MODELING FORT WALTON CULTURE IN NORTHWEST FLORIDA

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Fort Walton culture in northwest Florida is presented in the archaeological literature as the adaptation of sedentary, maize-producing agriculturalists who participated in certain mortuary practices and symbolism, long-distance trade networks, and chiefdom-level sociopolitical units similar to those of other contemporaneous Mississippian manifestations throughout the Southeast. We examine the data from which the extant models were drawn–ceramics, settlement patterns, chronology, and dates–to reveal how limited and derived they are and to present our own interpretation of Fort Walton, which represents the cultural accomplishments of the last prehistoric people in this area.

Fort Walton is the variant of Mississippian ''culture'' in the northwest Florida–South Alabama–southwest Georgia region, defined 60 years ago (Willey 1949; Willey and Woodbury 1942) as characterized by large agricultural villages, temple mounds, and distinctive ceramics. Since Willey's original description, models have been generated to redefine everything from ceramics to sociopolitical systems. Here we examine these models in the light of both old and recent evidence. We focus on the Fort Walton heartland, which encompasses two regions, the Apalachicola River Valley and the Tallahassee Red Hills (Figure 1), where we have firsthand experience. This work was originally presented in 1998 at the Southeastern Archaeological Conference. The paper was titled ''Smoke and Mirrors in Modeling Fort Walton Culture'' because Fort Walton models in the Apalachicola Valley are *clouded over* with speculative hypothesizing that can be cleared away to reveal few foundations, and in the Tallahassee Red Hills area Fort Walton is thought to be a prehistoric *reflection* of the missionized Apalachee Indians who were actually enormously changed by centuries of European dominance.

If archaeology is a science, as has been argued since the late 1960s, archaeologists must use the scientific method to reconstruct prehistoric societies. Data from controlled contexts are needed for model building, then *new* data for hypothesis testing in which the model is supported, refuted, or altered. Such would be the ideal situation; the real situation is that we have either few, or questionable data, but lots of model building nonetheless.

There is no shortage of theoretical reconstructions of Fort Walton (e.g., Brose and Percy 1978; Knight 1991; Scarry 1990, 1996a, and 1999). Though proposed as hypothetical, these have been taken as received wisdom by subsequent researchers, instead of tested with new data. While speculation can be a good thing, to provide ideas to explore, early models have been used as established fact or repeated without questioning their fundamental premises. In some areas, particularly the Tallahassee Red Hills, they have promoted a kind of stasis in which new data have not seemed necessary or desirable enough to encourage new field investigations.

In the broader understanding of the Mississippi period, Florida has been considered to lie on the fringe of the Mississippian world. Yet several cultural manifestations beyond this ''edge'' exhibit developments that are arguably ''Mississippian'': Safety Harbor (Griffin and Bullen 1950; Mitchem 1989; Willey 1949) along the upper peninsular Gulf Coast and Mill Cove complex in northeast Florida near the Atlantic Coast (Ashley 2003, 2005; Thunen 2005). In both areas, maize agriculture is evidently not a factor in the subsistence base; rather, dependence on coastal resources seems to be the adaptive mainstay. The question for these archaeological cultures is, Can there be Mississippi without maize? It is not our intent in this discussion to consider these Mississippian-related groups, nor the recognized hunter-gatherer-fisher tributary chiefdoms farther south in Florida which also subsisted mainly upon coastal resources (though these questions are clearly germane in Florida and beyond). Our goal here is to discuss Fort Walton, a regional variant already in the Mississippian ''club'' and the southeasternmost manifestation of Mississippi culture.

Defining Fort Walton

Willey (1949:1) intended his cultural synthesis and chronology to serve as a ''base of departure for future researches,'' but his definitions of the diagnostic elements of Fort Walton culture (Willey 1949:453–58) remain fundamentally unchanged. As updated from White's (1982) summary, these basics include the following:

- Sites are small to large occupations, the large ones with a temple mound or mounds, usually with adjacent, prepared plaza areas which may be devoid of artifact remains.
- Mound centers exist on large and small streams, the coast, and inland lakes and ponds and display typical

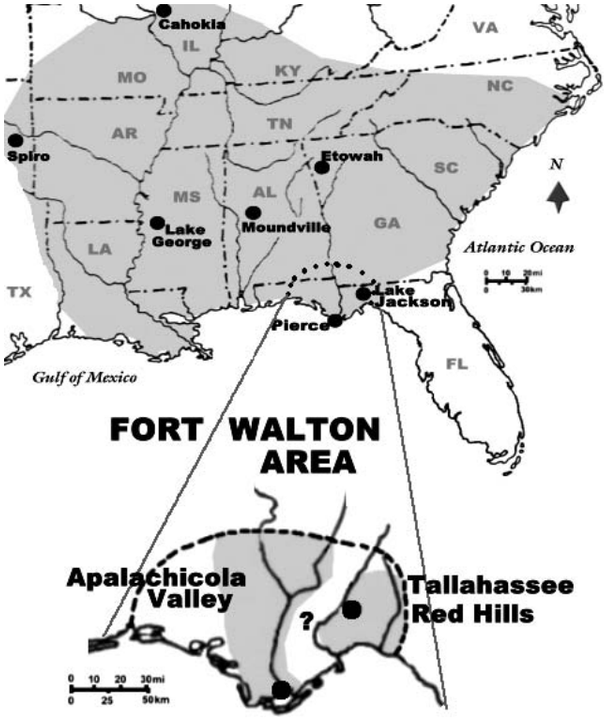

Figure 1. The Fort Walton heartland in northwest Florida, southern Georgia, and Alabama within the Mississippian Southeast.

Mississippian architecture (e.g., Lewis and Stout 1998; Payne 2002).

- Mounds and/or village areas may have evidence of structures such as clay daub fragments, postmold and sometimes wall trench features, hearths, and storage and refuse pits.
- Subsistence remains recovered include maize, wild plants such as acorns and fruits, and a variety of fauna, especially deer, small mammals, turtle, fish, and shellfish.
- Coastal sites may be smaller than inland sites and have much more shell-midden refuse with evidence of heavy exploitation of molluscs, fish, and turtles and so far no evidence of maize.
- Cemeteries, burial of elites in temple mounds, possible burial mounds, and isolated burials in middens are known.
- Many of the larger sites have components of other time periods. Woodland mounds sometimes have later, intrusive Fort Walton burials.
- There are fewer Fort Walton temple mounds than there are burial mounds of earlier time periods (e.g., Willey 1949:455); thus the number of ceremonial sites in relation to habitation sites is reduced from that of Middle Woodland times.
- Treatment of the dead was neither as distinctive nor as standardized as in Middle Woodland burial mounds. In Fort Walton sites, grave goods were more variable in number and quality and of less exotic material. However, certain burials in temple mounds are accorded special treatment.
- There is notably less chipped stone in Fort Walton (e.g., Bullen 1958:346–47) than in earlier and later time periods in the same region and apparently less than is associated with contemporaneous Mississippian adaptations elsewhere in the Southeast. Imported greenstone, especially in the form of celts, is very important.
- There is so far little (Gardner 1966, 1971; Tesar 2006) evidence for palisades or earthen embankments or ditches around mounds or any other sites, suggesting no defensive architecture, though over a third of Mississippian centers do have this (Payne 1994; Payne and Scarry 1998:41).
- Evidence is inadequate so far to determine whether Fort Walton societies were complex, economically stratified groups with clear division between elites and commoners, labor specialization, and hereditary power, or merely socially ranked, kin-based political groupings, but this is true for most (probably all?) Mississippi period archaeological cultures in the Southeast (e.g., Butler and Welch 2006; Cobb 2003; Muller 1997).

To this summary, we add an examination of ceramics. Temper is generally sand, grit, grog, or combinations thereof. This technology is a major characteristic distinguishing Fort Walton from Mississippi cultures elsewhere, most of which are dominated by shell-tempered ceramics. In the Fort Walton culture area, shell-tempered ceramics of any kind are distinct minority types (less than 5 to10 percent). However, most Fort Walton vessel forms and decorative motifs are similar to those of other Mississippian ceramics (Figure 2). For example, Lake Jackson (Plain or Incised) jars are similar in shape and rim treatment to Mississippi Plain, and Cool Branch Incised is a sand/grit-tempered version of Moundville Incised; Fort Walton Incised is a more distinctive type, with incisions and punctations on a typical Mississippian carinated bowl shape but also on distinctive six-pointed open bowls. Retention of local tempering agents may reflect the strong Middle and Late Woodland traditions of this region that smoothly transform in place into Fort Walton, with the help of outside influences that result in the addition of temple mounds and maize. However, there seems to be markedly more grit temper than any other kind in Fort Walton ceramics, to the point that the grit, which is apparently deliberately crushed quartzite, may be a diagnostic element of this time period. Manifestation of typical Mississippi period vessel forms in this diagnostic Fort Walton grit-tempered (and also sand- and grog-tempered) ceramic paste is all the more interesting

Figure 2. Typical Fort Walton ceramics. Row 1: 2 Cool Branch Incised jars (one with handle and one with rim point and lug), 3 Lake Jackson jars (one plain with ticked lip, one with lug, one with nodes); row 2: Fort Walton Incised sherds, 3 from six-pointed bowls and 2 with guilloche or interlocking scroll motif; row 3: Fort Walton Incised carinated bowl sherds. All from the Curlee site, 8Ja7, Perry collection, curated at USF archaeology lab.

because Fort Walton people had no shortage of shell, whether marine, brackish water, or freshwater, to use in pottery making. There may have been a deliberate aim in this everyday craft to maintain some kind of regional identity within the Mississippian world, though it is equally possible that there was a technological reason.

The name ''Fort Walton'' was applied by Willey based on his work at the Fort Walton temple mound site (8Ok6) on the coast at Fort Walton Beach (in the far west corner of the region depicted at bottom in Figure 1). By now it is clear that this type site is *not* an appropriate one as it is actually affiliated with the Pensacola ''culture'' (Milanich 1994:381), a more typical Mississippian manifestation with shell-tempered pottery. Fort Walton culture today is defined within the geographical area stretching from a Pensacola–Fort Walton transitional zone (using shell tempering as a criterion) around Choctawhatchee Bay on the west side and the Aucilla River to the east. Fort Walton extends into the interior of south Alabama and Georgia, 107 river miles up the entire Apalachicola River and at least another 50 river miles farther inland up the Chattahoochee River about to the mouth of Georgia's Coheelee Creek, across from Columbia, Alabama. Though this point is over 100 river miles below the Fall Line, it nonetheless begins the region of more hilly terrain and higher, steep riverbanks at the northern edge of the Dougherty Plain segment of the Gulf Coastal Plain. Above this, other more or less closely related Mississippian manifestations are becoming better documented (Blitz and Lorenz 2002, 2006) up to the Fall Line and above. Far less is known of the northerly extent of Fort Walton into southern Georgia north of the Tallahassee Hills.

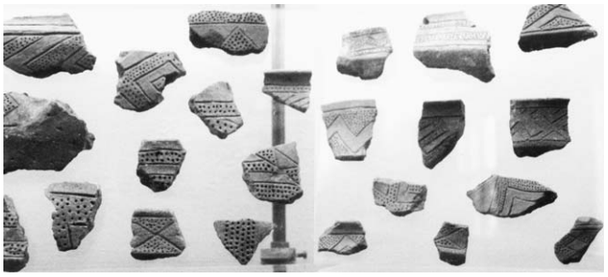

Figure 3. Italian Neolithic pottery resembling the type Fort Walton Incised (including carinated bowl sherds at upper right), photographed at the Luigi Pigorini National Museum of Prehistory and Ethnography, Rome, Italy, 1992.

By the late 1970s, most archaeologists had dismissed the idea that Mississippian cultures represented intrusions of peoples from Mexico or the Mississippi Valley and agreed that Fort Walton derived from a combination of Mississippian influence and indigenous Weeden Island roots (Brose and Percy 1978; White 1982), as Willey and Woodbury (1942:238) had first said and others agreed (e.g., Bullen 1958; Kelly 1960:32–33). Still, there were some dissenters. For example, Sears (1977:175) called Fort Walton people invaders into northwest Florida. Knight (1980:1, 9) saw the ceramics as a ''carried complex'' possibly brought eastward. Neither these two, nor other researchers, indicated why population movements might be taking place or from what points of origin. Stylistic resemblance of one ceramic complex to another is not necessarily evidence of migration or even any relationship at all. For example, Figure 3, showing what look like typical Fort Walton Incised sherds, is a photo taken in the Pigorini Museum in Rome (Italy, not Georgia). They are sherds from the Italian Neolithic, not evidence of Fort Walton connections with the Mediterranean. Clear evidence for population movement is lacking in northwest Florida Fort Walton by comparison, for example, with the upper part of the lower Chattahoochee Valley where Blitz and Lorenz (2002, 2006) have suggested in-migration based on the sudden appearance of shell-tempered ceramics.

Apalachicola River Valley

Models and Problems

Models of Fort Walton development continued to result from research in the Apalachicola River Valley, the lowest portion of the great Chattahoochee River system, which originates in the mountains of north Georgia. The lower Chattahoochee today forms the border between Alabama and Georgia, with the lowest 25 river miles being the Florida-Georgia border. From the confluence of the Chattahoochee and Flint Rivers,

the Apalachicola flows to the Gulf of Mexico. It has formed a large delta, with fertile bottomlands traversed by many tributary and distributary streams. On the upper west side of the valley are the Marianna Lowlands, limestone outcrops with caves, chert sources, and sinkhole ponds. Many old meander scars on the west side show the whole river has been migrating eastward, stopped by the high, steep Torreya Ravines formation on the upper east side. The lower delta is characterized by river swamps, estuaries, and bays, and barrier islands front the coast. Both inland and coastal Fort Walton sites have received continuing attention.

Brose and Percy (1978:105; Brose 1984) hypothesized Fort Walton origins connected with population growth (the fashionable prime mover of the 1970s, still serviceable today) during late Weeden Island (Late Woodland). This led to expansion into more diverse ecological zones and intensification of cultivation, then greater sociopolitical complexity and economic stratification. We know there was some maize by late Weeden Island (e.g., Milanich 1974), and intensive agriculture by early Fort Walton times, around A.D. 1000 (e.g., Bullen 1958; White 2000). Weeden Island Incised and Punctated ceramic types from the Middle Woodland mostly dropped out by Late Woodland, though other Weeden Island types such as Keith Incised and Carrabelle Incised continued in small quantities. Check-stamped pottery continued into at least early Fort Walton times, and Willey (1949:458) recognized that Fort Walton Incised and other contemporaneous types maintained the zoned punctation techniques, effigy forms, and some designs from Weeden Island types, and supported the model of in-place development. Louis Tesar (1980), generally supporting this model, defined six geographic subareas of Fort Walton, including at least two overlapping ones in the Apalachicola valley (Apalachicola Fort Walton and Marianna Fort Walton), as well as temporal divisions of Apalachee Fort Walton in the Tallahassee area.

Using the Brose-Percy model, White (1982) documented settlement shifts in the Apalachicola valley from late Weeden Island to Fort Walton, but with the assumption (from earlier models such as that of Bullen 1958:355) that sites producing only check-stamped and plain pottery, in those diverse ecological zones, were late Weeden Island, and that settlement then shifted very nicely to the immediate riverbank with Fort Walton farmers. However, there were some 175 sites in the valley that produced check-stamped and plain pottery only, but only 34 sites known to be late Weeden Island based on more diagnostic materials. The problem with check-stamped pottery is that they began making it well over 2000 years ago and never quit until long after the Spanish entradas. Figure 4 shows the difficulty of assigning generic check-stamped sherds to specific types by comparing several from well-dated contexts, using Willey's (1949) type names. While Leon Check-Stamped (at top of photo) from protohistoric and Mission period contexts may have larger checks, this is not always true. Wakulla Check-Stamped, from late Weeden Island and Fort Walton contexts, looks very much like earlier Wakulla or Gulf Check-Stamped of Middle Woodland times. Early Woodland Deptford sherds, about 2,000 years old, are very similar except in the case of linear checks (bottom right in photo), where lands of one direction dominate over lands of the other direction in the stamped pattern. All these sherds are sand/grit tempered, and color and thickness variations as well as rim forms and vessel shapes, so far, are also useless to tell them apart. Given only check-stamped

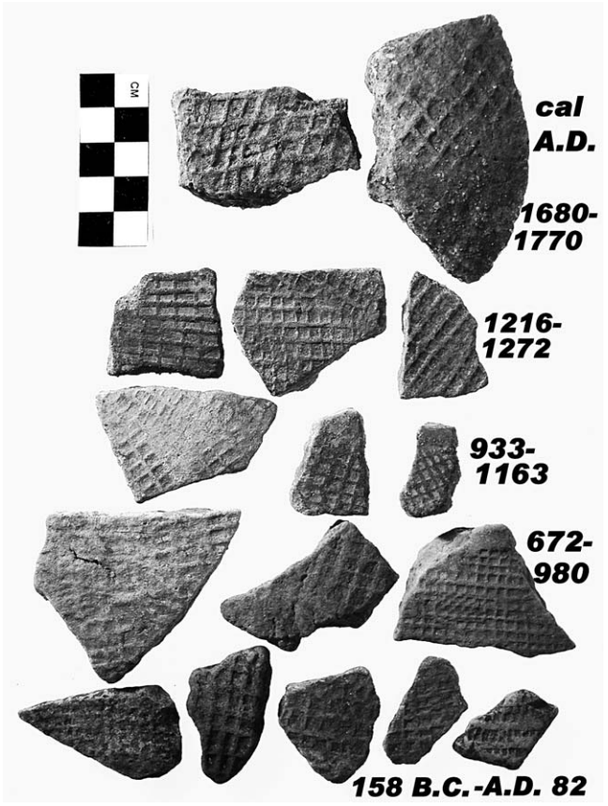

Figure 4. Apalachicola Valley check-stamped sherds and calibrated dates, showing similarities over 1.5 millennia. Top: protohistoric, Lighthouse Bayou site, shell pile 2 (cat. no. Gu114-02-14 and 01-39A), A.D. 1680–1770 (White 2005a:31–33); row 2: Fort Walton, Curlee site, unit 4-6S stratum III (cat. no. 8Ja7-125), A.D. 1216–1272 (White 1982:63,108); row 3: Late Woodland/Late Weeden Island, Otis Hare site, TU 1 L 4 (cat. no. 8Li172-90), A.D. 933–1163 (White et al. 1991; Harper 2005); row 4: Late Middle Woodland, Otis Hare site, TU 1 L6 (cat. no. 8Li172-149), A.D. 672–980 (White et al. 1991; Harper 2005); row 5: Early Woodland/Deptford, Depot Creek shell mound, TU C L1, dated 158 B.C.–A.D. 82 (White 1994:34).

and plain sherds it is impossible to determine the cultural affiliation of a site, making this part of White's original model suspect.

After White's dissertation (1982), J. Scarry's dissertation (1984) set up a Fort Walton chronology. His proposed phases all have problems stemming from the original scant data upon which they were based, either surface collections or excavated samples with little chronological control. The earliest phase was called Wakulla and encompassed late Weeden Island times, with ceramic assemblages dominated by that nondiagnostic check-stamped pottery. The earliest true Fort Walton he named the Chattahoochee Landing phase, defined as retaining up to 30 percent check-stamped ceramics along with the new Fort Walton types. But the type site, Chattahoochee Landing mounds, 8Gd4, near the Florida-Georgia border at the top of the Apalachicola River, may have produced a high percentage of check-stamped sherds because it has an Early Woodland component as well, given the recovery of Deptford Simple-Stamped and Linear Check-Stamped sherds (Bullen 1958:351–52; White 1982:137–42). Scarry's next phase, called Yon, was partially defined based upon surface-collected materials from the riverbank at Yon mound, 8Li2. This was before we realized that most of the upper riverbank is sand dredged from the channel bottom, with sherds that could have come from anywhere (White 1996). There are similar problems with Scarry's other phases. The ceramics they are based on are never given in much detail and the scores of radiocarbon dates listed (Scarry 1990:Table 26) have no indication of exactly what is being dated, any associated artifacts or features, or relative frequencies of ceramics or other artifact types. The dates and ceramic frequencies are assumed to be for whole sites, ignoring the likelihood of change through time at the same place during long occupation spans.

There are also more fundamental problems with various ceramic type revisions. The single outstanding attribute of Fort Walton pottery is that it is Mississippian but not shell-tempered like Mississippian nearly everywhere else. But Schnell, Knight, and Schnell (1981) redefined Lake Jackson Plain and Incised types to include shell-tempered sherds, thus removing that distinction. Scarry (1985) did not comment on this in his large-scale revision of all Fort Walton ceramic type definitions. He attempted to develop a type-variety system, like those which work well in the Mississippi Valley or at Moundville, but only added more confusion, not clarity, for Florida. He used inappropriate type and variety names (for example, types from other time periods or site names at which those supposed varieties were not known, or place names chosen just because they were in the general region) and non-uniform and overlapping criteria to distinguish types that have not been demonstrated to have temporal or spatial significance. He also used pseudo-quantification of ceramic attributes: Size of temper particles and width of incised lines differentiate several of the types and varieties, but no measurements were taken of these attributes over a sample of sherds and plotted to show real distributional differences. Typologies must have practical, classificatory value. One cannot easily sort in the lab a sherd of Fort Walton Incised from a sherd of Lamar (''bold'') Incised from a sherd of Ocmulgee Fields Incised, for example, based on even our traditional original type descriptions (Wauchope 1966:82–87; Willey 1949:460–62, 493–94), let alone Scarry's proposed types and varieties.

Although we did not have the opportunity to comment upon Scarry's proposed new Fort Walton ceramic typology, others did, noting that it obscured relationships among types from different geographic areas and time periods (Griffin 1985, Luer 1985), and that classification into the different varieties, in other words, sorting sherds in the lab, would be hard to do (Mitchem 1985), or impossible (Blitz and Lorenz 2006:237; Tesar 2006:17–19). We are currently working on a lab sorting guide for Fort Walton and protohistoric/Mission period ceramic types based on the original type descriptions and using non-overlapping criteria. We have yet to determine if a type-variety system, so useful in other areas of the Southeast, could be developed for northwest Florida, perhaps paying attention to attributes such as temper, which did not figure very much in Scarry's classification system.

Beyond the minutiae of ceramics, failure to test hypotheses is also seen for models of Fort Walton political systems. For temple mound centers along the Apalachicola, one model (Scarry and Payne 1986) had the computer map boundaries of individual ''polities'' (just as awkward a term as ''chiefdoms'' or ''societies'') and based the importance of the site upon the amount of earth in the mound. Brose (1990) originally noted the problems with this model, including the assumption that all these undated sites are contemporaneous, even though Fort Walton lasted for perhaps 600 years. Another obvious problem is simplistically assuming the larger the size, the greater the importance (!), or that large temple mounds necessarily meant commanding huge amounts of long-term labor (e.g., Muller 1997:273–75). Blitz and Livingood (2004) note that neither duration of mound use nor amount of chiefly power adequately explain mound size, and that the average occupation span per mound construction layer is 25–30 years, which suggests a generation. If new mound-stage construction accompanies the ascendancy of new chiefs, size might only be related to frequency of demise of old chiefs (so that a long-lasting Queen Elizabeth or Victoria might have a very small mound); dozens of other factors could also account for mound and site size.

A more serious problem is the lack of controlled data for this nebulous modeling of Fort Walton. For example, one of the mound centers within a hypothesized Apalachicola polity, the Jones-Daniel Mound, 8Gu14 (Scarry 1990:229), has been demonstrated to be a Civil War fort (White et al. 2000). In addition, Scarry's (1990:241, Fig. 80) model hypothesizes that reduced ceramic diversity through Fort Walton times shows the increase in political complexity because of the requirement for more intensive exploitation of limited resources. But there is no presentation of any data indicating a decline in either ceramic diversity or resource availability, nor has such evidence become available since. In fact, as Cobb (2003) points out, it is very difficult to demonstrate or explain complexity and political power in prehistory, and Mississippian societies have been described as ranging from weakly integrated and decentralized to extremely hierarchical, up to a near-state such as Cahokia (e.g., Blitz and Lorenz 2006:5; Payne 2006). One recent interpretation assumes they were hereditarily stratified but ranged from apical hierarchies developed through coercive expansion to constituent hierarchies achieved through persuasive aggregation (Beck 2003).

Evidence and Modeling

After two decades of testing sites all along the Apalachicola Valley, there is a good idea of what Fort Walton looks like. Inland are several mound-village centers (Table 1), at least a couple with multiple mounds (Figures 5, 6), and evidence suggestive of intensive maize agriculture. On the coast, from 35 miles inland out to the barrier islands, the people were still fishing, gathering, and hunting the same species as their Woodland and Archaic ancestors, as seen in shell midden stratigraphy (White 1994; White et al. 2002). Even if maize is recovered on the coast, as at sites farther westward (Mikell 1990; Brown 2003:22), there is no proof it was grown there. It is very hard to grow corn in the swampy lower Apalachicola delta, and it could always have been brought in through exchange with inland producers. M. Scarry (2003) suggests it was brought already processed as possible tribute to Bottle Creek, on the Alabama coast.

Since Fort Walton agricultural villages with plenty of maize are common upriver, comparison of coastal and interior adaptations is a current research focus. Coastal/estuarine groups were probably small and mobile, as Davis (1984) and others have suggested for the whole northern Gulf Coast. Nonetheless, coastal Fort Walton folks did have their temple mound center at Pierce (8Fr14, Figure 7), near the river's mouth (which had been a Middle Woodland center as well). Another piece of the model in the Apalachicola area is the elite cemetery, even in the absence of temple mounds, with goods such as copper, greenstone, shell cups, and other unusual items. For example, Figure 8 shows an elite burial from the Corbin-Tucker site (8Ca142; White 1994:170–72) with copper disc, greenstone celt, and fancy ceramics. Southeastern Ceremonial Complex (SECC) materials are also known, such as a carved shell disc Williams Island or ''spaghetti-style'' gorget (Wheeler 2001) and an engraved sherd with a ''sun circle'' design (White 1982:380, Figure 18y), both from the upper Apalachicola. This river system had to have been important in the Mississippian exchange network within the greater Southeast.

Table 2 presents dates confidently associated with controlled, excavated data for Fort Walton in this valley. Tabulation of ceramic type relative frequencies and other factors is underway to produce a more detailed chronology. So far a few spatio-temporal trends are clear:

- The continued use of late Weeden Island check-stamped vessels in early Fort Walton that Willey (1949:438,457) recognized long ago. This type constitutes up to half of the earliest component at the Curlee site and declines to less than 10 percent in the latest component, which dates to around cal. A.D. 1250 (White 1982:109). Check-stamped makes up between 7 to 9 percent at Richardson's Hammock site, from a context dated to about A.D. 1300 (White et al. 2002:48; White 2005a:30). By the time of the earlier midden at the Thick Greenbriar site, dated to about A.D. 1350 (White 2000), and the J-5 (8Ja8) site midden, dated to about A.D. 1400 (Bullen 1958), there is little or no check-stamped present.
- The early appearance of cob-marking, seen at Yon mound and village (White 1996) and elsewhere.
- The occurrence of occasional limestone-tempered paste associated with Fort Walton components in localized areas, such as the west side of the upper valley, with its limestone caves and outcrops (Bullen 1949; Gardner 1966; Tesar 2006; White 1982), and the lower delta shell middens, where there is little stone (White 1994:70, White et al. 2002:14).
- Shell-tempered pottery, where it does occur, classified as plain or (by definition) Pensacola Incised, never constitutes more than about 1 to 5 percent of the total ceramic assemblage. Shell tempering occurs more often early in the ceramic sequence, and then not until after the contact period (e.g., White 1982, 1996). It may represent visitors from farther west or north, the more traditional Mississippian cultures.

The Lamar Problem

As more radiocarbon dates give a better idea of chronology, a mystery has been the place of Lamar,

Table 1. Fort Walton Mound Sites Known in the Apalachicola Valley Area.

Site	Location[a]	Description	Dimensions	Comments	Reference
Seaborn (mound below Columbia or Omussee Creek), 1Ho27	Lower Chattahoochee W bank mile 47.7 (154.7)	1 rectangular platform mound, village	42 m × 27 m, 2.6 m high; 4 construction stages including a rock layer, dark sand, shell midden, red clay mantles	Early and late materials, including Lamar; premound midden has 42% shell-tempered sherds, mound has more typical Fort Walton, maize	Moore 1907:444–46; Neuman 1961; Belovich et al. 1982:165–168; Blitz and Lorenz 2006
Old Rambo Landing 9Se15	Lower Chattahoochee E bank mile 19 (116)	Poss. round? platform mound, village, fresh water shell midden	20 m diam, 2 m high, of sandy clay	Tentatively Ft. Walton based on 1 FW Inc sherd, little chert, grit-t plain sherds; may be plowed away now	Moore 1907:437; UGA 1948, 1953 site forms; White 1981:490–493
Waddell's Mill Pond, 8Ja65	Creek W of Chipola R, 35 km W of the Chattahoochee at mile 14	Sub-rectangular? mound	3 m high, red, gray, brown sands and clays fill, areas of limestone rocks	Fort Walton 1-m stratum with burials caps Early Woodland mound; possible palisade not near mound	Tesar 2006 (complete report in progress)
Underwater Indian Mound, 9Se27	Lower Chattahoochee E bank mile 2.7 in forks, 2.5 km below Spring Creek mouth	Subrectangular poss. mound, freshwater shell midden	120 m N-S, 50 m E-W, low elevation	Many other components, mound may be natural ridge, may be Middle Woodland in original construction	Boyd 1958:211; C. Miller notes in Smithsonian; White 1982:501–510
Chattahoochee Landing, 8Gd4	Upper Apalachi-cola E bank mile 105.6, just below confluence	7 mounds, poss. only 1 or 2 were temple mounds	Clay flat-topped mound 3.4 m high; others conical	Other components including Deptford	Moore 1907:411–412; Bullen 1958; White 1982
Curlee, 8Ja7	Upper Apalachi-cola W bank 105.6, just below confluence	1 possible mound, associated village	Sandy dark midden soil	May just have been cemetery with elite grave goods on high bank levee	White 1982
Yon, 8Li2	Middle Apalachi-cola E bank mile 78.6	1 temple mound, village (no ramp or plaza?)	8.8 m high, 47.9 m square	Early & late materials, including Lamar	Moore 1907:473; White 1996
Cayson (mound near Blountstown), 8Ca3	Middle Apalachi-cola near W bank, mile 78.1	1 temple mound, narrow ramp, village, plaza, low conical mound	Temple mound 5.9 m high, 32 m × 42 m at base	Gray silt prepared floor plaza bordered by line of posts, long wall trench N of mound	Moore 1907:467; Brose 1975
Chipola Cutoff, 8Gu5	Chipola R N (E) bank .5 mile from cutoff that meets Apalachicola at mile 41.5	1 conical burial mound; unknown if any domestic area	1.4 m high, 14.6 m diam, in low wet swamp	Now underwater, 42 burials, some Middle Woodland; protohistoric Ft. Walton with glass beads, brass disc; no Lamar	Moore 1907:445–466; USF lab
Pierce, 8Fr14(complex probably includes Singer, Fr16; Jackson, Fr15; Cemetery Mound, Fr21; Mound Near Apalachicola, Fr20, and others)	W bank of former channel of Apalachicola near mile 1 (near mouth)	At least 4 platform mounds, up to 8 others in large complex	1 temple mound of shell at least 30 m square, 2.5 m high, others smaller, of unknown composition	Some of mounds are Middle Woodland; FW habitation area on E side near temple mound; no Lamar known so far; many exotics; confusion on which mounds Moore described	Moore 1902:217–229; Willey 1949:278–283;USF archaeo lab

[a] Location given in river navigation miles up from mouth of each river; the Apalachicola has 107+ miles up from the Gulf of Mexico, so total miles inland are given for Chattahoochee sites.

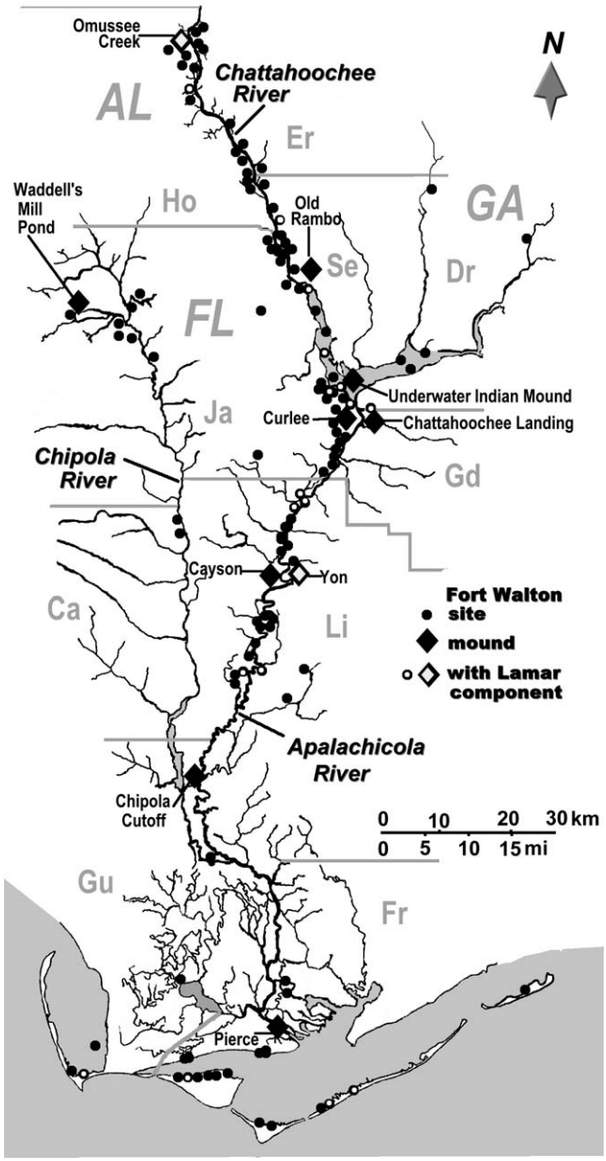

Figure 5. Distribution of known Fort Walton sites, including mounds and sites with Lamar components, in the Apalachicola–lower Chattahoochee Valley (counties indicated in gray for Alabama, Georgia, and Florida).

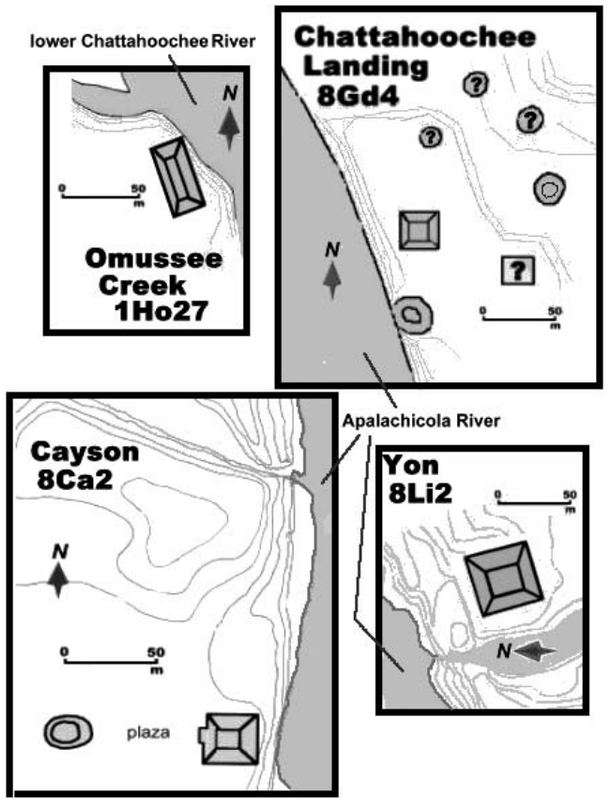

Figure 6. Schematic diagrams of some Fort Walton mound centers in the Apalachicola–lower Chattahoochee Valley, oriented on west or east bank of river (compare with locations in Figure 5). Chattahoochee Landing mounds with ''?'' are very tentatively reconstructed from Moore's description; some of them may be constructions earlier than Fort Walton.

with its characteristic complicated-stamped and incised pottery, within Fort Walton. Lamar ceramics have been thought to appear late in Fort Walton, and farther up the lower Chattahoochee, in the Fall Line hills, they are first seen by A.D. 1200–1300 and become dominant by 1400 (Blitz and Lorenz 2006). Though it looks like complicated-stamped Mission period Apalachee pottery (called Jefferson ware), Lamar has so far not been recovered with any historic non-aboriginal cultural materials. It occurs at about 16 percent of the Fort Walton sites in the Apalachicola Valley (Simpson 1996); calculated another way, of the 142 Fort Walton sites pictured in Figure 5, in the Apalachicola Valley and lowest 50 miles of the Chattahoochee Valley, 19 or 12 percent have Lamar materials. However, recent work at the bottom of the Apalachicola delta (White et al. 2002; White 2005a) has demonstrated a later historic association for it. At the Lighthouse Bayou site (8Gu114), a large-gastropod shell midden on St. Joseph Bay, a discrete shell pile (No. 12) with only Fort Walton pottery was radiocarbon dated to about cal. A.D. 1500, and another pile (No. 2) with Lamar pottery, dated to between cal. A.D. 1680–1770.

Lamar is distributed southward all the way to the Gulf. This contradicts the visual model on display (Figure 9) at the Kolomoki Museum in southwest Georgia, with its rather suspicious boundary between Fort Walton and Lamar: the modern Georgia-Florida border. (This display is to be redone soon, according to park personnel, but it has stood for many decades, a part of the inaccurate archaeological chronology and interpretation developed by William Sears that the profession spent half a century ignoring and that the public had no reason to question [Knight and Schnell 2004]).

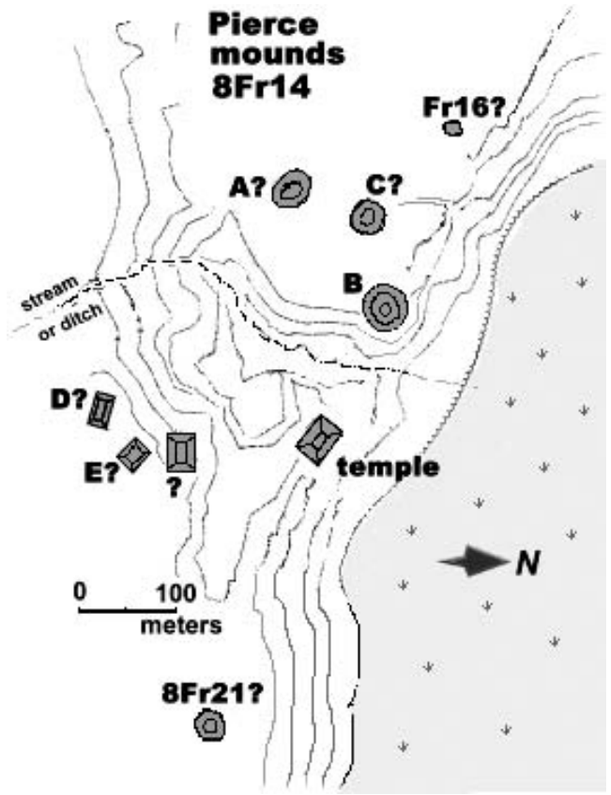

Figure 7. Schematic diagram of Pierce Mounds, a major center at the mouth of the Apalachicola (see Figure 5); mounds given other numbers are probably part of the whole center, but some mounds were constructed earlier than Fort Walton times.

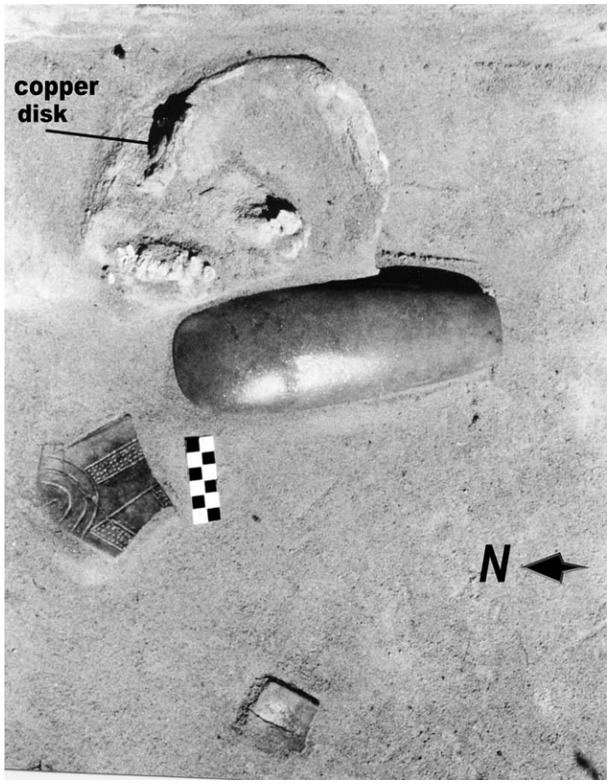

Figure 8. Elite Fort Walton burial at the Corbin-Tucker site, 8Ca142, middle Apalachicola Valley, with plain sherd (*bottom*) and sherd of Fort Walton Incised six-pointed bowl, greenstone celt under partial skull, copper disk on forehead. The skull lying on its right side was once identified as probably male (White 1994:191) but has now been reexamined by forensic anthropologists and classified as adult female (Marsh 2006).

While it is often simplistic to associate a ceramic series with a particular ethnicity, the Lamar pottery appearing in later Fort Walton could be interpreted as indicating increased interaction with the ancestors of the Lower Creeks to the north. This interaction may have begun in prehistory, or may have been intensified due to the Spanish entradas and later missionizing effort, drawing people down the Chattahoochee to replace those lost to early depopulation and/or to obtain whatever advantages were available from the intruders. Fort Walton disappears either before or perhaps right at the time of the destruction of the missions in the early 1700s, leaving either empty land into which more people came from the north, or less likely, leaving surviving people whose material culture had evolved completely into Lamar. It could be people moving in or goods (sending smoked fish or oysters, whelk shells, salt, or yaupon holly upriver in exchange for dried maize?). Lamar ceramics are especially found at sites on the barrier islands, possibly reflecting more European-influenced travel patterns.

Based on the supposed absence of late Fort Walton sites in the Apalachicola Valley as compared with the Tallahassee area, some (Brose 1984; Knight 1991; Scarry 1990, 1994; Tesar 1980:608) also hypothesize the late prehistoric ''segmentation'' of Fort Walton, with ''one segment then [entering] the Tallahassee Hills'' (Scarry 1990:243). Knight (1991) suggested that the Apalachicola Valley was ''overpopulated'' but never developed more than simple chiefdoms, while Lake Jackson was a complex chiefdom that developed from colonies of people migrating eastward from Apalachicola due to demographic pressure. Scarry (1994:169) thought agricultural land was limited in the Apalachicola Valley, while the Tallahassee area was more productive and could support larger populations. This interesting scenario, never demonstrated archaeologically, is now taken as fact, such that the major Fort Walton center at Lake Jackson in Tallahassee is described as having been settled by Mississippian expansion from the ''crowded Apalachicola River homeland'' (Payne and Scarry 1998:47). But there is absolutely no documentation of demographic pressure, nor any shortage of resources or good farmland in the rich Apalachicola delta, nor

even any shortage of late sites as opposed to a lack of fieldwork to find them. Segmentation and migration must be discounted until there is at least the smallest shred of evidence.

One of these late sites is the Thick Greenbriar site (Rodriguez 2004; White 2000), which has two well-separated Fort Walton components. The lower is radiocarbon dated to cal. A.D. 1270–1430 and the upper, which produced five glass beads and a wrought iron nail, had two dates of cal. A.D. 1420–1660 and 1680–1740. The ceramics from the earlier component are similar to those from the later one; there is no Lamar. Two other of the very few presumed early postcontact sites known in this valley have produced similar typical Fort Walton materials with very few European artifacts (White 2004), and so far no Lamar. Perhaps there are so few Contact period sites because of very early depopulation, before de Soto even arrived but after other Spanish germs had already moved in along this major waterway. However, given the few dates we have, these sites are placed in a general Contact-through-Mission period category, and the Lamar sites are seen as either later or ethnically different or both.

The relationship between Fort Walton in the Apalachicola Valley and the Tallahassee Hills areas is still impossible to characterize until there are better-dated ceramic assemblages, better control of the chronological span of mound sites, and more information about sites at the intersection of the two areas, somewhere in eastern Gadsden and northwestern Leon Counties. For the present, the hypothesis of early postcontact depopulation in the Apalachicola area makes better sense than the explanation that they were just moving eastward in droves in later precontact times for no demonstrated reason. Similarly, the notion that between the Apalachicola Valley and the Tallahassee region was an ''uninhabited buffer zone'' (Scarry 1990:243), indicated in Figure 1 by a question mark, derives from the fact that comparatively little archaeological research has been done there to see how many Fort Walton sites there might be.

At the suggestion of one reviewer, we looked at site distribution along the Interstate 10 corridor, which runs like a transect across this zone and was surveyed in the late 1960s and early 1970s. Only one Fort Walton site was located in this zone, between the Apalachicola and Ochlockonee River drainages, but this could be a sampling issue because the corridor was less than 100 m wide. We went back to the site file to see what other Fort Walton sites were recorded within the entire so-called buffer zone. A rough sort by township for those between the two river basins (and thus in smaller river and creek drainages) shows interesting results for the portions of the three counties within this zone. There are three Fort Walton sites in Gadsden County including the one in the I-10 corridor, the other two having been discovered within pipeline corridors. Gadsden is the most rural county, with little development requiring archaeological survey. In Liberty County there are 13 recorded Fort Walton sites; this county is also rural but contains the Apalachicola National Forest, with its own archaeologists, who provide greater coverage. In Franklin County there are also 13 Fort Walton sites recorded in this intermediate zone, but all are on the bay shore where the modern population is the densest, as opposed to the interior, and they are also shell middens, which are more visible. In general, these data suggest that there certainly is not an uninhabited zone here and indicate the need for systematic survey.

Tallahassee Red Hills

The Tallahassee Hills zone is part of the Northern Highlands Formation, a long elevated ridge, composed of ancient deltaic sediments (Figures 10 and 11). It extends from the vicinity of the Georgia State line in the north to a low escarpment on the south, a distance of approximately 25 miles (Hendry and Sproul 1966:24). Locally called the ''Tallahassee Red Hills'' or ''Red Hills'' because of the red clay substrate, it features an extensive hardwood vegetation and fertile agricultural soils. In the Red Hills, elevations may reach 200 to 230 ft. In some areas, this zone is immediately adjacent to karstic formations, such as the Woodville Karst Plain south of Tallahassee. Where it is broken by low-lying areas (e.g., Lake Jackson Lowlands), there are lakes, many of which drain periodically into large sinkholes (e.g., Lake Jackson, Lake Lafayette, and Lake Iamonia). Feeder streams collect water from the southern edge of the Red Hills (the Cody Escarpment) and carry it south to join rivers such as the St. Marks, Wacissa, Wakulla, and Aucilla. The Ochlockonee River lies in a lowland that cuts through the Red Hills. Sinuous and carrying sediment loads, the Ochlockonee differs from many of the local rivers that cut down through limestone and maintain channels little changed from Paleoindian times (Faught 2004). Neither it nor the local rivers were large enough to be navigable for C. B. Moore to visit this region.

Although there is a significant body of literature regarding the nature of the late prehistoric cultures of the Red Hills area, even today, data generated from archaeological excavations are meager. Nevertheless, models of Mississippian affiliation and development for the late prehistoric period have been conspicuously elaborated for the Red Hills area (Scarry and Payne 1986; Tesar 1980). It is reasonable to ask if these presentations of cultural developments have been forced into cultural molds more appropriate for other

Table 2. Fort Walton Period Sites Radiocarbon Dates in the Apalachicola Valley, Northwest Florida[a].

Site	Location	Provenience	Raw Date, Lab No.	Calibrated[b] Date Range	Associated Materials[c]	Reference
Chattahoochee River No. 1, J-5 or 8Ja8, village	Upper valley riverbank	''Fort Walton Zone'' or Zone 4	A.D. 1400 ± 200 M-392	A.D. 1317–1467	Nearly 6,000 sherds from 30-cm midden zone: 6% FW Inc, 2% LJ, 86% grit-t pl, 2% shell-t	Bullen 1958
Curlee, 8Ja7, village, cemetery	Upper valley riverbank	TU 4-6S, stratum IIId, lower midden, N portion of site	760 ± 50 B.P. A.D. 1190 DIC-1048	A.D. 1216–1272	15% ck-st, 4%FW Inc, 6% LJ, 58% grit-t pl, 6% shell-t	White 1982: 63, 108
		Midden Cut 2, S portion of site	1550 ± 85 A.D. 400 DIC-1049	A.D. 415 –579	Mostly check-st and plain sherds, a few FW types; may be dating deeper Late Woodland (late Weeden Island) stratum with later material mixed in	White 1982:70
Thick Greenbriar, 8Ja417, village	Upper valley riverbank	TU1, Feature 1, pit in upper (proto-historic) midden	380 ± 70 B.P. A.D. 1570 Beta-116315	A.D. 1420–1660	In pit: 2 glass beads, 2 FW Inc; 4 sand-t pl, 1 shell-t pl	White 2000
		TU5, L2, proto-historic upper midden	70 ± 40 B.P. A.D. 1880 Beta-181245	A.D. 1680–1740	6 grit-t pl, 10 sand-t pl, 1 shell-t, 1 indet sherd, 2 glass beads, 1 square iron nail,	Rodriguez 2004
		TU2 L6 , lower (prehistoric) midden	630 ± 70 B.P. A.D. 1320 Beta-110360	A.D. 1270–1430	7% FW Inc, 2% LJ, 75% grit-t pl (716 sherds), 8% shell-t pl, daub, maize, persimmon	White 2000
Sunstroke, 8Li217, shell midden	middle valley riverbank	TUA, Floor 6	1220 ± 90 B.P. A.D. 730 Beta-110361	A.D. 708–908	56% ch-st, 1% FW Inc, 11%sand-t pl	USF archaeology lab
Yon, 8Li2, platform mound, village	Middle valley riverbank	TU95A, stratum VIIIA, earliest mound stratum	820 ± 50 B.P. A.D. 1130 Beta-91844	A.D. 1065–1285	A basket load in earliest mound construction, grit-t pl, poss cob-mk sherds	White 1996
		TU95AA, intrusive burial in slope edge at base of platform mound	990 ± 60 B.P. A.D. 960 Beta-91164	A.D. 1010–1225	2 charcoal frags with intrusive burial (could be older, curated wooden artifact); level had 30 sherds: 3% FW Inc, 47% grit-t pl, 3% ch-st, greenstone celt with burial	
		Same burial as above	930 ± 50 B.P. A.D. 1020 Beta-91165	A.D. 970–1195	Another charcoal frag from same provenience as above, to get 2nd date; which comes out statistically the same	
		TUG, Feature 4, midden NE of mound	850 ± 40 B.P. A.D. 1100 Beta-154364	A.D. 1050–1270	FW and Lamar sherds, iron nails, probably disturbed context	USF archae-ology lab
		Refuse area S (?) of mound	A.D. 1050 ± 120 CWRU-95	A.D. 1017–1219	''Intermediate levels,'' apparently Zone II, with 5% FW Inc, 1%ch-st, 1%Lamar	Brose 1975[a]
		Midden NE (?) of mound	A.D. 970 ± 105 CWRU-14	A.D. 944–1158	Burned floor with *Compositae* pollen, ''Fort Walton ceramics''	
Cayson, 8Ca3, platform mound, village	Middle valley riverbank	Wall trench, habitation area S of platform mound	in text: A.D. 900 ± 65; on table: 950 ± 130 CWRU-93	A.D. 905–1037 (text of paper) A.D. 887–1155 (table of paper)	''Much higher occurrence of Wakulla check-st'' in this area, tabulated for entire S area of site at 25% ch-st, 17% FW Inc, 7% LJ [date given 2 different ways in different parts of the paper; neither agrees with that on original dating form]	Brose 1975[a]
		Low mound W of platform mound and plaza	900 ± 200 A.D. 1050 CWRU-94	A.D. 904–1258	Refuse pit with maize, nutshells, FW Inc & LJ sherds, in low mound across plaza from temple mound	
Corbin-Tucker, 8Ca142, cemetery, village	Middle valley, old meander	TUA, Feature 1, stratum II	1080 ± 90 A.D. 870 Beta-30633	A.D. 831–1027	Garbage pit with freshwater mollusc, turtle, fish, ch-st & pl sherds; a few FW sherds in surrounding midden may tie this component to cemetery at N end of site or it may be separate Late Woodland (late Weeden Island) component	White 1994
		TUA, Feature 1, Stratum 1	1060 ± 80 A.D. 890 Beta -68757	A.D. 881–1049	Same garbage pit as above, to get 2nd date, which agrees with the first one	USF archaeology lab (work in progress)
		TUE, cemetery, near Individual 1	1840 ± 110 A.D. 110 Beta-40905	A.D. 54–310	Charcoal under copper disc under bone from secondary burial (could be long-curated artifact or **erroneous** date); only FW Inc and plain sherds	White 1994
		TUE cemetery, bone frag, Individual 1	180 ± 40 A.D. 1770 Beta-213055	A.D. 1650–1880	Same burial as above; had only FW Inc sherds and copper discs; burial may be protohistoric, intrusive into FW cemetery	Marsh 2006
		TUE cemetery, bone frag, Individual 2	380 ± 40 A.D. 1570 Beta-217850	A.D. 1440–1640	Long bone from another burial, Individual 2, only FW Inc sherds, greenstone celt, shell cup; best estimate is very late prehistoric	USF archaeology lab (work in progress

Table 2. Fort Walton Period Sites Radiocarbon Dates in the Apalachicola Valley, Northwest Florida[a]. (continued).

Site	Location	Provenience	Raw Date, Lab No.	Calibrated[b] Date Range	Associated Materials[c]	Reference
New Pass, 8Fr27, shell midden	Lower valley on barrier island	Unit 601.5N495E, Level 1	680 ± 50 A.D. 1270 Beta-38689	A.D. 1277–1371	Dates on oyster shell, latest and earliest ends of FW occupation, ceramics for unit (not separated by level) = 12 ch-st, 6 FW Inc	Barton 1992
		Level 5 same unit	840 ± 50 A.D. 1110 Beta-38690	A.D. 1110–1234	4 PtW Inc (?), 3 Lamar Comp-St, 3 cob-mk	
Richardson's Hammock, 8Gu10, shell midden	Lower delta, St. Joe Bay shore	TUB L3, S end of site	650 ± 40 A.D. 1300 Beta-191276	A.D. 1280–1400	8%FW Inc, 3% LJ, 9% ch-st, 31% grit-t pl, 8% grog-t pl, 21% grit&grog-t pl, 18% sand-t pl, 3% shell-t pl	White et al. 2002; White 2005; USF archaeology lab (work in progress)
Lighthouse Bayou, 8Gu114, shell midden	Lower delta, St. Joe Bay shore	Shell pile 12W L4	380 ± 60 A.D. 1570 Beta-177996	A.D. 1420–1650	Western 1 × 1 m square in 1 × 5 unit in discrete shell pile with FW Inc, only one possible Lamar sherd	
		Shell pile 2N, L2	120 ± 50 A.D. 1830 Beta-165601	A.D. 1660– 1950	Northern 1 × 1 m square in 1 × 5 m unit in discrete shell pile with many Lamar sherds, little or no FW pottery	
		Shell pile 3, L3	150 ± 50 A.D. 1800 Beta-193568	A.D. 1660–1950	Smaller discrete pile with sherds fitting sherds from Pile 2; exactly the same result may be due to a forest fire that burned the whole site (?)	

[a] There are more dates available on some of these sites but little information on them: e.g., Scarry (1984:91) lists many dates but no data on what is being dated or any associated materials; Brose (1975) lists many more dates in text and tables that do not agree with each other or with dates on original radiocarbon forms filed at the Cleveland Museum of Natural History.
[b] Dates not done by Beta Analytic after 1996 were calibrated using CalPal online calibration program (Cologne 2006, which gives ranges at 1-sigma probability).
[c] Ceramics only roughly tabulated by sherd counts (not weights) for complete assemblages and only for general comparison, as there are enormous differences in sample sizes and many types are not mentioned; abbreviations: FWInc = Fort Walton Incised; LJ = Lake Jackson Plain or Incised; PtWInc=Point Washington Incised; ch-st = check-stamped, -t = tempered, pl = plain.

areas, if there has been sufficient consideration of local differences, or if similarity has been stressed to the exclusion of developing a local perspective. Recent investigations of Mississippian-like cultural developments along the St. Johns River in east Florida by Keith H. Ashley (2003) and Robert L. Thunen (2005) have drawn attention to apparent cultural differences (sociopolitical and economic) in the Mill Cove Complex.

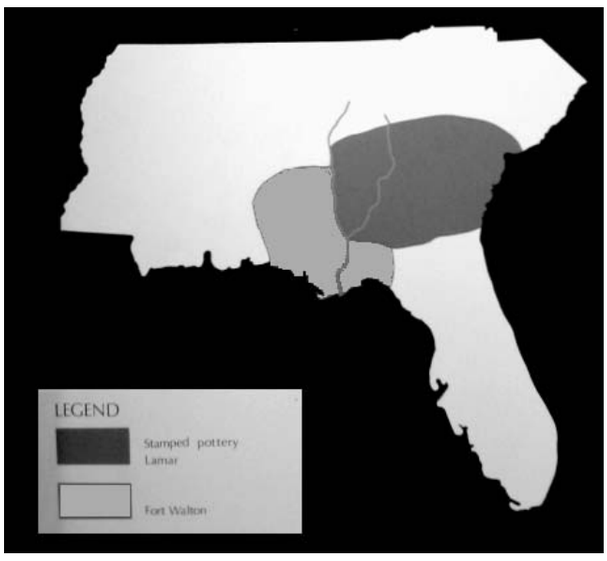

Figure 9. Simplistic model showing division between Fort Walton and Lamar at exactly the modern Florida-Georgia border; photo by Cassandra Rae Harper of museum exhibit at Kolomoki Mounds State Park, southwest Georgia, 2006.

There platform mounds were built by people who were not maize agriculturalists and where sedentism and hierarchical ranking may not have been cultural features. Thus it is germane to our argument to consider the extant database for the Red Hills area (Table 3) and its problems.

The Red Hills Evidence and Problems

First, we consider the data from sites with multiple mounds (Figure 11, Table 3): Lake Jackson, Markley/Sharer Road, and Letchworth.

Lake Jackson Site (8Le1). Any treatment of the Tallahassee Red Hills area must begin with Gordon Willey's 1949 summary of Fort Walton culture and his comments on the Apalachee area (also termed Apalache). In 1940, Willey and Woodbury (Willey 1949:95–98) conducted limited excavations at the Lake Jackson site (Figure 12), opening two 3-m square units. Neither was located on a mound: One was located closely adjacent to the south side of Mound 2, the largest of the complex; the other within 60 m north of Mound 2. In his first test, Willey found scant cultural material, but in the second test, he reported dense midden accumulation. On the basis of mound form (truncated pyramidal), mound complex (6–7 recognized), and late ceramics, Willey proposed a Mississippian affiliation for the site.

John Griffin's test excavations at the Lake Jackson site in 1947 were also not located on mounds. Griffin (1950) opened a test area totaling 2175 square feet, west

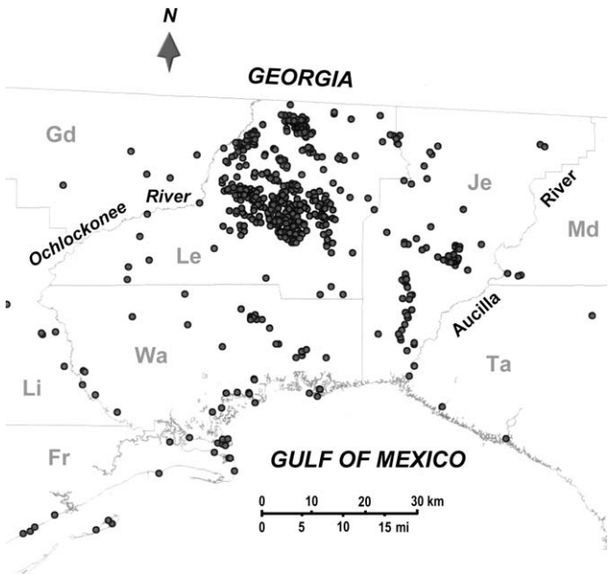

Figure 10. Fort Walton period sites in the Tallahassee Red Hills area; this figure is located geographically immediately east of the area shown in Figure 5. (Courtesy of Florida Master Site File.)

of the largest mound (Mound 2), which revealed substantial midden accumulation. At the time of his work, a large looter's trench had been cut into the south side of Mound 2. Griffin cleaned the profiles and reported that the upper stratigraphy of Mound 2 contained several clay mantles capping mixed deposits of clay, loam, and sand (Griffin 1950:99). He also cleaned the ''platforms'' (summits) of Mounds 4 and 5, removing the topsoil to reveal clay mantles. Griffin confirmed Willey's earlier findings and considered whether Lake Jackson was the site of Anhaica, the principal town of the Apalachees at the time of Hernando de Soto's arrival in 1539. Griffin (1950) noted, as Willey (1949) had in 1940, that Spanish materials were not recovered.

Subsequent to Griffin's excavations, no professional archaeological investigations were conducted until after the site became a state park in 1966. Two tests were made by Daniel T. Penton (1968) along the course of a proposed drainage ditch. Near Mound 2, he reported low artifact frequency and no structural evidence. In the second test, some 72 m west of the first, Penton found a denser deposit of cultural materials and a single possible postmold. In 1969, as the site was being developed for public use, Frank B. Fryman Jr. conducted excavations at the proposed locations of a restroom, ranger's residence, and workshop. The restroom location, northwest of Mound 2 revealed a dense midden accumulation and a short wall trench segment (Fryman ca. 1969). This excavation was made south of the area that Griffin tested in 1947.

Information about mound structure and content at Lake Jackson is represented principally by the work of archaeologists B. Calvin Jones (1982) and Claudine Payne (1994) and amateur Louis Hill (n.d.). In the 1970s, Hill excavated a trench in the north side of Mound 6, then located on adjacent private property. His work revealed a series of packed clay floors and a platform mound form. The field notes (Hill n.d.) are undated, and in conversation Hill (personal communication 2006) could not be more specific about the year of his work. No burials were encountered and no subsequent investigation of this mound has been undertaken.

In 1975, a copper celt, discovered in the construction fill at a new house site in Tallahassee, was traced to Mound 3. Also in private ownership, this mound was being leveled to prepare space for the owner's new heavy equipment shed and the fill used in his construction business. Arrangements for salvage excavation were made and Jones, of the Florida Bureau of Archaeological Research, conducted the excavations. He (Jones 1982:7–8) reported that ''a large portion'' of the east half of the mound had been removed to ground surface before he began. Six burials were collected by amateur archaeologist Conrad (Joby) Kidd, who was monitoring the site for Jones over a holiday. Two more were observed in the upper levels of the mound as removal of fill progressed. Jones (1982, 1994) reported a complex layering of strata and mantles and 15 burials, some with significant grave goods. The Mississippian affiliation of Lake Jackson was clearly demonstrated by SECC (Galloway 1989) artifacts such as copper plates and celts with burials.

In 1989, Claudine Payne (1994) conducted investigations at the Lake Jackson site for her doctoral dissertation. She began with controlled subsurface testing around the mounds using a mechanical auger, followed by mapping and testing several mounds. A flanking excavation placed on the southern side of Mound 4 revealed mound stratigraphy and several post molds in its basal levels. Charcoal from the premound occupation level of Mound 5 was submitted for radiocarbon dating (Table 4). Payne (1994:262–272) studied collections made by earlier investigators and used the ceramic data, mound stratigraphy and materials, and radiocarbon dates to propose a three-stage developmental sequence for the site. Lake Jackson I, essentially early Fort Walton (ca. A.D. 1050 to 1150), includes the ceramic types Wakulla Check-Stamped and Fort Walton Incised (Payne 1994:262). Further, she noted the presence of engraving and mica inclusions in the ceramic paste. She also mentioned that few vessel forms or decorative motifs typical of Mississippian culture elsewhere were present. Lake Jackson II (ca. A.D.1150 to 1400) is divided into early and late subphases based on the

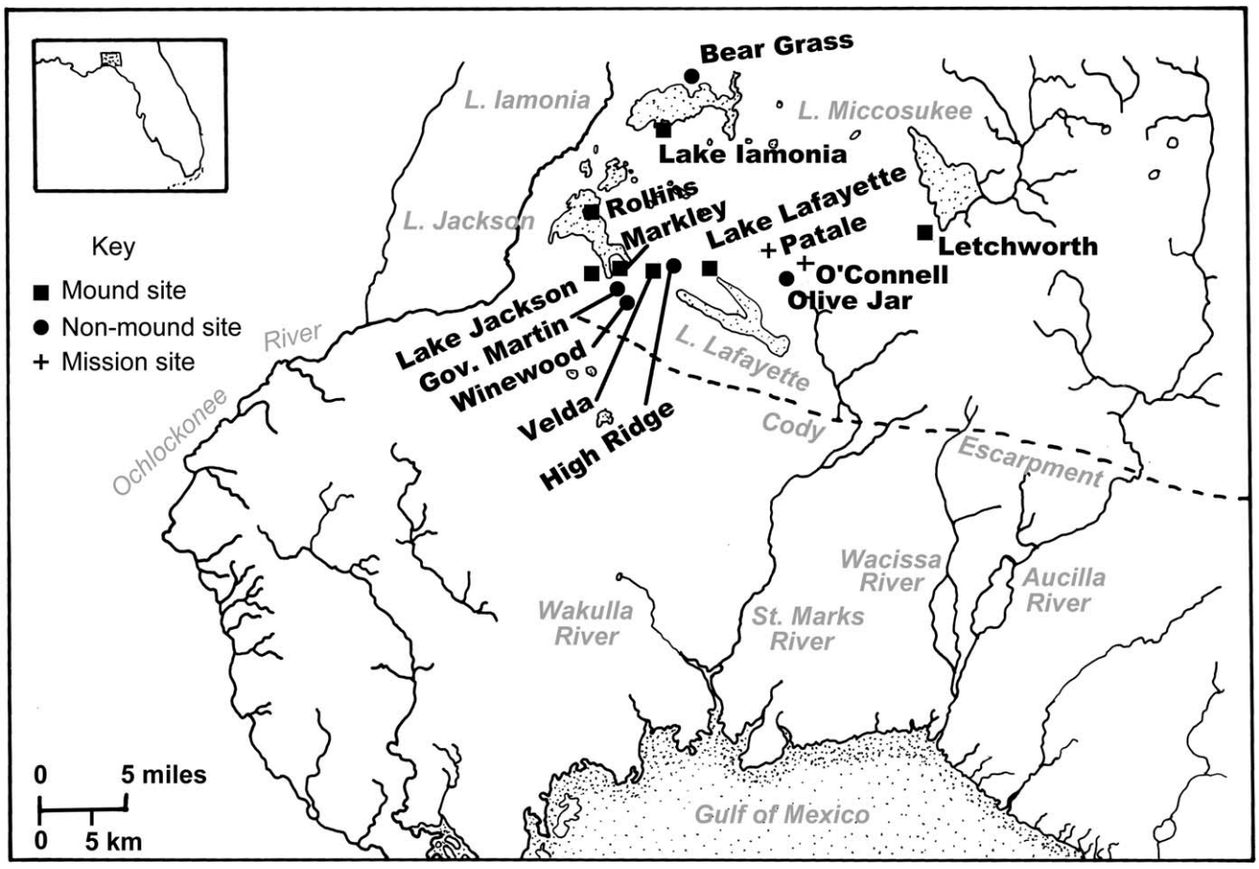

Figure 11. Fort Walton period mounds and other important sites in the Tallahassee Red Hills.

presence of Wakulla Check-Stamped, Carrabelle Punctated, and cob-marked pottery in the earlier subphase and their absence in the later. Lake Jackson III (ca. A.D.1400 to 1500) features Fort Walton Incised and vessels with fluted rims. Payne's (1994:261–264) proposed stages were based on limited work in the part of the site in state ownership in 1989 and await testing.

Subsurface testing of the areas around Mounds 2, 4, and 5 strongly supported the presence of a plaza west of Mound 2 and north of Mound 4. Recent additions to the park have meant that all of the other mounds, except Mound 1, now lie within the park boundaries. Determining the presence of other settlement features will require additional testing. Although the site has been called ''palisaded'' (Tesar 1980:163), there is no

Table 3. Fort Walton Period Mound Sites in the Tallahassee Red Hills area.

Site	Location	Description	Dimensions	Comments	Reference
Lake Jackson 8Le1	Lake edge	6 platform mounds, 1 conical mound	Md. 1 – 2 m high, 20 × 25 m at base Md. 2 - 11 m high, 85 × 95 m at base Md. 3 - ≥ 4.9 m high, 44 × 48 m at base Md. 4 - 5 m high, 50 × 55 m at base Md. 5 - 3+ m high, 25 × 35 m at base Md. 6 - 3+ m high, 33 × 60 m at base Md. 7 - low circular rise ± 1 m high, dia. 20 m		Griffin 1950 Jones 1982, 1994 Payne 1994 Willey 1949:95–98
Lake Lafayette 8Le2	Lake edge	1 platform mound	Estimated height 4.5 m, 36 m at base		Willey 1949:284 Smith 1956:123
Rollins 8Le3	Lake edge	1 platform mound	Estimated height 2 m, 27 × 25 m at base		Willey 1949:285
Lake Iamonia 8Le5	Lake edge	1 platform mound	Unknown		Willey 1949:286
Velda 8Le44	Inland	1 platform mound, adjacent village	Unknown	3 circular structures in village	Fryman 1971 Scarry 1995
Markley/Sharer 8Le213	Near lake	3–5 clay-floored platform mounds	Unknown	Several circular single-post structures	Anonymous 1974
Letchworth 8Je337	Near lake	1 platform mound, ≥ 5 associated mounds	Estimated height 13+ m; 100 m wide		Florida Master Site File

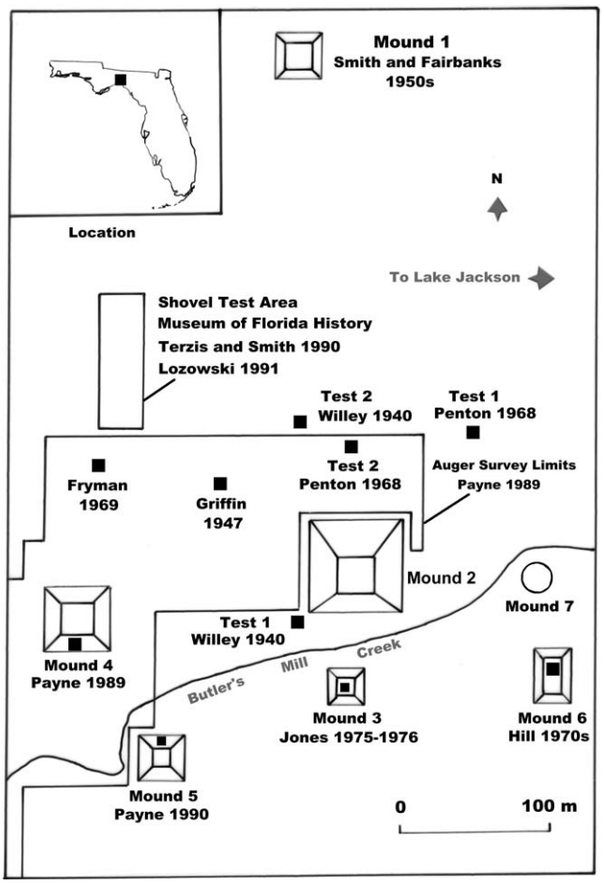

Figure 12. Schematic diagram of the Lake Jackson site in Tallahassee showing different investigations (adapted from Payne 1994:245).

archaeological evidence. The Lake Jackson site has been called the prehistoric ''capital'' of Apalachee (Fryman 1971). At 24 hectares in extent (Payne 1994:232), it is larger than any mound center in the Apalachicola River Valley, but less than 1 percent of it has been investigated.

The Markley/Sharer Road Site (8Le213). This site is reported in a brief note (Anonymous 1974:2) and in the Florida Master Site File by Jones who described it as having three to five clay-floored structural mounds. He also noted several circular, single-post structures with clay-lined hearths but did not assert that the mounds were truncated nor that they were ''temple'' mounds. Jones concluded, on the basis of Lake Jackson series ceramics, that the site was related to the Lake Jackson Mound complex. His investigations at this site have not been reported, but a handwritten note (Jones ca. 1974a), apparently meant to be part of a ceramic discussion, offers some insights regarding perceived similarities to the Borrow Pit and Winewood sites. A map of most of the site locations is also available (Jones ca. 1974b). Since Jones's limited work at this site, no further investigation has been made.

The Letchworth Site (8Je337). Another problematic site with multiple mounds is Letchworth, some 18 miles east of Tallahassee. This site also has been called the Miccosukee Mound (Boyd 1939), and some scholars consider it to be Mississippian (e.g., Payne and Scarry 1990). Composed of one large mound and at least five smaller mounds, it was initially reported as a Swift Creek/Weeden Island site in the Florida Master Site File, but this characterization was based on surface collections. At over 13 m, its principal mound is the highest in Florida. Auger and shovel testing programs and limited test excavations around the mounds have been undertaken. Field notes and conversations with excavators Ryan Wheeler and Louis Tesar at the Florida Division of Historical Resources (DHR) indicate that both Weeden Island and Fort Walton components are present. However, results of investigations in 2004 are not yet available (Florida Department of State 2007). It is unclear if late Weeden Island evolved into Fort Walton at this site or if the Fort Walton materials recovered represent a later occupation.

Of the identified sites with multiple mounds in the Tallahassee Red Hills area, Lake Jackson is clearly the preeminent site. Although our knowledge is based on very limited archaeological evidence, this site has dominated recent archaeological writing about Fort Walton and Mississippi culture in general (e.g., Payne 2006, Scarry 1996b). Mounds 1, 2, and 7 remain wholly or largely undocumented. Mound 3 has been virtually destroyed (Jones 1982), but it is possible that some submound features survive. Mounds 4 and 5 have been minimally tested and Mound 6 was trenched by an amateur collector (Hill n.d.) whose field notes are available for study. Unlike many of the Mississippian centers elsewhere (e.g., Cahokia, Moundville, Spiro, and Etowah), the archaeological investigation of the Lake Jackson site has been piecemeal, not long term and rarely problem-oriented.

Other Mounds in the Red Hills Area. In his 1949 synthesis, Willey also reported the Rollins Mound (8Le3), a platform mound located on a small peninsula on the eastern shore of Lake Jackson. He reported looting in the central portion of the mound and his surface collection from the adjacent field netted five Fort Walton Incised sherds. He concluded that the site was affiliated with the Fort Walton period. There has been no further professional investigation of this site.

A mound on Lake Iamonia (8Le5), northwest of Lake Jackson, also was reported by Willey (1949:286) as a Fort Walton site. He did not visit it, but he studied materials curated by the Peabody Museum at Harvard: Fort Walton Incised pottery (17 sherds) and Lake Jackson Plain (13 sherds, one a disk). The mound is reported as a ''temple'' mound on its Florida Master Site File form and a notation is included that it was measured and mapped by Hale G. Smith. There is a

Table 4. Fort Walton Period Radiocarbon Dates for the Tallahassee Red Hills area.

Site	Location	Provenience	Raw Date	Calibrated Date	Associated Materials	Reference
Lake Jackson, 8Le1, multiple mound site	Lake edge	Mound 3 Burial Pit 1	1025 ± 80 B.P. I-9918	A.D 1012 ± 98	Charcoal sapling covering Burial 1	Submission form, Bureau of Arch. Res.; Jones 1982:26
		Mound 3 Feature 1 Cultural Zone 1	365 ± 75 B.P. I-9919	A.D 1540 ± 75	Charcoal small fire basin	Submission form, Bureau of Arch. Res.; Jones 1982:26
		Mound 3 Zone 14 post assoc. with premound midden	715 ± 85 B.P. I-9920	A.D 1293 ± 71	Charcoal from post	Submission form, Bureau of Arch. Res.; Jones 1982:9, 26
		Mound 3 structural log Cultural Zone 3 Floor 2	1045 ± 75 B.P. I-9921	A.D 992 ± 91	Charcoal, upright structural post	Submission form, Bureau of Arch. Res.; Jones 1982:26
		Mound 3 Burial Pit 2 Floor 10	1035 ± 80 B.P. I-9922	A.D 1003 ± 98	Charcoal sapling covering Burial 2	Submission form, Bureau of Arch. Res.; Jones 1982:26
		Mound 3 Burial 17 fill Cultural Zone post-12 Floor unknown	850 ± 70 B.P. Beta-64833	A.D 1152 ± 80	Charcoal sapling covering Burial 17	Lake Jackson files, Bureau of Arch. Res.
		Mound 3 Burial 7 fill Cultural Zone 10 Floor 9	550 ± 90 B.P. Beta-64835	A.D 1372 ± 59	Charcoal sapling above Burial 7	Lake Jackson files, Bureau of Arch. Res.
		Mound 3 Burial 3 fill Cultural Zone 1 Floor 1	720 ± 70 B.P. Beta-64835	A.D 1293 ± 67	Charcoal 50 cm thick zone above burial pit	Lake Jackson files, Bureau of Arch. Res.
		Mound 3 Burial 6 fill Cultural Zone 13 Floor 11	620 ± 60 B.P. Beta-64836	A.D 1343 ± 44	Charcoal from upper fill of burial pit	Lake Jackson files, Bureau of Arch. Res.
		Mound 5 Base	670 ± 90 B.P. Beta-44592	A.D 1317 ± 62	Charcoal-rich occupation layer beneath mound	Payne 1994:258
		Mound 5 Base	910 ± 110 B.P. Beta-47654	A.D 1114 ± 94	Charcoal-rich occupation layer beneath mound	Payne 1994:258
Velda Mound, 8Le44, single mound, village	Inland	Postmold 84	445 ± 90 B.P. I-6583	A.D. 1499 ± 92	Charcoal Structure 3 circular	Radiocarbon date file, Bureau of Arch. Res.
		Feature M 67	6490 ± 292	5380 B.C . ± 292	Charcoal irregular oval feature	Radiocarbon date file, Bureau of Arch. Res.
		No location Provided	430 ± 80 B.P.	A.D. 1510 ± 84	Charcoal	Radiocarbon Date file, Bureau of Arch. Res.

Note: All dates were calibrated using Calpal online calibration program (Cologne 2006); ranges given at 1-sigma probability.

further notation that Smith trenched the mound on the northwest side, but neither field notes nor a reference to a report has been located.

Within Tallahassee, the Velda Mound (8Le44) is a single mound site originally identified by Charles Fairbanks in the 1950s. Also a platform mound, it has been virtually destroyed by looting and there is little knowledge of the kinds of materials that were carried away. At this site, we have our clearest association of a nearby village where excavations were conducted by Ross Morrell in 1968. J. Scarry has studied the ceramic assemblage and site features (e.g., Scarry 1995, Scarry and McEwan 1995), but a site report has not been published. From Velda, we have the best prehistoric structural evidence. Two round structures, one 5.5 m in diameter, the other 7.5 m in diameter, were single post constructions and neither had subfloor burials. Trash-bearing features were identified outside the structures and a possible *garita* (an elevated storage structure) nearby. Radiocarbon dates (Table 3) indicate a late-fifteenth- to early-sixteenth-century occupation, but European-derived cultural materials were not recovered.

East of Tallahassee, Willey (1949:284) visited the Lake Lafayette site (8Le2) and reported a ''flat-topped pyramidal mound of clay surrounded by fields which bear evidence of having been an old village site.'' From the ''surrounding village area,'' Willey (1949:285) recovered only 22 decorated sherds, which he typed: 20 designated Fort Walton Complex (Fort Walton Incised, Lake Jackson Plain, Pensacola Plain, Leon Check-Stamped, and Lamar Complicated-Stamped) and 2 designated Weeden Island Complex (Carrabelle Punctated and Wakulla Check-Stamped). Smith (1956:123) excavated there in the 1950s and reported Jefferson Complicated-Stamped sherds associated with Lake Jackson and Fort Walton ceramic types.

Other Sites of Interest. The Borrow Pit site (8Le 170) was investigated in 1972 as Interstate 10 was under construction in northeast Tallahassee. Jones (1990:83) described it as an Apalachee hamlet of five structures. The largest of these, Structure 3, approximately 12 m in diameter, contained eight burials beneath its red clay floor. All burials were flexed and the grave pits contained pieces of the red clay floor. Jones (1990) also mentions investigating two other burials in an adjacent

structure, but does not describe them. Although there was no final report of the excavations conducted at this site, an illustration of Jones's field map of Structure 3 has been published (Shapiro and McEwan 1992:66) and the grave goods of one burial described (Jones 1990). Jones believed that this site dated to the late prehistoric period (ca. 1500; Shapiro and McEwan 1992:63).

The Winewood site (8Le164), located within the city limits of Tallahassee, has been interpreted to be an inland late prehistoric Apalachee site. Jones and Penman (1973) reported the results of only two days of salvage investigations in 1971 as the land was being converted into a golf course. Using a motor grader and bulldozer for stripping, they collected materials and identified 11 features. The ceramic assemblage featured Fort Walton ceramics: Fort Walton Incised, Lake Jackson Plain and Incised, Safety Harbor Incised, and Cool Branch Incised. Complicated-stamped ceramics were not reported. Eight features were excavated: five large pits and six burials. The features were closely associated, in an area ''approximately 7 by 11 meters'' (Jones and Penman 1973:67). Three of these features contained human remains associated with potsherds and charcoal and Jones and Penman (1973) identified them as ''burials.'' It is not clear if these were primary burials or if the small number of skeletal elements present represents intrusion of a later pit into a cemetery area. Three grave features were investigated and Jones and Penman (1973:72, Figure 1) reported that they contained recumbent, fully extended burials. Although no Mission period or European-derived materials were recovered, the burial pattern suggests that Jones and Penman may have intersected a mission cemetery as seen at Mission Patale (Figure 13). During the Mission period, extended recumbent burials were placed in individual graves, often with grave goods. The possibility that the Winewood burials date to the Mission period calls into question the cultural and chronological attributions of this site. Lacking radiocarbon dates, it is not possible to pursue this problem further.

The Bear Grass site (8Le473) is usually cited in any discussion of prehistoric architecture in the Red Hills (Scarry and McEwan 1995; Tesar 1980:777–794). Bear Grass is a multicomponent site: Late Archaic to Creek/Seminole (Tesar 1980:782). Limited excavation revealed part of an arching line of postmolds estimated to represent a 12-m diameter structure (Tesar 1980:792). Because this feature was not completely exposed, its identity and function remain unresolved.

Modeling Fort Walton in the Tallahassee Red Hills

In late prehistoric times, the area around present-day Tallahassee, like the Apalachicola Valley, was dominated by cultural developments that are similar to those at more distant Mississippian centers. So much of our interpretation of the late prehistoric period in this area is dependent on data from one site, Lake Jackson, and it is a meager–not a large–database (Payne 2006). Were it not for the excavation of Mound 3, under less than optimal salvage conditions, there would be few substantive data to tie the site to the greater Mississippian world. We do know that the people of Lake Jackson, the dominant site of the locality, received and valued exotic items that tied them to Mississippian sites such as Spiro (Drooker 1998) and Etowah (Jones 1982).

It is also clear that the cultural adaptations in the Red Hills area have been driven by a topography that features lakes rather than rivers. It is a topography so dependent on local rainfall that in years of drought, sinkholes form and substantial water bodies may drain rapidly and take months or years to refill (Hughes 1967). Thus the social and economic adaptations and magico-religious practices required to succeed in this locale may be significantly different than for river-dwelling peoples. Rapid, catastrophic water loss might also precipitate events ranging from social chaos to changes in leadership or population loss through migration.

Were the people who developed the Lake Jackson site and the other mound sites in the Red Hills area migrants from the Apalachicola-Chattahoochee drainage or were they local people who intensified their commitment to maize agriculture, and in doing so, found common ground with peoples of the Mississippian sphere beyond? The mechanisms whereby maize was introduced, adopted, and ultimately became a mainstay in the area are poorly understood. We do not know if rituals or practices that assured its fertility and renewal diffused along with this plant or how local ritual practices were adapted. Given the similarity of mounds, burial context, and burial associations, Lake Jackson evidences many parallels to Mississippian sites elsewhere.

We know little about how the site was used, however, because we have no substantial excavations of areas that can be called residential. Willey, Griffin, Penton, and Fryman all encountered dense cultural accumulations west of Mound 2. Fryman's excavation revealed a wall trench segment, but the feature was not pursued laterally and we do not know how extensive it might have been. We do not know whether it represents a dwelling, a screen, or some other type of structure. It is difficult to evaluate whether these food remains, broken vessels, and lithic debris represent rites of intensification that required the presence of large numbers of people at the site for ritual, refurbishment, or building. Yet these data have been accepted uncritically as evidence of a village (e.g., Bierce-Gedris 1981; Jones 1994:120).

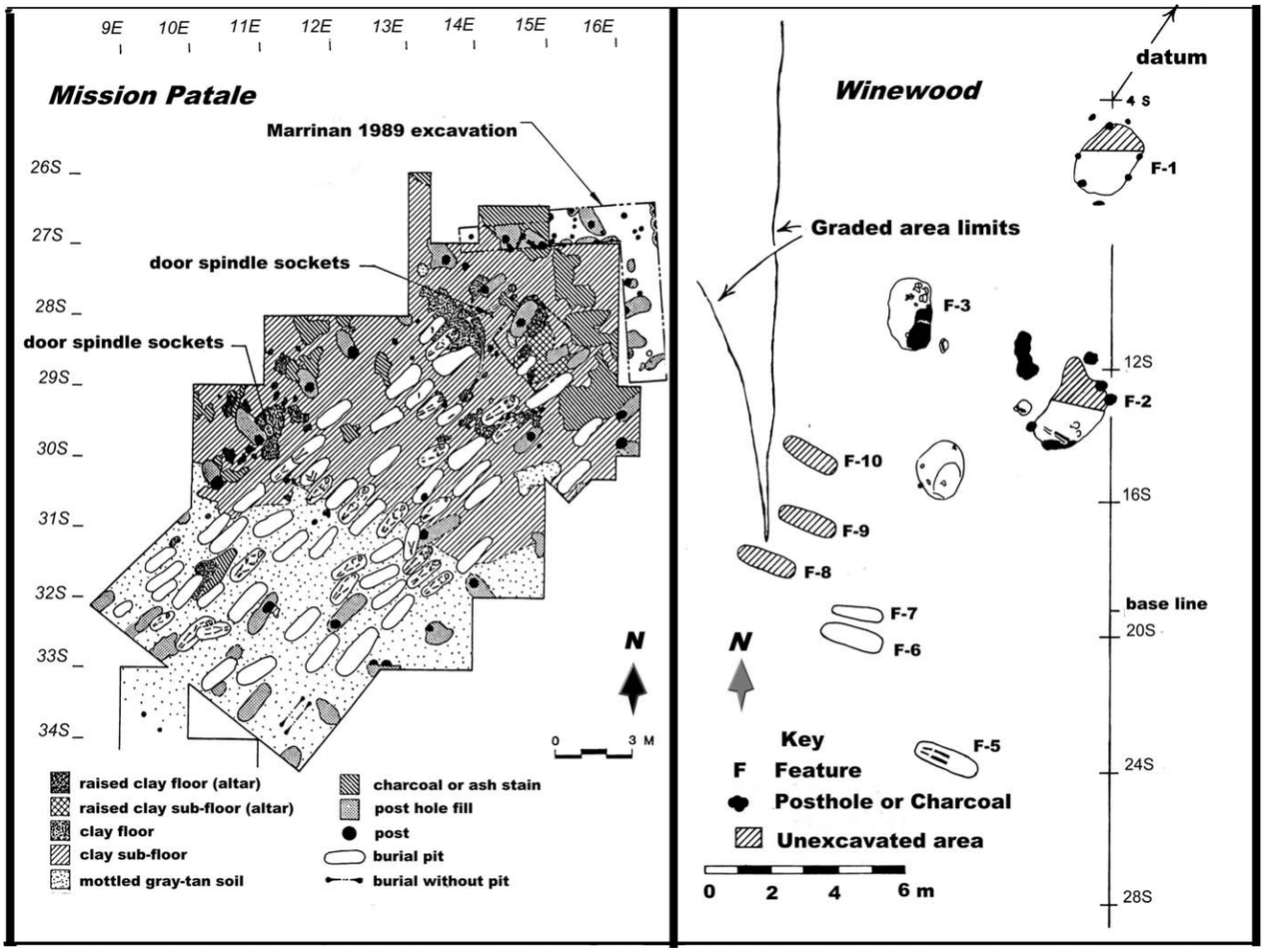

Figure 13. Burial patterns at Winewood and Mission Patale sites (adapted from Jones and Penman 1973; Jones et al. 1991).

Similarly, it is unknown if Lake Jackson represents a residential and sacred place limited to the elite of society and their retainers, or if it is a ritual precinct–home to religious functionaries who cared for the dead and oversaw the site. We do not know whether these people feared their dead, lived with their dead beneath their houses, associated the important dead as unthreatening or the basis of legitimacy, and built their elite dwellings or ritual structures upon them. We also do not know what steps were required in the mortuary process (Hutchinson and Aragon 2002) because our information is very limited.

From Jones's salvage excavation at Lake Jackson, we have insights about burial pattern: it is not typical of most Mississippian patterns of interment. One of the unusual aspects is the burial of SECC copper breastplates with mature women. Two women clearly have been identified and a third is equivocal (Storey 1993). Storey opts (2005) for male but says that Hutchinson and Larsen identified it as female. If this third individual is female, all of the breastplates with complex raptor iconography recovered in Mound 3 at Lake Jackson are associated with adult women. Males do have associated copper plates, but only one was buried with a plate in the shape of a raptor. We might be moved to argue that these women were chiefs (Trocolli 2002:178), but it could also mean that they were clan leaders. Given that all of the breastplates are heirloom items–as attested by mends and joining of unrelated fragments–we might contend that their leadership roles continued after death or that ''retirement'' of these cultural symbols at the death of a senior woman was appropriate in a matrilineal society. Because we have no indication of other burial spaces at Lake Jackson, we cannot comment on discrete cemeteries adjacent to mounds or burial beneath house floors as has been commonly seen at other Mississippian-affiliated sites (e.g., Moundville, Etowah, and Spiro). As our interest in gendered social and political roles has expanded to include Mississippian mortuary practices, several archaeologists have warned that our interpretations often reflect Eurocentric expectations of leadership but that there are other ''emic'' realities that should be considered (Klein 1995; Pate 2004; Trocolli

1999, 2002; White 1999:329–35). Sullivan's (2001, 2006) recent studies of male and female burial patterns in Tennessee also suggests different social roles based on spatial arrangement. Fort Walton may end up being distinctive also because of its evidence of high-status women, perhaps because of Florida's proximity to the Caribbean area, which had many women chiefs (Troccoli 2002:179–80).

In 1990, Jones (1990:85) observed that the late Fort Walton period mortuary population included 24 burials from Lake Jackson (25 are indicated in Jones 1994:125), eight from the Borrow Pit site, and 10 from the Winewood site. With the exception of one burial, the cremation of a 35- to 39-year-old male at Lake Jackson (Burial 12), the remainder of the burials are inhumations. Although the burial recovery at Lake Jackson was complicated by broadscale fill removal by the owner's heavy machinery, Jones (1982:11) indicated that nine burials were fully extended and the remaining 14 flexed or semiflexed. Nine burials were associated with cane matting and poles that may have been part of litters (Jones 1982). At the Borrow Pit site, all burials were made through a clay house floor and were flexed. At Winewood, no mound nor structure was identified by Jones. The mortuary pattern at Winewood is complicated by the fact that all of the pit features that contained fragmentary human remains were not completely excavated and several of the presumed grave features were not investigated. The ceramic component (Jones and Penman 1973) is very similar to that recovered from the midden lying beneath the church at Mission Patale, which apparently dates from the earliest days of missionization (ca. 1633–1647; Jones, Hann, and Scarry 1991; Marrinan 1991, 1993). It is also similar to the assemblage from the Olive Jar site, an historic Apalachee homestead located near the O'Connell Mission site (8Le157) (Williams et al. 1992). Jones (ca. 1974a) also noted the similarities of the Winewood assemblage to those from the Borrow Pit site and the Markley/Sharer Road site.

At Lake Jackson, there is no clear evidence among the Mound 3 burials of trophy skulls or secondary burial. The question of retainer sacrifice cannot be definitively answered because of the salvage conditions under which Jones worked. It is difficult to understand if there are associations of burials, particularly among the upper level burials (Jones 1982:10–11). Among the burials recovered from Mound 3, a single male interment has been identified as a young male (Burial 14), seven to eight years of age. Given the poor preservation of skeletal remains in Mound 3, the presence of infants cannot be addressed.

Our data on structures are limited. There is no evidence of a palisade at Lake Jackson given the limitations of previous excavations. Palisades were a feature of many Mississippian sites, but we have no real evidence for them in the Red Hills area during late prehistoric times. Velda (Scarry 1995) has the most complete data on domestic structures, but most of the other data cited as evidence of structures (e.g., Scarry and McEwan 1995) are fragmentary, only partially excavated lines of posts interpreted as structures, but truly equivocal until, or unless, fully exposed.

Just as we do not have a grasp of the cultural developments of Early Fort Walton, we also lack a clear understanding of the end of Fort Walton. Migration theories once accounted for the demise of the ''Lake Jackson chiefdom.'' The prevailing explanation for the ''abandonment'' of the Lake Jackson site was that an influx of Middle Georgia Lamar people occurred in the late prehistoric period and destabilized the Lake Jackson chiefdom, causing the cessation of mound building in the area. The evidence for this scenario noted by local archaeologists has been (1) the presence of Lamar Complicated-Stamped ceramics in the area indicated the movement of people from central Georgia, (2) the absence of any mention of mounds in the Cabeza de Vaca and de Soto *entrada* narratives, and (3) the absence of Spanish materials at the Lake Jackson site. This point of view is best expressed by Shapiro (1987:2–5) and Tesar (1980:161–163).

The Lamar Problem. Lamar ceramics, using the definitions of Jennings and Fairbanks (1939), are grit tempered with varieties of complicated stamping and incision as surface decoration. In the Red Hills area, late complicated-stamped ceramics are predominately grog tempered, but sand, grit, and grit-and-grog tempering are also present. Complicated-stamped patterns are a relatively few simple motifs of parallel curvilinear and/or rectilinear lines sometimes enclosing a central boss, herringbone elements, or combined circular and triangular elements (Scarry 1985). We do not see the variety of stamping patterns that Wauchope (1966:82) reported for northern Georgia, for example.

When does complicated stamping occur in the Red Hills? During the Woodland period, a strong cultural tradition of complicated stamping is seen in sites with Swift Creek components. In late Weeden Island, complicated stamping declines. One source of information about the reappearance of complicated stamping may be the Martin (De Soto) Archaeological Site (8Le853B). Identified in 1987, it is the putative location of Anhaica, the major town of Apalachee in the early sixteenth century. This site makes the best claim to be the winter encampment of the de Soto expedition based on the recovery of early-sixteenth-century coins, early style olive jars, chain mail, and crossbow quarrels (Ewen and Hann 1998). Because the site has produced evidence of late prehistoric, contact, Mission, and Seminole period occupations, we must be careful in our use of the data. In the Tallahassee Red Hills area, antebellum and postbellum plowing, and post–World

War II mechanized agriculture, have seriously affected the upper level soils. On most sites, there is a substantial plowzone with very mixed materials. By excluding upper level materials and using only the data from within features lying beneath the plowzone, we can avoid mixed contexts so common in the area.

On the basis of their contents and interpretation (Ewen and Hann 1998), there are several features at the Martin (De Soto) site that appear to be directly associated with the Spanish entrada. The best example is Feature 96, a large borrow pit, ostensibly dug to remove clay for construction needs. Its contents include Fort Walton Incised and Leon Check-Stamped types (Ewen and Hann 1998:Table 5.1). Several other features are suggestive of what late Fort Walton assemblages contain, but their contents are not detailed by Ewen and Hann (1998). These are Feature 52 (a rectangular pit interpreted to be a ''cooking pit''), Feature 184 (a ''cistern''), and Feature 131 (a human burial). For the latter features, artifacts reported from their fill include Fort Walton Incised and Carrabelle Punctated, but no quantification is provided (Ewen and Hann 1998:66–72). All of these features contained both Fort Walton ceramics and Spanish materials. Complicated-stamped ceramics are not listed in any of these features but are included in a general count of decorated ceramics from the site (Ewan 1989:Table 6.2): by count 82 sherds (0.2 percent) and by weight 792.4 gm (0.3 percent). The absence of complicated-stamped ceramics from undisputed sixteenth-century protohistoric contexts supports the inference that they occur after de Soto, as suggested by the data so far from the Apalachicola Valley area.

The Winewood site seems to represent either a multicomponent site with a very early mission-related component or a late prehistoric Fort Walton site that became a mission. The absence of complicated-stamped ceramics supports Jones and Penman's (1973) late Fort Walton assignment. The Olive Jar site, having clear Mission period European-derived ceramics, also had Late Fort Walton ceramics as the dominant indigenous component (Williams et al. 1992:19). Fully 84 percent of the ceramics recovered were classified as Lake Jackson Plain. Stamped pottery of all types contributed 10.3 percent. Complicated-stamped ceramics are present at Mission Patale, particularly around what is thought to be a mission-related elite residential structure (Heide 1999). In sum, just as in the Apalachicola Valley, a pure Fort Walton component without any complicated-stamped or other Lamar ceramics may characterize the earliest missions.

It is safe to say that de Soto ranged throughout the Southeast without much mention of mounds in the Spanish narratives, but that later French explorers saw and reported such behavior. It is not clear that mound building or mound use had ceased by the time of de Soto's arrival in the area. The later scope and function of the Lake Jackson site and its relationship, if any, to Anhaica in 1539 is unknown. The range of standard deviations in radiocarbon dates from Mound 3 at Lake Jackson (Table 4) suggests that the site may have been used into the early sixteenth century.

The absence of sixteenth-century Spanish materials at the Lake Jackson site is interesting, but Spanish material culture attributable to the seventeenth century has been recovered away from the central mound area (Jones 1992; Lozowski 1991; Terzis and Smith 1990). Given such limited investigation at the site and the conditions under which the Mound 3 salvage was conducted, the issue of contact materials at this site must be considered unsettled.

There are other types of problems with the Fort Walton database in the Red Hills area, for example, the settlement pattern is not known. Ceramic change, which usually provides an indication of temporal affiliation, is not very helpful because there does not seem to be a great deal of change in styles through time. Bryne's (1986:57–59) study of the area around Mission Patale, using a controlled shovel-testing strategy to determine site size, proposed a four-tiered settlement pattern: town, village, hamlet, and farmstead based on subsurface testing to determine site size. Smith and Scarry (1988), using available survey data and Florida Master Site File data have modeled the relationships among numbers of sites of various time periods, site size, and population. Both of these are interesting proposals, but settlement studies suffer from the lack of tight chronological controls. The number and scale of sites on the landscape does suggest a dispersed model of land use during the Fort Walton priod, probably based on traditional use rights invested in matrilineal clans. The frequency with which a farmstead was moved is also unknown.

Radiocarbon dates from the Lake Jackson site suggest that the site was used over a period of several centuries (Jones 1982). Radiocarbon dates from the Tallahassee area classified as Fort Walton (Mississippi) or Protohistoric are very few and most are from the Lake Jackson site (Table 4). Carbon samples derived from posts consistently date earlier than the basal and uppermost dates for the mound. This discrepancy was not addressed by Jones or Payne. In Florida, it is difficult to conceive that wood might be curated for a century or more before use. However, the fluctuating water levels in Lake Jackson may account for the radiocarbon anomalies. During periods of low water, it would be possible to salvage fallen trees exposed in the lake bed (Hughes 1967). We suggest that salvage of wood during episodes of lake draining or low water cycles may account for the presence of posts in mounds that date considerably earlier than the construction activities with which they are associated.

Thus we can say that the database on Fort Walton Mississippi in the Tallahassee Red Hills is truly meager, but that reality has not curtailed interpretation of the ''Lake Jackson chiefdom,'' discussions of ''polities,'' and generation of models of Fort Walton society. And those representations have become ever more derived and complex. Whether early Fort Walton is underrepresented in the Red Hills is not clear and certainly will require radiocarbon-dated sites and contexts. Until we have these data, it simply is not reasonable to say that early Fort Walton is absent in the Red Hills and propose its arrival from the Apalachicola River Valley. We must demonstrate it.

Concern about the state of our knowledge of prehistoric Fort Walton development stems from the fact that the presentation of people called ''Apalachees'' during the Mission period has been based on an assumption of direct lineal relatedness between or from prehistoric and historic peoples. That is, the people who met Narváez in 1528 and de Soto in 1539 in Apalache are considered to be the same as the Apalachees who petitioned for missionaries in 1608 and 1612, and the same as those who constituted the mission congregations formed in Apalache after 1633 and destroyed in 1704. Significant changes may have occurred *before* the Narváez and de Soto entradas, *and* as a result of them. From the first appearance of Europeans in the Caribbean basin to the Narváez entrada in the Tallahassee Red Hills, instances of undocumented contact from coastal exploration or slaving raids are a possibility and their impact unknown. Almost a century passed between the de Soto entrada and the establishment of the first missions in the area (1540 to 1633). During that time, there was little contact with the indigenous people of the area and a dearth of ethnohistoric information about their social and political life, their material culture, and their settlement patterns. There is also little archaeological information to illuminate this period.

The people of the Red Hills and the Apalachicola River Valley were clearly part of the Mississippian sphere. They had platform mounds, extensive maize agriculture, SECC-associated artifacts, pottery made in Mississippian forms (albeit with different tempers), and at Contact had a reputation for defense of their homelands against the Spaniards that suggests hierarchical ranking. However, some researchers have imported models that may work well in the Mississippi Alluvial Valley or Moundville and imposed them here, without using fundamental knowledge developed from careful archaeological investigation.

Discussion

We admit that modeling Fort Walton is difficult because the information is meager, and an adequate archaeological database is sorely needed. Survey, particularly of the area between the Apalachicola drainage and the Red Hills, is a conspicuous need. Site-specific data and, where possible, stratigraphic recovery anchored by radiocarbon dating are critical. If there are sites of the Early Fort Walton period in this area, we must be able to identify them, date them unequivocally, and use their ceramic components to refine our local ceramic chronology. We also need to verify the presence of early Fort Walton components to test the hypothesis that it arose elsewhere and moved eastward to the Red Hills.

Local features that are not available to other Mississippian populations must be examined; for example, what is the relationship between inland and coastal peoples or, are they the same people seasonally moving? To what extent does maize production figure in the lives of these people in contrast to other areas? More radiocarbon dating is needed to provide a foundation for a useable ceramic chronology; researchers should also remember that dating mound fill materials is inadvisable since mounds are built when people scrape up earlier, deeper soils and pile them on top. Similarly, using mound fill ceramics to establish a seriation is equally suspect. The ceramic type-variety system proposed by Scarry in 1985 has been applied, but never tested. It is not based on chronometric dates, or at best, only selectively so. Furthermore, it does not include some of the attributes that made the types unique–the reason we establish typologies. The presence of several components in sites and the degree of agriculturally induced mixing does not make our task easy. Neither does the fact that so much of the information is in unpublished papers or lab notes. Perhaps we must begin again with quantitative data, careful excavation, radiocarbon dates, and a commitment to revisit early ceramic chronologies (e.g., Smith 1948). So far, one attempt at an internal Fort Walton ceramic chronology has documented an increase in design varieties through time in the type Fort Walton Incised (Yuellig 2007). Fine-grained ceramic attribute analysis may be the way to go for establishing varieties within types. As noted in this paper, we also know that Lamar ceramics are clearly a postcontact phenomenon in northwest Florida. For now, we wish to stick with ''early'' or ''late'' as descriptors instead of using phase names.

O'Brien and Dunnell (1998:21) note that we are saddled with a confusing array of phase names in the Southeast. They caution about the construction of hypothesized phases solely based on ceramics and using them as real entities, not the arbitrary constructs they actually are. The Fort Walton phase proliferation is all the more unfortunate because other researchers have used these phases and typologies uncritically as established categories. A recent example of this is

Ewen's (Ewen and Hann 1998:109–113) assertion that Apalachee culture was already in decline at the time of de Soto's appearance, based on the ceramic phase evidence, and thus the results of the Spanish invasion were not so bad.

We can build models, from the bottom up, the way we are supposed to, instead of piling on more hypothetical construction without recognition of the limitations of the extant database. It is easy (and unwise) to criticize others' work and interpretations by pointing out mistakes without suggesting alternatives. We urge going back to the original excavated data to see how they were collected and defined. Establishing a good internal chronology within Fort Walton requires quantifying ceramic change through time and seriating sites that are well dated and from which it is clear exactly what is being dated and with what it is associated. Assumptions about how to recognize complexity must be examined. For example, ranking burials by types and numbers of grave goods (e.g., Payne and Scarry 1998:34) requires justification for choices of artifacts and numbers used and how to gauge relative expense or value of each. Establishing population growth or movements requires going beyond mere survey data of numbers or estimated sizes of sites to establish well-dated sequences of settlement patterns. Associating increasing complexity and nucleation with intensified maize agriculture requires demonstration that this is also the case on the coast as well as inland. Demonstrating craft specialization and regional exchange of prestige goods among nobles requires sourcing of raw materials, location of artifact production sites, and differentiation of exchange networks *within* Fort Walton, say, between coast and interior, from those of Fort Walton groups within the wider Mississippian world. If coastal people are bringing whelk shells or yaupon holly for the Black Drink into the interior (e.g., Payne and Scarry 1998:45) for elite use, they may indeed be facilitating its movement into the greater Southeast, but testable hypotheses are needed to show this.

We are working on the careful (and tedious) detailing of the material evidence and examination of original field notes and other sources. We need site survey and more investigation of mound sites, which in the post-NAGPRA environment may not be easy. Meanwhile, we are comfortable (to a certain degree) with some of the ideas in earlier models that relate Fort Walton to the wider Mississippian world. There is not yet good support for the notion that populations were smaller in the Tallahassee Red Hills than in the Apalachicola Valley, only that they were different, aligned around the many lakes. In the absence of rivers that flowed somewhere, their sociopolitical and economic systems must have required overland trails, more difficult than water travel and transport.

We agree that centers such as Lake Jackson and Pierce represent the southeastern edge of the Mississippian world (e.g., Payne 1994; Payne and Scarry 1998). To a small extent like Spiro at the western edge of the Southeast (e.g., White 2005b:316), these centers contained many SECC items and other exotics that marked their position as players in the system, even though geographically they were removed from the heartland, however that was defined (main Mississippi Valley, Tennessee Valley, other Alabama or Georgia valleys). It may be a lot like having the latest independent art films opening at a big theater in Tallahassee to great fanfare even though the New York premieres were much earlier and fancier. Since the Red Hills area is close to the southeastern edge of good agricultural land, geography and soils may have been the primary determinants of relationships with late prehistoric cultures in the rest of Florida who had some Mississippian trappings, even mounds and tributary chiefdoms (e.g., Ashley 2003; Marquardt 1985; Mitchem 1989; Widmer 1988), but who were probably mostly fishers, hunters, and gatherers.

Meanwhile, we urge caution in accepting interpretations with no solid foundations. It is easy to make fun of academic endeavors involving trendy fads, speculative models, and discussions of power (e.g., Best 2006; Jones 1993:55–57, 65–66), or perspectives and ''citation circles'' that create ''so many article opportunities'' (Jones 1993:103). Given the nature of archaeological interpretation, opinions do evolve over time. But scientific method does not accept explanations as dogma until they are based on well-controlled data and then replicated through testing elsewhere. Fort Walton, and by extension the archaeology of the protohistoric and pre-Mission Apalachees, are extremely overdeveloped cultural constructs, given the available data. We can build models from the bottom up, the way we are supposed to. Researchers should not pile on more derived interpretations without recognition of the limitations of the extant database.

Notes

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References Cited

Anonymous
1974 12-Year Old Leads Archaeologist to Significant Find in Tallahassee. *Archives and History News* 5(5):2. Florida Department of State, Tallahassee.

Ashley, Keith H.
2003 Interaction, Population Movement, and Political Economy: The Changing Social Landscapes of Northeast Florida (A.D. 900–1500). Ph.D. diss., Department of Anthropology, University of Florida, Gainesville.
2005 Introducing Shields Mound (8Du12) and the Mill Cove Complex. *Florida Anthropologist* 58:151–173.

Barton, John Timothy
1992 A Reconstruction of Subsistence and Environment at the New Pass Site (8Fr27). Master's thesis, Department of Anthropology, Florida State University.

Beck, Robin A., Jr.
2003 Consolidation and Hierarchy: Chiefdom Variability in the Mississippian Southeast. *American Antiquity* 68: 641–661.

Belovich, Stephanie J., David S. Brose, Russell M. Weisman, and Nancy Marie White
1982 *Archaeological Survey at George W. Andrews Lake and Chattahoochee River*. Cleveland Museum of Natural History Archaeological Report No. 37.

Best, Joel
2006 From Fad to Worse. *Chronicle of Higher Education* 52(32): B6.

Bierce-Gedris, Katharine
1981 Apalachee Hill: The Archaeological Investigation of an Indian Site of the Spanish Mission Period in Northwest Florida. Master's thesis, Department of Anthropology, Florida State University, Tallahassee.

Blitz, John H., and Patrick Livingood
2004 Sociopolitical Implications of Mississippian Mound Volume. *American Antiquity* 69:291–301.

Blitz, John H., and Karl G. Lorenz
2002 The Early Mississippian Frontier in the Lower Chattahoochee–Apalachicola River Valley. *Southeastern Archaeology* 21:117–135.
2006 *The Chattahoochee Chiefdoms*. University of Alabama Press, Tuscaloosa.

Boyd, Mark F.
1939 Mission Sites in Florida. *Florida Historical Quarterly* 17(4):255–280.
1958 *Historic Sites in and Around the Jim Woodruff Reservoir Area, Florida-Georgia*. River Basin Surveys Papers, No. 13. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

Brose, David S.
1975 Case Western Reserve University Contributions to the Archaeological Investigation of Two Early Fort Walton Sites in the Apalachicola River Valley, Northwest Florida,1973. Ms. on file, Cleveland Museum of Natural History and Case Western Reserve University.
1984 Mississippian Period Cultures in Northwestern Florida. In *Perspectives on Gulf Coast Prehistory*, edited by Dave D. Davis, pp. 165–197. University Press of Florida, Gainesville.
1990 Apalachee Impostors. Paper presented at the annual meeting of the Southeastern Archaeological Conference, Mobile.

Brose, David S., and George W. Percy
1978 Fort Walton Settlement Patterns. In *Mississippian Settlement Patterns*, edited by Bruce D. Smith, pp. 81–108. Academic Press, New York.

Brown, Ian W. (editor)
2003 *Bottle Creek: A Pensacola Culture Site in South Alabama*. University of Alabama Press, Tuscaloosa.

Bryne, Stephen C.
1986 Apalachee Settlement Patterns. Master's thesis, Department of Anthropology, Florida State University, Tallahassee.

Bullen, Ripley P.
1949 Indian Sites at Florida Caverns State Park. *Florida Anthropologist* 2:1–9.
1958 Six Sites Near the Chattahoochee River in the Jim Woodruff Reservoir Area, Florida. In *River Basin Survey Papers*, edited by Frank H. Roberts, Jr., pp. 315–376. Bureau of American Ethnology Bulletin 169. Smithsonian Institution, Washington, D.C.

Butler, Brian M.and Paul D. Welch (editors)
2006 *Leadership and Polity in Mississippian Society*. Center for Archaeological Investigations, Occasional Paper No. 33. Southern Illinois University, Carbondale.

Cobb, Charles R.
2003 Mississippian Chiefdoms: How Complex? *Annual Review of Anthropology* 32:63–84.

Cologne Radiocarbon
2006 CalPal (radiocarbon date calibration program). Cologne Radiocarbon Calibration and Paleoclimate Research Package. Online at http://www.calpal-online.de/index.html. Accessed July 2006.

Davis, Dave D.
1984 Protohistoric Cultural Interaction along the Northern Gulf Coast. In *Perspectives on Gulf Coast Prehistory*, edited by Dave D. Davis, pp. 216–231. University Presses of Florida, Gainesville.

Drooker, Penelope B.
1998 Letter of 22 May 1998 to James J. Miller Regarding Fabric Remains from the Lake Jackson Site. Ms. on file, Bureau of Archaeological Research, Division of Historical Resources, Florida Department of State, Tallahassee.

Ewen, Charles R.
1989 The Search for Hernando de Soto's First Winter Camp: Excavations at the Martin Site. 3rd Draft, November 6, 1989. Ms. on file, Bureau of Archaeological Research, Division of Historical Resources, Florida Department of State, Tallahassee.

Ewen, Charles R., and John H. Hann
1998 *Hernando De Soto Among the Apalachee: The Archaeology of the First Winter Encampment*. University Press of Florida, Gainesville.

Faught, Michael K.
2004 The Underwater Archaeology of Paleolandscapes, Apalachee Bay, Florida. *American Antiquity* 69:275–289.

Florida Department of State
2007 Letchworth Mounds: State Archaeological Park Research Project. Online at http://www.flheritage.com/archaeology/projects/letchworth. Accessed March 2007.

Fryman, Frank B., Jr.
1969 Lake Jackson Site (8Le1). Unpublished field notes on file, Florida Bureau of Archaeological Research, Division of Historical Resources, Tallahassee, Florida.
1971 Tallahassee's Prehistoric Political Center. *Archives and History News* 2(3):2–4.
Galloway, Patricia (editor)
1989 *The Southeastern Ceremonial Complex: Artifacts and Analysis. The Cottonlandia Conference*. University of Nebraska Press, Lincoln.
Gardner, William M.
1966 The Waddells Mill Pond Site. *Florida Anthropologist* 19: 43–64.
1971 Ft. Walton in Inland Florida. *Southeastern Archaeological Conference Newsletter* 10(2):48–50.
Griffin, John W.
1950 Test Excavations at the Lake Jackson Site. *American Antiquity* 16:99–112.
1985 Comments. *Florida Anthropologist* 38:234–245.
Griffin, John W., and Ripley P. Bullen
1950 *The Safety Harbor Site, Pinellas County, Florida*. Florida Anthropological Society Publication No. 2. Gainesville.
Harper, Cassandra Rae
2005 Middle Woodland Ceramics and Domestic Sites in the Apalachicola Valley, Northwest Florida. Paper presented at the annual meeting of the Southeastern Archaeological Conference, Columbia, SC.
Heide, Gregory M.
1999 Archaeological Analysis and Interpretation of the Northeast Yard of the Patale Mission Site (8Le152). Master's thesis, Department of Anthropology, Florida State University, Tallahassee.
Hendry, Charles W., Jr., and Charles R. Sproul
1966 Geology and Ground-Water Resources of Leon County, Florida. Florida Geological Survey Bulletin 47. Tallahassee, Florida.
Hill, Louis
n.d. Mound 6 Excavations at the Lake Jackson Site. Unpublished field notes on file, Bureau of Archaeological Research, Tallahassee, Florida.
Hughes, Gilbert H.
1967 Analysis of the Water-Level Fluctuations of Lake Jackson near Tallahassee, Florida. State Board of Conservation, Division of Geology, Report of Investigations No. 48. Tallahassee, Florida.
Hutchinson, Dale L., and Lorraine V. Aragon
2002 Collective Burials and Community Memories: Interpreting the Placement of the Dead in the Southeastern and Mid-Atlantic United States with Reference to Ethnographic Cases from Indonesia. In *Space and Place of Death*, edited by Helaine Silverman, David B. Small, and Lorraine V. Aragon pp. 27–54. Archeological Papers of the American Anthropological Association, No. 11.
Jennings, Jesse D., and Charles H. Fairbanks
1939 Type Descriptions of Pottery. *Newsletter, Southeastern Archaeological Conference* 1(2)
Jones, B. Calvin
ca. 1974a Markley Site (8Le213). Unpublished ceramic notes on file, Bureau of Archaeological Research, Tallahassee, Florida.
ca. 1974b Markley Site (8Le213). Unpublished field map on file, Bureau of Archaeological Research, Tallahassee, Florida.
1982 Southern Cult Manifestations at the Lake Jackson Site, Leon County, Florida: Salvage Excavation of Mound 3. *Midcontinental Journal of Archaeology* 7:3–44.
1990 A Mississippian Collector? *Soto States Anthropologist* 90(2):83–86.
1992 November 1992 Septic Tank Survey at lake Jackson Mounds State Park Archaeological Site, Leon County. Ms. on file, Bureau of Archaeological Research, Florida Department of State, Tallahassee.
1994 The Lake Jackson Mound Complex: Stability and Change in Fort Walton Culture. *Florida Anthropologist* 47:120–146.
Jones, B. Calvin, John H. Hann, and John F. Scarry
1991 *San Pedro y San Pablo de Patale: A Seventeenth-Century Spanish Mission in Leon County, Florida*. Florida Archaeology No. 5. Bureau of Archaeological Research, Division of Historical Resources, Florida Department of State, Tallahassee.
Jones, B. Calvin, and John T. Penman
1973 Winewood: An Inland Ft. Walton Site. Bureau of Historic Sites and Properties, Bulletin No. 3. Division of Archives, History, and Records Management, Florida Department of State, Tallahassee.
Jones, D. J. H.
1993 *Murder at the MLA*. University of Georgia Press, Athens.
Kelly, A. R.
1960 *A Weeden Island Burial Mound in Decatur County, Georgia: The Lake Douglas Mound, 9Dr21*. University of Georgia Laboratory of Archaeology Series, Report No. 1. Athens.
Klein, Laura F.
1995 Mother as Clanswoman: Rank and Gender in Tlingit Society. In *Women and Power in Native North America*, edited by Laura F. Klein and Lillian A. Ackerman, pp. 28–45. University of Oklahoma Press, Norman.
Knight, Vernon J., Jr.
1980 Comments on Brose and Percy's ''Fort Walton Settlement Patterns.'' *Florida Journal of Anthropology* 5:20–25.
1991 Lake Jackson and Speculations on a Demographic Paradox. Paper presented at the 48th annual meeting of the Southeastern Archaeological Conference, Jackson, Mississippi.
Knight, Vernon J., Jr., and Frank T. Schnell
2004 Silence over Kolomoki: A Curious Episode in the History of Southeastern Archaeology. *Southeastern Archaeology* 23:1–11.
Lewis, R. Barryand Charles Stout (editors)
1998 *Mississippian Towns and Sacred Spaces*. University of Alabama Press, Tuscaloosa.
Lozowski, Jennifer
1991 Shovel Testing at the Lake Jackson Site (8Le1) by Museum of Florida History Summer Campers, June 1991. Ms. on file, Museum of Florida History, Tallahassee.
Luer, George M.
1985 Some Comments on Englewood Incised, Safety Harbor Incised, and Scarry's Proposed Ceramic Changes. *Florida Anthropologist* 38:236–239.

Marquardt, William H.
1985 Complexity and Scale in the Study of Fisher-Gatherer-Hunters: An Example from the Eastern United States. In *Prehistoric Hunter-Gatherers: The Emergence of Cultural Complexity*, edited by T. Douglas Price and James A. Brown, pp. 59–98. Academic Press, New York.
Marrinan, Rochelle A.
1991 Archaeological Investigations at Mission Patale, 1984–1991. *Florida Anthropologist* 44:228–254.
1993 Archaeological Investigations at Mission Patale, 1984–1992. In *The Spanish Missions of La Florida*, edited by Bonnie G. McEwan, pp. 244–294. University Press of Florida, Gainesville.
Marrinan, Rochelle A., and Nancy Marie White
1998 Smoke and Mirrors in Modeling Fort Walton Culture, Northwest Florida. Paper presented at the 55th annual meeting of the Southeastern Archaeological Conference, Greenville, SC.
Marsh, Elan Tomkinson
2006 Fort Walton Burial Practices in the Apalachicola River Valley. Senior honors thesis in anthropology, University of South Florida, Tampa.
Mikell, Greg
1990 The Sheephead Bayou Site (8By150): A Single Component Fort Walton Hamlet Site in Northwest Florida. *Florida Anthropologist* 43:198–208.
1994 8WL38: A Protohistoric Village on Choctawhatchee Bay. *Florida Anthropologist* 47:233–268.
Milanich, Jerald T.
1974 Life in a 9th Century Indian Household, a Weeden Island Fall-Winter Site on the Upper Apalachicola River, Florida. *Florida Bureau of Historic Sites and Properties Bulletin* 4:1–44.
1994 *Archaeology of Precolumbian Florida*. University Press of Florida, Gainesville.
Mitchem, Jeffrey M.
1985 Comments on John Scarry's Fort Walton Type-Variety Paper. *Florida Anthropologist* 38:240–241.
1989 Redefining Safety Harbor: Late Prehistoric/Protohistoric Archaeology in West Peninsular Florida. Ph.D. diss., Department of Anthropology, University of Florida, Gainesville.
Moore, Clarence B.
1902 Certain Aboriginal Remains of the Northwest Florida Coast, Part II. *Journal of the Academy of Natural Sciences* 12: 126–355. Philadelphia.
1903 Certain Aboriginal Mounds of the Apalachicola River. *Journal of the Academy of Natural Sciences* 12:444–490. Philadelphia.
1907 Mounds of the Lower Chattahoochee and Lower Flint Rivers. *Journal of the Academy of Natural Sciences* 13:426–56. Philadelphia.
Muller, Jon
1997 *Mississippian Political Economy*. Plenum Press, New York.
Neuman, Robert W.
1961 Domesticated Corn from a Fort Walton Mound Site in Houston County, Alabama. *Florida Anthropologist* 14: 75–80.
O'Brien, Michael J., and Robert C. Dunnell
1998 A Brief Introduction to the Archaeology of the Central Mississippi River Valley. In *Changing Perspectives on the Archaeology of the Central Mississippi Valley*, edited by Michael J. O'Brien and Robert C. Dunnell, pp. 1–30. University of Alabama Press, Tuscaloosa.
Pate, Laura
2004 The Use and Abuse of Ethnographic Analogies in Interpretations of Gender Systems at Cahokia. In *Ungendering Civilization*, edited by K. Anne Pyburn, pp. 71–93. Routledge, New York.
Payne, Claudine
1994 Mississippian Capitals: An Archaeological Investigation of Precolumbian Political Structure. Ph.D. diss., Department of Anthropology, University of Florida, Gainesville.
2002 Architectural Reflections of Power and Authority in Mississippian Towns. In *The Dynamics of Power*, edited by Maria O'Donovan, pp. 188–213. Center for Archaeological Investigations, Occasional Paper No. 30. Southern Illinois University, Carbondale.
2006 The Foundations of Leadership in Mississippian Chiefdoms: Perspectives from Lake Jackson and Upper Nodena. In *Leadership and Polity in Mississippian Society*, edited by Brian M. Butler and Paul D. Welch, pp. 91–111. Center for Archaeological Investigations, Occasional Paper No. 33. Southern Illinois University, Carbondale.
Payne, Claudine, and John F. Scarry
1990 Apalachee Prehistory: The Origins and Evolution of the Lake Jackson Phase. Paper presented at the 47th annual meeting of the Southeastern Archaeological Conference, Mobile, AL.
1998 Town Structure at the Edge of the Mississippian World. In *Mississippian Towns and Sacred Spaces: Searching for an Architectural Grammar*, edited by R. Barry Lewis and Charles B. Stout, pp. 22–48. University of Alabama Press, Tuscaloosa.
Penton, Daniel T.
1968 Lake Jackson Site (8Le1). Ms. on file, Bureau of Archaeological Research, Florida Department of State, Tallahassee.
Rodriguez, Nelson David
2004 The Contact/Mission Period and Depopulation in the Apalachicola River Valley, Northwest Florida. Master's thesis, Department of Anthropology, University of South Florida, Tampa.
Scarry, C. Margaret
2003 Food Plant Remains from Excavations in Mounds A, B, C, D, and L at Bottle Creek. In *Bottle Creek: A Pensacola Culture Site in South Alabama*, edited by Ian W. Brown, pp. 114–129. University of Alabama Press, Tuscaloosa.
Scarry, John F.
1984 Fort Walton Development: Mississippian Chiefdoms in the Lower Southeast. Ph.D. diss., Department of Anthropology, Case Western Reserve University, Cleveland. University Microfilms International, Ann Arbor.
1985 A Proposed Revision of the Fort Walton Ceramic Typology: A Type-Variety System. *Florida Anthropologist* 38:199–233.
1990 Mississippian Emergence in the Fort Walton Area: The Evolution of the Cayson and Lake Jackson Phases. In *The Mississippian Emergence*, edited by Bruce D. Smith,

pp. 227–250. Smithsonian Institution Press, Washington, D.C.

1994 The Apalachee Chiefdom: A Mississippian Society on the Fringe of the Mississippian World. In *The Forgotten Centuries. Indians and Europeans in the American South, 1521–1704*, edited by Charles M. Hudson and C. Chaves Tesser, pp. 156–178. University of Georgia Press, Athens.

1995 Apalachee Homesteads: The Basal Social and Economic Units of a Mississippian Chiefdom. In *Mississippian Communities and Households*, edited by J. Daniel Rogers and Bruce D. Smith, pp. 201–223. University of Alabama Press, Tuscaloosa.

1996a Stability and Change in the Apalachee Chiefdom. In *Political Structure and Change In the Prehistoric Southeastern United States*, edited by John Scarry, pp. 192–227. University Press of Florida, Gainesville.

1999 How Great were the Southeastern Polities? In *Great Towns and Regional Polities in the American Southwest and Southeast*, edited by Jill E. Neitzel, pp. 59–74. Amerind Foundation, Dragoon, AZ.

Scarry, John F. (editor)

1996b *Political Structure and Change in the Prehistoric Southeastern United States*. University Press of Florida, Gainesville.

Scarry, John F., and Bonnie G. McEwan

1995 Domestic Architecture in Apalachee Province: Apalachee and Spanish Residential Styles in the Late Prehistoric and Early Historic Period Southeast. *American Antiquity* 60:482–495.

Scarry, John F., and Claudine Payne

1986 Mississippian Polities in the Fort Walton Area: A Model Generated from the Renfrew-Level XTENT Algorithm. *Southeastern Archaeology* 5:79–90.

Schnell, Frank T., Vernon J. Knight, and Gail S. Schnell

1981 *Cemochechobee: Archaeology of a Mississippian Ceremonial Center on the Chattahoochee River*. University Press of Florida, Gainesville.

Sears, William H.

1977 Prehistoric Culture Areas and Culture Change on the Gulf Coastal Plain. In *For the Director: Research Essays in Honor of James B. Griffin*, edited by Charles E. Cleland. pp. 152–184. Museum of Anthropology, University of Michigan, Anthropological Papers No. 61. Ann Arbor.

Shapiro, Gary

1987 *Archaeology at San Luis: Broad-Scale Testing, 1984–1985*. Florida Archaeology No. 3. Bureau of Archaeological Research, Florida Department of State, Tallahassee.

Shapiro, Gary, and Bonnie G. McEwan

1992 *Archaeology at San Luis, Part I: The Apalachee Council House*. Florida Archaeology No. 6. Bureau of Archaeological Research, Division of Historical Resources, Florida Department of State, Tallahassee.

Simpson, Terrance L.

1996 Prehistoric Settlement Patterns in the Apalachicola River Valley: A GIS (Geographic Information System) Approach. Master's thesis, Department of Anthropology, University of South Florida, Tampa.

Smith, Hale G.

1948 Two Historical Archaeological Periods in Florida. *American Antiquity* 13:313–319.

1956 *The European and the Indian*. Florida Anthropological Society Publications No. 4.

Smith, Marion, and John F. Scarry

1988 Apalachee Settlement Distribution: The View from the Florida Master Site File. *Florida Anthropologist* 41:351–364.

Storey, Rebecca

1993 Catalog of the Lake Jackson Mound 3 Skeletons. Ms. on file, Bureau of Archaeological Research, Division of Historical Resources, Florida Department of State, Tallahassee.

2005 Notes on Lake Jackson Pathologies. Copy of email correspondence between Rebecca Storey and David A. Klingle, Department of Anthropology, Florida State University, Tallahassee.

Sullivan, Lynne P.

2001 Those Men in the Mounds: Gender, Politics, and Mortuary Practices in Late Prehistoric Eastern Tennessee. In *Archaeological Studies of Gender in the Southeastern United States*, edited by Jane M. Eastman and Christopher B. Rodning, pp. 101–126. University Press of Florida, Gainesville.

2006 Gendered Contexts of Mississippian Leadership in Southern Appalachia. In *Leadership and Polity in Mississippian Society*, edited by Brian M. Butler and Paul D. Welch, pp. 264–285. Center for Archaeological Investigations, Occasional Paper No. 33. Southern Illinois University, Carbondale.

Terzis, Lee A., and K. C. Smith

1990 Shovel Testing at the Lake Jackson Mounds Site (8Le1) by Museum of Natural History Summer Campers, July 1990. Ms. on file, Museum of Florida History, Florida Department of State, Tallahassee.

Tesar, Louis Daniel

1980 *The Leon County Bicentennial Survey Report: An Archaeological Survey of Selected Portions of Leon County, Florida*. Miscellaneous Project Report Series No. 49. Division of Archives, History, and Records Management, Florida Department of State, Tallahassee.

2006 The Waddells Mill Pond Site (8Ja65) Revisited: The Results of B. Calvin Jones' 1973–74 Investigation. Paper presented at the annual meeting of the Florida Anthropological Society, Stuart.

Thunen, Robert L.

2005 Grant Mound: Past and Present. *Florida Anthropologist* 58:255–263.

Trocolli, Ruth

1999 Women Leaders in Native North American Societies: Invisible Women of Power. In *Manifesting Power: Gender and Interpretation of Power in Archaeology*, edited by Tracy L. Sweely, pp. 49–61. Routledge, London.

2002 Mississippian Chiefs: Women and Men of Power. In *The Dynamics of Power*, edited by Maria O'Donovan, pp. 168–187. Center for Archaeological Investigations, Occasional Paper No. 30. Southern Illinois University, Carbondale.

Wauchope, Robert

1966 *Archaeological Survey of Northern Georgia, with a Test of Some Cultural Hypotheses*. Memoirs of the Society for American Archaeology No. 21.

Wheeler, Ryan

2001 Williams Island Shell Gorgets from Florida. *Florida Anthropologist* 54:67–74.

White, Nancy Marie
1981 *Archaeological Survey at Lake Seminole*. Cleveland Museum of Natural History Archaeological Research Report No. 29.
1982 The Curlee Site (8Ja7) and Fort Walton Development in the Upper Apalachicola–Lower Chattahoochee Valley, Florida, Georgia, Alabama. Ph.D. diss., Department of Anthropology, Case Western Reserve University, Cleveland. University Microfilms International, Ann Arbor.
1994 *Archaeological Investigations at Six Sites in the Apalachicola River Valley, Northwest Florida*. National Oceanic and Atmospheric Administration Technical Memorandum NOS SRD 26. Marine and Estuarine Management Division, Washington, D.C.
1996 *Test Excavations at the Yon Mound and Village Site (8Li2), Middle Apalachicola Valley, Northwest Florida.*. Report to the Florida Division of Historical Resources, Tallahassee. Department of Anthropology, University of South Florida, Tampa.
1999 Reflections and Speculations in Putting Women into Southeastern Archaeology. In *Grit- Tempered: Early Women Archaeologists in the Southeastern United States*, edited by Nancy Marie White, Lynne P. Sullivan, and Rochelle A. Marrinan, pp. 315–336. University Press of Florida, Gainesville.
2000 Prehistoric and Protohistoric Fort Walton at Thick Greenbriar Site (8Ja417), Northwest Florida. *Florida Anthropologist* 53:134–152.
2004 Protohistoric and Historic Native Cultures of the Apalachicola Valley, Northwest Florida. Southeastern Archaeological Conference/Midwest Archaeological Conference, St. Louis, October.
2005a *Archaeological Survey of the St. Joseph Bay State Buffer Preserve, Gulf County, Florida*. Report to the Apalachicola National Estuarine Research Reserve, East Point, and the Division of Historical Resources, Tallahassee. Department of Anthropology, University of South Florida, Tampa.
White, Nancy Marie (editor)
2005b *Gulf Coast Archaeology: The Southeastern United States and Mexico*. University Press of Florida, Gainesville.
White, Nancy Marie, Joe Knetsch, and B. Calvin Jones
2000 Archaeology, History, Fluvial Geomorphology, and the Mystery Mounds of Northwest Florida. *Southeastern Archaeology* 18:142–56.
White, Nancy Marie, Nelson D. Rodriguez, Christopher Smith, and Mary Beth Fitts
2002 *St. Joseph Bay Shell Middens Test Excavations, Gulf County, Florida, 2000–2002*. Report to the Department of State, Division of Historical Resources, Tallahassee. Department of Anthropology.
White, Nancy Marie, Terrance Simpson, Lee Hutchinson, and Michael McDaniel
1991 Public Archaeology and Middle Woodland Research in the Middle Apalachicola Valley, Northwest Florida. Paper presented at the annual meeting of the Florida Anthropological Society, Pensacola.
Widmer, Randolph J.
1988 *The Evolution of the Calusa: A Nonagricultural Chiefdom on the Southwest Florida Coast*. University of Alabama Press, Tuscaloosa.
Willey, Gordon R.
1949 *Archaeology of the Florida Gulf Coast*. Smithsonian Miscellaneous Collections 115. Washington, D.C. Reprinted by University Press of Florida, Gainesville, 1998.
Willey, Gordon R., and R. B. Woodbury
1942 A Chronological Outline for the Northwest Florida Coast. *American Antiquity* 7:232–254.
Williams, Mark, B. Calvin Jones, and Jennifer Lozowski
1992 *Archaeological Excavations at the Olive Jar Site (8Le112), Leon County, Florida*. Florida Archaeological Reports, No. 17. Bureau of Archaeological Research, Division of Historical Resources, Florida Department of State, Tallahassee.
Yuellig, Amber J.
2007 Fort Walton Ceramics in the Perry Collection, Apalachicola Valley, Northwest Florida. Master's thesis, Department of Anthropology, University of South Florida, Tampa.