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)	22846	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

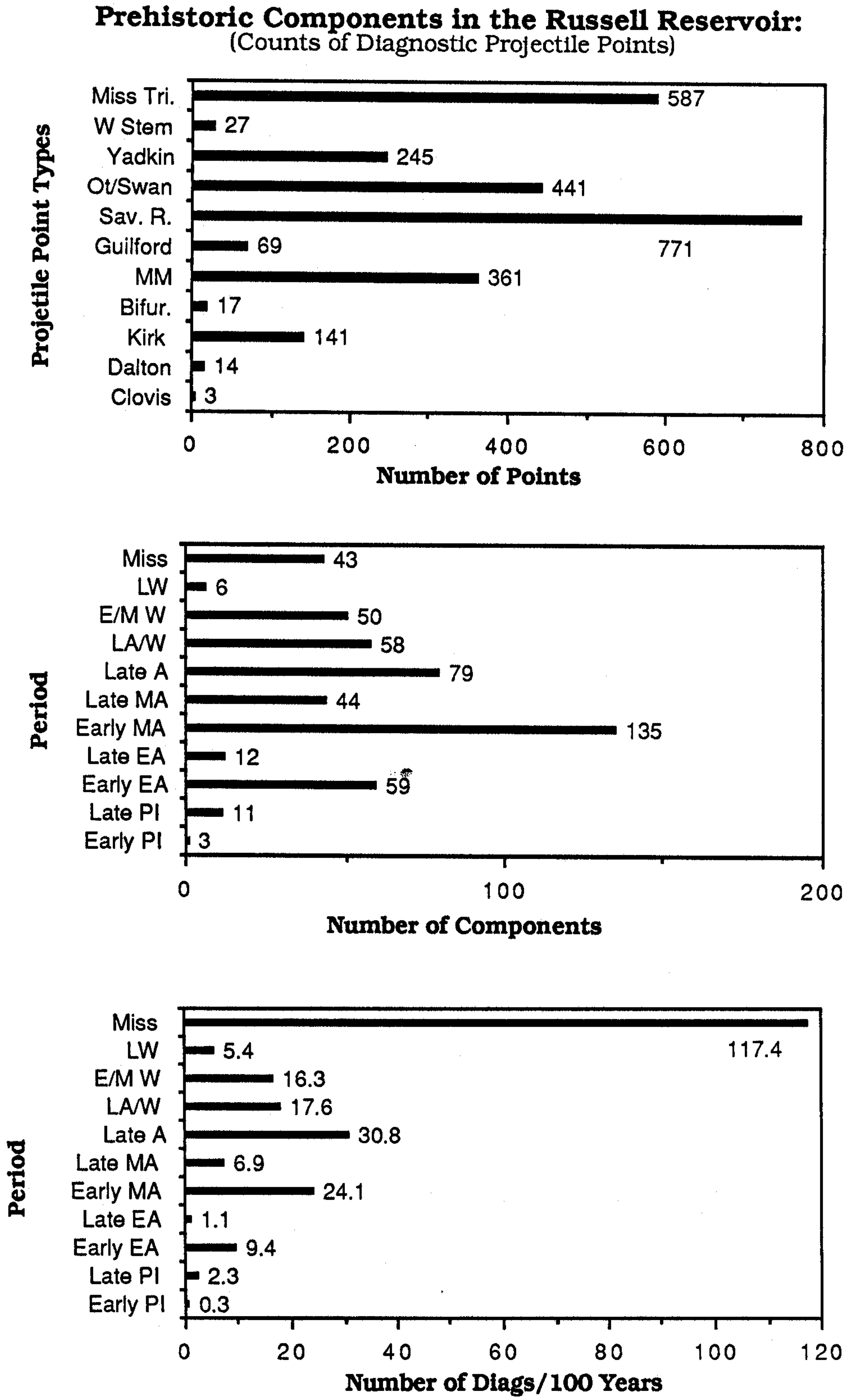


Figure 3. Lithic Components and Diagnostics per Period, Richard B. Russell Reservoir.

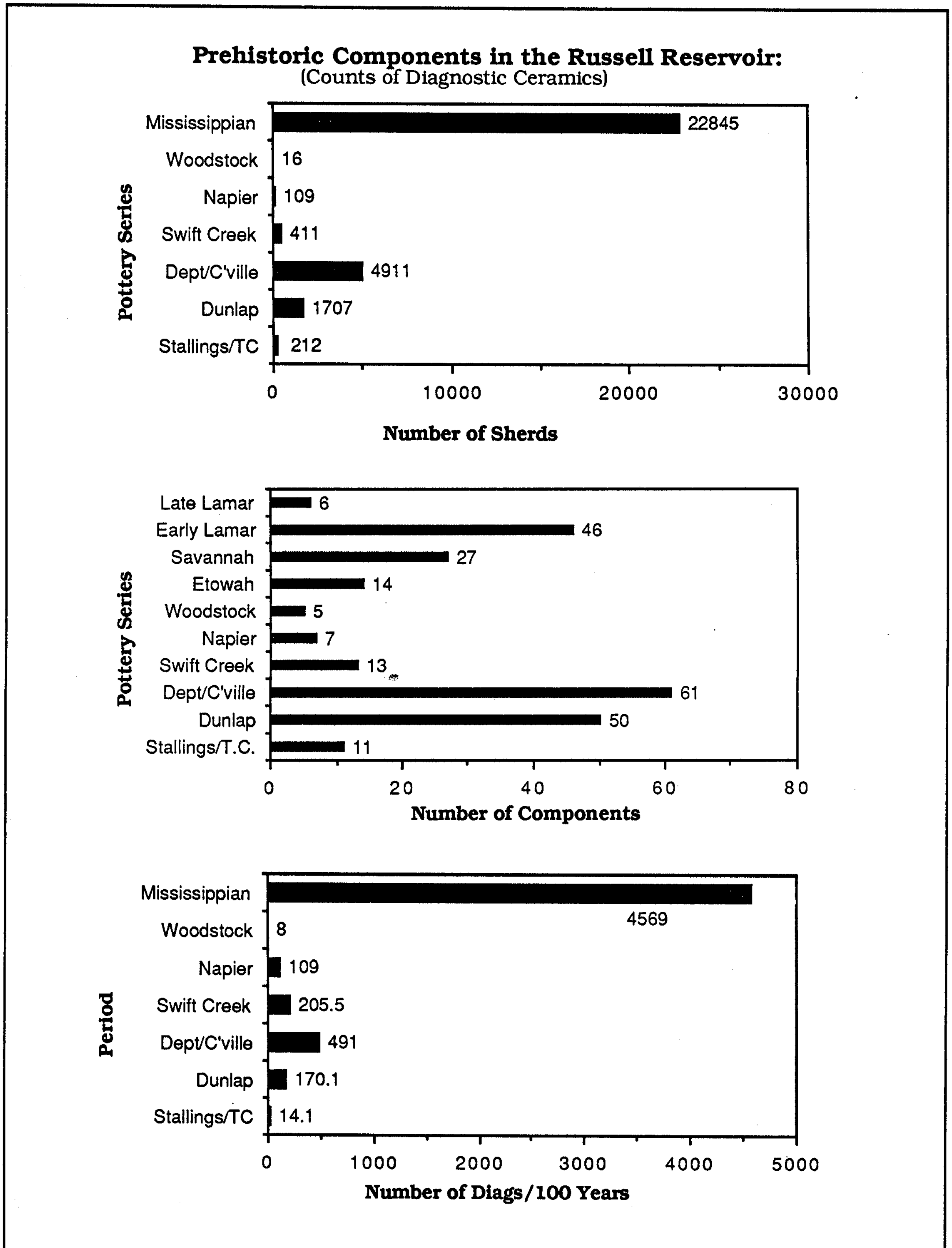


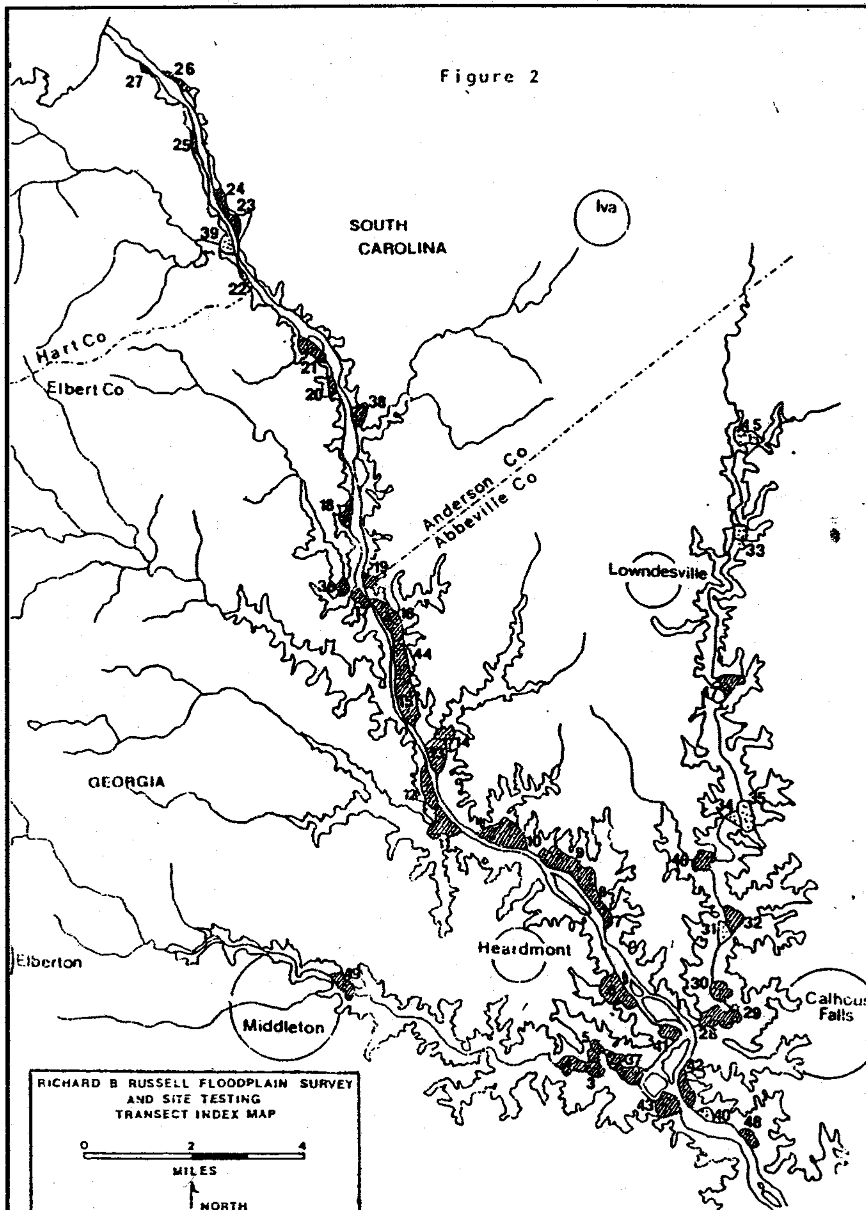
Figure 4. Ceramic Components and Diagnostics per Period, Richard B. Russell Reservoir.

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).

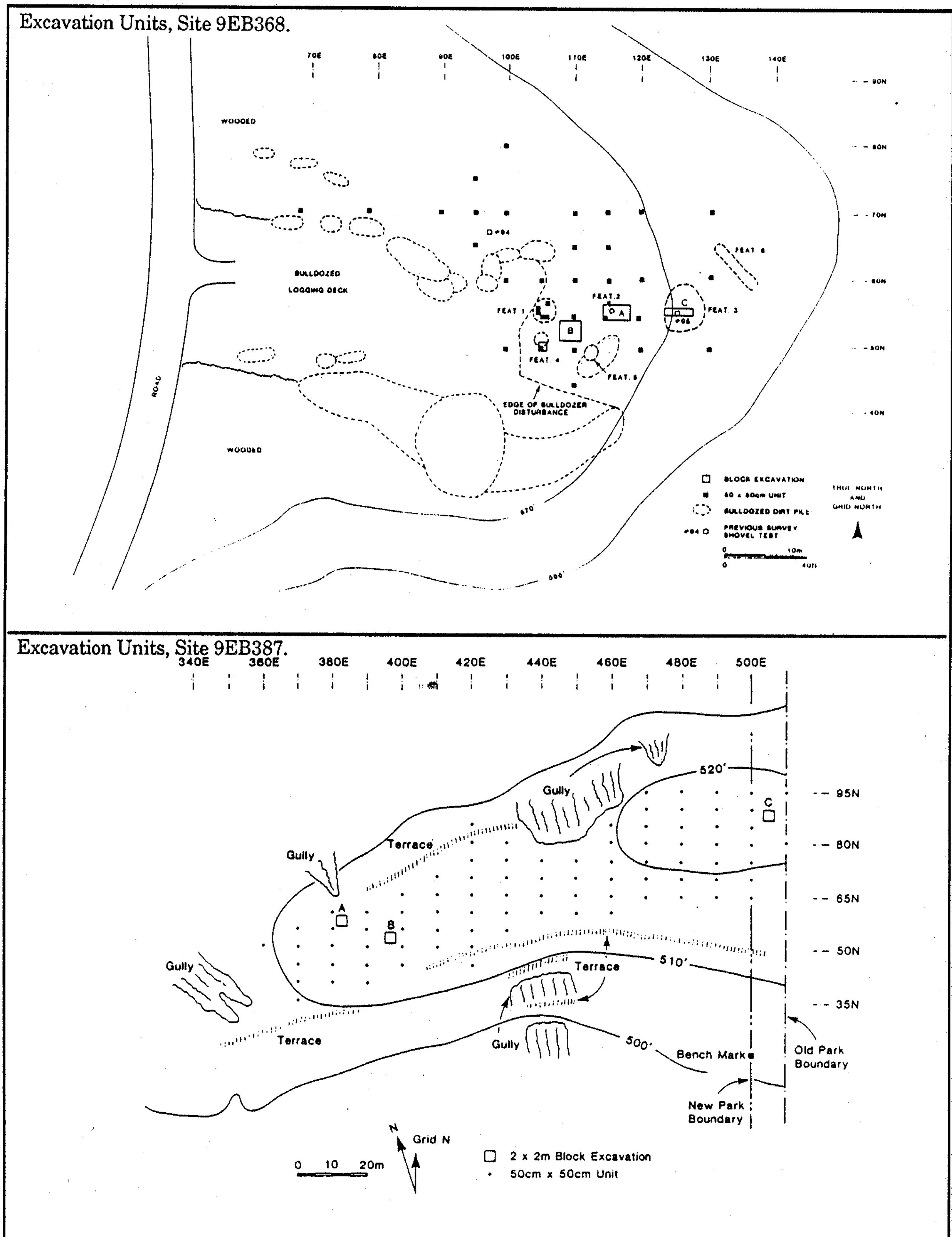
Rigorous selection criteria were employed to delimit the sites chosen for additional data recovery effort after 1980. Following the close of the first season of Phase III fieldwork and the submission of detailed technical and management summaries of the work to date by each contractor, an evaluation 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



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

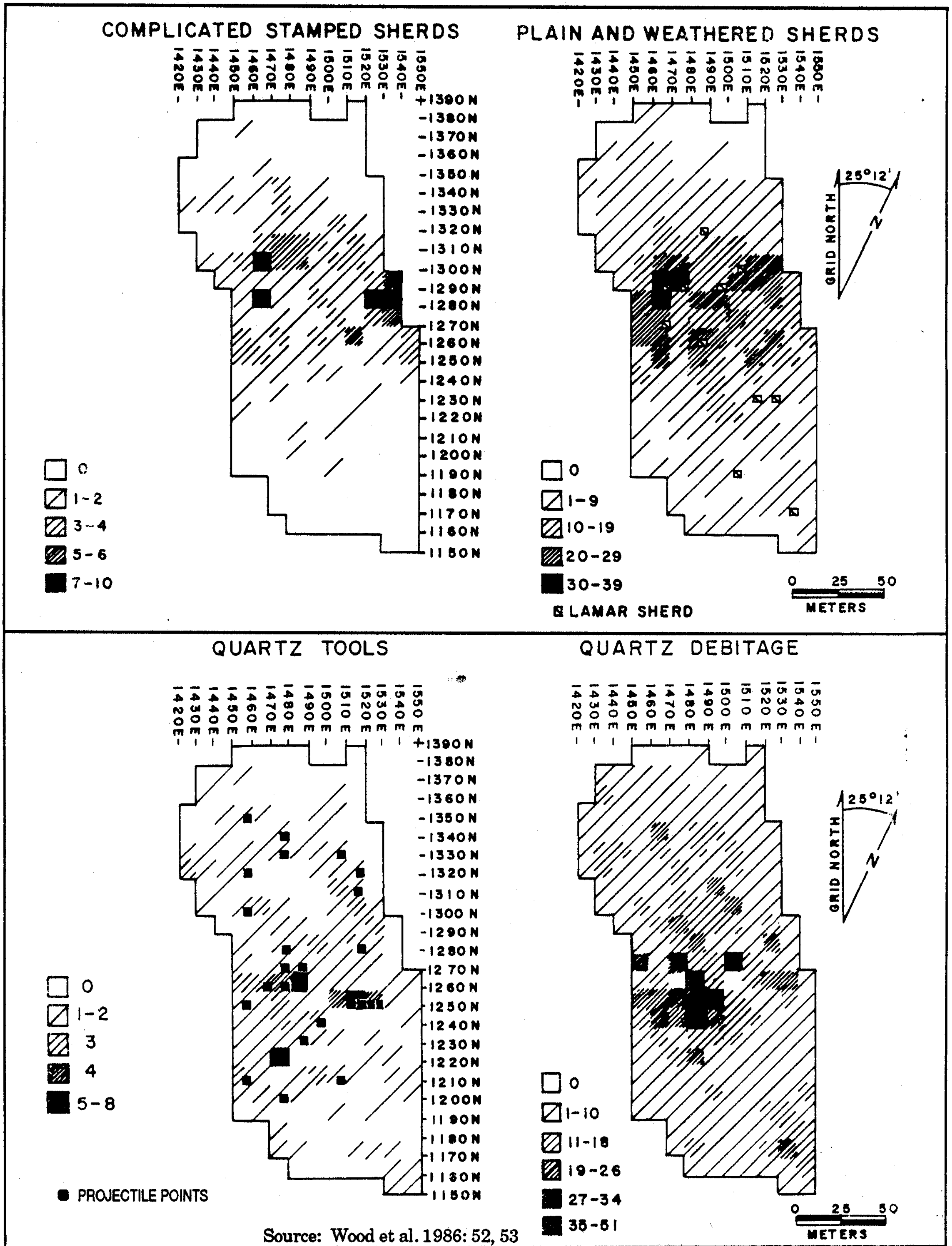


Figure 7. Artifact Distributions, Simpson's Field (38AN8), Controlled Surface Collections.

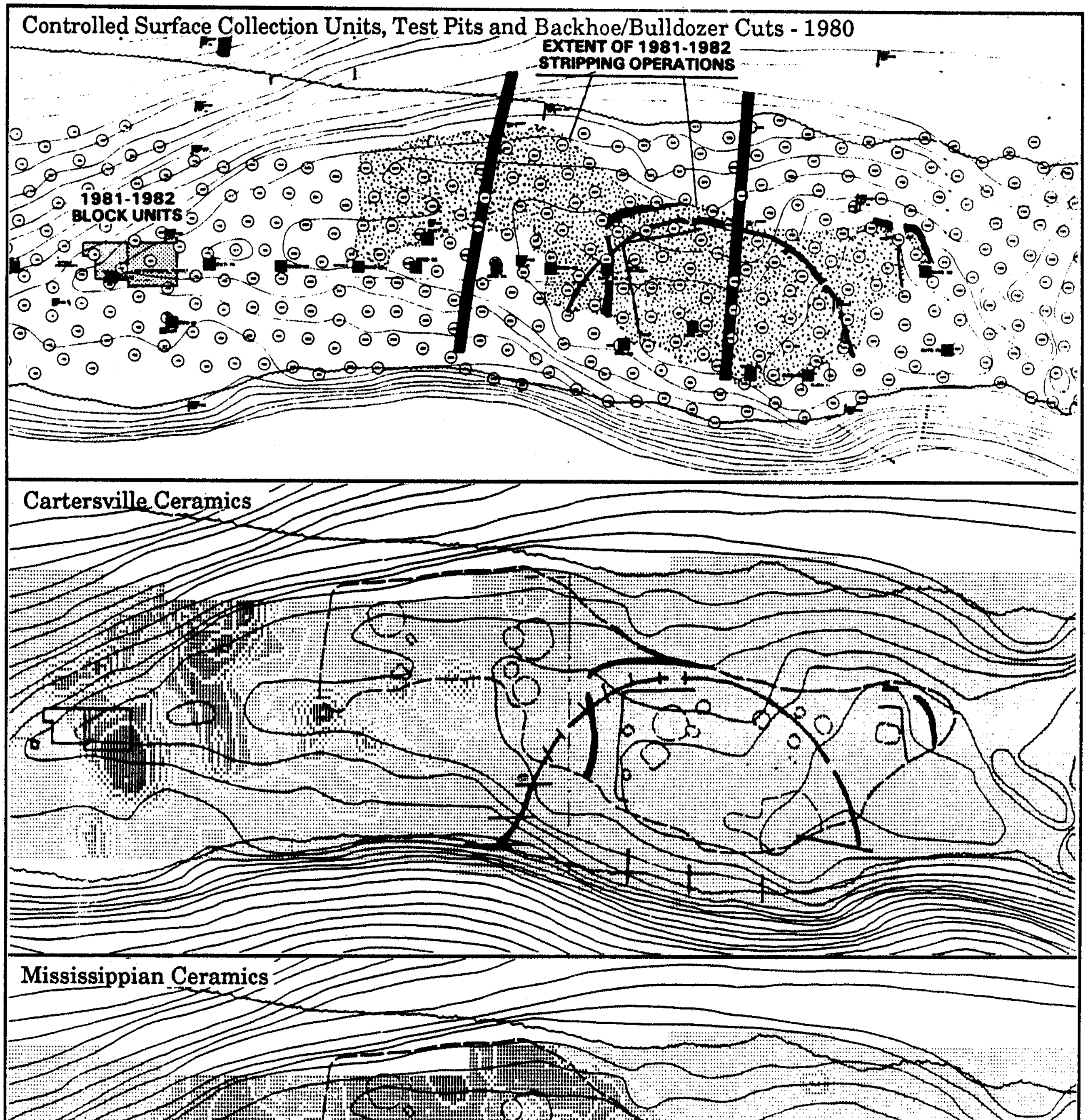
surface collection had been made, a general or "grab sample" collection was obtained from the surrounding area, and again labeled in reference to the sample point. In such a manner, the location of every surface artifact was known to within approximately 10 m. At Rucker's Bottom a team of six mapped 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)

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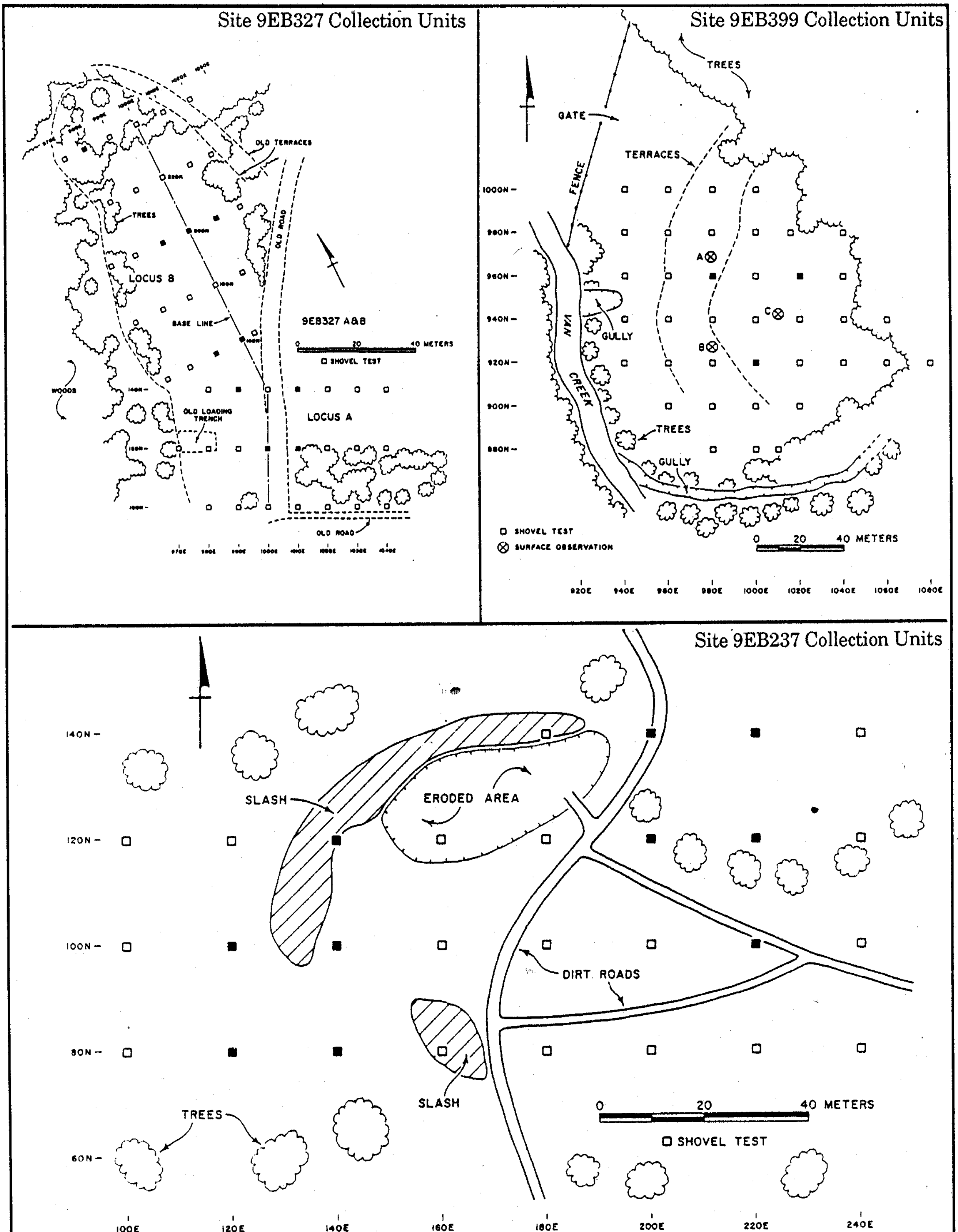
included in field notes, site forms, and reports from investigations where shovel testing is used.

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.