Climate Change and Cultural Dynamics: A Global Perspective on Mid-Holocene Transitions
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Chapter 13

Mid-Holocene cultural dynamics in southeastern North America

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Abstract

The Middle Archaic period in the Southeast, corresponding to the Mid-Holocene era, from 8000 to 5000 ^{14}C yr BP (ca. 8900–5750 cal yr BP) is a time of appreciable culture change. During this interval monumental construction began in a number of areas, long-distance exchange networks emerged, evidence for warfare appeared, and experimentation with agriculture was initiated. These trends continued and accelerated during the ensuing Late Archaic, and it was at the very start of this period, soon after 5000 ^{14}C yr BP (ca. 5750 cal yr BP), that pottery appeared. Variability is evident in the size and complexity of southeastern Middle Archaic societies, something that appears linked to changes in population interaction, climate, and resource structure. During the Mid-Holocene, use of the southeastern Coastal Plain decreased dramatically, and extensive use of shellfish resources appeared for the first time along the major rivers of the interior and in coastal areas. With the onset of essentially modern climate and resource structure after 5000 ^{14}C yr BP (ca. 5750 cal yr BP), a dramatic increase in regional population levels is indicated.

1. Introduction

To archaeologists in southeastern North America, the Mid-Holocene is considered interchangeable with the Middle Archaic period, from 8000 to 5000 radiocarbon years before present (^{14}C yr BP). It is widely viewed as the time of human adaptation to the climate interval variously known as the Hypsithermal, Altithermal, Atlantic, or Climatic Optimum. In calibrated time, 8000–5000 ^{14}C yr BP is roughly 8900–5750 cal yr BP or 6900–3750 B.C. In this paper both uncalibrated radiocarbon years and calibrated or calendar years are employed; calibrations were done using the Calib 4.0 program (Stuiver et al., 1998a, 1998b). A brief review of events in the Southeast during the Archaic, and particularly the Middle Archaic, follows (Fig. 13.1).

The Early Archaic is traditionally dated in the region from 10,000 to 8000 ^{14}C yr BP (ca. 11,450–8900 cal yr BP) (Smith, 1986; Anderson and Sassaman, 1996, 2004).

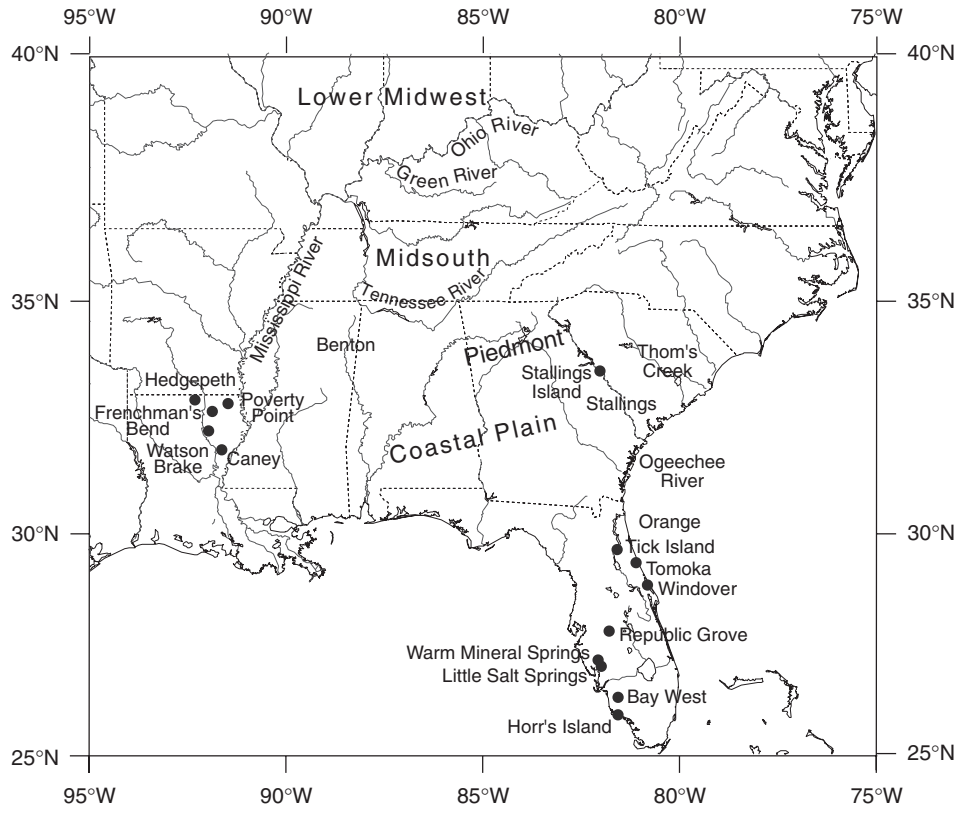

Figure 13.1. Location of archaeological sites and cultures mentioned in the text.

Sites are recognized by the occurrence of successive side- and corner-notched and bifurcate-based points. Early Archaic lithic assemblages were characterized by formal chipped tools fashioned from high-quality stone. Over time carefully crafted formal tools were replaced by more casual tools made on locally available materials. Mixed hardwoods forest were present across much of the region, creating favorable environments for hunting and gathering populations in both riverine and interriverine settings. Widespread use of wild plant foods is indicated by carbonized remains as well as ground and pecked stone plant processing tools. People organized themselves in small bands. Periodically, meetings between widely ranging bands occurred in favored settings, tying together people over large areas, and facilitating the spread of information, mates, and materials. Over time, annual ranges are thought to have grown progressively smaller, so that by the end of the era groups in some areas were likely restricted to within portions of river systems. Large numbers of sites are observed over the landscape.

The Middle Archaic in the Southeast is dated from 8000 to 5000 ^{14}C yr BP (ca. 8900–5750 cal yr BP) (Bense, 1994; Sassaman, 1995, 2005a; Sassaman and Anderson, 1995, 1996, 2004; Anderson and Sassaman, 2004). Interior sites are

identified by an array of point forms, reflecting an increasingly diversified cultural landscape. The replacement of mixed hardwood forests by pine forests and cypress swamps across the southeastern Coastal Plain consolidated peoples in river valleys where hardwood forests remained. In these restricted environments, regional population levels appear to have stabilized or decreased somewhat. Large earth and shell midden sites with dense occupational debris and numerous burials appear along some of the major drainages of the Midsouth and lower Midwest, encompassing northern Alabama and Mississippi, all of Tennessee and Kentucky, and the areas just to the north of the Ohio River in southern Illinois, Indiana, and Ohio (Smith, 1986; Steponaitis, 1986; Bense, 1994; Russo, 1996a, 1996b; Sassaman and Anderson, 1996; Milner, 2004a, 2004b). Occupied for extended parts of the annual cycle, these sites served as aggregation loci and possibly as special burial areas (cf. Claassen, 1996; Milner and Jefferies, 1998). While widely ranging foraging groups were still present, they are found in regions outside the lower Midwest and Midsouth, such as in portions of the South Atlantic Slope in Georgia and the Carolinas, or in the Trans-Mississippi uplands of Louisiana, eastern Texas, and southwestern Arkansas (Anderson, 1996; Sassaman, 1995).

Long-distance exchange networks spanning large portions of the eastern United States, including the southeast, emerged by ca. 7500 cal yr BP (Jefferies, 1996, 2004). Goods in circulation included shell from the southern coasts and copper from the Great Lakes. Some items like bone pins, bannerstones (presumed atlatl weights), and elaborate bifaces were circulating, often over smaller areas, indicating more localized exchange networks were also operating. Interaction and exchange enhanced the status of network participants and may have helped reduce conflict and subsistence uncertainty by creating ties between groups.

The construction of earthen mound complexes in the Lower Mississippi Valley and earthen and shell mound complexes in Florida arose between ca. 6000 and 5000 ^{14}C yr BP (ca. 6800–5750 cal yr BP) (Russo, 1994a, 1994b, 1996a, 1996b; Saunders et al., 1997, 2005). These centers are thought to represent the communal action of large numbers of people, the development of more complex organizational forms, and an increased need to define territories and/or alliance networks. Territorial circumscription is suggested by the appearance of evidence for conflict – burials with embedded projectile points, scalping marks, and parry fractures – in some parts of the midcontinent, in the Midsouth and lower Midwest. Variability in mortuary treatment indicates appreciable differences in status were emerging, although evidence of heritable ranking has not been identified. That is, achieved rather than ascribed or hereditary positions are all that are thought to have been present at this time.

All the trends initiated in the Middle Archaic continued to grow in scale over the course of the Late Archaic, from 5000 to 3000 ^{14}C yr BP (ca. 5750–3200 cal yr BP) (Smith, 1986; Sassaman and Anderson, 2004). During this interval essentially modern climate, sea level, and vegetation communities emerged. Mound construction, long-distance prestige-goods exchange, and warfare expanded, culminating in dramatic cultural expressions like Poverty Point, Stallings Island, Green

River/Indian Knoll, Orange, and Horr's Island (Fig. 13.1). Shellfish use in the Midsouth and lower Midwest continued, and use of coastal resources becomes widespread. A major increase in regional population levels is indicated, with sites found in all parts of the landscape.

Wild plant foods were collected in increasing quantity, and by the end of the Late Archaic, between 4000 and 3000 ^{14}C yr BP (ca. 4450–3200 cal yr BP), morphological changes indicative of domestication are evident in a number of local species such as goosefoot, sumpweed, sunflower, and gourds (Smith, 1992). Pottery appeared in the Stallings culture of Georgia and South Carolina about 4500 ^{14}C yr BP (ca. 5150 cal yr BP) and soon thereafter in the Thom's Creek and Orange cultures of South Carolina and Florida, respectively (Sassaman, 1993, 2005a). These cultures, as well as unnamed Ten Thousand Island, Bonita, Cottage, and Reed cultures in South Florida, built extensive large-scale shell and earthworks including mounds and rings (Russo, 1996b, 2004, 2006a). By 3400 ^{14}C yr BP (ca. 3650 cal yr BP) the mounds and earthworks of the Poverty Point culture, a vast exchange network centered on the Lower Mississippi Valley, were among the largest ever built in the East (Gibson, 1996, 2000; Sassaman, 2005b) (Fig. 13.2).

Any summary treatment of the Mid-Holocene Southeast must sacrifice detail for generalization. The long-held notion that Archaic populations were part of a gradual evolutionary trend toward ever-more efficient adaptation to the southeastern environment (e.g., Caldwell, 1958) ignores many of the nonlinear environmental and cultural trends apparent at subregional scales of observation. Likewise, the notion that Mid-Holocene prehistory reflects, in part, cultural responses to a pan-regional warm, dry climate (e.g., Smith, 1986, p. 24; Bense, 1994, p. 74) runs counter to paleoenvironmental research which documents increased moisture in portions of the lower Southeast (e.g., Sassaman, 1995, pp. 141–143; Dye, 1996, pp. 141–142; Watts et al., 1996). Effects of sea level rise were likewise very different on the Atlantic and Gulf coasts. Modern perspectives on the Mid-Holocene must therefore be sensitive to the tremendous natural and cultural diversity of the era. In attempting to explain this diversity, we must be careful not to regard observed differences simply as expressions of subregionalization or cultural isolation, as if divergent trends mimicked processes of speciation. Histories of population interaction at scales sometimes spanning most of the Southeast must be integrated with data on local conditions and adaptations to fully appreciate the conditions resulting in the Southeast's marked cultural variation during this era.

2. Emergent riverine economies and cultural complexity in the midcontinent

The Mid-Holocene was a period of dramatic cultural change in the Midsouth and in the immediately adjacent lower Midwest. During this period ceremonial shell/earthen mound construction was initiated, long-distance exchange networks spanning much of the region appeared, new tool forms, such as bannerstones and grooved axes were adopted, and there was increased evidence for interpersonal

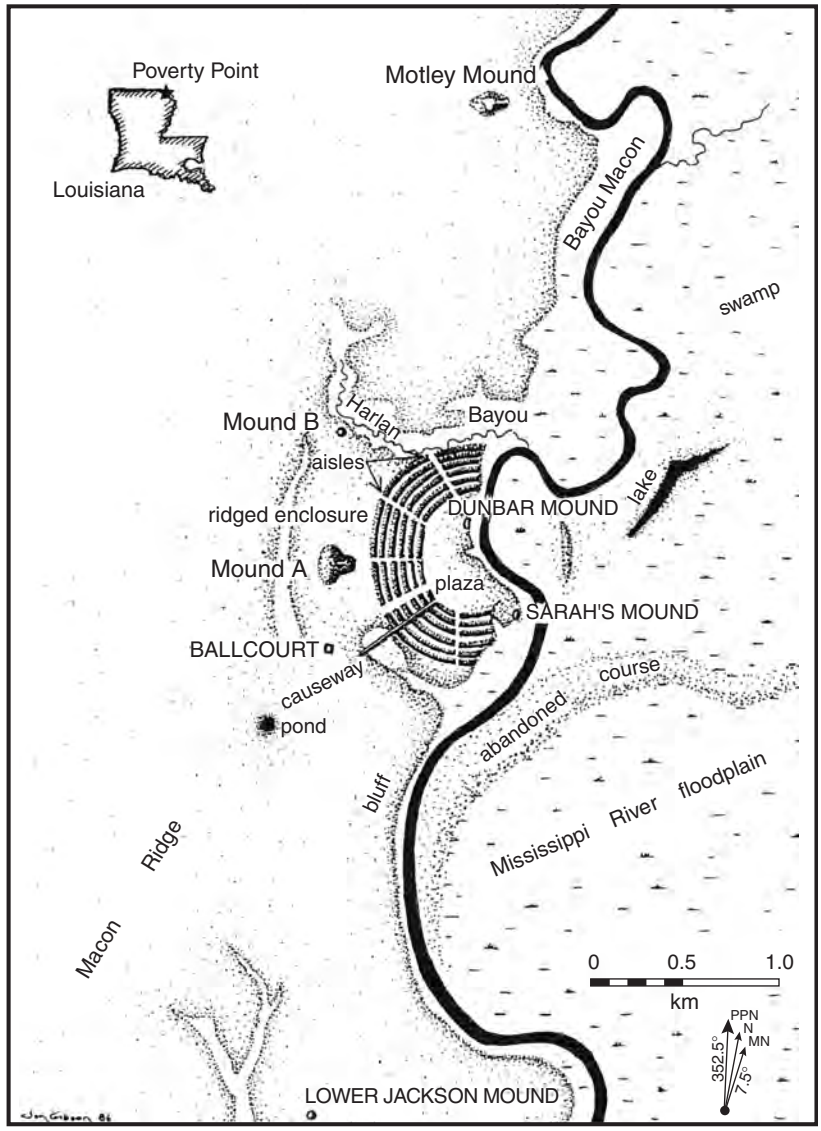

Figure 13.2. The Poverty Point site, Louisiana (drawn by Jon Gibson, from Gibson, 2000, p. 82, courtesy University Press of Florida).

violence or warfare (Griffin, 1967; Smith, 1986, 1996; Steponaitis, 1986; Jefferies, 1995, 1996, 2004; Sassaman, 1996, 2000, 2004, 2005a, 2005b; Sassaman and Anderson, 1996, 2004; Anderson and Smith, 2003a, 2003b; Anderson and Sassaman, 2004; Gibson and Carr, 2004; Milner, 2004a, 2004b). All these factors indicate local cultures were growing in scale and organizational complexity.

Climate appears to have helped shape some of these developments. In the lower Midwest and Midsouth, Mid-Holocene climate appears to have been hotter and

dryer than at present, leading to a reduction in upland vegetation, increased surface erosion, and aggrading floodplains (Knox, 1983; Delcourt and Delcourt, 1987, 2004; Jacobson et al., 1987; Webb, 1987, 1988; Webb et al., 1993; Schuldenrein, 1996; Stein, 2005). Formation of backwater slough habitat enhanced floodplain productivity, while shoal environments favored freshwater shellfish. These warming and drying trends may have rendered riverine areas more favorable and upland areas less favorable to human populations.

As early as 7300 ^{14}C yr BP (ca. 8100 cal yr BP), some populations in the Midsouth began to occupy riverine sites for extended stays, or otherwise returned regularly enough to create midden deposits. Shellfish began to be collected in significant numbers (Marquardt and Watson, 1983, 2005; Claassen, 1996; Dye, 1996). Some of the earliest shell midden sites (which are actually typically accumulations of both shell and earth, or are sometimes middens with occasional scattered shell) were occupied by Morrow Mountain phase populations of the Midsouth, beginning about 7000 ^{14}C yr BP (ca. 7800 cal yr BP) (Dowd, 1989). Over the ensuing millennium, evidence for substantial architecture and intensive occupation appears at terrace-edge and lakeside locations in the Lower Midwest (e.g., Jefferies and Butler, 1982; Brown and Vierra, 1983), as well as an increasing number of riverine sites across the midcontinent.

The large shell middens of the Midsouth, such as those along the Green River in Kentucky and the Tennessee River of northern Alabama, are assumed to reflect aggregation loci where group ceremony and ritual occurred (Claassen, 1991a, 1991b, 1996; Sassaman, 1993, 2005a; but see Milner and Jefferies 1998; Crothers 1999, 2004; Milner, 2004a, 2004b; Marquardt and Watson, 2005, p. 636, for different or "minimalist" opinions about the extent of ceremony that may have occurred). Burial in shell mounds also likely served to demarcate territories and bind people together in an era of increasing population and competition, as reflected in the widespread evidence for prestige goods exchange (Brown, 1985; Johnson and Brookes, 1989; Jefferies, 1995, 1996, 2004; Meeks, 1999) and the somewhat more restricted evidence for conflict (Smith, 1996). Much of the long-distance exchange appears to have been driven by the efforts of individuals to enhance their personal status, although there is no evidence for hereditary leadership positions. Achieving success in warfare may have been another means of enhancing personal status, just as it was in later prehistory and during the early historic era in the region (e.g., DePratter, 1983, pp. 44–67; Dye, 1990; Anderson, 1994, pp. 132–135). The occurrence of burials and cemeteries at many sites in the Midsouth, particularly when coupled with evidence for long-distance exchange, is seen as evidence for an increasing complex and sedentary lifestyle (Marquardt and Watson, 1983, 2005; Marquardt, 1985). Archaeologists debate whether overall conditions "pushed" or "pulled" Mid-Holocene populations into riverine zones, that is, whether peoples were forced to adopt floodplain resources due to desiccation of the uplands, or were attracted to them as part of a general strategy of increasing sedentism (cf. Brown and Vierra, 1983, pp. 167, 190; Carmichael, 1977).

Just as earthen mounds are present in some parts of the region and not in others (see below), shell middens are also unevenly distributed across the interior

Southeast, and are in fact absent in some areas where mollusks were prevalent (Claassen, 1996; see also Peacock, 1998, 2002). One reason shell middens are unevenly distributed along the coastal portions of the region is likely because they are drowned or destroyed. But in the interior Southeast it appears shell middens simply were not accumulated in some areas. Shell midden/mound construction, if indeed a symbolic strategy to link people together in regional alliances or to demarcate territories, may have been necessary only where population levels were high and competition for resources was intense. The presence of large shell middens at some sites may indicate particularly intense competition. The mounding of earth and shell in the Midsouth at this time parallels comparable developments in coastal areas and the Lower Mississippi Valley. As we shall see, collective ceremonial behavior was sufficiently sophisticated to construct enduring large-scale monuments in many parts of the region (Russo, 1996a, 1996b, 2004, 2006a; Gibson and Carr, 2004; Sassaman, 2004; J. Saunders, 2004).

In the Midsouth, Morrow Mountain phases were replaced after about 6500 ^{14}C yr BP (ca. 7400 cal yr BP) by a series of local cultural traditions, one of the most distinctive of which is the Benton phase of the upper Tombigbee, middle Tennessee River, and middle Cumberland river area, dating from ca. 6000 to 5000 ^{14}C yr BP (ca. 6850–5750 cal yr BP), with most of the dates falling between ca. 5700 and 5200 ^{14}C yr BP (ca. 6500–6000 cal yr BP) (Johnson and Brookes, 1989; Jefferies, 1996, pp. 228–230; Meeks, 1999). Exchange connections in this ''Benton Interaction Sphere'' are subregional in scale, extending over no more than a few hundred kilometers. Exotic artifacts from much greater distances, such as Great Lakes copper or marine shell from the Gulf or Atlantic coasts, are rare. Benton is characterized by elaborate burial ceremonialism, however, involving the placement of caches of large and elaborate bifaces with the dead. It has been suggested that interaction networks helped tie people together, and emerged in part to alleviate subsistence uncertainty (Braun and Plog, 1982). Subsistence uncertainty in the Mid-Holocene Southeast may have been brought about by rising regional population levels and broad scale climatic conditions that combined to place pressure on available food resources, although whether this was actually the case remains to be documented empirically. Throughout the Midsouth, riverine adaptations continued at varying scales through the Late Archaic period. The overall trend was for relatively intensive riverine economies, possibly territorially and ethnically circumscribed, with intergroup interactions ranging from violent to peaceful.

The intensive collection of a wide range of wild plants is documented during the Mid-Holocene in the Midsouth and lower Midwest, and morphological changes indicative of domestication, such as an increase in seed size or a decrease in seed coat thickness, are evident in several local species by the end of the Late Archaic period, from ca. 4000 to 3000 ^{14}C yr BP (ca. 4450–3200 cal yr BP) (Smith, 1992). Local plant species of this ''Eastern Agricultural Complex'' include sunflower (*Helianthus annus*), sumpweed (*Iva annua*), goosefoot (*Chenopodium berlandieri*), maygrass (*Phalaris caroliniana*), knotweed (*Polygonum erectum*), little barley (*Hordeum pusillum*), and local cucurbits or gourds. Intensive collection of these

plants, a process that would have eventually led to domestication, probably dates back to the Mid-Holocene.

Eastern North America is one of the few places in the world where plant domestication can be explored in detail, along with the changes in culture that occurred with a shift from hunting and gathering to agriculture. Exactly how the process of domestication occurred is unknown. There is no doubt that plant resources were intensively exploited by Archaic populations in Eastern North America. Domestication is thought to have occurred in areas of greatest population density and pressure, as part of an effort to maximize subsistence resources. There is some evidence to suggest that as domesticated plant foods became increasingly important, the use of shellfish declined in the interior (Claassen, 1991a, 1991b; but see Peacock, 1998, 2002). Exactly how the process of domestication occurred, and how it effected the collection of other types of subsistence resources, however, is not well understood.

One theory posits that plants of the Eastern Agricultural Complex were first gathered, and then encouraged to grow, in the disturbed habitats found in and near the major earth and shell mound sites of the Midsouth and lower Midwest (Smith, 1992). These plants thrive in such habitats, and their close proximity to burgeoning human populations would have prompted intensifying exploitation over time, leading to domestication (Smith, 1986, 1987, 1989, 1992). An alternative to this ''weedy floodplain'' hypothesis suggests that these plant foods were instead collected in adjoining upland areas, where the peoples living at lowland shell middens would have likely ranged from time to time, perhaps seasonally (Fritz, 1990; Gremillion, 1996, 2002; Marquardt and Watson, 2005, p. 630). This counter argument has arisen because there is comparatively little evidence for domesticates at early shell midden sites, and a great deal of evidence for them in upland cave and rockshelter settings. These distributions warrant explanation, since they do not appear to reflect factors of differential preservation, and since appreciable effort has been directed to the recovery of plant remains in recent research at Shell Mound Archaic sites in the Midsouth (Marquardt and Watson, 1983; Gremillion, 1996; Crothers, 1999; Marquardt and Watson, 2005, pp. 630–631); the only common domesticates found in floodplain Archaic shell midden settings, gourds, may have been used for containers and fishing floats rather than as a food source (Fritz, 1999; Marquardt and Watson, 2005, pp. 630–631).

The increased attention given to the local starchy and oily seeds during the middle and later Holocene may have been due, in part, to increased subsistence pressures created by growing, and somewhat circumscribed, human riverine populations. Interestingly, while domesticates were assuming an increasing importance in the diet in some parts of the region, in other areas hunting and gathering continued. In particular, there is little evidence for cultivation until much later in time in the Lower Mississippi Valley, across thinly populated areas of the Atlantic and Gulf Coastal Plains, and in a number areas on the Gulf and Atlantic shores occupied by peoples who never became reliant on agriculture (e.g., Yarnell and Black, 1985; Fritz and Kidder, 1993; Gremillion, 2002). The need for domesticates may

have been unnecessary in areas rich in natural resources, or where population density was low or only minimally circumscribed.

3. The initiation of mound building and other monumental construction

As Mid-Holocene population levels grew, competition and interaction between groups appears to have likewise increased, as indicted by the appearance of exchange networks, warfare, as well as the construction of complex mound centers. One of the most exciting archaeological discoveries in recent years is the recognition that earthen mound construction in the southeastern United States extends well into the Mid-Holocene, to as far back as 6000 ^{14}C yr BP (ca. 6800 cal yr BP). With a few enigmatic exceptions, initial mound building in the Southeast had long been thought to date primarily to the Woodland period, after about 3000 ^{14}C yr BP (ca. 3200 cal yr BP).

An exceptional and until recently poorly understood precursor to the Woodland earthen mound building tradition was the Poverty Point culture of northeast Louisiana and vicinity, dating to about 3400–2900 ^{14}C yr BP (ca. 3650–3050 cal yr BP) (Gibson, 2000; Kidder, 2001). So unusual was this complex of pre-Woodland sites with elaborate mounds that for many years, researchers openly acknowledged that it did not "fit" with archaeological understanding of southeastern prehistory (Ford and Webb, 1956, p. 14; Gibson, 1996, p. 288). The Poverty Point type site is one of the largest earthen mound complexes ever built in North America, and includes a massive bird effigy mound some 21 meters high, a number of smaller mounds, and six semi-circular rings some 1200 meters across (Gibson, 2000; Kidder, 2001). A number of contemporaneous mound centers are present in this part of the Lower Mississippi Valley, making up an extensive interaction network that made use of raw materials from across much of the lower Southeast and up the Mississippi River into the Midwest. How such large and complex mound centers could arise among presumably preagricultural, egalitarian hunting-gathering populations was a puzzle for many years.

Massive earthen mound constructions predating Poverty Point by up to three millennia have now been documented at a number of locations in the Lower Mississippi Valley (Russo, 1994a, 1996a; Saunders et al., 1997, 2005). Early mound complexes dating between ca. 5500 and 5000 ^{14}C yr BP (ca. 6300–5750 cal yr BP) include Caney, Frenchman's Bend, Hedgepeth, and Watson Brake (Saunders et al., 1994, 1997, 2005; Russo, 1996a; J. Saunders, 2004) (Figs. 13.3 and 13.4). These are not isolated small mounds, but complexes whose construction and maintenance required the cooperative interaction of large numbers of people. Watson Brake, for example, which was built between ca. 5400 and 5000 ^{14}C yr BP (ca. 6250–5750 cal yr BP), includes 11 mounds up to 7 m in height connected by a circular earthen embankment some 280 m across. As at Poverty Point, appreciable occupational debris is evident. Paleosubsistence analyses undertaken to date suggest Watson Brake was used seasonally rather than year-round (Saunders et al., 1997), although

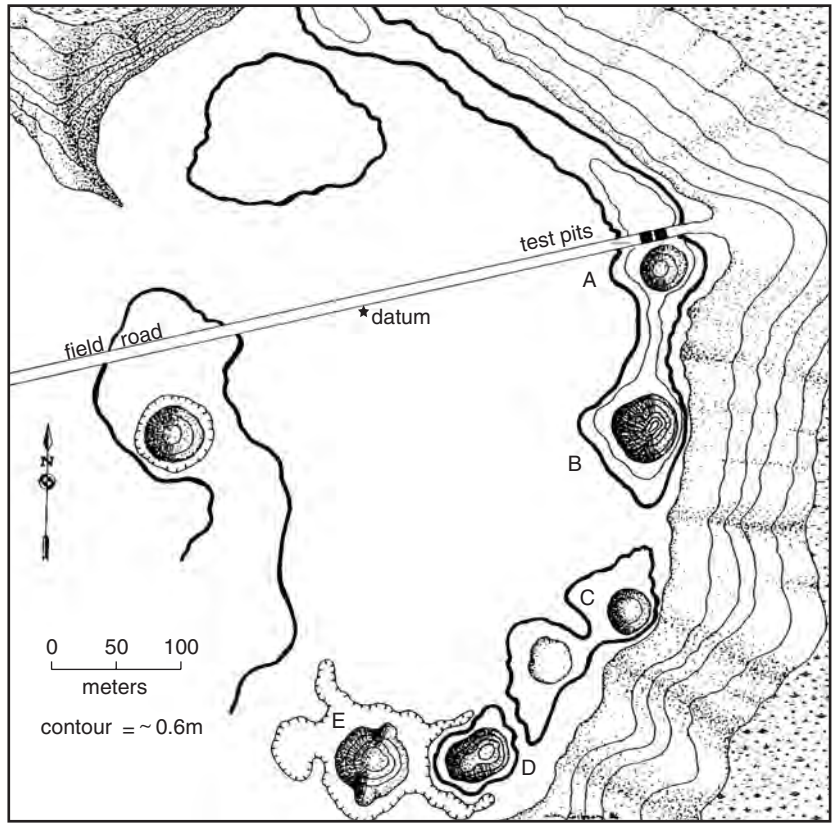

Figure 13.3. The Caney Mounds, Louisiana (drawn by Jon Gibson, adopted from Gibson, 1994, p. 173, courtesy *Southeastern Archaeology*).

it must be cautioned that the area that has been examined at the site is extremely small. No evidence for long-distance exchange or elite (or any) burials has been found at the site (J. Saunders, 2004).

To some, Poverty Point is now no longer an enigma, but rather a high point in a long and quite probably sacred and symbolically charged tradition of mound building in the region (Gibson, 1996, 2000; Clark, 2004; Sassaman, 2005a, 2005b; Sassaman and Heckenberger, 2004). Little is currently known about the Mid-Holocene cultures that initiated this tradition, but it appears they made extensive use of rich local wetland habitats. Competition for status between individuals and groups may have driven some of this construction activity (cf., Anderson, 2002, Gibson, 2004, J. Saunders, 2004). Minimally, the mound complexes suggest the involvement of peoples over a large area, and may demarcate the emergence of more complex forms of social organization, such as tribal-level entities, rather than the band-level groupings of 25–50 people that were long assumed by scholars to have been the primary social grouping of Early and Middle Archaic populations (Bender, 1985; Anderson, 2002, 2004). That is, the complex mound centers of the Middle Archaic may reflect the actions of many band-sized groups, or tribal

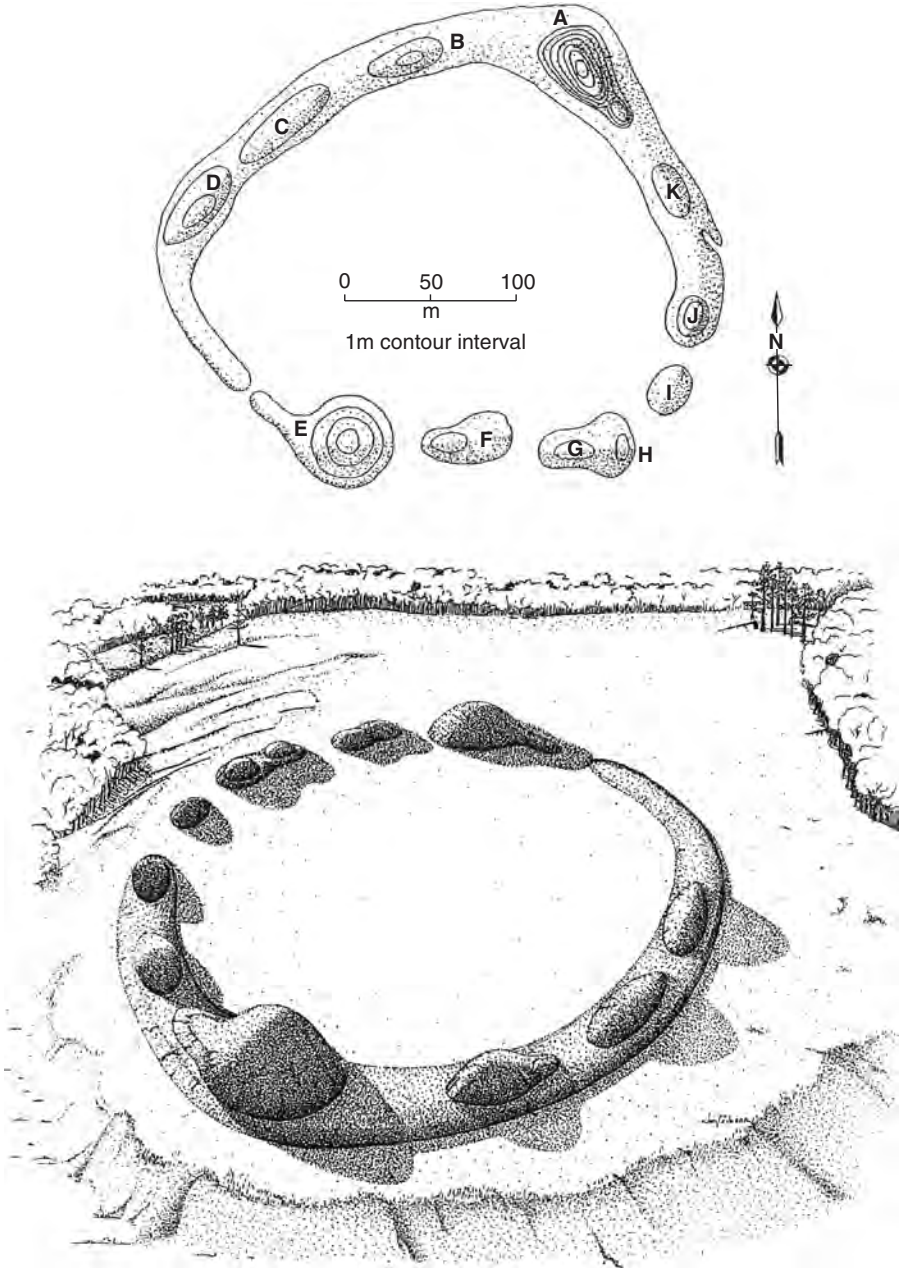

Figure 13.4. The Watson Brake Mounds, Louisiana, contours and idealized reconstruction (drawn by Jon Gibson, adopted from Saunders et al., 1994, p. 145, courtesy *Southeastern Archaeology*).

segments, bound together into a new social formation by the collective ceremonial activity represented by the construction of these earthen mound complexes, and the communal feasting, ritual and other behavior that likely took place at them. Mound construction and associated ritual, in this view, helped create pan-tribal social institutions linking peoples from across large areas together (Anderson, 2002, 2004; Widmer, 2004). Besides enhancing the status of tribal leaders, interaction and exchange over large areas likely helped reduce the possibility of warfare and alleviate subsistence stress, by creating ties between different groups (Braun and Plog, 1982; Jefferies, 2004). When resources in one area grew scarce, the existence of alliances would facilitate temporary group relocation into more favored areas, until the shortfall passed.

Early mound construction has been identified in several other parts of the Eastern North America, notably in coastal areas where, as in the Midsouth, both shell and earth were sometimes used to create monumental accumulations in or near villages or aggregation sites. In terms of architectural complexity, area, and volume, the largest of the coastal shell ring sites compare favorably with the Middle Archaic mound complexes of the lower Mississippi valley (Russo, 2006a, 2006b). The largest coastal ring sites contain up to 14 individual rings of heights up to 6 m and are associated with other earthen/shell constructions including mounds, causeways, ridges, ramps, paths, plazas, and extensive sheet and mounded middens (Russo, 2006a). In total, over 50 ring sites have been identified in South Carolina, Georgia, and Florida (Russo, 2006a) (Figs. 13.5 and 13.6). Horr's Island in southwest Florida is one of the largest, consisting of a complex arrangement of mounded

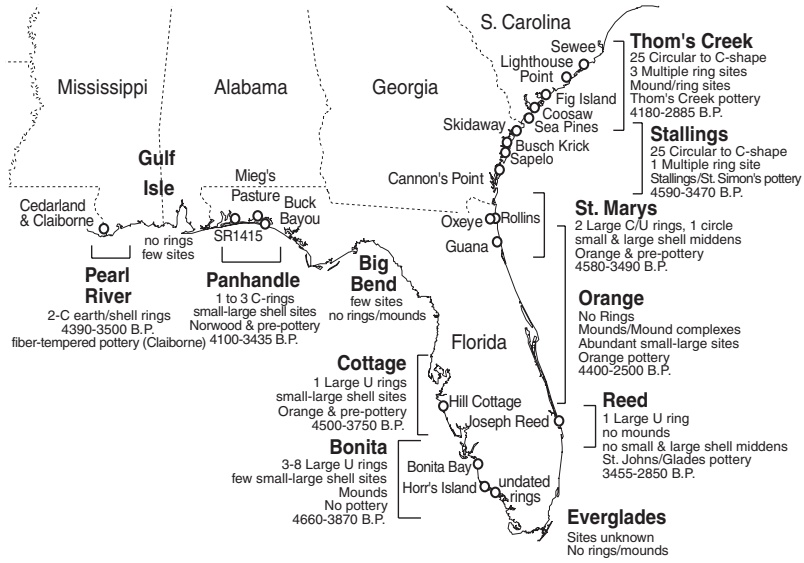

Figure 13.5. Southeastern United States coastal shell ring and other culture areas. Radiocarbon age ranges are conventional dates and do not include standard deviations (courtesy National Park Service, from Russo, 2006a).

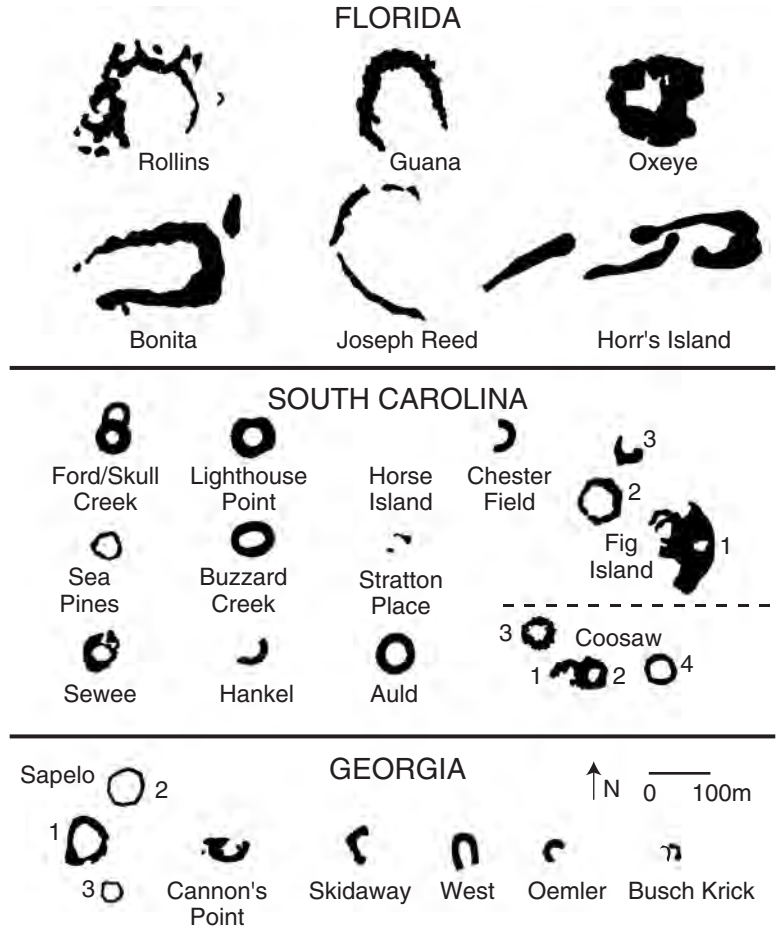

Figure 13.6. Footprints of Middle and Late Archaic shell ring and midden sites from Florida, Georgia, and South Carolina (courtesy National Park Service, from Russo, 2006a).

shell rings and conical shell/earth mounds built between 4600 and 5000 cal yr B.P. (Russo, 1994b, 1996b). Paleosubsistence analyses indicate occupation of the site was year-round – the earliest evidence for sedentism found to date in eastern North America. Even earlier shell and earthen mounds are known from northeast Florida, at Tomoka (Piatek, 1994), Tick Island (Russo, 1994b, pp. 106–108; Aten, 1999), Thornhill Lake (Endonino, 2003), Bluffton (Sears, 1960), and at Hontoon Island and vicinity (Sassaman, 2003; Randall and Sassaman, 2005), among other locales. Ceremonial functions have been suggested for these sites, and for many of the Archaic shell rings of the South Atlantic coast that date from ca. 5000 to 3000 B.P. (Russo, 1996b, 1999, 2004, 2006a; Russo and Heide, 2001, 2002a, 2002b; Saunders and Russo, 2002).

At mound sites in Florida, burials represent the obvious ceremony at Tick Island, Bluffton, and Thornhill Lake. The ceremonial use of other Florida and coastal

early mound sites remains to be definitively established. Although burials or isolated human remains have been found in a number of mounds, they often appear intrusive, while other mounds lack burials altogether (Russo, 1991). Unfortunately, most mounds have not been intensively investigated to draw any conclusions as to their use (Dickel, 1992; Piatek, 1994; Randall and Sassaman, 2005). At Horr's Island Mounds A and B, burials were identified, but post-dated the construction of the mounds. This suggests that if the mounds associated with the ring site were not originally built for burial, they were certainly used for burial within a few generations of their construction. That is, they seem to have become ancestral architectural memorabilia whose original purpose may have changed through time to become a place of ceremonial burial (e.g., Dillehay, 1990, p. 233; Russo, 1991, 2006a).

As for the ceremonial use of shell rings, it is unclear whether burial was one of the ceremonies practiced. Certainly, complete burials have never been found in the rings themselves and it remains something of a mystery as to what peoples of the Orange, Stallings, Thom's Creek, and other ring-producing cultures were doing with their dead. Isolated remains are common, but consist mostly of teeth, which do not in and of themselves argue strongly for a mortuary function for shell rings. Of the 30 citations of human remains recovered from 15 shell ring sites, Russo (2006a) found that possibly only five occurrences of isolated remains came from secure ring contexts.

One ceremony with more substantial evidence is feasting. While some portions of shell rings evidence construction using the refuse of quotidian meals (e.g., Trinkley, 1985; Thompson, 2006), most rings are made from massive pilings of shell resulting from large-scale, short-term feasts (Russo, 2004; R. Saunders, 2002, 2004). Ethnographically, large-scale feasts among tribal societies are associated with ceremony and ritual, and, hence, the case for shell rings as ceremonial sites has been forwarded (Russo, 2004; R. Saunders, 2004). The presence of both large- and small-scale food deposits suggests that rings served multiple functions, including both habitation and feasting, which may have co-occurred or changed through time (Russo, 2006a; Thompson, 2006).

Whereas increased population and tribal warring were common elsewhere in the Southeast, the competitive feasting activities of transegalitarian groups on local scales likely served to mitigate conflicts, such as along the South Carolina coast where shell rings and ring complexes are densely packed. Mounds associated with ring sites, and constructional asymmetries found within most of the ring sites suggest, minimally, situational status differences among the ring builders, perhaps tolerated by an otherwise egalitarian ethnic only in times of ceremony and feasting. At some ring sites, complexity and asymmetries in mound and ring architecture suggest hierarchical social asymmetries that would not subsequently again be seen until the Woodland period (Russo, 1999, 2002, 2004, 2006a; R. Saunders, 2002). That none of the rings and mounds have revealed evidence of caching, storage, or burial with exotic goods obtained from involvement in geographically distant trade

networks suggests that any incipient ranking that may have occurred at shell ring sites was dissimilar from the aggrandizing chiefdoms that would come to typify the later Southeastern socio-political landscape.

4. The persistence of interriverine forager adaptations

Concurrent with the more complex societies evident in several parts of the Southeast during the later Mid-Holocene, less complex social groups were also present, usually in more geographically marginal areas on the region's peripheries (Sassaman, 1983, 1991, 1995, 2001a, 2001b; Amick and Carr, 1996; Anderson, 1996). These tended to be highly mobile, small-scale foraging groups that appear to have made wide-ranging and generalized use of upland habitats. Some occupational expressions may be seasonal encampments of river-based populations. On both the eastern and western margins of the region, however, they appear to represent distinctive adaptations, local societies perhaps at no more than a band level of social organization (Sassaman, 1991, 1995; Anderson, 1996, p. 165). The large numbers of Middle Archaic sites in the uplands of western Louisiana, for example, appear to reflect a continuation of relatively uncomplicated foraging adaptations from the Early Archaic period (Anderson and Smith, 2003b, pp. 369–377), although closer to the Mississippi River such sites may be the encampments of the same populations that built mound complexes like Watson Brake.

The persistence of organizationally uncomplicated foraging populations is best documented along the South Atlantic Slope of Georgia and the Carolinas (Sassaman, 1983, 1985, 1991, 1995; Sassaman and Anderson, 1995). Throughout the Piedmont and into the Blue Ridge physiographic provinces, for example, sites with Morrow Mountain points are distributed across interriverine landforms. These sites are highly redundant, consisting of few formal tools, a high level of expedient tools and minimal evidence for midden. Riverine sites in this region rarely contain midden deposits, shellfish, or evidence for intensive or continuous occupation. These sites are thought to reflect a relatively uncomplicated foraging adaptation to Ridge and Valley and Piedmont habitats; uncomplicated, at least, when compared with cultural developments in the interior midsouth (Sassaman, 1995, pp. 182–183, 191; see also Anderson, 1996, p. 164–165). Vegetational history across this expanse is not well documented, although some have suggested that oak-hickory forests remained dominant throughout the Mid-Holocene (Delcourt and Delcourt, 1981, 1987; Jacobson et al., 1987).

Differences in respective environments may account for the pronounced differences in cultural expressions, with Midsouth Shell Mound Archaic groups adapted to patchy, high-yield riverine habitats, and Piedmont/Ridge and Valley groups adapted to dispersed, homogenous, lower-yield oak-hickory forest habitats. However, the presence of Morrow Mountain points in both areas also encourages consideration of possible sociocultural or historical factors that might have

been operating (Sassaman, 1995, 2001a, 2001b, 2005a). The intensive economies and presumably stressful circumstances Midsouth groups faced (i.e., warfare, circumscription) may have resulted in some population fissioning and movement. Morrow Mountain groups on the South Atlantic Slope may well have opted out of the complex sociopolitical environment of the Midsouth or, given their marginal geographic location, may not have been compelled to participate in this way of life. Thus, by the Mid-Holocene, historical conditions at the regional scale appear to have had a significant effect on adaptations on the local scale. To understand cultural developments in one part of the region, we need to be aware of conditions over a much larger area (Sassaman, 1995).

While Piedmont habitats teemed with activity during the Morrow Mountain phase on the South Atlantic Slope, even if by groups less complexly organized than those in the interior of the continent, the adjacent Coastal Plain was unquestionably underutilized. Large numbers of sites are known in this area during the preceding Early Archaic period (Anderson and Hanson, 1988; Sassaman et al., 1990; Anderson, 1996). Beginning no later than 8000 ^{14}C yr BP (ca. 8900 cal yr BP), pine began to expand in the interriverine areas at the expense of mast-producing species such as oak and hickory, and cypress in riverine zones of the Coastal Plain, something attributed to the global warming (resulting in both increased aridity and increased storm frequency) occurring at this time and to an increase in fires accidentally or intentionally set by Indian populations (Delcourt and Delcourt, 1987, 2004; Webb et al., 1993; Watts et al., 1996; Goman and Leigh, 2004). The expansion of pine forests, which produced lower quantities of food resources of use to human populations, appears to have led to a general depopulation of the interior Coastal Plain and an increased use of Piedmont and other interior areas, and probably made coastal areas more attractive as well (Anderson, 1991; Kowalewski, 1995, pp. 162–165; Sassaman 1995, 2001a). This population relocation is perhaps the most obvious impact climate change had on regional cultures during the Mid-Holocene.

Although drier conditions may have prevailed during the Mid-Holocene in the Midwest and parts of the Southeast, sediment records from the Atlantic Coastal Plain of North Carolina, South Carolina, and northwest Georgia suggest that moist conditions locally were uninterrupted (Seielstad, 1994; Watts et al., 1996; Goman and Leigh, 2004). Even the numerous interriverine wetlands known as Carolina Bays appear to have been well watered throughout this interval (Brooks et al., 1996). Other support is found in analysis of paleochannel morphology. For example, large meandering paleochannels on the floodplain of the Ogeechee River in southeast Georgia show wet paleoclimate during the early to Mid-Holocene from roughly 8500 to 4500 ^{14}C yr BP (ca. 9500–5150 cal yr BP) (Leigh and Feeney, 1995). All these data corroborate paleoclimate simulations and reconstructions derived from global circulation models and pollen studies. In particular, simulations indicate that the lower Southeast U.S. was much wetter from 9000 to 3000 ^{14}C yr BP (ca. 10,200–3200 cal yr BP) than at present because of increased solar radiation and intensified summer monsoon conditions (Kutzbach, 1987).

Thus, despite the diminished regional availability of mast resources, ponds and rivers throughout the Coastal Plain were potentially rich, albeit localized, resource patches of aquatic species, as well as mesic and hydric vegetation. Given this, one would be hard pressed to argue that Coastal Plain habitats were underutilized during the Mid-Holocene because it was an impoverished "pine barren" (e.g., Larson, 1980). Instead, limited use of the province, coupled with increased use of adjacent Piedmont habitat, may be traced to differences in resource structure, not composition. The increased range of soil moisture and surface water conditions evident in the Coastal Plain encouraged more heterogeneous landscapes compared to the relatively homogenous Piedmont (Hoover and Parker, 1991). Human use of the patchier Coastal Plain would have required levels of settlement permanence and logistical organization (sensu Binford, 1980) well beyond that necessary in the Piedmont. That productive Coastal Plain habitat was underutilized suggests that cultural traditions of land use emphasized freedom from constraints on mobility and economic demands, not limited local resource potential (Sassaman, 2001a, 2001b).

5. Pond, river, and coastal settlement in Florida and adjoining areas

The general lack of surface water in peninsular Florida during the early Holocene encouraged settlement around sinks and ponds. By shortly after 8000 ^{14}C yr BP (ca. 8900 cal yr BP), these occupations involved the interment of humans in pond/bog settings at places such as Windover (Doran and Dickel, 1988; Doran et al., 1988; Doran, 2002). Archaic basketry, canoes, carved wooden sculpture, tools, utensils, and clothing, as well as superbly preserved human tissue have all been found in wet sites, of which cemeteries like Windover and Little Salt Springs in Florida are the best known examples (Clausen et al., 1979; Doran et al., 1988; Doran, 2002; Purdy, 1988, 1991). As more well preserved human remains are found, DNA analyses may help delimit genetic relationships between populations. Recent wet-site work has also shown that the use of dugout canoes in Florida has appreciable antiquity. The earliest specimen currently known dates to roughly 6000 ^{14}C yr BP (ca. 6800 cal yr BP), and numerous canoes have been found dating between 5000 and 2300 cal yr BP (Newsom and Purdy, 1990; Milanich, 1994, p. 70; Wheeler et al., 2003a, 2003b, pp. 543–544).

The overall moister conditions of lower southeastern environments in the Mid-Holocene were not apparently present or of much significance in early Mid-Holocene Florida, where karst substrate and sea level were critical factors determining the availability of surface water. Some of peninsular Florida's cenotes and sinkholes have produced evidence for fluctuating water levels, and their impact on human populations, back to the late Pleistocene. At the 60-m deep Little Salt Springs (Clausen et al., 1979), water rose to present levels by 8500 ^{14}C yr BP (ca. 9500 cal yr BP), but fell some 8 m by 5000 ^{14}C yr BP (ca. 5750 cal yr BP). A drying trend recorded in peat communities marginal to the cenote peaked at about

7000 ^{14}C yr BP (ca. 7800 cal yr BP). Drops in water levels in the Everglades are further evidence of later Holocene fluctuations.

The interment of humans in subaqueous graves at places such as Little Salt Springs, Windover, Bay West, and Republic Groves, in what appear to have been marked cemeteries/burial areas, suggests territorial marking perhaps associated with either permanent or repeated, intensive occupation of the surrounding area (Russo, 1996b; Doran, 2002). The latter two sites have produced radiocarbon samples and diagnostic bifaces dating from about 7000 to 5700 ^{14}C yr BP (ca. 7800–6475 cal yr BP). The Newnan projectile point type from these sites is also among the more widespread types in Florida, found not only at pond sites, but also across much of the interior "uplands" of north-central Florida. Unlike the Coastal Plain of eastern Georgia and the Carolinas, the interior uplands forests of Florida would not be dominated by southern pine communities until the very end of the Mid-Holocene about 5000–4500 ^{14}C yr BP (ca. 5750–5150 cal yr BP) (Watts et al., 1996). Thus, despite potentially drier conditions, interior Florida appears to have supported a richer mast canopy than points farther north, and hence encouraged widespread, albeit low-intensity use of the interior uplands when compared to the riverine and coastal zones at the end of the Mid-Holocene.

The St. Johns River of east Florida is the earliest riverine environment in the lower Southeast with the massive midden deposits that characterize the extensive shellfishing that first occurred in the Mid-Holocene. The river is an extremely low gradient stream flowing south to north paralleling the Atlantic coast for 200 miles. While nearly dry during the Early Archaic period, the river valley flooded under rising sea levels and increased artesian flow during the Mid-Holocene allowing productive estuaries to expand at its northern mouth, vast lakes to develop in its center, and extensive marshes to spread across its southern-most reaches. By 6000 cal yr BP (McGee and Wheeler, 1994, p. 344), the central region of the river valley was being extensively exploited for fish and banded mystery snail (*Viviparus georgianus*); the northern tidewaters were exploited for oyster, clam, coquina, and fish by 5600 cal yr BP (Russo, 1992; Russo and Saunders, 1999); and by 4300 cal yr BP the southern marshes were home to numerous communities living off of mussel and other freshwater fisheries (Russo, 1986). Archaic shell midden sites along the river are far more abundant than along the coast where studies indicate that the large sites with monumental architecture in this region were occupied year-round (Russo, 1992; Russo and Ste. Claire, 1992). Unfortunately, no successful seasonality measure of the mystery snail and mussels that dominate the St. Johns middens has been developed, and determining permanent occupation along the river has been difficult. Nonetheless, the limited data have indicated permanent occupation of the river by Archaic groups (Russo, 1986; Russo and Ste. Claire, 1992, p. 344; Russo et al., 1992; Newsom, 1994, pp. 414–416; Wheeler et al., 2003a, pp. 154–155).

While the earliest Florida Atlantic coast site dates to 5600 cal yr BP (Russo and Saunders, 1999), even earlier settlement occurred on the Gulf coast of Florida. Shell middens dating as early as 6700 cal yr BP have been identified on high dune

formations (Milanich et al., 1984, p. 270; Russo, 1996a, p. 263). By 5000 cal yr BP mound and shell ring complexes began to appear and were widespread from South Carolina to Mississippi by 4000 cal yr BP (Trinkley, 1980a, 1980b; Webb, 1982, p. 34; Bruseth, 1991, p. 15; Thomas and Campbell, 1991; Russo, 1996a, 1996b, 2006a; Russo and Heide, 2001, 2002a, 2002b; Saunders and Russo, 2002). Compared to normative assumptions about the development of the modern coastlines and their initial settlement (i.e., that extended settlement along the littoral was unlikely until seas levels stabilized near their present level), the oldest of these dates are extremely early for the coastal zone of the Southeast (cf. Rouse, 1951; Widmer, 1988). It is thus unclear if shell midden sites dating to 6700 or 5600 cal yr BP represent the earliest coastal occupations of the Mid-Holocene or the earliest extant remnants of coastal settlement whose initial occupations remain unknown.

Microtidal conditions (less than 2 meter tidal range) characterize the entire coast of the Florida peninsula today, and almost certainly in the Mid-Holocene as well. Karstified carbonate strata and a general lack of relief characterizes the peninsula, and relatively little sediment reaches the coast. These conditions appear to have enabled some of the earlier coastal sites in Florida to survive alluvial burial (i.e., flooding by rising sea levels) better than sites in the barrier island chains of Georgia and the Carolinas and along the central Gulf coast, where the earliest sites are more recent, between 4000 and 4500 cal yr BP. Also helping to account for Florida's durable early coastal sites are their locations on unusually high topographic formations adjacent to, but largely unassailed by rising seas (Milanich et al., 1984; Russo, 1991, 1996b).

Unfortunately, except for these few sites in Florida, evidence for Mid-Holocene use of marine resources has likely been lost by sea level rise in other areas of the Southeast (Blanton, 1996; Russo, 1996b). The Mid-Holocene was generally a time of moderate sea level rise. During the early Holocene, sea levels in the Southeast rose at a rate of as much as 1 cm a year, dropping to as little as 25 mm per year by about 8000 ^{14}C yr BP (ca. 8900 to cal yr BP). From 6000 to about 3000 ^{14}C yr BP (ca. 6800–3200 cal yr BP), sea level rose at a rate of no more than 3 mm a year (Colquhoun and Brooks, 1986). On the Atlantic coast, the slow sea level rise combined with a relatively steep offshore gradients precluded significant ocean transgression over the shoreline, and estuaries and barrier islands approximated the configurations they currently hold. On the Gulf shore, a lower gradient under a transgressing sea likely resulted in the submergence and erosion of all but those archeological sites situated on the rare topographic high. While some have suggested that prior to 4500 ^{14}C yr BP (ca. 5150 cal yr BP), the rate of sea level rise was too rapid to promote productive habitat for shellfish and other coastal food resources (DePratter and Howard, 1980; Widmer, 1988), it now appears productive estuaries dating to the Mid-Holocene were present across the Southeast coasts as evidenced by dense midden sites on both dry and submerged lands, submerged paleo-oyster bars, and the presence estuarine shellfish in paleo-shorelines (Stapor et al., 1988, pp. 192–202; Faught, 1996; Russo, 1996b). Certainly, particular configurations of coastal islands and mainland shores have changed to varying degrees

since 4500 ^{14}C yr BP (ca. 5150 cal yr BP). But during the Middle and Late Archaic productive estuaries, if not ubiquitous, did gain footholds along the Southeast coasts.

Pottery first appears about 4500 ^{14}C yr BP (ca. 5150 cal yr BP) in the Stallings culture of the middle Savannah River, and soon thereafter in the Orange culture along the St. Johns River and the Thom's Creek culture of South Carolina (Trinkley, 1980a, 1980b; Sassaman, 1993; Russo, 2006a). Some archeologists have suggested that early appearance of pottery in parts of the Southeast was linked causally to or resulted from the surpluses provided by the early shellfishing economies (Goodyear, 1988; Sassaman, 1993, pp. 216–217; Russo, 2006a, 2006b). However, intensive shellfishing arose hundreds of years before the earliest pottery appeared in many other areas of the Southeast (Russo, 1992, 1996a, 1996b; Russo and Saunders, 1999; Morey et al., 2002) indicating, perhaps, a sufficient, but not necessary linkage between pottery and intensified shellfish production.

6. Population distributions

The incidence of Archaic sites across the Southeast also provides clues about Mid-Holocene settlement (Anderson, 1996). As of the mid-1990s, ca. 180,000 sites had been recorded across the region, of which over 32,000 have Archaic components. An increase in the total number of sites occurs over the course of the Archaic, from roughly 7000 in the Early Archaic to 10,000 in the Middle Archaic to 15,000 in the Late Archaic. Standardizing for time, the proportional occurrence of sites in the Early, Middle, and Late Archaic subperiods is actually 1.00 to 0.98 to 2.11. That is, a slight decrease in site incidence occurred from the Early to Middle Archaic, followed by a fairly dramatic increase from the Middle to Late Archaic. Although care must be used when equating site numbers with population levels, the data suggest regional population levels may have stabilized fairly early on and then remained uniform or even dropped slightly through the Mid-Holocene, with marked growth only coming in the Late Archaic (see also Milner, 2004a, 2004b, p. 28–29). The data also indicate that Middle Archaic sites are not distributed evenly over the region.

Large numbers of Middle Archaic sites are reported in the Piedmont of North Carolina, South Carolina, and Georgia (Kowalewski, 1995, pp. 160–167; Anderson, 1996, pp. 163–165). As noted, this area appears to have been occupied by highly mobile foraging groups using an expedient lithic technology. These site concentrations thus probably do not represent dense populations but, instead, the remains of small, organizationally uncomplicated groups ranging widely over the landscape (Kowalewski, 1995; Sassaman, 1995). Large numbers of Middle Archaic sites are also present in Louisiana in the interior uplands to the west of the river, that appear to represent the remains of a highly mobile foraging adaptation similar to that noted in the South Appalachian area (Anderson, 1996; Saunders and Allen, 1997; Anderson and Smith, 2003a, 2003b, p. 367–377).

In the interior Midsouth, in contrast, Middle Archaic sites are somewhat more restricted, with concentrations along the major drainages, some in areas where extensive shell and earthen midden deposits have been found, such as along the Green and Tennessee Rivers. The major site concentrations in the Midsouth are thought to represent the territorial or integrative centers of individual groups. Site incidence over the remainder of the Midsouth may reflect the seasonally exploited foraging ranges of these groups, with areas of low site density possibly indicative of buffer zones between distinct societies. Other major concentrations of Middle Archaic sites associated with massive mound/midden complexes and evidence for extended occupations occur in Louisiana near the Mississippi River and its tributaries, and along the Gulf coast and St. Johns River of Florida.

The Gulf and Atlantic Coastal Plain across much of the region, from southeastern Mississippi to northern North Carolina, has a very low incidence of Middle Archaic sites, a reversal of the pattern noted in the Early Archaic period. As noted, the expansion of pine forests in the Coastal Plain beginning about 9000 cal yr BP is thought to have made this area less attractive for settlement, prompting a relocation of populations into the interior. Finally, Late Archaic sites occur in large numbers over almost every part of the Southeast, suggesting appreciable population increase following the close of the Mid-Holocene, and considerable landscape infilling.

7. Conclusions

As noted in recent syntheses (Anderson, 1995; Sassaman and Anderson, 1996, 2004; Anderson and Sassaman, 2004; Gibson and Carr, 2004), our understanding of Archaic occupations in the Southeast is increasing rapidly, with much of the information gained from cultural resource management projects. Monumental architecture dating more than 5000 cal yr BP is now well documented in Louisiana and Florida (Russo, 1996a), and shell rings of the Atlantic and Gulf coasts (Russo and Heide, 2001), once widely regarded as merely refuse heaps, are now accepted by many as ritual deposits (Russo, 2004). Floor plans of a number of Archaic structures have been documented, showing them to be, not surprisingly, more substantial than one might expect of small-scale, mobile societies (Sassaman and Ledbetter, 1996). Middle and Late Archaic exchange and interaction is attracting increasing attention, and there is evidence that the scale at which regular interaction occurred between groups was hundreds of kilometers in extent, particularly in the Midsouth (Jefferies, 1995, 1996, 2004). Local participation in long-distance exchange, however, appears to have varied appreciably over the region (Claassen, 1996). The incidence of extralocal materials varied appreciably, something that probably reflects the actions and abilities of individual network participants, who likely shaped the extent of local involvement.

We now have the capability to develop paleotemperature reconstructions spanning most of the Holocene with a resolution of a decade or less, using high precision uranium–thorium dating of banded speleothem calcite, coupled with carbon and

oxygen isotope composition analyses (Dorale et al., 1992). Such analyses, when conducted in various parts of the karst-rich southeastern landscape, will provide measures of mean annual temperature for most or all of the period of human occupation. Such data can be tied directly into analyses linking effective temperature and technological organization (Binford, 1980; Cable, 1982, 1996). Dendrochronology also appears to offer the potential to delimit annual variation in rainfall well back into the Holocene which, with paleotemperature information, should provide precise information about Mid-Holocene climate in parts of the region (Stahle et al., 1988; Miller et al., 2006).

As we have seen, differing patterns of land use and different levels of organizational complexity are evident during the Middle Archaic period in the Southeast. These include (1) foragers of low social complexity and high mobility in the South Appalachian Piedmont and the interior uplands of western Louisiana; (2) a pattern of infrequent use of the Coastal Plain from North Carolina to Mississippi; (3) possible logistically based year-round coastal and riverine adaptations in Florida, coupled with seasonal foraging in interior areas; (4) complex, riverine occupations along major drainages of the Midsouth and in the lower Mississippi Valley, possibly with territorial buffers as well as less complex systems in intervening areas; and (5) the construction of monumental architecture and the emergence of tribal-level forms of social organization in some areas. The Mid-Holocene cultural landscape was a varied one, and also changed appreciably over time. At the beginning of the period band level societies were ubiquitous, while at the end societies of varying levels of size and complexity were present in different parts of the landscape.

The varying levels of social complexity observed over the Mid-Holocene Southeast were variously related to differences in regional physiography, resource structure, climate, intensity of intergroup interaction, and the historical traditions prevalent in each area. Areas rich in resources where interaction potential was greatest, such as in the major river drainages of the Midsouth, or areas rich in subsistence resources, such as in the lower Mississippi Valley or the Atlantic and Gulf coasts of Florida, tended to have the highest levels of sociopolitical complexity, and complex social formations developed early in these settings. In areas where interaction potential might have been lower, or subsistence resources more uncommon, cultural systems of less complexity are evident. Of course, what is meant by cultural ''complexity'' during the Mid-Holocene has itself been variously defined, with a diverse array of approaches used to explore the subject (cf., Anderson, 2002, 2004, 2005; Clark, 2004; Gibson, 2004; Russo, 2004; Sassaman, 2004, 2005a, 2005b; Sassaman and Heckenberger, 2004; J. Saunders, 2004). Appreciable variability also characterizes the societies of the region. The earliest mound sites in the lower Mississippi Valley and peninsular Florida, as well as the early shell ring sites in Georgia, South Carolina, and Florida, for example, lack much evidence for artifacts obtained through long-distance exchange, a pattern quite unlike that in the Middle and Late Archaic shell middens of the Midsouth, where artifacts of copper and marine shell are more frequently found in burials. But the extent of monumental construction was, in some cases, far greater than that found in

contemporary Midsouth and even many subsequent regional societies. None of these Middle Holocene cultures, however, have the markedly elaborated burials and other evidence for self-aggrandizing behavior or hereditary leadership groups common to many subsequent Woodland or Mississippian era cultures. The Mid-Holocene Southeast was a varied cultural landscape, within which a number of distinct historical trajectories were operating. To understand occupations in any one area, we must have an appreciation for climatic and cultural developments at a range of geographic and temporal scales. Research of this kind is just emerging, which is fitting. Two decades ago we had no idea monumental architecture was being built during the Mid-Holocene in the Southeast. It will be interesting to see what we know about life during this period given another two decades of research.

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