A DEFINITION OF THE MANASOTA CULTURE

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The Manasota culture is a newly recognized, prehistoric aboriginal culture. The culture existed from about 500 B.C. to about A.D. 800 in the Central Peninsular Gulf Coast region of Florida, the area around Tampa Bay and southward to just north of Charlotte Harbor (Fig. 1). The word "Manasota" is a contraction of the names of the two counties "Manatee" and "Sarasota," and reflects the geographic area in which the cultural complex was first recognized.

In this article, specific archaeologically derived culture traits of the Manasota culture are identified (Table 1). The development through time of the Manasota culture is examined and the adaptations of the Manasota culture to the surrounding natural and cultural environments are discussed. Also, this article provides information about sites located inland from the shore of the central peninsular Gulf coast and about the significance of these sites to the Manasota culture.

Background

The Manasota culture was identified (Luer and Almy 1979a, 1979b) after research disclosed that the complex of culture traits that had defined the Perico Island culture (Willey 1948, 1949) of the central peninsular Gulf coast was not a valid complex. "Most of the traits which Willey attributed to the Perico Island culture are in fact of two culture periods: the Florida Transitional and a 'post-Florida Transitional' period" (Luer and Almy 1979b:1). For decades, Willey's definition of the Perico Island culture has created major problems for archaeologists working on the west coast of Florida.

One of the first problems appeared in the 1950s and 1960s when research showed that the original geographic and temporal placement of the Perico ceramic series (Perico Plain, Perico Linear Punctated, and Perico Incised) was incorrect (Bullen 1950a, 1950b, 1959; Bullen and Askew 1965). Regarding the geographic distribution of the Perico pottery, Bullen wrote that although

Wolley . . . postulated a . . . Perico Island Period for the area between Tampa Bay and Charlotte Harbor (Manatee, Sarasota, and Charlotte counties) . . ., work done since then has produced a few limestone-tempered sherds, possibly Perico Plain, but no decorated pottery of the Perico Series south of Tampa Bay (Bullen and Bullen 1956,ms; Bullen 1950a, 1950b, 1951) (Bullen and Askew 1965: 214-215).

In contrast, Bullen and Askew found that "to the north of Tampa Bay the situation is considerably different," where a " . . . concentration of Perico ceramics occurs in Citrus and Hernando Counties with a few finds in Pinellas County" and he concluded that "the Perico Series must be considered a local development in Citrus and Hernando Counties . . ." (Bullen and Askew 1965:215). Furthermore, Bullen's research disclosed that the Perico Series...
actually belonged to a brief, immediately post-Archaic culture which Bullen (1959) named the Florida Transitional Period. Thus, the only clearly definitive Perico Island traits, the Perico ceramics, were not of a Perico Island culture.

Although Bullen's work clarified the problem of the Perico ceramic series, other problems remained with Willey's definition. Other ceramic types which were used to define "Perico Island" did not characterize any culture between Tampa Bay and Charlotte Harbor.

From Bullen's work at several sites in Manatee and Sarasota counties, from Luer's work at Roberts Bay, and from Luer and Almy's work on Longboat Key, it was found that Miami Incised, Okeechobee Plain and Belle Glade Plain pottery, traits which Willey had attributed to Perico Island, were not produced by the 'post-Florida Transitional' culture... (Luer and Almy 1979b:2).

Instead, excavations showed that only undecorated sand-tempered pottery was manufactured (Bullen 1950a, 1950b, 1951, 1952, 1955, 1971; Bullen and Bullen 1956, 1976; Luer 1977a and 1977b; Luer and Almy 1979a, 1979b). Hence, the "Perico Island" ceramic assemblage, which had been based on limited evidence from a single site, characterized no known culture.

The other remaining traits used to define "Perico Island" were not definitive. For example, such traits as Busycon hammers, picks, and celts, as well as bone projectile points, awls, and daggers were shared by many Florida prehistoric cultures. Even Willey's "Perico Island" subsistence, burial, and settlement traits were not distinctive. Thus, the problem became: how to characterize and what to call the post-Florida Transitional culture and period of the central peninsular Gulf coast?

Archaeologists working between Tampa Bay and Charlotte Harbor dealt with this problem differently. To some investigators (Bullen 1950b, 1951, 1952, 1971, 1973; Bullen and Bullen 1976; Luer 1977b), the term "Perico Island" came to mean the post-Florida Transitional period during which

... the manufacture of undecorated gritty pottery became well established in the Tampa Bay area and for hundreds of years was the only kind of pottery made (Bullen 1955:55-56).

Other investigators continued to attribute the assemblage of traits which Willey defined for "Perico Island" to the area between Tampa Bay and Charlotte Harbor despite the lack of evidence for the existence of such a complex (Gagel 1976; Almy 1976; Jones n.d.; Grange and Williams 1979; Burger 1979). All these researchers, however, retained the "Perico Island" appellation "apparently for lack of a name... for this... 'post-Florida Transitional' period" (Luer and Almy 1979b:2). This resulted in even more confusion because the term "Perico Island" had come to mean different things to different researchers.

**Identifying Manasota**

By the late 1970s sufficient work had been done between Tampa Bay and Charlotte Harbor that the authors could begin to identify the post-Florida
Figure 1. Locations of Sites that Have Yielded Information Pertinent to this Article. Black dots represent sites at which Manasota components have been identified. Circles represent sand burial mounds mentioned in text. Triangles represent occupational sand mounds, squares represent occupational or activity areas - many of which yield evidence of long usage.
Transitional culture of the central peninsular Gulf coast. Confronted with the problem of describing the culture, the authors began an investigation: dozens of coastal sites were visited—mostly in Sarasota and Manatee counties; published accounts of sites from Crystal River to Mound Key were studied; and hundreds of artifacts from museums and private collections were examined. Also, we talked with archaeologists familiar with the area and we reviewed our own experiences in the field. From this investigation, an article was published in 1979 in which we made the first effort at describing this unrecognized cultural complex which we named Manasota:

Archaeologically, the Manasota culture is characterized by . . . sites which yield evidence of an economy based on fishing, hunting, and shellfish-gathering. The sites yield evidence of burial practices involving primary, flexed burials. . . . Ceramic manufacture was limited to sand-tempered, undecorated . . . pottery such as . . . flattened-globular bowls and pots with a converged orifice. Many shell tools were used . . . including fighting conch shell hammers, left-handed whelk shell 'spokeshaves' . . . columellae and hammers. . . . There was little use of stone tools. . . . Bone tools include barbs and simple points made from longbones (Luer and Almy 1979a:41-42).

From our field work and our analysis of published site reports, we realized that the Manasota culture had a particular distribution in time; that is, from about 500 B.C. to about A.D. 800 (Luer and Almy 1979a:41). Our dating of the culture was based primarily on stratigraphic evidence, especially ceramic inventories and carbon-14 dates.

The spatial distribution of Manasota, from around Tampa Bay southward to near Charlotte Harbor, was determined from the occurrence of artifacts as well as from the extent of the particular subsistence and settlement pattern described for Manasota in which Indians combined . . . marine and hinterland exploitation. . . . Large, shoreside sites, on or very near the mainland, were the major villages. . . . The necessity of proximity and easy access to regions of sufficient area in which food could be reliably procured dictated that villages straddle the marine and terrestrial environments. A hinterland of several hundred square kilometers stretched eastward of the village sites. . . . Food bones in midden debris, although less conspicuous than mollusk shell, substantiate that a hinterland provided much food for the Indians . . . (Luer and Almy 1979a:42).

We also cited evidence to show that the Manasota culture was bordered by different cultures to the north and south.

We presented additional information about the Manasota culture in a later paper (Luer and Almy 1979b) discussing the relationship between Manasota subsistence and settlement patterns and the environments of the central peninsular Gulf coast (Fig. 2). We spoke of the Manasota culture giving way to other cultures and subsistence patterns to the north of Tampa Bay as the bays and pine flatwoods of the central peninsular Gulf coast change to low-lying, coastal marsh and hardwood hammocks and to hilly xerophytic oak and
Figure 2. Central Gulf Coast of Florida Showing Primary Physiographic Divisions (a, left) and Zones of Natural Vegetation (b, right); modified after Davis (1967) and White (1970). Dashed and dotted line traces approximate extent of Central Peninsular Gulf Coast region which roughly corresponds to coastal zone of pine flatwoods.
longleaf pine forests. We then described how, at Charlotte Harbor, the narrow bays and well-drained shores of the central peninsular Gulf coast change to broad and shallow bays and to low, mangrove-covered shores which supported the different subsistence and settlement patterns of the archaeologically-different Caloosahatchee region. Also in that same paper, the Manasota culture was described as an indigenous cultural manifestation displaying continuity as well as change through time; the later development of the Manasota culture, which we recognized as having been Weeden Island-influenced, was recently suggested by Milanich to have been one of several Weeden Island-related peninsular cultures (Milanich 1980:13; Milanich and Fairbanks 1980:112).

During the last two years, we have refined our understanding of the Manasota culture. We have published a detailed study of ceramics which has shown us more about Manasota pottery, and reinterpretation of existing data has amplified our understanding of burial practices. Also, recent excavation of sites inland from the shore has increased our knowledge of settlement patterns. When we first defined Manasota, we identified components of the culture at 14 shell middens. Many of these Manasota components occur in deep shell middens which also yield evidence of several other culture periods, from the late Archaic to Safety Harbor. Since we identified Manasota, we have realized that shoreside sites are only part of the overall picture. Recent testing and excavation at sites located inland from the shore have yielded some evidence of the Manasota culture. These new findings have been incorporated into this definition.

**Settlement and Subsistence**

Shoreside sites used by the Manasota people were spread linearly and parallel with the shoreline. Large sites, probably village sites, cover several acres and measure several meters in thickness. Many of these shell middens form a well-defined elevated ridge paralleling the shore (Willey 1949; Bullen 1951; Gallagher and Warren 1975; Bullen and Bullen 1976; Luer 1977b). At several of these village sites, shell midden material was used to construct what appear to be ramps that lead to the elevated ridge from the surrounding terrain (Gallagher and Warren 1975; Luer 1977b). Evidence is lacking for the size, shape, number, and orientation of the houses that characterized these villages. The large village middens are found along the shore of the mainland or along the shore of adjacent islands at intervals of about 5 to 10 km (Fig. 1). At each large site, both the bay and extensive areas of pine flatwoods are readily accessible. These extensive and exploitable areas probably allowed large sites to be inhabited throughout much of the year. The areal requirement for the procurement of sufficient food probably also accounts for the distance between village sites. Small sites also are found along the shores of the mainland, adjacent islands, and barrier island and are distributed between the large sites. These small sites border similar exploitable areas and probably were visited intermittently.

Inland from the shore, aboriginal sites exist in the pine flatwoods. These sites usually occur on slightly elevated ground, often on a natural ridge, near a source of freshwater such as a creek or bayhead. Multiple habitats, including freshwater swamp, hardwood and sabal palm hammock, and pine-palmetto woods, were readily accessible from these sites. The sites are
MANASOTA CULTURE TRAITS (Table 1)

SETTLEMENT PATTERN

Sites Along Shore
Sites along shore on slightly elevated ground
Sites (large) probably villages:
- on mainland and adjacent islands from where estuaries and
  large areas of pine flatwoods readily accessible
- spaced about every 5 to 10 km along shore
- inhabited through much of year (inferred)
Sites (small):
- on mainland and barrier islands
- distributed between large sites
- visited intermittently (inferred)

Sites Inland from Shore
Sites in pine flatwoods often on slightly elevated ground
Sites:
- near sources of freshwater from where multiple habitats
  readily accessible
- interspersed through pine flatwoods
- occupied for brief periods (inferred)

Sites usually have evidence of long usage (evidence of other culture
periods often present)

SUBSISTENCE ACTIVITIES

Activities Pursued from Shoreside Sites
Fishing in both estuaries and the Gulf
Hunting on mainland and nearby islands
Collecting of shellfish and crabs from estuaries
Gathering of various wild food plants (inferred)

Activities Pursued from Sites Inland from Shore
Fishing for freshwater fish (inferred)
Hunting of available animals (inferred)
Collecting of various freshwater shellfish and crustaceans (inferred)
Gathering of various wild plant foods (inferred)

COMMUNITY PATTERN

Shoreside Sites
Villages spread linearly and parallel to the shoreline
Village sites consist of large and deep shell middens:
- some shell middens form a well-defined elevated ridge
- shell midden material used to construct ramps at some sites
Small sites consist of shallow shell middens
No evidence for size, shape, number, and orientation of houses

Sites Inland from Shore
Sites consist primarily of cultural remains occurring:
- in low hillock or mound of sand
- on sand ridge or well-drained land
MANASOTA CULTURE TRAITS (con't)

TECHNOLOGICAL ACTIVITIES

Manufacture of undecorated, sand-tempered, thick-walled, large vessels:
- Flattened-globular bowls (early)
  - rim form is inward-curving
  - lip form is chamfered or rounded
- Pots with converged orifice
  - rim form is slightly inward-curving
  - lip form is rounded
- Pots with straight walls (late)
  - rim form is straight
  - lip form is rounded

Ceramic Use, Secular
- Used commonly at shoreside shell middens
- Used less commonly at sites inland from the shore
- Used in heavy-duty activities such as cooking

Ceramic Use, Sacred
- See burial activities

Shell Tool Manufacturing (well developed)
- Modification of heavy marine mollusk shell
- Tools made by combining modified shell with other materials
  - Strombus (fighting conch) shell hammers
  - Mercenaria valve anvils, "notched" implements, and scrapers
  - Busycon shell spoons, pounders, celts, columellae, columella barbs, "spokeshaves," and hammers
  - Fasciolaria shell columella "planes"
  - Noetia valve net sinkers

Shell Tool Use
- Abundant at shoreside shell middens:
  - used in preparing and obtaining food
  - used in woodworking
- Rare at sites inland from the shore

Stone Tool Manufacturing (poorly developed)
- Chert modified to make projectile points, knives, scrapers, and drills
- Mineralized bone modified to make tools
- Sandstone modified to make chopping tools, abraders, and smoothing stones
- Chert cores, blanks, and unfinished tools rare at shoreside shell middens but present at some sites inland from the shore

Stone Tool Use
- Stone tools used in hunting, preparing food, woodworking, and other activities

Bone Tool Manufacturing (well developed - inferred)
- Modification of bone to make projectile points, awls, and barbs
- Modification of stingray barbs to make points
- Modification of shark teeth to make tools
MANASOTA CULTURE TRAITS (con't)

Bone Tool Use
- Bone tools used in hunting, fishing, and other activities
- Bone tools commonly used at shoreside shell middens
- Bone tools commonly used at sites inland from the shore (inferred)

Wooden Tool Manufacturing (well developed - inferred)
- Modification of wood to make dugouts, weapons, bowls, structures, handles for tools, and other items (inferred)

Wooden Tool Use
- Wooden tools used in hunting, fishing, food preparation, and other activities at shoreside sites and sites inland from shore (inferred)

Ornamental Activities
- Manufacture of items of adornment:
  - Oliva shell beads
  - Busycon shell gorgets
  - Shark vertebra beads

  Designs and decorations:
  - ceramics undecorated
  - bone undecorated or rarely decorated
  - wood decorated (inferred)

BURIAL ACTIVITIES

Burials Concentrated in Certain Areas
- Burials in shell midden (early)
- Burials near shell midden in burial mound (late)
- Burial mound of continuous use type

Kind and Placement of Burials
- Primary flexed burials in midden debris (early)
- Primary flexed burials, rarely extended or semi-flexed, in burial mound
- Secondary burials in burial mounds (late)

Ceremonial Activity
- Sherds spread on or included in burial area (not in caches):
  - sherds of indigenous sand-tempered vessels (abundant)
  - sherds of imported, decorated and undecorated vessels (rare)
- Other grave goods included in burial area (not in caches)

ITEMS OF EXOGENOUS ORIGIN

Items Include Ceramics and Lithics
- Ceramics include:
  - Deptford Check Stamped wares (early)
  - Sand- and grog-tempered plain (late)
  - Belle Glade Plain (late)
  - Pasco Plain (late)
  - St. Johns Check Stamped (very late)
  - Wakulla Check Stamped (very late)
  - Various "Weeden Island ceramic types" (late; sacred context only)

- Lithics Include:
  - Various projectile points: Hernando, Sarasota, and Westo
often evidenced by cultural debris including lithic material, charcoal, and perhaps potsherds and occasionally some marine shell (Browning 1973; Hemmings 1975; Martin 1976; Welch 1982; Florida Master Site File). Some of these sites occur as a small, low hillock or "mound" of sand. Some of these sand hillocks may have been purposefully constructed whereas other sand hillocks gradually accumulated (Piper, Piper, and Almy 1980; Almy n.d.l; Florida Master Site File). There is yet no evidence for structures at these sites, but there is evidence that some sites had specific and limited uses (Almy n.d.l). As discussed below, carbon-14 dates and ceramics indicate that some of the sites inland from the shore were used during the Manasota period and could have been visited for brief periods as Manasota people moved inland for intermittent, perhaps seasonal, exploitation of resources (Almy n.d.l).

The Manasota people pursued a subsistence strategy which included fishing, hunting, and gathering and entailed movement between shoreside sites and sites located inland from the shore. This was a general subsistence strategy shared by many peoples of peninsular Florida, but along the central peninsular Gulf coast, certain elements of this strategy became more important and there developed a particular way of life. The most abundant and concentrated energy-rich food available along the central peninsular Gulf coast was the fish of the estuarine environment, and fishing became a very important subsistence activity. The Manasota people supplemented their diet of fish by collecting shellfish in the estuaries and by hunting game and gathering wild plant food in the nearby pine flatwoods. Intermittently, perhaps seasonally during the winter when fish are less abundant (Finucane 1965:18-20; Wang and Raney 1979: 49,54), they moved inland from the shore to exploit more distant terrestrial and freshwater resources.

There is archaeological evidence that they caught sharks and rays of about 10 species and hony fish of more than 15 species (Luer 1977a, 1977b; Fraser 1980:77-80). The diversity of fish indicates that fishing methods were employed that could secure bottom fish such as flounder, grassbed fish such as seatrout, fast-swimming fish of open waters such as mackerel, and surface fish such as mullet. Probably spears, nets, fishhooks, and dugouts were used in fishing and possibly the bow and arrow and fish-wier were used also.

The estuarine waters also supported the collecting of shellfish. Archaeological evidence indicates that a large variety of shellfish, including about 25 species, was collected by Manasota people. This diversity of mollusks indicates that many habitats were exploited. For example, the beaches of barrier islands yielded surf clams, the extensive beds of turtle grass in the bays supported the collection of bay scallops, fighting conchs, and left-handed whelks, and the tidal flats yielded quahog clams. Oyster beds and mangrove roots yielded king's crowns and oysters.

There is also evidence which indicates that the Manasota people hunted a great variety of animals. They apparently utilized most available animals. Remains from shell middens are of such diverse animals as deer, wolf, opossum, rabbit, rat, dolphin, red-breasted merganser, bald eagle, and various reptiles and amphibians (Luer 1977a, 1977b; Fraser 1980). There is also some evidence that the most intensely hunted animal was the deer (Fraser 1978:77). Large game such as deer and dolphin might have been hunted with various spears and harpoons bearing either bone or stone points. Smaller game might have been taken with traps, snares, or the bow and arrow. Near sites inland from the shore, a diversity of animals probably was taken also.
Technology

The Manasota people were especially proficient at employing marine shell and apparently bone and wood in a great variety of uses. They utilized stone less intensively than shell and they made earthenware vessels of only a few forms and of predominately a single kind of ceramic.

One of the distinctive Manasota traits was the manufacture of sand-tempered, undecorated flattened globular bowls and pots with a converged orifice (Fig. 3). These vessels are easily recognized from distinctive inward-curving rim sherds with chamfered or rounded lips (Fig. 3). Sherds from these vessels are often more than 1 cm in thickness. The authors (1980) have studied this pottery in detail and, using stratigraphic evidence and carbon-14 dates, have shown that it was the predominant kind of ceramic made from about 300 B.C. to A.D. 700 along the central peninsular Gulf coast. From about 300 B.C. to about A.D. 400 the pottery was especially thick and chamfered lips were common. Gradually, around A.D. 400, pottery became slightly thinner and only rounded lips were made. By the end of the Manasota period, around A.D. 700 or 800, the pottery became even thinner. Vessels of this thinner ware were simple bowls or pots with a straight rim which had rounded or flattened lips (Fig. 3).

The Manasota people were especially proficient at making tools from marine shell. Heavy mollusk shell was readily available along the shore and they modified shell and combined it with wood and other materials to make tools. Shell satisfied the need for pounding tools and for sharp-edged cutting tools. Picks, hammers, pounders, celts, spoons, barbs, and other tools were fashioned from marine shell. Most shell tools seem to have been made for tasks specific to the exploitation of marine resources and are found predominantly at shoreside sites. The manufacture and use of fighting conch shell hammers was a Manasota trait. Many of these small hammers have been found associated with the distinctive thick Manasota pottery in strata dated from about 300 B.C. to about A.D. 700. Significantly, the authors have found that these hammers are rare or absent after about A.D. 700 or 800.

In the manufacture of tools, the Manasota people utilized stone less intensively than shell. Naturally occurring, rounded pieces of hard sandstone were apparently utilized as hand-held chopping and pounding tools. Some pieces of hard sandstone have worn surfaces and probably served as abraders and smoothing stones and as various scraping tools. Mineralized bone tools, including scrapers fashioned from mineralized shark teeth and sea cow ribs, were used. Chert and agatized coral were fashioned into projectile points, scrapers, knives, drills, and other tools. Projectile points utilized by Manasota people include Sarasota, Hernando, and Westo points (Bullen 1975; Luer and Almy 1979a:41), some of which may be exogenous items obtained from other cultures. The scarcity at shoreside shell middens of cores, blanks, and unfinished tools may indicate that most tools of chert or agatized coral were made elsewhere, some perhaps by Manasota people at some sites inland from the shore. In general, however, tools of agatized coral and chert are not abundant at Manasota sites, particularly in the southern portion of the region. This scarcity may indicate that shell and perishable material such as wood and bone were used instead of stone for making tools.

Bone, like shell, also satisfied the need for a strong material, which could be sharpened. The bone tools found in Manasota shell midden components indicate that animal bone was fashioned into points, awls, and barbs, that
Inward-curving rim with chamfered lip from a flattened-globular bowl (circa 500 B.C. - A.D. 400)

Slightly inward-curving rim with rounded lip from a pot with a slightly converged orifice (circa 200 B.C. - A.D. 700)

Straight rim with rounded lip from pot with straight rim (circa A.D. 400 into Safety Harbor)

Outward-curving rim with flattened lip from a simple bowl (circa A.D. 800 into Safety Harbor)

Figure 3. Changes in Vessel Form During the Manasota Period.
stingray barbs were fashioned into points, and that shark teeth were fashioned into blades for cutting tools. These bone tools and implements were used in hunting, fishing, and other activities. Bone is seldom preserved in sandy soils and the scarcity or lack of bone tools at sites inland from the shore is probably due to the deterioration of the bone.

Since wood also rapidly deteriorates, wooden artifacts of the Manasota culture have not been found, but there is indirect evidence for the use of wood. The use of dugouts and paddles can be inferred from archaeological evidence such as the remains of open-water fishes in shell middens. The use of wood for tool handles can be inferred from evidence such as the holes and notches in certain shell artifacts. Also, the use of wood in the hafting of stone and bone artifacts, such as projectile points, drills, and knives, can be inferred. Wood apparently was used in hafting shell celts to make tools which in turn probably were used to hew wood. The Manasota people probably carved various types of wood into bowls, stools, floats for nets, boards, masks, plaques, weapons, and other items. At Key Marco, there is archaeological evidence for the manufacture of these kinds of items by a neighboring culture to the south which produced many artifacts similar to some produced by the Manasota culture (Gilliland 1975).

Many of the ornamental activities of the Manasota people also can be inferred. If wood was employed in the variety of uses hypothesized above, then many of the wooden items probably were decorated by carving and painting. A highly developed tradition of working and decorating wood could account for ceramics having been ignored as an artistic medium. Bone and shell, however, like wood, could be cut and carved, and some bone and shell probably was decorated.

**Burial Practices**

Manasota burial practices changed greatly during the course of the Manasota period. There is evidence at shoreside sites that the early Manasota people interred primary, often flexed burials. Primary, flexed burials were common during the late Archaic of central Florida (Wharton, Ballo, and Hope 1981:76; Jones 1981:81) and the Manasota people could have inherited this mode of burial. The Manasota burials, like those of the late Archaic, were concentrated in certain areas, perhaps cemeteries. These early Manasota burial areas were in midden debris and have been identified at more than half a dozen shoreside village sites between St. Petersburg and Englewood (Luer and Almy 1979a:39-40). Gradually, like many Florida Indians, the Manasota Indians adopted continuous use burial mounds. At first, Manasota people interred primary flexed burials in the mounds. Gradually they changed to other forms of interments including secondary, bundle burials (Bullen 1951, 1952; Bullen and Bullen 1976). As discussed below, there is evidence for the change to continuous use burial mounds by about A.D. 200 or 300.

Throughout the Manasota period, few grave goods were placed with burials. Early in the period, burials in midden debris often lack accompanying grave goods (Luer and Almy 1979a). This custom was continued in burial mounds such as the Prine, Thomas, and Palmer mounds where artifacts are rarely associated with a specific burial; artifacts which do occur were apparently scattered over small areas of a mound and not deposited in caches (Bullen 1951, 1952;
Bullen and Bullen 1976). At first, only sand-tempered plain sherds were placed in the mounds. The Manasota Indians did not manufacture a specialized sacred or mortuary ware but they used their own undecorated sand-tempered ware in a sacred context (Table 2). Late in the Manasota period, they sometimes placed exogenous items such as Weeden Island ceremonial ceramics in a sacred context.

Evidence of the gradual changes in burial practices described above was first outlined by Bullen. He noted that around Tampa Bay there was a "... gradual change in burial modes with bundle burials replacing flexed inhumations" (Bullen 1952:82). He also described that, within this continuum of change, Weeden Island decorated sherds were associated with both flexed and bundle burials and he inferred "... that the change from flexed to bundle burial occurred entirely within the Weeden Island period" (Bullen 1952:83).

Subsequent work by the Bullens reinforces this theory of changing burial practices during what is now referred to as the Weeden Island-related period of the central peninsular Gulf coast (Bullen and Bullen 1976; Bullen n.d.; Milanich and Fairbanks 1980). Based on stratigraphic evidence and a carbon-14 date from the Palmer burial mound, there is evidence that bundle burials were the most common form of interment by about A.D. 850 (Bullen and Bullen 1976: 41-42). These bundle burials were in the uppermost layer of the mound and were underlain by primary flexed interments. Moreover, sherds of various Weeden Island decorated types were concentrated in the uppermost layer and were rare in the lowermost level of the burial mound.

The Palmer burial mound also yielded evidence for dating the primary, flexed interments. The vast majority of sherds from the Palmer burial mound (about 81%) were sand-tempered plain and were identical to those excavated from the nearby middens. Significantly, the Bullens noted differences in the distribution of sand-tempered plain rim sherds from the burial mound and wrote that "straight rims are more common near the top and incurving rims are more common near the bottom of the mound;" even some of the inward-curving rim sherds had chamfered lips (Bullen and Bullen 1976:44). As already described, incurving rim sherds often with a chamfered lip were made prior to about A.D. 400. Hence, primary flexed burials in the lowermost level of the Palmer burial mound probably originated prior to A.D. 400. Such an early date for the use of sand burial mounds along the central peninsular Gulf coast is supported by similar recently obtained carbon-14 dates for Weeden Island burial mounds in northern Florida (Milanich 1980:14-15; Milanich and Fairbanks 1980:97-98).

In summary, the available evidence suggests the following changes in burial practices for the Manasota period: (1) primary, often flexed, burials in midden debris early in the period (500 B.C. to perhaps A.D. 200); (2) primary, often flexed, burials in burial mounds with only thick, sand-tempered plain pottery (from perhaps as early as A.D. 200 to about A.D. 400); (3) primary, often flexed, burials in burial mounds with sand-tempered plain pottery and a few decorated Weeden Island ceramics (about A.D. 400 to perhaps A.D. 600); and (4) secondary bundle burials in burial mounds with thinner, sand-tempered plain pottery and more numerous Weeden Island ceramics (perhaps A.D. 600 to about A.D. 800). The latter two burial practices occurred during the Weeden Island-related phase of the Manasota culture (Fig. 4).
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<td>Plainware Plinian</td>
<td>Thinned surface</td>
<td>Orange ware</td>
<td>Red-on-buff</td>
<td>Black-on-white</td>
</tr>
<tr>
<td><strong>MANASOTA</strong></td>
<td><strong>MANASOTA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 4: Approximate Temporal Distribution of Selected Culture Traits.*
Items of Exogenous Origin

Perhaps through trade, warfare, and marriage the Manasota people obtained items of non-indigenous origin. Various items were obtained, including ceramics and probably some stone tools. Some exogenous items have been found in both secular and sacred contexts. Small quantities of exotic, decorated Weeden Island ceramics have been found only in sacred contexts.

The projectile points used by the Manasota people include Hernando, Westo, and Sarasota points. Projectile points of these types occur over wide areas of Florida and were used also by other cultures. In the Manasota culture, some of these points may be items of exogenous origin.

Ceramics of exogenous origin are most common late in the Manasota period. Early in the Manasota period, exogenous ceramics are very rare and only sherds of check stamped Deptford pottery have been found (Luer and Almy 1979a). Throughout the Central Peninsular Gulf Coast region and late in the Manasota period, sherds of Belle Glade Plain and undecorated sand- and grog-tempered pottery, the latter possibly from northeastern Florida, occur but are uncommon (Luer and Almy 1980:212-213). In the northern portion of the region, ceramics of the Pasco series can occur in small amounts; the occurrence of Pasco ceramics increases sharply just north of Tampa Bay at the southern boundary of the Northern Peninsular Gulf Coast region. At the Safford burial mound (Table 2, Fig. 1), Pasco Plain sherds comprised about 23% of the total number of sherds and at the Cypress Creek site inland from the shore near the Hillsborough-Pasco county line, Pasco ceramics comprised 49% of the total number of sherds excavated (Almy n.d.2). The abundance of Pasco ceramics at the latter site contrasts sharply with the situation at Curiosity Creek, another site inland from the shore located just 50 km to the south (Fig. 1), where no Pasco ceramics were found and sand-tempered plain pottery predominated (Almy n.d.1).

Sherds of exotic, decorated Weeden Island ceramics occur only in burial mounds and only late in the Manasota period. Many of these sherds have micaceous paste, indicating the ceramics were made in northern Florida where micaceous clays occur. As Table 2 shows, the decorated Weeden Island ceramics form only small percentages of the total number of sherds from burial mounds and the absolute numbers of these sherds decrease from north to south. In contrast, sherds of another exogenous ware, Belle Glade Plain, decrease in abundance from south to north in the burial mounds.

Discussion

In the foregoing pages we have described the Manasota culture as we presently understand it. We have identified many specific culture traits, and the sum of these traits describes Manasota. Evidence for most of these culture traits has been derived from clearly identifiable components at shoreside sites. Other culture traits have been incorporated based on general evidence from sites located inland from the shore; these little-studied sites have yielded evidence of several culture periods, including some limited evidence of the Manasota culture.

We must discuss what we have termed "sites located inland from the shore" and explain how we have incorporated our understanding of these sites into the definition of Manasota. Recent research, especially cultural
Table 2. Numbers and Percentages of Selected Ceramics from Six Burial Mounds along the Peninsular Gulf Coast. Table shows that certain "Weeden Island Ceramics" become rarer from north to south (left to right in table) whereas other ceramics become more common. Absolute numbers of sherds for each ceramic are recorded. Percentages are of the total number of sherds excavated from each mound. (* percentages are not computed because collections are incomplete; + figures are not given because collections are incomplete; 1 Bullen, Partridge, and Harris 1970; 2 Willey 1949:110-111; 3 Willey 1949:119-121; 4 Bullen 1951; 5 Bullen and Bullen [n.d., Florida State Museum accession cards for Ma-3]; 6 Bullen and Bullen 1976).

<table>
<thead>
<tr>
<th>Ceramic</th>
<th>Safford 1</th>
<th>Weeden Island</th>
<th>Thomas 3</th>
<th>Prine 4</th>
<th>Pillsbury 5</th>
<th>Palmer 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weeden Island Punctated</td>
<td>556 (2.2%)</td>
<td>49 *</td>
<td>235 *</td>
<td>18 (0.2%)</td>
<td>50 (0.8%)</td>
<td>9 (0.1%)</td>
</tr>
<tr>
<td>Dunns Creek Red</td>
<td>1195 (4.8%)</td>
<td>0</td>
<td>12</td>
<td>69 (0.6%)</td>
<td>122 (2.0%)</td>
<td>40 (0.5%)</td>
</tr>
<tr>
<td>Swift Creek Complicated Stamped (late variety)</td>
<td>286 (1.1%)</td>
<td>3</td>
<td>36</td>
<td>12 (0.1%)</td>
<td>11 (0.2%)</td>
<td>0</td>
</tr>
<tr>
<td>Carabelle Incised</td>
<td>64 (0.3%)</td>
<td>82</td>
<td>12</td>
<td>0</td>
<td>11 (0.2%)</td>
<td>0</td>
</tr>
<tr>
<td>Carabelle Punctated</td>
<td>10 (- %)</td>
<td>2</td>
<td>3</td>
<td>6 (0.1%)</td>
<td>9 (0.2%)</td>
<td>0</td>
</tr>
<tr>
<td>Keith Incised</td>
<td>29 (0.1%)</td>
<td>26</td>
<td>12</td>
<td>1 (- %)</td>
<td>2 (- %)</td>
<td>0</td>
</tr>
<tr>
<td>Pasco Plain</td>
<td>5627 (22.5%) +</td>
<td>+</td>
<td>791 (7.4%)</td>
<td>291 (5.0%)</td>
<td>75 (0.9%)</td>
<td></td>
</tr>
<tr>
<td>Wakulla Check Stamped</td>
<td>446 (1.8%)</td>
<td>101</td>
<td>88</td>
<td>252 (2.4%)</td>
<td>151 (2.6%)</td>
<td>35 (0.4%)</td>
</tr>
<tr>
<td>St. Johns Check Stamped</td>
<td>315 (1.3%)</td>
<td>22</td>
<td>91</td>
<td>58 (0.5%)</td>
<td>367 (6.2%)</td>
<td>139 (1.6%)</td>
</tr>
<tr>
<td>Sand-tempered plain</td>
<td>9815 (39.3%) +</td>
<td>+</td>
<td>6888 (64.7%)</td>
<td>2443 (41.6%)</td>
<td>6926 (80.8%)</td>
<td></td>
</tr>
<tr>
<td>(Includes smooth plain and residual plain)</td>
<td>46 (0.2%)</td>
<td>+</td>
<td>93 (0.9%)</td>
<td>382 (6.5%)</td>
<td>746 (8.7%)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Numbers and Percentages of Selected Ceramics from Six Burial Mounds along the Peninsular Gulf Coast. Table shows that certain "Weeden Island Ceramics" become rarer from north to south (left to right in table) whereas other ceramics become more common. Absolute numbers of sherds for each ceramic are recorded. Percentages are of the total number of sherds excavated from each mound. (* percentages are not computed because collections are incomplete; + figures are not given because collections are incomplete; 1 Bullen, Partridge, and Harris 1970; 2 Willey 1949:110-111; 3 Willey 1949:119-121; 4 Bullen 1951; 5 Bullen and Bullen [n.d., Florida State Museum accession cards for Ma-3]; 6 Bullen and Bullen 1976).
resource surveys and salvage excavations, has shown that aboriginal sites are much more numerous inland from the shore of the central peninsular Gulf coast than previously supposed. For example, in Hillsborough county, Deming (1980:Fig. 1) recently analyzed approximately 350 aboriginal sites of which more than 250 are located in inland areas of the country. Very little is known about most of these sites but a picture has begun to emerge which shows that there are different types of sites "inland from the shore" and that many had long usage over several thousand years just as many shoreside sites also had.

We have used the term "sites inland from the shore" for several reasons. First, it is our interpretation that many of these sites were used by Indians who dwelled mostly along the shore. This is suggested by 1) the evidence of limited activities at many of these sites; 2) the proximity of these sites to the shore (within about 30 km) and 3) the occurrence at these sites of lithics and ceramics, and occasionally marine shells and shell tools, similar to those found at the large shoreside sites. Secondly, the term "site inland from the shore" contrasts with the term "inland site" which we prefer to use for sites situated in interior regions of the peninsula. According to this view, interior cultural areas which have been identified, such as Cades Pond and Alachua (Milanich and Fairbanks 1980), Okeechobee Basin (Sears 1974), and Peace River basin (Luer and Almy 1981:149), would be characterized by "inland sites." Admittedly, distinct boundaries between "inland sites" and distant "sites inland from the shore" are vague, but the terms do seem useful. Indeed, boundary areas may have been broad, overlapping zones which accommodated both coastal and inland peoples.

There are different types of sites located inland from the shore of the central peninsular Gulf coast. Several burial mounds have been located, but most sites inland from the shore are evidenced by 1) occupational sand mounds containing varied cultural debris such as charcoal, lithics, and sometimes ceramics; or 2) occupational areas often on well-drained land, also containing varied cultural debris. The latter type of site includes shallow and small areas as well as deep and large areas. There is evidence that only limited activities such as hunting, extracting, or quarrying may have occurred at some of these areas. Numerous occupational areas and sand mounds have been located and include those shown on Figure 1.

Along the central peninsular Gulf coast, there is evidence that many sites inland from the shore had long usage. That is, the use of these sites was probably sporadic or intermittent for several thousand years. Some of the best evidence for "long use" comes from the excavation of an occupational sand mound at Curiosity Creek (Almy n.d.1). That excavation uncovered: 1) charcoal and marine shell which were carbon-14 dated to about 600 B.C., 500 B.C., and A.D. 500; 2) lithics which include fragments of three Archaic stemmed projectile points, a Hillsborough point, and Hernando points and fragments; and 3) ceramics including sherds of St. Johns Check Stamped and Pinellas Plain pottery (post A.D. 800). There are also artifacts indicative of "long use" at some occupational areas including the West Grove site in Manatee county and the Parking Lot site in Hillsborough county, where test pits yielded stemmed projectile points, Pinellas points, and sand-tempered plain sherds (Browning 1973:28-34; McCullough 1979; Wharton 1981). In Hillsborough and Manatee counties, cultural resource surveys and inventories have shown that many other "sites inland from the shore" have evidence of more than one culture period (Browning 1973, 1975; Hemmings 1975; Daniel, Wisenbaker, and Fryman 1979; Piper, Piper, and Almy 1980; Deming 1980; Almy n.d.2; Welch 1982).
Within this general picture of "long use" of sites inland from the shore, there is definite evidence of use during the Manasota period. At Curiosity Creek, the date of about A.D. 500 (Beta-1025, 1485 B.P.± 70) clearly falls within the Manasota period; the site also yielded ceramics and lithics characteristic of Manasota such as sand- and grog-tempered plain trade ware, a thick incurving sand-tempered rim sherd, and Hernando points (Almy n.d.l). At other sites, indirect support for the Manasota period comes from the finding of Hernando, Westo, and Sarasota points, thick sand-tempered plain pottery, and various trade wares. We believe that much evidence for the utilization of these sites during the Manasota period will be found when researchers obtain carbon-14 dates and clearly record details about ceramics and other artifacts.

### Manasota in Broader Contexts

By about 2,500 years ago in central Florida, the life-ways of the late Archaic and the Florida Transitional periods were giving way to more sedentary life-ways and to regionalism (Bullen 1959, 1965, 1970; Milanich and Fairbanks 1980). One area which developed a separate regional identity was "the central Gulf coast or greater Tampa Bay region" (Bullen 1970:57). In this region, a more settled existence apparently became possible as peoples adapted and re-fined their basic subsistence strategy in order to exploit extensively the abundant estuarine resources of the central peninsular Gulf coast. This adaption apparently allowed the post-Florida Transitional people to reside on the shore for much of the year and to stay for short intervals at sites inland from the shore. Thus, in this region, there developed a particular way of life, the Manasota culture.

According to this view, the early Manasota culture was an outgrowth of the preceding cultures of western central Florida. Evidence consistent with such an interpretation may lie in such a culture trait as primary burials, possibly in cemeteries. Other culture traits, such as fighting conch shell hammers and bone points, clearly continue from the late Archaic (Bullen and Bullen 1976:Plates III and IV).

Gradually, the Manasota people received Weeden Island influences from the north. Apparently influences from the Weeden Island "heartland" (Milanich 1980:4) led to the incorporation of burial mounds into Manasota burial prac-tices. Probably additional Weeden Island influences eventually led to changes in the modes of interments in these burial mounds. The late Manasota culture became a Weeden Island-related culture, one of three peninsular Weeden Island-related cultures recently identified and described by Milanich (1980). These three Weeden Island-related cultures:

... do not include such traits as pattern burial mounds with east-side pottery deposits and central burials; and Kolomoki-style pedestaled effigy vessels are rare or absent. The behav-iorial patterns associated with these traits may also be absent (Milanich 1980:14).

Further influences from the north led to the Mississippianization of the late Manasota culture which became the Safety Harbor culture. There are many significant continuities between the two cultures, but many changes did occur including the appearance of temple mounds, plazas, beakers and bottles,
Pinellas Plain pottery, and new utilitarian vessel forms. By about A.D. 800, the manufacture of Pinellas Plain pottery was introduced along the central peninsular Gulf coast (Luer and Almy 1980). This ware is related to several Mississippian ceramic types including the Ingram Plain of Georgia, which have similar ware characteristics and even share lip-notching or "nicking" (Schnell, Knight and Schnell 1979:283-285). Many Pinellas Plain vessels were simple bowls (Fig. 3); sand-tempered plain pottery remained dominant, but the common form of this ceramic became the simple bowl by around A.D. 800 (Luer and Almy 1980). A classic hallmark of Mississippian culture, the ceramic bottle, may have appeared before A.D. 1000 along the central peninsular Gulf coast. Safety Harbor Incised bottles resemble Nunnally Incised bottles in Georgia which appeared by about A.D. 900 (Schnell et al.1979:279-283). Consistent with this early date are three carbon-14 dates of about A.D. 900 (UM1742, 940 ± 60; UM1805, 1175 ± 50; UM1806, 1045 ± 65 years before present) from a burial mound, near Charlotte Harbor, which yielded Safety Harbor Incised bottles (Luer 1980). Recent research, which supports the introduction of temple mounds by about A.D. 1000 along the central peninsular Gulf coast, also suggests the importance of agriculture during the Safety Harbor period (Luer and Almy 1981).

A significant continuity from Manasota, however, was that major Safety Harbor sites remained primarily along the shore, many situated at the same locations as late Manasota sites (Luer and Almy 1981). Also, the Safety Harbor people continued to use many of the same burial mounds as the late Manasota people and apparently continued the tradition of interring few grave goods with individual burials. The few Safety Harbor burials which have been found in temple mounds lack the accompanying paraphernalia often found with burials in Mississippian platform mounds elsewhere in the southeast. In summary, available evidence indicates that the late Manasota culture developed into the Safety Harbor culture, the local manifestation of the widespread Mississippian culture.

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