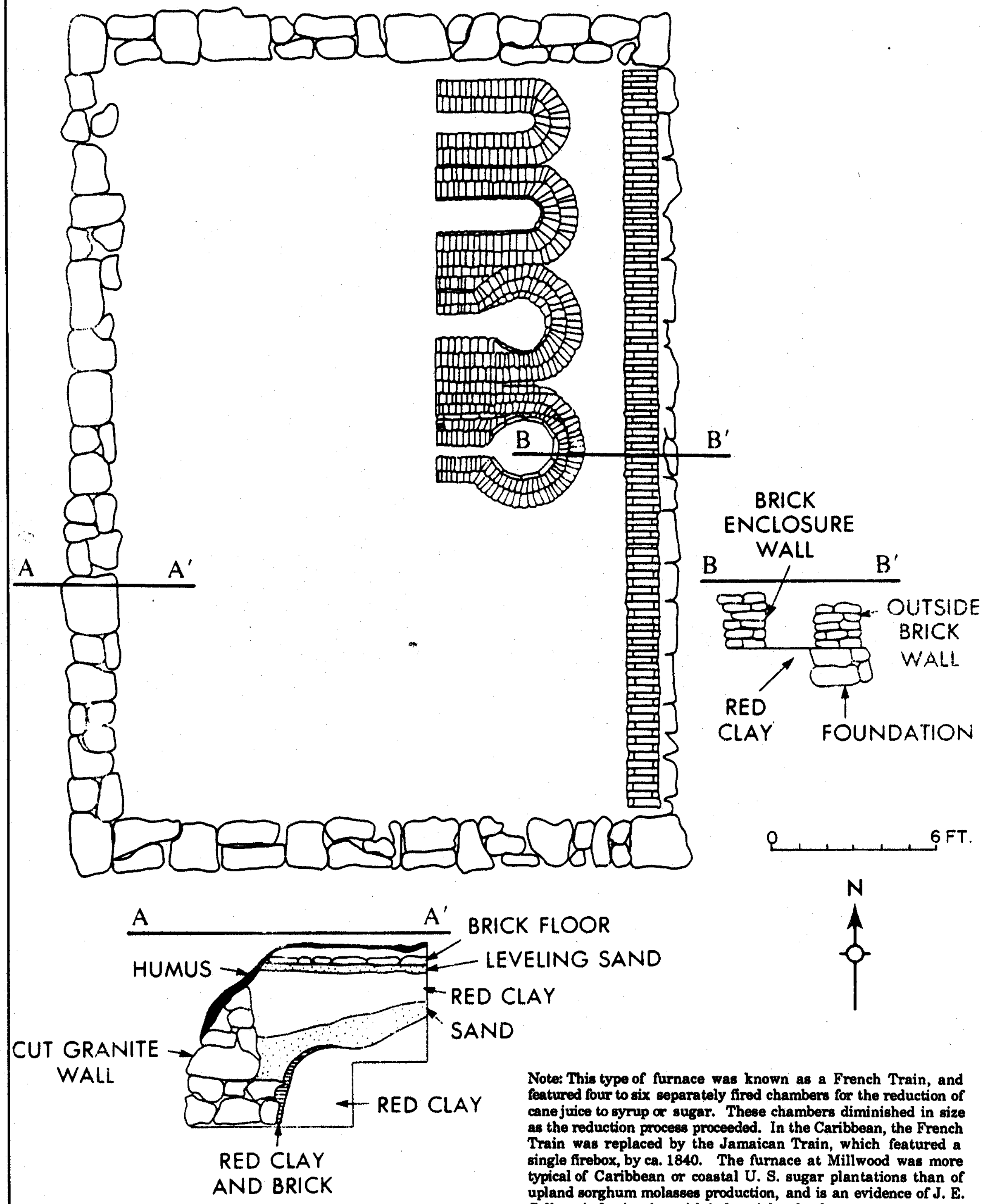
Technologically, these mills demonstrate variety within a tradition rather than a formulaic response to milling. White Mill's continued use of a gravity wheel and a river sluiceway rather than an excavated raceway and turbine shows an accommodation to terrain and the particular milling needs of that site. The other mills show an acceptance of the turbine and the increased efficiency it offered; the turbines recovered were probably produced locally by small foundries rather than imported from the North. Dam types varied. In some instances the entire stream was dammed, in others, such as Mattox Mill, a wing dam served this purpose. Construction techniques ranged from simple diversion dams built of boulders to wood cribbing. Again, a particular technological strategy was wedded to the terrain and the mill's purpose. The length of the millraces was also variable. Eureka Mill's raceway was approximately .62 miles in length, while Mattox Mill had a one mile long race (5,280 feet) and Price and Burdett's race was less than 1/5 of a mile. The great length of the millrace at Mattox Mill was probably necessitated by the terrain. For Mattox, a well-to-do planter and industrialist, land and labor were at his disposal. Hence if the terrain predicated a long millrace to achieve a better head, these means were at his disposal. Finally, it appears that individuals who operated these mills were tied together economically by the end of the period. The Gray-Heardmont venture, which began and ended in 1890, was collaborative, based on the experience of millers such as John P. Grogan, the entrepreneur who revitalized the Eureka Mill; William Mattox, an early investor in Eureka and the owner of Mattox Mill; and Andrew Cleveland, whose family ran the White Mill. For all of these investors this was a move away from grist and flour milling into the industrialism espoused for the New South. While this first attempt at textile production was a failure, later attempts on the same millseat at the turn of the century proved successful.

Postbellum industrialization in the project area remained closely wedded to the agricultural production of the region until the closing decades of the nineteenth century. In essence, these mills continued a tradition of regional self-sufficiency established by the plantation economy during the antebellum period, a self-sufficiency necessitated by the relative isolation of the project area. Milling was not the only locally oriented industrial pursuit of the region. In many ways the project area functioned as a self-contained unit almost until the turn of the century. Other regional industries included pottery manufacture and syrup and molasses production. For example, potter George Chandler of Elbert County was one of a long line of folk potters who operated in the South from ca. 1820 until well into the twentieth century (folk potteries continue to operate in Georgia, although their products are geared more toward craft sales than for home use) (Burrison 1983); Chandler's shop was located south of Pearle Mill (The History Group 1981:206). Molasses furnaces and syrup mills were found on most nineteenth-century plantations and large farms, and examples from the reservoir were uncovered at the Thomas B. Clinkscales Farm (Drucker et al. 1983:74) and at Millwood (Orser et al. 1987:272). The molasses furnace at Millwood exhibited a greater degree of complexity than commonly found, and is worthy of consideration as an example of Calhoun's industrial obsessions.

The molasses furnace at Millwood was identified as Structure 16, the northeastern most structure within Millwood's main compound (see Figure 92). This structure was identified by Orser et al. (1987:272-289) as four keyhole-to-arch shaped brick foundations placed on a brick-floored structure (Figures 110 and 111). A considerable quantity of cotton fiber and seed was located within these features, suggesting to Orser et al. (1987:281) that perhaps "this structure was used in the manufacture of cotton seed oil." However, they noted that cotton seed oil was manufactured in steam ovens, and that the features recorded in Structure 16 did not appear suited to steam heat. A more logical explanation for the function of this structure was that it served as a molasses furnace. Orser (Anonymous 1857; in Orser 1985:61) observed that sorghum cane was introduced to the southern upland in 1855, and that by 1857 "thousands" were reportedly experimenting with the production of syrup, rum, and other sorghum products. By 1860 Calhoun was recorded as the producer of 500 gallons of molasses, and clearly had pursued this industry with vigor. An appraisal of Calhoun's estate at his death in 1889 listed "1 Molasses Mill & Frame," "6 Molasses Boilers," and four barrels each containing 70 gallons of molasses. Oral history conducted as part of the Millwood research also reported molasses production on the site. One informant remembered that (in Orser 1985:61):

> There was a mill down there [at the plantation], but they weren't cooking syrup like they cooking these days. They had a great big old thing that held about 150, 200 gallons, and they put [the syrup] in a great big thing and make a fire under it.... They would cook that syrup until it was just about done.... I think they called it a boiler.

What is interesting regarding the molasses furnace at Millwood is its scale and variation from more traditional southern syrup furnaces. On most postbellum farms and plantations, sorghum cane was crushed in a mule-driven press (Figure 112), then cooked in long pans over small rectangular hearths which resembled modern barbecues. This type of production was undoubtedly the one referenced by the comment that "they weren't cooking syrup like they cooking these days." Calhoun's arrangement was known as the "French Train" (Joseph



Note: This type of furnace was known as a French Train, and featured four to six separately fired chambers for the reduction of cane juice to syrup or sugar. These chambers diminished in size as the reduction process proceeded. In the Caribbean, the French Train was replaced by the Jamaican Train, which featured a single firebox, by ca. 1840. The furnace at Millwood was more typical of Caribbean or coastal U. S. sugar plantations than of upland sorghum molasses production, and is an evidence of J. E. Calhoun's fascination with industrial technology.

Source: Orser 1985:54 - Drawing by Mary Lee Eggart. Courtesy of Historical Archaeology .

Figure 110. Plan of the Molasses Furnace at Millwood.

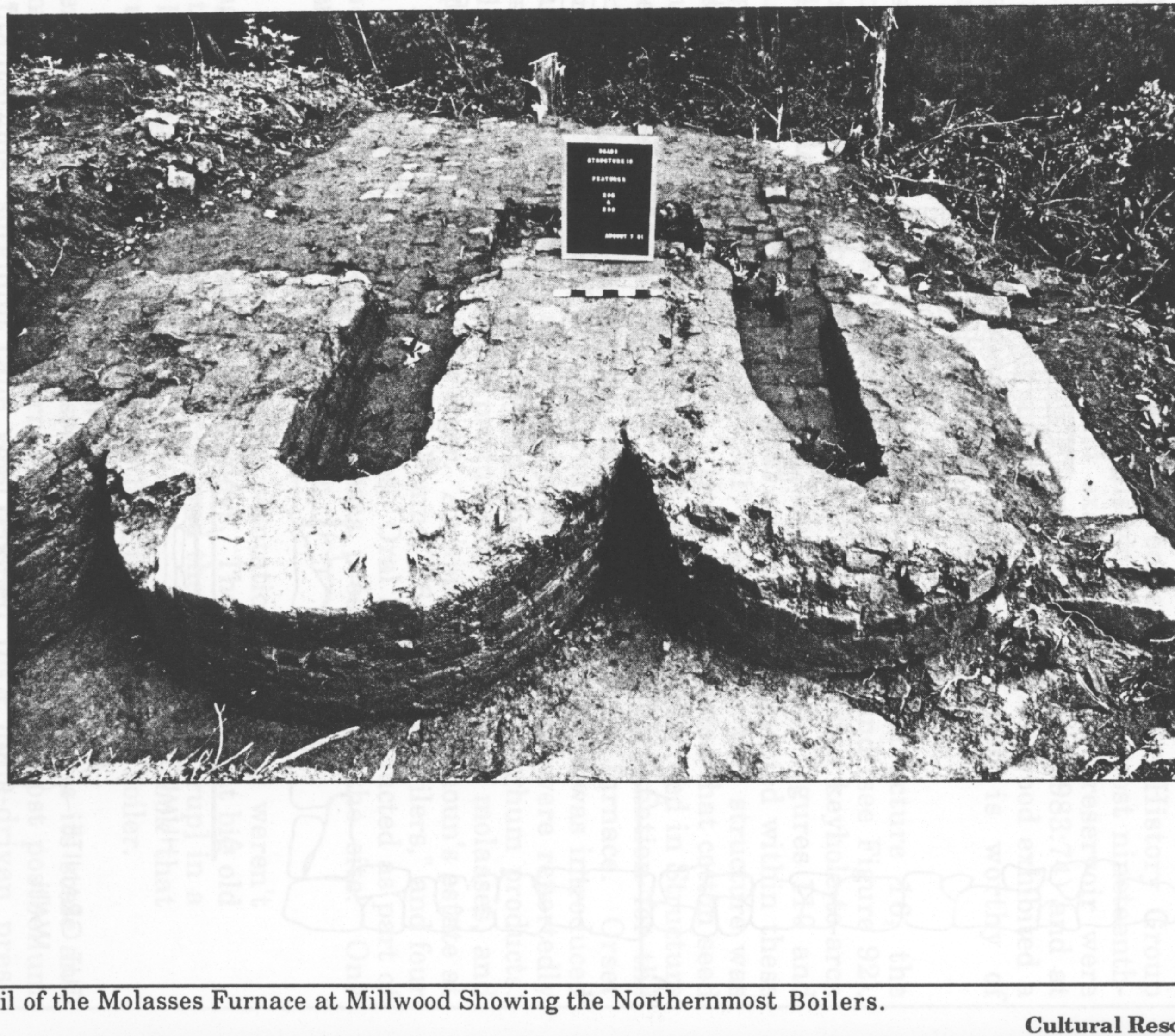
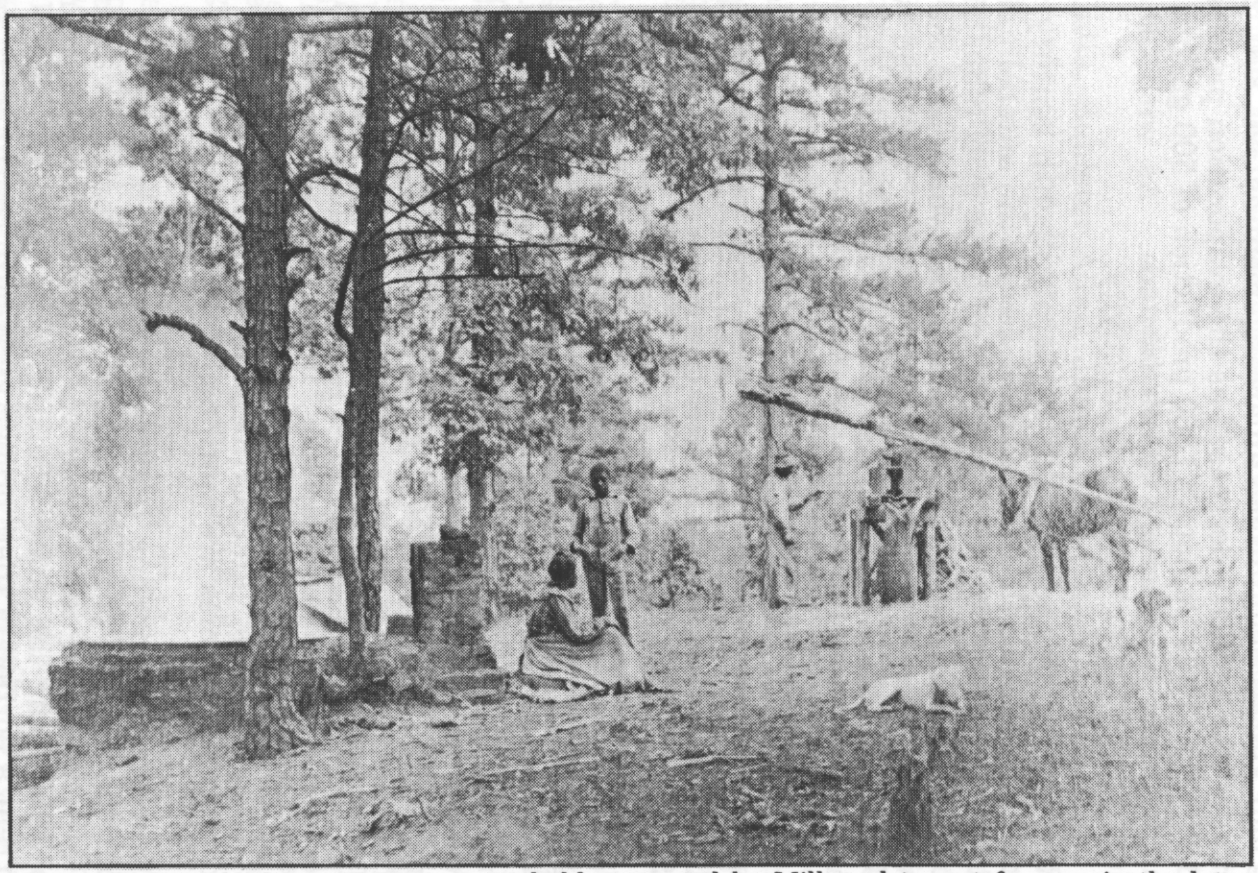


Figure 111. Detail of the Molasses Furnace at Millwood Showing the Northernmost Boilers.



Note: This mule driven press was probably operated by Millwood tenant farmers in the late nineteenth century. Note the rectangular "barbeque-type" oven at the left of the frame. This type of syrup cooker was common throughout the South, and represents the more traditional expression of syrup manufacture in the region.

Source: Orser et al. 1987: 284.

Figure 112. Sorghum Press, Millwood Plantation, ca. 1875.

et al. 1988:91) and was found on large-scale sugar plantations of the Caribbean, Louisiana, and coastal Georgia. Calhoun's use of this form at Millwood suggests a sophistication and familiarity with the technology involved, knowledge that he might have gained during his travels in the Navy, or through his correspondence with other agriculturalists through letters and journals. It is also indicative of Calhoun's unrelenting ambition. Planter Thomas Spaulding of Georgia lists the capacity of the four kettles held in such an arrangement as 320, 300, 200, and 100 gallons respectively (the capacity decreased as the evaporation process proceeded) (Joseph et al. 1988:93). Thus Calhoun's 1860 production of 500 gallons of molasses would account for only five firings of his furnace. As with other pursuits Calhoun's visions were greater than his productivity.

The Russell Reservoir in the second half of the nineteenth century was a more complicated and diverse place than it had been during the antebellum. The sway of the plantation was replaced by towns, mills, and other local industries. Yet the region continued to exist in isolation from remaining world, and the rhythms of its existence were still dictated by an agrarian culture. The land was still the land of King Cotton. In order to develop a greater appreciation for this culture, the world of tenancy must be examined in greater detail.

LANDLORDS, FARMERS, TENANTS AND SHARECROPPERS: THE ARCHAEOLOGY AND ARCHITECTURE OF POSTBELLUM LIFE IN THE RUSSELL RESERVOIR: 1865-1890

While the historical outline developed above illustrates broad trends in the region's history, it cannot provide a detailed view of postbellum agrarian culture, nor can it accurately compare this culture with the preceding plantation society. As noted elsewhere, one of the flaws of Russell Reservoir historical archaeology was the continued occupation of excavated antebellum sites into the postbellum period,and thus the impossibility of segregating antebellum from postbellum archaeological remains. While this facet of the research conducted in the area is detrimental to archaeological comparisons, it benefits the historical time line. The families and figures discussed in the previous chapter: the Calhouns, Harpers, McCallas, Allens, and Clinkscales, appear on the postbellum landscape, and their biographies are continued in this section.

The continuation of the storyline illustrates the similarities and differences between the periods. In the postbellum there was no readily available statistic, such as the ownership of 20 slaves, to separate planters from farmers. "Landlord" does not bear the same connotation as "planter," since even small farmers might rent a portion of their property. Wealth continued to segregate the inhabitants of the area, but the social scale was probably less distinctive than before. The division of plantations into numerous tenant farms clouds the reconstruction of wealth and productivity, since these individual holdings were not listed by owner in the census returns. Despite emancipation, black tenants are as poorly understood as slaves. What history exists for them is culled primarily from the documents of whites, and from oral history. The oral historical information is mostly derived from more recent times, but it is employed in this section as a means of fleshing out a thinly documented people. *Power Without Power*, the report of oral historical investigations in the reservoir authored by Eleanor Ramsey, Patricia Turner, and Shirley Moore (1986), provides an important correlate to the archaeological and architectural data, and a fifth column to support the interpretations outlined in this section.

Landlords and Farmers

George McCalla, Banister Allen, James Calhoun, Henry Harper, and William Clinkscales entered the War era in different social statuses and following different trajectories. McCalla's and Harper's fortunes were increasing, and each were well established in the planter class. Calhoun's wealth had declined in the last decade before the War and, as the owner of the largest slave population, Calhoun appeared to be most vulnerable to the War's outcome. Banister Allen was a capable if not exemplary planter, and had maintained his position in the middle echelon in the decade before the War. William Clinkscales made a great show of industry, and was certainly a man on the move on the eve of the Civil War. The histories of these five individuals, and their families, in the postbellum period, indicates that the War had a variety of meanings, and that the rise or decline of personal fortunes in the postbellum years was a matter of personal industry and adaptation, and was not pre-conditioned to follow class lines.

George McCalla When last seen, George McCalla had entered the War years as a well-to-do planter, the owner of 85 slaves and 3,000 acres of land. The War exacted a considerable toll on his personal estate. According to his 1865 tax return, McCalla's property had decreased in value from $31,000 to $15,000 during the five years of the War (Gray 1983:86). By 1870 his fortune had continued to decline, and in that year his total real estate was only worth $11,300 (Table 20). Interestingly, McCalla's census return in 1870 was divided into three separate entries. In that year McCalla's eldest son John was away at school, and the second son, Isaac, was superintendent of the farm. It is likely that the plantation had been divided into thirds, with George managing one third, Isaac managing a second, and an unknown party (possibly a tenant) responsible for a third. A total of $2,600 was paid for wages and board for laborers (Gray 1983:87-88).

By 1880 the McCalla fortune had plummeted (Table 20). George McCalla listed only 10 improved acres in that year, although the value of his real estate was virtually unchanged. Only $250 was paid for wages and board for employees, and the limited production of the farm (only 75 bushels of corn) suggests that McCalla was only producing enough foodstuffs to supply his family. By that year his eldest son, John, had settled in the Heardmont vicinity of Elbert County and was a prominent businessman, merchant and landowner (he would later be instrumental in the development of the Heardmont Mill), while the second son, Isaac, had married Elizabeth Speed and was listed in the census as a farmer in residence with his in-laws. The four youngest McCalla children continued to live

Table 20: George McCalla's Agricultural Production, 1870 and 1880, from the Census Returns (Gray 1983:87, 89).

	1870		1880	
	N	$	N	$
Acres of improved land	340		10	
Acres of woodland	750		1,000	
Acres of unimproved land	1,150		1,833	
Cash value of farm		$11,300		$12,000
Cash value of implements/machinery		300		100
Total amount of wages/board paid		2,600		250
Horses	6		3	
Asses and mules	22		1	
Milk cows	8		4	
Working oxen	26		5	
Other cattle	47		27	
Sheep	60		--	
Swine	70		10	
Value of livestock		$3,400		$200
Wool (pounds)	--		--	
Butter (pounds)	--		200	
Beeswax (pounds)	--		--	
Honey (pounds)	--		--	
Wheat (bushels)	200		80	
Rye (bushels)	--		--	
Indian corn (bushels)	1,850		75	
Oats (bushels)	--		--	
Cotton (bales)	96		--	
Peas and beans (bushels)	--		--	
Irish potatoes (bushels)	--		--	
Sweet potatoes (bushels)	--		100	
Barley (bushels)	--		--	
Hay (tons)	--		--	
Number of bearing apple trees	--		26	
Number of bearing peach trees	--		75	
Amount of wood cut (cords)	--		100	
Value of all forest products sold/consumed	--			$100
Estimated value of all farm productions		$24,632		$100

at home. The dramatic decrease of McCalla's improved acreage (from 340 to 10 acres) and agricultural production suggests McCalla's land was either exhausted, sold, or distributed among his children. No documentation was recovered to indicate which of these occurred.

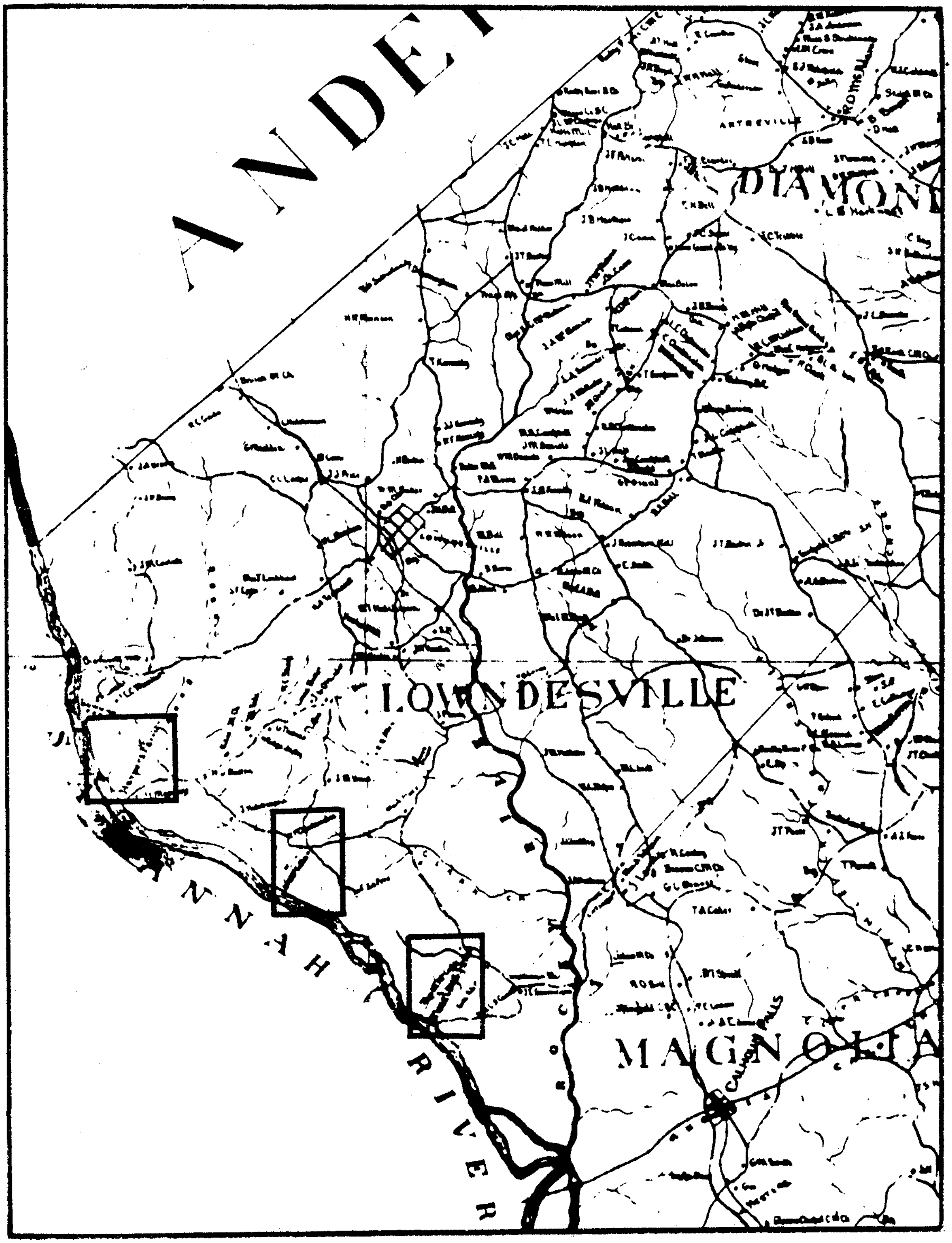
George McCalla died in 1886 and was buried in the family cemetery. An 1894 map of the region (Figure 113) shows "Mrs. M. McCalla" living at the McCalla homesite (referred to by Gray as the McCalla I site), while an "I. H. McCalla" lived at an adjacent site (Gray's McCalla II site). Gray notes that the adjacent Isaac H. McCalla homesite may have originally belonged to his in-laws, the Speeds, since a cemetery across the road from this site features the graves of Ezekiel P. Speed (1814-1881) and Julia A. Speed (1831-1863), Isaac's mother- and father-in-law. Isaac also stipulated in his will that his "home place known as the Speed place" not be sold, supporting this interpretation (Gray 1983:90).

George McCalla had lost most of his personal wealth by the time of his death. His real estate was valued at only $10,790, and his personal effects at a mere $75. His land, the only real property of value he owned, was divided among his sons. As executor, Isaac was forced to sell some of this property to pay off his father's substantial debts. While the sequence of events following George's death in 1886 is unclear, it appears that Isaac had acquired the bulk of his father's real estate by 1894, and then set about reconstructing the family's fortunes.

For George McCalla, the years between 1860 and 1890 were harsh. On the eve of the War he had made himself a wealthy planter, the master of 85 slaves and 3,000 acres. Certainly his future looked promising. McCalla never made the adjustment from the antebellum to postbellum era, however. As noted in the previous chapter, a significant proportion of his pre-War wealth was invested in slaves, a policy which rewarded him in the antebellum years but penalized him greatly after the war. It is uncertain from the documentation just how much of George McCalla's indebtedness was carried over from the pre-War era, but it is possible that the increases witnessed in his land and slave holdings were gained on credit, and that these bills could never be adequately repaid in the postbellum years. For George McCalla, the War brought plantation culture to an abrupt end.

<u>Banister Allen</u> Banister Allen met the Civil War as a planter of above-average wealth. The owner of 58 slaves and 1,725 acres in 1860, Allen's fortunes had moderated in the period between 1850 and 1860. These fortunes appear to have improved following the War, and Allen's social and economic status was evidently on the rise in the postbellum years.

There is no record of Banister Allen's affairs between 1860 and 1870, and thus it is unclear exactly how Allen dealt with the passage of the War. It appears from the 1870 agricultural census that his worth declined. In that year his total acreage was roughly the same as in the pre-War years (1,700 acres) although by this time only 300 of those acres were improved. The value of this land had crashed in the interval however, and was now listed at $1,800 as opposed to a pre-War $17,270. Livestock and agricultural production indicated similar declines, the value of



Source: Gray 1983:91.

Figure 113. Bullock and Grier Map of Abbeville County, 1894, Showing the Locations of the McCalla Sites and the Harper and Clinkscales Farms.

livestock decreasing from $5,544 to $1,600 and agricultural production declining across the board (24 bales of cotton as opposed to 57 before the War; 800 bushels of wheat as opposed to 1,000 before the War; 800 bushels of corn against a pre-War production of 3,000 bushels). Since the Census listed agricultural production by cultivator, not owner, it is not certain whether Allen had any tenants and if so, how productive they were. His 1876 tax assessment suggests that he may have had several, since in that year he paid taxes on real estate worth more than $5,000, one of only three Abbeville County residents in this upper tax bracket (Drucker et a. 1983:20-23). This is also supported by the value of his agricultural production in 1870, $47,211, a figure well in advance of his neighbors. The discrepancy between census and tax returns indicates some of the difficulty in reconstructing the tenant era based on census returns.

Banister Allen died in 1876. If his estate had declined between 1860 and 1870, then at least some restoration of this estate was made after the latter year. Banister left the bulk of his land to his wife, Ann Elizabeth, as well as all of the household furnishings. He also left her the equipment necessary for the operation of the plantation (Will of Banister Allen; in Drucker et al. 1983:120-121):

> ...all my blacksmith's and plantation tools, including looms, wheels and reels, and all the farming and domestic implements of whatever kind and description, of which I may be seized and possessed at the time of my death; also one cotton gin and band, one wheat-thresher and farming mill: all my stock cattle, hogs, and sheep: my best carriage and harness, my buggy and harness, and two mules to be selected by herself from my stock of mules: also one thousand bushels of corn, eight hundred bundles of fodder, fifteen hundred pounds of bacon, and seventy five bushels of wheat.

Ann Elizabeth also received $500 by the conditions of the will. Banister's eldest son, Bannister Bolin, received 450 acres of land, one mule, and $1,200; his son Basil Berrien received all of the land "lying on the East side of the Augusta Road, including and now formerly known as the Carothers and the Mecklin tracts," a horse, a mule, and $1,200; to his daughter Mary Asenath he left the tract of land known as the "Sturkness Place," containing 220 acres, and $1,200, and to his son James T. the sum of $1,200. The will noted that his children Byrd O. Allen and Indiana Barksdale had already received their shares, and made no mention of a bequeath to son Charles P., who was named Executor. Banister Allen left at least $5,300 and a considerable quantity of land by his will, and obviously was a man of some means.

His inventory accounted for another $1,607.50 in property, and provides more detail on his material wealth (Table 21). Included in the inventory are home furnishings and possessions, a "Fire Proof Safe" (suggesting Banister must have held some business documents of value, and perhaps cash as well, at his home), a loom, spinning wheels, and miscellaneous farm equipment. The value of home furnishings is in no way comparable with property owned by Lyndsey Harper two

Table 21: "Bill of Appraisement of the goods and chattels of the late Bannister Allen, deceased, as shown us by Charles P. Allen, Executor of said Bannister Allen, deceased, October 20, 1876" (from Drucker et al. 1983:12-123)

	$ Cts
1 Secretary	35 00
1 Bureau	10 00
1 Center Table & [illegible]	25 00
2 Tea Tables	20 00
2 Large Mirrors	6 00
Sett Tables 3 in number	15 00
Clock, Sofa and Sett Parlor Chairs	15 00
1 Trunk & Small Table	4 00
Fender, and Irons and Tongs in Parlor	5 00
1 Fire Proof Safe	25 00
1 Serving Machine	30 00
2 Beds Bedding and Steads	60 00
2 Bed Steads	15 00
1 Lot Bed Clothing & Table	20 00
Fender Shovel & Tongs	5 00
Pictures & Candle Sticks	2 00
3 Chairs, Wash Stand & Bowl	2 00
Table, glass, & Lot old Trunks	3 00
Matress and Straw Bed	5 00
And Irons, Fender Shovel & Tongs	10 00
10 Chairs	5 00
Dining Table & Cover	5 09
Stove and fixtures	20 00
Side Board & 2 Chests	5 00
Lot Crockery & Glass Ware	5 00
Lot Knives & Forks	1 00
Lot Farming Tools & Sundries	10 00
Lot [illegible] & Wheat Sowing Machine	5 00
Lot 2 Large Wash Pots	5 00
Grind Stone & Tubs	2 00
Lot Kitchen Furniture	5 00
Loom, Bed Stead, Spinning Wheels	5 00
Lot Sundries	10 00
8 Head Cattle	80 00
Blacksmith Tools	5 00
Old Wagon Wheels 7 Irons	1 00
Buggy & Harness	50 00
Carriage & Harness	50 00
90 [illegible] Bridles	10 00
Willed to Widow	591 00

	$ Cts
Property of Estate not Willed	
1 Colts Pistol	5 00
1 Saddle & Lot Leather	7 00
1 Lot old Lightning Rods	2 00
Old Mare	20 00
Old Buggy & Harness	10 00
1 Mule	75 00
Old Carriage	15 00
Wagon	10 00
Old Wagon	30 00
22 Bales Cotton at 8 1/2 per lb.	

and half decades earlier, and suggests a man of moderate wealth. The Allens evidently did not invest heavily in household accoutrements.

Yet while Banister Allen does not appear to have displayed his wealth ostentatiously, he was evidently regarded as one of Abbeville Counties more prosperous citizens. His obituary stated that Allen was "one of the county's oldest citizens" and "regarded as one of the few rich men in Abbeville County" (in Drucker et al. 1983:20). The general community evidently felt that Banister Allen had prospered in the decade after the Civil War.

Banister Allen is an example of the difficulty with which postbellum wealth must be reconstructed, compared to the relative ease with which antebellum wealth is understood. On the basis of his 1870 census return and inventory, Allen would have to be considered only as a modest farmer. His will suggests greater wealth, while his obituary implies he was among the wealthiest citizens of the area. How Banister moved from the upper-middle to upper status between 1860 and 1876 is uncertain, as is the variation in his relative worth from the antebellum to the postbellum. What is evident is that Banister Allen survived the War far better than did his pre-War compatriot George McCalla.

<u>James E. Calhoun</u> James Calhoun entered the war years with a sizeable estate and even greater dreams. In 1860 he owned 2,850 acres and 194 slaves. His slaveholding made him perhaps the most vulnerable of our planters, but Calhoun's experience indicates the War did not have the same meaning for everyone.

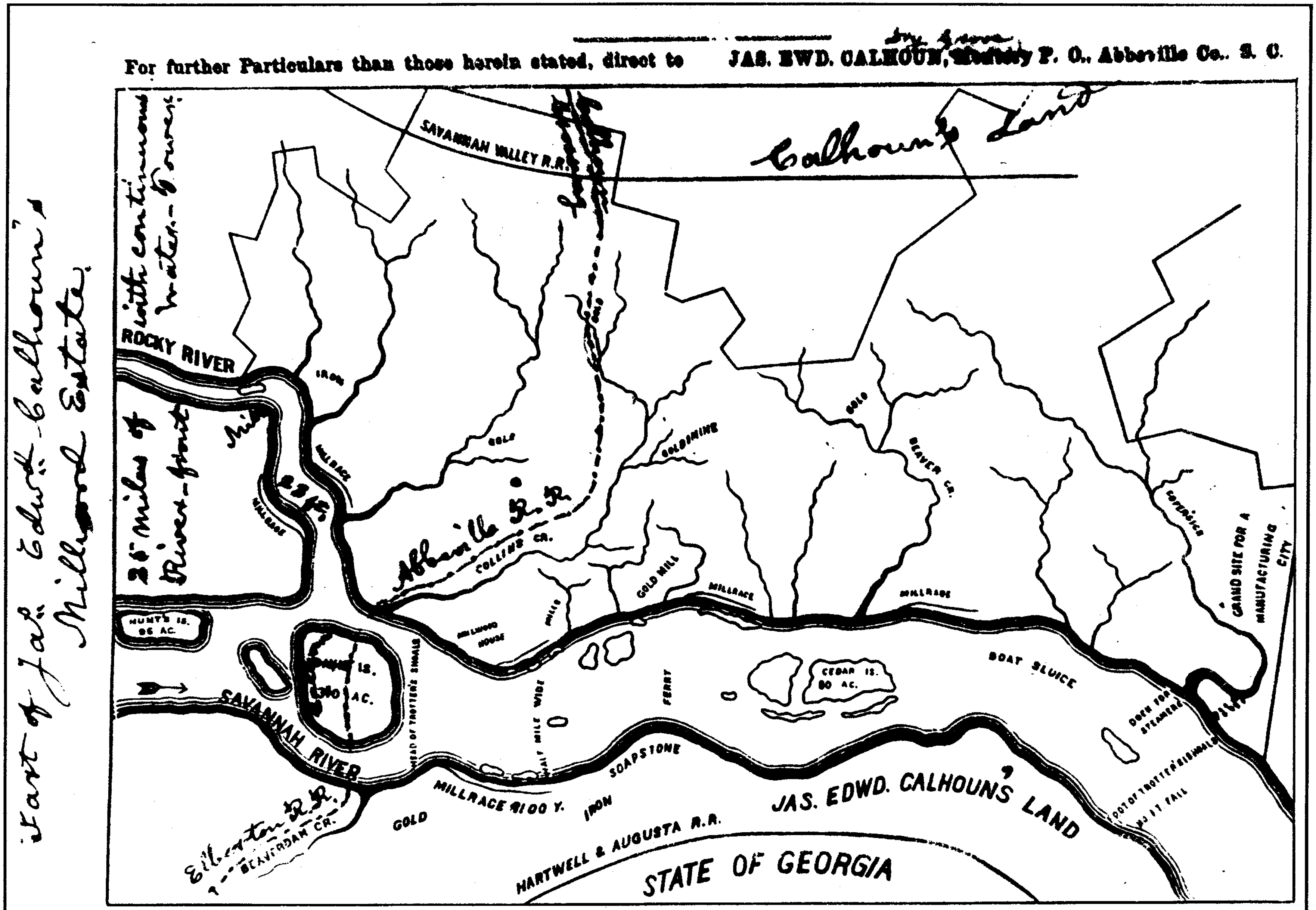
Although the War did not physically manifest itself in Abbeville County, Calhoun was aware of the deprivations it wrought. As a prominent and wealthy individual, his assistance was sought by many. In February of 1863 a distant cousin with a husband and sons in the Confederate Army, wrote Calhoun and begged for his aid to "make a crop" so she could pay her debts and purchase food (Mary Calhoun Carvin to JEC, February 27, 1863, JECP; in Orser et al. 1987:754). That summer Calhoun sent food and seed to a neighbor, to help him feed his slaves and plant for the coming year. In August he received a note from an old "school fellow" who had abandoned his coastal South Carolina plantation after the North had taken Port Royal. This old acquaintance sought new lands for himself and his slaves, and although Calhoun offered the use of some of his Pickens District property, his offer was declined as "too great an undertaking for an old man" (James Gregorie to JEC, August 17, 1863, September 2, 1863, JECP; in Orser et al. 1987:755).

Calhoun also noted the effects of the War through the inflated cost of basic food stuffs (a neighbor complained of coffee selling for $11 per pound in nearby Augusta) (L. Hopkinson to JEC, October 22, 1863, JECP; in Orser et al. 1987:755), and when six of his slaves were requested by the Confederate Engineering Department for service in Charleston, but these were only "minor discomforts" (Orser et al. 1987:755). Orser et al. (1987:755) suggest that Calhoun's fortunes may actually have increased during the course of the War. In February, 1864, for example, he wrote to his nephew Andrew that he was "free of debt," and several months later noted that he anticipated "an extraordinary crop" and was "never before so well prepared" (JEC to Andrew Calhoun, February 27, 1864, May 1, 1864, JECP; in Orser et al. 1987:755). Noting that Calhoun's real estate had decreased from 10,100 acres to 2,850 acres between 1850 and 1860, Orser et al. speculate that this decrease provided Calhoun with capital which he then employed during the War years. By 1867 Calhoun owned 10,194 acres, a 72 percent increase over his pre-War estate. At least until its conclusion, the Civil War appears to have been a time of prosperity for James E. Calhoun (Orser et al. 1987:757).

As noted above, Calhoun negotiated contracts with seven freedmen for the cultivation of his lands in 1867. The productivity of this arrangement is unknown, since for some peculiar reason Calhoun does not appear in the 1870 census of the Abbeville District. His letters indicate that the wartime prosperity had vanished, as he tried to secure loans several times between 1865 and 1867. In 1869 he wrote to an old friend, "My house, which you knew, is rotting over my head, past repair. My losses have been so immense (they still continue) that I cannot afford to build. I can do no more than try to gather enough to enable me to modify one of my outbuildings, that I may have some convenience & more security" (JEC to Mrs. Anna M. Clemson, June 3, 1869, JECP; in Orser et al. 1987:760).

Calhoun's fortunes between 1865 and 1890 are uncertain. The agricultural census of 1880 listed agricultural produce by the cultivator, not the owner, so it is unclear how well Calhoun's tenants prospered. It is also not known when Calhoun abandoned the squad system for a tenant-based agriculture, although this occurred at some point between 1867 and 1880. In 1880 there were 33 tenants identified at Millwood, one third of whom were share renters and the other two thirds cash renters. Thus by 1880 Calhoun was evidently no longer engaged in sharecropping as he had been with the squad system. Ninety-one percent of his tenants owned their own draft animals, which was something of a standard requirement for tenancy. The average size of agricultural plots was larger for share renters (29 acres) than for cash renters (17 acres), and in general the acreage farmed appears to have been a factor of the number of work animals available, since those renters with two or more work animals had an average farm size of 38 acres (Orser et al. 1987:612-613).

Calhoun evidently continued to be one of the major landowners of the region, and in 1880 he owned 9,169 acres which were not in cultivation. And he continued to be engaged in industry, with a saw mill producing 20,000 board feet in 1880. His "gold fever" of the 1840s remained, with some production to show for it; in 1867 and 1875 he contemplated leasing his gold mine (the 1875 request for a lease stipulated that it was conditional on the gold mill working), and in 1869 he sent "a lump of pure gold, from my Mine" as a wedding present to a friend (JEC to Mrs. Anna M. Clemson, July 18, 1869, JECP; in Orser et al. 1987:760). An undated map of Calhoun's estate (Figure 114), apparently prepared as part of some campaign to sell his lands, depicts a "Gold Mill" on the Savannah River, a "Gold Mine," three additional locations for gold, two locations for iron, one for soapstone, five millraces, "mills," a "dock for steamers," two railroads (the



Source: Orser et al. 1987:761.

Figure 114. Late Nineteenth-Century Map of James Edward Calhoun's Estate. Note the locations of mills, gold, iron, a goldmine, a gold mill, a boat sluice, a "dock for steamers", and the "Grand Site for a Manufacturing City." Obviously Calhoun's industrial vision was not hindered by old age.

Savannah Valley and the Hartwell & Augusta, and a "Grand Site for a Manufacturing City" (JECP; in Orser et al. 1987:761). The presence of the Savannah Valley Railroad dates the map as post-1886. Clearly the grandeur of Calhoun's industrial visions were not greatly abated by the outcome of the War.

James E. Calhoun died at Millwood on October 31, 1889. His will and inventory thus provide a last look at this fascinating figure at the close of our chronological period. Calhoun bequeathed his property to a number of individuals. He willed 150 acres in Elbert County to his "faithful servant Caroline [Walker] Kessler" and her children; an additional 150 acres to Edward Keiser, who had managed his lands for several years, and the remainder of his lands in Elbert and Abbeville Counties (the total acreage is not specified) to a number of relatives. Additional lands held by Calhoun in Oconee and Pickens Counties were left to a second set of relatives (Orser et al. 1987:762-763).

Calhoun's inventory totaled twelve pages, and documented furnishings, personal items, tools, livestock, equipment and other aspects of his material wealth. The inventory suggests that Calhoun no longer had any direct involvement with the agricultural production of his estate, since only two horses, two mules, and three yokes of oxen are listed. Calhoun presumably no longer provided his tenants with draft animals. His personal estate was valued at $5,128.07, and sold on March 10, 1890, for $1,644.27 (Orser et al. 1987:763).

At his death Calhoun's landed estate supported 95 tenants. These tenants are not broken out by race, although Calhoun continued to rent land to whites in the postbellum years (whites became the majority of southern tenants by 1930). If labor is considered as a measure of wealth, Calhoun continued to reside among the upper echelon. By comparison, in South Carolina in 1900 only 8.5 percent of landowners had 20 or more tenants. Rents received by Calhoun for these tracts ranged in value from $2 to $110, with most in the $35 to $70 category. The size of the properties rented was not specified, although Ransom and Sutch (1977; in Orser et al. 1987:763) suggest that one half of all tenant farms in 1880 were in the 20 to 49 acre division. Orser et al. (1987:763) speculate that Calhoun had about 3,000 acres under cultivation through the tenant system.

How did James Calhoun fare in the postbellum period? The answer to that question is a difficult one. Estimates suggest that Calhoun had at least 3,000 cultivated acres in 1890, more than twice the 1,450 improved acres listed on his 1860 Agricultural Schedule. Calhoun also had 95 tenants in 1890, and if each of these consisted of a family of four, then his estate housed nearly 400 individuals, again more than twice Calhoun's maximum labor population from the pre-War years. Yet the value of Calhoun's personal estate was relatively meager, and he complained frequently in 1860s of his debt and impoverishment. Calhoun clearly survived the War in better standing than many of his neighbors, but his social and economic standing appear to have been crippled by it's outcome. The War may also have blunted his energies, and in the era of tenancy Calhoun no longer appears to have been concerned with agricultural production. He remained an ardent industrialist, but in the postbellum era, as in the antebellum, James Calhoun appears to have lacked the resources to realize his dreams.

William Franklin Clinkscales William Franklin Clinkscales was the poorest of our group on the eve of the Civil War, the owner of 420 acres and eight slaves. His fate in the years after the War suggests that the postbellum economy did not separate the poor from the wealthy.

William Franklin Clinkscales emerged from the Civil War with his landholdings intact, although worth considerably less money than in 1860. The 1865 tax record book for the Abbeville District indicates the Clinkscales owned 460 acres (a slight increase over his 1860 holdings), but that the value of this land was now approximately half what it had been before the War. These figures were unchanged by 1870, when the Agricultural Census reported Clinkscales' farm productivity (Table 22). In that year Clinkscales produced modest amounts of wheat, corn, oats, and cotton, and owned a fair number of livestock. By 1880 his total and improved acreage had both declined, but the value of his farm had increased slightly. Of interest is the crop production in 1880 (Table 22). While Clinkscales was listed as owning only 30 improved acres, as opposed to 160 in 1870, his production of wheat and oats had increased, while that of cotton and corn showed decreases. Clinkscales paid only $250 for agricultural employees in 1880, and it is likely that 30 acres was as much land as he and one or two assistants could farm.

William Franklin Clinkscales lived until 1906, but his fortune changed little throughout the postbellum years. An industrious farmer with the potential to climb in status, Clinkscales appears to have been as defeated by the postbellum economy as had been many planters, and maintained a living, if not a livelihood, from his agricultural pursuits.

Henry Harper In 1860 Henry Harper owned 42 slaves and 1,400 acres valued at $21,000. Having recently risen from the ranks of farmer to the status of planter, Harper was well situated to feel the effects of the War.

Harper is the only one of our group to have served in the Confederate Army. He enlisted in September of 1861 and was mustered in as a Captain at Camp Butler. The first quarter of 1862 found him stationed at Tomotley near Beaufort, South Carolina. He was granted a leave of absence to return home in the summer of 1862, and apparently received some injury while on his journey home which kept him away from his post for much of that year. By September of 1863 he was promoted to Major, and assigned to Lee's Army of Northern Virginia near Petersburg. Harper likely faced combat during several of the battles between Lee and Grant which occurred during this campaign, as Grant maneuvered to dislodge Lee's army (Gray 1983:72).

Harper was captured at Malvern Hill in July, 1864, and sent to the Old Capital Prison in Washington, D. C., and subsequently to the prison at Fort Delaware. On

Table 22: William F. Clinkscales' Agricultural Production, 1870 and 1880, from the Census Returns (Gray 1983:32, 33).

	1870		1880	
	N	$	N	$
Acres of improved land	160		30	
Acres of woodland	90		170	
Acres of unimproved land	210		230	
Cash value of farm		$3,500		$4,400
Cash value of implements/machinery		50		70
Total amount of wages/board paid		800		250
Horses	2		3	
Asses and mules	2		2	
Milk cows	6		6	
Working oxen	4		2	
Other cattle	10		10	
Sheep	25		7	
Swine	25		8	
Value of livestock		$800		$365
Wool (pounds)	--		8	
Butter (pounds)	--		150	
Beeswax (pounds)	--		10	
Honey (pounds)	--		50	
Wheat (bushels)	85		130	
Rye (bushels)	--		--	
Indian corn (bushels)	500		300	
Oats (bushels)	60		200	
Cotton (bales)	14		8	
Peas and beans (bushels)	--		--	
Irish potatoes (bushels)	--		10	
Sweet potatoes (bushels)	--		15	
Barley (bushels)	--		--	
Hay (tons)	--		--	
Number of bearing apple trees	--		120	
Number of bearing peach trees	--		20	
Amount of wood cut (cords)	--		30	
Value of all forest products sold/consumed		--		$30
Estimated value of all farm productions		$1,780		$1,150

July 24, 1865, after signing an oath of alliegance to the U. S., Henry Harper was released from prison to return home (Gray 1983:72).

Harper emerged from the War with most of real estate intact, although greatly devalued. The 1865 Abbeville County Tax Record lists him as the owner of 1,100 acres worth $8,800, and also reported cotton on hand valued at $6,240. These numbers remained relatively constant through 1870. According to the Agricultural Schedule of the 1870 Federal Census (Table 23), Harper produced sizable quantities of corn, oats, wheat, and cotton, with total farm production valued at $5,100. Interestingly, no wages or board are listed in the 1870 census, despite the fact that Harper would have needed assistance to produce the crops outlined above. Some of this aid may have been provided by his two teenage sons, although there were probably tenants on the farm as well.

In 1878 Henry Harper was elected to the South Carolina House of Representatives, where he served until 1880. This fact may in part explain the substantial decreases witnessed by his 1880 Agricultural Schedule (Table 23). The value of Harper's land fell from $8,000 to $2,600; the value of his agricultural production showed a similar decline, from $5,100 to $700, and his crop production followed suit. Harper had lost 600 acres in the interim, and from the appearances of the 1880 census was in a state of financial difficulty. He died in 1886, and no will or inventory was found for either he or his wife, who died in 1891. Thus the last glimpse of Henry Harper, the 1880 Census, suggests that like George McCalla, his wealth had sharply declined by this time.

<u>Summary</u> The outcome of the Civil War meant different things to the five families outlined above. Their histories suggest that the rise and fall of agricultural fortunes was more tenuous in the War's aftermath than before, and that decreases were more likely than increases. Only one of the five (Banister Allen) appears to have improved his fortunes in the years following the War, and the available documentation makes it difficult to say whether this rise in social status is indicative of a true increase in financial worth. James Calhoun was clearly well-off at this death, and his frequent complaints of impoverishment and roofs rotting over his head must be taken in light of Calhoun's character, which emphasized the impediments to his industrial schemes. For Calhoun the War certainly appears to have had a psychological effect, and after initial negotiations with freedmen for the management of his estate, Calhoun appears to have abandoned his interest in the agricultural production of Millwood, hiring, in his latter years, a manager to handle this aspect of his affairs. For George McCalla, Henry Harper, and William Clinkscales, the War clearly represents a down-turn in their economic affairs. McCalla in particular steadily lost wealth after the War, while Clinkscales and Harper managed to maintain some equilibrium in their decline.

It is impossible to measure the productivity of land and labor for these individuals, as was done for the antebellum period, since we have no statistics on the land under the care of tenant farmers. But, it is possible to gauge transitions in their wealth and real estate. Table 24 outlines the statistics for McCalla, Allen, Clinkscales and Harper for 1870 and 1880 (since Calhoun was not recorded in the

Table 23: Henry Harper's Agricultural Production, 1870 and 1880, from the Census Returns (Gray 1983:72, 74).

	1870		1880	
	N	$	N	$
Acres of improved land	300		100	
Acres of woodland	400		350	
Acres of unimproved land	400		50	
Cash value of farm		$8,000		$2,600
Cash value of implements/machinery		200		150
Total amount of wages/board paid		--		--
Horses	5		2	
Asses and mules	5		--	
Milk cows	10		1	
Working oxen	4		2	
Other cattle	15		6	
Sheep	25		--	
Swine	15		15	
Value of livestock		$1,500		$280
Wool (pounds)	--		--	
Butter (pounds)	--		300	
Beeswax (pounds)	--		50	
Honey (pounds)	--		400	
Wheat (bushels)	100		140	
Rye (bushels)	--		--	
Indian corn (bushels)	1,000		--	
Oats (bushels)	200		600	
Cotton (bales)	32		--	
Peas and beans (bushels)	--		40	
Irish potatoes (bushels)	--		50	
Sweet potatoes (bushels)	--		300	
Barley (bushels)	--		40	
Hay (tons)	--		--	
Number of bearing apple trees	--		--	
Number of bearing peach trees	--		50	
Amount of wood cut (cords)	--		50	
Value of all forest products sold/consumed		--		$50
Estimated value of all farm productions		$5,100		$700

Table 24: Land and Wealth in the Russell Reservoir - A Comparison of the Holdings and Agricultural Production for the McCalla, Allen, Clinkscales, and Harper Families, 1860 to 1880

	McCalla	Allen	Clinkscales	Harper
1870				
No. Improved Acres	340	300	160	300
No. Unimproved Acres	1,900	1,400	300	800
Value of Real Estate	$11,300	$1,800	$3,500	$8,000
Bales of Cotton	96	24	14	32
Bushels of Corn	1,850	800	500	1,000
Value per acre (all acreage)	$5.04	$1.58	$7.60	$7.27
Value of Farm Production	$24,632	$47,211	$1,780	$5,100
Farm Prod. Value/Total Acres	$10.99	$27.77	$3.86	$4.63
Farm Prod. Value/Impr. Acres	$72.45	$157.37	$11.12	$17.00

	McCalla	Allen	Clinkscales	Harper
1880				
No. Improved Acres	10	--	30	100
No. Unimproved Acres	2,833	--	400	350
Value of Real Estate	$12,000	--	$4,400	$2,600
Bales of Cotton	0	--	8	0
Bushels of Corn	75	--	300	0
Value per acre (all acreage)	$4.22	--	$10.23	$5.77
Value of Farm Production	$100	--	$1,150	$700
Farm Prod. Value/Total Acres	$0.04	--	$2.67	$1.55
Farm Prod. Value/Impr. Acres	$10.00	--	$38.33	$7.00

	McCalla	Allen	Clinkscales	Harper
Percentage of change 1860 to 1870				
No. Improved Acres	-57%	-62%	+6%	-25%
No. Unimproved Acres	-14%	+51%	+4%	-20%
Value of Real Estate	-63%	-89%	-44%	-62%
Percentage of change 1870 to 1880				
No. Improved Acres	-97%	--	-81%	-66%
No. Unimproved Acres	+49%	--	+33%	-56%
Value of Real Estate	+6%	--	+25%	-67%
Value of Farm Production	-99%	--	-35%	-86%
Farm Prod. Value/Impr. Acres	-86%	--	+244%	-58%

1870 Census, he is not included in this comparison). The War appears to have affected all four similarly with regard to the decline in the value of their lands. Property losses ranged from 89 percent (Banister Allen) to 44 percent of the pre-War value (William Clinkscales). McCalla, Harper, and Allen lost land during the War, with McCalla and Allen losing more than half of their improved acreage, while William Clinkscales recorded a modest gain in his total acreage. The value of farm production in 1870 varied greatly among these estates, from Banister Allen's $47,211 to William Clinkscales' $1,780. There is no indication from the census returns why Allen's estate fared so well, and comparing his production of corn and cotton with those of his neighbors (Allen was next to last in both categories) suggests that this figure may have included his share of produce grown by tenants, and that tenancy, not recorded on his Agricultural Schedule, provided the bulk of Banister Allen's wealth.

Banister Allen was dead by 1880, so the change in his fortunes between 1870 and that year cannot be gauged. McCalla, Clinkscales, and Harper all witnessed substantial decreases in their improved acreage during this period, ranging from 97 percent of McCalla's improved land to 66 percent of Harper's. The value of McCalla's and Clinkscales' land increased slightly, through acquisitions of unimproved land, while the value of Henry Harper's real estate dropped by 67 percent. The value of farm production for both Harper and McCalla declined sharply, Harper losing 86 percent of his 1870 farm value. Some of this decline may have been a product of his tenure in the House of Representatives in 1880. George McCalla's decrease, 99 percent of the 1870 value, can only be accounted for by generally declining fortunes. William Clinkscales' loss was more moderate, and Clinkscales witnessed a sharp increase in the value of his farm production per improved acreage during the period from 1870 to 1880.

These statistics, although tenuous, suggest that Allen, McCalla, and Harper were moving away from a direct involvement in agricultural production. This move may have in part been precipitated by their age, and by Henry Harper's political career, although it may also reflect a more managerial relationship, with farm produce by tenants not listed in the agricultural census. Clinkscales maintained his position as farmer and a direct role in agricultural productivity. The divorce of these individuals from the land, a separation discussed above in regards to James Calhoun, helps explain the poor land practices and soil exhaustion which contributed greatly to the agricultural depression of the twentieth century.

Tenants and Sharecroppers

In many regards it is more difficult to portray the lives of tenants and sharecroppers, particularly in the nineteenth century, than it is to illuminate the lives of slaves. Both were anonymous inhabitants of the landscape. Slaves at least were a political and social concern, a southern quirk, a subject for comment and consideration by regional and national journalists. Tenants and sharecroppers are much less visible in the literature. The outline of tenant life discussed below is thus drawn from contemporary and historical references to tenancy in the project area, in order to provide as detailed a view as possible.

As noted above, the history of tenancy is marked by two phases, an initial continuance of plantation management and organization, under wage relations or through the squad system, and the subsequent dispersal of tenancy to individually occupied and managed agricultural tracts. This dispersed occupance gave the freedman the qualities he desired (Prunty 1955:470; in Brooks 1978:133):

> ...his own house adjacent to his own cropland, his cultivating tools nearby instead of in a separate shed, a minimum of supervision plus freedom to work where, when, and as he pleased, and he wanted use and control of the mules.

While beneficial from a social perspective, this dispersed occupance did not provide comparable economic returns to either the tenant or landlord. Dispersed occupancy debilitated the overall management of the plantation. Labor, both human and animal, was scattered across the landscape; soil conservation, crop rotation, and general improvements to the plantation vanished under a system of every man for himself; planters lost interest in the condition of the estate and became concerned only with the productivity of individual parcels; tenants viewed the various planters as competitive employers, and moved if their situation could be improved. Paternalistic relations eroded under this system of migratory labor.

A 1936 study of tenancy in the South provides a description of tenant life which certainly bears a resemblance to the conditions of the nineteenth century (Woofter et al. 1936:xxvii-xxviii; in Brooks 1978:134):

> Fuel and house rent are part of the tenants prerequisites but the houses furnished are among the poorest in the Nation. Unpainted four-room shacks predominate. Screening is the exception rather than the rule and sanitation is primitive. In a study of farm housing in the Southeast in 1934, it was found that wells furnished the source of water for over 80 percent of both owner and tenant dwellings.
>
> The low income for large families provides only a meager subsistence. About one-third of the net income is in the form of products raised for home consumption - a few chickens and eggs, home killed pork, syrup, corn meal, cow peas, and sweet potatoes. These food items are usually available only in late summer and fall.
>
> During the months when the crops are cultivated, the tenant uses another third of his income, at the rate of about $13 per month for food - mostly flour, lard, and salt pork - and also for kerosene, medicine, and such clothing purchases as cannot be postponed till fall. Another third is spent for clothing and incidentals, usually after the fall "settlement." Thus, by winter, resources are exhausted

> and "slim rations" begin. Clothing, usually purchased once a year, is of the poorest quality. Often the children do not have sufficient warm clothing to go to school.
>
> Few of the tenants in this study had gardens and only 55 percent had cows. The effect of poor housing and meager diet was reflected in the health of the families studied. The lack of balance in the diet is largely responsible for pellagra and the digestive disorders that are prevalent in the South. The lack of screening makes the control of malaria difficult.

Labor organization in the tenant economy varied with the size of the plantation and the management philosophy of the planter, but generally two systems appear to have prevailed: "through-and-through" cultivation and "individual" cultivation. Under the former, all sharecroppers worked together to plow, furrow, plant, and fertilize the agricultural fields. The land was then "laid off" into individual units, which were then cultivated and harvested. This system offered a number of advantages over "individual" organization, not the least of which was the collective conduct of the most time- and labor-consuming aspects of planting. As one farmer recalled the conditions of the early twentieth century (in Prunty 1955:468):

> Common practice... then was to prepare the seedbed by breaking with a six inch turning plow pulled by an eight hundred pound mule, and harrow with a light peg harrow. When ready to plant, the drill was opened by a bull tongue on a light plow stock operated by a mule and a man. This was followed by two men carrying two kinds of fertilizer in buckets and dropping it in a trench [by hand]. They were followed by a man dropping velvet beans and another dropping corn. The fertilizer and the seed were then covered by a light spring tooth cultivator pulled by a mule, and a man, and cultivating was done by tools which covered one half row at a time.

Under the individual system plots were managed, plowed, cultivated, and harvested by separate family units. This system characterized tenant renter occupations, and also occurred on a minority of sharecropper sites (Prunty 1955:468-469).

While tenancy and poverty were equivalent for the majority of tenant farmers, some social and economic mobility was offered under this system. Tenancy offered the opportunity for advancement only through a combination of knowledge, industry, and a certain amount of luck. Janie Hampton describes the skill and knowledge her father, a Millwood tenant, brought to his agriculture (Ramsey et al. 1986:79-82):

> ... [there] really wasn't anything around the farm he couldn't do. He used to get farmer's magazines... he was just apt at learning things... He had an orchard... He had different kinds of peaches. He had red peaches, then he had a real sweet white peach. And then

> he had apricots, plums. He used to graft trees and make them grow, you know, mixed fruits.
>
> He used to go back and forth around to different people and doctor on the animals.... He knew when to plant certain things that grew underground. It was a certain moon that you plant those on. And things that grow above, the ground, things that you freed from the stalk and then there was some produced things to be picked... There's a significance in it. And there is a certain time if you kill your hog and your meat will be dry... And there's certain times you kill it and chew it and the meat will be good and tender and everything. And the fat will come from it. And then there is a lot in feeding an animal. When you get an animal ready for the table, the market, there is certain things you feed him and certain ways and it will turn out.

Hampton's knowledge and skill allowed him to acquire sufficient funds to purchase his own plot of land. As his daughter noted, once Millwood's manager learned that Hampton had purchased his own property, conditions were made more difficult for him as a Millwood tenant (Ramsey et al. 1986:83):

> People knew that he had bought. And they figured he was planning on building and they just wouldn't be but so nice to you if they thought you was trying to help yourself.... They took more rent from you than you was supposed to [pay]... whatever they said you owed you just had to pay it.

Hampton's situation reflects the adversity which black tenants faced. Not only were the conditions of tenancy inclined against blacks acquiring wealth and personal property, but the attitudes of whites were also opposed to their economic success. W. T. Smith recalled that "They [the whites] didn't wanna see colored folk with nothing but a pair of patched up white overalls. Some of them don't want to see you with a new pair of overalls on" (Ramsey et al. 1986:14). Since whites possessed political power, they also possessed the leverage to pry land away from blacks. A particular example of such misappropriation regards the heirs of George Washington Dye. Dye was an Elbert County planter who fathered eight children by his black mistress, Lucinda. At his death some time after 1865 Dye left his entire estate to his mistress and children. While some of this estate was maintained by his heirs, the bulk was expropriated by whites through extralegal, and perhaps illegal, means (The History Group 1981:123, 250). As Edward Brownlee noted, "they didn't get it because the administrators met and thought that it was terrible for white people to give land to Negroes -- so they took as much of it as they could -- if they didn't take it all then, they took it later" (Ramsey et al. 1986:9).

Blacks had few avenues of recourse against this system. There were minor ways of improving their share of the crop; for example, Rufus Ballard noted that "You could weigh a bale of cotton there today and lay it out at night and take it to town tomorrow and it might gain five pounds due to moisture" (Ramsey et al. 1986:14), but in general tenancy was divided on racial lines and blacks had little success in pitting whites against one another. Ramsey et al. (1986:14) note that some blacks in the project area sold cotton by the basketful, not reporting these earnings to the landlord, but such practices were unlikely to make much of a difference against the greater inequities of tenant agriculture.

Tenancy is best distinguished from the plantation by its dispersed settlement, the impoverishment of the land, and the different management strategies which it produced. It is also the best documented period in the historical archaeology of the reservoir. Brooks (1978:135) notes that 145 (70%) of the 205 historic sites located in the reservoir contained artifacts diagnostic of the postbellum period. The archaeology and architecture of the Russell Reservoir provides additional descriptive material on the nature of tenant life and culture.

Settlement

Perhaps the key distinguishing trait of tenancy versus plantation agriculture was the dispersed nature of the former's settlement pattern. This change in spatial organization was noted by planters and others in the years immediately following the War. In 1881 David C. Barrow published an article in *Scribner's Monthly* which attempted to explain how the "labor relations of the two races are adjusting themselves and working out a solution of the dreaded 'negro problem' in a practical way" (1881:830; in Orser and Nekola 1985:68). Barrow noted that plantation settlement had shifted from linearly organized quarters to a dispersed occupation, and that this shift had provided "more elbow-room." He suggested that "the transformation has been so gradual that almost imperceptibly a radical change has been effected," (1881:831; in Orser and Nekola 1985:68) indicating that the dispersed settlement had occurred between 1865 and 1881, but not immediately after the War.

As Barrow (1881), Orser and Nekola (1985), and Orser et al. (1987) have noted, the transformation from a nuclear plantation settlement to a dispersed tenant occupation was probably not direct, and several interim stages were likely to have existed. Immediately following the War freedmen continued to occupy village quarters, as these provided the only available housing in an impoverished situation. The squad system, a dispersed occupation consisting of groups of 10 to 20 workers housed and employed as a unit, occurred on some plantations in the immediate postbellum period. This settlement form may not have been found on all plantations, as it was best suited to those which employed a conglomerate settlement pattern prior to the War. In this scenario, the satellite villages of the conglomerate settlement would have served as the basis for squad housing, and in essence the earlier labor organization of the plantation would have continued. In such circumstances neither the gang nor squad organization and settlement would have marked a distinctive break from earlier plantation labor and spatial arrangements. It is possible that some plantations began as nucleated settlements, then constructed squad villages, and finally evolved into dispersed occupations, but such a transformation would have been costly, representing two as opposed to one rebuilding sequence. The historical and archaeological documentation to date is too sparse to provide a detailed reconstruction of settlement shifts in the postbellum period, but if the interpretation presented above is correct, then squad labor organization would be expected for plantations which employed a conglomerate spatial organization, and not on those who were nuclear in settlement.

Although the shifts are not well defined (as Barrow notes, they may have been imperceptible at the time), the dispersed settlement pattern which typifies tenant agriculture appears to have occurred during the 1870s. The time elapsed between the gang or squad organization and the dispersed organization reflects a number of variables. Important among these was the give and take of negotiations between planters and freedmen as each tried to establish the parameters of the new agricultural order. It is evident that the freedmen desired isolation and self-supervision under the new system. Such a labor distribution was not economically advantageous for planters in the years immediately following the war, since dispersed settlement meant the construction of new dwellings, the clearing of new fields, and other associated costs. Within five to ten years following the conclusion of the War, however, such settlement shifts would have offered economic incentives. By this time older fields would have been nearing exhaustion, and would have required replacement, while slave dwellings, especially those made of log, would have been in need of repair. Thus a shift to a dispersed settlement pattern during the first half of the 1870s may have served planters' goals equally as well as freedmen's.

Prunty (1955:467-482) distinguishes between two types of postbellum tenant settlement: the "cropper" type and the "tenant-renter" type (Figure 115). The primary difference between these spatial arrangements was the ownership of cultivating equipment and motive power (tools and mules). In the cropper system, as outlined above, these resources were provided by the landlord, and hence were housed either adjacent to his home or at a centrally convenient place. Under the "tenant-renter" system these items were provided by the tenant. Each settlement loci thus acted as an independent farm, and Prunty (1955:475) notes that agricultural plots were generally larger under this system than with the cropper system. Prunty provides statistics indicating that sharecroppers were responsible for 30 to 40 acres of land, and tenant-renters for approximately 65 acres (Prunty 1955:469, 474).

Orser and Nekola (1985) attempted to understand Millwood's postbellum tenant settlement pattern by analysizing the relationship between the distribution of tenant structures and a number of environmental and cultural variables. Structures employed in their analysis included those identified from a 1932 Soil Survey Map of the Millwood vicinity (Figure 116). A total of 66 homesites were identified, of which 53 were within the boundaries of the Calhoun estate as they existed in 1932. Their analysis suggests that the "typical" Millwood tenant structure was located at an elevation of 475 feet above mean sea level, and on soils with a medium agricultural and woodland potential and a high pasture potential. The typical farm was situated on a slope with either a south, southeast, or

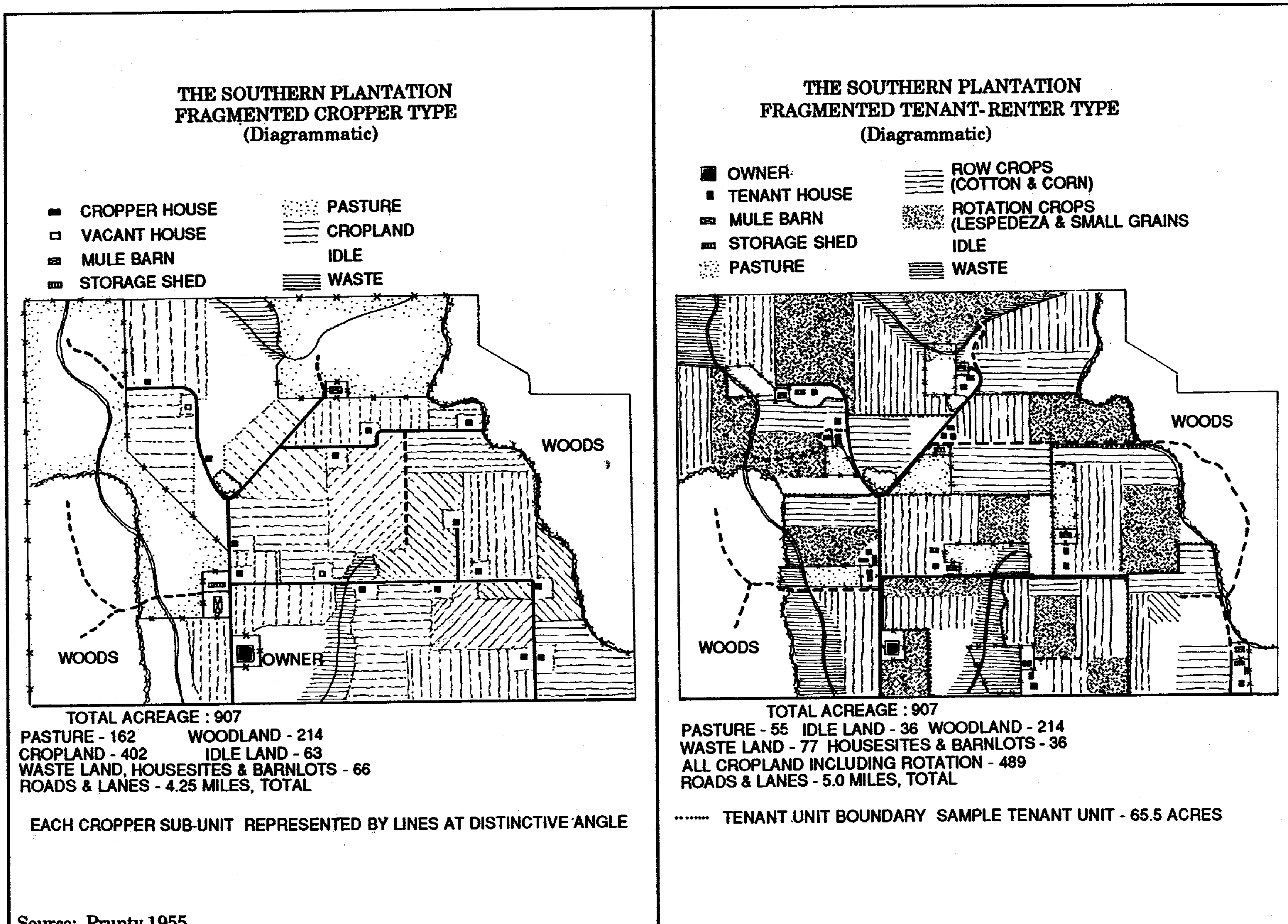
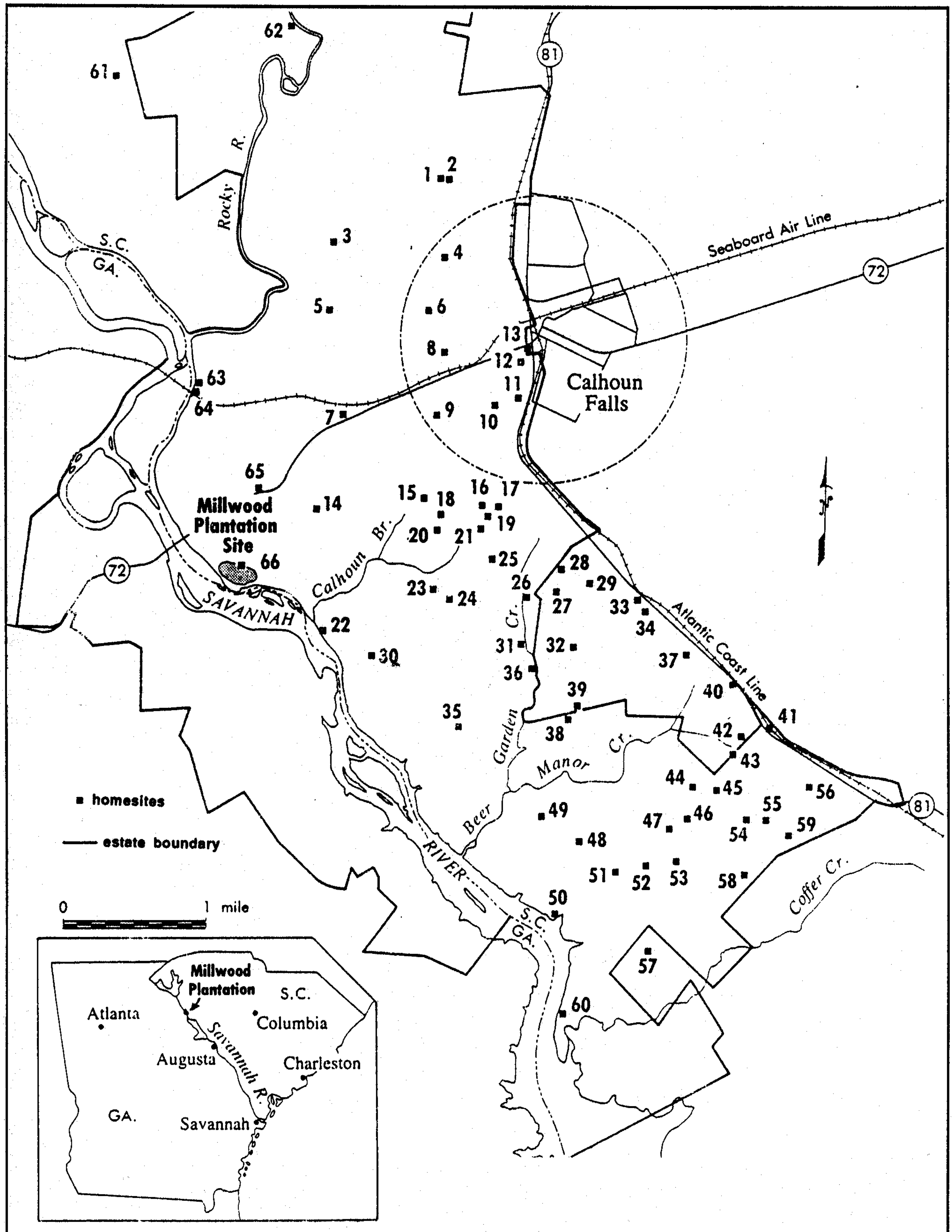


Figure 115. The Cropper and Tenant-Renter Settlement Patterns, as proposed by Prunty (1955).



Source: Orser et al. 1987:615.

Figure 116. The Location of Dwellings on the Calhoun Estate, 1932, Based on the Soil Survey Map.

southwest aspect; was less than .3 miles from an intermittent stream, and less than .5 miles from a stream confluence; was .5 to 1.5 miles from the nearest road or railroad; and less than .3 miles from its nearest neighbor (Orser and Nekola 1985:81).

These characteristics mesh well with criteria outlined by Keber (1979) for determining farmstead settlement location in western North Carolina. Keber (1979:198; in Smith et al. 1982:214) outlined six major farmstead site settlement determinants: (1) proximity to gravity flow water (98.5 percent of Millwood tenant structures were less than .3 miles from the nearest stream); (2) aspect; (3) protection from westward wind; (4) accessibility to roads (84.5 percent of Millwood tenant structures were less than 1.5 miles from the nearest road); (5) light slope requiring little ground preparation; and (6) proximity to tillable land. Smith et al. (1982:214) note that a southern aspect was prominent among their study sites, and provided additional warmth during the winter months; 44 percent of Millwood tenant structures faced south. Protection from a westward wind was provided by natural topography and aspect, and the former variable was not measured by Orser and Nekola (1985). Millwood tenant structures were sheltered from northern exposures, with only 33 percent of these sites having a northern slope aspect (Orser and Nekola 1985:80-81).

Settlement studies for historic sites, particularly those based on environmental variables, may be more complicated to understand than comparable prehistoric settlement models. In a study conducted for nineteenth-century farmsteads in the War Eagle Creek drainage of Arkansas, Joyce (1981:14) argued that historical archaeological settlement analyses must account for a broader definition of settlement. Specifically, she noted that:

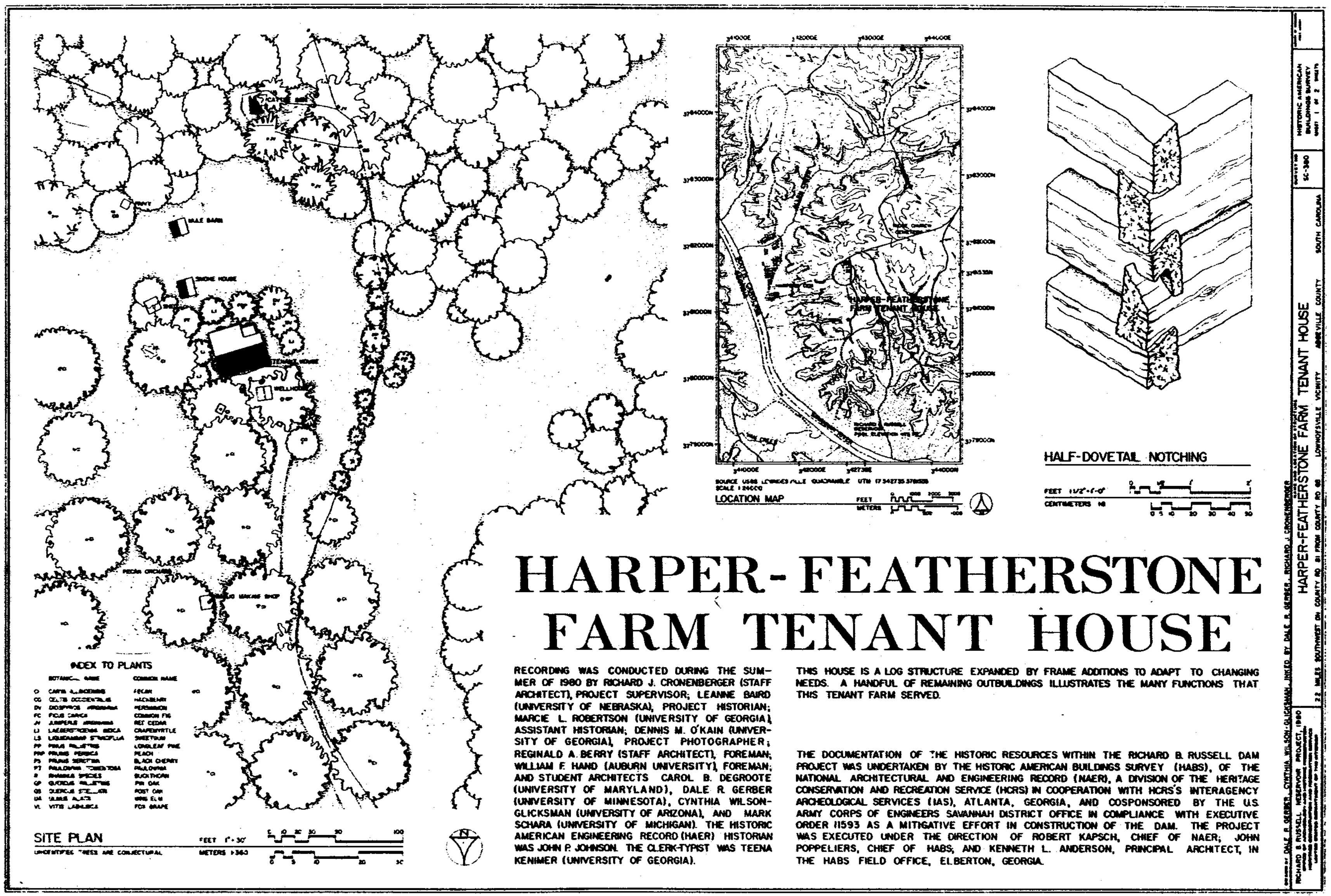
> The selection of units of analysis should be geared toward the questions being asked. With property ownership the universe is the total purchasable region; whereas with the individual structure the universe is the purchased or claimed property. The confusion arises because settlement is viewed as a structure or activity center which generates physical remains, rather than a physical space which included fields, woods, and improvements. The latter view probably more closely approximates the emic view of "settlement."

Joyce went on to point out that historic structures are frequently associated with the least productive soils, thus maximizing the agricultural potential of the purchased property. She proposed that site locations were those best suited to access agricultural fields, potable water, and roads, and those which provided ideal climatic conditions: southern exposure and shelter from northern and westward winds. Community also played an important role in the location of rural sites.

Joyce (1981) observed that kinship appeared to be a critical settlement determinant for historic sites, and Smith et al. (1982) echo this view with the results of their work from Tishmingo County, Mississippi. In the War Eagle Creek drainage, settlers chose less preferable lands if they provided greater proximity to kin. The importance of kinship during the initial settlement of the Russell Reservoir area has already been discussed. However, it is difficult to gauge the influence of kinship and other social relations on tenant settlement. Tenants were limited to small agricultural plots (roughly 30 to 75 acres) chosen and distributed by the landlord, and kinship and other social concerns (ethnic affiliation, church membership, etc.) would not have been as likely to have played a role in tenant settlement patterning. Joyce's research also suggests that environmental models are inappropriate for certain historic settlements, since historic settlement, in the archaeological record, is reflected by structure locations and not by the presence of agricultural fields. While Orser and Nekola's (1985) analysis shows that only 26 percent of Millwood tenant structures were located on land with high agricultural potential, this may be a factor of the soils available at Millwood, and not a true reflection of settlement concerns. Tenant settlement was probably more environmentally structured than the contemporary farmstead distribution discussed by Joyce, however, since tenants farmed smaller plots chosen by planter landlords, and were thus more closely associated with their agricultural fields. A fruitful line of inquiry for future studies of tenant settlement will be to determine whether settlement was organized by kinship connections in the tenant economy.

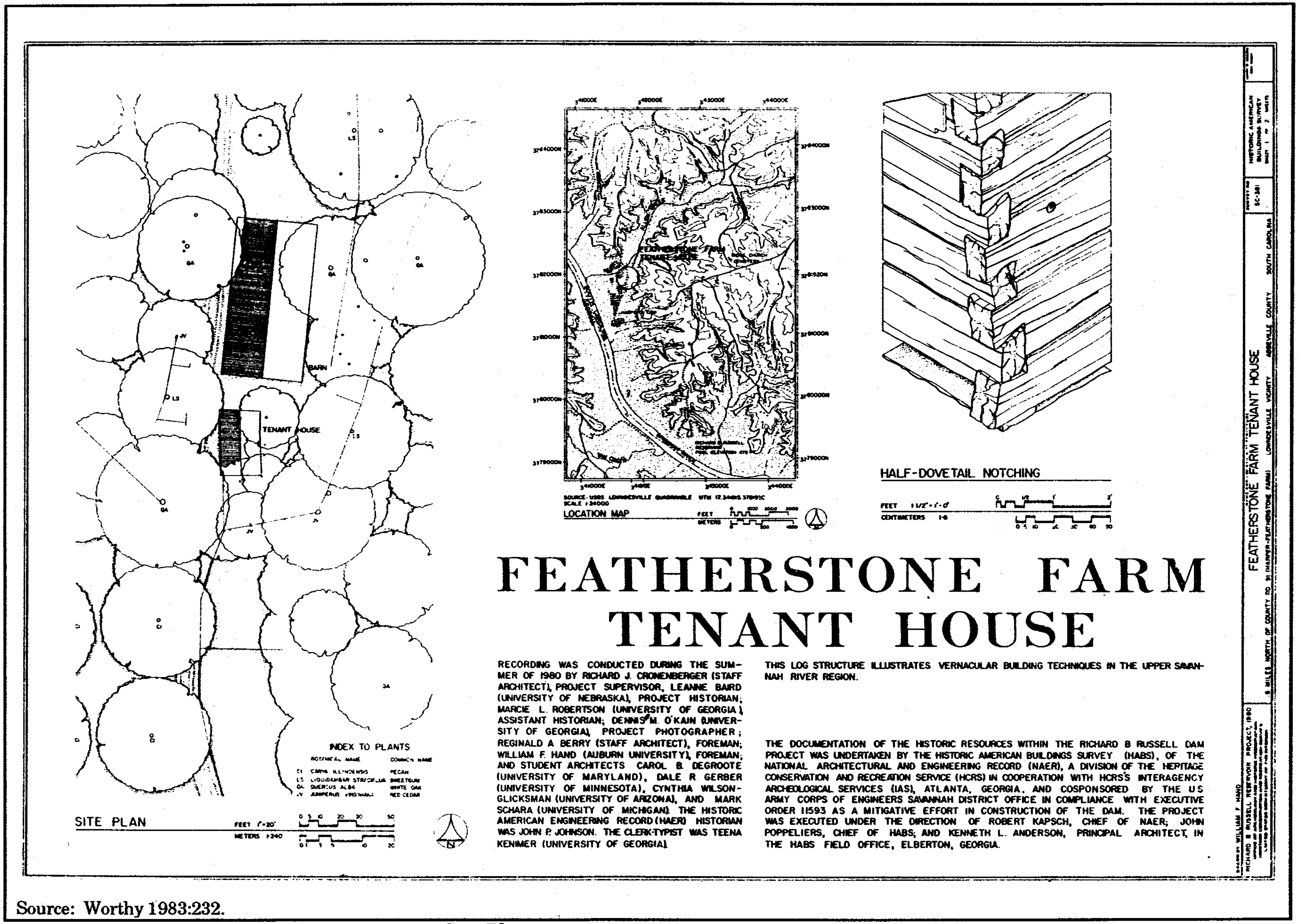
The internal structuring of tenant farms differed from those of owner-operated farms only in the number and diversity of structures. Sharecropper homesites would be expected to contain a dwelling and one or two support structures, such as a chicken coop or storage shed. Tenant sites would probably add a barn to this assemblage. The Harper-Featherstone Farm Tenant House (Figure 117) presents a more elaborate range of structures, consisting of a dwelling, smokehouse, mule barn, cattle pen, wellhouse, and "bango making shop." The dwelling apparently originated as a single-pen log structure, and may be of antebellum origin. Most of the outbuildings were added to the property in the twentieth century by the Morrow family, who were tenants at this site from 1912 to the 1970s. Thus the diversity of structures at this site is probably a product of the long tenure of this particular family as tenants, and is not a true characteristic of the tenant farm's spatial arrangement.

The Featherstone Farm Tenant House (Figure 118) represents a more simplistic organization in keeping with the parameters of tenant agriculture. The complex consists of two structures: the tenant house and a barn. The tenant house is constructed of log (see below), and appears to have been moved to this location from a previous spot. HABS historian LeAnne Baird speculated that this structure may have originally been built as a slave dwelling and later removed to the Featherstone Farm (in Worthy 1983:226). Such repositioning of slave dwellings has interesting implications for the shift from nuclear or conglomerate plantation settlement to the dispersed arrangement of tenancy, since it implies that this transition may have been made before structures had deteriorated and required replacement. The close positioning of the Featherstone Tenant dwelling and barn indicates something of the functional nature of both human and animal



Source: Worthy 1983:271.

Figure 117. Harper-Featherstone Farm Tenant House Site Plan. Drawing prepared for the Historic American Building Survey.



Source: Worthy 1983:232.

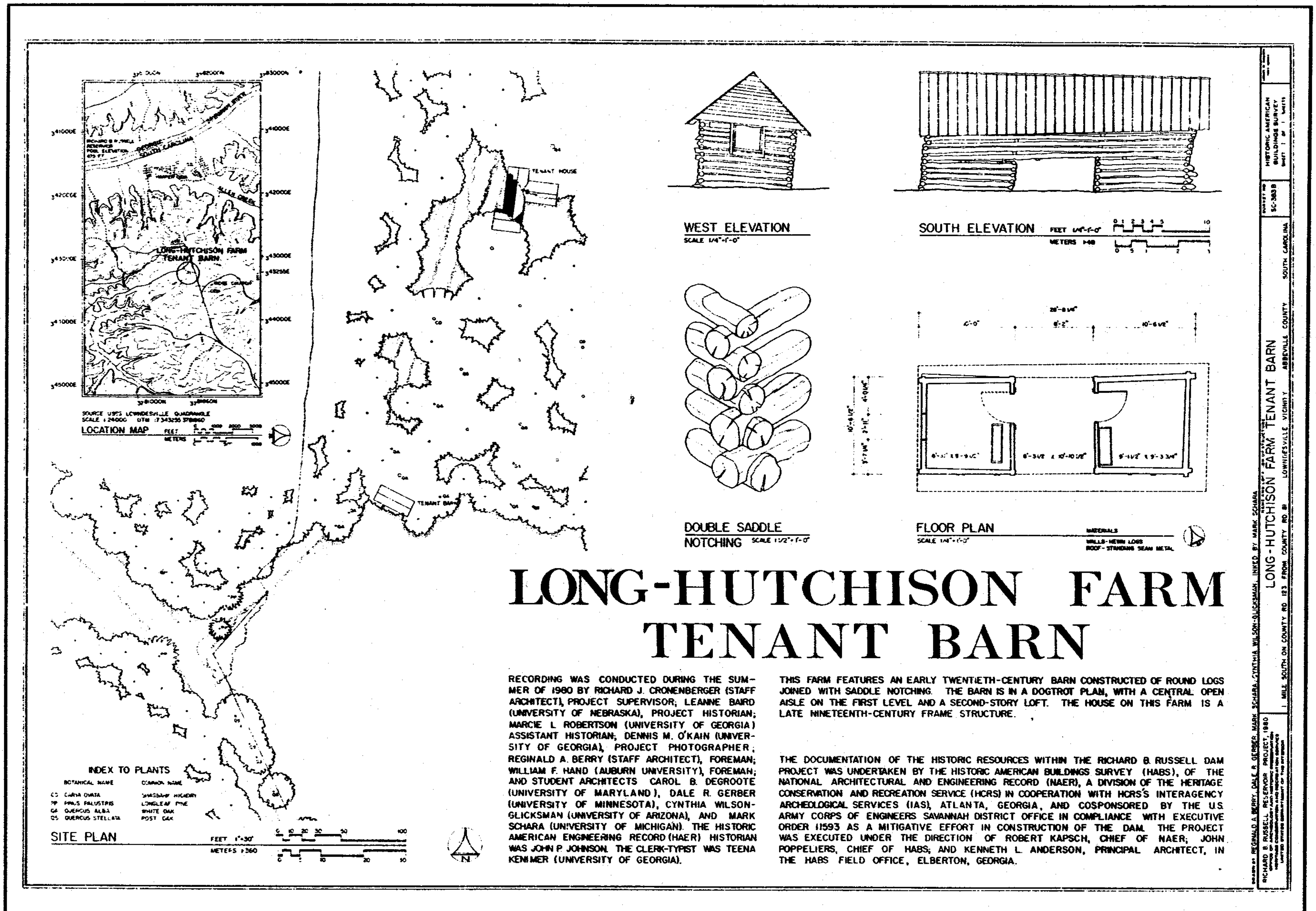
Figure 118. Featherstone Farm Tenant House Site Plan.
Drawing prepared for the Historic American Building Survey.

laborer within tenant agriculture, while the relative size of these structures provides an illustration of the degraded status to which tenants were assigned.

The Long-Hutchinson Tenant Barn site (Figure 119) consists of a dwelling and barn. The spatial arrangement of this farm indicates an intermediary position between the Harper-Featherstone site and the Featherstone farm. The tenant house is situated at a reasonable distance from the barn (approximately 50 m), and is a considerably larger structure than found at either the Harper-Featherstone or Featherstone sites. The scale of the home is not in keeping with standard tenant housing, however, as this structure was originally built and occupied by one of the Hutchinson sons, and only relegated to tenancy in the early twentieth century.

The spatial patterning of plantations evolved from nuclear or conglomerate clusters of facilities to the dispersed arrangement of tenancy. While this dispersed settlement suggests a random distribution of human resources, it was underlain by the management ideals and strategies of the planter/landlord. If farmed on a sharecropper basis, support structures such as mule barns and tool sheds occupied central locations in this settlement. If farmed by renters, each location functioned much as an independent farm, although without the range of associated structures found on owner-operated farms. The dispersed settlement was not without logic or reason, and marked the planter/landlord's effort to make use of the maximum available cropland. Patterning, such as that of the Millwood tenant structures (Figure 116), suggests concentrations in areas of agriculturally superior soils (such an area might be the space between Coffer Creek and Manor Creek at Millwood), with a relatively even spacing of structures within this area. This transition from plantation to tenant settlement patterning suggests that the the natural order and structure of the antebellum phase was replaced by a more management-oriented philosophy in the postbellum.

The spatial relationship of agricultural structures is only one aspect of settlement analysis. Archaeologists are also concerned with the manner in which the surrounding landscape is used. Drucker et al. (1983) noted that the intense topographic relief of the piedmont contributed to a particular pattern of refuse disposal. This pattern, dubbed the "Piedmont Refuse Disposal Pattern" (Drucker 1979; Drucker, Anthony and Harmon 1979; Drucker and Anthony 1982) was characterized by the following traits (Drucker et al. 1983:106-107): (1) Routine maintenance and cleaning of the immediate household area, with at least the front and sides of the dwelling swept, and large food scraps disposed of in animal pens or garden areas. (2) The accumulation of refuse in heaps or middens, sometimes for the intentional subsequent removal and disposal in gullies or ravines. (3) The disposal of refuse along hillsides for housesites established adjacent to slopes. Drucker et al. (1987:107) note that these practices have several implications for the archaeological investigations of piedmont sites. First, the total artifacts recovered from areas around structures will probably be sparse, since these areas were routinely cleaned. Second, these assemblages will be biased toward architectural materials, which would be deposited after the abandonment of such sites, while domestic remains would be expected to be



Source: Worthy 1983:279.

Figure 119. Long-Hutchinson Farm Tenant Barn Site Plan. Drawing prepared for the Historic American Building Survey.

removed from the area. Third, primary refuse deposits will occur on the periphery of site occupations, and primary and secondary deposits on adjacent slopes and at the base of adjacent gulleys and ravines. Finally, refuse cannot be directly associated with the nearest dwelling, since Drucker et al. (1983:107) note that a stated objective of the transportation of trash is to "get it away from our property," and hence dumping debris on someone else's land is an acceptable disposal practice. These observations are of considerable utility to historical archaeological studies of Piedmont upland sites, and explain the high percentage of architectural elements noted in pattern studies at such locations (Gresham and Wood 1986).

In summary, the internal arrangement of postbellum tenant and sharecropper farms varies from those which were virtually indistinguishable from owner-operated farms, to those which were marked by a more restricted variety in terms of the structures present, to those were the tenant laborers were treated no better, if not worse, than the livestock. The latter represents the most functional representation of a tenant farm, as a point which housed men and animals for agricultural cultivation. The range of forms indicates that, as in the antebellum, some men were better landlords than others, and the quality of life depended on whose farm was being worked. The variation among tenant structures, and the contrast of this variation with the dwellings of whites, highlights the social range of the project area in the late nineteenth century.

Architecture

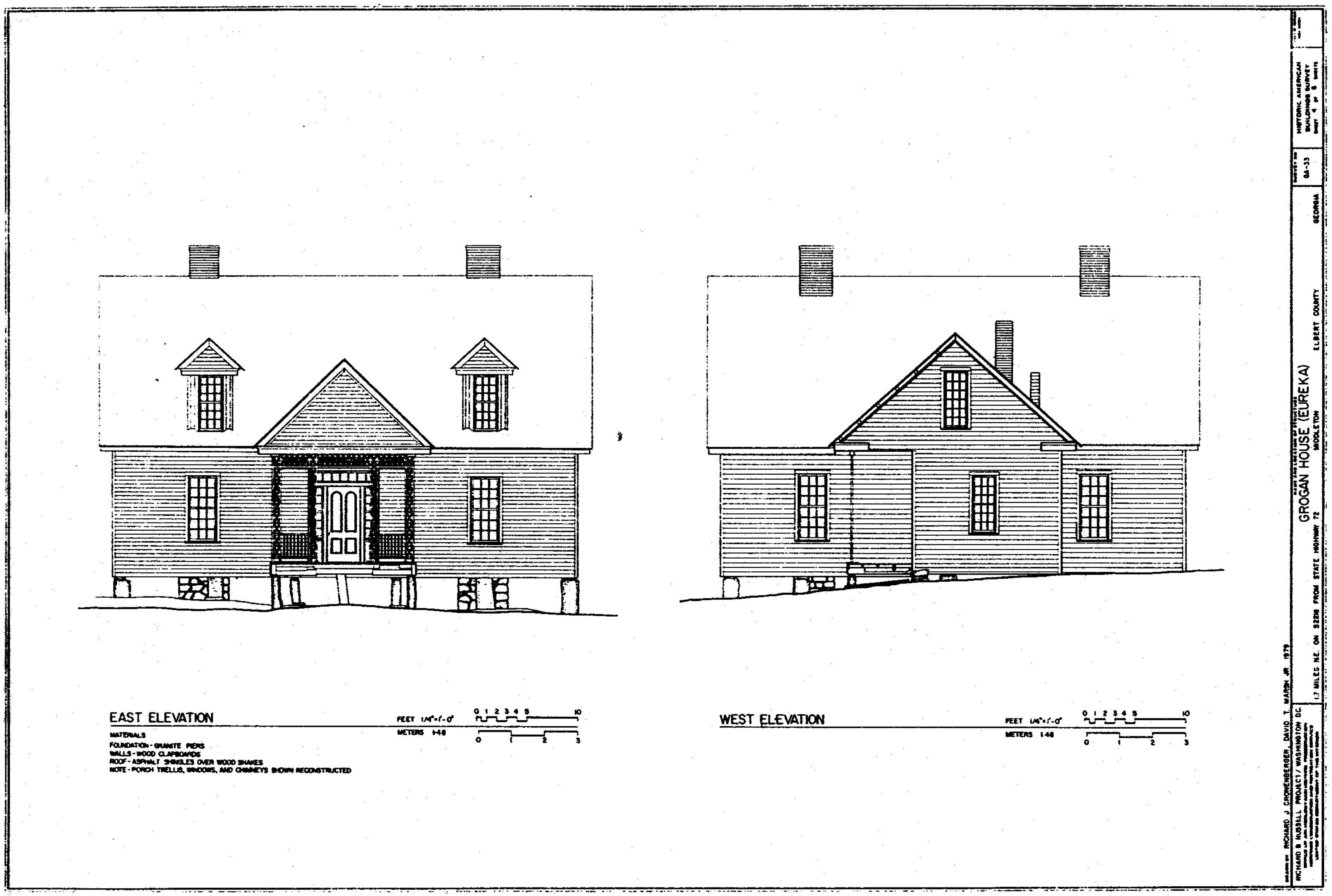
The architecture of the postbellum period marks a continuation of antebellum trends, with one general shift in regional patterns: the replacement of log architecture with balloon-frame construction. This transition was made possible by a number of factors, primarily the greater availability of sawn wood, which occurred after the introduction of sawmills to the project area in the 1850s, and the lower cost of nails following the invention of cut nails in the early nineteenth century (Worthy 1983:52). Worthy (1983:31) notes that the postbellum represents the majority of structures inventoried in the project area (due to both population increases and the greater survival of frame architecture over earlier log forms), and that houses of this period are generally smaller than those of the antebellum. While frame was the dominant construction material of the time, five log structures were identified which dated to the postbellum, and Worthy (1983:31) suggests that the notching devices employed for log structures may be a diagnostic index. Specifically, she indicates that v-notching appears to date from ca. 1865 to 1880, and that this was replaced by saddle-notching during the period from ca. 1890 to 1910.

A second shift noted in structures of the period is the appearance of internal, central brick chimneys, and the abandonment of the mud-and-stick or clay chimneys found on low status dwellings of the antebellum. The use of brick suggests this resource was becoming more available in the area in the postbellum period, although Worthy (1983:31) does not explain the adoption of interior chimneys. Certainly mud-and-stick chimneys were not viable for interior construction, since these frequently caught fire and were actually constructed semi-detached from the exterior wall of structures so they could fall away if on fire, and spare the remainder of the dwelling from the conflagration (McDaniel 1982). The adoption of interior brick chimneys on lower status dwellings may be a matter of economics, since if brick was used, the builders could perhaps only afford the material for a single chimney, and thus placed this chimney where it could heat more than one room.

Several structures from this period illustrate the range and variation in postbellum architecture in the area. The Grogan House was apparently constructed at some point between 1870 and 1873 by the Reverend John Henry Grogan, an itinerant minister and miller. Grogan maintained a controlling interest in the Eureka Mill from the 1870s until his death in 1896, which afforded him considerable wealth. His house is Georgian in style, and features a central hallway and attached rear kitchen wing (Figures 120, 121 and 122). Three internal brick chimneys serve the two halves of the main structure and the kitchen annex. The style of this house, and its setting (Figure 123) marks a continuation of architectural practices of status and segregation which originated in the antebellum period. The Grogan House is secluded from the outside world by a protective screening of shrubbery along the Middleton-Ruckersville Road, and provides further social distancing through the use of a portico and through its central hall plan. Interestingly, this structure employs three interior brick chimneys, suggesting that wealth was not a factor in the decision to use interior as opposed to exterior chimneys.

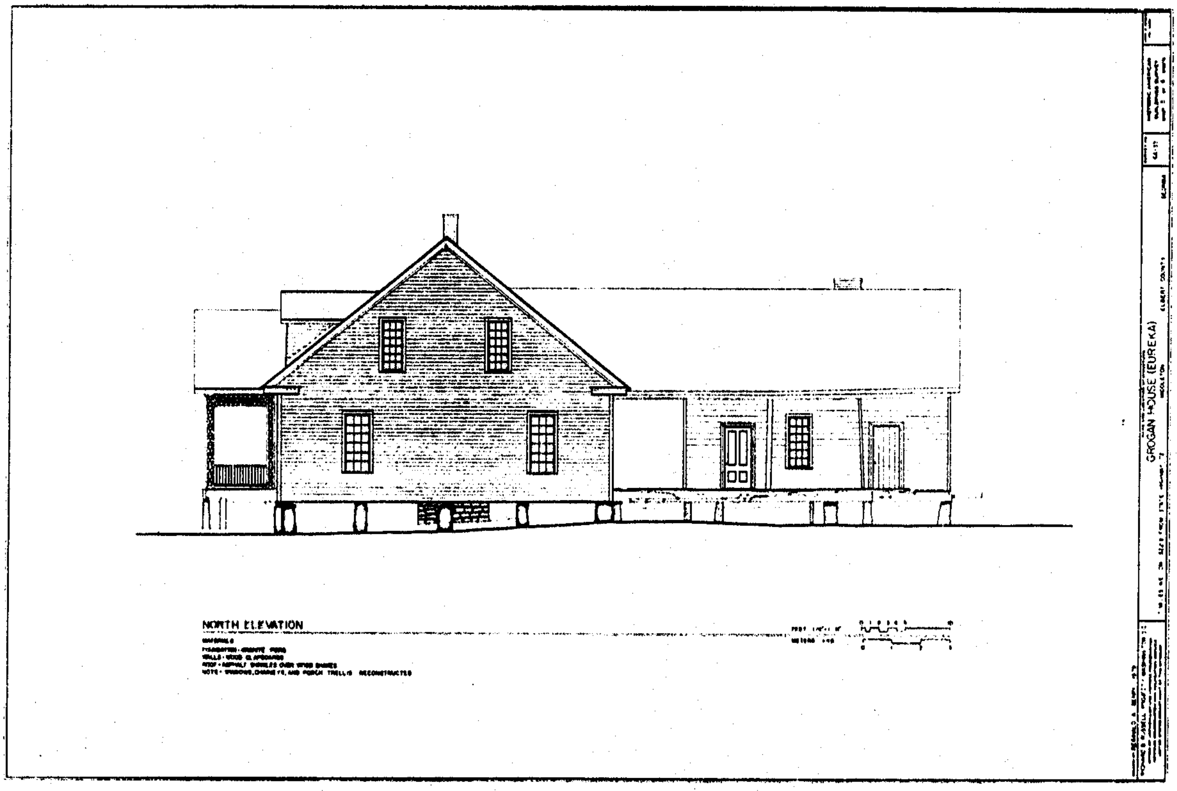
In contrast, the Harper-Featherstone Farm Tenant House (Figure 124) offers evidence of the architectural style and space afforded tenants of the postbellum period. This structure was originally constructed of dovetail-notched hewn logs, and later covered with boards and siding, and the dovetail notching suggests that the building may originally date to the antebellum period. The house consists of four rooms, and features two separate entrances, an indication that it may have been intended for use as a duplex, although these separate entrances may also have provided a segregation of resident and guest. At least three alteration phases are noted in this structure, which initially began as a single-pen log house with external chimney, and includes the later additions of a shed kitchen and of a third room along the lines of the original structure. Unlike the Grogan House, this dwelling is easily accessible by visitors and affords little social separation.

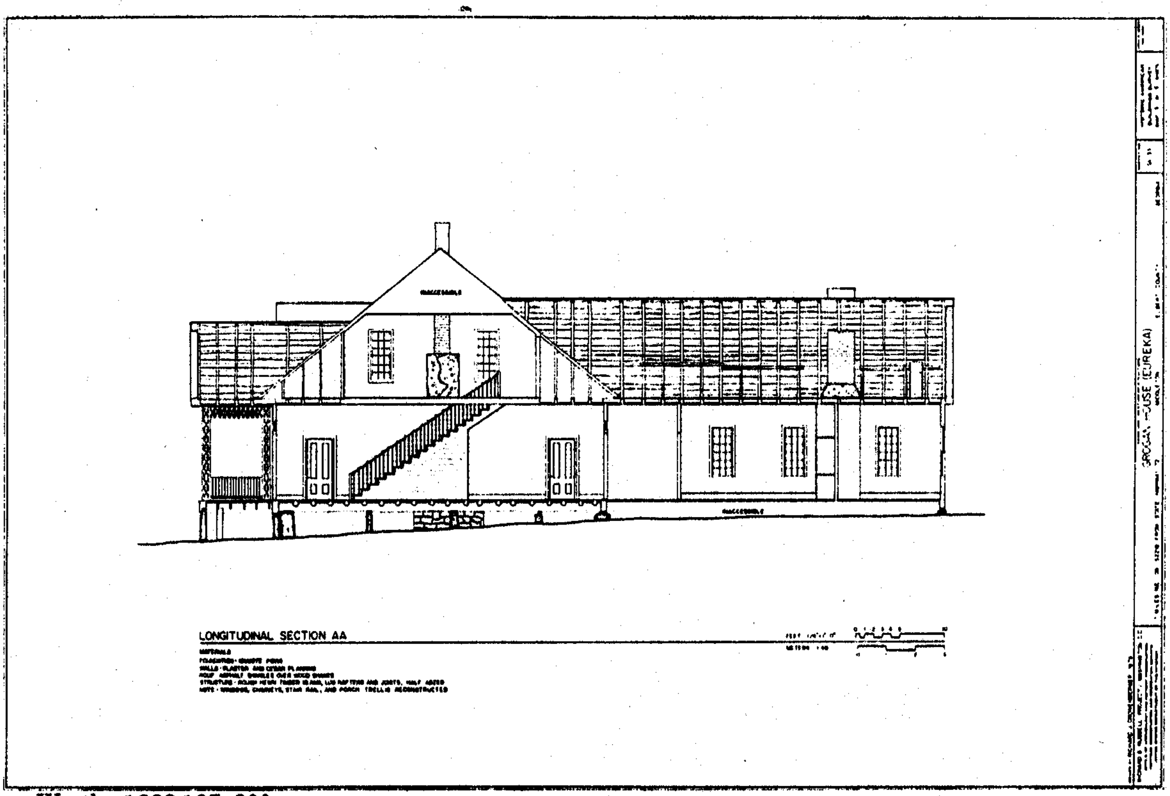
An even more impoverished structure is the Featherstone Tenant House (Figure 125). This dwelling features an original single-pen log structure and an attached frame annex. The dimensions of the original log cabin are 18' 11" by 17' 2 1/2," while the annex measures roughly 12' by 17'. The Featherstone Tenant House offers the least amount of space per occupant of the structures discussed in this section, although an apparent increase over the space provided slaves during the antebellum (see below).



Source: Worthy 1983:196.

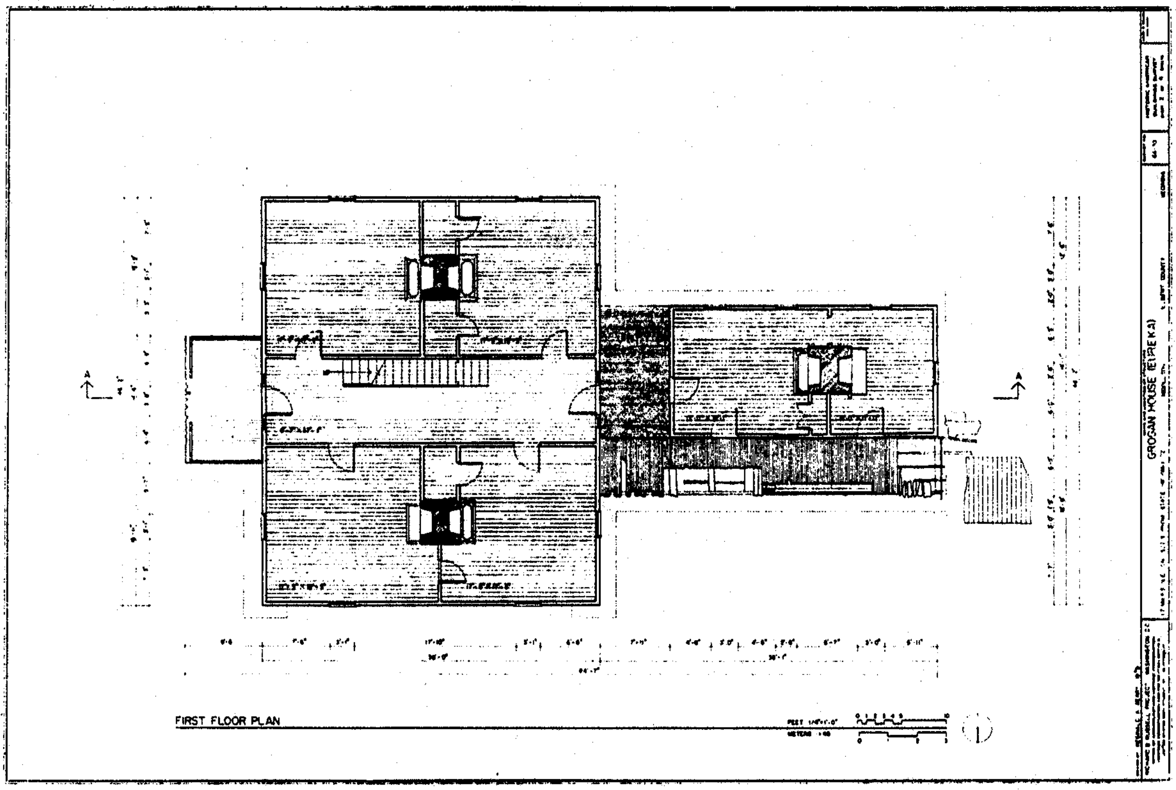
Figure 120. Grogan House East and West Elevations.
Drawing prepared for the Historic American Building Survey.

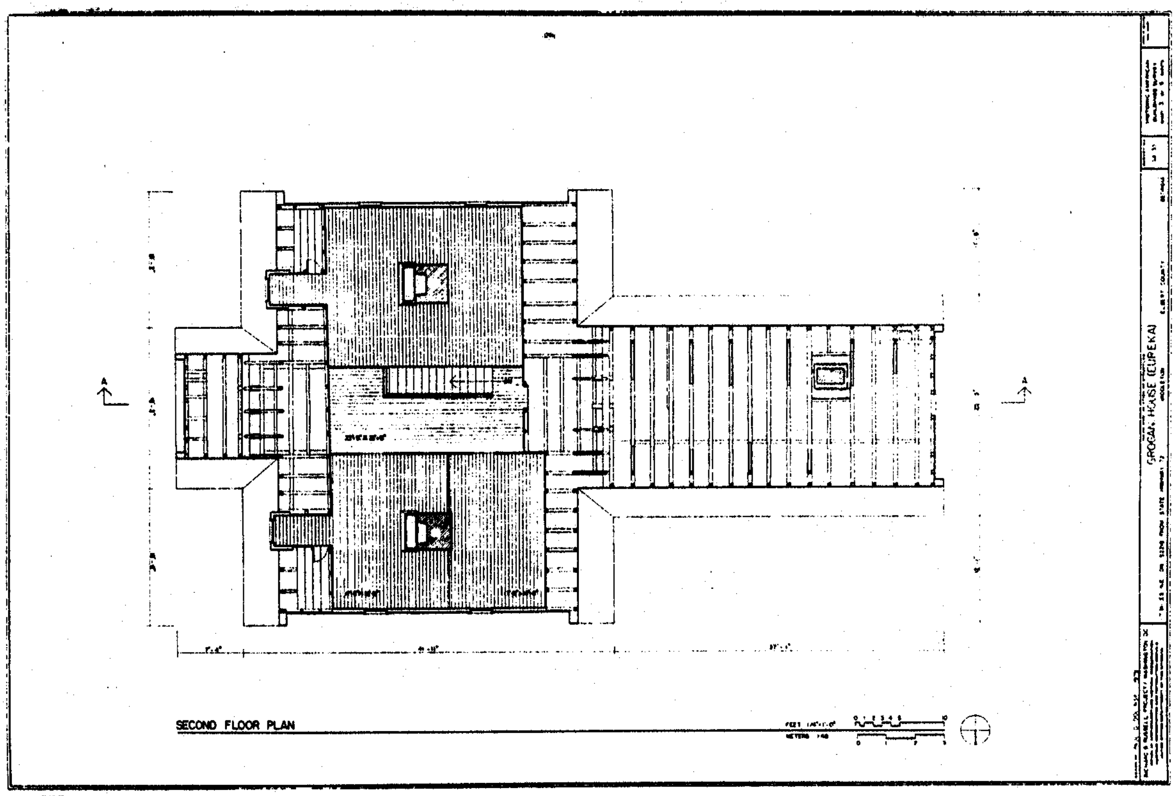




Source: Worthy 1983:197, 200.

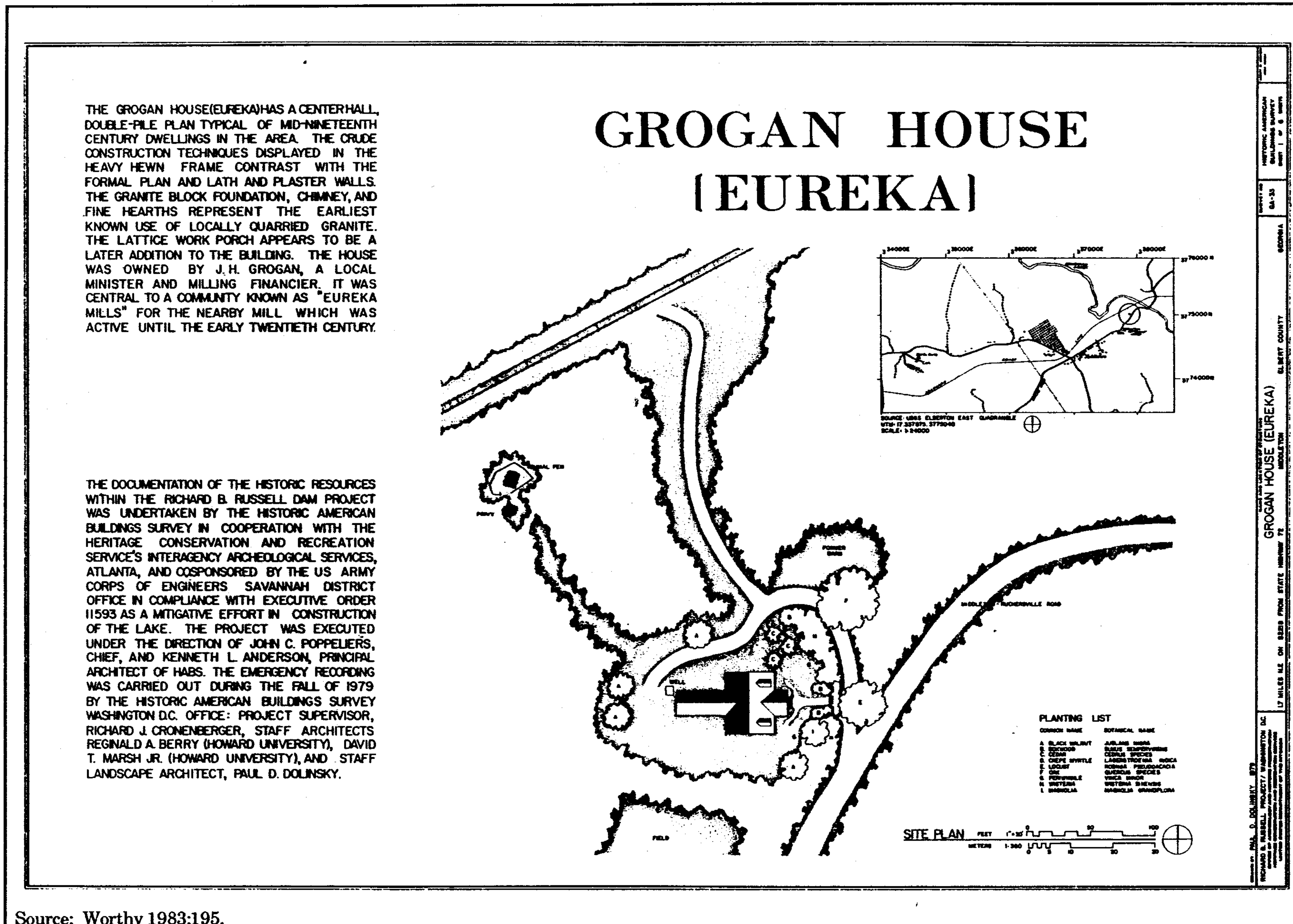
Figure 121. Grogan House, North Elevation and Section. Drawing prepared for the Historic American Building Survey.





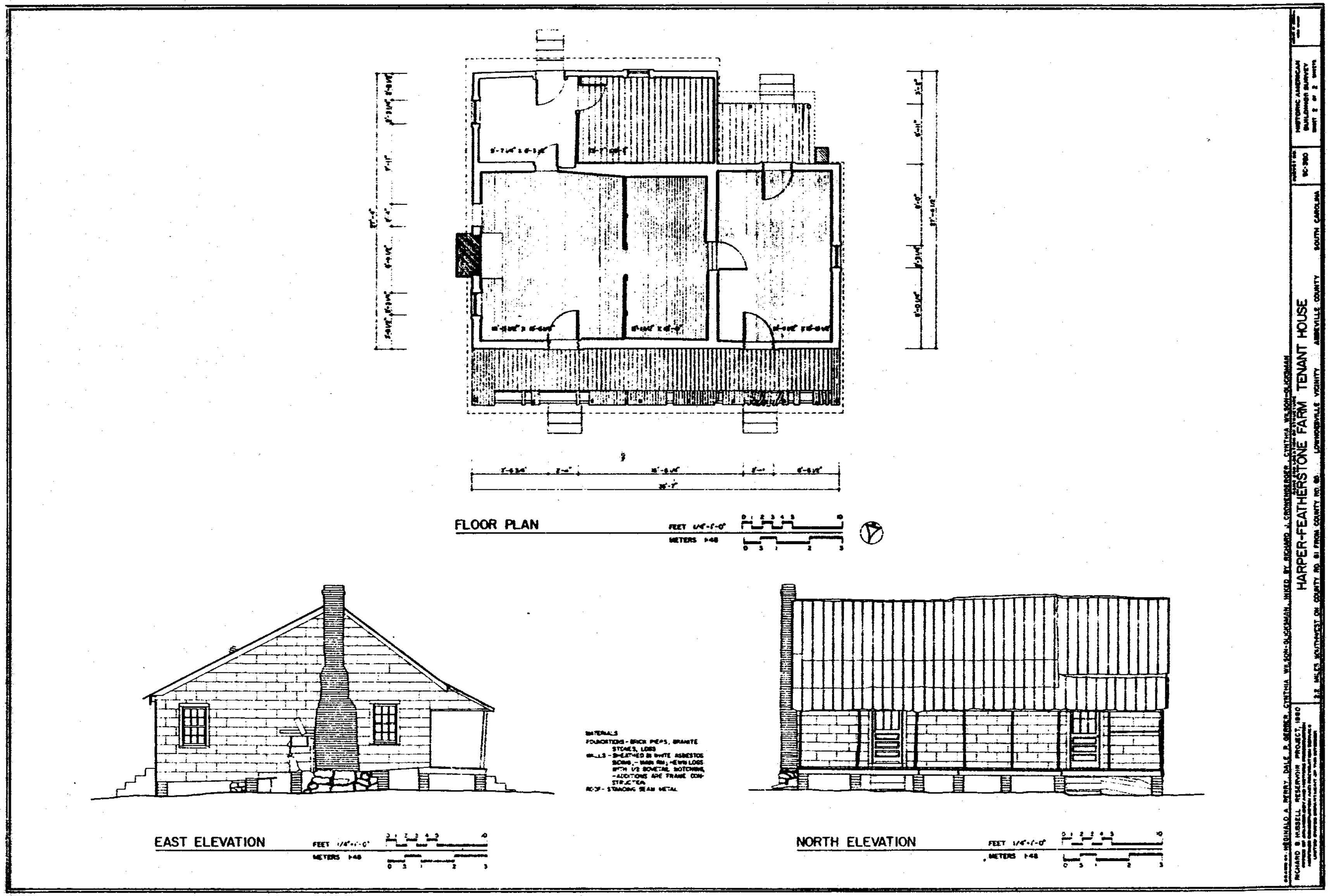
Source: Worthy 1983:198-199.

Figure 122. Grogan House, 1st and 2nd Story Plans.
Drawing prepared for the Historic American Building Survey.



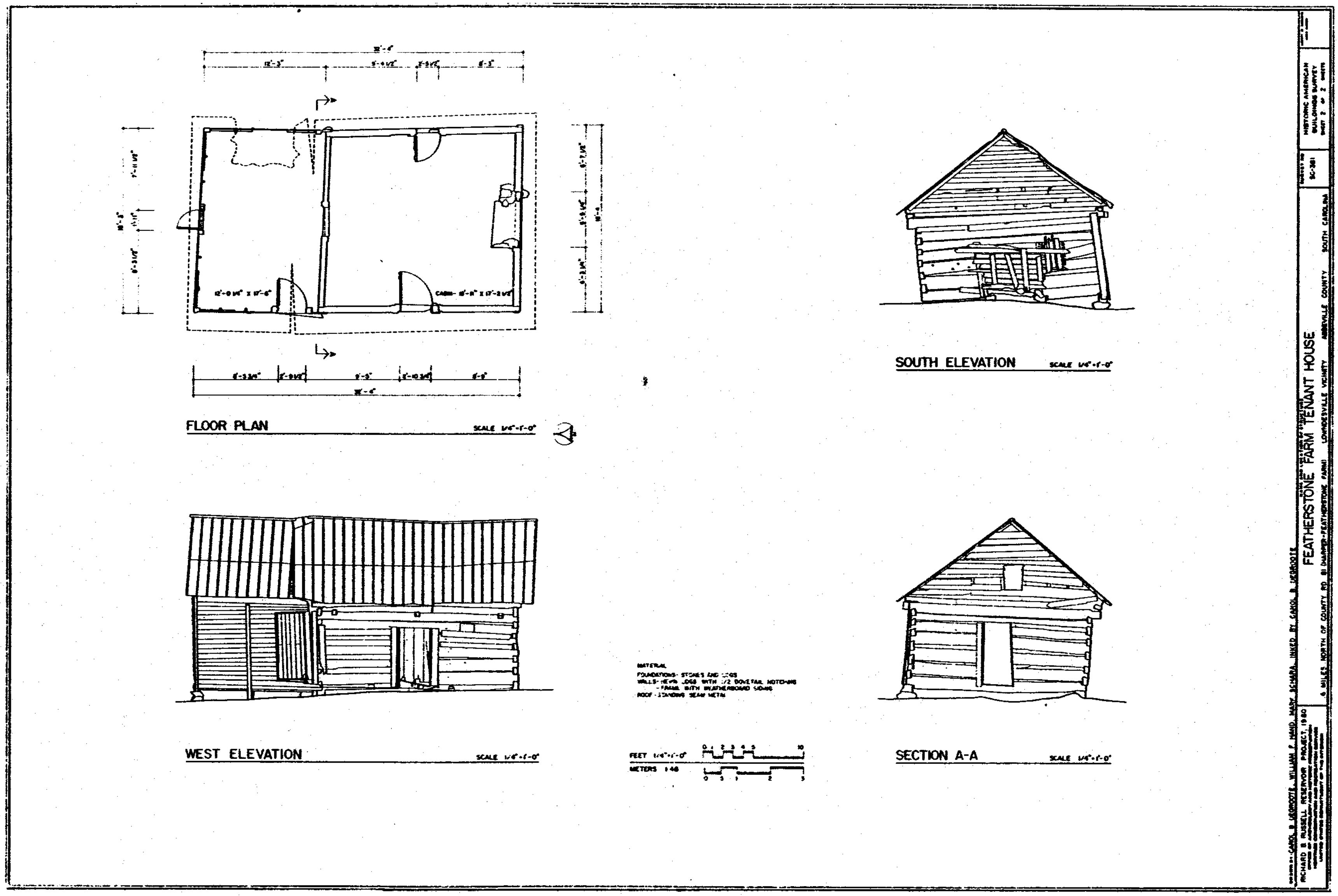
Source: Worthy 1983:195.

Figure 123. Grogan House Site Plan.
Drawing prepared for the Historic American Building Survey.



Source: Worthy 1983:272.

Figure 124. Harper-Featherstone Farm Tenant House, Elevations and Plan. Drawing prepared for the Historic American Building Survey.



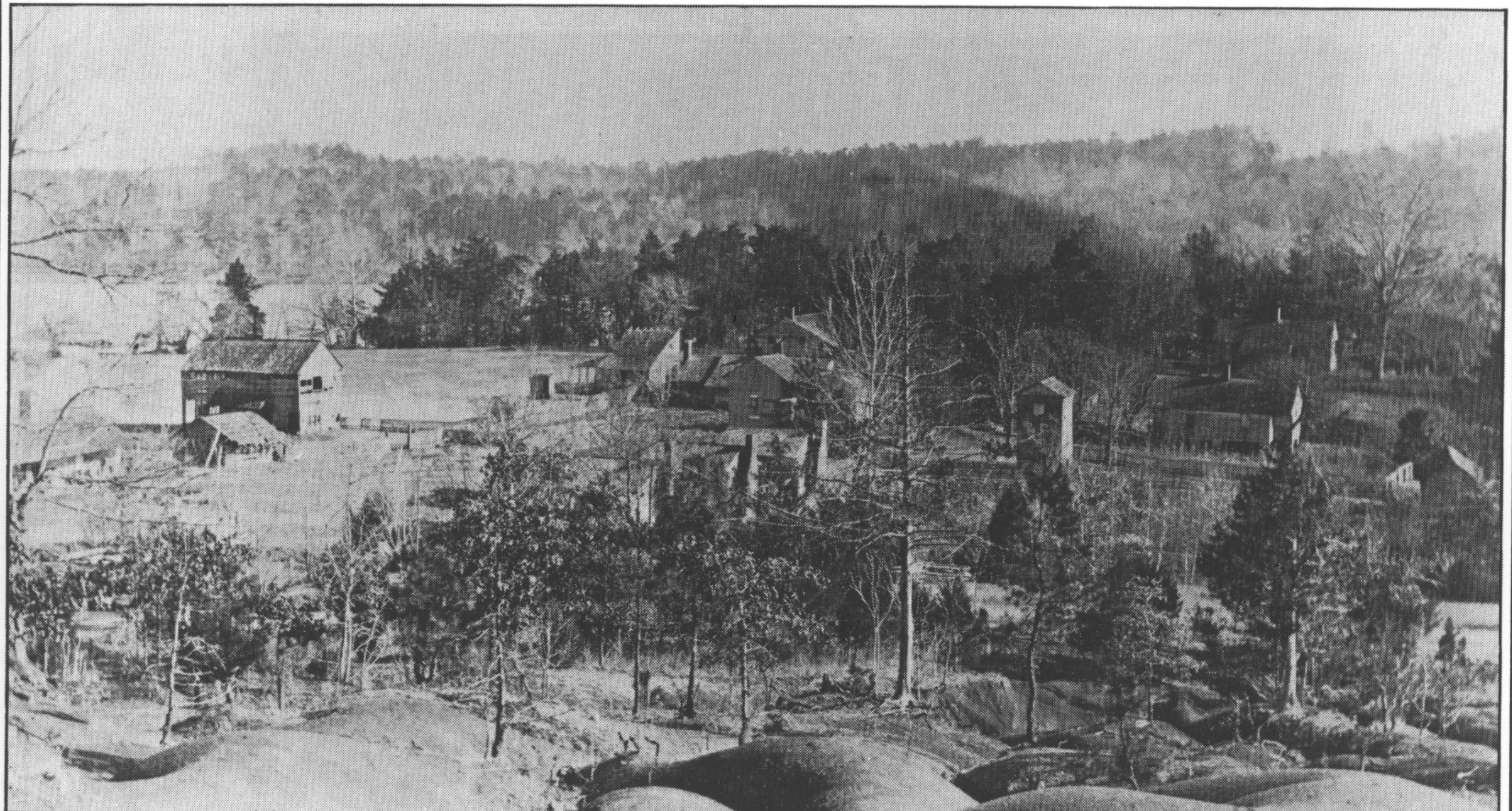
Source: Worthy 1983:233.

Figure 125. Featherstone Farm Tenant House, Elevations and Plan. Drawing prepared for the Historic American Building Survey.

Visual images of postbellum architecture indicate the rugged, functional nature of most structures found on farms and plantations. A panoramic view of Millwood plantation, taken in about 1879, provides an illustration of this plantation in the postbellum (Figure 126). Millwood continued to possess a considerable number and diversity of structures. The panoramic view shows a concentration of barns and sheds to the far right, an apparent owner/manager complex in the rear center, three linearly arranged dwellings in front of the owner/manager complex (the linear organization suggests these may be remnants of the slave quarters at Millwood), and a variety of service structures to the left. Also of interest in this photograph is the severe erosion apparent in the foreground. A closeup of the plantation (Figure 127), probably taken several years earlier, shows a concentration of service structures around a well, with barnyard animals, a dog and a piglet, running loose among these buildings. A postcard from 1901 (Figure 128), entitled "TYPICAL NEGRO CABIN AT MILLWOOD, S.C.," shows a tenant family, apparently the Cuff Walker family, in front of a small frame cabin raised on a stone foundation. Finally, two views of the Long-Hutchinson tenant house (Figure 129) provide images of a more well-to-do tenant architecture, although it should be considered that this structure was originally built for one of the Hutchinson sons, and not as a tenant structure.

This perspective on the postbellum architecture of the region suggests that in the postbellum nearly all classes built in the same medium, frame, and thus construction material did not distinguish social status. Status was indicated by architectural style (the use of formal facade treatments, structured as opposed to organic plans, and by the presence of hallways, porches, and other devices to provide social segregation), in the decorative treatment of structures (the Grogan House was apparently the only one of the structures outlined above which was painted), and in the amount of space provided per occupant. Orser et al. (1987:609) outlined the living space provided for various social classes at Millwood, and their structure is expanded here (Table 25) to include the Grogan House, Featherstone Tenant House, and Harper-Featherstone Tenant House.

These statistics indicate that the housing conditions of tenants improved greatly over those enjoyed by slaves, with an increase of approximately 90 square feet per inhabitant, but that even with these increases planters and landlords continued to maintain a far greater amount of space than provided to their tenants; roughly six times the amount of space per inhabitant. It is also of interest to note that the two Millwood tenant structures were originally occupied as slave cabins, and that these provided the least amount of interior space. Both the Featherstone and Harper-Featherstone Tenant homes began life as single-pen structures (with floor space similar to that provided the Millwood slaves) and were later enlarged to their recorded dimensions. This contrast suggests that it was perhaps tenants themselves who expanded their living quarters, and that such increased space does not necessarily represent any greater benevolence on the part of planters and landlords.

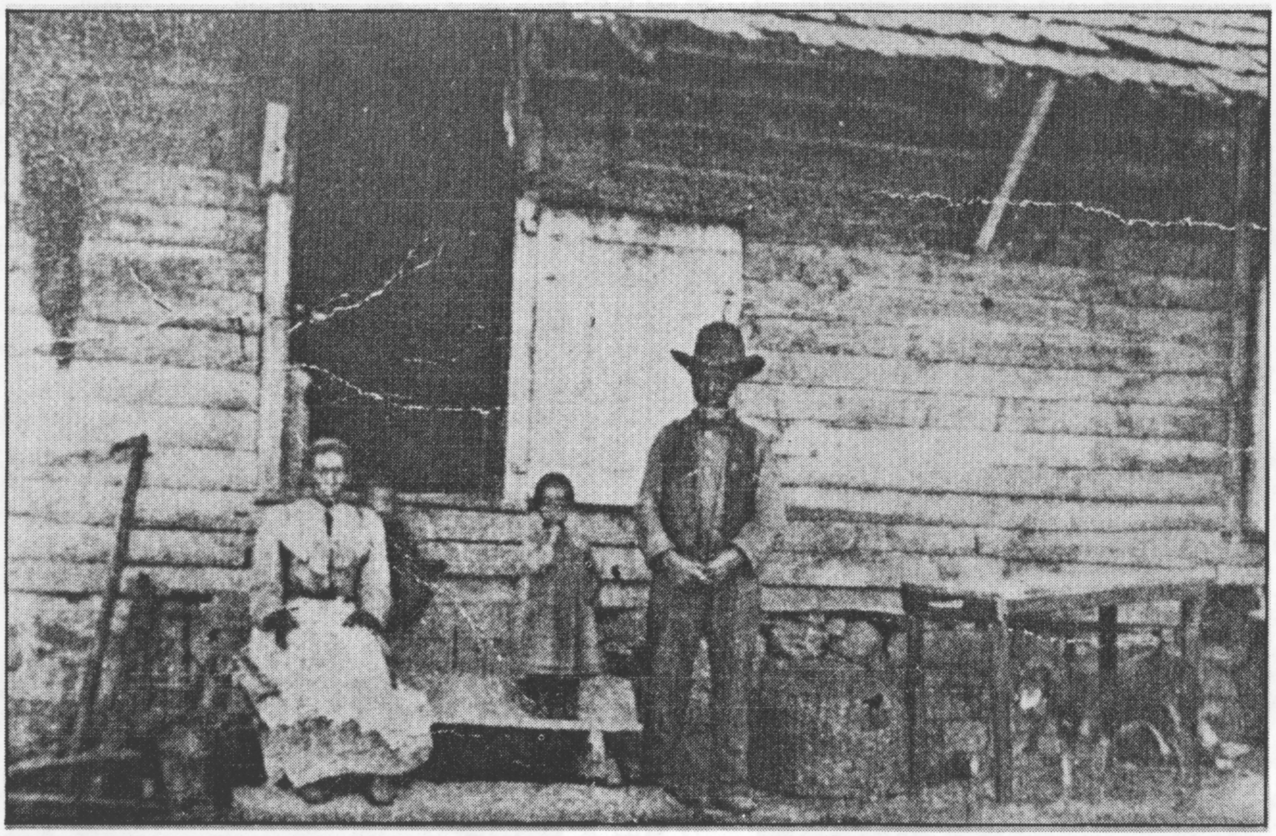


Source: Orser et al. 1987: 153

Figure 126. Panoramic View of Millwood Plantation, ca.1879.
Note severe erosion in the foreground.

Source: Orser et al. 1987: 161

Figure 127. Detail of Millwood Plantation from ca. 1875.



Source: Orser et al. 1987: 302

Figure 128. Picture Postcard from Millwood, ca. 1909.
Note: Caption reads TYPICAL NEGRO CABIN AT MILLWOOD, SC.

Source: Worthy 1983:277.

Figure 129. Long-Hutchinson Tenant Home.
Photographs for the Historic American Building Survey.

Table 25: The Living Space Provided by Social Class in Different Dwellings from the Russell Reservoir (from Orser et al. 1987:609 and Worthy 1983)

GROUP	FAMILY SIZE	SQUARE FOOTAGE	SQ. FT./PERSON
Millwood Planter/Owner	1.0	773.0	773.0
Millwood Overseer/Manger	4.0	539.00	134.7
Millwood Slave/Tenant	5.2[1]	224.00	43.1
Millwood Slave/Tenant	5.7[2]	224.00	39.30
Featherstone Tenant House	4.4[3]	540.75	122.89
Harper-Featherstone Tenant House	4.4[3]	582.40	132.36
Grogan House	5	3239.38	647.87

1. Based on Fogel and Engerman (1974)
2. Mean size of Millwood slave families based on 1860 slave schedule
3. Mean size of tenant families reported by Woofter (1936)

Archaeology

As noted in the previous chapter, the continued occupation of antebellum sites into the postbellum period prohibited the clear separation of archaeological materials from the pre-War period from those which were deposited in the War's aftermath. Thus the historical archaeology of the Russell Reservoir cannot address questions of a chronological nature. The archaeological research did distinguish a variety of social and occupational statuses. Since the relationships between these changed only slightly between the antebellum and postbellum (slaves may have gained their freedom, but the economic and social relationship of slaves to planters and of tenants to landlords were similar relationships), the archaeological research offers an opportunity to compare and contrast the material worlds of whites and blacks, of planters and tenants, in the project area in the postbellum period.

The nature of the historical archaeology undertaken for the Russell Reservoir varied significantly in purpose and results. Gray's (1983) work was intended to examine the internal distributions of materials from several recently burnt domestic structures, and thus does not provide significant contributions to our understanding of postbellum archaeology. Drucker et al.'s (1983) research was of a more preliminary nature, and yielded only limited returns with which to consider postbellum agricultural dynamics. The most well-developed research, in terms of both scale and research design, was the work conducted by Orser et al. (1987) at Millwood Plantation, and this forms the body of the discussion presented below.

Social Status and Archaeology: The Material Correlates of Wealth and Ethnicity in Agrarian Culture The archaeological identification and examination of status through the material record has proven to be one of the more intriguing aspects of plantation and agricultural archaeology. As Otto (1980) notes, it is the cross-cutting nature of social status in Southern culture which makes the archaeological discussion of status such a fascinating topic. For example, status can be considered on racial lines (whites: blacks), as a measure of social organization (managers: supervisors: workers), or as elites versus non-elites (owners: employees) (Otto 1980:8). Otto's (1975) work at Cannon Point, an antebellum coastal Georgia plantation, suggested that economic status could be detected in comparative worth of ceramics; that ethnicity could be read from vessel forms and associated foodways; that racial status could be interpreted from the commonality of white-occupied architecture versus that of slaves; and that elite - non-elite separation was legible in subsistence remains. Otto's results continue to be a focal point of plantation archaeology, and in general have received only limited support from additional studies of antebellum coastal plantations. Prior to Orser et al.'s research at Millwood, these interpretations had not been applied to either the upcountry or the postbellum.

Orser et al. (1987:685) focused their research on status and the archaeological record primarily on the postbellum period, since these materials represented the most secure archaeological contexts on which to base their interpretations. Ten structures were selected as representing groupings of tenant/non-tenant occupations. Structure 1 (Calhoun's residence), Structure 6 (possibly the original residence of Calhoun), Structure 7 (a guest house), and Structure 8 (the overseer/manager's house) comprised the non-tenant assemblage, while Structures 2, 10, 11, 17, 19 and E were selected as tenant occupations. Structures 10, 11, and E are the three linearly arranged dwellings noted in the panoramic view of Millwood, above, and thus may have originally served as slave cabins, while Structure 2 was occupied by Caroline Walker, Calhoun's long-time personal servant and presumably a person of higher status than the tenants.

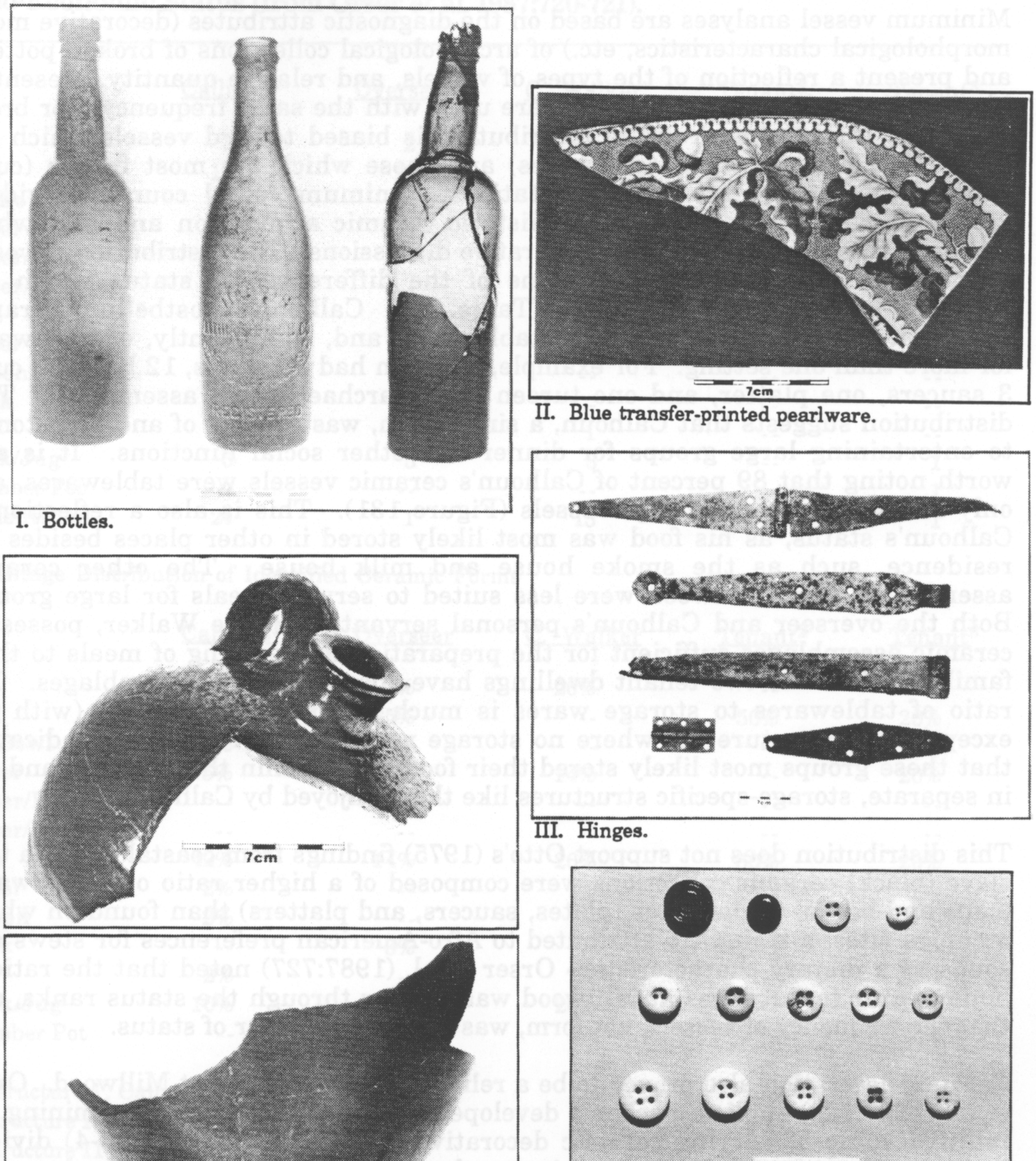
Orser et al. (1987:685-702) considered the distribution of a number of material objects to determine which of these potentially reflected socio-economic status. Their work indicated there were several material correlates of status. The frequency of container glass by function appeared to be one measure of status at Millwood. Dividing the container glass into four categories: liquor, medicine, tableware, and unclassified, they noted that liquor glass occurred with greater frequency among the non-tenant structures than within assemblages associated with tenancy (Figure 130). Liquor glass contributed from 22.6 to 31.9 percent of the assemblages of the non-tenants, for an average of 26.1 percent, while consisting of only 7.1 percent of the tenant's container glass refuse (Orser et al. 1987:687). Interestingly, the sole tenant site with a high percentage of liquor bottles (in fact the highest percentage of either the tenant or non-tenant structures) was Structure 19, which is the only one of the tenant structures not located in Millwood's main compound (see Figure 92). This suggests that what Orser et al. may have measured in the container glass distribution was not status, but social control; tenants living near Calhoun may have moderated their drinking, or conducted it out from under his watchful eye (perhaps at the residence of Structure 19), while those with further distance from Calhoun were less restricted in their behavior.

Source: Orser et al. 1987: 176

Figure 130. Mold-made Green Bottle from Structure 2, Calhoun's Antebellum Residence.

Other non-ceramic artifacts were of less interpretive value as indices of socio-economic status. Architectural elements reflected a relatively comparable distribution when non-tenant structures were compared with those of tenancy, although window glass did occur at a higher frequency on non-tenant sites (25.1 percent of all architecture) than on tenant sites (8.5 percent of all architecture) (Orser et al. 1987:691). This may reflect a continuation of antebellum conditions, in which slave and other lower status dwellings did not have glazed windows. The distribution of buttons by material surprisingly did not indicate status. Otto's (1975) research had indicated that bone buttons were associated with slave assemblages, but at Millwood this was not the case (Figure 131). The most frequent material for the tenant and non-tenant structures was glass/porcelain, while metal was the second most frequent for both. Otto (1975:250) notes that the popularity of glass and porcelain buttons increased after 1840, and this may explain the variation between Millwood's assemblage and Cannon Point's. It is expected that status would be better indicated by the decorative treatment of buttons than by raw material, since this aspect was more likely to have determined the cost of a button after the mid-nineteenth century. Finally, the distribution of personal artifacts at Millwood did not indicate significant variations between the tenant and non-tenant structures. The non-tenant sites had a slightly higher percentage of recreational materials than the tenant sites (63.6 percent as opposed to 50 percent), while the tenant site percentages of cosmetics and adornments were somewhat greater than those of the non-tenant structures (23.7 percent to 12.1 percent and 15.8 percent to 9.1 percent respectively), but these variations were not distinctive enough to be considered as status markers (Orser et al. 1987:698).

Ceramics much more clearly delineated social status. Orser et al. (1987) measured the correlation between ceramics and status by a number of indices. For example, they noted that the number of vessel types present in a structure's refuse offered a rough seriation of the statuses expected at Millwood: Structures 1 and 6 (Calhoun's postbellum and presumed antebellum residences) had the most types present (each with 29); followed by Structure 2 (Caroline Walker's, Calhoun's personal servant, residence) with 24 types; Structure 8 (the overseer's house) with 20 types; Structure 17 with 19 types (the presence of so many types at Structure 17 may be misleading, since this structure burnt and thus probably captured a greater variety of material culture than found at the other tenant structures); and Structure 7 (the guest house) with 8 types. The remaining tenant houses, structures 10, 11, 19 and E, averaged slightly less than five types each (Orser et al. 1987:711-713). This seriation was also reflected by the number of vessels present at each of these structures. Based on minimum vessel counts from the ceramic artifacts recovered, and using only those vessels with identified forms, the two Calhoun residences had the most vessels (55 and 54), followed by the overseer's house (29 vessels) and Structure 17 (23 vessels; as noted, the recovery of materials from this structure was skewed by depositional circumstances). Caroline Walker's house and the guest house also had a relatively high frequency of vessels in their assemblages (15 and 10 respectively) while the remaining tenant houses are all characterized by impoverishment in the number of vessels represented, ranging from five at Structure 19 to one at



I. Bottles.

II. Blue transfer-printed pearlware.

III. Hinges.

IV. Albany slip and alkaline glazed stoneware.

V. Glass and porcelain buttons.

Source: Orser et al. 1987: 463, 478, 484, 490, 502.

Figure 131. Historical Artifacts from Millwood.

Structure E (Orser et al. 1987:720-722).

Minimum vessel analyses are based on the diagnostic attributes (decorative motif, morphological characteristics, etc.) of archaeological collections of broken pottery, and present a reflection of the types of vessels, and relative quantity, present at historic sites. Since not all vessels are used with the same frequency, nor break as easily, the minimum vessel distribution is biased toward vessels which are most often used (such as tablewares) and those which are most fragile (cups, saucers, etc.). Despite these limitations, minimum vessel counts provide a means of partially reconstructing historic ceramic acquisition and use, which can be of interpretive value in comparative discussions. The distribution of vessel forms from Millwood indicates some of the differences in status which are reflected by ceramic assemblages (Table 26). Calhoun's postbellum ceramic collection is composed primarily of tablewares, and, significantly, of tablewares for more than one setting. For example, Calhoun had 23 plates, 12 bowls, 3 cups, 3 saucers, one platter, and one tureen in his archaeological assemblage. This distribution suggests that Calhoun, a single man, was capable of and accustomed to entertaining large groups for dinner and other social functions. It is also worth noting that 89 percent of Calhoun's ceramic vessels were tablewares, and only 11 percent were storage vessels (Figure 131). This is also a reflection of Calhoun's status, as his food was most likely stored in other places besides his residence, such as the smoke house and milk house. The other ceramic assemblages from Millwood were less suited to serving meals for large groups. Both the overseer and Calhoun's personal servant, Caroline Walker, possessed ceramic assemblages sufficient for the preparation and serving of meals to their families, while the two tenant dwellings have sparse ceramic assemblages. The ratio of tablewares to storage wares is much lower for these sites (with the exception of Structure 10, where no storage vessels were recovered), indicating that these groups most likely stored their foodstuffs within their homes, and not in separate, storage-specific structures like those enjoyed by Calhoun.

This distribution does not support Otto's (1975) findings from coastal Georgia that slave (black) ceramic collections were composed of a higher ratio of hollowwares (cups and bowls) to flatwares (plates, saucers, and platters) than found on white-occupied sites, a trait Otto attributed to Afro-American preferences for stews and soups as a dietary characteristic. Orser et al. (1987:727) noted that the ratio of hollowwares to flatwares at Millwood was similar through the status ranks, and that the frequency of vessels, not form, was a better indicator of status.

Ceramic decoration also proved to be a reliable index of status at Millwood. Orser et al. (1987:728) applied a scheme developed by Miller (1980) for determining the relative value of varying ceramic decorative motifs. Miller (1980:3-4) divided historic ceramics into four categories on the basis of decoration: (1) undecorated wares; (2) ceramics with minimal decoration, i.e. shell-edged, sponged, banded, annular, and finger painted wares; (3) ceramics with painted decoration, such as hand-painted flowers or Chinese motifs; and (4) transfer-printed ceramics (Figure 131). As Orser et al. (1987:728) note, Miller's divisions were created for materials from the first half of the nineteenth century, and changes in

Table 26: The Distribution of Ceramic Vessel Forms at Millwood Plantation by Socio-Economic Status (from Orser et al. 1987:720-721).

	Calhoun[1]	Overseer	C. Walker	Tenant[2]	Tenant[3]
Cup	3	2	4	--	--
Bowl	12	10	--	2	1
Cup/Bowl	6	--	--	--	--
Saucer	3	7	2	--	1
Saucer/Bowl	--	--	--	--	--
Saucer/Plate	--	--	--	--	--
Plate	23	4	4	2	1
Platter	1	--	1	--	--
Tureen	1	--	--	--	--
Crock	--	1	--	--	--
Jug	1	--	1	--	--
Crock/Jug	5	5	3	--	1
Chamber Pot	--	--	--	--	1
Unidentified	24	1	15	--	1

Percentage Distribution of Identified Ceramic Forms

	Calhoun[1]	Overseer	C. Walker	Tenant[2]	Tenant[3]
Cup	5%	7%	26%	--	--
Bowl	22%	35%	--	50%	20%
Cup/Bowl	10%	--	--	--	--
Saucer	5%	24%	14%	--	20%
Saucer/Bowl	--	--	--	--	--
Saucer/Plate	--	--	--	--	--
Plate	42%	14%	26%	50%	20%
Platter	2%	--	7%	--	--
Tureen	2%	--	--	--	--
Crock	--	3%	--	--	--
Jug	2%	--	7%	--	--
Crock/Jug	10%	17%	20%	--	20%
Chamber Pot	--	--	--	--	20%

1. Structure 1, Calhoun's postbellum residence
2. Structure 10
3. Structure 11

ceramic technology limit the utility of these groupings for late nineteenth-century sites. Miller wrote (1980:4; in Orser et al. 1987:728):

> The above four categories are especially valid for the first half of the nineteenth century... Beginning in the mid-1850s, a major change

> takes place in ceramic prices and tastes. Until that point, undecorated wares were the cheapest type available. By the mid-1850s price lists and bills begin listing large quantities of undecorated white ironstone or white granite. Prices for this new type are often equal to prices for transfer-printed vessels of the same form and size... From the mid-19th century there appears to be a weaker relationship between final cost of vessels and their decoration. An analysis of the movement of undecorated ironstone into a position of status comparable to transfer-printed wares would provide an interesting insight into ceramic marketing at mid-century.

Thus decorative motifs for Millwood's postbellum assemblages should not be expected to as clearly segregate social statuses as they would for antebellum assemblages. Orser et al. (1987) applied a modified version of Miller's (1980) categories, lumping Miller's second and third groupings as minimally decorated wares, and adding decalled ceramics to transfer-print for a category of extensively decorated wares. The distribution of these ceramics at the Millwood sites discussed above is shown in Table 27.

Table 27: The Distribution of Ceramic Decorative Groups at Millwood Plantation by Socio-Economic Status (from Orser et al. 1987:720-721).

	Calhoun	Overseer	C. Walker	Tenant	Tenant
Undecorated	57.52%	54.41%	60.53%	83.33%	83.33%
Minimal Decoration	6.55%	14.71%	14.47%	--	--
Extensive Decoration	35.93%	30.88%	25.00%	16.67%	16.67%

This distribution follows the general patterns predicted by Miller's (1980) research. The low status tenant sites have the highest percentage of undecorated ceramics, while Calhoun's residence possessed the greatest quantity of extensively decorated wares. Caroline Walker's ceramic collection was intermediate between Calhoun's and those of his tenants, reflecting her status within the Millwood community.

Orser et al.'s (1987:739-740) research into the recognition of status in archaeological assemblages indicates that this is much more complex task for the postbellum (and upcountry) than for the antebellum, lowcountry plantation studied by Otto (1975). Several artifact classes from Millwood appear to serve as status indices. The percentage distribution of liquor bottles among all container glass was much higher among the non-tenant sites than among the majority of tenant sites, and Orser et al. (1987) suggest that: "...liquor consumption... will be more prevalent among higher social classes who have the means to procure liquor and who have more frequent social interactions beyond the bounds of their immediate families." This cannot be totally accepted as a status index, however, as the highest percentage of all Millwood sites with a known status was found at

Structure 19, a tenant structure located outside Millwood's main complex. Although tentative, these data suggest that the distribution of liquor bottles may reflect social control, and not status. We have already noted freedmen's desire to escape from under the planter's watchful eye following emancipation. The evidence from Millwood suggests that those tenants who lived in proximity to Calhoun continued to modify their behavior to meet his requirements, while greater freedom was enjoyed by tenants who had established separate residences. It should be noted that this interpretation receives support from the data on unidentified occupant structures. This group is composed of five structures which possessed chimneys, and hence most likely served as dwellings, but for which no historical or oral historical information was recovered to reveal who their occupants were. Given Millwood's postbellum functions, tenants are the most likely candidates. Of these five structures, two (Structures 14 and 27) are located in the main house compound, while the remaining three (Structures 21, 23, and 24) are located at a considerable distance outside this compound. Liquor bottles provided only 2.25 percent of the container bottle glass for the two structures within the compound, whereas this group contributed 54.93 percent of the bottle glass from the distant structures (Orser et al. 1987:688). The archaeological correlation between social control, proximity, and alcohol consumption among postbellum tenant occupations should receive greater attention in future postbellum studies.

Ceramics proved to be the best indicators of social status at Millwood. However, the relation of ceramics to status appears to have been different on postbellum sites from relations posited for the antebellum. The research at Millwood suggests that the number of types, number of vessels, and to a lesser degree, decorative motifs, are all status indices, and that high status sites should be expected to possess more numerous types and vessels than those sites of lower status.

Interestingly, the research at Millwood documents the continuation of planter paternalism. Caroline Walker, Calhoun's personal servant, was of a considerably higher status than other Millwood tenants based on the analyses presented above. The historical information does not exist to determine what variation existed between Ms. Walker's wages and those of Millwood's tenants, but it is unlikely that wage variation alone explained the degree of difference between her ceramic assemblage and those of other tenants, since Caroline Walker was nearly equivalent to Millwood's overseer in status, based on the archaeological interpretations, but certainly did not receive an equivalent salary. It is likely that many of the ceramics in Ms. Walker's possession came as gifts of Calhoun, perhaps at times when he purchased new ceramic sets, and this paternalistic treatment could explain both the number of vessels found at Ms. Walker's site, and the relatively high percentage of decorated wares.

Considering Otto's (1975) social dichotomies, based on his coastal Georgia research, it is clear that the postbellum upcountry agrarian culture was substantially different from that of the lowcountry and antebellum. Otto noted several social dichotomies in the material record at Cannon's Point. Housing suggested a racial separation, as whites (planter and overseer) were housed in substantial frame or brick structures, and blacks (slaves) in log or tabby dwellings. This dichotomy does not apply to the postbellum, as construction material did not distinguish between racial or social status, and size was not a sufficient variable to distinguish between black and white occupations (the overseer's house at Millwood is comparable to the Harper-Featherstone and Featherstone tenant houses in square footage). Ethnicity, interpreted by Otto (1975; 1980) from the ratio of hollowwares to flatwares, does not appear in Millwood's postbellum assemblage, as this ratio is comparable for the various status groups at Millwood. Only socio-economic status, interpreted by Otto through the use of more decorated ceramics by the planter class, can be read at Millwood, and Orser et al.'s research indicates that quantity, more than decoration, is a reflection of social status in the postbellum.

Summary and Conclusions

That agricultural southern culture changed in the period from 1860 to 1890 is unquestionable. The abolition of slavery was a fundamental turning point in southern history. But the changes between the antebellum and postbellum society in the project area were not as dramatic as might be expected. King Cotton continued; the regional economy maintained its position as a regional economy, and its isolation from broader networks; agricultural rhythms dominated daily life. If a single aspect summed up the transition from the plantation economy to tenancy, it would have to be the dispersed settlement pattern of the tenant economy. This settlement shift is eloquent in what it reveals of freedmen's and planter's desires. Planters wanted, and maintained, power: political, economic, and social. Freedmen needed, and achieved a measure of independence. It was white supervision which was most resented by the region's black population, just as the white population resented the Federal threat to their social and economic standing. Tenancy marks a compromise which partially fulfilled the objectives of both groups. It also marks a system which slowly ate away at the life line of the agrarian culture, weakening the southern soil. As a compromise, it would be short lived.

The four decades between 1890 and 1930 witnessed far greater changes in the regional culture than occurred between 1865 and 1890. It marked the entrance of the area into the national economy, the expansion of industry and agriculture, and regional collapse and fragmentation as agrarian culture succumbed to soil erosion and an insect known as the boll weevil. These four decades are critical decades in the history of the region, and form the basis of our next chapter.

XI. 'TOO POOR TO RAISE A FUSS ON': KING COTTON'S DECLINE AND THE CONTEMPORARY LANDSCAPE, 1890 - 1980

As the History Group notes (1981:129), the decline of King Cotton can be divided into two phases: the thirty year period from 1890 to 1920, and the decade from 1920 to 1930. The first period marked a continuation of the cotton monarchy, and actually witnessed a rise in the region's fortunes, as manufacturing increased and railroads ended the isolation which had characterized the reservoir from the frontier period to the close of the nineteenth century. Between 1920 and 1930 cotton agriculture was dealt a series of blows, as demand slackened, prices declined, and the boll weevil arrived. The combination of these episodes, and specifically the boll weevil's arrival, signaled the economic demise of a large number of the area's cotton farmers. Confronted with bankruptcy, real or imminent, many of the area's inhabitants migrated to surrounding mill towns, or to the North (The History Group 1981:129). The end of the period marked the passing of an era, as the agricultural economy would not recover its former sway.

The period from 1890 to 1920 is one of the most enigmatic and provocative in the region's history. In many respects the agricultural heritage of the region was shed for the mantle of the New South; industry, commerce, and transportation all witnessed substantial improvements during this time. The railroads brought a greater variety of products, and greater contact with the outside world to the region, and made traveling within and beyond an easier thing to do. The railroad's made the depopulation of the 1930s possible. It is difficult to chart the cultural changes which occurred during this period, however, since a new cultural order never replaced the old. The Russell Reservoir after 1890 was neither New South or Old. The events from 1920 to 1930 retarded the cultural transformation of the region, and left behind a stunted, dwarfed version of the postbellum agricultural culture. The period after 1930 has been marked by relative stagnation, a shift in employment from agricultural to manufacturing venues, the gradual depopulation of the region, and the reorganization of the agrarian economy under the guise of agri-business, featuring fewer and larger farms practicing a diversified crop economy and utilizing mechanized labor. The culture of the area has become less regional, less southern, more national, and less distinctive. It is impossible to characterize the inhabitants of the area in terms of a single economic pursuit, as could be done for the agrarian economy. The passing of King Cotton's regime witnessed the passing of a common heritage.

To lay the demise of King Cotton's regime on the brittle carapace of the boll weevil is too simplistic of an explanation for the changes which were wrought between 1920 and 1930. Soil depletion, the over-production of cotton and corresponding decrease in price, the lack of diversity in the regional economy, and the Depression all contributed to the end of the agricultural era. It is likely that King Cotton's empire would have fallen without the boll weevil. In a sense the empire was corrupted by poor land practices of the postbellum period, and by the vicious cycle of tenancy, and was ripe to be overthrown. The story of King Cotton's decline in the region is a fascinating story, but it also one without a real conclusion. In King Cotton's absence no new cultural monarchy has been enthroned.

FROM BOOM TO BUST: HISTORICAL EVOLUTION IN THE RUSSELL RESERVOIR, 1890 - 1930

The historical evolution of the Russell Reservoir from 1890 to 1930 can be understood in a number terms: industrialization; the rise and fall of the agricultural economy; or the changing relations between landlords, tenants, mill workers, and merchants. It is perhaps best understood in terms of the railroad. The railroad brought a new prosperity to the region, new products, new towns, and a new sense of belonging to the industrial South. When prosperity collapsed, the railroad took the region's inhabitants to new places and beginnings. As discussed in the previous chapter, until the late 1880s the Russell Reservoir area acted as a self-contained and self-sufficient unit, and it's isolated setting explains in many ways the continuation of antebellum cultural traits into the postbellum period. The railroad shattered this isolation, and in turn transformed the regional culture.

The Savannah Valley Railroad's arrival on the eastern edge of the project area in 1886 was followed by the Georgia, Carolina, and Northern Railway (the G. C. & N.) in 1892. The G. C. & N. ran east-west across the region, connecting Abbeville and Elberton with Atlanta, while the Savannah Valley (later reorganized as the Charleston and Western Carolina Railway - the C. & W. C.) provided north-south connections to Augusta and beyond (The History Group 1981:52).

As the History Group (1981:52) notes, the completion of these lines had four basic effects on the region. First, they provided links to the extensive southern rail network, and thus promoted new trade routes and relations. Second, the C. & W. C. connected the region with Augusta, and thus offered a viable alternative to the Savannah River for goods shipped to this market. Third, the railroads greatly enhanced the regional prominence of their depot communities, focusing local trade systems. Finally, the railroads made travel within, and outside the region much easier and faster (The History Group 1981:52).

After 1900 the G. C. & N. became part of the Seaboard Air Line, and provided transportation between the project area and Atlanta, Birmingham, Washington, D.C., New York, and other east coast urban centers. The Seaboard Line became the region's primary transportation route, and quickly replaced other modes of transportation. Riverine networks were not economically viable as competition with the rails. As noted, the Savannah River acted as one of the region's primary transportation links up to the latter decades of the nineteenth century, and Augusta was one of the main trading hubs for the Georgia and South Carolina upcountry. For example, in 1876-1877, 180,000 bales of cotton were shipped to

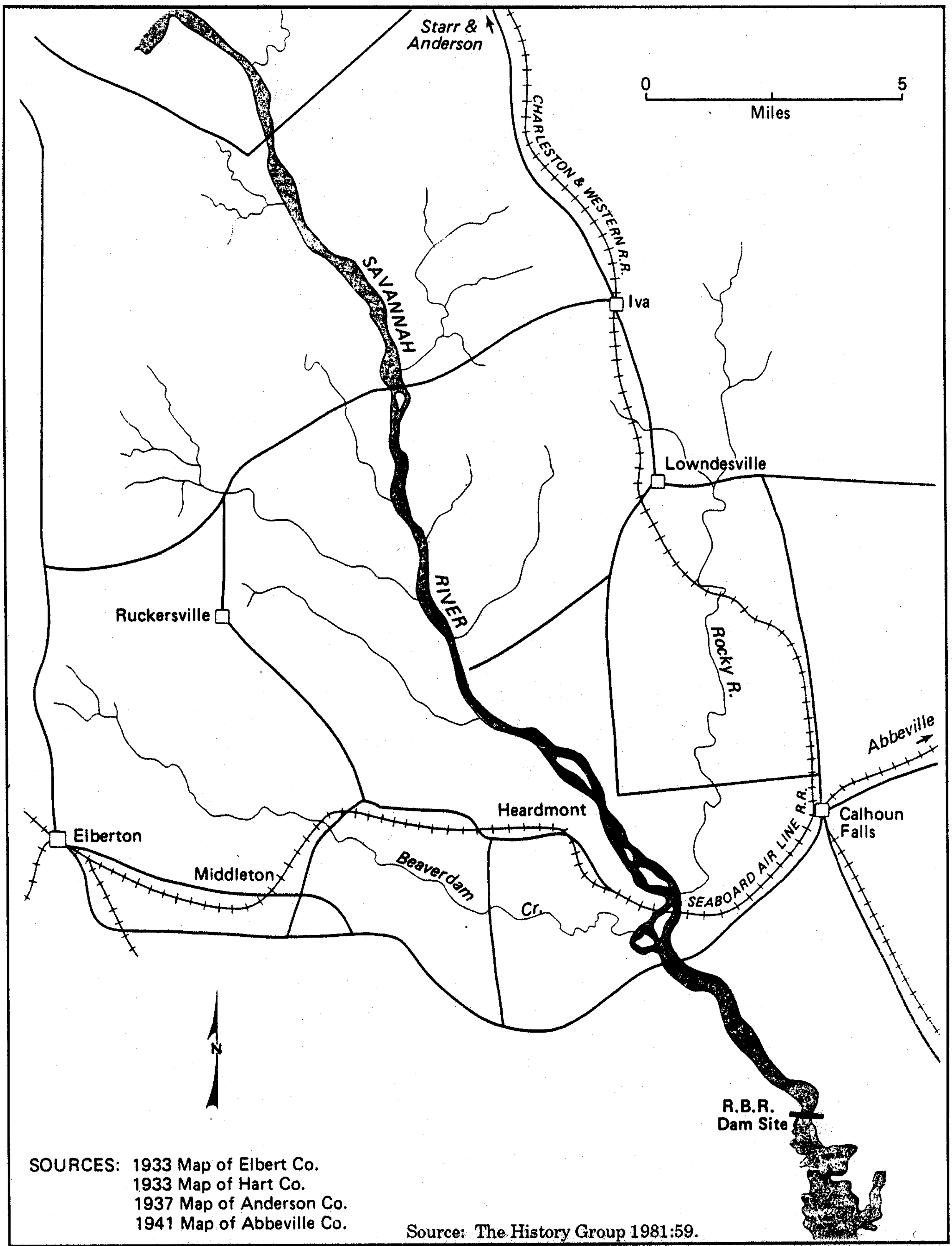
Augusta, with 12,000 of these originating from Anderson, S. C., the head of navigation on the Savannah. By 1887, following the completion of the Savannah Valley Railroad, shipment on the Savannah River had declined to 4,477 bales. Statistics gathered from Elberton, Georgia in 1900 indicate that 23,000 (77 percent) of Elbert County's 30,000 bales of cotton were transported by rail; 6,000 bales were used in local textile mills; and only 1,000 bales were shipped by other means (The History Group 1981:53). The overwhelming shift to rail transportation after 1900 is perhaps the best measure of the inadequacy of other transportation means in the eighteenth and nineteenth centuries.

The rails served as the primary mode of transportation for the region well into the twentieth century. A letter written by a Lowndesville resident discussing his efforts to carry a load of bricks from Latimer to Lowndesville after several rainy days in February, 1901, provides a glimpse at the poor road conditions faced at even that late date (in The History Group 1981:53):

> Mr. Allen had two wagons, 4 mules to one and 2 mules to the other and sent 2 darkies to drive. We went to Latimers and loaded the wagons as Mr. Allen told us, 700 bricks on one, 300 bricks on the other, and started home. We come all right til we got this side of Charles Allen place to a bad muddy place in the road. The 4 mule wagon stuck tight in the mud and could not move til we unloaded half the brick. We then drove to the top of hill, unloaded [the] 2 mule wagon on [the] 4 mule wagon and went right back after the brick we unloaded. We came all right til we got to [the] creek down here in Paterson Place. The 4 mule wagon stuck tight in the creek and could not move til we unloaded all the brick but about 150. The we pulled out, and when the 2 mule wagon got about half up the first hill this side [of] the creek the coupling tongue broke and spilled all its load in the road. Then we put its load on the 4 mule wagon, [and] went on to the house. By this time it was getting dark. We unloaded and went back to the creek and got about half the brick we throwed off and went back to the house with them. The darkies then went and made them a coupling tongue and went on home, and I hauled the balance of the brick from the creek [the] next morning. Now after all, the chimney is up and in use.

The story of transporting Mr. Allen's chimney brick gives an indication of how wonderful railroad transit must have been for the region's inhabitants in the early twentieth century. Highways and paved roads slowly began to appear in the region during the 1920s, and the completion of the Georgia-Carolina Memorial Bridge in 1927 provided an important link across the Savannah (Worthy 1983:296). After the 1930s ferrys declined in importance. The presence of both paved roads and railroads, in conjunction with decreasing population, led to a reduction in the number of communities in the region following the 1930s (Figure 132).

As the statistics on cotton shipment from Elberton indicate, the completion of the rail lines greatly effected the fortunes of those towns with depots, and of those without. Heardmont was typical of towns boasting rail depots, and the commerce



Source: The History Group 1981:59.

Figure 132. Regional Settlement and Transportation Pattern, ca. 1930. Note: For comparison, see the ca. 1850 settlement pattern, Figure 83.

to and from these towns is an indication of the railroad's role in their economies. Rufus Ballard remembered this commerce as it was in the early twentieth century (in The History Group 1981:130):

> Heardmont hit its peak during World War I. I think... things was pretty good in them days, in World War I. Of course, after World War II come along there wasn't much to it. Shoot, we used to have three stores out there; we had two gins where you would gin cotton... and we had a train coming four times a day. We didn't have many cars, but there weren't any then. If you wanted to go to town you just step right in and catch a train, go on in and came back out the same day for twenty-five or thirty cents.... We had a train come early in the morning, then one come at dinner time about eleven, then another at five o'clock in the evening, and another one then at night. You see, about four trains a day, two going this way and two coming back.... People were coming to church out here on this train. Our preacher used to ride it... and then by the time it would go back at night the service would be over with. You catch this train and go on back home. We had people getting off at Pearle and Middleton; there is two stops between here and Elberton.... We had people who came even from Winder, Georgia, to church.... Winder, Georgia, way up above Athens.

The railroad influenced not only the success of towns; it also directed their patterns of growth and development. While no major economic development occurred along the rail lines within the project area, a typical rail town was Lowndesville, South Carolina, to the north of the project area. Lowndesville, which was incorporated in 1839, received an economic boost with the arrival of the Savannah Valley Railroad in 1886. As local historian H. A. (Arnette) Carlisle has observed (in The History Group 1981:132):

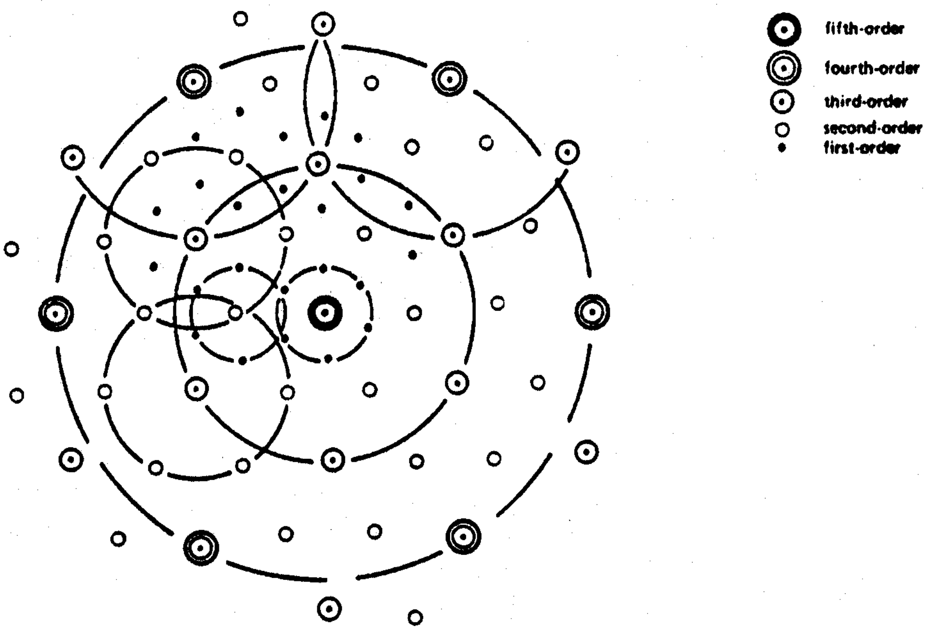
> The railroad is about a third of a mile from where the town grew up and when it came out here to the west of the old town and built a depot down there, then the business firms gravitated toward the depot. We had what we called a "new town" and an "old town".... "New town" started building up shortly after the railroad came... the dwellings all came in after 1890, but some of the stores and warehouses began to build up as soon as the railroad came through there. There was a rivalry between the merchants all during the year, "new town" and "old town." Of course, these boys down here at the railroad had the advantage, they didn't have to hire somebody to haul their goods a mile to a half-mile away. One of them even built his store on the side track down there; he could use handtrucks to unload right into the store.... That's the main effect of the railroad. Of course, it also gave them the means of passenger transportation too. We had two passenger trains each way, north and south, each day.

Other railroad towns which developed during this period included Starr, Iva, and Calhoun Falls on the C. & W. C. line, and Middleton on the Seaboard Line. Most of these existed as small communities providing basic services (which almost always included a cotton gin) and as a transhipment point for cotton and other agricultural products. The populations of these towns were not greatly changed by the railroad, but local businesses received a competitive edge over other communities, especially those businesses geared toward the cotton economy. The most important service provided by these towns was ginning cotton. Alvin Hutchinson remembers that "... it wasn't too long before they quit ginning [cotton on the farm] and most of the ginning was done in Lowndesville; you had to haul your cotton out there and you got the fertilizer out there at the railroad station" (in The History Group 1981:136). Other services for the cotton industry included compresses, developed in the late nineteenth century, which reduced the size of cotton bales by half, allowing trains to carry more cotton and thus reducing freight costs. A second industrial development which affected the cotton economy was caused by the dramatic increase in the price of olive oil after 1880. With this price increase it became profitable to market other types of vegetable oils, including cotton seed oil, and both Starr and Lowndesville had cotton seed oil plants in the early twentieth century (The History Group 1981:136).

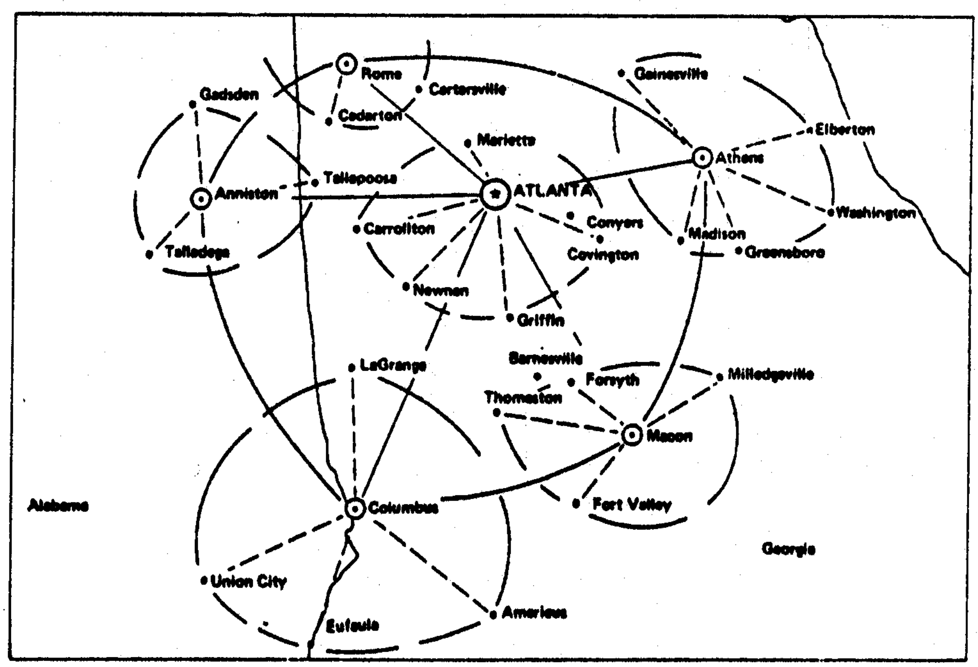
The development of these industrial adjuncts to the cotton economy, coupled with the arrival of the railroad, expanded the market radius of key communities in the region. Previously towns had been of little importance, since farms or plantations provided the basic industrial requisites, ginning and milling, of the community. Those towns that existed served a market radius of only five to ten miles, according to cultural geographer Kenneth Weiher. The concentration of compresses, gins, and cotton seed oil plants in particular communities made them central places for their regions, and expanded their market radius to 25 to 50 miles. Figure 133 shows Weiher's (1977) model for regional hierarchy, and the Atlanta trade network of 1890. Within the Atlanta network Elberton served as a first order trading loci dependent on Athens, which in turn traded to Atlanta (The History Group 1981:136-137). In the project area smaller communities such as Heardmont and Pearle most likely served as first order satellites of Elberton. This centralization of services and of trade relations was lacking in the project area until the end of the nineteenth century, and provided for greater urbanization and centralization of resources and capital in the twentieth century.

The development of central places in the region also led to the growth of a true merchant class. The establishment of railroads, gins, compresses, and oil plants meant that cotton could be marketed from Elberton, Lowndesville, and other regional communities, rather than being shipped to Augusta, Charleston, Atlanta, or Savannah for sale. Local storeowners thus became pivotal figures in the cotton economy, and not merely adjuncts to the seaport factors. Competition between these merchants benefited farmers in the sale of their cotton, and those farmers who were willing to travel the extra distance received a better price for their crop. Sharecropper Blake Crocker remembers that (in The History Group 1981:139):

Weiher's Regional Heirarchy of Southern Places.



The Atlanta Urban Network, 1890.



Source: The History Group 1981:137.

Figure 133. Weiher's (1977) Model for Regional Trading Hierarchy and the Atlanta Trade Network of 1890.

> I done most of my trading, most of the people around there did, in Elberton, Georgia. We'd cross at Tucker's Ferry. And we [would] go over there about once a month to buy groceries and sometimes we would haul, carry cotton over there. We would get maybe a cent a pound more for it in Elberton than we could get in Lowndesville. We would take over two or three bales and they would have cotton buyers there, maybe three or four cutting and looking at your cotton. They would bid against each other so that sometimes you'd maybe get a cent, sometimes two cents, more than you would in Lowndesville because they had maybe [only] one or two buyers. If they didn't have but one, he would get it as cheap as he could. So we hauled a lot of cotton over to Elberton.

Crocker's memories of cotton trading highlights the economic benefits sharecroppers and tenants gained from the increasing commerce of the region; the centralization of mercantile functions meant that tenants could be aware of the value of their crop, and no longer solely dependent on landlords for determining its value. The growth of towns, railroads, and industry benefited all of the region's inhabitants.

Industrial developments followed the shift from a regional-agrarian to a national economy. The chief transition in the industrialization of the Russell Reservoir was the rise of textile mills and corresponding decline of grist and saw mills. Both Elbert and Abbeville Counties witnessed substantial industrial development during this period, although their accomplishments were not on a par with the growth in Anderson County. Anderson, the county seat, possessed only one textile mill in the late 1880s, but by 1909 it had 16, with a combined capitalization of more than $7,000,000. These mills processed 150,000 bales of cotton annually and employed 1,000 workers. Much of Anderson's industrial success can be attributed to the availability of cheap electric power. The Anderson Water, Light, and Power Company completed two stations, Rocky Creek and Portman Shoals, before the turn of the century, and their success was followed by other power companies. The Savannah River Power Company completed it's Greg Shoals plant in 1906, which provided 2,666 horsepower for Anderson, Abbeville, and Greenwood, S. C. The company had development plans for two plants within the project area, one at Cherokee Shoals capable of 13,300 horsepower and a second at Trotter's Shoals with a projected 40,000 horsepower capacity. These were never begun, but the power provided to Anderson County permitted sizable population increases and established an economy which would weather the storm of King Cotton's decline (The History Group 1981:136-142).

All of these transitions contributed to a substantial change in the regional economy and culture prior to 1920. Transportation across the region was facilitated by the railroads; towns developed as central places housing gins, oil plants, compresses and other mercantile facilities; farmers and sharecroppers participated in the cotton economy more directly, receiving a better price for their crop; textile mills developed in the region, providing an additional outlet for locally grown cotton and a competing avenue of employment; and power plants began to appear on the upper reaches of the Savannah, bringing electricity to the region. However, 1920 marks the end of this brief phase of modernization and economic improvement in the region. By 1920 the boll weevil had also arrived, and this arrival triggered a depressed agricultural economy which lasted well beyond the second World War.

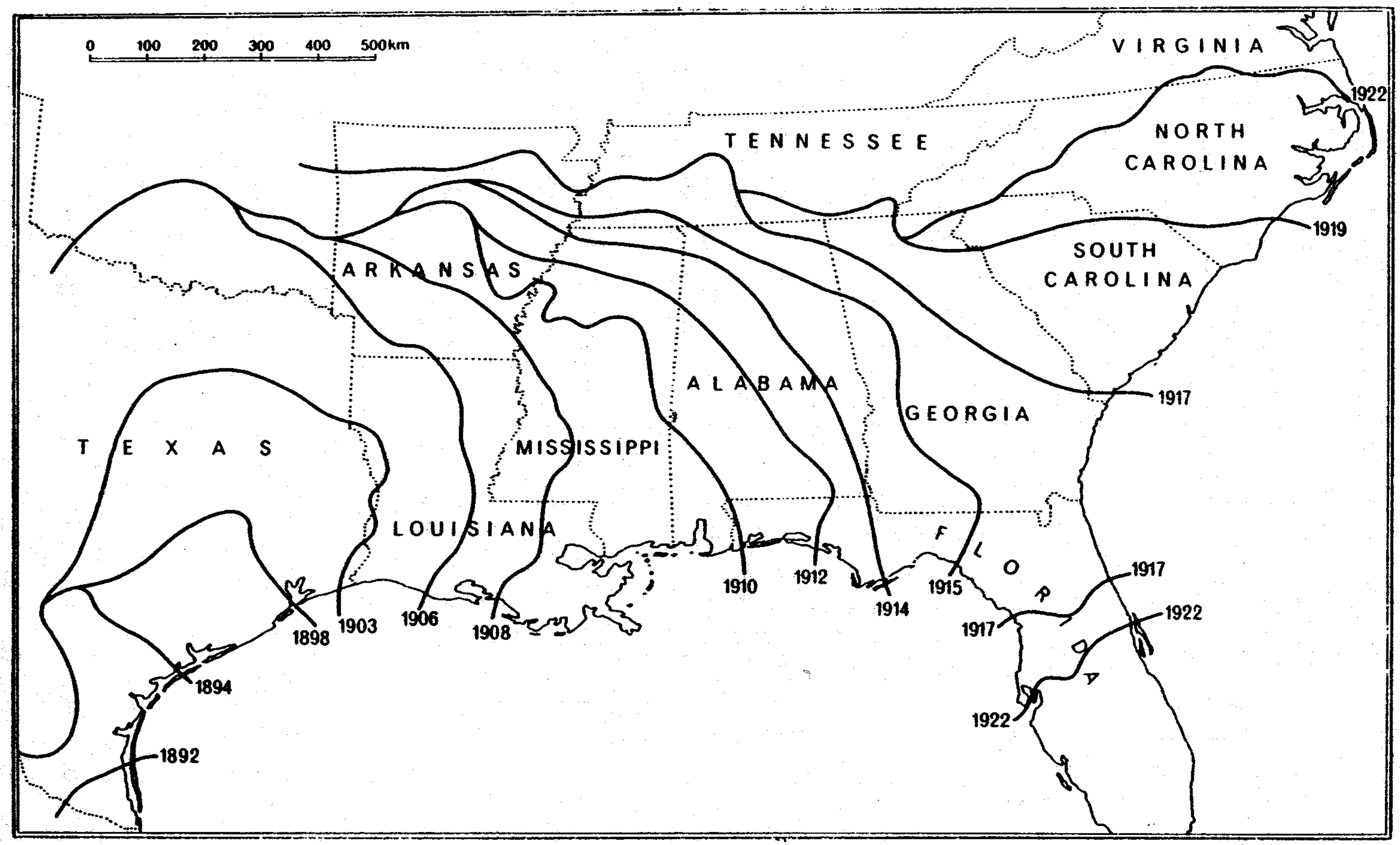
The boll weevil reached the project area in approximately 1919 (Figure 134). As Edward Brownlee notes, the economic hard times that followed persuaded many of the area's inhabitants to try and reestablish themselves in the north (in The History Group 1981:142):

> The boll weevils broke down the farming situation.... When the boll weevil came, thats what run a lot of the people off the farm. That's when New York, Chicago, and all these places filled up. The people were being cheated enough [by the storeowners], and they knew they were being cheated. When the boll weevil came they couldn't make their quantities... and a lot of them got discouraged and they thought they'd go to some of these places where the "booms" had hit. They would go and for awhile... they makes lots of money. But when the boom got over they had to come back.

This outmigration was noted in the local presses, and was evidently tied to a shift in the region's agriculture. While perceived as a problem, black outmigration was also apparently promoted by local whites. An article from December 15, 1922, entitled "The Negro Exodus Serious Problem" reported (in Ramsey et al. 1986:4):

> The fact that a great many colored laborers have left Elbert County is a serious problem. They have gone north, east, and west. Many of them are worthy and have the respect of both races... it may be that the land owner could not or would not furnish the rations. If he could furnish rations, it seems short-sighted not to do so, for if the exodus continues where can the land owner expect to get laborers.... But if enough white labor can be secured to take their place then the county will be better off, for the negro cannot be used as profitably in diversified farming as the white man.

The article is interesting for it's implications as well as what it directly states. The failure of land owners to provide "rations" apparently was not always due to the financial restrictions caused by the boll weevil and decreasing cotton prices, and the article suggests that some farmers sought to drive tenants from their land. This drive may have been linked to a change in agricultural patterns, as "diversified farming" is noted as an apparent agricultural solution for depressed cotton economy. Black tenants were obviously linked to cotton agriculture in the minds of the region's white inhabitants, to the degree that the article suggests they could not be "profitably" employed in the new agricultural regime. The article is also of interest in that in many ways it foreshadowed the agricultural future of the region; diversified farming would oust tenants from the land,



Source: The History Group 1981:143.

Figure 134. The Spread of the Boll Weevil in the South, 1892-1922.

although their labor was replaced by machines, not white farmers. The seed of a diversified crop economy was apparently planted during the 1920s.

For those who chose to remain in the region, absolute warfare against the boll weevil became an economic necessity. Edward Brownlee remembers the efforts his father took to preserve the family's cotton crop (in The History Group 1981:144):

> I was a child but I can remember it. I was nine years old. I can remember good. We poisoned the boll weevil... when they first started they used to make that molasses syrup that I was telling you about. They would get arsenic and put it in this molasses. They would take a stick and some old socks or old cloth and wrap it around to make a mop. And they would give the children these buckets of this liquid. The syrup made it sweet and the boll weevils like it. And we would go along with this mop, dip this mop in there and touch each top of cotton. You would leave some in there and at night the boll weevils come up and eat this syrup and stuff and die. And it was really effective. My dad used it because he was the type that was determined we survived.... We mopped our cotton for years. We couldn't work as much as other folks was working, but we made almost as much as they did because we took so much care with what little we did have.... We [also] had an old machine... we weren't big enough as children to carry it. It was made with these flaps and things and had these troughs... you take it on over to the row and you fill these things with kerosene... and you take it over the rows and these flaps [would] knock the boll weevils off and they would fall into this kerosene that would kill them.

The boll weevil was not the only threat to the agricultural economy with which farmers had to contend. By the early twentieth century soil exhaustion had ruined the productivity of many of the region's farms. Charlotte Sweeney remembers her father's land (in Ramsey et al. 1986:13): "he couldn't raise nothing on it... too poor to raise a fuss on, couldn't even raise a good argument on it!" The agricultural existence of the 1920s and 1930s was tenuous at best.

The boll weevil did not discriminate on racial lines, and white farmers were injured by the weevil's path through the South as well as blacks. While many blacks moved away from the region to find economic employment, whites were able to find work in local cotton mills. Arnette Carlisle remembers (in The History Group 1981:145):

> The boll weevil came in and destroyed cotton farming. That was before the Depression even.... It just came natural that I thought I've got to find something else to do.... My brother... had already gone from Lowndesville and went to work in a textile mill at Calhoun Falls. He worked at night, had a night job, then during the day built up a small store building... right next to where his store is now....

> They [the farmers] were gravitating toward the textile mills because that was the only industry in this area: Calhoun Falls, Abbeville, Ware Shoals.

Employment in the textile industry was segregated along racial lines throughout most of the South into the Civil Rights era. Blacks were employed at the mills, but at tasks such as loading and unloading cotton bales, and not at skilled positions. This segregation was one means for the textile industry to avoid unionization, since the option of blacks being employed in the mills could always be used against whites if they threatened to go on strike. Marshall Thomas remembers that is was not until the 1960s that blacks were finally employed inside the local mills. He recalls that "... in 1963, they started hiring blacks over here in this Burlington Mill where I work. There wasn't any blacks there before. I know cause I was one of the first blacks that they hired to go up in the mill" (in The History Group 1981:158). Thus up until more recent times, blacks' options in the depressed economy were limited, and were one reason why blacks left the region.

The outmigration of blacks during the 1920s led to the recognition that their treatment was unequal between the North and South, and this recognition would in turn provide fuel to the Civil Rights movement of the 1950s and 1960s. Luelle Walker recalled her experience in New York: "... I went to New York. I went in the shoe shop. A white man called me 'miss'...." She joined a union and found employment as a hotel housekeeper. "I was the only black woman on the job... they called me Miss Walker, they called me Miss Walker all the time" (Ramsey et al. 1986:4-6). The application of honorific titles, a privilege restricted to whites in the South, provided the recognition of biased treatment and would have a significant impact on regional culture as blacks returned after they retired from northern jobs in the 1950s and 1960s.

The collapse of the agricultural economy, outmigration, the growth of industrial employment, and segregation in this new job market, was not solely a factor of the destruction wrought by the boll weevil. The boll weevil was allied to a general depression in cotton prices which strengthened throughout the decade from 1920 to 1930. The price of cotton fell from 35¢ per pound in 1919 to 16¢ per pound in 1920, and to 9 1/2¢ per pound in 1930 (The History Group 1981). The limited production caused by the boll weevil, plus the decreased prices, and all followed by the Great Depression, assured that the agricultural economy of the region was dead by the early 1930s. King Cotton's reign was over.

MILLERS AND FARMERS: A PARTING GLANCE, 1890-1930

The historical investigations of the Russell Reservoir provide one last view of life in the region in the early twentieth century. This view is centered on one industrial site: Pearle Mill; four families: the Clinkscales, Harpers, McCallas and Grays; and three twentieth-century farms documented by HABS. While not as detailed as the antebellum and postbellum perspectives of the area, the history of these sites and families carries the biographical timeline to its conclusion in the area.

Pearle Cotton Mill

Pearle Mill developed from the Heardmont Mill which was destroyed by fire in 1889. The loss of Heardmont Mill to the community as well as its investors was bewailed by the *Elberton Star* (June 20, 1890 in Worthy 1983:314):

> (the mills)... were the pride and boast of our county, being our largest manufacturing enterprise and, as we fondly hoped the nucleus around which, encouraged by their posterity, would spring up many smaller industries that would give new vigor and stronger impetus to the era of prosperity that is just dawning on our grand old county, were no more.

The new vigor and impetus which the Heardmont Mill was to supply to the local economy was delayed until the former mill seat became the property of Thomas M. Swift and John K. Swift of Elberton in 1895. Thomas M. Swift was from the start interested in commerce and industry; he had organized Elberton's first oil mill (1888) and steam-powered cotton factory (1892). The latter, the Swift Cotton Mill, began operating with 600 spindles but soon purchased power looms enabling the facility to produce cloth. It was a sizable and successful establishment employing around 200 workers who lived in company owned housing. Hence, Swift was well versed as a textile entrepreneur, and he brought this experience to bear on his new venture, Pearle Mill, located at the old Heardmont millseat. Swift's industrial proclivity was laced with political fervor; he served as Elbert County's representative in the State Legislature from 1896 through 1899, as well as other political positions. Swift recommended the expansion of the textile industry into the South's traditionally agricultural economy (in Worthy 1983:317):

> I have been making yarn for weavers in Philadelphia and have had all that I could do. That suit of clothes you wear is made of southern cotton transformed into clay worsted by the skill of a New England mill. Go into any store in the land and hidden under various deceptive names you will buy back some of the very cotton which you looked upon in the field last year.

Pearle Mill was Swift's answer to this offensive deception. Its construction coincided with Georgia's textile boom which reached its acme in the late nineteenth century. It was one of 27 cotton factories either organized or established in the state within the first three months of 1896; those 27 factories constituted one third of all the textile factories established in this period (Worthy 1983:316).

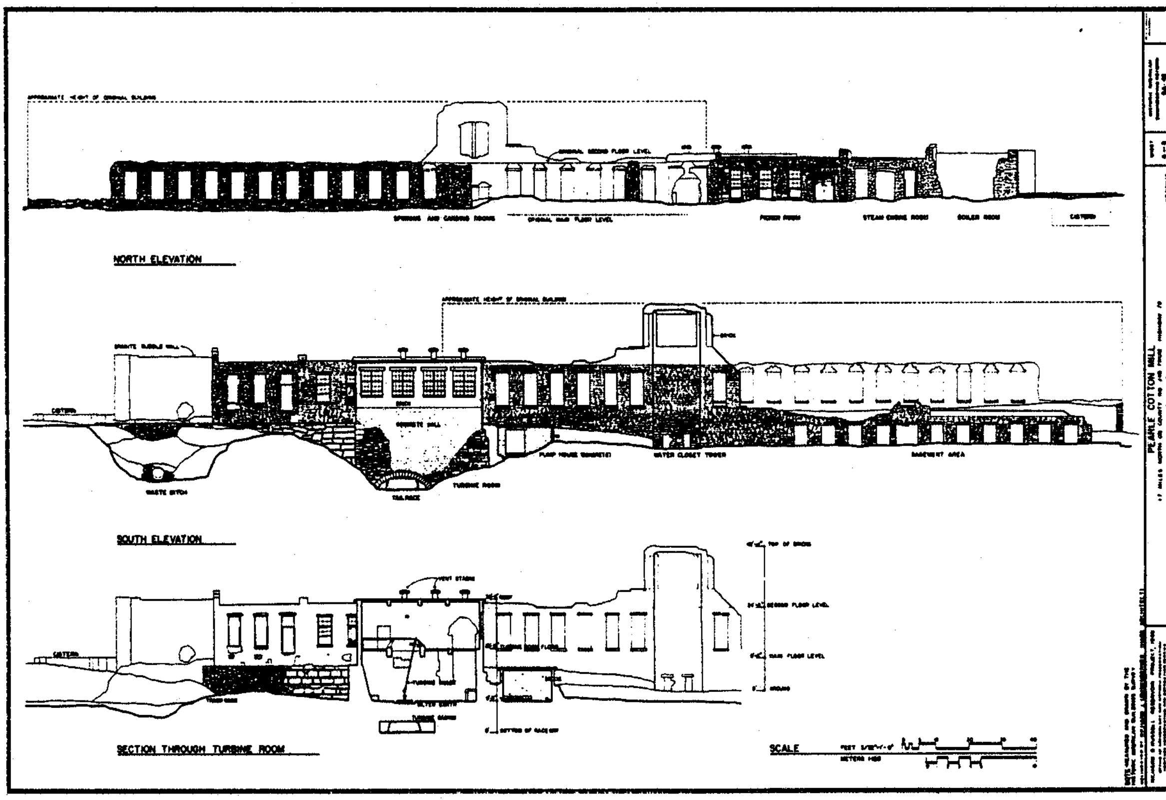
Pearle Mill was built one half mile downstream from the Heardmont millseat. A dam was constructed utilizing prison labor, and a half mile raceway was dug from the dam to the main building (Figure 135). The latter was two and a half stories in height; one and a half stories were constructed in granite, the remaining story was brick (Figure 136a). The dimensions of the main building were 400 feet in length and 80 feet in width. The boiler room, engine room, and picker room were contained within a granite partition on the west side of the building (Figure 136b). Managed by William Swift, Thomas Swift's son, the mill went into operation in January 1896. The mill machinery included three picking machines, 16 carding machines, and 3,000 spindles to transform lint cotton into yarn and twine. In April 1896, James Monroe Smith, a planter from Oglethorpe County, lent the Swift operation $20,000. In return, he held the deed to the land and the machinery at the millseat.

Monroe's money was a wise investment as the mill and its surrounding community, known as Beverly, came into its own (Figure 137). The mill was incorporated in December 1899. Three incorporators were named: Thomas M. Swift, and his sons William A. Swift and James Y. Swift. The purpose of the mill was to spin yarn, manufacture rope, sheeting, cheesecloth, and batting. The factory was a success, by 1905 it had doubled its spinning capacity. Three years later its composition included 38 company houses (22 four-room houses, three six room houses, two five room houses, four three room houses, six two room houses, and a seven room house for the Superintendent), three cotton warehouses, an oil house, and the mill.

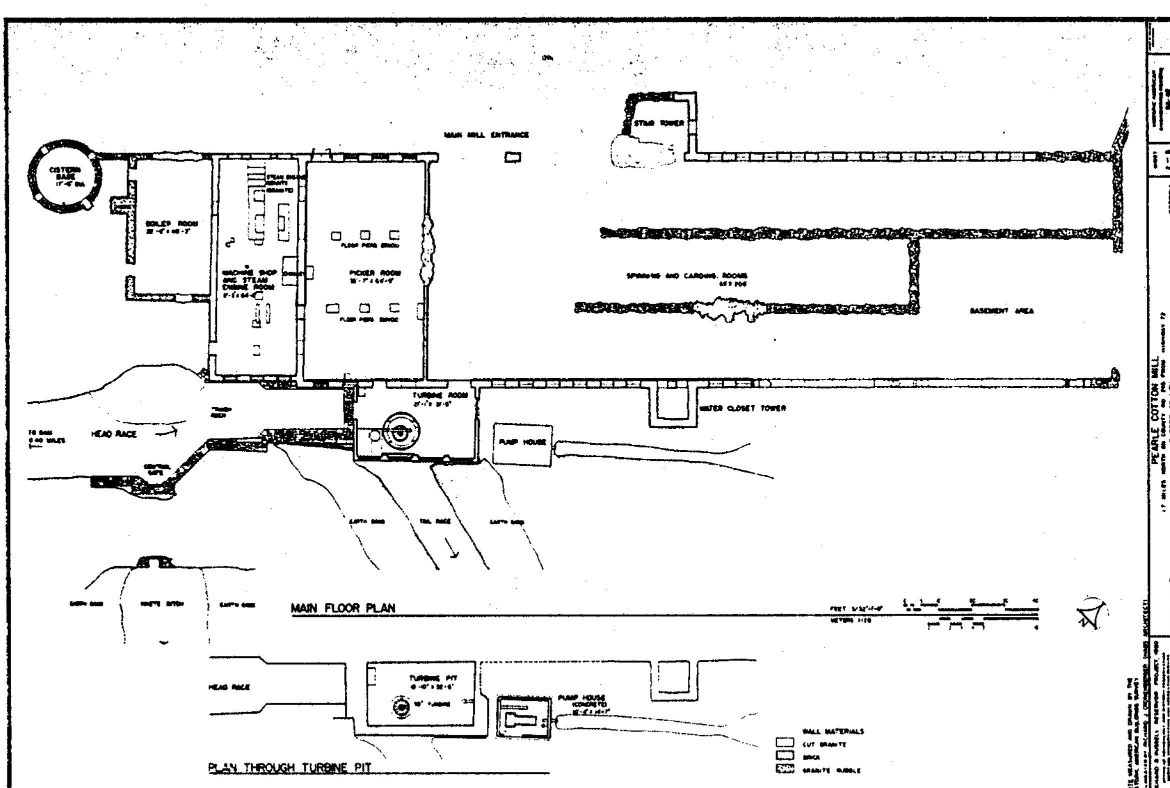
The mill was powered by two turbines manufactured by James Leffel and Company which generated 150 horsepower. The location of the turbine pit is shown in Figure 136b. The textile machinery reflected the purpose of the mill: eight drawing frames, four slubbers, six fly frames, 22 Whitin spinning frames with 204 spindles each, 14 Lowell spinning frames also with 204 spindles each, four spoolers, three cone winders, two warpers, 11 reels for skein yarn, one slasher, two Lowell beam warpers, two roper machines, and four formers for the manufacture of cotton rope. The transformation of baled cotton to finished yarn which involved some of these machines was succinctly described in 1902 (in Worthy 1983:318):

> Baled lint cotton from the local ginneries entered the factory at the Picker Room. The cotton grades were mixed before being run through the picking machinery, which cleaned out the trash and delivered cotton in rolls of batting. The rolls were carried into the Carding Room on the first floor of the main mill. In the Carding Room the rolls were reduced by combing out the fibers into roving. The roving was carried to the Spinning Room on the second floor. From the spinning frames the cotton was spooled and some was twisted into yarn. Some yarn was sent to the warpers. The principal products of the mill were yarns, warps and skeins, rope and twisted yarns on tapes and cones. Orders were carried up the hill on wagons to a storage house on a rail siding for the Georgia, Carolina and Northern Railroad.

A

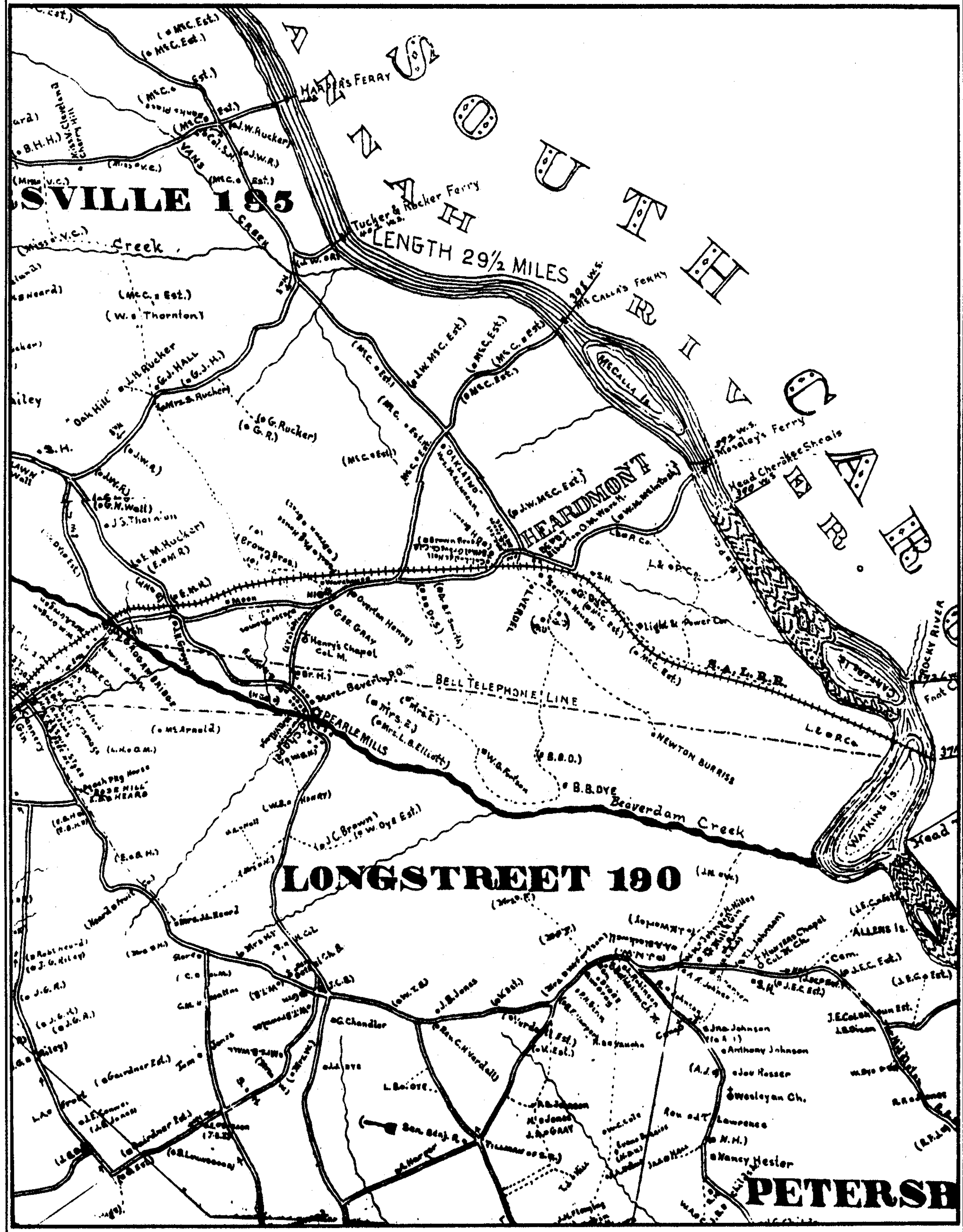


B



Source: Worthy 1983:339, 340.

Figure 136. Pearle Mill. A - Elevations and Section. B - Main Floor Plan. Drawings prepared for the Historic American Buildings Survey.



Source: The History Group 1981:197.

Figure 137. Map of Elbert County, Georgia, Showing Pearle Mill and Beverly. Elbert County Post Office Department, 1914.

The men and women who produced these goods were housed at Beverly. The 1900 Federal Census offers some information on these families. Fifteen families were enumerated of which 13 heads of households worked for the mill. The remaining heads of households were a farmer and a bricklayer; in both cases each had children working at the factory. Typically, each family did have children working at the mill with one exception. The bookkeeper, J. C. Thomas, had three children, none of whom were employed at Pearle (Worthy 1983:319-320). A photograph of a family in front of a pyramidal-roofed mill house is shown in Figure 138a; an interior view of worker's at the mill is also shown (Figure 138b).

Pearle Mill's success was destroyed by the flood of 1908, which finished most of the mills within the project area. Uninsured, the mill was unable to recover and Pearle Cotton Mill was declared bankrupt and put up for sale. Paul Bowden purchased the property in 1909 in hopes of starting the mill again as the Beverly Cotton Mill, but it was operated in only a limited manner between 1908-1916 and was vacant for the next four years. In 1910, only 14 individuals were present at Beverly. Swift's involvement in the textile industry was effectively ended with his loss at Pearle Mill; in 1909, his Elberton mill was reorganized as the Home Cotton Mills (Worthy 1983:321-322).

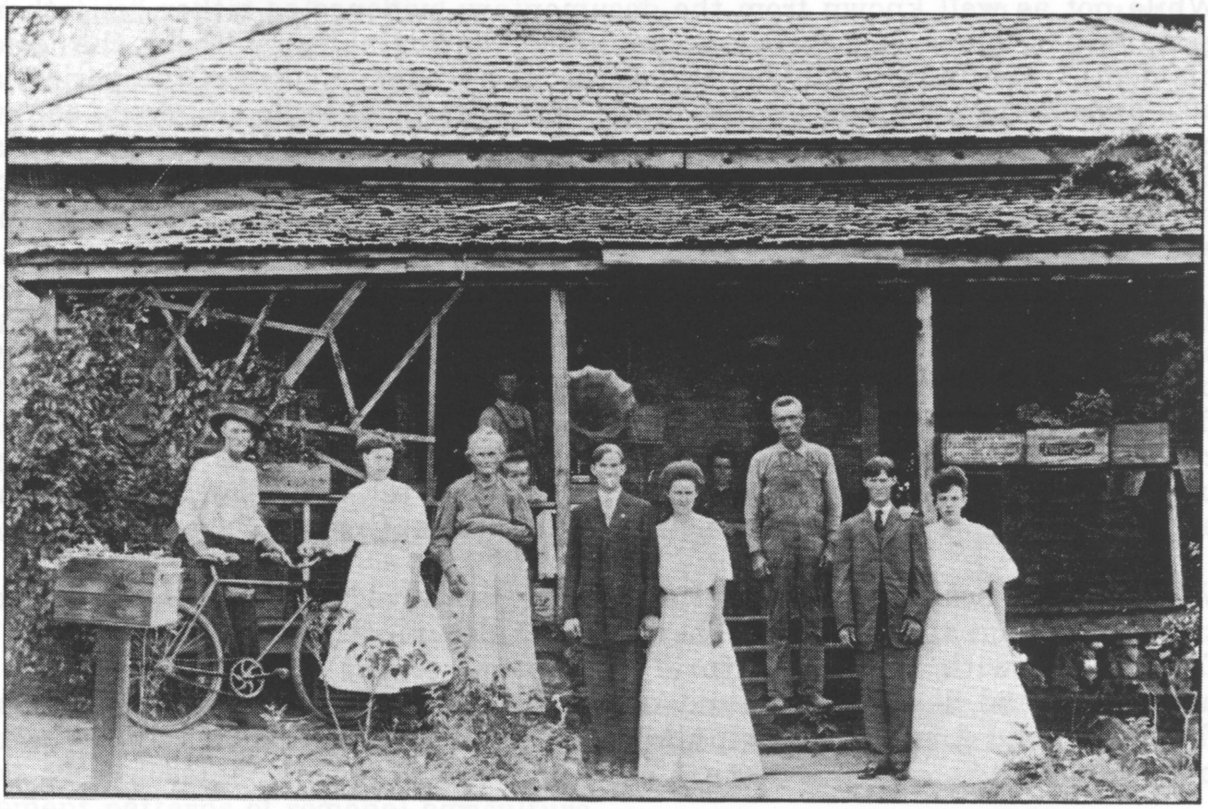
The history of the mill, known by the 1920s as the Beaverdam Mill, through the 1930s is checkered with financial troubles or idleness. The tract was sold to Webb Tatum in 1936 along with adjoining property for $250. Tatum and his family moved to the mill tract, occupying the Superintendent's house. Under his ownership, the mill property was slowly dismantled; machinery was sold for scrap metal and the company houses for lumber. Tatum reused the mill as a corn mill which was in production to 1948. The remains of the Heardmont Mill were removed in 1949 (Worthy 1983:325).

Farmers

Biographical information is available for three of the families considered in chapters nine and ten: the Harpers, McCallas, and Clinkscales, and for an additional farmer, Gilbert Gray. This information provides some documentation of the fortunes of these families in the twentieth century.

<u>The McCallas</u> By 1894 George McCalla's second son Isaac had acquired the bulk of his father's real estate and had set about resurrecting the family's agricultural wealth. Isaac was apparently an aggressive businessman and farmer, and by 1913 he had increased the acreage of the plantation to a total of 3,490 acres. While the documentation for this period is limited (census returns after 1880 are restricted), Isaac apparently also pursued mercantile interests, and was listed as a partner in his brother John's business in John's 1904 will. In 1913 Isaac's tax assessment indicated he owned real estate valued at $17,450 and personal property worth an additional $8,910. Isaac died in 1913 (Gray 1983:93-96).

A



B

Source: The History Group 1981:198, 194.

Figure 138. Millworkers at Pearle Mill.
A - Mill family outside mill house at Beverly.
B - Worker's inside Pearle Mill.

While not as well known from the documentary evidence as either his father or grandfather, Isaac had clearly accumulated considerable wealth by the time of his death. He undoubtedly benefited from the economic boom of the period, and also appears to have represented a new sort of farmer in the reservoir; one with business interests to balance his agricultural yield. Members of the McCalla family have remained in the project area into the present, although their recent life histories were not addressed by the project research. The McCallas are an excellent example of the shifting fortunes of agriculture in the region.

The Clinkscales William Franklin Clinkscales died in 1906. His son Ezekiel took over the operation of the family farm following his mother's death in the latter part of 1906. By 1908 he had acquired a total of 820 acres of farmland, while this figure rose to 1,316 acres by 1933 (his wife owned an additional 500 acres). Ezekiel continued as a farmer until his death in 1943, at which time the farm was inherited by his nephews, Ralph and Ray. By 1955 they sold the property to Alan and Winston Sibley, who acted as absentee landlords (Gray 1983:44).

William Clinkscales' son Ezekiel apparently improved on his father's fortunes, tripling his acreage by 1933. There is little documentation to indicate how the farm fared with the agricultural depression of the 1920s and 1930s, but agriculture had clearly been abandoned by the 1950s. The Clinkscales represent a family of solid farmers, the type who once made up the bulk of the reservoir's population.

The Harpers When last seen, Henry Harper had retired from the South Carolina House of Representatives, and had witnessed a substantial decline in his fortunes. Henry Harper died in 1886. By 1894, Weston, his oldest surviving son, had purchased the bulk of his father's real estate from his brothers and sisters, and was continuing in the agriculture tradition of the family. Weston owned 1,306 acres in 1900 valued at $7,250 and 1,101 acres in 1913 with a value of $5,585 according to the tax reports. His fortunes evidently declined in the 1920s, a fall that paralleled the boll weevil's arrival in the region, and by 1926 he had lost the farm in a court judgement. The property was then bought by Douglas Featherstone of Greenwood, S. C., and Featherstone acted as an absentee landowner until the property's sale to the U. S. government in 1979 (Gray 1983:73-76).

The Harpers are the best evidence for the economic depression associated with the 1920s in the project area. While Gray does not specify the exact nature of the court settlement against Harper, it most likely originated from debts against the farm during the economic depression of the 1920s. The Harper's decline from antebellum prominence was thus final by 1926.

Gilbert Gray Very little is known regarding Gilbert Gray, the only black farmer studied in the reservoir. According to the 1870 census Gray was born a slave in 1852. During the latter decades of the nineteenth century he was a tenant renter in Elbert County, and it was not until 1909 that Gray acquired his own land in the region, 143 3/4 acres purchased from C. F. Marshall of Fulton County. Gray was unable to maintain this farm for long, losing the property between 1912 and 1914. Reportedly he was unable to make his mortgage payments, with one of his nephews reporting that he had buried a bag of silver on his land for the payment, but forgot where it was buried and thus lost the farm (Gray 1983:50-55).

Summary The histories of these four families in the project area reflect the historical trends outlined above. Most successful was Isaac McCalla, who combined agriculture with industry and other mercantile efforts and prospered in the early twentieth century. The Clinkscales managed to maintain their estate, as they had between the antebellum and postbellum, and generally continued to exhibit the behavior of industrious farmers which had characterized them in the previous century. The Harper's downfall from the antebellum period was final, apparently a victim of the depression of the 1920s, as their property was lost to a court settlement. Finally, Gilbert Gray's story was one repeated by many tenant farmers of the region. Able to finally acquire his own land, Gray was unable to maintain payments and lost the property after only a few years of possession.

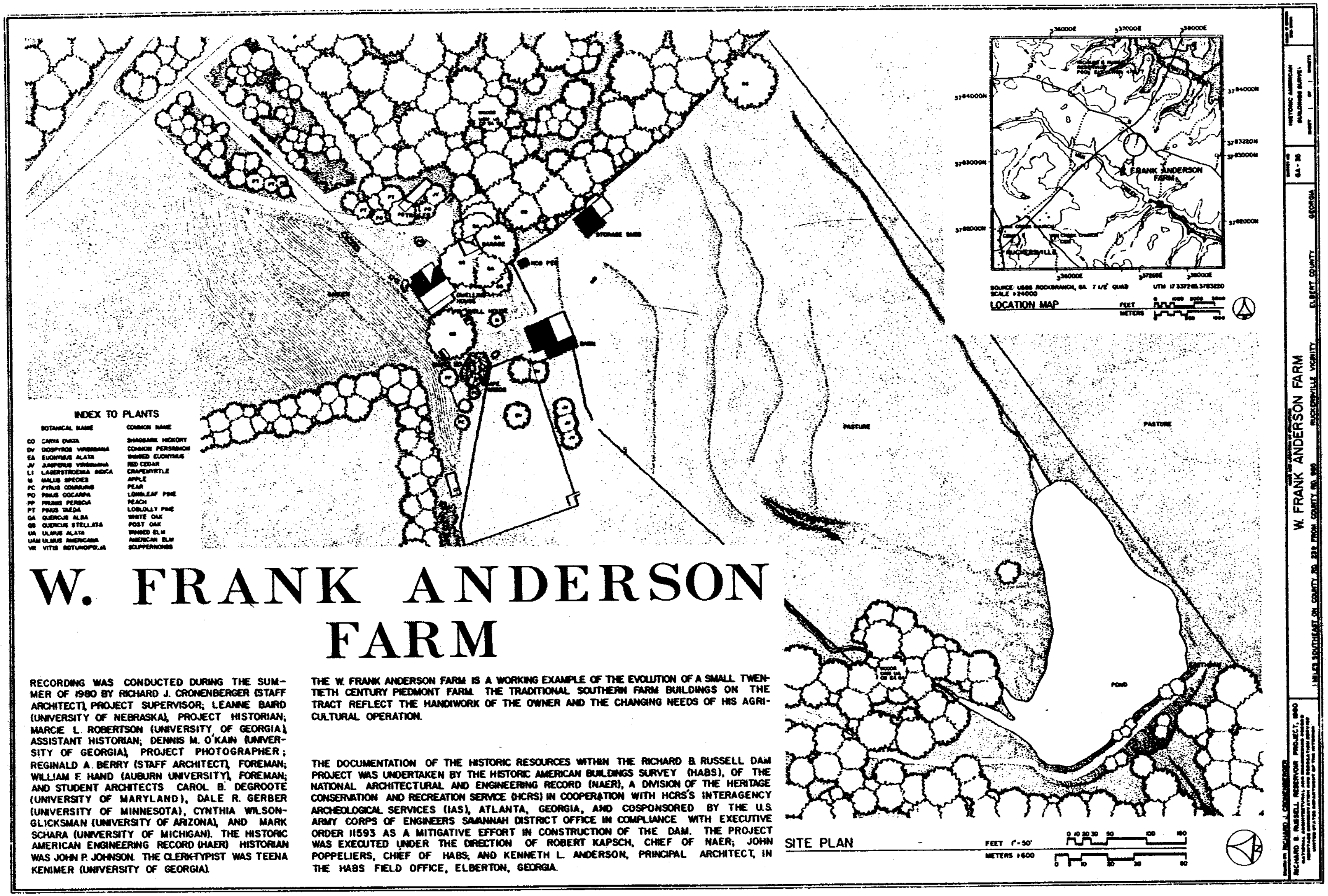
Settlement

The transition from mono-crop agriculture to diversified farming was briefly discussed above, and is presented in greater detail below. Three farms from this period were documented by HABS, and these provide evidence of the changing settlement patterns of regional agriculture.

The W. Frank Anderson Farm (Figure 139) was constructed during the period from 1928 to the 1950s by W. Frank Anderson and his nephew Martin Anderson, the son of Reuben Anderson, discussed below. W. Frank Anderson owned several parcels of land in Elbert County in the early twentieth century, most of which he lost during the agricultural depression of the 1920s and 1930s. The 61 1/2 acre tract containing his homestead was purchased by his brother Reuben from the Land Bank, and later purchased from him by his son Martin in 1949. Martin attempted to grow cotton, but found the boll weevil and depressed prices made his cotton production unprofitable, and then switched to grains. Grain profitability was also limited, and in 1955 Martin went to work at the Jackson Textile Mill in Iva. The farm was still operated by the Andersons at the time it was recorded, worked on weekends mainly for the production of vegetables which Martin sells at the mill (Worthy 1983:155-156).

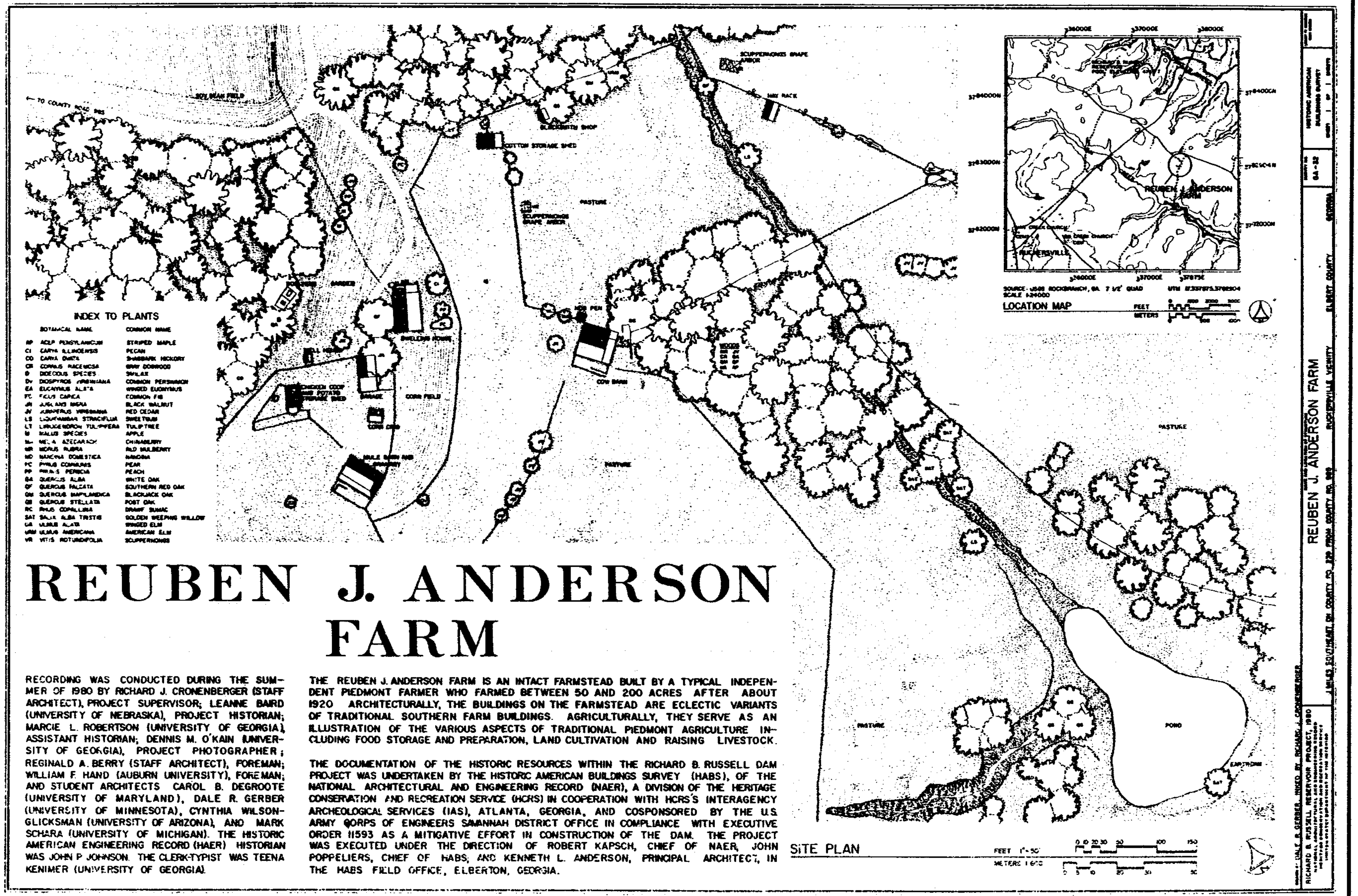
The layout of the farm does not differ greatly from those of the postbellum or antebellum periods. All structures are located in relatively close proximity, although trees shelter the rear of the house from the storage shed, barn, and other outbuildings. Fields and pasture are located immediately adjacent to this complex.

Martin's father's farm is an example of a medium-sized twentieth century farmstead (Figure 140). The property was acquired by Reuben Anderson in 1930,



Source: Worthy 1983:163.

Figure 139. W. Frank Anderson Farm Site Plan. Drawing prepared for the Historic American Buildings Survey.



Source: Worthy 1983:152.

Figure 140. Reuben J. Anderson Farm Site Plan.
Drawing prepared for the Historic American Buildings Survey.

after most of the farmers had moved out of the area due to the depressed cotton economy. Reuben J. Anderson focused his agricultural production on corn, vegetables, and livestock, and describes himself as "never wanting much." The farm features a range and diversity of structures not found on most antebellum or postbellum farms, a reflection of Reuben's diversified farming. The structures appear to be randomly distributed, and there is no evident separation of male and female functions in the farm complex.

The Dye-White Farmstead (Figure 141) is one of the few black-owned farms documented by the project research. The farm was originally established by Bynum Dye, and purchased by Jim White in 1919. White was one of the few farmers who actually increased their holdings during the period from 1920 to 1930. Worthy (1983:167) attributes this increase to the fact that White diversified his agricultural production at an early date; was a firm believer in crop rotation and soil conservation; and also invested heavily in livestock. The White farm produced almost every crop known to the South: cotton, peas, corn, wheat, peanuts, sweet potatoes, sugar cane, vegetables, and fruits. The Whites sold about a third of their production, and held onto much of their crop for sale during the winter months, when they received the best prices. Thus several structures on the farm (for example the potato house) were constructed specifically for this purpose. The families success at subsistence farming is marked by the fact that they continue to farm in the region, having been relocated outside the project area in 1979 (Worthy 1983:165-167).

The farm possessed at one time 37 separate outbuildings, qualifying the settlement pattern as almost a neo-plantation. The family's dwelling was separated from other agricultural functions, flanked on both sides by large trees, with open field to the rear. The front of the house faced an area which contained grape arbors, a children's play house, a privy, and poultry houses. The agricultural functions of the farm are clearly separated by male and female tasks, as a second concentration of structures to the west of the dwelling contains barns, corn cribs, and other storage structures. Of the three farms, the Dye-White Farm most closely resembles antebellum patterns. The reason for this resemblance is uncertain, although the Whites were shrewd farmers, and this organization may have best suited their agricultural management.

THE CONTEMPORARY LANDSCAPE AND ITS INHABITANTS, 1930 - 1980

The period from 1930 to the present marks a quiescence in the economy and culture of the Russell Reservoir region. Agriculture continues to serve as a mainstay of the regional economy, but under a different organization employing a variety of crops and utilizing far less of the landscape. Industrialization including textile mills and the granite industry, which has developed around Elberton, serves as a second bastion of employment. The regional landscape has begun to recover from the agricultural practices of the postbellum and early twentieth century, as forests have taken over eroded fields and begun the process

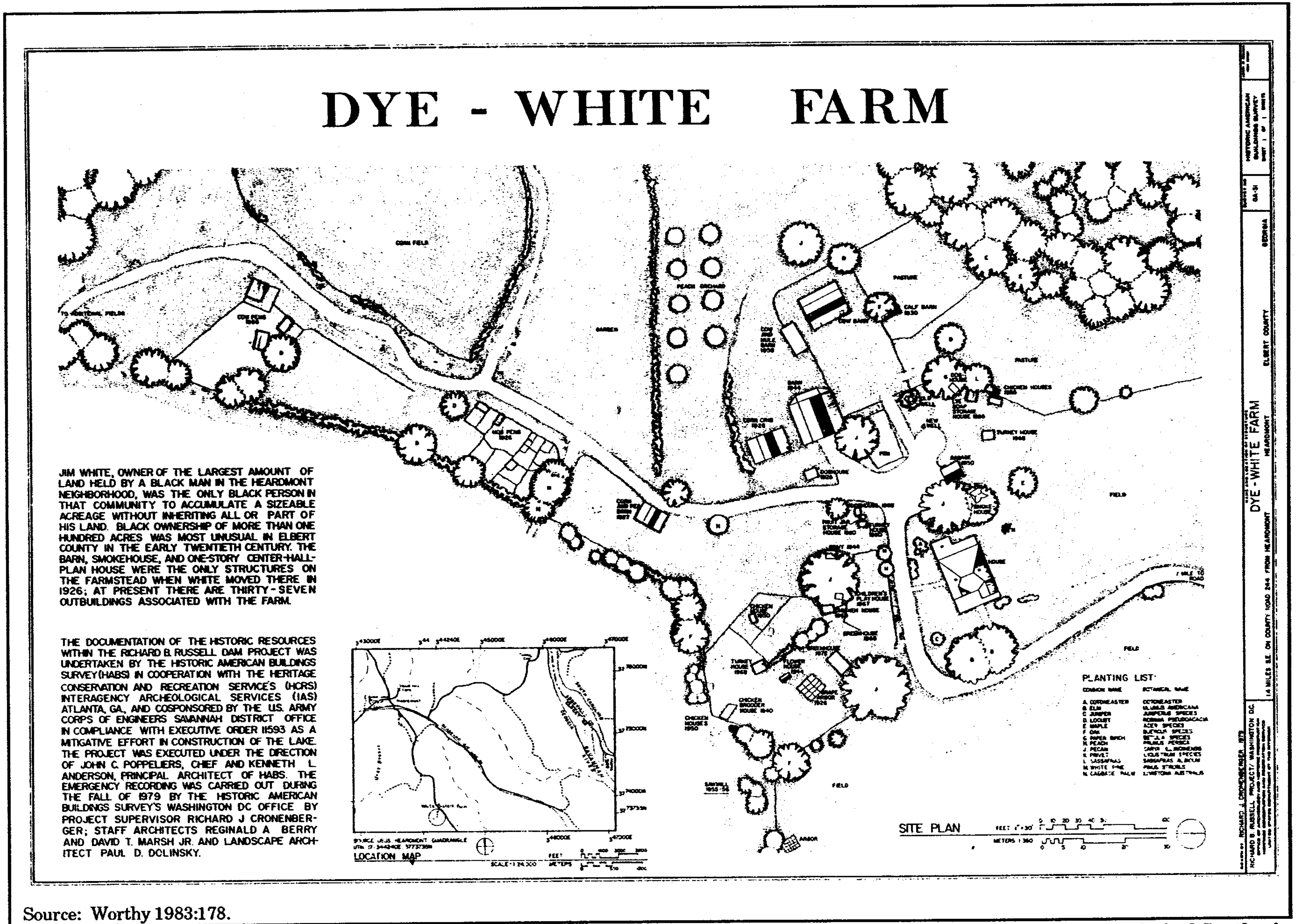


Figure 141. Dye-White Farm Site Plan.
Drawing prepared for the Historic American Buildings Survey.

of soil recovery. The region still bears the scars of its heritage, as well as a number of its cultural traits, but connections to the outside world have made the project area much less distinctive as a region.

The period from 1930 to the present has witnessed dramatic decreases in the number of farms and total farmland, and equally dramatic increases in the average farm size. For example, Abbeville County lost 85 percent of its farms during the period from 1930 to 1974, while farms from 99 to greater than 1,000 acres in size increased from 18.2 percent of all farms in the county in 1930 to 63.2 percent in 1974. The shift in land utilization from small farm to agri-business is attached to an increase in agricultural mechanization. Mechanization and a diversified crop economy have made the agriculture of the region profitable, but agriculture no longer provides sustenance to the population which was supported in the antebellum and postbellum years. The total number of farmers in Elberton, Hart, Abbeville, and Anderson counties in 1930 was 16,605, while this number had decreased to 2,725 in 1974, an 83 percent loss for the period (The History Group 1981:153-154; 268).

Most affected by the transition from mono-crop to diversified crop economy and from human to mechanized labor have been the tenant and black farmers. The statistics from the region are striking; tenant farmers contributed 12,466 (75 percent) of all farmers in the four counties contributing to the reservoir in 1930, but only 127 (5 percent) in 1974, a decrease of 99 percent of all tenant farmers for the period. In general, blacks' participation in the agrarian economy has decreased across the South in the twentieth century, as the number of all black farmers has dropped from 908,351 in 1920 to 666,000 in 1940 to only 184,000 in 1964 (The History Group 1981:268, 156). Rufus Ballard describes the changes he witnessed in the region's economy upon returning home from World War II (in The History Group 1981:156):

> I tell you, and this comes down to facts: farming had sort of played out, was on its way out... in the 1940s. It was on its way out. You know, people was quitting like they doing, and there wasn't too much farming. It was going to grass and cattle and stuff.... Yeah, farming was on the downswing. And it ain't picked up. It's just continued going out. You see, I'll tell you what really happened: Mr. Eisenhower paid the landowners so much money to get out of production - cotton and such stuff - that the tenant farmer didn't have anything to go on.... We had lots of people who hung around their houses [on tenant farms] for a long time. But, you know, they finally had to get out and find something.

With the loss of agricultural employment, many of the region's inhabitants have found jobs in the industrial and manufacturing sectors. Anderson County in particular has witnessed population increases thanks to its strong industrial base. Elbert County's granite industry, first started in the late-nineteenth century, has provided an impetus to the economy of that part of the reservoir. In 1955 ten companies produced 38,439 tons of stone with a value of $1,401,114, while the 1975 value of granite produced in Elbert County had risen to $3,662,000. Granite production has also created jobs in related industries; in 1977 the Elberton Granite Association estimated that 125 companies were involved in granite-related work, and about 40 percent of the non-farming population of the region found employment in the granite industry. As one resident noted, granite is "really what made Elberton" (in The History Group 1981:159):

> By 1920, they had three or four rock sheds in Elberton.... The first little place where they cut granite was up on the side of the railroad, up just above the Seaboard Rail Line.... A little place in there because they were afraid of the dust, you know. They wouldn't go in the shed, they would cut it in the outside there.... They didn't wear a mask or anything, no way to protect themselves.... That's really what made Elberton; we didn't have anything here. There wasn't too much cotton, since we would have bad crops some years and that put it back. Good business in general we didn't have until the granite business come here. The granite industry is just what makes this county.

Once the land of King Cotton, the project area is now best known for its production of tombstones.

The last century in the history of our region was not scrutinized with the same intensity applied to earlier periods. In part, this derives from the perspective that what is recent is already known. For the project area such an axiom is probably inappropriate; it is much more difficult to characterize the region now than to characterize the postbellum, antebellum, or frontier periods. Of course, we undoubtedly ignored many of the variations of earlier life, knowing the course of history and how the story ended. Such knowledge does not exist for the region at the present. It is very difficult to chart the region's future. Agriculture and industry will both undoubtedly play important roles in the regional economy, although it is unlikely that agriculture will ever again so dominate the area's culture. Perhaps the greatest difficulty in charting the future of the region is that a regional identity no longer exists. The area is now simply part of the South, of the nation, a small component of a much larger whole. Its future history will most likely not be as distinctive as its past.

In his foreword to Linda Worthy's (1983:vi) report on the region's architecture, Dr. Victor Carbone, then Chief of the Archaeological Services Branch of the National Park Service, wrote:

> All that remains of the White sister's old place is a lonely cabbage palm tilting incongruously among the ruins in the weedy landscape. It stands as a silent tribute to the people who worked the Piedmont fields which now lie overgrown, recalled to nature's way. The palm was one of the few things they said they would miss the most as they moved uphill to their new brick dwelling, making way for the Richard B. Russell Dam and Lake.

Carbone's words remind us that history is a landscape, an environment where trees, houses, fords, and fields act as symbols of past events. Like any landscape under man's care, we carefully prune and maintain certain portions, while other landmarks are masked by weeds and forgotten. Thus our perception of the past is always much clearer than that of the present. We focus on the big house, ignoring the row of slave cabins on its flank and the leaning log cabin of a poor white farmer down the road. We see the abolition of slavery, leaving the social and political repressions of tenancy hidden in the undergrowth. If the history of the Russell Reservoir stands apart from other histories, it is a tribute to the manner in which this history was gathered. At a time when their landscape was being submerged, Carbone and others asked the people to identify their landmarks. Their words rushed forward in a jumble of places, persons, and events; a garbled language but a common tongue. This report has tried to pull together that history, to see the region as it was seen by those who lived and died there. There will certainly be deficiencies, the product of our own perception of the landscape, but we hope we have done justice to the people of the Russell Reservoir, that landscape now submerged in memory.

PART IV

CONCLUDING REMARKS

XIII. CONCLUDING REMARKS: CONTRIBUTIONS OF THE RUSSELL RESERVOIR RESEARCH TO SOUTHEASTERN HISTORY AND PREHISTORY

THE PREHISTORIC OCCUPATION OF THE RUSSELL RESERVOIR: SUMMARY AND CONCLUSIONS

When the first European settlers arrived in the upper Savannah River in the vicinity of the Richard B. Russell Reservoir in the eighteenth century, they found little evidence for past human occupation. The closest Indian groups, the Cherokee, lived well to the north near the headwaters of the river, or to the northwest in Georgia. Little obvious evidence remained to indicate the nature and extent of prehistoric settlement. The evidence for the existence of these peoples was buried deep in the floodplain soils, or lay scattered about eroding upland surfaces, and remained obscure until the planned reservoir construction prompted the investigations summarized in this volume. Looking out over the tranquil lake that now covers this portion of the valley, it is difficult to realize the variety of human drama that has occurred over time. Momentarily exposed and examined with passionate intensity during the 1970s and 1980s, this record has once again been obscured, although this time we have records and memories of what went before.

The first true pioneers in the Savannah River Valley arrived some 11,500 years ago, at the end of the last ice age. Conditions in the area were cooler than today, although not appreciably so. The great ice sheets lay well to the north and, with minor fluctuations, were retreating for the last time. In addition to modern species, a host of late Pleistocene animals were present, including mammoth, mastodon, giant sloth, and other now-extinct forms. Like the glaciers, however, their numbers were rapidly dwindling, and by the end of the PaleoIndian era they too would be gone. These first Americans are thought, in fact, to have delivered the coup-de-grace that pushed many of these species over the edge into extinction. While we may never know for certain that large game animals like mastodon or giant ground sloth were hunted in the upper Savannah River Valley, evidence for these early PaleoIndian populations was found.

The earliest human occupation of the reservoir area, during the PaleoIndian era from ca. 11,500 to 10,000 years ago, appears to have been extremely limited. Only three artifacts, all Clovis projectile points, could be unambiguously attributed to this period. While some of the tools and debitage found with these points may date to the same period, they were typically mixed with the remains of later occupations, rendering interpretation difficult. No dense concentrations of artifacts were found, and PaleoIndian settlement may have consisted of little more than brief camps, occupied for a few days or so by groups passing through the area. Very little of the terminal Pleistocene land surface dating to this period has survived in the floodplain, and of that only a tiny fraction could be examined. Until we can learn how to find and examine these surviving surfaces, and determine how early populations made use of them, inferences about PaleoIndian settlement must remain tentative.

Over time increasing numbers of artifacts appeared, and populations seem to have been growing rapidly throughout the region, filling the formerly empty landscape. By the Early Archaic period, from ca. 10,000 to 8,000 years ago, evidence for human presence was widely distributed throughout the reservoir area. Distinctive notched and beveled projectile points were found throughout the floodplain and in the surrounding uplands, indicating fairly appreciable use of the area. Scattered hearth remnants, stone tool scatters, and chipping debris were found at sites like Rucker's Bottom and Gregg Shoals on floodplain terraces, and have been interpreted as the short term settlements of a fairly mobile population. No evidence for permanent settlements was found, although it should be noted that the first secure evidence for sites of this kind does not appear until the Late Archaic, several thousand years later. The evidence from the reservoir indicates that groups were occupying the general area on a more or less year round basis well before this, certainly by the later Middle Archaic, if not before. While comparatively large areas were opened at the Archaic sites in the reservoir by modern archaeological standards, it is probable that only a fraction of the space that was used was actually examined. To better understand the prehistoric use of these landforms will require excavation of far larger areas than has been possible to date.

Little evidence for terminal Early Archaic/initial Middle Archaic populations was found in the reservoir area. Bifurcate and Stanly points, which are diagnostic of this period over wide areas of the southeast, were only rarely found. These forms are uncommon throughout eastern Georgia and western South Carolina, indicating that either the area was depopulated for some reason, or that other artifact categories were in use during this period. A continuation of Early Archaic stemmed and notched forms in this area to ca. 8,000 years ago, or an early appearance for contracting stemmed Morrow Mountain points may have occurred. Unfortunately, little was found in the reservoir to help clarify this problem. The few Stanly points that were found were typically made from metavolcanics, a pattern of raw material use differing from the almost exclusive use of quartz characteristic of the succeeding Middle Archaic, and the use of a wide range of materials characteristic of the Early Archaic. Low local populations, or an overlap of populations using a range of diagnostics, including bifurcates and Stanlys in low incidence, may be indicated.

By the later Middle Archaic, from 7,500 to 6000 years ago, human groups appear to have been living year round in the upper Savannah River Valley in fairly appreciable numbers. Diagnostic Morrow Mountain projectile points were widespread, and were the most common prehistoric projectile point category found in the reservoir area. Use of locally acquired raw materials, particularly quartz, characterized tool assemblages, and there was no evidence for interaction with other areas. Like the preceding Early Archaic, site assemblages remained fairly uncomplicated, consisting of little more than projectile points and other bifacial tools, casually utilized flakes, cracked rock, and cobble tools. Considerable residential movement was indicated, with sites occupied for comparatively brief periods. As during the earlier periods, however, the actual area excavated and the number of isolated components found dating to the period was small.

Little evidence for terminal Middle Archaic/initial Late Archaic occupation was found within the reservoir. Traditional diagnostics used to identify this period, Guilford Lanceolates and large Savannah River Stemmed points, were somewhat uncommon or, in the case of the latter type, were typically found in later Late Archaic context. A replacement of Morrow Mountain and Guilford forms locally by smaller square to slightly expanding or contracting stemmed points was indicated at sites like Gregg Shoals and Rucker's Bottom. Use of quartz continued to characterize these assemblages, although a range of raw materials, particularly metavolcanics, came into use soon after.

The first evidence for sedentary communities characterized by structures, rich associated midden areas, and large quantities of debris indicative of fairly long term occupation occurred during the Late Archaic period. Three major assemblages were found dating to between 4,500 and 4,000 years ago, at the Sara's Ridge, Paris Island South, and Rocky River sites. No ceramics were found in association with the primary occupations at these sites, which were occupied about the same time or slightly before the first appearance of fiber tempered pottery in the coastal plain. The presence of posts at all three sites, and a probable structure at Sara's Ridge, indicated considerable investment in shelters and other site facilities. The presence of pit-features and dense scatters of fire cracked rock indicate cooking was accomplished over hearths and possibly in skin-lined pits, using perforated soapstone slabs for cooking stones.

A range of large and small projectile points was found with these occupations, most resembling the Small Savannah River and Otarre types. Few true large Savannah River Stemmed points were found, and the use of point size as a dating criteria during the Late Archaic was shown to be invalid locally. While a general trend from larger to smaller points is apparent from the late Archaic to the Woodland in the region, Late Archaic assemblages from reservoir area typically included a range of size and shapes. Projectile points during the preceramic era were made primarily from quartz and metavolcanics, materials occurring within the piedmont. No evidence for interaction with other areas such as within the coastal plain or Appalachian Summit area was found, and population movement appeared to have been restricted to within the piedmont.

This pattern changed from 4,000 to 3,000 years before the present, when fiber tempered pottery appeared at a number of sites, and use of a wide range of raw materials characterized stone tool assemblages. Greater interaction with groups throughout the region was indicated, particularly with populations in the lower portion of the drainage. Use of perforated soapstone slabs clearly predated soapstone bowls in the reservoir, a pattern that can be seen at stratified sites like Gregg Shoals, McCalla Bottoms, and Rocky River, and that is also evident when

Late Archaic assemblages dating from 4,500 to 4,000 years ago are compared with those dating from 4,000 to 3,000 years ago.

Only incidental evidence for the use of shellfish during the Late Archaic period was found, in the form of a single isolated fragment at Gregg Shoals. Massive quantities of shellfish debris, comparable to the middens observed at Late Archaic sites such as Stallings Island, Rabbit Mount, and Bilbo along the lower Savannah River, were not found anywhere in the reservoir. Shellfish remains of any kind were only rarely encountered, and when found tended to come from Woodland and Mississippian contexts. The Late Archaic occupations in the reservoir thus offer a counterpoint to settlement models developed from the pottery-bearing, shell midden sites of the lower drainage.

Woodland occupations were comparatively infrequent in the reservoir. No evidence for transitional assemblages bridging the Late Archaic/Woodland were found. A decrease in the occurrence of extralocal lithic raw materials took place, indicating a possible drop in interaction with groups in other areas. The cultural sequence for the area resembled that in both northwest Georgia and in the Appalachian Summit, with fewer ties to the coastal plain. The earliest Woodland ceramics were fabric impressed, which were replaced by check, linear check, and simple stamped wares, which were in turn replaced by simple stamped and brushed assemblages. Late in the Woodland complicated stamping appeared, with assemblages resembling Swift Creek and Napier wares from central Georgia present in low incidence. A co-occurrence of these later Woodland Swift Creek materials with local assemblages characterized by plain, simple stamped, and brushed ceramics was inferred. Large triangular Yadkin-like points were present in Early and Middle Woodland assemblages in the area, co-occurring with small stemmed Swannanoa-like forms. Later Woodland forms included similar triangular and smaller stemmed points.

Evidence for structures was found at several sites in the reservoir, and moderately well defined structures were found at the Rucker's Bottom, Simpson's Field, and Rufus Bullard sites. Small hamlets or villages occupying floodplain terraces were indicated. Evidence for the use of cultigens was minimal, and subsistence appears to have been directed primarily to wild resources. No evidence for elaborate ceremonial or mortuary behavior was found, and the area was outside of major regional developments such as the Hopewellian ceremonial/exchange network.

Simple agriculturally-based chiefdoms appear in the area shortly after A.D. 1100, reflecting a spread of this adaptation from the west. Major assemblages were documented at Beaverdam Creek Mound, a single mound ceremonial center occupied for about 100-150 years from ca. A.D. 1200-1300, and at Rucker's Bottom, where two small villages were occupied from ca. A.D. 1200 to 1450. No other major Mississippian occupations were documented, although evidence for small hamlets or villages was found at a number of sites, including at Clyde Gulley, Simpson's Field, and the Beaverdam Site Group. Isolated structures were found at these latter sites, and a three-tiered settlement hierarchy consisting of ceremonial centers, large villages, and small villages/hamlets appears to have characterized local settlement.

The small ceremonial center at the Beaverdam Creek site went through six separate construction episodes. Two earth embanked structures or "earthlodges" were built initially, one on top of the other, followed by four platform mound stages. The makers of the earthlodges were participating fully in the Mississippian economic and ceremonial adaptation, as witnessed by the widespread presence of corn in features, and the elaborate interment of an adult male with extensive ritual paraphernalia between the first and second structures. The earlier Beaverdam phase village at Rucker's Bottom was probably a subsidiary, tributary community associated with the center. The inhabitants of this village do not appear to have lived as well as those at the center. They were generally in poorer health and of shorter stature, with less elaborate grave goods. Some foods, notably deer hindquarters, may have been leaving the site as tribute. Both of the Beaverdam phase components, at the mound center and at Rucker's Bottom, were characterized by diversified subsistence strategies, focusing on a fairly wide range of wild plant and animal foods, over and above cultigens .

Shortly after A.D. 1300 the Beaverdam Creek Mound site was abandoned, with the Rembert Mounds to the south becoming the principal ceremonial center in this part of the drainage. About this time the village at Rucker's Bottom was relocated to the northern part of the terrace, and simple ditch and stockade fortifications appeared. Greater site autonomy was inferred, and no evidence was found for foodstuffs leaving the site as tribute. Subsistence became increasingly focused, with a much narrower range of species exploited. An emphasis on deer and nuts, particularly acorns, was evident. This has been attributed to subsistence intensification, and the need to maximize caloric return during the collection of wild resources. Both the earlier and later villages at the site were characterized by structures about plazas, a typical southeastern Mississippian arrangement. Large circular structures were found in both villages to the south of the plazas. These have been interpreted as council houses, and their presence may indicate considerable local decision-making in these societies.

Shortly after A.D. 1400 the Mississippian populations in the Russell Reservoir area disappeared, and the area was effectively abandoned until European settlement in the 18th century. This depopulation occurred throughout the lower drainage, and indicates fairly major population movement took place at this time. While answers remain elusive, it appears that the local chiefly societies in the Savannah River Valley were caught between major chiefdoms developing in the drainages to either side, on the Oconee and along the Santee/Wateree. When De Soto passed through the area in 1540 it was deserted and formed a buffer between two rival provinces of Ocute along the upper Oconee and Cofitachequi in central South Carolina. The populations that lived here had vanished, and are thought to have been absorbed into one group or the other.

The prehistoric archaeological investigations conducted during the Russell Reservoir project have provided a fairly detailed picture of life within the central piedmont over the last eleven millennia. While the sequence of occupation in the

Russell Reservoir exhibits expected similarities and differences with occupations in nearby regions, fairly dramatic differences are evident when comparisons are drawn within the drainage itself. From the terminal Middle Archaic on, increasing divergence characterizes assemblages in the coastal plain and piedmont, a pattern that may reflect the emergence and development of distinctive social entities in these areas. This is most clearly seen in the distributions of temporally diagnostic artifacts. Terminal Middle Archaic MALA projectile points, Late Archaic Stallings, Thom's Creek, and Refuge pottery, and later Woodland and Mississippian cord marked wares common in the coastal plain are infrequent or absent in the central piedmont portion of the drainage. Cartersville, Swift Creek, and Napier materials, present to common in the Piedmont, are virtually nonexistent in the coastal plain portion of the drainage. Distinctive cultural divisions are thus indicated as far back as 5,000 years ago in the drainage.

The prehistoric archaeological investigations associated with the construction of the Russell Reservoir have gone a long way towards shedding light on the record of human settlement in the upper Savannah River, a record that was previously almost completely unknown. Through thoughtful analysis these assemblages have been able to tell us a great deal about life during these early periods, highlighting archaeology's role of "making mute stones speak."

THE HISTORIC OCCUPATION OF THE RUSSELL RESERVOIR: SUMMARY AND CONCLUSIONS

The selection of portions of eastern Abbeville and Anderson and western Hart and Elbert Counties as the setting for a regional study followed the plans and dictates of the U. S. Army Corps of Engineers for the upper portion of the Savannah drainage. Throughout this report we have referred to this setting in a variety of ways: as the project area, as the Russell Reservoir, as simply the reservoir, and sometimes as the region. Despite this varied nomenclature, our historical overview clearly presents the area under consideration as a region. Geographically, the definition of region denotes an area distinguished by some recognizable physical characteristic or characteristics from surrounding areas. When applied to cultural geography and history, regional studies are based on two models of the "region." The first is an environmental model, in which human behavior represents an adaptation to a particular environmental setting. An example of environmental region in southern historiography comes from Charles Joiner's (1984) study, *Down by the Riverside*, which examines the rice plantation culture that developed along the Waccamaw River in South Carolina's Georgetown District. This culture and economy was dependent on the tidal flow of the Waccamaw, without which rice agriculture was not profitable. River and man thus merged to form a historic region. A second historical definition of region is dependent on political boundaries. For example, Darrett and Anita Rutman's (1984) examination of life in Colonial Virginia was developed from a single county, Middlesex, during the period from 1650 to 1750. The use of politically defined regions offers great advantages to the historian, since historical records are most often collected and organized by such political units. Thus towns, districts, counties, and parishes are all commonly explored social expressions of the region.

The Russell Reservoir fails to fulfill the requirements of either of these historical definitions of region. We have noted at numerous points in the text the difficulty in abstracting our regional behavior from statistics on the larger counties which contribute to the area. Statements such as "although calculated for Elbert County as a whole, these numbers can be applied to the reservoir" are frequently interspersed throughout this report. County-wide statistics do provide a gross level of documentation for our region, but we do not and cannot know whether our particular portion of the county varied greatly from the whole. Nor does the Russell Reservoir meet the requirements of a cultural-environmental definition of region. The Savannah River, that environmental attribute selected by the Army Corps, was certainly of great importance to the area's inhabitants. Yet it did not give rise to any particular cultural enterprise. Its power was never adequately harnessed for the development of a thriving industrial community; its numerous shoals and falls prohibited the Savannah from serving as a main transportation artery; and the river provided no particular benefits to the cotton economy. Based on traditional models, the Russell Reservoir cannot be considered as a region.

And yet it was. The area was clearly perceived as a unit by its inhabitants, who spoke in terms of local landmarks, places, persons, and events. Until the late nineteenth century the area was characterized by participation in a common economy, the agriculture of King Cotton. Although this agriculture was not limited to this one particular setting, and occurred throughout the Old South, historians recognize that the cotton economy of eastern Texas differed from that of the Mississippi delta or the Georgia Piedmont. While characteristic of the South as a whole, the cotton economy was at the same time a regional concern. Although separated into two states and four counties, the area's inhabitants regularly crossed legislated boundaries to sell cotton, visit neighbors and relatives, attend church, and pursue new economic opportunities. Politically defined lines on a map did not act as social limits. In seeking an explanation for why this particular place in time acted as a region, we are inevitably drawn to its isolation and self-sufficiency and to its inhabitant's identification with their landscape. Isolation characterized the reservoir from the frontier period up to the current century. Early routes of migration skirted the area; later, river transportation and overland routes proved difficult, and journeys to and from the region were infrequent. It was not until the arrival of the railroad in the late 1880s that the regional character of the reservoir began to vanish, a transition noted in the historic synthesis by the difficulty in characterizing the most recent history of the area.

Thus while it was not the intent of the Corps to select a reservoir project which could also serve as a regional history, they have none-the-less succeeded. Our experience in the reservoir investigations suggests that there are many more regions throughout the South than are generally recognized by historians and geographers. Geographers look for broad physiographic zones, historians for political boundaries or regional economies, yet the research in the Russell Reservoir suggests that regions are also composed of a common history. The inhabitants of the reservoir knew of Millwood, of Pearle Mill, knew the various ferry crossings and farms which dotted the landscape, knew the destruction of the boll weevil and the wages of tenancy. This common knowledge is in part a feature of regional isolation, but is is also a measure of tenacity. As our overview demonstrates, families have remained in the region for generations, and can be traced from the early Antebellum period up to the present.

The agricultural heritage of the area certainly accounts for much of this regional coherence. Yet the agrarian ties to the land were not simply a product of economics; as the oral history suggests, the landscape possessed the region's history. The words of Windell Cleveland, of the Alexander-Cleveland farm, in response to the loss of his family farm, bear hearing (in Worthy 1983:107).

> It's not takin' your life, but in other words, its the same as takin' your life -- takin' something you've worked for years to build up.... Land is precious, I tell you, people just don't realize what it means."

In the reservoir, land meant history. From the White sister's cabbage palm to Windell Cleveland's farm, the area's history was clearly expressed in terms of physical landmarks. But how and why do such landmarks serve as historic references? An answer comes in part from a distant region, the western Pacific, and the work of Bronislaw Malinowski (1922). In *Argonauts of the Western Pacific*, Malinowski attempted to explain why the Trobriand islanders carried out the cultural tradition of the kula ring, a trade network in which the kula objects were continually in exchange, and never owned. Malinowski noted that the kula provided a means of regulating trade, and of providing entrepots to hostile territory, but the kula was also a means of expressing Trobriand history. The kula objects themselves had names and personal histories; by continually trading these objects history was shared, and each "owner" became part of this history. Malinowski also noted that the trade route among the various islands was a refresher course in Trobriand mythology and history; various reefs and islands had associated mythologies. All history is, in a sense, mythology, a means of explaining the present by past events. In traditional culture, mythology is transmitted verbally, while modern societies record history in print. Yet even where recorded history exists, oral history continues. By connecting oral history to points on the landscape, history is given a frame of reference. Thus Henry Cook, a grand-nephew of Ezekiel Clinkscales, remembers that his uncle took him to "where a band of friendly Cherokee Indians had camped for many years in a cane brake on the 'bottoms'" (in Gray 1983:46). Ezekiel Clinkscales was born in 1861; it is unlikely that he ever witnessed a band of friendly Indians camping near the river. Yet the story lives in the Clinkscales oral history, a survival made possible by its connection to the landscape and thus its physical reality.

Regional loyalty, this sedentary aspect of southern culture, has frayed in the past decades as the old ties of agriculture have released man from the land. It is likely that there were many other regions across the South, places were history was shared as a common bond, and that these regions are now disappearing. We are fortunate to have encountered one while its identity was still known.

The first historical perceptions of the region cast its isolated wilderness against the canvas of an industrial and agrarian community. Naturalist William Bartram noted the "solitary" aspect of the region, its isolation, inaccessibility, and "uncultivated" nature. Bartram offset this wilderness with the vision of a garden, a "country which promises plenty and felicity." The industrial potential of the region was noted, the river was cited for its numerous "convenient places for erecting Saw and Grist Mills." The intent for this region appears to have followed the settlement plan employed in New England; small farms would intermesh with mills and other industry, and provide a haven of white society against the perceived threat of the growing coastal slave population.

Life on this frontier proved difficult, and as would be a pattern in later years, isolation characterized the European presence in the area. Fortifications of the region, such as Fort Independence, appear to have consisted primarily of stockaded homesites, where settlers could seek protection during times of warfare. The fortified homesite was a characteristic of other frontier regions, and reflects local adaptation to isolation and distance from established communities. In general, the project area's frontier is characterized by hostilities between whites and indians throughout most of the Colonial period, and trade and other cross-cultural interaction apparently did not occur in this setting. The Russell Reservoir reminds us that there were two types of frontiers: an active frontier, characterized by cultural conflict between native groups and the new arrivals; and a passive frontier, in which these groups coexisted peacefully. The project area is an example of the former.

The agrarian-industrial community envisioned by Georgia's and South Carolina's political leadership never developed in the project area. In part, this was due to the expansion of the southern frontier during the period from 1790 through the 1840s. As better lands became available, or at least the promise of better lands, settlers of the project area continued the westward migration which had brought them to the region. This "leap-frogging" settlement characterized the region until the early nineteenth century. The invention of the cotton gin, and the increasing value of short-staple cotton on the world market, caused the spread of plantation agriculture and the rise of King Cotton. By the 1810s and 1820s the project area had clearly entered the cotton economy. Those regional towns which had started in the Colonial period slowly faded from the landscape, as the plantation became the nucleus of social and economic interaction. The industrial development of the period was also geared toward the plantation economy; the mills that existed primarily produced flour and lumber. Finished products were purchased from outside the region, and the area's planters traded and interacted with factors in Augusta, Savannah, and Charleston. The Savannah River provided one avenue for the transit of items, while roads connected the region with market communities on its periphery. In general, transportation was difficult, and this difficulty partially explains the region's lagging role in the cotton economy, as its one time dominance was assumed by plantations centered on the Mississippi drainage.

The Civil War was a distinct event in the history of the South, and one which has received prominence in southern historiography. While the War and the abolition of slavery were fundamental changes for southern culture, the research conducted in the project area suggests that the transformations which occurred following the War were not as great have been described, or as might be imagined. Cotton continued to dominate the regional culture. Blacks continued to comprise the bulk of the agricultural work force. Whites continued to direct black labor and to receive the greatest share of profit. The most dramatic change in the regional culture, as presented by the project research, was the shift from nucleated to dispersed settlement which characterized the transition from slavery to tenancy. The research conducted in the reservoir indicates that this shift was not an immediate reaction to emancipation, but followed a period of consideration during which blacks and whites sorted through their objectives and desires. In the end, blacks relinquished political and economic power for privacy and personal authority, while whites gave up authority in exchange for political control and profit. This resolution of the War's outcome is the impetus behind the settlement pattern shift. Under tenancy, the material life of blacks appears to have improved only slightly over that experienced during slavery. For white landowners, the postbellum culture was harsher, and a number of planters lost the fortunes they had established prior to the War.

The region continued to function in isolation throughout most of the postbellum period. With the exception of the shift from slavery to tenancy, there is little to distinguish the postbellum years from those of the antebellum. Cotton was the main product of the region; mills continued to serve the regional economy as opposed to a national economy. There was greater urbanization in the region after the War, as small towns developed, housing basic services once provided by the plantations. Regional isolation and regional character were removed with the arrival of the railroads in the 1880s. With their arrival, industry shifted its attention from flour and lumber to textiles; towns developed around railroad depots, where merchants served functions once available only in cities like Augusta; transportation within and beyond the area was facilitated. Regional identity began to erode. This process was accelerated by the arrival of the boll weevil and the cotton depression of the 1920s. As cotton agriculture became unprofitable, so did tenancy, and tenants either abandoned or were forced off their farms, and sought employment in other climates. Later, many blacks returned to their birthplace for retirement, and brought with them the realization of their degradation in the South, a knowledge that fanned the flames of the civil rights movement. Whites left the region or found employment in local textile mills, which provided few jobs to blacks until the 1960s. Elberton's granite industry provided some jobs; farming provided very few. Agriculture remained profitable, but under a new organization featuring a diversity of crops and employing machinery instead of men. The human bond to the landscape was broken.

The region's landscape was scarred by the wounds of two centuries of intensive agriculture. Slowly this landscape has healed, and new forests have risen from once plowed fields. This reforestation was noted in the survey as an impediment to site identification. It has also masked the region's history. The sense of loss is best expressed by Blake Crocker's story of the search for his former home (in The History Group 1981):

> I went down there where I... farmed.... I lived in this one place and rented this one-mule farm.... There was an old gin-house there and I made a barn, a big barn. And I went in there, it wasn't too long ago, just looking around, you know, like you could go back to it. And I couldn't locate the place exactly where the house stood; it done growed up with such trees and things that it just didn't look like the same country. There was wilderness on each side and I couldn't tell exactly.... Of course, I didn't stop, I was just riding down the road looking and trying to figure it out. And I never did figure out exactly where that old place was at.

With the closing of the flood gates in 1983, the region has vanished. We hope this report has presented, if not exactly, at least some sense of the history of this region, some measure of where "that old place was at."

PREHISTORY AND HISTORY ALONG THE UPPER SAVANNAH RIVER:
TECHNICAL SYNTHESIS OF CULTURAL RESOURCE INVESTIGATIONS RICHARD B. RUSSELL MULTIPLE RESOURCE AREA

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APPENDIX I.

RADIOCARBON DATES FROM THE RICHARD B. RUSSELL RESERVOIR PROJECT

Laboratory Number	Age (Years B.P.)	Age (A.D./B.C. Date)	MASCA Corrected Age	Sample Provenience	Associated Material Remains	Sample References	Utility of Date
DIC-2301	-	-	-	9EB91 (Rucker's Bottom), F 425/426	Beaverdam Phase ceramics, burial	Anderson and Schuldenrein 1985:8	Poor/late
DIC-2303	500±70	A.D. 1450	A.D. 1410	9EB91 (Rucker's Bottom), M1199, T5 Ditch base	Semicircular ditch with Beaverdam Phase ceramics in fill	Anderson and Schuldenrein 1985:8	Good
DIC-2305	540±60	A.D. 1410	A.D. 1390	9EB91 (Rucker's Bottom), M1199, T10 Ditch base	Semicircular ditch with Beaverdam Phase ceramics in fill	Anderson and Schuldenrein 1985:8	Good
DIC-2304	590±60	A.D. 1360	A.D. 1360	9EB91 (Rucker's Bottom), M1199, T5 Ditch fill	Semicircular ditch with Beaverdam Phase ceramics in fill	Anderson and Schuldenrein 1985:8	Good
UGA-3615	765±100	A.D. 1185	A.D.1225	9EB348, 120S50E, Feature A	Rembert Phase ceramics (pinched rim)	Flint and Suggs 1980; Anderson and Schuldenrein 1985:8	Doubtful/early
DIC-2296	770±45	A.D. 1180	A.D.1220	9EB91, Feature A30	Plain, simple stamped ceramics "Late Cartersville"	Anderson and Schuldenrein 1985:8	Doubtful/late?
DIC-2295	860±50	A.D. 1090	A.D. 1110-1170	9EB91, Feature A25	Plain, simple stamped ceramics "Late Cartersville"	Anderson and Schuldenrein 1985:8	Doubtful/late?
UGA-3616	860±55	A.D. 1090	A.D. 1110-1170	9EB76 (Rufus Bullard), 80S30E, Feature 1, 35-40cm	Plain, simple stamped ceramics "Late Cartersville"	Flint and Suggs 1980; Anderson and Schuldenrein 1985:8	Doubtful/late?
UGA-3613	1000±55	A.D. 950	A.D. 1010	9EB76, 40S30W, 47-52cm	Plain, simple stamped ceramics "Late Cartersville"	Flint and Suggs 1980; Anderson and Schuldenrein 1985:8	Doubtful/late?
BETA-1961	1010±80	A.D. 940	A.D. 1000	9EB91 (Rucker's Bottom), M2500	Rembert Phase ceramics (pinched rim)	Anderson and Schuldenrein 1985:8	Poor/early
DIC-2297	1050±85	A.D. 900	A.D. 960	9EB91 (Rucker's Bottom), M211	Plain, simple stamped ceramics "Late Cartersville"	Anderson and Schuldenrein 1985:8	Doubtful/late?
DIC-2299	1140±110	A.D. 810	A.D. 860-880	9EB91 (Rucker's Bottom), M372	Plain, simple stamped ceramics "Late Cartersville"	Anderson and Schuldenrein 1985:8	Doubtful/late?
DIC-2298	1580±50	A.D. 370	A.D. 440	9EB91 (Rucker's Bottom), M372	Plain, simple stamped ceramics "Late Cartersville"	Anderson and Schuldenrein 1985:8	Good
DIC2294	1610±85	A.D. 340	A.D. 410	9EB91 (Rucker's Bottom), M11	Linear check stamped ceramics "Early Cartersville"	Anderson and Schuldenrein 1985:8	Good
BETA-2529	2000±80	50 B.C.	A.D. 50	38AB91 (Rocky River), Block 1, Feature 4	Plain, simple, check stamped ceramcis "Early Cartersvill	Anderson and Schuldenrein 1985:8	Good
BETA-2531	2020±70	70 B.C.	A.D. 30-50	38AB288, (McCalla Bottoms) Block 1, Feature 2	No associated artifacts, dates "Early Cartersville" zone?	Glander et al 1981; Anderson and Schuldenrein 1985:8	Good
BETA-2530	3410±80	1460 B.C.	1680 B.C.	38AB288 (McCalla Bottoms),Block 1, Feature 7	Stallings Punctate, soapstone vessel fragments	Glander et al 1981; Anderson and Schuldenrein 1985:8	Good
BETA-4307	4400±70	2450 B.C.	2970-2990 B.C.	38AB91 (Rocky River), EU77 midden	Small Savannah Rivers, perforated steatite objects	Anderson and Schuldenrein 1985:8	Good
UGA-3612	4500±135	2550 B.C.	3010-3110 B.C.	9EB76 (Rufus Bullard), 30S10W, Feature B	Late Archaic level, Stallings fiber tempered pottery	Flint and Suggs 1980; Anderson and Schuldenrein 1985:8	Doubtful/early?
BETA-2527	8080±630	6130 B.C.	-	38AB91 (Rocky River), Test Pit 1, Feature 7	No associated artifacts, dates Late Archaic midden?	Glander et al 1981; Anderson and Schuldenrein 1985:8	Poor/early
BETA-2603	1250±50	A.D. 700	A.D. 720±50	38AN8 (Simpson's Field), Feature 111, XU4	Swift Creek and Napier pottery.	Wood et al. 1986:63-65,105	Good
BETA-7010	720±50	A.D. 1230	A.D. 1240±50	38AN8 (Simpson's Field), Feature 399,	Swift Creek pottery	Wood et al. 1986:67,105	Poor/late; dates Mississippian component?
BETA-6398	1020±50	A.D. 930	A.D. 960±50	38AN8 (Simpson's Field), Feature 216	Swift Creek and Napier pottery	Wood et al. 1986:69-71,105	Doubtful/late?
BETA-7009	1340±50	A.D. 610	A.D. 630±60	38AN8 (Simpson's Field), Feature 216	Swift Creek and Napier pottery	Wood et al. 1986:69-71,105	Good/early?
BETA-6397	690±60	A.D. 1260	A.D. 1260±60	38AN8 (Simpson's Field), Feature 319	Swift Creek and Napier pottery	Wood et al. 1986:73-74,105	Poor/late; dates Mississippian component?
BETA-2625	2030±50	80 B.C.	80±50 B.C	38AN8 (Simpson's Field), Feature 7	Swift Creek and Napier pottery	Wood et al. 1986:74,105	Poor/early
BETA-2803	630±40	A.D. 1320	A.D. 1310	38AN8 (Simpson's Field), Feature 160/Burial 2	Rembert Phase pottery	Wood et al. 1986:108	Good
BETA-2735	3950±80	2000 B.C.	2560±80 B.C.	38AN29 (Sara's Ridge), Feature 21, XU1	Preceramic Late Archaic midden (Savannah River Phase)	Wood et al. 1986:126	Good
BETA-2736	4200±90	2250 B.C.	2940±90 B.C.	38AN29 (Sara's Ridge), Feature 37, XU2	Preceramic Late Archaic midden (Savannah River Phase)	Wood et al. 1986:159	Good
BETA-2737	4210±60	2260 B.C.	2980±60 B.C.	38AN29 (Sara's Ridge), Feature 63, XU2	Preceramic Late Archaic midden (Savannah River Phase)	Wood et al. 1986:159	Good

Laboratory Number	Age (Years B.P.)	Age (A.D./B.C. Date)	MASCA Corrected Age	Sample Provenience	Associated Material Remains	Sample References	Utility of Date
BETA-6399	5200±280	3250 B.C.	4075±280 B.C.	38AN29 (Sara's Ridge), Feature 63, XU2	Preceramic Late Archaic midden (Savannah River Phase)	Wood et al. 1986:159	Doubtful/Early?
BETA-6400	3680±60	1730 B.C.	2190±60 B.C.	38AN29 (Sara's Ridge), Feature 63, XU2	Preceramic Late Archaic midden (Savannah River Phase)	Wood et al. 1986:159	Good
BETA-???	180±50	A.D. 1770	A.D. 1765	38AN126 (Big Generostee Creek), Feature 4	Early Woodland (Dunlap/Cartersville) materials	Wood et al. 1986:236	Poor
BETA-???	Modern		Modern	38AN126 (Big Generostee Creek), Feature 12	Later Woodland (simple stamped/brushed) material	Wood et al. 1986:244	Poor
BETA-3761	4090±70	2140 B.C.	2726±70 B.C.	9EB21 (Parris Island South), Feature 10	Preceramic Late Archaic midden (Savannah River Phase)	Wood et al. 1986:260, 286	Good
BETA-3759	4170±100	2220 B.C.	2915±100 B.C.	9EB21 (Parris Island South), Level C fill	Preceramic Late Archaic midden (Savannah River Phase)	Wood et al. 1986:286	Good
BETA-3762	4070±70	2120 B.C.	2712±70 B.C.	9EB21 (Parris Island South), Level X fill	Preceramic Late Archaic midden (Savannah River Phase)	Wood et al. 1986:286	Good
BETA-3763	3190±140	1240 B.C.	1540±140 B.C.	9EB21 (Parris Island South), Level C fill	Preceramic Late Archaic midden (Savannah River Phase)	Wood et al. 1986:286	Poor/Late
BETA-1791	760±200 B.P.	A.D. 1190±200	A.D. 1230	9EB85 (Beaverdam Creek), Premound midden	Initial Beaverdam Phase occupation	Rudolph and Hally 1986:463	Good
BETA-1792	800±80 B.P.	A.D. 1150±80	A.D. 1210	9EB85 (Beaverdam Creek), Structure C, Stage 1	Later Beaverdam Phase occupation	Rudolph and Hally 1986:463	Good
DIC-2117	380±50 B.P.	A.D. 1570±50	A.D. 1460-1500	9EB85 (Beaverdam Creek), Waterlain Sand	Later Beaverdam Phase occupation	Rudolph and Hally 1986:463	Poor/Late
DIC-2118	1620±100 B.P.	A.D. 330±100	A.D. 400	9EB85 (Beaverdam Creek), Premound midden, F34	Initial Beaverdam Phase occupation	Rudolph and Hally 1986:463	Poor/Early
DIC-2119	740±55 B.P.	A.D. 1210±55	A.D. 1240	9EB85 (Beaverdam Creek), Gray Ashy Layer, Stage 1	Later Beaverdam Phase occupation	Rudolph and Hally 1986:463	Good
DIC-2120	230±80 B.P.	A.D. 1720±80	A.D. 1640	9EB85 (Beaverdam Creek), Stage 3, F67	Later Beaverdam Phase occupation	Rudolph and Hally 1986:463	Poor/Late
DIC-2121	Insufficient Carbon for dating			9EB85 (Beaverdam Creek), Stage 3, F67	Later Beaverdam Phase occupation	Rudolph and Hally 1986:463	N/A
I-11,722	10,370±140 B.P.		Beyond range	9EB259 (Gregg Shoals) Basal layers	Initial Holocene Deposits	Segovia 1985:5	Good
I-11,723	10,170±140 B.P.		Beyond range	9EB259 (Gregg Shoals) Basal layers	Initial Holocene Deposits	Segovia 1985:5	Good
I-11,724	10,000±140 B.P.		Beyond range	9EB259 (Gregg Shoals) Basal layers	Initial Holocene Deposits	Segovia 1985:5	Good
GX-2282	180±80 B.P.	A.D. 1770±80	A.D. 1660	38AB15 (log from Cherokee Shoals fish weir)	Late prehistoric or early historic fish trap	Goodyear et al. 1979:142; Alterman 1987:118	Unknown
GX-2283	545±100 B.P.	A.D. 1405±100	A.D. 1390	38AB15 (log from Cherokee Shoals fish weir)	Late prehistoric or early historic fish trap	Goodyear et al. 1979:142; Alterman 1987:118	Unknown

APPENDIX II.

CULTURAL RESOURCE REPORTS PRODUCED DURING THE RICHARD B. RUSSELL RESERVOIR PROJECT

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1981 *A Report of Archaeological Testing at Sites 38AB22, 39AB91, and 38AB288 in the Richard B. Russell Reservoir, Abbeville County, South Carolina.* Contract C-54051(81) Final Report, submitted to Atlanta Interagency Archeological Services Division, National Park Service.

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