THE MISSISSIPPIAN OCCUPATION OF THE SAVANNAH RIVER VALLEY

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Before 1970, knowledge of Mississippian occupations in the Savannah River Valley came from isolated, often brief reports describing investigations at major ceremonial centers, such as Irene, Hollywood, Rembert, Chauga, Tugalo, and Estatoe. Extensive fieldwork over the past 15 years, however, has permitted for the first time the development of riverine-extensive chronological sequences, useful for detailing sociopolitical, settlement, and subsistence evolution within local Mississippian societies. Within the Savannah River basin the Woodland to Mississippian transition is characterized by a shift from small, widely dispersed sites to larger, nucleated settlements located near the floodplain, and the emergence of political/ceremonial centers. Subsistence practices proceed from a generalized to a more focused pattern of wild food procurement, coupled with an increasingly intensive reliance on agriculture. Evidence is emerging that documents the appearance and evolution of discrete chiefly societies within the valley, a process that appears to be linked to political developments occurring throughout the region.

> The archaeological examination of the Savannah River has been too long deferred [Moore 1898:168].

In this paper archaeological research on the prehistoric, Mississippi-period occupation of the Savannah River basin of Georgia and South Carolina is summarized. The temporal focus for this review is the interval from A.D. 900 to 1540, the span of the prehistoric Mississippian stage in this region (Griffin 1967; Ferguson 1971; Rudolph and Hally 1985; Anderson 1986a), although the earlier Woodland antecedents and later post-European-contact successors of this stage are briefly examined as well, to provide a broader evolutionary perspective. While Mississippian research in the Savannah River basin is still in its infancy in many ways, particularly when compared with research in other areas of the Eastern Woodlands, a number of major accomplishments have occurred. These include (*a*) the emergence of a basic chronological and cultural sequence for the period along much of the drainage; (*b*) the publication of major survey and excavation reports from several areas of the basin, including work at several major mound and village sites; (*c*) the linkage of ethnohistoric and archaeological site records; and (*d*) the initiation of diachronic analyses encompassing both drainage-specific and regional political evolution, subsistence trends, mortuary practices, and settlement patterning. Current directions in research are noted together with suggestions for future investigations.

History of Research

Early Investigations at Mound Sites

The first scientific excavation at a Mississippian site along the Savannah River occurred in 1886, when John P. Rogan of the Mound Division of the Bureau of Ethnology conducted test excavations at the Rembert mound group (9EB1), Elbert County, Georgia (Thomas 1894:315–318) (Figure 1). Information about specific sites prior to this time was variously noted, however, and can be found in eighteenth- and nineteenth-century maps, and in the written accounts of explorers, travelers, surveyors, traders, and military commanders (e.g., Milling 1940; Baker 1974, 1975; Anderson 1985; Hally et al. 1985). While these accounts typically contain only minimal or incidental data, their value has been magnified by the subsequent destruction of many of these sites by erosion, agricultural practices, vandalism, or construction, particularly of reservoirs.

The earliest moderately detailed accounts of Mississippian remains along the Savannah River are William Bartram's descriptions of the Silver Bluff (38AK7), Rembert, and Keowee (28OC1) mound groups, made during his travels along the upper reaches of the drainage in May of 1775 (Bartram 1791: 314–315, 324–326, 331–332). Bartram's descriptions are particularly important since both Silver Bluff and Rembert, originally the two largest mound groups in the basin, were largely destroyed by the mid-nineteenth century, when local antiquarian reporting began. The next major description of Rembert dates from 1848 (White 1849:229–230), by which time most of the smaller mounds and earthworks at the site were gone. Almost a century went by before the Sil-

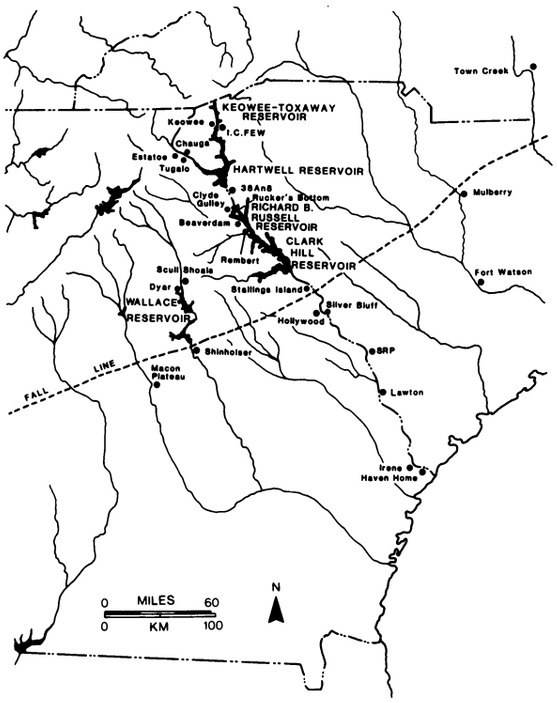

Figure 1. Savannah River drainage and archaeological sites mentioned in text.

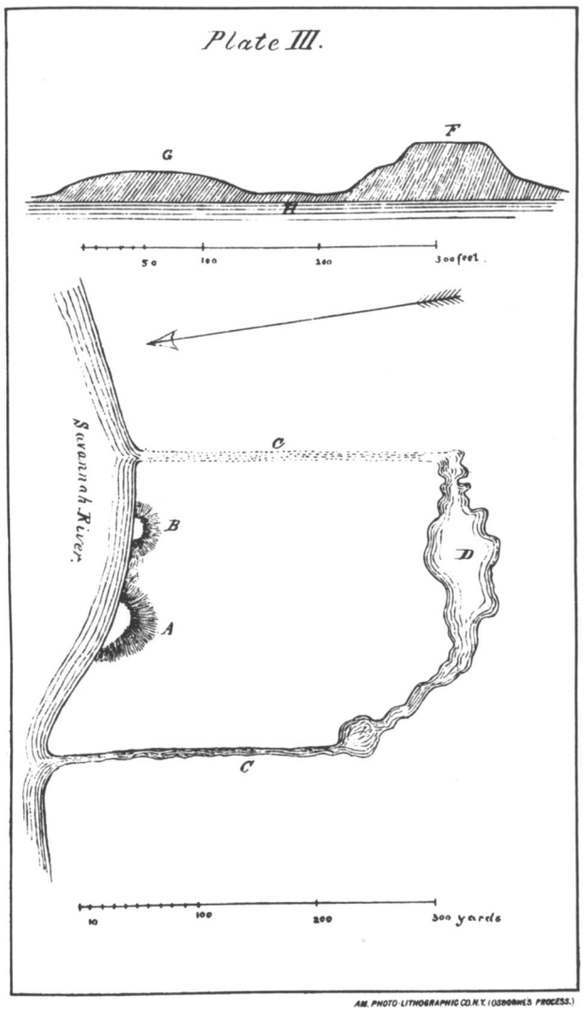

Figure 2. The Silver Bluff mound group (38AK7), as mapped by C. C. Jones in the early 1870s. The mounds have since washed into the river (reproduced from Jones 1873:Plate 3).

ver Bluff site was again described, fortunately in considerable detail, by C. C. Jones in 1873 (Jones 1873: 152–157) (Figure 2). By that time, however, two major mounds known to Jones were gone, two others had been largely plowed flat, and two others were rapidly eroding into the river, prompting him to remark prophetically that

> the day is probably not far distant when tradition only will designate the spot once memorable in the annals of a former race as the site of monuments of unusual size and interest [Jones 1873:152–153].

By the winter of 1897–1898, when C. B. Moore (1898: 168) was excavating sites along the river, no trace of Silver Bluff was left. To date, in fact, no remains have been found that can be conclusively tied to this site (Scurry et al. 1980:7–10).

Bureau of Ethnology Mound Division investigations along the Savannah focused on two sites, the Rembert mound group, tested in 1886 (Thomas 1894: 315–317), and the Hollywood mound group (9RI1), examined in 1891 by Henry L. Reynolds (Thomas 1894:317–326). The excavations at Hollywood, of unrivaled competence for their day (Waring 1968a:293), uncovered Southeastern Ceremonial Complex (SCC) materials in the smaller of the two mounds on the site. Two major stages of mound construction were documented, the earliest of which contained two groups of burials. The SCC materials came from the stratigraphically earlier burial group and included copper "eagle dancer" plates; painted and engraved bottles with sun circle and cross, anthropomorphized serpent, and human-head motifs; and pipes, shell beads, and earspools. The stratigraphically later burial group lacked SCC artifacts.

During the winter of 1897–1898, Clarence B. Moore "in a rapid steamer of light draught" (Moore 1898: 167) examined 13 mounds at six separate locations along the Savannah. His explorations extended from the coast to the fall line, with considerable care taken to locate sites. He had sent a man ahead the summer before to inquire about site locations, and while running upriver the bank cuts and all high bluffs were carefully examined. No shell heaps were observed below Augusta, and the mounds that were found were described as being of two types: clay rises in the swamp, thought to represent habitation areas or refuges in times of flooding, and low sand burial

mounds on higher ground away from the river. Moore was not very enthusiastic about the archaeological potential of the drainage, something that in retrospect is probably fortunate given his field procedures:

> It soon became apparent to us that the Savannah River, though no digging into the mounds had been attempted for scientific purposes, did not offer a promising field, for many rises in the ground known as mounds by the inhabitants proved to be roughly circular banks thrown up by the current ... In addition, the few mounds found back from the river in cultivated fields were very small and had been rifled by seekers after treasure, and the swamp mounds seemed made for domiciliary purposes. Therefore we did not pursue our usual custom, totally to demolish each mound discovered, as we had done, as a rule, in Florida and on the Georgia coast. No mounds of which we heard, however, except one on which stood a house, were left uninvestigated [Moore 1898:167].

The sites Moore examined included the Irene mounds (9CH1) near Savannah, Georgia; the Lawton mounds (38AL11) near Allendale, South Carolina, where a series of trenches 3-4 ft wide and 5-6 ft deep, totalling 45 ft in length were opened through the mounds; and several low sand burial mounds in Screven and Burke Counties, Georgia (Moore 1898:168-172). Curiously, although aware of the Silver Bluff site—which he found had completely eroded away—Moore neglected the Hollywood mounds, where Reynolds had worked a few years before, located just across the river.

Excavations in the Early Twentieth Century

Archaeological research in the Savannah basin languished for over 30 years until, coincidentally, two separate excavations were conducted in the winter of 1929 that yielded Mississippian materials. These investigations, at the Haven Home burial mound (9CH15) in Savannah (Waring 1968b:209-215) and Stalling's Island (9CB1) (Claflin 1931), were quite different in emphasis, although both resulted in valuable publications. The Haven Home excavation, conducted by Antonio J. Waring (then 14 years old) and his school friends, was little more than enthusiastic site mining. While this episode was something of an embarrassment to Waring in later years, his site report, detailing the mound structure and the associations of the 44 burials found within it, was equal to the standards of Moore and the archaeologists of the Mound Division. The Stalling's Island excavations, in contrast, were conducted under the auspices of Harvard's Peabody Museum and were directed by experienced archaeologists, Mr. and Mrs. C. B. Cosgrove. Although these excavations are best known for their documentation of the extensive Late Archaic materials on the site, minor quantities of Mississippian material were also found, including two Savannah-culture urn burials (Claflin 1931:17-21, Plates 21-25).

WPA Investigations at the Mouth of the Savannah

The most extensive excavations to date at a Mississippian mound site were those conducted from 1937 to 1939 at Irene, during Works Progress Administration (WPA) operations at the mouth of the Savannah. The report on this work, by Joseph R. Caldwell and Catherine McCann (1941), remains one of the few comprehensive Mississippian site reports produced in this part of the Southeast. Eight construction stages with associated structures were documented in the platform mound, while 106 interments were documented in a smaller associated burial mound. Extensive excavations in the area around the two mounds revealed a large mortuary structure, a rotunda or probable council house, several smaller structures, and an extensive series of fence lines or enclosures—possibly demarcating ceremonial precincts or serving as fortifications. All of these architectural features were found to date to the Savannah- and Irene-culture occupations of the site.

Reservoir Salvage Projects in the Savannah Basin: 1948-1970

With a few important exceptions, most major Mississippian investigations along the Savannah River in the post-WPA era have been connected with reservoir-construction projects. In 1948 the general area of the Clark Hill Reservoir, just above Augusta, was surveyed by Caldwell and Miller (Miller 1974). As part of these investigations a series of tests were excavated at the Rembert mound group; these tests, described by Caldwell (1953), together with the earlier work by the Mound Division, produced the only collections currently known from this site, which was apparently the largest mound group in the drainage. The ceramic collections from Caldwell's testing program have recently been used by Hally to help define the early-Lamar Rembert phase (Rudolph and Hally 1985).

Farther to the north, the area of the Hartwell Reservoir was surveyed by Caldwell in 1953 (Caldwell 1974), and major excavations were subsequently carried out at three sites: Chauga (38OC47) in South Carolina, and Tugalo (9ST1) and Estatoe (9ST3) along the Tugaloo River—a headwater of the Savannah—in Georgia. The Chauga mound and village site, located in the proposed floodpool in Oconee County, South Carolina, was examined in 1958 by A. R. Kelly and R. S. Neitzel (1961). Ten successive mound stages were documented, together with evidence for a number of associated structures. Fifty-three burials

were found in the mound, together with nine in the associated village area. Site occupation from Etowah (ca. A.D. 1100) through historic Cherokee times was indicated (Kelly and Neitzel 1961:57–60). A similar span of occupation was found at the Tugalo site, which was examined in 1954 and after by Caldwell (1956). No final report has appeared on this work, although four stages of mound construction were documented (Williams and Branch 1978). Later Lamar through Cherokee components were documented at Estatoe, which was examined by Kelly and de Baillou (1960) in 1959 and 1960. Six mound stages were reported at Estatoe, and structures were found associated with several of these. The ceramic collections from Chauga, Tugalo, and Estatoe have been reanalyzed by Hally and form the basis for the definition of two Mississippian phases: the Etowah-culture Jarrett phase and the late-Lamar Tugalo phase (Hally and Rudolph 1986; Hally 1984a).

From 1966 to 1968 a program of survey and excavation was undertaken in the proposed floodpool of the Keowee-Toxaway Reservoir in Oconee and Pickens Counties, South Carolina, in the upper reaches of the Savannah River watershed. Excavations were undertaken at a number of prehistoric and historic Indian sites, including I. C. Few (38PN2), Wild Cherry (38PN22), Rock Turtle (38PN4), and Toxaway (38OC3). Connestee, Pisgah, and Qualla (Lamar) components were documented, a cultural sequence comparable to that noted in the Appalachian summit to the north (Keel 1976; Dickens 1976). Existing reports include a brief general overview of the project (Beuschel 1976), and a comprehensive monograph on the late prehistoric/protohistoric components at the I. C. Few site (Grange 1972). At I. C. Few, a badly disturbed burial mound and associated village area on the Keowee River, Grange (1972:166–175) identified Napier, Etowah, Lamar-like, and Pisgah ceramics, indicating a Late Woodland through Mississippian occupation; little evidence for Cherokee occupation was noted. A single period of mound construction probably dating to ca. A.D. 1300–1450 (based on ceramic rim and design motifs tabulated in Tables 34–39 in the report) was documented. The ceramic assemblage associated with the primary occupation exhibited a strong admixture of Pisgah (Dickens 1976; Moore 1981) and early-Lamar (M. Smith 1981; Rudolph and Hally 1985) rim and design motifs. One hundred and twenty features were excavated in the mound and village area of the site, including 15 burials.

Russell Reservoir Investigations: 1969–1985

In the late 1960s and early 1970s surveys were initiated in the proposed Richard B. Russell Reservoir along the upper Savannah, between the Hartwell and Clark Hill reservoirs in the central Piedmont (Hutto 1970; Hemmings 1970). The reservoir construction led to extensive survey, testing, and excavation projects in the late 1970s and early 1980s, providing the best Mississippian sample obtained to date from the Piedmont portion of the drainage. (Work in the Clark Hill and Hartwell reservoirs prior to flooding was minimal.) The results of the Russell Reservoir work have only recently appeared, and some are still in the process of being published (Taylor and Smith 1978; Goodyear et al. 1983; Campbell and Weed 1984; Tippitt and Marquardt 1984; Anderson and Schuldenrein 1985; Rudolph and Hally 1985); the massive influx of data generated by this project has prompted a considerable re-evaluation of the prehistoric occupations along the drainage, of which this paper represents a part.

Mississippian components were the focus of major excavation programs at the Beaverdam Creek (9EB85) and Rucker's Bottom (9EB91) sites in the Russell Reservoir; less extensive testing occurred at a number of other sites. The Beaverdam Creek site, occupied from roughly A.D. 1200 to 1300, is the type site for what has been called the Beaverdam phase, a regional variant of Savannah culture. At Beaverdam Creek, Rudolph and Hally (1985) documented six construction stages in the single mound dominating the site, two superimposed earthlodges and four superimposed platform mounds. Approximately 2,600 m^2 of the adjacent "village" area were examined, uncovering several hundred features but only one possible house pattern. The low incidence of structures suggests that the site may have had only a small permanent population, and thus may have served as a "vacant" mortuary/ceremonial center. Forty-seven burials, 37 in or below the mound and the remainder in the village area, were found; clear, presumably status-related differences were observed in the treatment of the dead. Detailed typological and functional analyses were undertaken for the recovered artifactual assemblage, together with a range of specialized analyses of floral, faunal, human skeletal, palynological, and geoarchaeological samples from the site.

Beaverdam and Rembert phase components were identified at the Rucker's Bottom site, located approximately 12 km upstream from Beaverdam Creek (Anderson and Schuldenrein 1983, 1985). At Rucker's Bottom, where approximately 10,000 m^2 were examined, two successive village occupations were identified, dating from ca. A.D. 1200 to 1450. The early Mississippian village, contemporaneous with the use of the Beaverdam Creek mound, was located at the south end of the terrace and characterized by a cluster of structures arranged around an open area that probably served as a plaza. One large building, a 14-m-wide circular structure that may have been a town house or rotunda, was present in the southern

part of the village, fronting on the plaza. In the northern part of the terrace a second, apparently fortified village was found that was apparently occupied from late in the Beaverdam phase into the succeeding Rembert phase. Two ditch-and-stockade lines enclosed this settlement, the first semicircular and the second rectangular. Once again, a pattern of structures encircling a probable plaza was observed, together with a large circular structure in the southern portion of the village that may have served as a public building. Several hundred features were excavated over the site; among these were 24 burials, several large, rock-filled pits in the plazas that were probably major post supports, and one structure floor found preserved in a slightly lower area of the midden. As at the Beaverdam mound, an extensive program of specialized analyses was conducted with materials recovered during the field program.

Minor Mississippian components, reflecting either small village or hamlet occupations, were examined at several sites. The most extensive of these programs was at Clyde Gulley (38EB387), where an Etowah component, apparently a small village, was examined (Tippitt and Marquardt 1984). Other sites in the reservoir where small Mississippian components were examined in some detail include 9EB92 and 9EB207 (Campbell and Weed 1984), and 38AN8 (Wood 1984). At these sites materials were found in features that occurred singly or in small groups, or in general excavation strata; little evidence for structure or settlement organization was recovered. Including data from survey projects, over 60 sites with Mississippian components were identified during the reservoir investigations; synthetic analyses of these materials, however, are only beginning to appear (Rudolph and Hally 1985:428–439).

Mississippian Period Research in the Coastal Plain: 1941–1985

Following the close of the WPA investigations at the mouth of the Savannah River in 1941, almost 25 years went by before Mississippian research resumed in the lower portion of the drainage. Minor statements describing earlier work appeared during this interval (e.g., Caldwell 1952), and Waring (1968c) continued to refine the cultural sequence at the mouth of the river. Actual fieldwork documenting Mississippian components (excluding Caldwell's 1948 investigations at historic Palachacolas Town in Hampton County, South Carolina) did not, however, resume until 1964, when James B. Stoltman conducted an extensive program of survey and excavation on Groton Plantation in Allendale County, South Carolina. Mississippian components were identified at several sites and, in a general synthesis of his data, Stoltman (1974:241–243) noted the Woodland to Mississippian transition was characterized by a shift in settlement emphasis from the uplands to the floodplain. This, he thought, reflected a change in subsistence practices from horticulture to intensive agriculture. This change in settlement has been confirmed by subsequent analyses, although the reasons for it are currently unresolved. Stoltman (1974:30–31, 91) also noted the apparent contemporaneity of Savannah and Etowah-like ceramics in the Savannah basin, something that Hally has subsequently documented in considerable detail in conjunction with his definition of the Beaverdam phase (Rudolph and Hally 1985).

In 1965 Clemens de Baillou (1965) conducted test excavations at the Hollywood mound site in Richland county, Georgia, where Reynolds had worked in the early 1890s. Two construction stages were identified in Mound B (confirming Reynolds's work), and Savannah and Pee Dee-like pottery was recovered from tests in the flanks of Mound A. In a comparison of ceramics from Hollywood, the Fort Watson mound group in central South Carolina, and Town Creek in North Carolina, Reid (1965:25) noted "striking similarities" among these assemblages, particularly in rim treatment and stamp design, suggesting close cultural and/or temporal affiliations.

In recent years large numbers of Mississippian sites and components have been identified along the Savannah, most as a result of survey and testing projects associated with cultural resource management (CRM) operations. While many of these projects are fairly small, the data collected combine to provide an extensive, if spatially somewhat uneven, record (e.g., Ferguson and Widmer 1976; Cable et al. 1978; Anthony and Drucker 1984; Drucker et al. 1984). Fortunately, major regional samples exist that facilitate the interpretation of these individual project assemblages. Within the central Coastal Plain, for example, investigations on the Department of Energy's Savannah River Plant—where an intensive survey of a 40% sample of the entire 850 km^2 facility has been completed—provide comprehensive coverage of both riverine and interriverine habitats (Hanson et al. 1978, 1981). The Russell Reservoir provides a roughly comparable data set from the Piedmont, particularly when it is combined with information from other large-scale survey projects (e.g., Goodyear et al. 1979).

In addition to CRM-mandated activity, a number of projects by amateur and professional archaeologists have occurred in recent years that augment our information about Mississippian occupations in the Savannah drainage. In 1971 Leland Ferguson, then at Florida Atlantic University, conducted a reconnaissance-level survey throughout the Coastal Plain portion of the drainage in a deliberate attempt to locate Mississippian sites. Collections were obtained

from over 100 sites, many with Mississippian components; these materials have proved very useful to subsequent researchers (Anderson 1975a, 1975b). Under the direction of Tommy Charles (1981, 1983), the locations and contents of several hundred private collections have been recorded throughout South Carolina in recent years. Many of these materials came from the Savannah River basin; Charles's records, particularly of collections by conscientious amateurs (i.e., those recording site locations), greatly augment the amount of Mississippian material available for analysis.

The Mississippian Cultural Sequence in the Savannah River Basin

The Development of the Sequence

The Mississippian cultural sequence (Figure 3) in the Savannah River valley, as currently understood, has emerged through a combination of work within the basin itself—notably at the river mouth and at a series of mound and village sites in the piedmont—and through cross dating with sequences developed in other areas, notably in the Georgia and North Carolina Piedmont and the Appalachian Summit. Before detailing the Savannah River Mississippian sequence, its development and debt from other areas should be briefly reviewed (see also Ferguson 1971).

The mouth-of-the-Savannah sequence (Caldwell and Waring 1939a, 1939b; Waring 1968c; DePratter 1979) is based on a series of large WPA excavations, and has been appraised by Williams (1968:101) as "one of the finest local sequences based on stratigraphic evidence that exists in Southeastern archaeology." For the later prehistoric era, the mouth-of-the-Savannah sequence in its present form (DePratter 1979) provides chronological control on the order of 100–150 year intervals for the period from roughly A.D. 800 to 1450. The Wilmington–St. Catherines–Savannah–Irene ceramic and cultural succession developed from this work has been used, with varying degrees of success, to guide component identification throughout the Coastal Plain and into the Piedmont portions of the Savannah River basin.

Extensive archaeological survey and testing activity also occurred in northern Georgia during the WPA era (Wauchope 1966). This and subsequent work in the Allatoona Reservoir (Caldwell 1957) produced the classic northwest Georgia Etowah–Savannah–Lamar Mississippian ceramic and cultural sequence (Wauchope 1948, 1950; Fairbanks 1950, 1952). The northwest Georgia sequence, as modified through the years with the inclusion of the Cartersville, Swift Creek, Napier, and Woodstock series (Caldwell 1950, 1957, 1958; Sears 1958; Wauchope 1966), has until recently been the primary source used for dating and

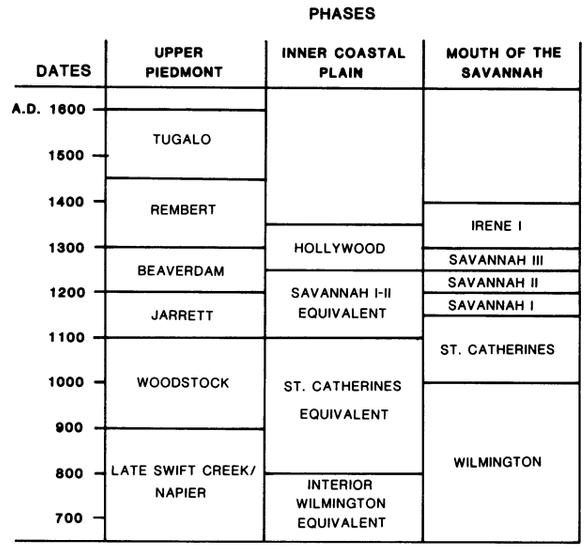

Figure 3. Late Woodland–Mississippian cultural sequence for the Savannah River basin: upper Piedmont (Hally and Rudolph 1986; Wood 1984; Anderson and Schuldenrein 1985), inner Coastal Plain (Hanson 1985; Hally and Rudolph 1986; Anderson 1986b), and mouth of the Savannah (DePratter 1979).

interpreting later Woodland and Mississippi-period sites in the Georgia and South Carolina Piedmont, including the Savannah River basin (e.g., Taylor and Smith 1978).

A third major external source used to interpret late prehistoric sites in the Savannah River basin derives from south-central North Carolina. There, under the direction of Joffre Coe, excavations have been carried out since 1937 at the Mississippi-period Town Creek site, located on a tributary of the Pee Dee River. The mound and stockaded village at Town Creek, encompassing an area of approximately 2 ha, have been excavated almost completely (Coe 1952:308–309). The associated ceramics were formally described by Reid (1967) as the Pee Dee series. Materials identical to Pee Dee were noted at both Irene and Hollywood in the lower Savannah River basin (Reid 1965), and the close similarity of the Pee Dee series to ceramics from the upper Savannah drainage has been variously noted (Grange 1972; Rudolph and Hally 1985; Anderson and Schuldenrein 1985). Pee Dee series material, which has been dated to the thirteenth through fifteenth centuries (Dickens 1976:198), thus provides a temporal benchmark for local Mississippian remains where it is found.

More recent work has led to the development of a cultural sequence for the western part of North Carolina, in the Appalachian Summit area (Egloff 1967; Dickens 1976; Keel 1976; Moore 1981; Purrington 1983). This sequence can be used with fair effect in the Savannah River basin, particularly in the upper

Piedmont and Blue Ridge areas. Although the later Woodland period is still poorly understood, the general outline of the subsequent portion of the Appalachian Summit sequence—encompassing the Pisgah and Qualla phases—appears to accommodate at least some of the materials found in the upper reaches of the basin (Grange 1972; Beuschel 1976; Hally et al. 1985).

The fourth external sequence that has helped in subdividing local Mississippian assemblages derives from the University of Georgia's extensive survey and excavation program in the Wallace Reservoir, located on the upper Oconee River in the central Georgia Piedmont. In an analysis of ceramics from the Dyar (9GE5), Scull Shoals (9GE4), and Shinholser (9BL1) mound sites, Smith (1981:182–189, 242–245) and Williams (1984, 1985) developed criteria for identifying relatively brief (ca. 100-year) Mississippian phases; these phases include Stillhouse (A.D. 1100–1200), Scull Shoals (A.D. 1200–1300), Duvall (A.D. 1300–1400), Iron Horse (A.D. 1400–1500), and Dyar (A.D. 1500–1600). Specific ceramic types and rim attributes were found to be sensitive temporal markers. Refinement of sorting criteria has continued (Rudolph 1978; Rudolph and Blanton 1981), and several of the attributes, particularly rim treatments, have proved to be useful temporal markers in the upper Savannah basin (Rudolph and Hally 1985; Anderson and Schuldenrein 1985).

In conjunction with the Russell Reservoir work, the Savannah River Mississippian sequence has been re-evaluated in recent years, an effort that has included the reanalysis of assemblages from earlier excavations (Hally 1984a; Rudolph and Hally 1985; Duncan 1985; Hally et al. 1985; Hally and Rudolph 1986; Anderson 1986a, 1986b). This work has resulted in the chronologies described below.

The Upper Savannah Mississippian Sequence: Jarrett-Beaverdam-Hollywood-Rembert-Tugalo Phases

The earliest Mississippi-period occupation in the upper Savannah river is represented by small collections of Woodstock Complicated-Stamped pottery from the Estatoe and Chauga sites in Hartwell Reservoir. In northwest Georgia, there is clear evidence that this pottery type is directly ancestral to Etowah Complicated Stamped of the succeeding Etowah culture (Sears 1958). Presumably, the same situation exists in the upper Savannah drainage as well.

Jarrett Phase (ca. A.D. 1100–1200)

The earliest Mississippian occupation that is well documented in the upper Savannah River area is the Jarrett phase (Hally and Rudolph 1986) (Figure 3). This phase is similar in most respects to Etowah II/III in the Allatoona Reservoir of northwest Georgia (Caldwell 1957) and the Stillhouse phase in the Wallace Reservoir (M. Smith 1981) and probably dates to approximately A.D. 1100–1200. The Jarrett phase ceramic complex is characterized by three decorated types: Etowah Complicated Stamped (ca. 8%), Check Stamped (ca. 4%), and Red Filmed (ca. 2%) (Figure 4). The former is represented by ladder-base diamond, one- and two-bar diamond, cross-bar diamond, and line-block motifs. Thirty-nine percent of the sherds in the type collection can be classified only as unidentified complicated stamped because motifs are not recognizable. Of these sherds, however, 95% have rectilinear designs and probably represent standard Etowah motifs. Red filming is present on small bowls. Plain and burnished-plain pottery accounts for 43% and 3% of the complex respectively. Some stamped and plain-surface jars have collared rims (ca. 1%) resembling those characteristic of the Pisgah phase (Dickens 1976; Moore 1981), and some have corncob impressions on the neck and shoulder (ca. 1%).

Jarrett-phase components are currently known from three sites: Chauga, Tugalo, and Clyde Gulley. At Chauga and Tugalo they are associated with multistage platform mounds. Caldwell found only four intact mound stages at Tugalo (Caldwell 1956; Williams and Branch 1978). Each of these was constructed during the Jarrett phase and was surmounted by an earthlodge or earth-embanked structure. The latter were square in plan, measured 7.5–8.5 m on a side, and were constructed with individually set posts (Figure 5). A large post was set in each of the four corners. An entrance passage through the surrounding earth embankment was located along the east wall near the northeast corner of each structure. Central hearths were present. The last intact mound stage was 4.5 m high and approximately 24 m square at the base.

Only the first four stages of mound construction at Chauga were preserved beneath the plowzone. These stages were apparently constructed by the Jarrett-phase occupants of the site. Pothunting in the mound was so intense, however, that Kelly and Neitzel (1961) were unable to determine the nature of the summit structures.

Beaverdam Phase (ca. A.D. 1200–1300)

Ceramic evidence indicates that the Jarrett-phase occupation of the upper Savannah drainage developed directly into the Beaverdam phase of the Savannah culture (Rudolph and Hally 1985:Plates 13–16). Check stamping increases in frequency (to ca. 8%). Etowah Complicated Stamped (ca. 1%) decreases, and is represented primarily by cross-bar diamonds and a new herringbone motif. Collared rims (< 1%)

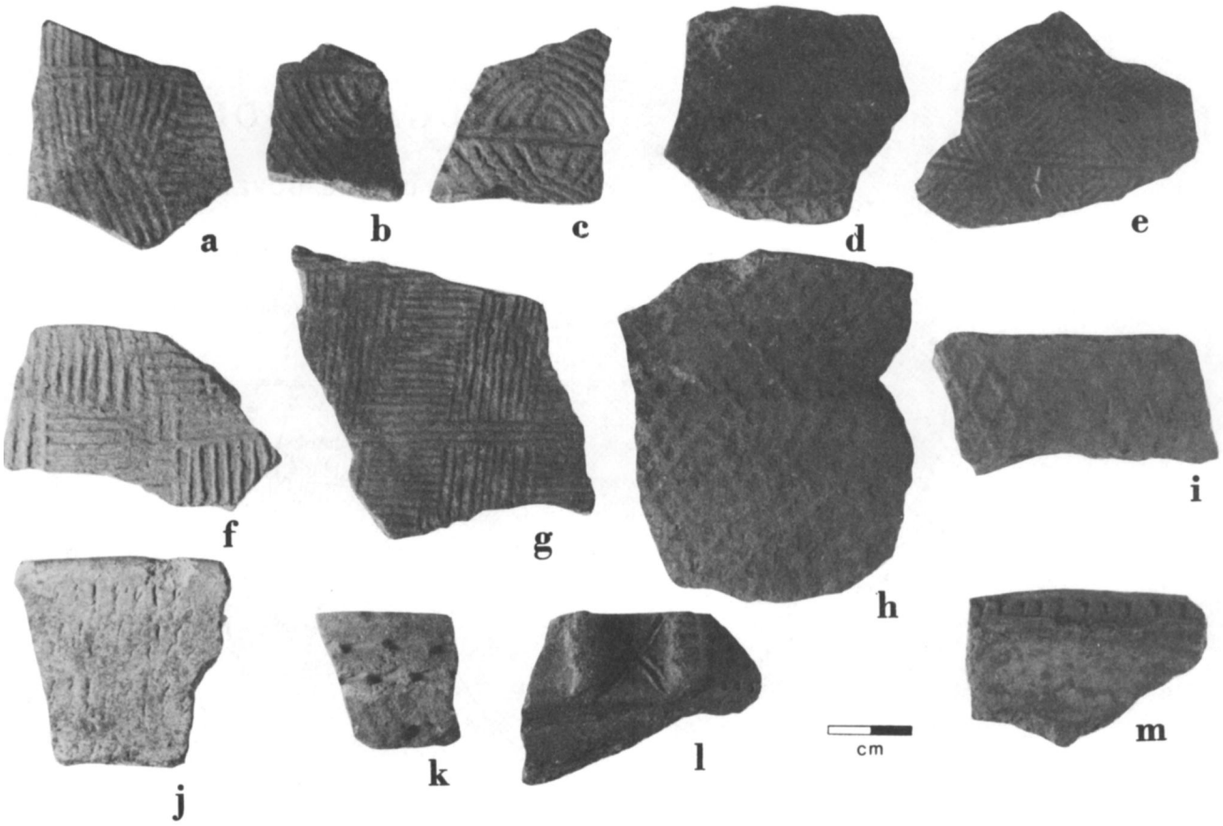

Figure 4. Jarrett-phase pottery types and modes: (a–g) Etowah Complicated Stamped; (h–i) check stamped; (j) corncob impressed; (k–m) collared rims.

and the corncob impressed surface treatment (ca. 3%) continue, the latter with slightly greater frequency, but red filming disappears. The major new ceramic element is Savannah Complicated Stamped (ca. 1%), characterized by concentric-circle motifs. Most stamped pottery continues to be unidentifiable (ca. 9%) as to motif, but the frequency of curvilinear designs increases dramatically, from 5% to 47%. Plain (ca. 67%) and burnished plain (ca. 11%) increase in frequency.

Radiocarbon determinations indicate that the Beaverdam phase dates to approximately A.D. 1200–1300 (Rudolph and Hally 1985). Components are currently known only from the Russell Reservoir. It is the only component at the type site, Beaverdam Creek, and one of two Mississippian components at Rucker's Bottom (Anderson and Schuldenrein 1985). The prominent feature at the Beaverdam Creek site is a multistage platform mound (Rudolph and Hally 1985). This mound was seriously damaged by professional and nonprofessional excavations prior to its investigation by the University of Georgia in 1980–1981. The construction sequence begins with two superimposed square earthlodges or earth-embanked structures measuring 7 m square that are similar in most details to the Jarrett-phase structures at Tugalo. Walls were constructed with individually set posts (Rudolph 1984:Figure 4). A single large post was placed at each corner, and there was an entrance passage located in the south wall near the southeast corner. No central hearth could be identified in the pothunter-disturbed floors.

Eventually the last structure was filled in, and a low platform mound measuring 14 by 17 m at the base and 1.4 m high was erected over it. Four stages of mound construction could be identified, but little is known about the nature of the summit structures. Stage two, the best preserved, was approximately 18 m square at the base and 1.5 m high. A ramp leading to the summit was located on at least one of the mound corners.

The Beaverdam phase resembles Savannah III at the Irene site with respect to check stamping, curvilinear stamped motifs, and vessel shapes. Collared rims and corncob-impressed surface treatment, however, are features that appear to be restricted to the Piedmont and Appalachian portions of the Savannah River drainage. These last two features are characteristic of the Pisgah phase in the Appalachian Summit region (Dickens 1976; Moore 1981), and along

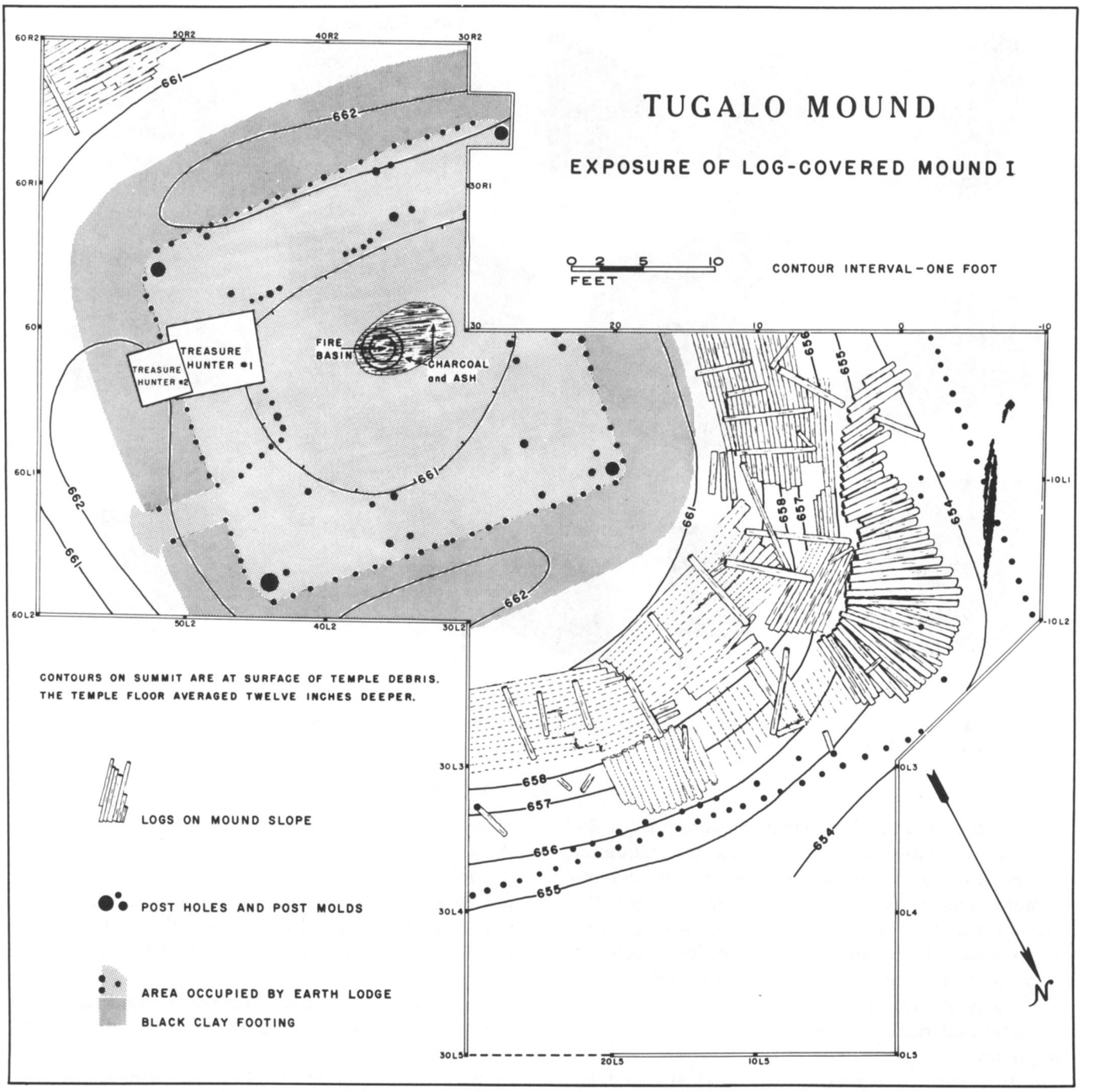

Figure 5. Earth-embanked structure on mound stage 1, Tugalo site. Drawing by Joseph R. Caldwell.

with several other shared ceramic features indicate at least partial contemporaneity between the two.

Hollywood Phase (ca. A.D. 1250–1350)

Test excavations by de Baillou (1965) in Mound A at the Hollywood site, located just below the fall line, yielded a pottery assemblage sufficiently distinct from that of the Beaverdam phase to merit recognition as a separate phase of Savannah culture. Check stamping is very common (ca. 41%), as is Savannah Complicated Stamped (ca. 14%), characterized by filfot-cross and related motifs (de Baillou 1965: Table 1). Etowah Complicated Stamped (< 1%) and corncob impressing (< 1%) are rare, and collared rims are absent. Plain and burnished plain account for 38% of all sherds in the type collection. New features include cane punctations and large riveted nodes impressed with cane punctations on unthickened jar rims (Reid 1965:Plates 4, 5).

The distinctive nature of the Hollywood phase ceramic complex probably reflects both regional and

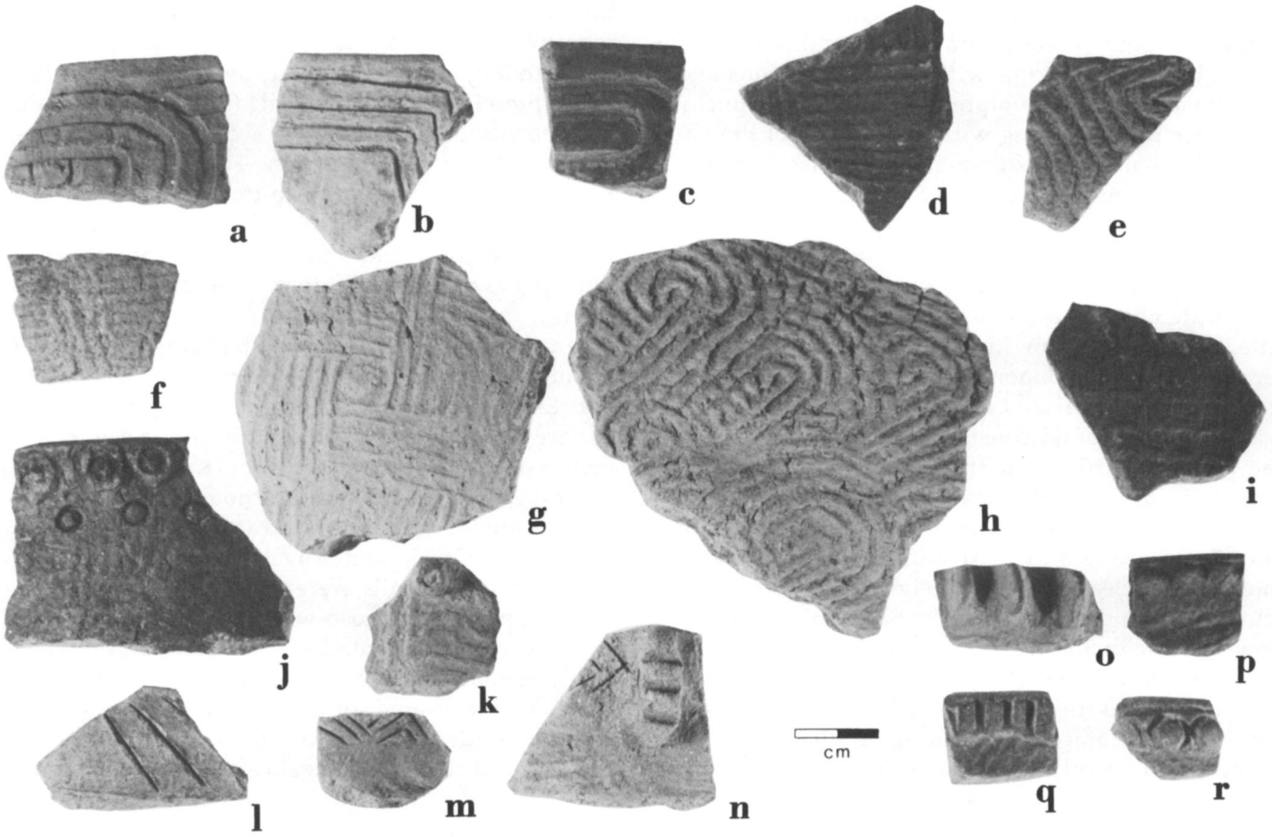

Figure 6. Rembert-phase pottery types and modes: (a–c) Lamar Incised; (d–h) Lamar Complicated Stamped; (i) check stamped; (j–k) unthickened jar rims with cane punctations and rosettes; (l–n) collared rims; (o–r) thickened jar rims with pinched, notched, and cane-punctated decoration.

temporal factors. Comparison with the Savannah II, Savannah III, and Irene phases on the coast (Caldwell and McCann 1941; DePratter 1979) and the Pee Dee phase in the North Carolina Piedmont (Coe 1952; Reid 1967) indicates that some ceramic features (i.e., a high frequency of check stamping and filfot-cross motifs, and rims with cane punctations and riveted nodes) are characteristics of sites located east and south of Hollywood. Two of these features are also characteristic of later phases—filfot cross in Irene, Rembert, and Pee Dee phases, and unthickened jar rims with cane punctations and riveted nodes in the Pee Dee phase—suggesting that Hollywood, while partially contemporaneous, extends slightly later in time than the Beaverdam phase. Overall, the Hollywood phase ceramic complex most closely resembles that of the Pee Dee phase. Available radiocarbon dates from the Town Creek site (Dickens 1976:198) suggest that Hollywood dates from approximately A.D. 1250 to 1350 (see also Hally and Rudolph 1986).

Caldwell (1952:319) reports that the later group of burials in Mound B at Hollywood was accompanied by both Savannah II and Irene vessels. This identification is apparently based on the co-occurrence of Irene Complicated-Stamped jars (with filfot-cross motifs, unthickened rims, cane punctations, and riveted nodes) with Savannah Check-Stamped vessels (Caldwell 1952:Figure 174). The same combinations occurred in de Baillou's (1965) sample from Mound A, indicating that these burials date to the Hollywood-phase component. Caldwell placed the earlier burial episode, with the unusual SCC artifacts, as early Savannah II. It is not clear, however, how he arrived at this conclusion.

Rembert Phase (ca. A.D. 1350–1450)

The early-Lamar Rembert phase appears to develop out of Hollywood or its upper-Savannah equivalent around A.D. 1350 (Hally and Rudolph 1986). As represented by the type collection, recovered from the Rembert mound group by Caldwell (1953), check stamping (ca. 1%), corncob impressing (ca. 1%) and collared rims (< 1%) continue, but in the case of the check stamping with substantially decreased frequency (Figure 6). Complicated stamping, in the form of Lamar Complicated Stamped, increases markedly in frequency (to ca. 41%), and continues to have both curvilinear (32%) and rectilinear (68%) designs. Identifiable motifs include concentric circles, figure nine,

filfot cross, and line block. Forty-eight percent of the pottery in the type collection is plain and burnished plain. Unthickened rims with cane punctations and rosettes (small nodes impressed with cane punctations) are present, along with early forms of the Lamar folded-and-pinched rim. Lamar Incised appears for the first time. It is not very common (< 1%), however, and is characterized by simple designs (horizontal lines interrupted by pendant festoons and loops) and carried out in two or three broad lines.

The Rembert phase is best known from the type site, located just below Russell Dam, and from Rucker's Bottom. A component is also represented in pottery Caldwell excavated from the margin of the Tugalo mound. Mound construction at Tugalo cannot, however, be attributed to the Rembert component on the basis of available stratigraphic evidence. The Rembert site may have been the largest Mississippian mound group on the Savannah River. Mound A measured at least 10 m in height, and four other mounds were present. Only the Silver Bluff site, below Augusta in South Carolina, may have been comparable in size (Jones 1873:152–157) (Figure 2). Little is known about the latter site, although it appears to have been occupied about the same time as Hollywood based on collections from fields and the river bank near where the site used to be. During the fourteenth and early fifteenth centuries, Rembert was almost certainly the most powerful center on the upper Savannah River, coeval with, or possibly replacing, Silver Bluff as paramount center.

Tugalo Phase (ca. A.D. 1450–1600)

The upper Savannah River south of Lake Hartwell appears to have been largely abandoned after the Rembert phase (Hally et al. 1985). There are no late-Lamar mound sites known from this area. In the Russell Reservoir, where fairly intensive surveys have been carried out (e.g., Taylor and Smith 1978; Gardner et al. 1981; Goodyear et al. 1983), no definite late-Lamar sites of any kind have been recorded.

The situation is different to the north along the Tugaloo River, where one late-Lamar phase, Tugalo, can be recognized and associated with mound building. The Tugalo phase ceramic complex is represented in collections from Tugalo, Estatoe, and Chauga, and appears to develop directly out of Rembert phase by A.D. 1450. In the sherd collection from mound stages 1–4 at Estatoe, check stamping continues to be infrequent (< 1%), while collared rims and corncob impressing disappear (Figure 7). Complicated stamping increases to approximately 60%, but the relative frequency of rectilinear (68%) and curvilinear (32%) motifs remains unchanged. Identifiable motifs include concentric circles, figure nines, simple stamped, and variations on the line block. Lamar Incised increases in frequency. Concentric circles and ovals and line-filled triangles are added to the Rembert phase repertoire of incised motifs, and decoration is carried out with larger numbers of narrower lines. Red filming is present in small amounts (< 1%), while plain and burnished-plain sherds account for approximately 29% of the collection. Folded-and-pinched rims increase in frequency to the point where they are the only rim form occurring on jars. Cane punctations, notches, and cut nodes are replaced by pinching as the dominant form of decoration on these rims.

It appears likely that mound building was carried out at Estatoe during the Tugalo phase. Structures 1–4 at Estatoe were erected on the aboriginal ground surface one above the other with only a few centimeters of fill separating each floor (Kelly and de Baillou 1960). These structures, although later in time, show a number of similarities to the earthlodges at Beaverdam Creek and Tugalo. Floor plans were square, exterior walls were constructed of individually set posts, large posts were placed in each corner near the walls, and central hearths were present. They also resemble the Beaverdam earthlodges in being placed on the ground surface and having only a small amount of fill separating each floor. They differ from the earlier structures at Tugalo and Beaverdam, however, in size (12 m versus 7 m), absence of earth embankments along outer walls, and absence of entrance passages. Eventually a mantle of large stones and earth was placed over the floor of the last structure, to form a platform mound approximately 0.5 m high. At least one structure (of undetermined form) was erected on this platform.

Mound stage 4, dating to the Jarrett phase, is the latest intact construction stage in the Tugalo mound. Caldwell (1956; Williams and Branch 1978) recovered Tugalo-phase pottery from several strata on the flanks of this mound, however, suggesting that mound construction also occurred during the Tugalo phase. The so-called "northeast dump" in particular yielded thousands of large fragments of pottery and several whole and nearly whole vessels which have been identified as refuse discarded from a Tugalo-phase mound summit (Duncan 1985).

No sixteenth-century European artifacts have been recovered from Tugalo-phase contexts. Comparison with the Barnett- and Dyar-phase ceramic complexes, however, suggests that the phase continues into the second half of that century (Hally 1979; M. Smith 1981).

The Lower Savannah Prehistoric Mississippian Sequence: Savannah I-III, Irene I Phases

Savannah I Phase (ca. A.D. 800–1100)

The prehistoric Mississippian sequence in the lower Savannah drainage is based primarily on WPA

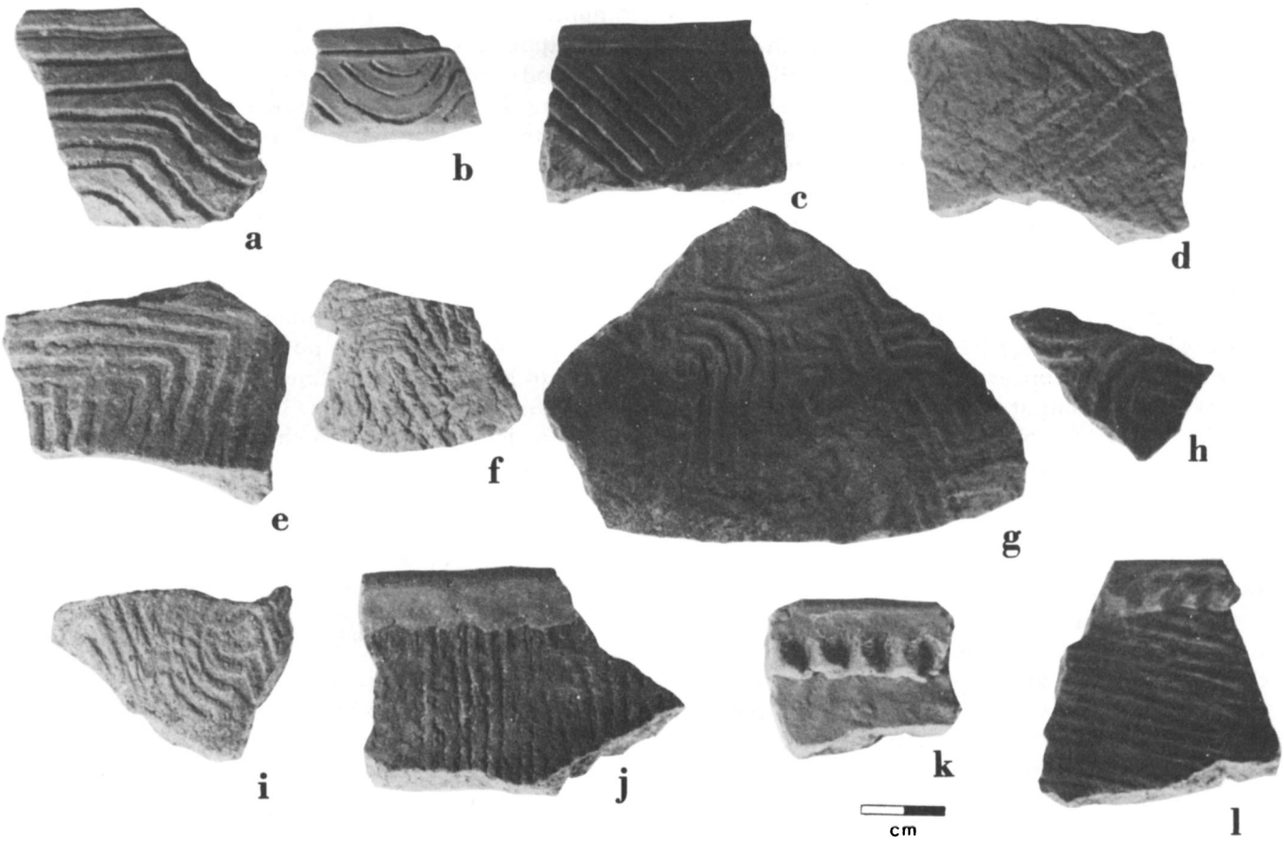

Figure 7. Tugalo-phase pottery types and modes: (a–c) Lamar Incised; (d–i) Lamar Complicated Stamped; (j–l) folded-and-pinched rims.

work at Irene and other nearby sites at the mouth of the drainage (Caldwell and Waring 1939a, 1939b; Caldwell and McCann 1941). This sequence has been variously refined through the years (e.g., Waring 1968c), with the latest formulation by DePratter (1979). DePratter's Savannah I phase runs from ca. A.D. 1150 to 1200 and is identified by the occurrence of Savannah Fine Cord-Marked, Burnished-Plain, and Plain ceramics; it succeeds his St. Catherines phase, which is dated from ca. A.D. 1000 to 1150.

The mouth-of-the-Savannah sequence for the Late Woodland/Early Mississippian, unfortunately, only works well in the extreme lower portion of the drainage (Figure 3). Resolution of "sand-tempered" Savannah pottery from the preceding grog-tempered St. Catherines series (which is also characterized by plain, burnished-plain, and fine cord-marked finishes, and net marking as a distinct minority) is possible only near the coast, where both pastes occur. In the interior Coastal Plain only sand tempering is present, and effective separation of St. Catherines/Savannah I equivalents is currently not possible.

Away from the coast Savannah I-like materials (sand-tempered plain, burnished-plain, and fine cord-marked ceramics) postdate Deptford and predate the appearance of Mississippian complicated-stamped ceramics (Stoltman 1974; Anderson 1986b). A sand-tempered bold cord-marked ware resembling the grog-tempered Late Woodland coastal Wilmington series in finish also occurs in this area and may reflect early Late Woodland occupations. Typical Savannah I finishes occur later than these interior, Wilmington-like assemblages (locally described as Cape Fear or Deptford), and appear to range in time from roughly A.D. 800 to 1100 (Figure 3). While there is some indication that later Savannah I wares exhibit greater rim modification—folded and stamped rims become more common—this remains to be securely demonstrated.

Savannah I components are common throughout the lower portion of the drainage, both along the floodplain and in the interriverine uplands. Evidence collected to date indicates that these components reflect an essentially Woodland, intensive hunting and gathering adaptation, prior to the presumed adoption of intensive agriculture and the concomitant nucleation, or shift in settlement, to the floodplain margins (see Stoltman 1974).

Savannah II/III Phases (ca. A.D. 1100–1300)

The appearance of Savannah Check Stamped, followed by Savannah Complicated-Stamped pottery,

has been used by DePratter (1979:111) to define the Savannah II (A.D. 1200–1250) and Savannah III (A.D. 1250–1300) phases at the river mouth. While there is clear stratigraphic evidence at a number of sites for this succession, the temporal range offered for the occurrence of these types, A.D. 1200 to 1300, appears far too restricted given the widespread occurrence of these finishes in collections from throughout the lower drainage. A somewhat broader span, from roughly A.D. 1100 to 1300, is suggested here as the probable range of maximum occurrence for these finishes. Check stamping is still assumed to predate considerably the appearance of complicated stamping, which is thought to come in about A.D. 1200. Rim forms during this interval are unmodified, while complicated-stamp motifs are dominated by concentric circles, figure nines, and barred concentric circles and diamonds.

Savannah III phase is best known from the Irene site (Caldwell and McCann 1941). Architectural features attributable to this component include stages 1–7 of the large platform mound, the initial stage of the burial mound, at least three "houses," and several enclosure walls. Stages 1 and 2 of the platform mound consisted of two superimposed, ground-level buildings. These were rectangular in plan, measured between 7 and 8 m on a side, and had earth and shell embankments against the outer walls. They were, in many respects, similar to the superimposed structures erected beneath the Beaverdam Creek mound. As in the latter case, a platform mound was eventually built over them (Rudolph 1984).

Upriver from the coast, the Lawton mound group, with platform mounds measuring approximately 2 m high, appears to have a Savannah II/III occupation, based on analysis of existing collections (Anderson 1975b). Rabbit Mount (38AL15) also has a Savannah II/III component (Stoltman 1974).

Irene I Phase (ca. A.D. 1300–1400)

The Irene I phase is identified primarily by the appearance of Irene Complicated-Stamped pottery, characterized by the filfot-cross and figure-nine motifs, and by the appearance of a variety of jar rim treatments. Irene Incised also appears for the first time, albeit in very low frequency. Caldwell (Caldwell and McCann 1941:41–42) argues that jar-rim modification began toward the end of the Savannah occupation at Irene and increased in frequency during the Irene I phase. According to Caldwell, large plain folded rims occurred in small numbers at the end of Savannah III, hollow cane punctations and riveted nodes with cane punctations were characteristic of the transition between Savannah III and Irene I, while rosettes and narrow folded rims with cane punctations were characteristic of the Irene component. This sequence of changes parallels that seen in the upper Savannah drainage in the Beaverdam, Hollywood, and Rembert phases.

Irene I phase is best known from the Irene site. Architectural features attributable to the component include the final stages of the platform and burial mounds; the "mortuary," a rectangular structure with encircling walls; the "rotunda," a circular wall-trench structure measuring approximately 37 m in diameter; enclosure walls; and at least one rectangular house.

The mouth of the Savannah River and presumably the entire Coastal Plain portion of the drainage appear to have been abandoned after Irene I (Hally et al. 1985; Anderson 1986a, 1986b). Aboriginal occupation does not occur in the area again until well into the historic period.

Mississippian Research in the Savannah River Basin: Current Approaches

Chronology and Taxonomy

As has been demonstrated by the preceding review, a fairly refined cultural sequence and chronology has emerged for the Mississippi period in the Savannah River basin in recent years. This sequence is supported by detailed ceramic-taxonomic analysis and a fair number of radiocarbon dates. Through the use of specific ceramic attributes, primarily those related to rim treatment and stamp motif, temporal resolution on the order of 100–150 years is possible for most assemblages dating between roughly A.D. 1000 and 1600. Over this interval, considerable continuity is evident and, while some areal differences are evident, ceramic assemblages are quite comparable throughout the drainage. The only portion of the basin where there is some uncertainty about the Mississippian sequence is in the inner Coastal Plain, where the age of the Silver Bluff site, and its relationship to the Hollywood and Rembert phases is still poorly understood. Collection of information about Silver Bluff, as well as comparison of these materials with collections from Hollywood, Rembert, and other Savannah River sites, is a critical subject for future research.

Characteristic South-Appalachian Mississippian complicated-stamped ceramics (Holmes 1903:130–133; Griffin 1967; Ferguson 1971) are not well represented along much of the Savannah drainage until roughly A.D. 1100. Only trace occurrences of Woodstock and early-Etowah ceramics have been found to date. The twelfth- and thirteenth-century Jarrett, Beaverdam, and Savannah II/III phases are thus the first local Mississippian societies well represented in the archaeological record from the basin. Whether this means that the Mississippian adaptation itself (sensu Griffin 1967:189; B. Smith 1978:486–488), particularly

the adoption of intensive agriculture, occurred earlier remains unknown.

Knowledge about the immediate antecedents of these societies will be essential to understanding how and why the Mississippian adaptation emerged in the Savannah River basin. A Middle–Late Woodland sequence has been established for the mouth of the river, but none has been formally worked out for inner Coastal Plain and Piedmont portions of the drainage. In the interior Coastal Plain, effective microseriation of cord-marked ceramics appears to be crucial in the identification of later Woodland sites (Anderson 1986b). In the Piedmont, a late-Swift-Creek/Napier Anderson phase has recently been defined (Wood 1984; Wood et al. 1985), based on collections from the Simpson Field site (38AN8) in the Russell Reservoir and the submound midden at Tugalo. These materials, together with the Napier component at Rucker's Bottom (Anderson and Schuldenrein 1985:362–366) and the Woodstock components at Estatoe and Chauga, indicate that a sequence similar to that defined in northwest Georgia, running from late Swift Creek through Etowah, may be postulated for the upper Savannah River (Wood et al. 1985; T. Rudolph 1985).

The picture may not be this simple, however. Within the last few years it has become evident that the later Woodland over much of South Carolina and southeastern Georgia was characterized by rather undistinguished assemblages of plain, cord-marked, fabric-impressed, and simple-stamped wares, most of which have traditionally been assigned to much earlier periods. In the South Carolina Coastal Plain, for example, a Late Woodland simple-stamped horizon—dating from A.D. 800 to 1200—has recently been documented (Anderson 1982:302–308); traces of this complex occur along the lower Savannah River (Anderson 1986b). In the Georgia–South Carolina–North Carolina area, including the upper Savannah River, Connestee/Cartersville-like plain, brushed, and simple-stamped assemblages have recently been found in later Woodland contexts (Manning 1982; Purrington 1983:142; Anderson and Schuldenrein 1985:340–347). Additional field research is needed to clarify the chronological and cultural relationships between these brushed/simple-stamped complexes and those characterized by complicated stamping.

The Emergence of Mississippian Societies in the Savannah River Region

How and why Mississippian societies emerged in the Savannah River basin is still very poorly understood. The apparent continuity in ceramics from late Swift Creek times that is evident in the upper Savannah basin suggests a development from indigenous populations. If a local development, it may well have been triggered by the presence of Mississippian societies further to the west, at Etowah, Macon Plateau, and possibly within the Oconee drainage. In this view, increasing competition for resources—deer (Hickerson 1965; Gramly 1977) or agricultural land (Larson 1972)—may have forced the development of more complex forms of sociopolitical organization in many areas as a defensive reaction to encroachment.

While there is no evidence for outright population replacement in the Savannah drainage—as might be expected under a migration hypothesis (B. Smith 1984)—the imposition of a chiefly elite on local populations by polities established elsewhere is at least a possibility. At the present level of archaeological resolution, this possibility cannot be rejected. Analysis of local Late Woodland and initial Mississippian skeletal remains for genetic continuity—particularly within the emergent chiefly elite—might be one method of examining this problem.

While the reasons why local Mississippian societies emerged remain obscure, considerable data exist documenting changes in settlement and site organization during this interval. Where areally extensive, well controlled surveys have been conducted—such as on the Savannah River Plant site or in the Russell Reservoir area—the Woodland-to-Mississippian transition is characterized by a shift from numerous small, widely dispersed sites to fewer, larger settlements located near the floodplain. This shift is thought to reflect a change in subsistence practices, from a Late Woodland pattern of intensive, scheduled collection of wild resources in a wide array of microenvironments, to a Mississippian pattern of intensive agriculture on fertile floodplain soils and the exploitation of a few favored microenvironments for wild foods (Murphy and Hudson 1967; B. Smith 1978; Brooks and Canouts 1984; Ferguson and Green 1984). While this view may be correct, considerable testing of it will be necessary, particularly given the near-absence of subsistence data (or data of any kind) from Late Woodland sites in the drainage.

Only minimal data on the size of individual Late Woodland and Mississippian components, in fact, are currently available from the Savannah drainage. Most information is based on the areal extent of surface artifact scatters. Only a comparatively few Mississippian sites—ceremonial centers such as Irene, Beaverdam Creek, and Lawton, or villages like Rucker's Bottom and Clyde Gulley—have been examined in sufficient detail to document component size. Larger communities, and centers with pronounced ceremonial/mortuary and (in some cases) defensive facilities, however, clearly occur locally in the Mississippi period and are not currently recognized in the Late Woodland.

Perhaps the most unambiguous architectural

change occurring in the Savannah River basin during the earlier Mississippian is the replacement of earthlodges (or similar community/ceremonial structures) by platform mounds. Rudolph (1984) has suggested that this replacement may reflect broad changes in sociopolitical organization, specifically the emergence of a chiefly elite, with a concomitant restriction of public access to ceremonial facilities. A limited test of this model using data from the Beaverdam mound site proved interesting. Little difference was noted in the apparent status composition of the groups interred in or below the earthlodge and in subsequent mound stages at the site. Higher-status people tended to be buried in all of these structures, while presumably lower-status individuals—at least those with no associated grave goods—occurred primarily in the village (Rudolph 1984:43-44; Rudolph and Hally 1985). This suggests that the emergence of local (chiefly?) elites may have predated the construction of platform mounds in this area.

The Organization and Operation of Mississippian Polities in the Savannah River Basin

A considerable body of synthetic research into the operation and evolution of Mississippian societies in the Savannah River basin has appeared in the last few years, almost all the direct or indirect result of CRM-mandated contract research. Most notable have been the analyses associated with the 1980-1982 excavations at the Beaverdam Creek and Rucker's Bottom sites in the Russell Reservoir. Major reports documenting this research have already appeared (Anderson and Schuldenrein 1985; Rudolph and Hally 1985), together with a number of derivative papers (Anderson and Schuldenrein 1983; Hally 1984b; J. Rudolph 1984, 1985).

The archaeological records at Rucker's Bottom and Beaverdam Creek, taken together, provide insight into the structure, operation, and evolution of Mississippian polities in the Savannah River basin. These sites—a small ceremonial/political center and one of its (presumed) subsidiary villages—illustrate in microcosm the sacred and secular sides of a local Mississippian polity. The relationship between its elite and its ordinary citizens, in life as well as in death, can be seen in the records of these two sites. The site histories, in turn, documenting the emergence, peak, and decline of these settlements, help shed light, in a small way, on the evolution of chiefly polities.

Seventy-five burials were excavated from these sites, 51 from Beaverdam Creek and 24 from Rucker's Bottom. Age, sex, stature, and gross skeletal pathologies were recorded for all of these specimens (Blakely et al. 1985; Weaver et al. 1985). The Rucker's Bottom sample was additionally subjected to radiographic examination for Harris lines (indicative of periods of stress or trauma during the period of growth); microscopic analysis of mid-femoral thin sections (to determine bone structure and hence individual health), inspection for episodes of enamel hypoplasia (reflecting recovery from dietary stress or other trauma during early childhood), and trace-element analysis (of Zn, Mg, Sr, and Ca) to assess general nutritional patterns (Weaver et al. 1985).

Not unexpectedly, probable status differences were evident within the burial assemblages. At Rucker's Bottom grave goods were fairly simple, and were found with about half of the Beaverdam-phase interments (N = 7; 53.8%). The later, Rembert-phase burials at the site, in contrast, only rarely had grave goods of any kind associated (N = 1; 10%), suggesting differences in interment practices. No spectacular grave associations indicative of marked status differentiation were noted on the site, nor was an appreciable age or sex bias noted in the occurrence of grave goods. Adult males did, however, tend to have slightly more elaborate grave goods—pots or beads as opposed to bone pins, rattles, or cobble tools—than adult females (Weaver et al. 1985:593).

A considerably different picture was obtained at the Beaverdam mound site. There, burial in the mound was clearly indicative of high status, at least for approximately one third of the interments (N = 14; 27.6%), which were characterized by unusually elaborate burial treatment and/or grave goods (Rudolph and Hally 1985:331). Only one of the nine burials found in the village area of the site, in contrast, had associated grave goods. Greater social differentiation, reflected in treatment at death, appears to have characterized life at the center as opposed to in the outlying village.

Males buried at the mound site tended to be several centimeters taller ($\bar{x}$ = 175.2 cm; N = 7) than those at Rucker's Bottom ($\bar{x}$ = 170.6 cm; N = 3), possibly reflecting better diet and/or living conditions. Little difference in female stature was noted between the two sites; it must be cautioned that for both sexes the sample sizes are small. Although detailed comparative analyses have not been undertaken, the skeletal sample from Beaverdam Creek differs markedly from that at Rucker's Bottom in having little evidence for dental decay or other disease. General skeletal pathologies—arthritis, localized periostitis, chronic osteomelitus, blastomycosis, and possibly tuberculosis—were diagnosed at both sites, but occur with far lower incidence at Beaverdam Creek mound. The individuals interred at the mound site appear to have been in much better condition, on the average, than their counterparts in the Rucker's Bottom Beaverdam-phase component.

At Rucker's Bottom, where two successive Mississippian village occupations occur, trace-element

analyses found little conclusive evidence for dietary change. A significantly higher incidence of zinc was observed in the earlier sample, suggesting greater meat consumption during the Beaverdam phase than during the Rembert phase. (This pattern was also indicated by the strontium values, although the differences were not statistically significant.) This may reflect the increased importance of other foods—corn and other starchy plants, such as acorns—in the later Mississippian occupation, something suggested by the paleobotanical analysis from this site (Moore 1985: 693).

Detailed analyses of subsistence remains were undertaken at both sites (e.g., Moore 1985; Scott 1985; Reitz 1985; Gardner 1985). Beaverdam-phase occupations at both sites apparently made use of a wide range of plant and animal resources in addition to agricultural domesticates, suggesting a generalized subsistence strategy. A shift to a more focused subsistence economy is evident in the later, Rembert-phase component at Rucker's Bottom, possibly the result of increasing agricultural intensification (Speth and Scott 1984). Changes in nut utilization, particularly a decrease in hickory nut and an increase in acorn over this same interval, may reflect increasing caloric (as opposed to strict protein) requirements for the population. The change in nut use and wood species diversity observed at the site also suggests the increasing exploitation of the surrounding forest matrix. A shift from mature to immature successional communities is suggested, possibly due to increased land clearance associated with agricultural food production (Moore 1985:686–693).

The early Mississippian (Beaverdam phase) faunal species list from Rucker's Bottom is nearly identical to that obtained from Beaverdam mound (Scott 1985: 661; Reitz 1985); a somewhat greater abundance of fish at the mound center is the only major difference between these assemblages (J. Rudolph 1985). No obvious dietary differences or restrictions are suggested between the two site types by the species data. Deer skeletal-element composition differs somewhat between the two sites, however, suggesting processing/consumption patterns. Deer were returned largely intact to the Beaverdam mound site (Reitz 1985:407); in the Beaverdam-phase village at Rucker's Bottom there is some evidence that meat was leaving the site, perhaps as tribute (Scott 1985:663–664). In the Rembert-phase village at Rucker's Bottom, in contrast, a pattern of on-site consumption like that noted at the mound center was observed.

The trends in settlement, subsistence, and mortuary behavior observed at the two sites appear closely related to changes in the regional political landscape. During the Beaverdam phase the mound site may have been the dominant political center in this portion of the drainage (although its precise relationship with Rembert must await better data on the earlier occupations at that site). An unfortified village was present at Rucker's Bottom at this time, suggesting a fairly stable cultural landscape (if an absence of fortifications can be equated with a general absence of warfare). A highly diversified subsistence economy was practiced, with small hamlets and villages scattered up and down the river, located on favorable terrace soils. Fairly egalitarian mortuary practices are suggested within these individual communities, although elites were interred with considerable pomp at the centers. Skeletal evidence suggests that these elites lived and ate considerably better than the commoners; some of their food may have come in the form of tribute from these outlying communities. Although a simple chiefly center–village–hamlet hierarchy is evident, the presence of council houses, or rotundas, suggests some decision-making authority resided at the village level.

Some time after A.D. 1300 or so the Beaverdam mound center was abandoned, with ceremonial/political control (apparently) passing to the Rembert mound group downstream. This abandonment was accompanied by the appearance of simple fortifications at Rucker's Bottom and the apparent emergence of that site, at least partially (as evidenced by meat consumption patterns), from a subservient or tributary role. A focalization of subsistence effort ocurred, possibly reflecting increasingly intensive use of agriculture, a pattern also suggested by changes in floodplain successional communities. The appearance of fortifications may reflect the greater distance of the village from the center and an increased need for the inhabitants to protect not only themselves, but also the occupants of surrounding hamlets. A fair degree of instability in the local Mississippian polity may be indicated by the change in centers and the emergence of fortifications.

These trends also appear to reflect changing political conditions throughout the South Appalachian area. After about A.D. 1450 the entire lower portion of the Savannah River was abandoned, including sites and centers like Irene, Silver Bluff, Rembert, and Rucker's Bottom. Only minimal evidence for late-prehistoric Mississippian settlement, in the form of a few stray sherds, has been found in the Piedmont region south of Lake Hartwell. The fortifications at Rucker's Bottom appear less than a century before this abandonment occurred, and suggest increasingly difficult conditions in the drainage.

Recent ethnohistoric research has documented the existence of three geographically extensive, complex chiefdoms in the South Atlantic area at the time of initial European contact, about A.D. 1540 (Smith and Kowalewski 1980; Shapiro 1983; DePratter et al. 1983; Hudson et al. 1984, 1985). These polities included the province of Coosa, centered on northwest Georgia

and extending from east-central Alabama into eastern Tennessee; the province of Ocute and a series of affiliated, lesser chiefdoms in central Georgia; and the province of Cofitachequi, extending from central South Carolina into central and western North Carolina. The abandonment of the lower Savannah River after A.D. 1450 appears to be directly linked to the rise of the rival provinces of Ocute and Cofitachequi, which were separated by an extensive buffer zone at the time of the de Soto entrada (Hudson et al. 1985). Only the Mississippian polities at the northern end of the drainage survived the political events of the fifteenth century (Hally et al. 1985) and lasted into the historic era.

Conclusions

From this review of prehistoric Mississippian settlement in the Savannah River basin, a number of topics for future research are evident. Continued field research will, of course, be essential, particularly the documentation of sites, centers, and segments of the drainage about which little is currently known. Basic settlement/chronological data of this kind are essential to the accurate reconstruction of Mississippian political geography. Equally important, however, is the need to confront questions of change—how and why, for example, these local Mississippian polities emerged, evolved, and declined. The abandonment of the lower drainage in the fifteenth century is perhaps the most dramatic event warranting explanation. The rise and fall of chiefly polities is a hallmark of Southeastern Mississippian, however, and appears an area for research that can be profitably addressed in the Savannah River valley.

Notes

Acknowledgments. The authors wish to thank the following colleagues for their advice at various stages of the research presented here: Mark J. Brooks, David S. Brose, Chester DePratter, Richard I. Ford, James B. Griffin, Glen T. Hanson, Teresa P. Rudolph, Gary Shapiro, Vincas P. Steponaitis, Stephen Williams, Mark Williams, W. Dean Wood, and Henry T. Wright.

Collections. Collections from the Russell Reservoir project are maintained by the University of Alabama at Mound State Monument, Moundville.

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