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E. Thomas Hemmings

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EMERGENCE OF FORMATIVE LIFE ON THE ATLANTIC COAST
OF THE SOUTHEAST

by
E. Thomas Hemmings
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Prepared by the
INSTITUTE OF ARCHEOLOGY AND ANTHROPOLOGY
UNIVERSITY OF SOUTH CAROLINA
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INTRODUCTION

The purpose of this paper is two-fold: first, to present new information regarding an important group of archeological sites - the coastal shell rings of Georgia and South Carolina - which are known at present primarily from Waring's work (Williams 1968), and second, to comment on Ford's (1966, 1969) "Colonial Formative" theory, insofar as it deals with this part of the New World. The background for this discussion is a long, but sporadic, span of archeology on the Atlantic coast of the Southeast, in part summarized by Caldwell (1952) and Williams (1968). Time will permit me only to outline these major conclusions of earlier workers, especially Waring:

- (1) The earliest pottery in North America north of Mexico is apparently the fiber-tempered Stallings Island complex, dating at least to 2000 B.C., and perhaps to 2500 B.C. (Bullen 1961; Stoltman 1966).
- (2) The distribution of early ceramic Stallings Island sites is the coastal strand from south Georgia to Port Royal, S. C., and the Savannah River from its mouth to just above Augusta. Stallings Island sherds occur in small numbers in the coastal plain beyond this zone (Williams 1968).
- (3) At least nine, ring-shaped, shell middens survive on the coast, those in Georgia associated with Stallings Island pottery and those in South Carolina with less well-known Awendaw and Horse Island pottery, apparently partially contemporary with Stallings Island (Waddell 1965; Williams 1968).

- (4) The shell rings are primary deposits of habitation refuse, but appear to be structures planned and constructed for communal or ceremonial purposes, a development unknown elsewhere in the United States at this early time (Waring and Larson 1968).
- (5) The shell ring dwellers were coastal hunters and gatherers, especially mollusc collectors, without knowledge of agriculture (Waring and Larson 1968).
- (6) Finally, it has been suggested that the entire complex of earliest ceramics, coastal subsistence, and shell ring structures was imported by seaborne colonists from South America, and that fiber-tempering and riparian existence were soon introduced to other areas of the Southeast (Ford 1966, 1969).

SHELL RING SURVEY

During late winter and early spring this year Gene Waddell of the Florence Museum and I surveyed a 150-mile section of coast from Bull Bay, S.C., to Sapelo Island, Ga. We located remains of 18 shell rings on 14 sites in this area, and suspect that four or more remain to be visited. The environmental settings were analyzed and recorded, and tape-and-compass maps of the rings were produced so that intersite variation might be evaluated. Surface samples of sherds, shell, and bone were collected to provide an approximate idea of site content. In the time available we were able to visit only a few early ceramic middens without ring structure, but such sites, usually relatively small, do

occur near some rings. The results of earlier test excavations in shell rings by Edwards (1965), Calmes (1968), and Waring and Larson (1968), as well as our survey data, indicate an important role for these sites in the emergence of Southeastern Formative life.

All known shell ring sites are located on estuaries or tidal creeks within the Sea Island section of the Atlantic coastal plain. They occupy high ground immediately adjoining salt marsh or, occasionally, are isolated in high marsh a few hundred feet offshore. The interiors are reasonably level, devoid of shell, and elevated 3 to 13 feet above mean sea level. Interiors of lowlying sites are marshy, while the higher sites are usually heavily forested. The shell rims range from about 130 to 300 feet in outside diameter, 2 to 10 feet in maximum height, and 25 to 70 feet in basal width. The rings are by no means all well preserved, as a number have been affected by the lateral cutting of tidal streams, or historic shell removal, or both. However, in five nearly intact rings the rims closely approach uniform width, level summits, and circular symmetry. Rim heights vary considerably between sites, probably due to length of occupation, but not within sites. Other rings, preserved only as segments, tend to corroborate these observations. Thus Waring was probably justified in emphasizing the monumental size and deliberate building of the ring structures.

It is also interesting to note that rings occur in complexes as well as isolated structures. The largest known ring at Sapelo Island is associated with two smaller rings nearby. The next largest ring (in diameter) at Fig Island on the North Edisto River is situated in marsh 75 feet from a smaller, eroded, ring segment. Small aprons of

shell on each ring suggest that a causeway linked them at the nearest point of approach. At ^{38 B48}Skull Creek on Hilton Head Island the rims of two rings are superposed at one point. Because of extensive erosion in the Sea Island area, both isolated rings and ring complexes may have been destroyed during the last 4000 years, but ring-building was assuredly widespread from the remaining evidence.

The rim stratigraphy is known both from excavation and from eroded faces or borrow pits. Hearths, crushed shell floors and heavily concentrated organic lenses have been interpreted as evidence of habitation on the rim summits, but these features are not always apparent or well defined. Dwellings, if once present on shell rims, must have been flimsy and impermanent. The question of perishable structures in the interior space is intriguing, and no conclusive excavation of this area in a shell ring site has been undertaken.

Bone and shell food remains are well preserved, as in most coastal middens. The bulk of all rings is American oyster, obviously a staple resource. Periwinkles, knobbed whelks, and ribbed mussels are always present in lesser amounts, and clams and several other bivalves and univalves are more rare. Excavations have shown that fish remains are extremely numerous, and that certain species such as black drum were taken in large numbers. Mammal remains are less common, white-tailed deer, racoon, and opossum being present in all sizable collections. Crab, turtle, and various bird remains are also usually present. Clearly the estuaries and nearby land habitats were being exploited, and especially their concentrated high-yield resources. However, significant differences ^{38 CH 41} in cultural ecology may exist between sites. For example, the Auld shell ring above Charleston contains an abundance of juvenile knobbed whelks.

The survey sherd collections, not finally analyzed, tend to corroborate and extend Waring's and others' observations for the distribution of earliest coastal ceramics. Stallings Island fiber-tempered types are practically exclusive in Georgia shell rings. From the Savannah River estuary to Port Royal Sound, sand-tempered or untempered Horse Island Punctate is more common and is associated with fiber-tempered ware. Calmes (1968) has presented evidence from Hilton Head shell rings for Stallings Island superposed over Horse Island Punctate. On the North Edisto River shell rings, Horse Island pottery is greatly predominant and Stallings Island and Awendaw present in small amounts. Northward in Charleston County Awendaw increases in frequency, Horse Island decreases, and Stallings Island is absent. At this point it should be noted that seven radiocarbon dates from four shell rings in South Carolina and one in Georgia fall between 3900 and 3100 years ago (Calmes 1968; Williams 1968). As there exist several conflicting lines of evidence for the relative ages of these ceramic types, much more typological analysis, stratigraphic excavation, and dating need to be done.

A homogeneous group of shell, bone, and antler artifacts appears to characterize all the rings where test excavations have been carried out. These include shell disc beads, shell hoes or picks, antler projectile points, bone awls, and distinctive Bilbo-type bone pins, often intricately engraved. Stone artifacts are relatively rare, but Savannah River Stemmed projectile points are present in most shell rings.

FIG ISLAND EXCAVATION

In late July-early August the Institute began excavating the largest shell ring on the South Carolina coast, known as Fig Island 2. It is located on high marsh adjacent to the North Edisto River estuary. A number of other shell rings and smaller early ceramic middens are known in this area. Fig Island 2 is about 260 feet in diameter and stands 3 to 5 feet above the marsh. The rim contains an estimated 375,000 bushels of shell, and surrounds a half acre flat central area. The circular symmetry of this well-preserved ring is impressive.

None of the analysis of collections has been completed, nor have dates yet been obtained. However, we expect especially fruitful results from analysis of the large invertebrate and vertebrate collections. Sherds recovered from the rim are predominantly Horse Island Punctate, a type which is not presently well described. Small numbers of Stallings Island fiber-tempered sherds are present throughout the midden. A small sample of bone and shell artifacts recovered from the rim includes the common types from early ceramic sites, such as engraved and plain bone pins. One object of particular interest is an elaborately engraved deer antler tine, possibly on atlatl hook.

Although we carried one 125-foot trench from the center of the ring through its rim, the exploration of the interior for evidence of structures was not successful. The interior area is wet just beneath the surface, and is covered by salt water during highest tides, one of which we experienced while trenching at the center.

The final result of the Fig Island project should be a detailed view of the local environment at the time of occupation and the way Fig. Islanders were exploiting it. The kinds of architectural evidence we were seeking will probably need to be ascertained from higher and dryer shell rings, of which there are, fortunately, several good candidates.

THE COLONIAL FORMATIVE

In his latest publications dealing with the spread of Formative culture in the Americas, Ford (1966, 1969) stated unequivocally that the earliest ceramic sites on the Atlantic coast of the Southeast were established by coastal voyagers from Colombia and Ecuador. The making of pottery and sea-oriented subsistence techniques, which permitted a new degree of sedentism, perhaps true village life, were introduced by small groups of sea-borne colonists, traveling northward along the coasts.

The most striking evidence in support of this theory comes from a shell ring on the north coast of Colombia, S. A. Puerto Hormiga, excavated by Reichel-Dolmatoff (1965) in 1961 and 1963, is situated in marsh and has a form closely corresponding with Georgia-South Carolina shell rings. It is 280 feet in outside diameter and stands 4 feet above the surrounding marsh. The rim varies from 52 to 75 feet in width at the base and consists largely of clam shell. The interior is clean and level. The earliest ceramics known from Colombia are Puerto Hormiga fiber-tempered and sand-tempered types which in many respects compare with Stallings Island pottery. An assemblage of stone tools, including grinding

equipment, occurs at Puerto Hormiga, but not in our coastal shell rings. A series of five radiocarbon dates places the occupation of Puerto Hormiga between 5000 and 4500 years ago (Reichel-Dolmatoff 1965).

Clearly, subsistence and settlement techniques, as well as the early ceramic complex, on the Atlantic coast of the Southeast could have derived from the Puerto Hormiga phase of coastal Colombia. The chronological relationship is credible, but the intervening distance exceeds 2500 miles of Caribbean Sea, Gulf of Mexico, and Atlantic waters. Ford suggests the voyage or voyages proceeded from the South American coast near the Isthmus, through the Yucatan and Florida straits west and north of Cuba, then northward to the Savannah River. Northbound currents of the Gulf Stream follow this route.

At the present time no shell rings or fiber-tempered ceramics are known on the Central American or Mexican Gulf coasts and the Caribbean Islands. Furthermore, although they are reported to exist, no published descriptions of Colombia shell rings, other than Puerto Hormiga, are available. In this respect Ford's Colonial Formative theory remains to be proven - intervening archeological site-units on the proposed route of migration are undiscovered (Rouse 1958).

The appearance of sedentism and concomitant social changes prior to food producing, and the stimuli and consequences of these changes, are little known aspects of emerging Formative life in the Southeast. Our coastal shell rings deserve special attention in approaching these problems.

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