

Late Holocene Period, 3750 to 650 B.C.

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Late Holocene populations in the southeastern United States continued and expanded on the hunting and gathering economies of ancestral populations in a milieu of increased cultural diversity and technological innovation, most notably pottery. These developments coincide with the establishment of essentially modern climatic conditions following the Middle Holocene period of elevated global temperatures. Diminished rates of sea-level rise promoted the establishment of increasingly productive estuarine environments, as well as maturing floodplain habitat. Evidence exists for permanent settlement of coastal locations, where pottery first appeared about 3200 B.C.* At first slow to spread, ceramic vessel technology was adopted by virtually all regional populations by about 650 B.C. Local variations in pottery technology and style reflect growing diversity of cultural expression. Regional exchange and intergroup ritual at locations of ceremonial earthworks were among the means by which members of different populations interacted. The panregional spread of mortuary ceremonial institutions and greater use of native cultigens in certain subregions mark the end of the period at about 650 B.C.

The culture-historical division between Archaic and Woodland traditions of the Late Holocene is difficult to defend on material traits alone. However, the division is still useful in delimiting major historical trends in each of the respective periods. The Late Archaic period (3750–1250 B.C.) witnessed an elaboration of the late Middle Holocene trend of increasingly intensive use of coastal and riverine locations throughout the region (fig. 1). Technological innovations in these contexts include ground and polished stone tools, storage facilities, and, in the certain subregions, ceramic and stone cooking vessels. Long-distance exchange of a variety of materials and products was elaborated over the preceding period, reaching the pinnacle of scale and complexity in the Poverty Point network of about 1700–1250 B.C. During the ensuing Early Woodland period, long-distance exchange and intensive land-use waned as many regional populations assumed more dispersed settlement patterns. Under these new circumstances pottery became

widespread and stylistically diversified, and native species of starchy and oily seed-bearing plants continued toward the path of domestication that began a millennium earlier.

Late Archaic

By the onset of the Late Archaic period, largely modern environments had been established, and thus sites of the period are located in contemporary zones of inhabitable land and favorable resources. The known number of Late Archaic sites regionwide increased by about 40 percent over the Middle Archaic period, a trend almost certainly attributable to widespread population growth (D.G. Anderson 1996a; Steponaitis 1986:373). No major geographic gaps exist in the distribution of sites across the greater Southeast. Locations underutilized or abandoned during the Middle Holocene, notably portions of the Gulf and Atlantic coastal plains, had once again become populated, and coastal zones throughout the region became major centers of settlement.

Perhaps the most defining environment factor of the Late Archaic period was the expansion of wetland habitat throughout the region. This process occurred on two major fronts. Along the primary rivers of the interior Southeast, terraces stabilized as flow velocity and bedload adjusted to increased precipitation and lowered channel gradients compared to the Middle Holocene (Schuldenrein 1996). In coastal zones the diminishing rate of sea level rise after 4850 B.C. enabled the establishment of estuarine habitats in the generally modern configuration. Concomitantly, groundwater levels rose as near-surface aquifers responded to rising sea levels, resulting in a mosaic of freshwater wetland habitat in lower coastal plain environs and peninsular Florida. The result was an enhanced regional landscape of well-watered habitat whose aquatic resource potential appears to have enabled increasingly redundant or permanent human habitations at coastal and riverine locations (Russo 1996a reviews evidence for coastal settlement before 3750 B.C.).

Interior Riverine Populations

The origins of freshwater shell exploitation and attendant riverine settlement can be traced back 7,000 years to the Midsouth in a tradition known as the Shell Mound Archaic.

*Dates in this chapter are reported as approximated calendar ages using the Calib 4.3 program employing extended radiocarbon calibration (Stuiver et al. 1998). All such values are rounded to the nearest half-century to approximate calendar ages in lieu of data on sample variance.

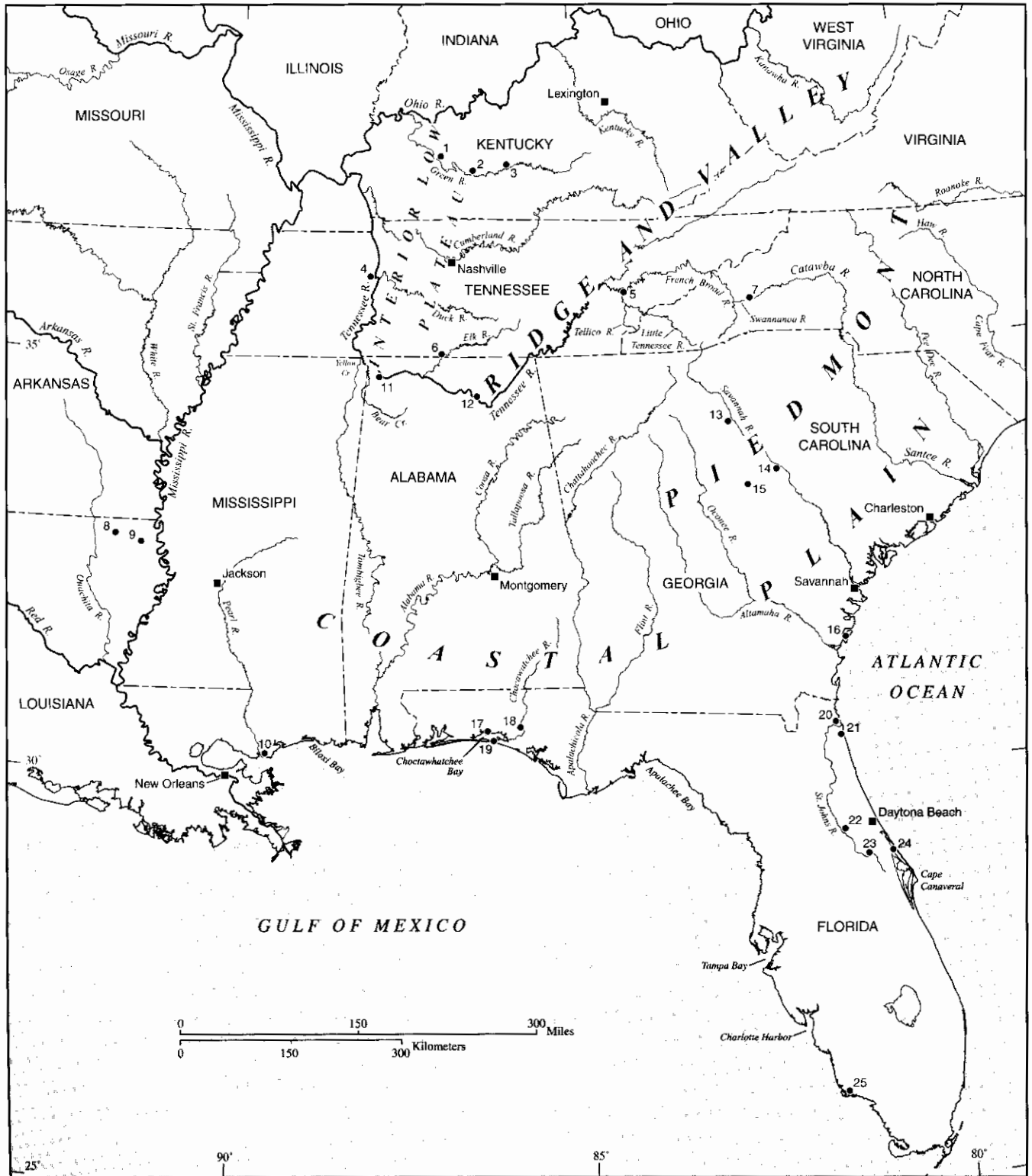


Fig. 1. Archeological sites of the Late Holocene until 650 B.C. Kentucky: 1, Indian Knoll (15OH2); 2, Carlson Annis (15BT5); 3, Mammoth Cave (15ED1) and Salts Cave (15HT4). Tennessee: 4, Eva (40BN12); 5, Iddins (40LD38); 6, Bailey (40GL26). North Carolina: 7, Warren Wilson (31BN29). Louisiana: 8, Plantersville (no number); 9, Poverty Point and Lower Jackson (16WC5). Mississippi: 10, Cedarland (22HA30) and Claiborne (22HA35). Alabama: 11, Mulberry Creek (1CT27); 12, Flint River (1MA48). Georgia: 13, Paris Island (9EB21); 14, Stallings Island (9CB1); 15, Mill Branch (9WR4); 16, Sapelo Island (9MI23). Florida: 17, Miags Pasture Midden (8OK102); 18, 8WL1278 and 8WL1281; 19, Buck Bayou Mound (8WL90); 20, Rollins Shell Ring (8DU7510); 21, Spencer's Midden (8DU5626); 22, Mount Taylor (8VO19) and Bluffton Midden (8VO22); 23, Tick Island (8VO24); 24, Tomoka Mound (8VO81); 25, Horr's I. (8CR205-209, 211).



U. of Ala., Ala. Mus. of Nat. Hist., Tuscaloosa: neg. 62Ma48.

Fig. 2. Buried shell midden at the Flint River site, Ala. The shell midden sloped from the inland part of the site down to the water and was over 3 m in depth. In the center, two Archaic pits are visible in the wall section showing how the soil differs from the earlier deposits they penetrate. Pits were used for cooking ovens, hearths, storage, for the soil they contained, and for burials (W.S. Webb and D.L. DeJarnette 1948). The lowest and hence earliest deposits of shell midden here predate the use of pottery in this region.

The increasingly intensive use of interior riverine habitat that began in the Middle Holocene continued in the ensuing millennia as fluvial systems grew increasingly stable and mature. The use of freshwater shellfish intensified during the Late Archaic period, leading to large accumulations of midden deposits at sites along the Green, Tennessee (fig. 2), and lesser rivers of the Interior Lowlands. While the increased volume of midden indicates more intensive use of particular locales, unequivocal evidence for permanent occupation is lacking. Rather, a seasonal settlement round involving cool-season dispersal into interriversine upland zones and warm-season aggregation at locations along major rivers likely characterized the settlement patterns of most Late Archaic groups (Bowen 1977; Dye 1996; Prentice 1994). Evidence for permanent architecture and community patterning at shell midden sites is sparse (cf. Winters 1969). Nonetheless, the large number of human interments at sites on the Green and middle Tennessee rivers (W.S. Webb 1946, 1950, 1950a; W.S. Webb and W.G. Haag 1940, 1947; W.S. Webb and D.L. DeJarnette 1942) provides evidence for long-term, repeated use of locations for purposes other than food gathering. The prevalence of burials at certain Shell Mound Archaic sites led Claassen (1991, 1991a) to suggest that shell was sometimes deposited for expressly mortuary purposes. Others view burials as incidental to routine habitation (Hensley 1994; Milner and Jefferies 1998).

Some of the best data available on Late Archaic shell middens of the Midsouth come from sites along the Green River of Kentucky (C. B. Moore 1916; W.S. Webb 1946, 1950, 1950a; W.S. Webb and W.G. Haag 1939, 1940, 1947). The discovery of domesticated plants in caves suggested that cultigens may have enabled relatively permanent settlement at shell-bearing sites (Yarnall 1974, 1974a). However, exca-

vations at the Carlson Annis shell mound proved otherwise (Marquardt and Watson 1983). Instead of the suite of starchy seeds (sunflower, marsh elder, goosefoot, maygrass, and amaranth) recovered from cave samples (Yarnell 1974, 1974a), the Carlson Annis floral remains were dominated by hickory nut, with minor occurrences of acorn, black walnut, and seeds of blackberry, grape, persimmon, and several other wild plant species (G. Crawford 1982). Additional subsistence data from this and other sites suggested that riverine resources were emphasized from late spring through early fall, and that upland resources (near caves) were targeted from late fall to early spring (Prentice 1996). Starchy seeds were apparently valued for their storability and thus potential for sustaining groups over the winter and early spring. Although caves in the middle Green River region were not utilized regularly until the Early Woodland period (M.C. Kennedy 1996), and even then primarily for purposes other than habitation, numerous upland, open-air sites and burned rock middens dating to the Late Archaic period are testimony to seasonal settlement relocations away from riverine shell mounds (Hensley 1994; Prentice 1994).

A second major venue of the Shell Mound Archaic in the Midsouth is the middle Tennessee River valley of northern Alabama and Tennessee. Although shellfish collection began as early as 5900 B.C. at Eva (T.M. Lewis and M.D. Lewis 1961) and Mulberry Creek (Webb and DeJarnette 1942), most shell deposits date to Late Archaic times or later (W.S. Webb 1938, 1939; W.S. Webb and D.L. DeJarnette 1942). Hopes of locating the remains of habitation structures were generally unfulfilled, while the complexity of midden deposits routinely compromised attempts to reconstruct culture-historical sequences from stratigraphic observations alone. Aside from occasional research on the Works Progress Administration collections (Futato 2000) and limited cultural research assessments, modern investigations of middle Tennessee shell mounds comparable to those of the Green River have not been initiated. The area remains little understood from the point of view of culture history, settlement, subsistence, and intergroup relations. Still, it is likely that middle Tennessee populations, like those of the Green River, abandoned shell midden sites during the cool seasons, when climate is generally wetter, and relocated to adjacent upland tributaries such as Bear Creek in Alabama (Futato 1983) and Yellow Creek in Mississippi (J.K. Johnson 1981). Many of the middle Tennessee shell middens continued to be occupied regularly through the Early Woodland period (Peacock 2002).

A noteworthy aspect of the Shell Mound Archaic in the middle Tennessee River valley is the adoption of ceramic vessel technology after 1700 B.C. Known as Wheeler fiber-tempered pottery (W.G. Haag 1939; W.H. Sears and J.B. Griffin 1950), this early ware is assigned to the Gulf Formational Stage (Walthall and Jenkins 1976), which is divided into an early phase, characterized by Wheeler, and a late phase (about 850–200 B.C.), when the sand-tempered Alexander pottery series appears (Jenkins and Krause

1986:43). Wheeler pottery consists of wide-mouthed, flat-bottomed beakers and bowls with largely plain, but also punctate, dentate, and simple-stamped surface treatments (Jenkins and Krause 1986:33; Jenkins, Dye, and Walthall 1986:548). Little is known about the actual uses of this early pottery or its consequences on the subsistence economy. However, a study of Pickwick Basin stratigraphy (Futato 2000) shows that Wheeler pottery coincides with intensified use of shellfish.

Soapstone and sandstone vessels (fig. 3) occur in middle Tennessee River shell middens and sites in the adjacent uplands, sometimes in burials (Futato 1986:40; W.S. Webb 1948). These are widely regarded as precursors of pottery (Bense 1994; Caldwell 1958; Walthall 1980:70; B.D. Smith 1986:30; Steponaitis 1986:373–374), even though radiometric dates and stratigraphic contexts to confirm this sequence have been lacking. Dating of soot from soapstone sherds across the Southeast shows that the innovation of pottery usually preceded the widespread use of the stone vessels (Sassaman 1997, 1999a). Among those dated are sherds in association with Alexander pottery from sites in northern Alabama (Sassaman 1997).

Not all Late Archaic populations of the interior Southeast were involved with shellfishing, although most, if not all,



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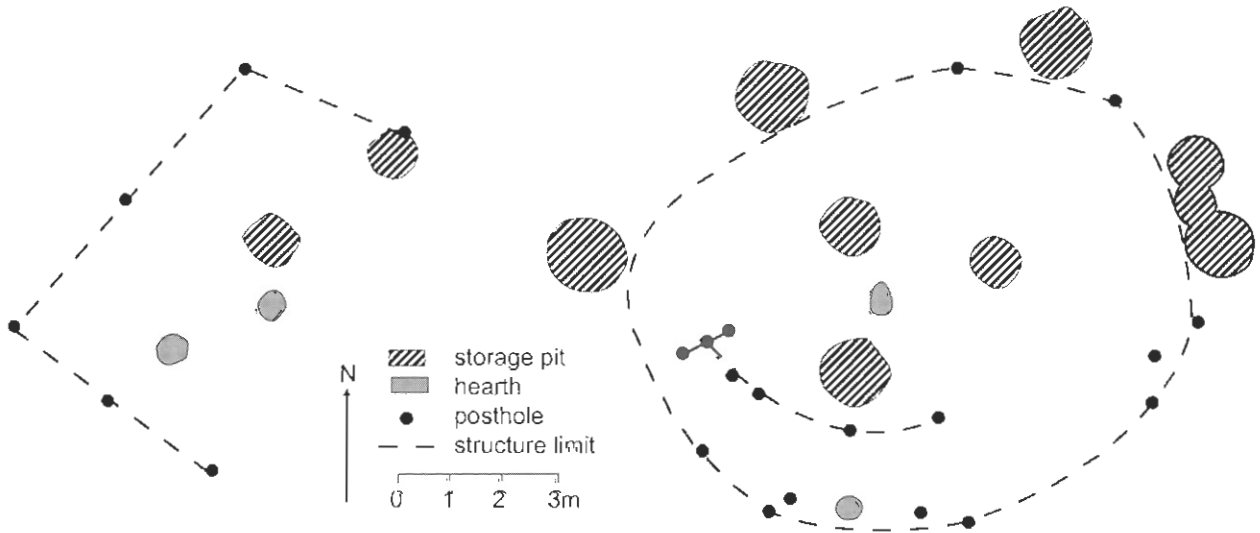
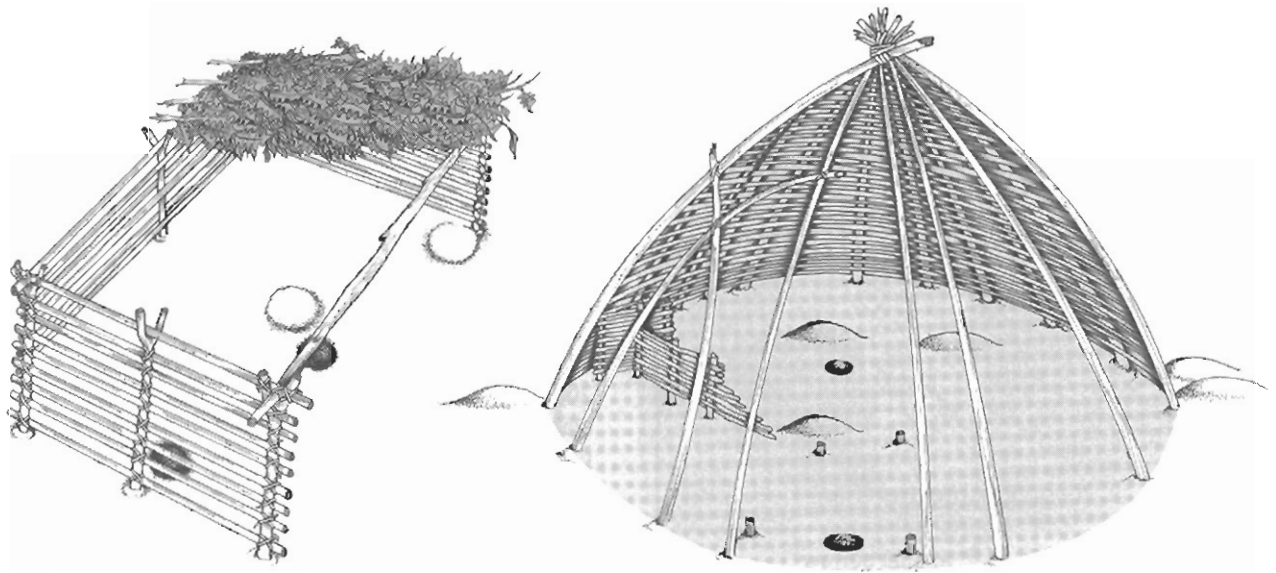
Fig. 3. Stone bowls from the Flint River site, Ala. The source of the steatite was the Appalachian mountains of Ga., S.C., Tenn., or N.C., while the sandstone was widely available. Because acquiring the raw materials and carving them into shape was a large investment of time and energy, stone bowls are uncommon. Bowl interiors were smoothed, but the exteriors were often unfinished, showing the marks from the tools used to make them, and sometimes sooting from use over fires. Bowls used as funerary offerings were often purposely broken before interment. top left, Ovoid sandstone bowl; top right, oval sandstone bowl with a round base; bottom left, flat-bottomed elliptical bowl with out-flaring sides; bottom right, Oval asymmetrical bowl showing evidence of mending. Two small perforations above the basal hole have ground edges; twine or sinew would have been used to lace the sherds together. Length of top left, 30 cm; top right, 41.3 cm; bottom left, 24.1 cm; bottom right, 48.3 cm.

took advantage of aquatic resources throughout the region. The Bailey site in Giles County, Tennessee is a case in point. Located on a tributary terrace of the Elk River only 30 kilometers from the Wheeler Dam of the middle Tennessee River, the Bailey site was a locus of seemingly year-round habitation from about 3750–3200 B.C. (Bentz 1988). A large assemblage of pit features included postholes for five structures. Two types of architecture were observed. Three open, rectangular structures measuring 4.0 to 7.0 meters long and 2.6 to 4.1 meters wide and with interior hearths and shallow (16 cm mean depth) to medium (51 cm mean depth) pits are interpreted by Bentz (1988:8) as single-family, warm-weather shelters. The other type, perhaps a winter house, was a fully enclosed structure measuring 8.9 by 10.5 meters with two internal hearths, and nine large (77 cm mean depth) pits, three inside and six outside the enclosure (fig. 4). Presumably, the large pits were used for winter storage.

Several lines of evidence point to the likelihood that inhabitants of the Bailey site were oriented on a year-round basis to this upland locale. Foremost is the co-occurrence of warm- and cold-weather dwellings and associated storage. Many pits are clustered and some superpositioned, evidence of repeated or long-term use of specific spaces on the terrace. In addition, human interments are present; at least seven of 10 burials examined were Late Archaic in age. Finally, a diverse array of food remains was recovered from Bailey. Along with an assemblage of fish bone dominated by suckers, catfish, sunfish, and drum were other aquatic resources, such as turtles and waterfowl, as well as terrestrial game, mostly white-tailed deer and turkey, but also opossum, woodchuck, beaver, muskrat, skunk, fox, racoon, rabbit, and squirrel. Hickory and walnut shell dominated the assemblage of plant remains.

Taken together, the evidence implies that Bailey inhabitants were part of a population oriented to an upland locale between riverine locations of Shell Mound Archaic groups. Whether they represent a truly distinct “ethnic” group or subpopulation is difficult to say. The only abundant diagnostic artifacts from Bailey are projectile points of the Benton, Ledbetter, Big Sandy II, and Little Bear Creek clusters, types that also occur at Shell Mound Archaic sites of the middle Tennessee River (Futato 1983).

The lower Little Tennessee River valley of eastern Tennessee provides additional information on riverine settlement outside the core area of the Shell Mound Archaic in the Midsouth. Investigations conducted in advance of the reservoir construction in the 1970s yielded a wealth of data on Late Archaic lifeways in the Ridge and Valley province. Late Archaic occupation in the area through about 1800 B.C. was substantial but not especially dense. During the Iddins phase (1800–1250 B.C.) the number of sites increased four-fold, with four-fifths of them located in the alluvial valleys of the Little Tennessee and Tellico rivers (R. Davis 1990:223–225). The change in site frequencies may be partly due to the differential visibility of sites in these deep



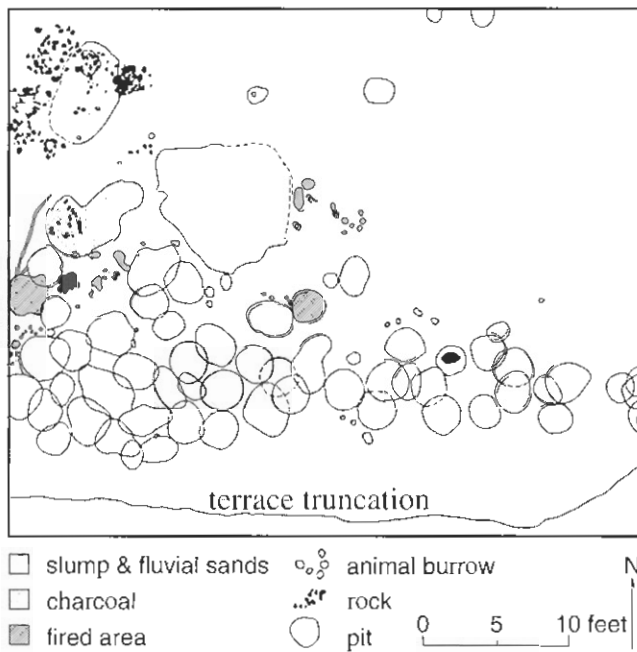
after Bentz 1996: left, figs. 32, 30; right, figs. 35, 33.

Fig. 4. Domestic structures found at the Bailey site, Tenn. Both structures were used for craft and production activities, as well as food processing and storage (Bentz 1988:8). left, Reconstruction and plan view of a rectangular shelter consisting of a 3-sided pole frame, 2 medium storage pits, and 2 hearths. This was a summer shelter or work area, similar to a ramada, and may have been roofed, right, Reconstruction and plan view of a multifamily winter house consisting of a pole frame, large storage pits, 2 hearths, and an interior wind-break to protect the main hearth. The superstructure was probably wattle and daub.

alluvial valleys, although the program of deep site testing conducted for the Tellico Reservoir ameliorated this bias somewhat.

Intensive riverine settlement is evident in the archeological remains of the namesake Iddins site (fig. 5) (J. Chapman 1981). Located on a terrace at the end of a series of shoals, Iddins appears to have been the locus of spring fish harvests from about 1800 to 1450 B.C. The location today supports large schools of suckers and other fish that aggregate at shoals each spring. Fish harvests involving traps and drive nets were observed by James Adair and others in the 1700s (J. Chapman 1981). Over 450 notched cobbles similar to

those described as net weights among historic Indians were recovered from Iddins. Also found were scores of rock-filled basins, which J. Chapman (1981) interprets as hearths for smoking fish. The remains of cultivated gourd and squash, wild forms of sunflower and marshelder, and grape and walnut reflect additional subsistence activities through the summer and early fall. Soapstone bowls were routinely used at the site for direct-heat cooking and represent one of the truly unequivocal occurrences of this technology prior to the local adoption of pottery. The Warren Wilson site on the Swannanoa River of western North Carolina yielded an assemblage of soapstone vessels, rock-filled basins, and



after J. Chapman 1981:fig.19.

Fig. 5. Iddins site, Tenn., showing detail of the Late Archaic horizon and the profusion of rock-filled pit features that lined the terrace overlooking the Little Tennessee River. Two heavily burned hearth areas and several areas of charcoal concentrations were present. The density and overlap of the pits indicates reuse of the site through time.

hafted bifaces similar to those at Iddins (Keel 1976). One of two radiometric dates from Warren Wilson's Late Archaic component is comparable to those from Iddins.

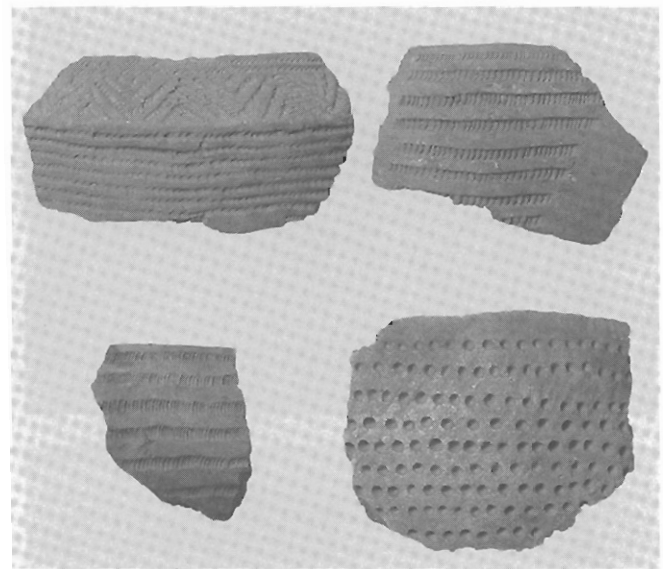
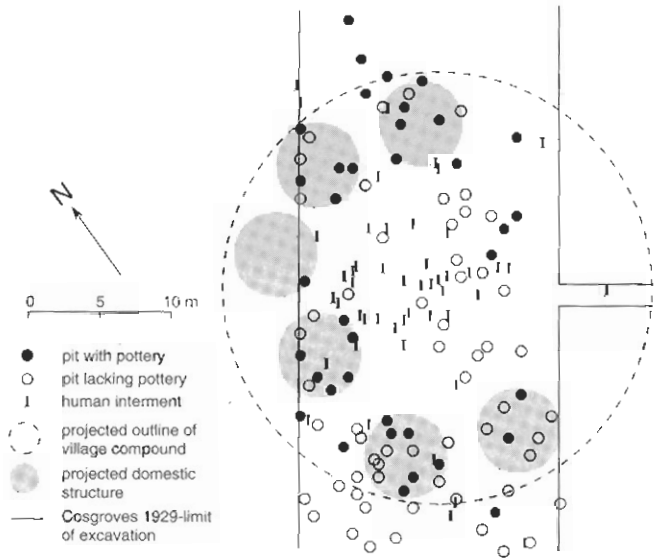
Noted for its abundance of coastal shell middens and rings, the South Atlantic Slope supported comparatively few riverine populations that chose to collect freshwater shellfish. One of the few examples is found in the middle Savannah River valley of Georgia and South Carolina, home to the Stallings culture of about 2500–1800 B.C. (Stoltman 1972). Noteworthy foremost for the innovation of pottery, populations of Stallings culture accumulated the remains of freshwater clam at habitation sites along the lower half of the Savannah River. Closely related coeval and possibly ancestral populations inhabited the coasts of Georgia and South Carolina. Variations in the technology and decoration of Stallings fiber-tempered pottery and related sand-tempered or nontempered Thoms Creek wares (Trinkley 1980a) are sufficient to suggest that the greater, regional population was divided into several discrete communities, with coastal and interior riverine groups perhaps the most distinctive (Sassaman 1993). Because the sequence of riverine settlement involving shellfishing along the middle Savannah is much shorter than those of the Midsouth—beginning later and terminating earlier—the culture history of the Savannah sequence is arguably better understood than elsewhere. Not only are many details of Stallings culture well documented, but also the outlines of its immediate

antecedents in the upper Savannah are well established (D.G. Anderson and J.W. Joseph 1988; Elliott et al. 1994; Ledbetter 1991; Sassaman et al. 1990). A significant result of this accumulated evidence is recognition of cultural diversity in the region, notably the coexistence of pottery making and aceramic groups over the interval of 3000 to 2250 B.C. (Sassaman 1993).

Interactions between ancestral Stallings groups of the Coastal Plain and indigenous (aceramic) Piedmont communities of the Paris Island (3200–2800 B.C.) and Mill Branch (2800–2250 B.C.) phases contributed to the genesis of Classic Stallings culture after about 2250 B.C. (Sassaman 2000a). The hallmark of Classic Stallings culture is the elaborate linear punctate and Drag and Jab punctate fiber-tempered pottery (fig. 6) common to middle Savannah shell-bearing sites. The type site, Stallings Island, is a seven-hectare island in the Savannah River, eight miles upstream from the city of Augusta, Georgia. Shell-bearing deposits on the island extend across 0.8 hectares of its topographic high and as much as three meters below surface along the perimeter of the deposit (C.C. Jones 1861; Clafin 1931). Shellfishing began as early as 2900 B.C., centuries before pottery was used on site in any significant fashion (Sassaman 1999). However, from about 2200 to 2250 B.C., when early Stallings groups from the Coastal Plain began to make increasingly greater use of middle Savannah sites, Stallings Island was unoccupied or at least underutilized. When intensive occupation of the site resumed after 2250 B.C., its resident population consisted of a community of small households (fig. 6) arranged in a circular compound some 30 meters in diameter, with a 15-meter diameter central "plaza" that was utilized for mortuary purposes, among perhaps other functions. Large storage pits, basins, and hearths accompanied each of the four to five-meter diameter structures, almost all containing decorated Stallings fiber-tempered pottery.

Two other sites within two kilometers of Stallings Island have yielded evidence for small circular village-plaza compounds dating to Classic Stallings times. Existing radiocarbon assays and other indirect evidence suggest these compounds were occupied simultaneously. If so, the local population can be estimated to total at least 90 to 100 individuals. Given the highly structured nature of these settlements, as well as the evidence for storage, it is reasonable to suggest that riverine occupations during Classic Stallings times were permanent. Spatial patterns in the distribution of technological and stylistic traits on Stallings pottery throughout the greater middle Savannah region suggest that coresident groups were structured around related females, consistent with a matrilineal postmarital residence pattern (Sassaman and Rudolphi 2001). How this aspect of social organization relates to circular village-plaza configuration remains uncertain.

The demise of Classic Stallings culture in the middle Savannah was rather abrupt, although it persisted on the coast and surrounding region for a few centuries more.



left, after Claflin 1931: pl. 7; right, Harvard U., Peabody Mus., Cambridge, Mass.: top left, 75826-v63; top right, 75961; bottom left, 20747; bottom right, 75850.

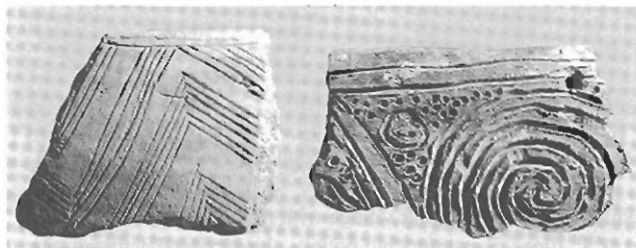
Fig. 6. Stallings I., Ga. left. Site plan at this dense riverine shell midden, which revealed a circular village with roughly circular houses. The site occupation spanned the time period of the invention and adoption of Stallings fiber-tempered pottery, the earliest dated ceramic series in North America, 2550–1050 B.C. right, Classic Stallings decorated ceramics: top left, Stallings Drag and Jab Punctate with rectangular motif on rim and parallel linear motif on body; top right, Stallings Drag and Jab Punctate with zoned motif; bottom left, Stallings Drag and Jab Punctate; bottom right, Stallings Separate Linear Punctate.

Stallings Island and related sites were abandoned at about 1800 B.C., and the freshwater shellfishing tradition of the region ceased to exist. A growing body of evidence points to a pattern of economic intensification over Stallings times. Fish figure prominently in the diets of Stallings groups from the onset of local settlement, but species diversity increased to include greater fractions of gar and suckers along with the preferred sunfishes and catfishes as the size of fish in general decreased. Turtles increased in importance as the frequency of deer decreased, and the average size of freshwater clam may have diminished. Preliminary analysis of terrestrial gastropods show diminished counts of species dependent on forest litter accompanied by increased proportions of species tolerant of open conditions. Together with technological innovations such as pottery and storage, the Stallings pattern suggests an unrelenting trend of economic stress, perhaps due in part to overexploitation of local habitats by increasingly permanent or redundant settlement patterns. The ultimate consequence of these apparent pressures was abandonment of the middle Savannah and the resumption of more mobile, less intensive land use in ensuing centuries. Some of the closely related communities of the South Carolina coast appear to have abandoned sites at about this same time, suggesting that the fate of riverine and certain coastal groups were intertwined, owing to either pan-regional environmental factors, sociopolitical interdependencies, or, most likely, some combination of the two.

The Saint Johns River valley of northeast Florida was home to populations of Late Archaic peoples who, like their

Savannah River counterparts, collected freshwater shellfish and made fiber-tempered pottery (fig. 7). Known locally as Orange fiber-tempered pottery (R.P. Bullen 1972), the innovation appears at about 2500 B.C. to become the chief diagnostic artifact of the ensuing millennium of intensive riverine and coastal settlement. Unlike the middle Savannah sequence, the tradition of riverine shellfishing does not terminate in the second millennium B.C. but instead continues well into late prehistoric times. After about 1450 B.C. Orange fiber-tempered pottery gives way to the long-lived Saint Johns pottery tradition, whose hallmark is the sponge-spiculate paste that renders it chalky to the touch. By some accounts, the historical trajectory along the Saint Johns River is one of great continuity in settlement and subsistence for upward of 5,000 years (Milanich 1994:86, 243; Milanich and Fairbanks 1980:147).

Sites with fiber-tempered pottery are found throughout Florida, although distinctively Orange pottery, with its incised motifs of concentric diamonds and horizontal lines, is concentrated at sites along the middle Saint Johns and coastal zone of northeast Florida. The former locale was also occupied by preceramic groups of the Mount Taylor culture (3750–2500 B.C.), who were the first to exploit shellfish and mound the inedible remains in massive piles at sites such as Tick Island and Mount Taylor in Volusia County. Tick Island was initiated as a mortuary mound during the fourth millennium B.C. (Aten 1999). Many such locales continued to be utilized through the Orange period, along with other, previously unoccupied sites whose accumulated frequency



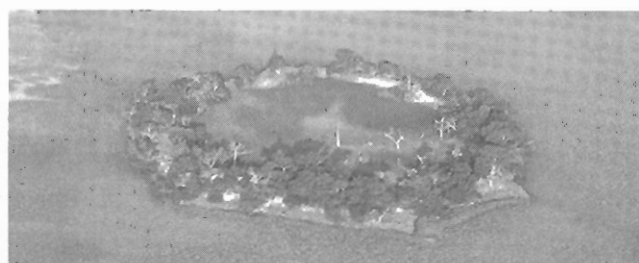
Fla. Mus. of Nat. Hist., Gainesville.

Fig. 7. Bluffton Midden, Fla., an Orange period shell midden on the St. Johns River. The midden, consisting of densely packed freshwater shellfish remains, fish bones, and other animal remains, was utilized throughout the Archaic and into the Woodland era. The site was estimated to cover 35 acres and was destroyed in the 1950s (C.B. Moore 1894:48). top, Mining the midden. Photograph by John Griffin, 1950s. bottom, Orange Fiber-tempered pottery from Bluffton Midden, Fla. left, Orange Incised; right, Tick Island Incised. Height of left 6.35 cm, other to scale.

suggest marked population growth since Mount Taylor times (Milanich 1994:87). The major constituent of all Mount Taylor and Orange period shell deposits along the middle Saint Johns is pond snail. Evidence for a decrease in average snail size through time has been interpreted as a consequence of overexploitation by humans (Cumbaa 1976), although other interpretations of these data have been offered (Russo 1986). If data for human impacts to snail populations withstand further scrutiny, the marked increase in site frequencies from Mount Taylor to Orange to Saint Johns times may reflect increasingly frequent site abandonment and relocation, as opposed to simply population growth. Evidence for increased residential mobility may help to explain how Saint Johns River populations were able to sustain a shellfishing economy in the region for millennia while their counterparts in the middle Savannah, who apparently maintained a sedentary existence, had to abandon the lifeway altogether after only a few centuries.

Coastal Populations

Both the south Atlantic and Gulf coasts supported large, stationary populations. There is evidence of intensive occupa-



S. C. Dept. of Nat. Resources, Columbia.

Fig. 8. Aerial view of ring 2 of the S.C. Shell Ring complex, one of the best-preserved shell rings on the Atlantic coast, facing west-southwest. Ring 2 is hexagonal, with a maximum width of 77 m. The shell is unevenly distributed around the ring, with sides ranging from 10 to 25 m wide and from 1-2 m above the central plaza. There appears to be an opening or break in the ring's southwest side, and a ramp of shell on the ring's opposite side leading into the marsh toward ring 3, a semicircular shell midden. The rings were occupied by about 1300 B.C. (R. Saunders 2002:i). Photograph by Philip Jones, about 1996.

tion of sites as early as 4500 B.C. on the south Atlantic coast and perhaps several centuries earlier on the Gulf Coast. The oldest south Atlantic coastal site is Spencer's Midden at the mouth of the Saint Johns River in northeast Florida (Russo, Cordell, and Ruhl 1993). The site is an arcuate coquina and oyster midden some 50 meters in length and one meter deep. Analysis of the food remains indicates multiseasonal occupation with emphasis on estuarine fish and shellfish. Two Late Archaic shell middens along the Gulf coast of Florida likewise show evidence of intensive estuarine settlement as early as 5450 B.C. (Mikell 2001). Situated on river delta deposits, sites 8WL1278 and 8WL1281 were on the former upper estuarine margin of Choctawhatchee Bay when Middle Holocene sea levels were above current levels. Other evidence for preceramic coastal occupations has been summarized by Russo (1996a).

Spencer's Midden and several similar sites at the mouth of the Saint Johns are part of a regional distribution of complex shell-midden deposits with arcuate or ring-like configuration. Referred to widely as "shell rings" (fig. 8) these sites are distributed intermittently from Cape Canaveral, Florida, to just south of the Santee River in South Carolina. Preceramic sites like Spencer's Midden notwithstanding, shell rings that have been well dated range from 2800 to 1350 B.C., and all such sites have yielded Late Archaic pottery. Debate over the formation and function of shell rings has continued since the 1960s, when Waring and Larson (1968:273) opined that a shell ring on Sapelo Island "very likely represents a ceremonial or social arrangement." Like others since, they were struck not only by its circular shape, but also by the fact that the interior of the ring was completely devoid of midden or artifacts. Waring and Larson recognized that the shell deposits of the ring proper accumulated from the everyday refuse of small habitations, a supposition later confirmed by Trinkley (1980, 1985). Yet, the

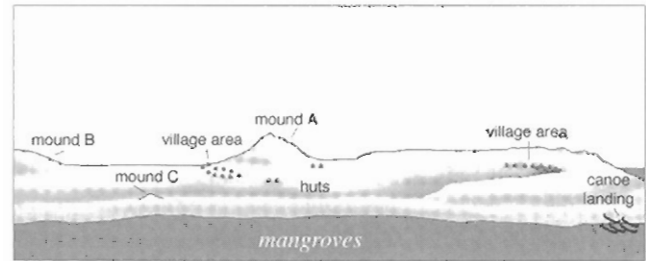
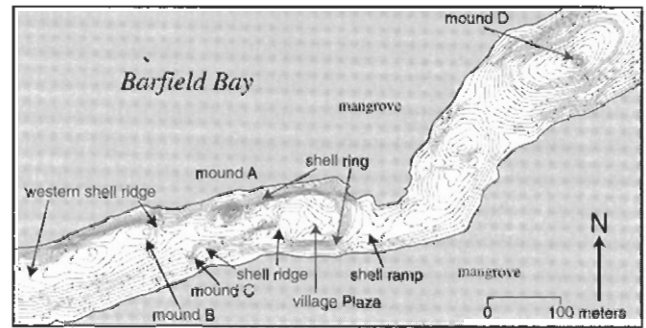
unusual configuration of the rings, compared to the more typical, amorphous middens along the coast, led some to speculate about the functional specialization of rings. Assemblage comparisons between rings and amorphous middens supported this notion (Michie 1979). The suggestion that the south Atlantic coast may have been colonized by sea-faring peoples from South America (J.A. Ford 1966, 1969) is not supported.

The debate surrounding the function of Late Archaic shell rings parallels the debate over the significance of shell mounding in the Shell Mound Archaic. Were shell rings constructed as monuments for ceremonial purposes, or were they simply the de facto accumulation of refuse from a circular settlement pattern? Russo (1999) has demonstrated that many of the region's largest rings are not actually circular, nor symmetrical. For instance, the massive Rollins Shell Ring on Fort Georgia Island, Florida, is a horseshoe-shaped deposit with a distinctive node of prominence at the enclosed end, opposite an opening. R. Saunders (1999) has developed data to suggest that Rollins was a venue for ceremonial feasting. Apparently more mundane activities also took place at shell rings across the region, but the accumulation of domestic refuse, no matter how prevalent, does nothing to discredit hypotheses about monumental functions for rings.

That shell and earthen mounds on the south Atlantic coast were indeed deliberate constructions is perhaps best exemplified by the Tomoka Mound complex near Daytona (Piatek 1994; Russo 1996:274–276). Located on the mainland side of a coastal lagoon, the Tomoka complex includes nine mounds surrounded by a midden consisting chiefly of coquina and oyster. Charcoal from the base of the three-meter-high Mound 6 returned a date of 3100 ± 70 B.C. (Piatek 1994), at least two centuries before pottery was used locally. Bannerstones recovered from the base of the mound (Douglass 1882) bear remarkable resemblance to Southern Ovate forms manufactured in the lower Piedmont of the Savannah River valley and likewise date to the middle third millennium B.C. (Sassaman 1998).

Another massive preceramic mound and midden complex is located on the Gulf coast of southwestern Florida. Dating from 3600 to 2500 B.C., Horr's Island (fig. 9) is an extensive shell-ringed village with at least three ceremonial mounds (Russo 1991a). The largest, Mound A, rises more than 12 meters above the water level at its base. Six meters of alternating layers of shell and sand attest to its staged construction. Two of the three lesser mounds, ranging in height from 1.5 to 4 meters, were likewise constructed in stages; the fourth, Mound C, lacked any distinct earthen layers in its three meters of mounded shell.

The village midden at Horr's Island consists largely of oyster, up to five meters thick, lying on dune crests and slopes amongst the mangrove swamps that circumscribe the island. An arcuate shell ridge encircles the midden. Mound A sits at the open end of the arc. Within the midden were uncovered successive living floors with hundreds of post-holes representing the remains of structures estimated at



Natl. Park Service, Southeast Archaeol. Center, Tallahassee, Fla.

Fig. 9. Horr's I., Fla. A narrow island in a protected bay off the Gulf of Mexico, this site was initially occupied in the Middle Archaic, but the main occupation and moundbuilding phase date to the Late Archaic. Mounds A-C were linked by steep ridges of shell 7-8 m tall, with a ridge partially enclosing the village area. Mound D lay a few hundred meters away. The village consisted of circular pole houses with hearths and storage pits. A food processing area was located to the east of the village with dense deposits of bone and shell refuse but little evidence for houses. In Mound A, the soil layers were carefully selected for their color, even though that entailed moving soil across the lagoon to the building site. Construction on Mound A began 2800–2300 B.C. (Russo 1994:100). top, Contour map showing the major site features; bottom, reconstruction of the site core with the vertical scale exaggerated.

three meters in diameter (Russo 1991a). Overlapping pits and hearths were scattered among the postholes, attesting to the intensity and redundancy of site use. Analysis of saltwater shellfish (scallop, clam, oyster) and estuarine fishes (hardhead catfish, pinfish, threadfin herring) for seasons of capture led to the conclusion that Horr's Island was occupied year round.

Other major shell ring or arc sites on the Gulf coast generally postdate 2500 B.C., although intensive use of estuarine resources of the Gulf coast dates at least two millennia earlier. Several of the better-known Gulf coast sites have historical connections with the Poverty Point culture of northeast Louisiana. Two such sites, Cedarland and Claiborne, occupy a bluff overlooking salt marsh near the mouth of the Pearl River in Mississippi (Bruseth 1991). Cedarland is a semicircular oyster midden measuring 165 meters in diameter, encompassed by a three- to five-meter-high earth and shell embankment. Unlike the shell rings of the Atlantic coast, Cedarland contains abundant habitation debris in the center

of the enclosure. Various nonlocal raw materials, including Great Lakes copper and Arkansas quartz crystals, attest to extensive trade relations. Although absolute dates for Cedarland are lacking, the absence of diagnostic Poverty Point artifacts, coupled with an assemblage of typical Late Archaic tool types, suggest an occupation slightly prior to 1700 B.C. Claiborne, on the other hand, is clearly a regional variant of Poverty Point culture. With uncalibrated radiocarbon dates ranging from 2480 ± 80 to 1330 ± 110 B.C., Claiborne predates but continues into the Poverty Point era. Like Cedarland, Claiborne is a semicircular ridge of midden some 250 meters in diameter, but it also contains clam, as well as oyster, and the central portion of the ring is devoid of midden deposits (making it more consistent with Atlantic coastal shell rings). Artifact assemblages from Claiborne contain all the usual Poverty Point diagnostics: gorgets, plummets, celts, Jaketown perforators, soapstone vessels, baked clay objects, Motley points, and several other projectile point types. Twelve soapstone vessels and associated copper artifacts were recovered from otherwise sterile sands in the eastern section of the midden arc. A small, conical earthen mound was located some 170 meters east of the semicircular midden. A second cache of 89 soapstone vessel sherds was located 20 meters northwest of the mound.

Four clusters of sites in the Choctawhatchee Bay of northwest Florida are assigned to the Elliott's Point complex, defined by W.C. Lazarus (1958) as a local expression of Poverty Point culture (P.M. Thomas and L.J. Campbell 1991). Baked clay objects, microliths, soapstone vessels, and other exotic items clearly bear affinity to Poverty Point culture, but not all investigators accept the connection without qualification, suggesting that populations along routes of exchange simply took advantage of circulating goods without assimilating core aspects of Poverty Point culture (J.L. Gibson 2000:264–265). Irrespective of cultural affinity, Elliott's Point represents a complex coastal adaptation in its own right. One of its chief sites, Buck Bayou Mound (8WL90), is a two-meter-thick semicircular shell deposit over 150 meters in diameter. Its shell assemblage is diverse, with fighting stromb, ark, edge clam, and cross-barred chione accompanying the more common quahog clam, bay scallop, and oyster. Small shell middens dot the landscape surrounding Buck Bayou Mound, suggestive of a possible settlement hierarchy, or, alternatively, functional differentiation between habitation and extractive loci. A second cluster of small sites surrounding the horseshoe-shaped Miegs Pasture midden (8OK102) mirrors the Buck Bayou pattern, although at a smaller scale. Radiometric dates for all Elliott's Point sites range from about 2500 to 800 B.C. Evidence from shell middens in the upper reaches of Chowtawhatchee Bay has pushed the inception of shellfishing in this area back another two millennia.

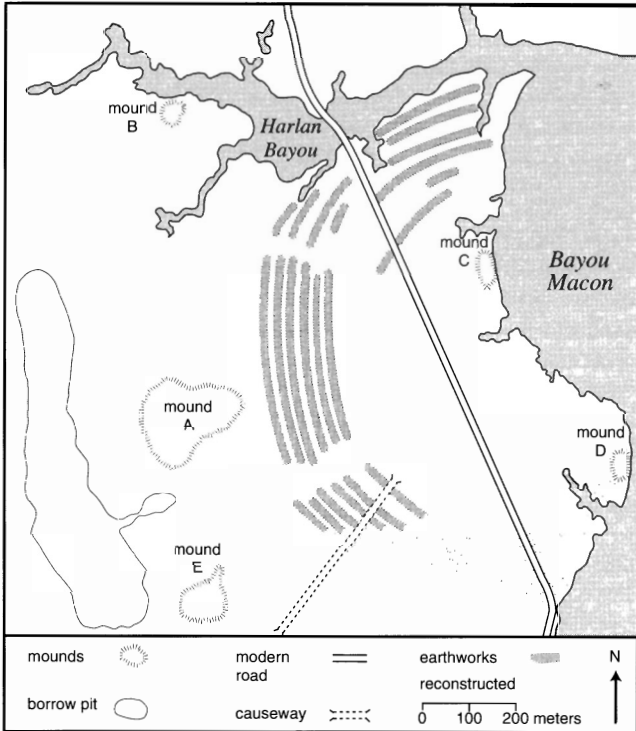
In much of the intervening coastal areas between clusters of shell mounds and rings, and along most of the Atlantic coast north of Charlestown, Late Archaic sites tend to be small and widely scattered. Transgressive coast lines have

no doubt obscured the archeological record of groups that did not mound shell and earth above high sea level stands. For instance, investigations in the Apalachicola-lower Chattahoochee area of northwest Florida have yielded evidence for scores of Late Archaic sites, but mounded shell is limited to low, linear deposits of clamshell, none of which is definitively preceramic in age (N.M. White 1999). Coastal North Carolina, with its complex array of barrier islands and tidal lagoons, presents a similar problem. Late Archaic sites are not uncommon in this region, but shell middens are exceedingly rare, again perhaps partly due to changes wrought by sea level fluctuations (H.T. Ward and R. Davis 1999:73–75). Without better data on the chronology, community patterning, and material culture of these lesser known coastal areas, the relationship between clusters of mounds and rings and intervening locales will remain unknown. It stands to reason, however, that ethnic diversity was as common, if not more common, to coastal life, as it was to life along the interior rivers of the Southeast.

Poverty Point Culture

The most elaborate level of cultural expression and integration throughout the Archaic Period is seen in the Poverty Point culture of northeast Louisiana (J.L. Gibson 1996a, 2000; C.H. Webb 1982). Emerging after about 2100 B.C. and developing over several centuries, Poverty Point culture involved unprecedented levels of mound construction and interregional exchange centered on the type site, Poverty Point (fig. 10), a three-square-kilometer complex of nearly one million cubic yards of mounded earth in six nested, elliptical half-rings, two massive bird-shaped effigies, and a few conical and flat-topped mounds (J.A. Ford and C.H. Webb 1956). Other settlements of Poverty Point affiliation were distributed across a 700-square-mile area centered on the type site, with more distant communities (Claiborne and Elliott's Point) participating through exchange with core groups (see papers in Byrd 1991). Although neither long-distance exchange nor mound construction can be considered innovations of Poverty Point culture, the scale of both activities eclipsed anything that came before.

Once thought to be the work of Mesoamerican colonists or influenced by Hopewell culture, the monuments of Poverty Point have a clear precedence in the Middle Archaic mound complexes of northeast Louisiana. Although active Middle Archaic mounding appears to have ceased after about 3200 B.C., at least one of the Poverty Point mounds, Lower Jackson, has been securely dated to the late Middle Archaic period (J. Saunders et al. 2001), lending some credibility to the argument that a mound-building tradition started over 5,000 years ago persisted, albeit in modified form, for nearly two millennia. According to John Clark (2001), Lower Jackson was incorporated into an overall plan for Poverty Point that was based on geometric principles of triangulation and standard units of measurement. Middle Archaic complexes that have been mapped in detail likewise



after Kidder 2002: fig. 1.

Fig. 10. Poverty Point, La., site reconstruction, based on the first complete mapping project, 1999–2000 (Kidder 2002). The largest of the 5 mounds, Mound A, may have been in the shape of a bird in flight (J.L. Gibson 2000:83). An arc of 6 concentric ridges ends at the bluff, enclosing a broad plaza. The ridges are discontinuous, interrupted by 3 aisles. The terrain was leveled with fill, and the rings and mounds were built using a mixture of local silt and clay, at least some of which came from the depressions or borrow pits to the west of Mound A. A causeway running south-southwest to the northeast links the ridges with the center plaza. Occupational middens have been found atop the ridges and in parts of the plaza, but no house remains have been identified (J.L. Gibson 2000:92, 99–100).

conform to these same principles. Arguably, then, Poverty Point and its antecedents were constructed according to a grand scheme, one that not only prescribed the size, arrangement, and orientation of earthworks at particular sites, but also possibly distributions of complexes across the landscape. As the grammar of this scheme becomes clearer, its intrinsic meaning remains elusive. J.L. Gibson (2000) offers a convincing argument about the cosmological significance of the elliptical arrangement and numerology of Poverty Point. He and others have also speculated on possible astronomical alignments attending the arrangement of mounds and ridges.

Perhaps the most debated aspect of the earthworks at Poverty Point is their implication for population size and sociopolitical complexity. Clearly an earth-moving project of this magnitude and sophistication, now matter how protracted over time, required not only a large pool of labor but also formal orchestration. Working from the assumption that mound-

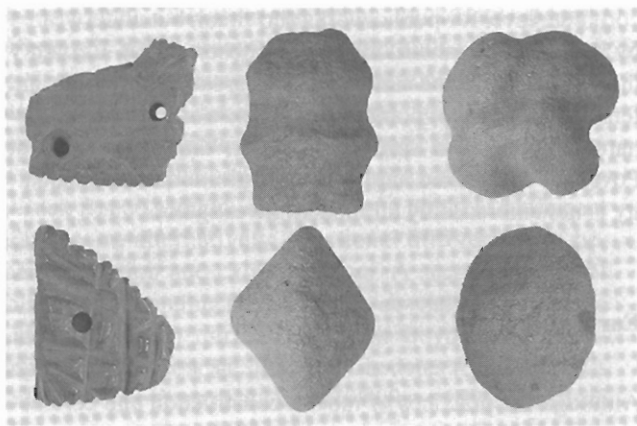
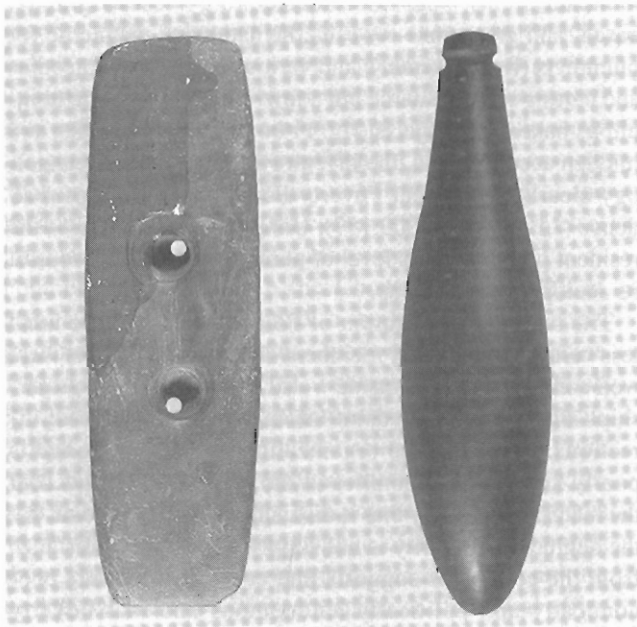
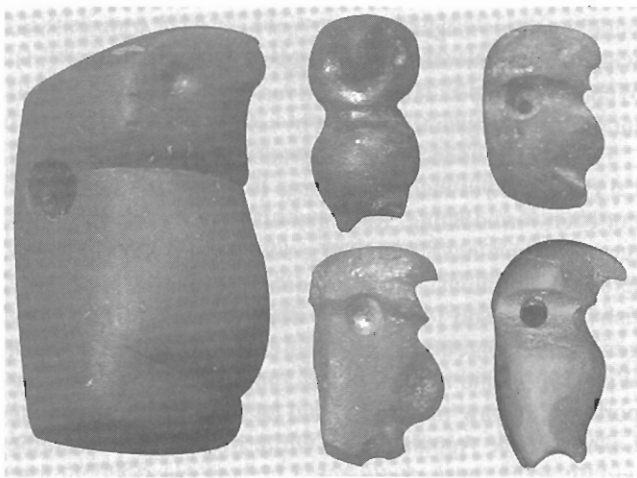
building of this magnitude could not have been accomplished without economic surplus and leadership, J.A. Ford and C.H. Webb (1956) speculated that Poverty Point was an agricultural society, organized and run by religious specialists.

However, evidence for an advanced level of sociopolitical complexity, much less a large resident population, has not been forthcoming. Repeated efforts to locate architectural evidence have failed. The subsistence economy centered on the intensive use of aquatic resources, especially fish (J.H. Jackson 1989, 1991), while the use of native cultigens was apparently negligible (A.B. Shea 1978a; H.D. Ward 1998), and tropical crops completely absent. The importation of raw materials from as far away as the Great Lakes and the Appalachians, while impressive in volume and diversity, was often geared toward the production of mundane items: soapstone for cooking vessels; granite, basalt, and greenstone for celts; hematite and magnetite for plummets (fig. 11 center); and various cherts for projectiles and cutting tools, to name but a few. Coupled with the ubiquitous baked clay objects (fig. 11 bottom), hearths, pits, and midden accumulation, the inventory of subsistence technology clearly shows that Poverty Point was a place of residence (J.L. Gibson 2000:157). Unresolved is the size of the resident population, its level of permanence, and, of course, its sociopolitical makeup.

The regional constitution of Poverty Point culture is no less certain. Obviously, members of local populations were well connected to the outside world through trading partnerships stretching hundreds of kilometers in virtually all directions. However, the organization of such exchange is poorly known. Communities in the region shared much of the material inventory that is distinctively Poverty Point, yet the degree of similarity is not simply a function of distance from the core. This suggests that communities were economically and politically autonomous and that Poverty Point was foremost a shared belief system, organized at a corporate level for public works and ritual, but underwritten by an ethos of egalitarianism (J.L. Gibson 2000). Certainly the symbolism of the earthworks and associated charms and fetishes (fig. 11 top) point to a complex worldview of supernatural forces and spirits. However, the argument that Poverty Point lacked any form of institutionalized inequality is not embraced by all modern investigators.

Early Woodland

Although the practices of mound construction and ceremonialism, native plant domestication, and settled village life begun in the Archaic Period intensified during the Woodland period in certain areas, about the only regionwide distinction between the two periods is the widespread adoption of pottery. Shortly after 1250 B.C., and certainly by 850 B.C., populations all across the Southeast were making and using pottery. The innovation prior to 1250 B.C. was restricted to



top, La. Office of State Parks, Baton Rouge: left, PP02-101; right, PP02-151, rest, Smithsonian, Dept. of Anthr.; center left, A515946; center right, A29177, bottom left, A515943; rest, A455328.

Fig. 11. Poverty Point-related artifacts, top, Bird effigy pendants or fetishes, probably owls, made from jasper pebbles, from the Poverty Point site, La. Extremely rare, these are excellent indications of Poverty Point's importance as a long-distance trading partner, since examples have been found in peninsular Fla. (J.L. Gibson 2000:187). Height of left, 2.54 cm, rest to scale, center left, Slate boatstone or atlatl weight, with corner restored, from the Poverty Point site. Height 10 cm, center right, Net sinker or plummet with grooved neck of pecked and ground hematite originating from the Ouachita Mountains of Ark. and Mo., found near Plantersville, La.; length 9.53 cm, bottom left, Fragments of 2 deeply incised jasper plaques, probably used as atlatl weights, from the Poverty Point site, center and right, Fired clay balls, substitutes for cooking stones, which were rarely found in the alluvial environment of the Lower Mississippi valley. They come in a variety of forms, including simple lumps, biconicals, grooved lumps, spheres, and quatrefoils, and are sometimes painted. From Hancock Co., Miss., about 5 km above the mouth of the Pearl River. Height of left, 5.5 cm, rest to scale.

east, the Early Woodland period usually is dated from about 1250 to 650 B.C. or slightly later. The former date approximately marks the widespread adoption of pottery, while the latter date is associated with the resurgence in mound construction and mortuary ritual of the Adena and Hopewell traditions.

The diversity of forms and decorations attending widespread use of pottery in the Early Woodland enables the recognition of a large number of discrete archaeological cultures—many more than are known for earlier periods, when diagnostic traits other than hafted bifaces are generally lacking. Four major ceramic traditions appear at this time, located in the Gulf Coastal Plain, the interior Midsouth, the South Appalachian area, and the middle Atlantic seaboard (Bense 1994:114–19; Caldwell 1958), each a presumed prehistoric culture area or home to groups of similar or related societies. The ceramic traditions of the Midsouth and Middle Atlantic are both characterized by cord or fabric impressions applied with a wrapped paddle; those of the South Appalachian and Gulf coastal areas include more elaborate designs applied with carved wooden paddles in the former area and characterized by dentate and rocker stamping and incising in the latter area. The archeological delineation of these various traditions is to some extent a matter of physiography, rather than discrete physical traits or meaningful cultural difference. In all locations surface treatments encompass appreciable variation within traditions, as do technological and functional attributes, although these tend to be underappreciated as significant emblems of cultural choice. It follows that the processes leading to regional patterns in the distribution of pottery attributes remain poorly understood. The similarities in assemblages over vast areas (W.H. Holmes 1903; J.B. Griffin 1967; P. Phillips 1970), remain an important basis for inferring connections among disparate societies across the region. Archeologists continue to strug-

select locales. Despite its eventual adoption, pottery was not usually accompanied by marked economic change. In fact, many Early Woodland adaptations appear so similar to those that came before that in many parts of the region they can be described as "Archaic with pottery." In the South-

gle with the tendency to equate pottery types with people and to rethink the culture-historical perspectives that attributed panregional patterning in pottery to episodes of migration and diffusion without specifying the actual cultural and environmental dynamics precipitating such actions.

The difficulties surrounding interpretation of variation in material culture are among the liabilities of limited, albeit diverse empirical data on community organization in the Early Woodland period. Excavated data pertaining to Early Woodland communities are sparse, and settlement models typically rely heavily on surface collections. Some Early Woodland cultures, such as the Kellogg phase of northwest Georgia (Bowen 1989; Caldwell 1958:23–25; W.D. Wood and W.R. Bowen 1995), consisted of seemingly stationary communities with well-defined structures, large subterranean storage pits, and dense occupational middens. Others consisted of small, seasonal sites with impermanent architecture and limited or no storage (D.F. Morse and P.A. Morse 1983; Sassaman 1993a). Colbert settlement in the Middle Tennessee River valley emphasized shell middens along the banks of the river, and rockshelters in the adjacent uplands were utilized intensively (Knight 1990a; Walthall 1980:114–115). In the Duck River drainage, Long Branch phase occupations exhibit single or small isolated clusters of features (storage pits, shallow processing basins, earth ovens), suggesting short-term, occasional occupation by isolated domestic units (Faulkner and McCollough 1974:192, 1982:292–300). Sites of the Watts Bar phase of the Little Tennessee River are concentrated along the edges of alluvial terraces, but with lesser feature and midden accumulations compared to preceding Iddins phase sites (R. Davis 1990:227–230). Early Woodland settlement along the Gulf and south Atlantic coasts involved both large and small communities at shell-bearing sites, some apparently carrying forward the shell ring tradition of the Late Archaic period.

This brief list of community patterns is sufficient to showcase the range of variation in group size and permanence during the Early Woodland period. It follows that generalizations about settlement organization gloss significant interregional differences. Still, compared to the preceding period, co-resident groups of the Early Woodland period were routinely small, on the order of a few structures and probably no more than 50 people, usually much fewer. In most portions of the Southeast, Early Woodland populations appear to have been fairly mobile foragers, at best sedentary or settled only seasonally. Social organization appears in most areas to have been based on unranked or minimally ranked lineages and clans. Widely shared material traits within regional traditions and the blurred boundaries that separate them attest to open relations among groups, perhaps facilitated by cognatic descent and flexible co-residential arrangements.

A decline in interregional exchange over the Late Archaic period suggests that Early Woodland groups were socially disintegrated, or, alternatively, simply did not symbolize long-distance relations through inorganic material goods. The

seeming decline in interregional interaction follows the dissolution of the Poverty Point culture in the Lower Mississippi Valley, as well as the decline of the so-called Shell Mound Archaic (e.g., Green River and Stallings), but the causal relationship between the transformation of these cultures and the ensuing genesis of Early Woodland groups is uncertain. Among the more conspicuous changes is the decrease in the use of nonlocal materials for mundane purposes. During Late Archaic and Poverty Point times many common tools were made of exotic materials that came from appreciable distances, while during the Early Woodland locally available materials tend to predominate. An exception is the continued importation of soapstone vessels into the south Atlantic and Gulf coastal plains, and peninsular Florida through about 650 B.C. (Sassaman 1999a). Soapstone vessels also occasionally occur with Early Woodland burials in northern Alabama (Walthall 1980:116).

Conclusion

Trends toward increasingly intensive riverine and coastal settlement begun in the Middle Holocene period continued during the Late Archaic period as regional populations expanded and diversified. Maturing floodplain habitats and diminished rates of sea-level rise, coupled with overall moist climate, enabled certain Late Archaic groups to maintain more-or-less permanent settlement in increasingly circumscribed areas. Seasonal movement between upland and riverine locales continued in subregions where spring flooding precluded permanent floodplain residence. Elsewhere the construction of substantial architecture and storage facilities suggests perennial use of riverine sites. Coastal sites have provided the best direct evidence for year-round occupation, beginning well before the Late Archaic period. Apparent hiatuses in coastal occupations over the Late Holocene may owe more to archeological bias than to actual changes in settlement preference.

Pottery emerged in the context of relatively permanent settlement of the Atlantic coast, coastal plain, and peninsular Florida. That it did not accompany appreciable change in diet and was generally slow to diffuse from locations of innovation suggests that pottery was not a revolutionary technology, at least not initially. However, in some cases, such as the middle Tennessee River valley, the adoption of pottery coincided with intensified use of aquatic resources. The eventual panregional adoption of the innovation after 1250 B.C. accompanied group fissioning and settlement dispersal across much of the Southeast. This process was neither thorough nor synchronous, as some subregional populations, such as those of northeast Florida and the middle Tennessee valley, experienced no radical change in land use. Such difference in local historical trajectories lessens the possibility that broad-scale changes in the Late Holocene can be attributed to global climatic change alone.

The addition of pottery accentuates the archeological recognition of increasingly greater cultural diversity over the Late Holocene. Given the level of interregional exchange apparent during Late Archaic and Poverty Point times, increased cultural diversity is likely a consequence of increased interaction among groups, rather than isolation. The Archaic tradition of mound building that culminated in Poverty Point culture was among the means of group interaction. Although participating groups apparently shared a common cosmology and ritualized practice, they appear to have been relatively autonomous economi-

cally and politically. Still, the dissolution of corporate organization that manifested itself in mound construction, ritual, and interregional exchange may have been precipitated by emerging authoritative control that extended to domestic affairs and led local groups to assert autonomy through fissioning and settlement dispersal at the beginning of the Early Woodland period. The re-emergence of corporate structures underwriting the spread of mound construction, exchange, and ceremonialism of the Adena and Hopewell traditions resulted in a renewed level of cultural diversity and complexity.