PALEO-INDIAN THROUGH PROTOHISTORIC ON ST. VINCENT ISLAND, NORTHWEST FLORIDA

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Recent archaeological research on St. Vincent Island, a National Wildlife Refuge (NWR) and northwest Florida's largest barrier island (Figures 1, 2), has documented an extensive material record dating from Paleo-Indian through protohistoric times. Field survey, limited testing, and archival and collections research now permit a comprehensive examination of the human habitation and long-term use of the island. The data alter existing interpretations of settlement patterns and other reconstructions of past native life in this region for some time periods.

Environmental Setting

St. Vincent is the closest barrier island to the mainland in the Apalachicola delta region. Indian Pass, at its northwest end, named after the highly visible archaeological record on both sides of it, is only 500 m wide. At the southeast end, the island is separated from the west end of Little St. George Island by West Pass, which is less than 1 km wide. St. Vincent Sound, the arm of Apalachicola Bay that separates the island from the mainland, is less than two meters deep in most places (Twichell et al. 2007).

St. Vincent differs from the other barrier islands in that it is triangular and wide, not long and thin, 14 km east-west at the north end, and a maximum 6 km north-south. Its ridge-and-swale topography has dune/beach ridges 1-2 meters high and ca. 30 meters apart (Campbell 1986). Over its 4000-year lifetime, more than 100 ridges formed during the late Holocene (Forrest 2007) as the island began to accrete (Campbell 1986; Stapor and Tanner 1977). Fresh water accumulates in swales, ponds, and small creeks (Edmiston 2008:40). A possible drowned spring might be off the middle-west side of the north shore, under St. Vincent Sound, just west of the Pickalene oyster bar.

Historically, the island had a string of wealthy owners, who used it mostly as a hunting preserve (Hornaday 1909), even importing exotic game animals; large Asian Sambar deer remain today. In 1968 St. Vincent became one of over 500 refuges run by the U.S. Fish and Wildlife Service, with

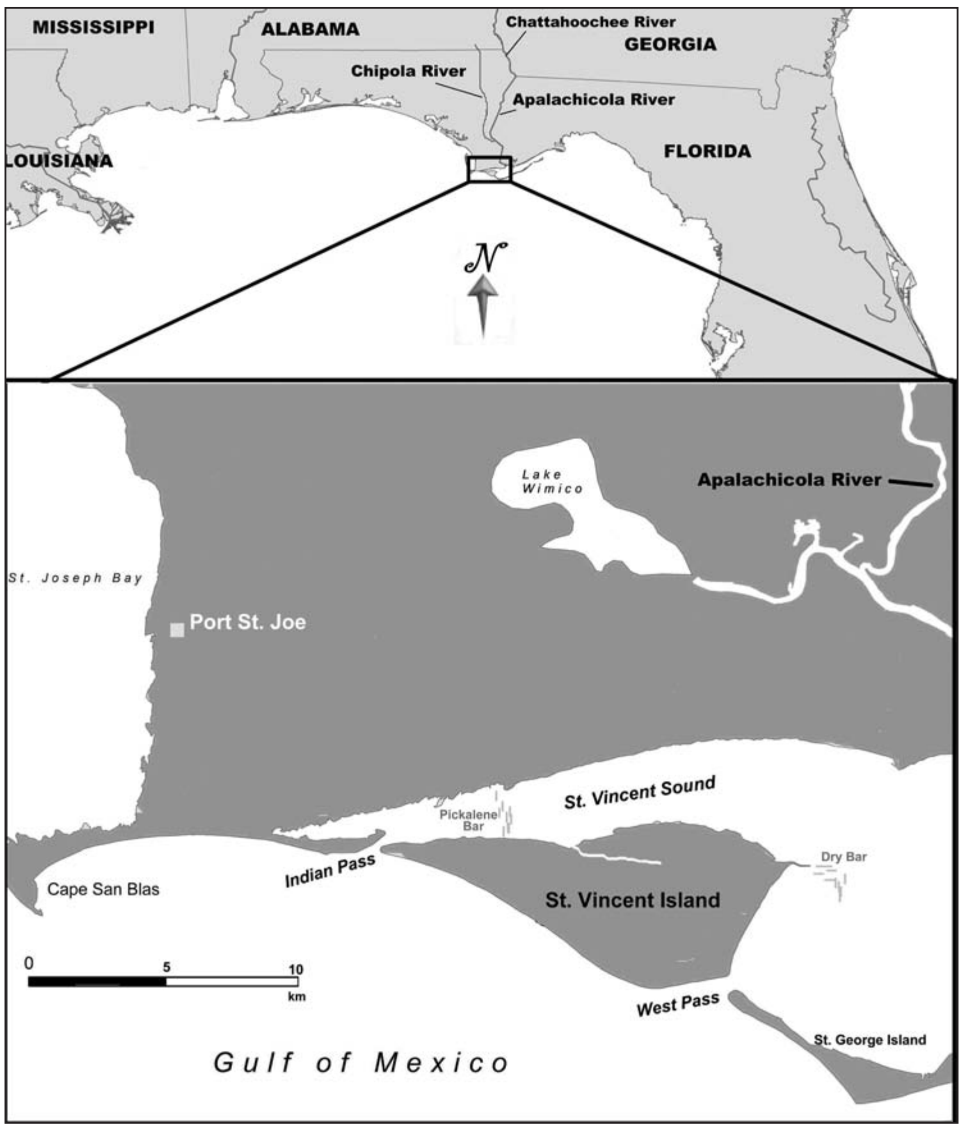
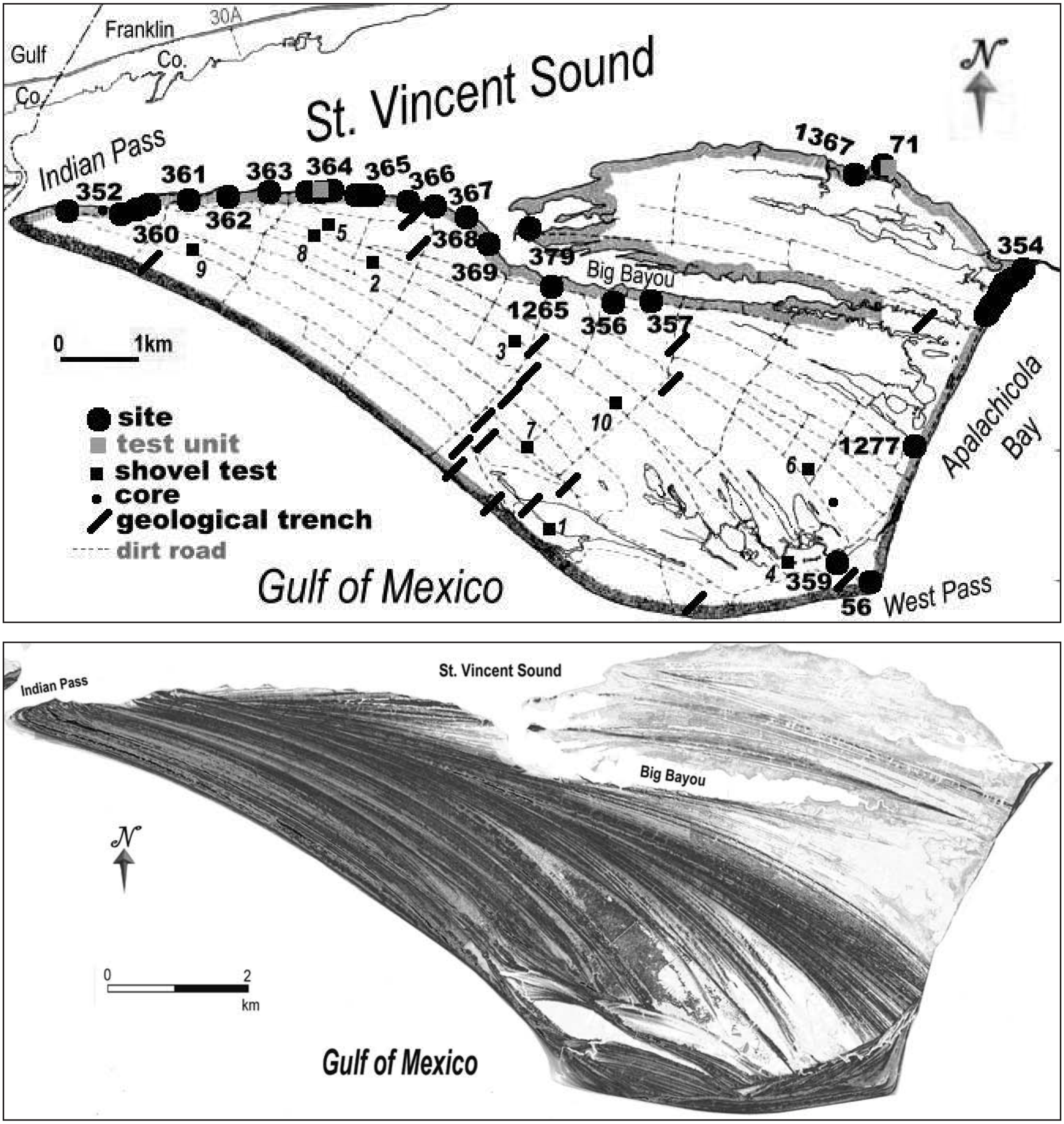


Figure 1. Location of St. Vincent Island in northwest Florida's Apalachicola delta region.



2. St. Vincent Island: (top) map showing sites (prefix "8FR" omitted from site numbers), subsurface tests, and network of dirt roads; (bottom) LiDAR image showing elevation; darker shading indicates higher elevations of ridges, up to 2 m (adapted from White and Kimble 2016:Figure 4, by Jeff Du Vernay).

many habitats managed for wildlife and the visiting public, and 80 miles of dirt roads (Davis and Mokray 2000). Most recreational use of the island is around the main entrance at the northwest point and the west side of the north shore. At the southeast tip are the standing early nineteenth-century house and maintenance structures. Prehistoric shell middens are constantly washing out of the north and east shores.

St. Vincent could be one of the oldest barrier islands in Florida (Stapor and Tanner 1977). The east side of the north shore is the oldest segment, with three major east-southeast-trending ridges (now the lowest at <2 m high) formed in sequence. Sea level research in the Gulf of Mexico has centered on the dating and formation processes of St. Vincent's beach ridges and involves much debate (Thomas 2011 has a good summary). The more recent work has archaeological corroboration (Balsillie and Donoghue 2004; Walker et al. 1995). The youngest ridges, on the western and southern sides, probably date to about 400-500 years ago (Donoghue 1991:77). Stapor and Tanner (1977:35) proposed that, since beach-ridge height is related to wave height, sea level must have been about 1.5 m lower than at present in order to form the oldest beach ridges that are now only one meter high. We collaborated with geologists Frank Stapor and Joe Donoghue to obtain new dates to address questions of sea-level fluctuations. The hypothesis that a sea-level high-stand of approximately .7 m above present occurred at some time between 1300 and 1000 years ago (Balsillie and Donoghue 2004; Donoghue and White 1995:655; Walker et al. 1995) is supported by our work (discussed below).

Our new data suggest that the oldest archaeological materials from the island are Paleo-Indian projectile points, at ca. 13,000 years B.P., deposited by people living there during the Pleistocene when the area was not an island but well inland, and probably riverbank. Fiber-tempered pottery, the oldest ceramics in North America at about 4000+ B.P., observed eroding out of deep peat deposits on the north shore, may have been deposited as the island was forming. The prehistoric cultural evidence comprises an almost continuous shell-midden ridge or strata extending along the western portion of the north shore of the island (and probably once continuous along the eastern portion of the north shore until most washed away), and also about halfway down the east shore, and along the north shore of the Big Bayou inlet.

Storms in the last three to five decades have washed away much of the archaeological deposits and have redeposited shell-midden material, sometimes making it hard to tell what is original midden and what is disturbed. Given their positions relative to winds, rain, and waves, St. Vincent and the other barrier formations are always extremely dynamic landforms. A single storm can rip off pieces from one area and redeposit them elsewhere; historic shoreline loss on Little St. George Island is estimated at between 0.2 and 4.3 m per year (Donoghue et al. 1990:6; Sankar 2015:xv, 113). Lately, however, storm regimes may have become even more intense (Joe Donoghue, personal communication, 2010). Figure 3 shows the appearance of the Pickalene Midden area (center west side of north shore) in the 1970s, recently damaged by a storm even then, but still showing 2 m of shell midden in the exposed bank. Our 2009 excavations, into the thickest portion of the St. Vincent 5 site (8FR364) near the place in the photo, about 40 m back from the shoreline, encountered only 1 m of shell midden, which thinned out moving northward toward the shore. Why recent storms are so much more destructive is unknown. We suspect human action, including that related to climate change, and think it is worth investigating why archaeological sites that have existed there for at least 1500 years are suddenly disappearing. Meanwhile, a major goal of our work has been simply to document what is still present, including what might have been salvaged by others.

Figure 3. Shell midden deposits estimated to be 2 m thick, from Pickalene midden area, St. Vincent 5 and 6 sites (8FR364 and 365), in the 1970s; considerably less remains today (photo courtesy of Frank Stapor).

Although the Gulf, Bay, and Sound waters were too saline to drink, they provided abundant aquatic species for past peoples to harvest. The inlet of Big Bayou cuts into the north shore of the island, expanding the available sheltered coastline for settlement and protection of watercraft. Besides seafood, terrestrial animals and birds are also abundant. St. Vincent Island has forests of pine, oak, palm, cypress wetlands, and a wide variety of other trees, as well as a large amount of brushy vegetation, such as rosemary and sea oats growing on the dunes (Johnson and Barbour 1990). Multiple habitat types identified on the island include wetlands, dunes with live oak and other trees, cabbage palm stands, and four different slash-pine communities. The broad spectrum of plant communities provides habitat for abundant animals, including 11 amphibian, 42 reptile, 39 fish, 277 bird, and 28 mammal species, even the occasional manatee during warm months (McCarthy 2004; U.S. Department of the Interior 2012). The island is an important stop-off point for neotropical migratory birds and a nesting place for loggerheads and other sea turtles. St. Vincent is said to have been the first place eagles nested in Florida as they recovered from the population crash caused by the insecticide DDT in the 1960s (Cerulean 2015:120).

History of Investigation

Recorded archaeology on St. Vincent Island began during the last half-century with Florida State University's David Phelps. Probably responding to information from the refuge manager at the time, Phelps visited and excavated at a few sites, but never wrote a report. It is not known exactly where his excavations were, and site numbers he assigned were confusing. He took materials and records when he went to East Carolina University in 1970. Some were returned, and there are boxes of artifacts in the FSU collections labeled St. Vincent Island, but it was difficult to make sense of them as they had either no proveniences or confusing proveniences with contradictory labels.

James Miller, John Griffin, and colleagues at Cultural Resources Management, Inc., Tallahassee, surveyed on St. Vincent Island in November 1978 in advance of proposed construction of refuge facilities, concentrating on a few areas during their nine fieldworker-days. They noted that the 14 sites known at that time were all shell middens discovered mostly by refuge personnel (Miller et al. 1980:2, 5). They assigned site numbers for the Florida Master Site File that corresponded as closely as possible with Phelps's data. Accompanying them was geologist Frank W. Stapor, who had been at FSU and worked with Phelps in the late 1960s and early '70s. Stapor sought to reconstruct regional sea-level fluctuations using St. Vincent geological and archaeological data. Miller et al. (1980) revisited and/or summarized Phelps's sites and recorded some new ones. Stapor and William F. Tanner (1977) studied past sea-level evidence observed within the stratification at the Paradise Point site, 8FR71, at the northeast tip of the island, on the oldest beach ridge, where shell midden layers lay over and under a stratum of gray clay deposited by what they considered to be a higher-than-present sea-level stand. The implication was that people came before and after that time, when it was dry land. Another coastal expert, geologist Joe Donoghue, continued this research (Balsillie and Donoghue 2004; Donoghue 1991). Luckily, we could coordinate our 2010 work at Paradise Point with that of these geologists. In 1981, Southeastern Wildlife Services (now Southeastern Archaeological Services, Inc.) of Athens, Georgia, conducted archaeological testing at Paradise Point. A human burial had just washed out, and detrimental erosion continued. The two-man field crew spent 10 autumn days mapping and digging 10 excavation units, recovering Fort Walton and Woodland materials, and documenting the gray clay layer as well (Braley1982).

In April of 2004, more human skeletal materials were discovered on the island's north shore near Pickalene Bar, near the St. Vincent 6 site, 8FR365, which has occupation ranging from Late Archaic through protohistoric. After some looting and illegal transport of bones, NWR staff recovered the remains. Following consultation with Native American tribal representatives, as required by federal regulations, Southeast Region NWR archaeologist Richard Kanaski excavated and reburied the remains at an undisclosed location.

Current Research

The University of South Florida (USF) comprehensive survey project was undertaken at the request of the local volunteer group, the Supporters of St. Vincent National Wildlife Refuge, who saw how federal refuge managers had struggled to deal with protecting the resources. With the USF archaeological field school in summer 2009, we surveyed the north and east shorelines, parts of the interior and remaining shorelines, and many kilometers of the dirt roads. We also shovel-tested to establish site boundaries and check interior areas with no known sites, and conducted test excavation at the St. Vincent 5 site, 8FR364. We returned in March 2010 for testing at Paradise Point, and did archival and collections research for years at the Bureau of Archaeological Research in Tallahassee and the Florida Museum of Natural History in Gainesville. Standard field methods were employed: 50-cm^2 shovel tests at judgmentally-chosen locations; all soils screened through ¼" mesh; waterscreening through 1/8" mesh at the test units, 1-liter soil samples for permanent curation and 9-liter soil samples from all levels processed by flotation (A fraction ¼" [6.35 mm] screen; B fraction .034" [.86 mm] screen; C fraction .0016" [.29 mm] screen). Our coverage of the island interior was expanded with information from a geological testing project (Forrest 2007) that had involved extensive machine trenching. The public archaeology component of the project included outreach to avocationals, which brought in great amounts of information. One collector had been obtaining materials for 25 years, coming to realize it was illegal; but he kept notes, a computer database, and artifacts in labeled plastic boxes. He allowed us to study these materials and then in 2013 decided to donate the whole huge collection (which we had to retrieve from Mississippi, where he had moved). We have no reason to doubt that these artifacts came from the assigned sites, especially because he wrote detailed, word-processed, dated field notes after each trip to the island.

We documented 19 aboriginal archaeological sites (Table 1), most with multiple cultural components and possible components (Table 2). All are shoreline shell middens of varying density. They are detailed in Kimble's (2012) M.A. thesis and our comprehensive report (White and Kimble 2016) and summarized by time period below. No prehistoric cultural materials were present in the island interior, whether in our subsurface tests or the geological trenches (shown in Figure 2). Two historic sites, a shipwreck and a Civil War fort's earthworks (FR56 and FR359, respectively), along with early twentieth-century structures, sit on the southeast tip of the island, near the Gulf of Mexico, and are not further discussed here. It is no surprise that Native American sites extend continuously along the north and east shores, but are not present on the south and southwest shores facing the Gulf. The fresh water, sheltered locales, less dynamic waves and shallower water of the bay sides were more attractive. In the center of the west side of the north shore, an oyster reef named Pickalene Bar runs north-south across St. Vincent Sound, and off the northeast tip of the island is another rich oyster reef, Dry Bar (see Figure 1), though oysters are available in any bay waters. The abundance of these shellfish and other aquatic resources explains the concentrations of sites in these areas. While Miller et al. (1980) drew discrete polygons indicating site boundaries, we often found that the differently-numbered sites merged at these arbitrary edges, but we kept to the established site numbers to make data comparable.

Paleo-Indian

Four sites produced a total of 21 Paleo-Indian points. A Dalton was recovered from the surface during salvage at the Paradise Point site (Braley 1982), but the remainder all came from the donated collection (Figure 4), and help validate the

Table 1. Native American archaeological sites on St. Vincent Island

No.	Name	Location	Cultural Components
8FR71	Paradise Point	E side of N shore	Paleo? MArch, LArch, EWd? MWd, LWd, FW, Lamar, LC/Sem
8FR352	St. Vincent Island Ferry	N shore right across Indian Pass	LArch? MWd? LWd? FW, Lamar
8FR354	St. Vincent Point	N end of E shore point	Paleo, EWd, FW
8FR356	Big Bayou 1	S shore Big Bayou	Wd? FW?
8FR357	Big Bayou 2	S shore Big Bayou 800 m E of Fr356	FW
8FR360	St. Vincent 1	N shore	L Arch, E/MWd, FW?
8FR361	St. Vincent 2	N shore	LArch, E/MWd, FW
8FR362	St. Vincent 3	N shore	Paleo, Arch, EWd, MWd? LWd? FW
8FR363	St. Vincent 4	N shore	E/MWd
8FR364	St. Vincent 5 (Pickalene midden)	N shore	Paleo, EArch, MArch, LArch, EWd, MWd, LWd? FW, Lamar
8FR365	St. Vincent 6	N shore	LArch, EWd, MWd? LWd? FW, Lamar, LC-Sem?
8FR366	St. Vincent 7	N shore	MWd, LWd? FW
8FR367	St. Vincent 8	N shore	EWd, MWd
8FR368	St. Vincent 9	N shore	FW
8FR369	St. Vincent 10	SW shore (mouth of) Big Bayou	FW, LC-Sem?
8FR370	St. Vincent 11	NE shore (mouth of) Big Bayou	MWd, LWd? hist Amer
8FR1265	Big Bayou S	S shore Big Bayou 1 km W of Fr356	FW
8FR1277	Mallard Slough	SE shore S side of Mallard Slough	FW?
8FR1367	Little Redfish Cr	E side of N shore	EArch, MArch, LArch, MWd, LWd? FW, hist Amer

Abbreviations: N-north, S-south, E-east, Paleo-Paleo-Indian, EArch-Early Archaic, MArch-Middle Archaic, LArch-Late Archaic, EWd-Early Woodland, MWd-Middle Woodland, LWd-Late Woodland, FW-Fort Walton, LC-Sem-Lower Creek to Seminole, hist-historic, Amer-American

Table 2. Archaeological components at the 19 Native American sites on St. Vincent Island

Cultural affiliation	No. of components (possible additional components)
Paleo-Indian	4
Early Archaic	2
Middle Archaic	2
general Archaic	3
Late Archaic (fiber-tempered ceramics)	7 (1)
Early Woodland	9 (2)
Middle Woodland	9 (4)
Late Woodland	2 (7)
Fort Walton	14 (3)
Lamar (protohistoric unknown Indian)	4
Creek/Seminole	2 (1)

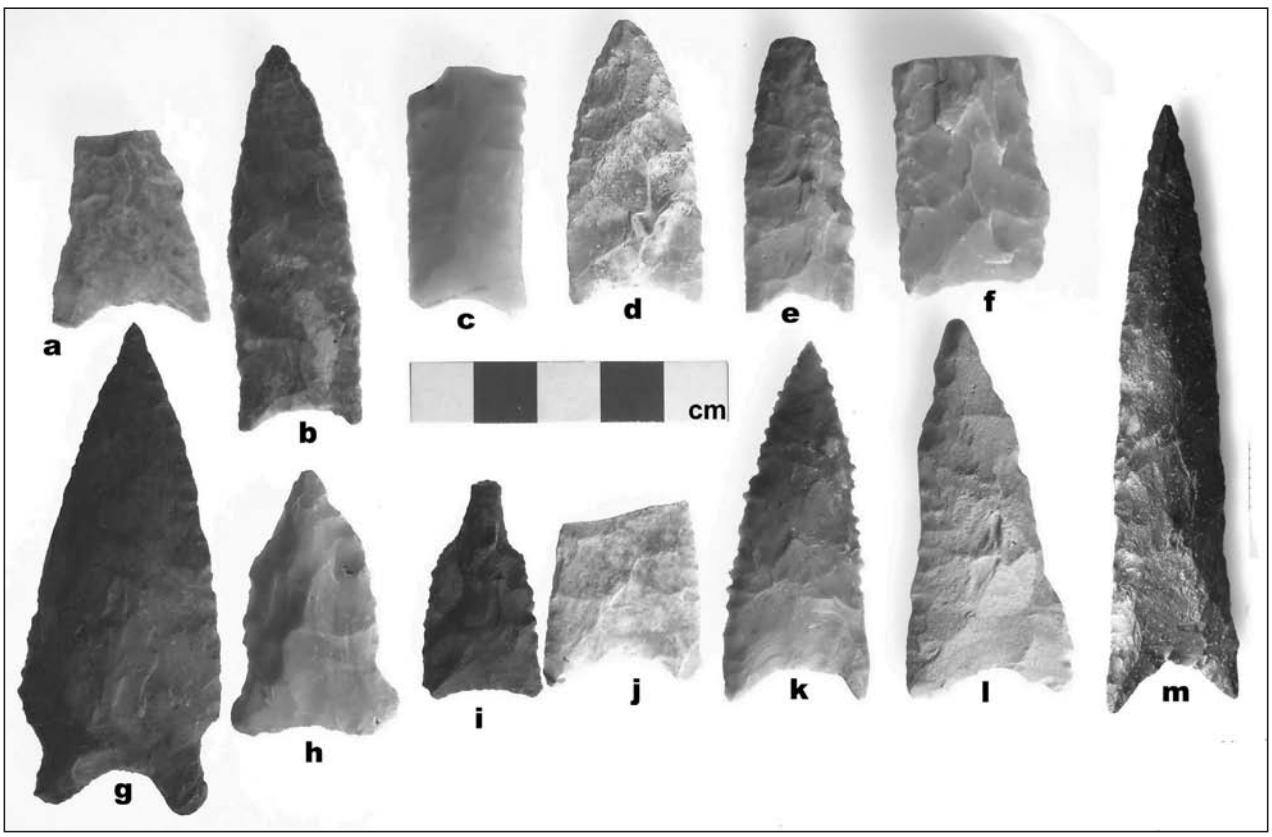


Figure 4. Paleo-Indian points from St. Vincent Island: from St. Vincent 3 site, (a-f) unfluted Clovis (?), USF#JC-8Fr362-13-1.27, .39, .45, .52; (g) Santa Fe or Simpson (?) also locally called Chipola point, USF#JC8Fr362-13-1.27; (h) Beaver Lake (?), USF#JC8Fr362-13-1.39; (i-l) probable Clovis (i is resharpened into a graver or chisel), USF# JC-8Fr362-13-.39, .45, .52); (m) from Paradise Point site: Clovis (?) USF#JC8Fr71-1.23.

collection's reliability since such rare artifacts would be hard to obtain if they were not actually there already. The points include fluted/unfluted Clovis, Santa Fe or Simpson, Suwanee, and possible Beaver Lake types. They suggest that what is now the coast was inhabited as early as the first humans got to northwest Florida, up to 13,000 years ago. All four sites are shell middens with later prehistoric cultural components as well, and two each are close to the two oyster bars.

Paleo-Indian habitation on what is now St. Vincent Island is far older than the island's formation. The points are not very eroded or water-worn, with a few (e.g., Figure 4c, d) even retaining some translucent, unweathered areas of the chert. They appear to have washed out recently from buried deposits at the four sites. These sites may have been chosen for early settlement because they were on what was the riverbank during the late Pleistocene. Geological research, including coring in Apalachicola Bay, indicates that the river once flowed much farther to the west than its present mouth indicates (Donoghue et al. 1990). After sea level rose at the end of the Pleistocene, the elevated former riverbanks may have formed a foundation for the later buildup of the barrier island, as wind- and wave-driven sand piled up on them (and then later peoples returned to deposit shell middens). Another attraction for Paleo-Indian settlement might have been nearby springs flowing into the ancient river. A deep spot in St. Vincent Sound right near Pickalene Bar could be a drowned spring. Oysters can be more numerous in areas where more fresh water helps keep their predators down, so the location of the Paleo-Indian materials near the two large modern oyster bars might not be unexpected (though oysters would not have been there during the Pleistocene since the coast of 10,000 years ago is today so far out in the Gulf). USF archaeology lab data show another Paleo-Indian point found by a collector on the east side of the river mouth, also near a large oyster bar. Work in Apalachee Bay, 120 km to the east, has identified Paleo-Indian and Archaic points and other habitation evidence at drowned freshwater springs along paleo-channels of the Aucilla River, some 6-9 km offshore, 4-6 m underwater (Faught 2004). But the much larger Apalachicola River has built up a huge delta extending into Apalachicola Bay and the Gulf (unlike at Apalachee Bay), covering its ancient channels in tens or hundreds of meters of sediment. The accident of increased erosion just in recent decades must be what exposed the long-hidden Paleo-Indian materials.

Paleo-Indian evidence has been scarce in the region outside the upper and middle valley of the Chipola River, the Apalachicola's largest tributary (see Figure 1), some 150 km distant by water from St. Vincent Island. This concentration along the Chipola was thought to be because that smaller river was once the original main river channel during the Pleistocene (White and Trauner 1987). The ancient points from St. Vincent, as well as some other new data, now require us to re-examine the picture of the region's earliest settlement (White 2016). A popular model for the Southeast hypothesized a few inland "staging areas" from which the earliest human groups moved out to inhabit wider regions (e.g., Anderson and Sassaman 2012:50), with coastal settlement coming later. The new evidence from St. Vincent Island suggests that the first people moved along continually, covering the whole landscape, and the only reason so few Paleo-Indian sites are known from the lower valley and coast is that they are deeply buried in the Holocene delta. The reason they were found on St. Vincent is that recent erosion and sea-level rise cutting into the shoreline uncovered those deeply buried deposits and washed them out onto the beach.

Archaic

Preceramic Archaic components are present at four sites, indicated mostly by points from the donated collection: Early Archaic Bolen, Hardaway/ Lost Lake corner-notched types (Figure 5), Middle Archaic Benton and other stemmed types, and Florida Archaic Stemmed types attributable to Middle or Late Archaic (Bullen 1975; Cambron and Hulse 1964). They indicate long habitation at many locales (probably also riverbank) while the island was still mainland and throughout the period during which sea level rose and the island took shape. At present, we cannot tell if/when there was a hiatus in occupation, as would be expected after sea-level rise and before or during the formation of the barrier island, though this would be a fruitful research topic; such a hiatus might have happened around 4000-5000 B.P. (Middle-Late Archaic). The points are mostly of pale local chert except for a few of dark-colored non-local stone that may have come from afar. Some are eroded and worn but many others, like the Paleo-Indian points, are not, suggesting they too came from once securely-buried deposits now exposed through the increased modern erosion.

Ceramic Late Archaic components, present at seven sites, are represented by plain fiber-tempered pottery, including many water-worn smoothed sherds. Over 80 chert microtools (Figure 6) are also from this time period (up to 4500 years ago; White 2003a, b). Relationships with mound-building Late Archaic adaptations at Poverty Point, in northeast Louisiana and across the Gulf Coast, are indicated by the

Figure 5. Probable Lost Lake projectile points (very weathered) from the Early Archaic component at the St. Vincent 5 site (USF# JC8Fr364-15-85 and -100).

microtools, and also fragments of characteristic clay balls or Poverty Point Objects, as well as a tiny disk bead of red jasper (Figure 7). Poverty Point-related material culture is distributed across low-lying wetlands of the northern Gulf Coast, with relatively easy connection by water from the major centers of Poverty Point and Claiborne in northeast Louisiana and southeast Mississippi, respectively, to northwest Florida (e.g., Gibson 2000). Microtools may have been for fashioning wooden artifacts, which are not only easier to make out of more abundant raw material, but also are able to float and be recovered if dropped into water amid these vast wetlands. The clay balls have been demonstrated to be for cooking and perhaps other less utilitarian function, such as group identity (Hays et al. 2016). The jasper bead is decorative, but may have had social, ritual, or even spiritual symbolism. The great extent of Poverty Point interaction networks across waterways of the Deep South and the Gulf of Mexico to northwest Florida indicates significant interconnection of Archaic societies and easy transport of people, things, and ideas by water.

Figure 6. Late Archaic chert microtools from the St. Vincent 5 site (USF# JC8Fr364-15-1.120; collector's numbers on some).

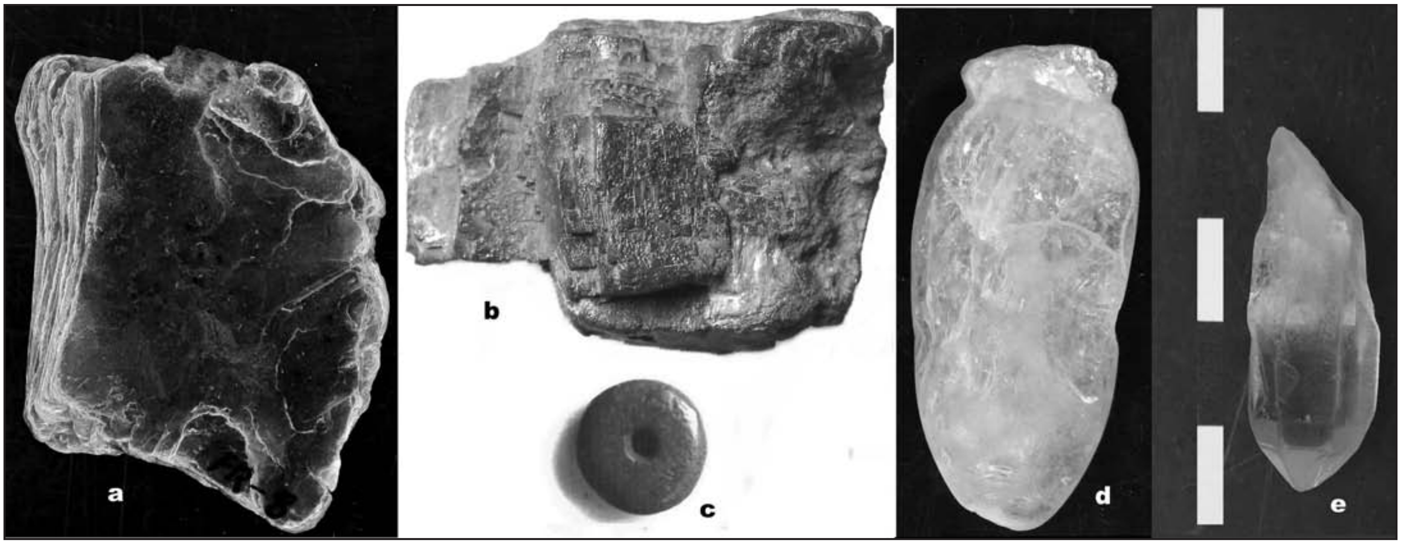


Figure 7. Exotic artifacts from St. Vincent Island, St. Vincent 5 site: (a) cut mica fragment, USF# JC8Fr364-15-181; (b) galena cube, USF# JC8Fr364-15-182; (c) jasper disc bead, USF# JC8Fr364-15-273; (d) quartz crystal pendant, USF# JC-8Fr364-15-119); from Little Redfish Creek site: (e) quartz crystal pendant, USF# JC8Fr1367-14-1-13.

Woodland

Early Woodland occupation on St. Vincent Island is seen at nine sites, with two others producing materials that may also be of this time period. One clearly diagnostic ceramic type is Deptford Simple-Stamped. Though the check-stamped pottery that began to be made at this time, some 3000 years ago, looks like all the other check-stamped of subsequent times through the contact period, it can be labeled as Deptford Check-Stamped if it has either linear checks (lands of one direction more pronounced than lands of the other direction) or a tetrapodal vessel base.

Middle Woodland components were recognized at nine sites, with an additional possible four others. These are characterized by both Swift Creek Complicated-Stamped and early Weeden Island Incised, Punctated, and Plain ceramics (Figure 8), typical diagnostics in this region (White 2014). In addition, a large number of exotics, such as quartz crystal pendants, a galena cube, and a cut mica fragment (see Figure 7) are assumed to be from this time period, associated with the height of burial mound ceremonialism. The nearest known Middle Woodland burial mound is just across Indian Pass from St. Vincent, on the mainland peninsula: the Indian Pass Mound, 8GU1 (Moore 1902:211-214). It had numerous Middle Woodland graves with elaborate funerary goods, and is known for its early Weeden Island ceramics, including a type with thin, parallel looped and straight incisions that Willey (1949:425-27) named Indian Pass Incised. Notably, however, it is the only one of 30 Middle Woodland mounds in the Apalachicola-lower Chattahoochee valley not known (so far) to have Swift Creek pottery. The sites with the largest Middle Woodland components were St.

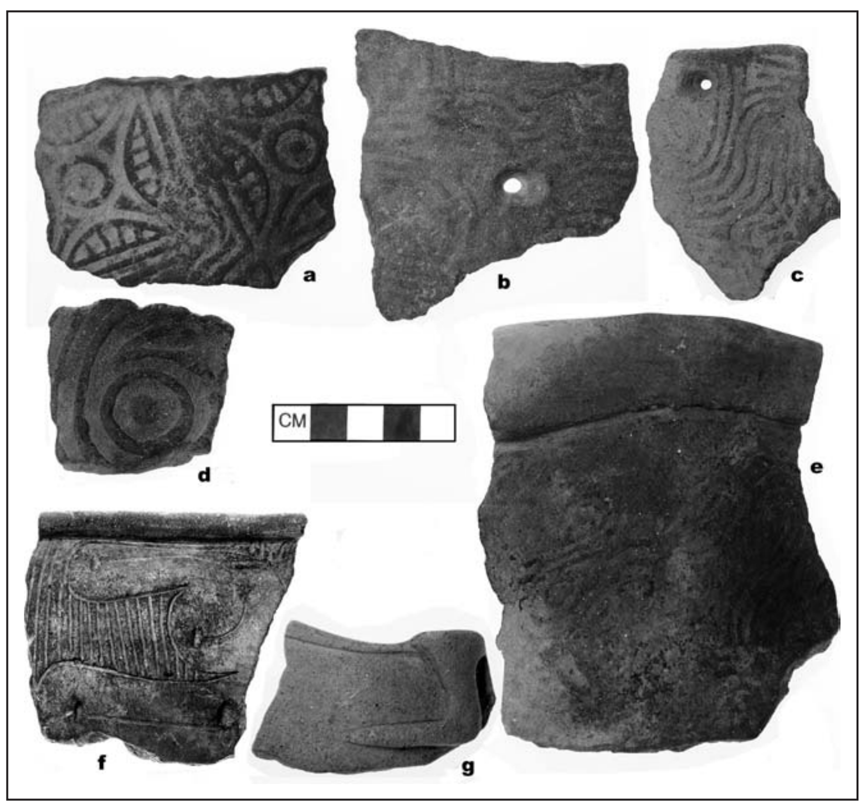


Figure 8. Middle Woodland ceramics from St. Vincent 5 site: (a-e) Swift Creek Complicated-Stamped (drilled holes probably for repair), USF# JC-8Fr364-15-2); (f) Weeden Island Incised (#-4); (g) Weeden Island Plain with raised animal effigy leg (#-6).

Vincent 5, on the west side of the north shore, and the Paradise Point site at the northeast tip of the island. Both were tested (as described below).

Late Woodland materials were identified for certain at only two sites, with seven more possible components from this time period. Few artifact types are truly diagnostic for Late Woodland. It is characterized by mostly check-stamped and plain ceramics and late Weeden Island types such as Carrabelle Punctate/Incised and Keith Incised. By this time there are few or no early Weeden Island or Swift Creek ceramics or Middle Woodland exotic materials. Dates on our test excavation at the St. Vincent 5 site showed continuous or repeated Middle through Late Woodland habitation (discussed below).

Fort Walton

The most abundant diagnostic artifacts from St. Vincent Island are Fort Walton Incised and Point Washington Incised potsherds, including several rim effigies (Figure 9). Late prehistoric Fort Walton components were present at 14 sites, and possibly at three additional sites that had the gritty plain pottery typical of this time period. Inland Fort Walton people in the Apalachicola delta region were intensive agriculturalists who produced maize and other cultigens, while also hunting, fishing, and gathering wild plants and animals. On the coast and in estuarine areas, however, Fort Walton groups apparently continued subsistence strategies of their ancestors, collecting only wild resources, especially aquatic species, as demonstrated in the continuous record of many shell midden sites; they apparently did not farm, but may have obtained agricultural products from upriver (White 2014; White et al. 2012). It is unclear if sociopolitical organization differed from coast to interior. The nearest Fort Walton temple mound center is Pierce Mounds, today in the city of Apalachicola, some 10-20 km across the bay from St. Vincent Island. Mobile fisherfolk could have traveled there for important occasions involving social aggregation, economic interaction, sports, religious or other ritual events. Two cobmarked sherds among the thousands from St. Vincent island suggest interaction with inland farmers. Perhaps smoked fish or shellfish and coastal yaupon holly used to brew traditional black drink were traded inland for maize?

Protohistoric/Historic Native Americans

Old World invaders are first recorded on the northern Gulf Coast with the Pánfilo de Narváez expedition in 1528 (Covey 1961), which moved north through the Florida peninsula and into Tallahassee, then to the coast before sailing away. Though it is debated whether they visited the Apalachicola delta region, we think Narváez's crew made it to St. Vincent Island. They were desperate and eating their horses at the "Bay of Horses" (probably St. Marks, south of Tallahassee), when they decided to build rafts and move by water instead of trek overland. They left on 22 September 1528, sailing westward for seven days in sheltered, shallow waters out of sight of the open Gulf. This route had to have been through Apalachicola Bay behind the barrier islands, including along the north shore of St. Vincent Island. Such a route matches the description (Covey 1961:47-50) in the only chronicle of the expedition, by Álvar Núñez Cabeza de Vaca, one of the only four who ultimately survived it. They were medieval men with little knowledge of seafaring,

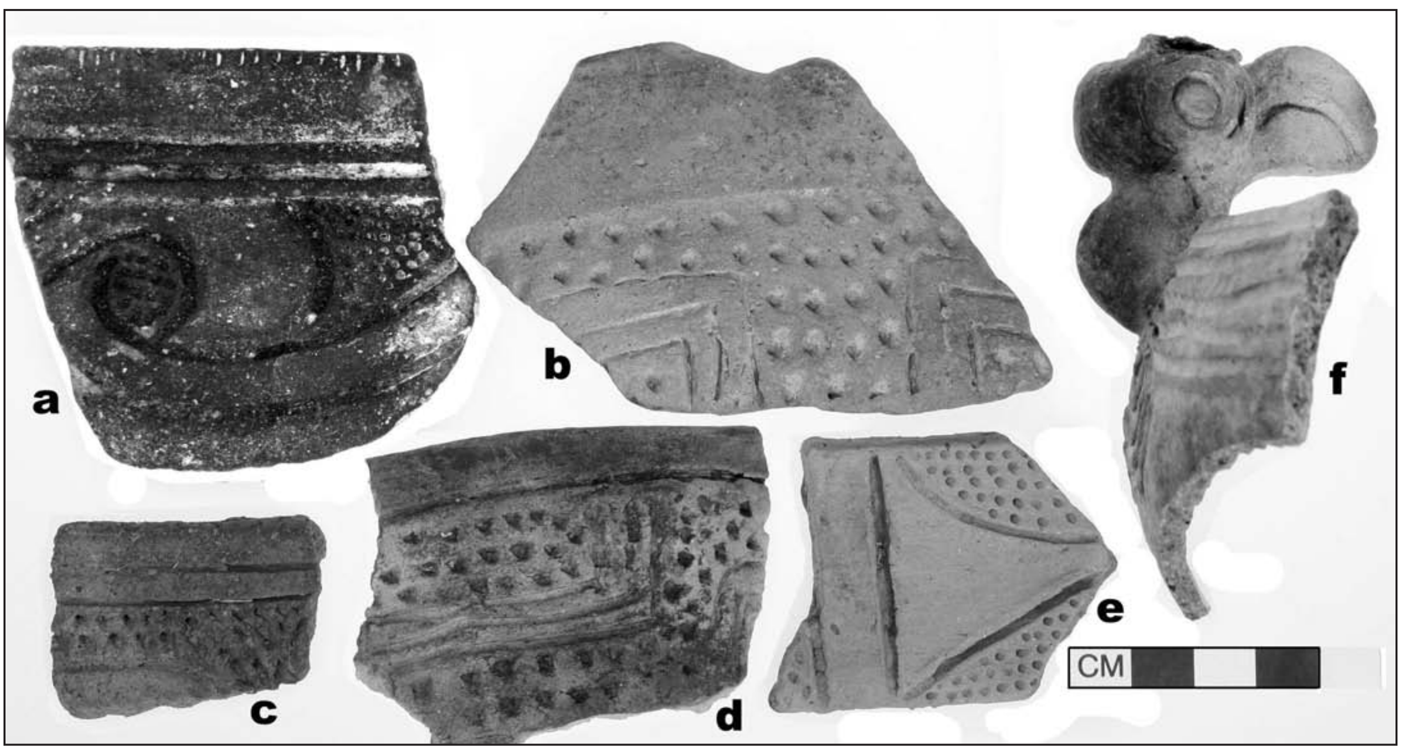


Figure 9. Fort Walton ceramics from Paradise Point site: (a-e) Fort Walton Incised, all rims except e is body sherd, USF# JC8Fr71-1.4; (f) Point Washington Incised rim with interior-facing bird effigy (#1.2).

but modern kayakers can go from St. Marks to St. Vincent in between 5-9 days. The Spaniards approached an island close to the mainland, and stopped there to steal some Indian canoes, and then at some Indian houses to steal food (dried skates or rays and roe). They then went another 2 leagues (between 5.25 and 10 miles [8.5-16 km]) until they reached a strait (which they named San Miguel) through which they passed to emerge at the open ocean. St. Vincent is 8-9 miles (12-14 km) wide at its wide north end, and comes very close to the mainland at Indian Pass; San Miguel strait had to have been Indian Pass. After stopping at the end of this strait to use the canoes to repair their rafts, the hapless explorers then proceeded on the rest of their historic journey. They may have left a few of their artifacts and/or germs, and they certainly document the presence of natives living and fishing on the island's north shore in the early fall season.

After this Spanish intrusion in the early sixteenth century, Fort Walton material culture disappeared by 1650-1700. By the mission period in the later 1600s, there are a few documented Spanish attempts to establish settlements near the headwaters of the Apalachicola River and forks of the Flint and Chattahoochee, but little information on who was living in the rest of the valley or on the coast. Some names of native groups are known – the Chine, Chatot or Chacato, Sabacola, Tawasa (Hann 2006) – but there is no archaeological evidence for where they lived, though the Spanish at the Apalachee mission of San Luis in Tallahassee recorded the Chine as being coastal dwellers. These protohistoric native groups had a different material culture, generic incised ceramics that may be diagnostic of the mission period and representative of the amalgamated societies of refugees and survivors left after devastation from colonial violence and diseases. Such coalescent societies struggled to survive with new, blended identities (Ethridge 2009), though we do not always know which named Indian groups they represented or how to recognize them archaeologically.

One interesting archaeological manifestation dating around 1700 is Lamar, characterized by distinctive Lamar Complicated-Stamped ceramics, usually with heavy grit temper, folded and notched rims, and sloppy stamped patterns on the surface (Figure 10). Not many Lamar sites are known from the Apalachicola delta area (White et al. 2012), nor are the ethnic identities of the people. Lamar pottery was also characteristic of the Apalachee Indians at the Spanish missions

Figure 10. Lamar sherds from the St. Vincent 5 site, all USF# JC8Fr364-15-1.1: (a) Lamar Complicated-Stamped with cross-in-circle motif common in the late prehistoric Southeast (though it might also be a sloppy, large-grit-tempered Swift Creek Complicated-Stamped); (b-d) Lamar Plain with varieties of notched, folded rim treatments (c is grog-tempered, with a square chunk of dark red grog visible in bottom of photo).

in Tallahassee, and other groups such as the Cherokee in north Georgia, though the Apalachee ceramics were heavily grog-tempered and the rest of Lamar is mostly grit-tempered. Whoever Lamar people were, they also disappeared, by the early eighteenth century. Spain's missions in Florida were destroyed in 1704 by the British and their Creek Indian allies attacking from Georgia. Lamar ceramics are known from four St. Vincent sites, supporting the model that they represent unknown Indians fleeing these attacks and moving westward to French territory. Lamar sites are mostly on the bay sides of barrier islands, where people might have stopped safely during such flight. Later, Creeks themselves moved into the upper Apalachicola, and must have visited St. Vincent Island rarely, as two, possibly three sites have a couple of sherds of their distinctive Chattahoochee Brushed pottery; one of these, St. Vincent 10 site, 8FR369 also produced a British and an Indian (local chert) gunflint.

Other Material Culture

Other prehistoric artifacts not assignable to a particular time period or cultural affiliation have been picked up on St. Vincent Island's beaches. Multiple greenstone celts are probably from Fort Walton or Middle Woodland times. Shell pins, awls and other columella tools, pendants, scoops, spatulas, and scrapers have also been recovered, as well as some debitage from shellworking, mostly with lightning whelk (*Busycon sinistrum*), and occasionally horse conch (*Triplofusus giganteus*). A curious item is a cut trianglar section from a quahog (*Mercenaria*) clamshell; at least a half dozen of these were found, as well as a whole shell minus a cut triangle, all from the St.Vincent 5 site, 8FR364. This species is not usually found in panhandle shell middens or other sites, except when its hard, thick shell is made into tools, but the function of such objects is unknown. At several sites a collector picked up dozens of lumpy, rounded fossils that appear to be dolphin internal ear bones; though these are probably natural, it is equally likely that past people picked them up for some purpose.

Native People

Though no burial mound is known on St. Vincent Island, human remains representing approximately seven individuals have washed out of St. Vincent Island over the years (Braley 1982; White and Kimble 2016), one from Paradise Point site (8FR71) and the rest from St. Vincent 5 or 6 sites, 8FR364-365. The two most recent were reburied, as noted. The other five sets of remains (teeth, jaws, a cranial fragment), recovered decades ago, were studied by bioarchaeologists and found to represent three young adults with worn but healthy teeth (one had two healed blows to the head), and two middle-aged men with worn teeth and dental problems (one with temporomandibular joint disorder [TMJD]). The ages and cultural affiliations of these remains are unknown.

Testing Woodland Components at Two Sites

St. Vincent 5 site, 8FR364

St. Vincent 5 site, at Pickalene Bar, was selected for testing as it contained the most intact and diverse midden components. Abundant cultural materials have been recovered here, especially after recent storms, which took out sections of midden, even some of the shell road, then redeposited them back on top of the site. Our 1-x-1-m test unit, located back from the shore in the thickest midden, aimed to find intact deposits and get controlled information. We chose a spot near a recent treefall where thick black sand with oyster shells and artifacts clung to upended roots. This unit, Test Unit A, turned out to be a good sample of undisturbed Middle-to-Late-Woodland deposits, solid oyster midden extending a meter deep, with dark midden sand devoid of shell continuing another 10 cm below that until the culturally-sterile white beach sand was reached. We also picked up Fort Walton sherds on the shoreline surface, but nothing from all the other time periods, whose habitation debris has probably washed away.

Table 3 lists materials recovered by the USF investigations. The arbitrary 10-cm levels of TUA produced only four diagnostics among the check-stamped and plain sherds: two Keith Incised and two Swift Creek Complicated-Stamped. A radiocarbon date on charcoal from Level 4 was a good indicator of Late Woodland, at cal. A.D. 870-1010 (2-sigma range). Charcoal from Level 10, the deepest shell refuse deposits, dated to cal. A.D. 560-660 (2-sigma), indicating a time late in the Middle Woodland. The dates suggest that the 60 cm of deposits between these two levels took about 330 years to accumulate, averaging 18 cm of shell garbage per century for this area of the site.

Some of the Middle Woodland artifacts from St. Vincent 5 in the donated collection are elaborate (see Figures 7, 8); high-status items not pictured include a ceramic ear (?) disk fragment and several shiny stones. Such objects may indicate special behavior, even while people stayed at the fishing camp. Surface lithic materials recovered by collectors included points, scrapers, microtools, cores, a large biface (27 cm long, 1.9 kg), and debitage of agatized coral, local chert, and Tallahatta sandstone (probably from Alabama); any of these may be associated with the Woodland components. Ground stone from the site included 44 greenstone celt fragments and hones of sandstone and limestone.

Flotation samples from each level of TUA (totaling 99 liters of soil) contained abundant faunal remains, which were analyzed by Rochelle Marrinan and her paleonutrition class at Florida State University. Table 4 presents a composite tabulation of these, including number of identified specimens (NISP) and minimum number of individuals (MNI) for each animal that they represent. Some 30 vertebrate and 18 invertebrate taxa were identified; 80 percent of the biomass and 92 percent of the individual animals represented were ray-finned fish, especially mullet, but also drums, catfishes, seatrout, and gar. Birds, chameleon, crab, and land and sea turtle bones were identified. Mammals represented were deer,

Table 3. Cultural materials from USF investigations at St. Vincent 5 site, 8FR364, surface and TUA levels (counts [N], weights [Wt] to nearest gram).

Provenience:	Surface		L1		L2		L3		L4		L5		L6		L7		L8		L9		L10		L11		Mixed		Totals	
Type	N	Wt	N	Wt	N	Wt	N	Wt	N	Wt	N	Wt	N	Wt	N	Wt	N	Wt	N	Wt	N	Wt	N	Wt	N	Wt	N	Wt
Fort Walton Inc	4	56																									4	56
Lake Jackson	1	21																									1	21
Pensacola Incised	1	24																									1	24
shell-t plain	4	16																									4	16
shell/grog-t plain	4	59																									4	59
shell/grit/grog-t pl	3	46																									3	46
shell/grit-t plain	3	37																									3	37
Swift Cr C-St					1	1									1	3											2	4
Keith Incised									1	6							1	6									2	12
check-st	31	523	14	67	25	172	6	126	29	239	10	46	23	176	7	64	3	12			1	7			1	4	150	1436
fabric-impressed									1	8																	1	8
indet stamped									2	9																	2	9
indet incised	7	41	1	4			4	17									2	7	2	5							16	74
indet punctate							1	3									1	2									2	5
grit&grog-t plain	18	215																			2	3					20	218
grit-t plain	15	129					1	1	1	1					1	4											18	135
grog-t plain	98	1151	58	245	20	56	14	107	43	164	8	22	4	15	11	92	22	310	7	59	3	9			1	11	289	2241
limestone-t plain			1	8									1	2													2	10
sand-t plain	8	64	99	137	48	91	43	85	67	78	15	19	14	43	11	67	20	48	8	31	7	30	3	1	6	23	349	717
TOTAL SHERDS	197	2382	173	461	94	320	69	339	144	505	33	87	42	236	31	230	49	385	17	95	13	49	3	1	8	38	873	5128
clay lump					1	3					1	1															2	4
glass sherd																									1	3	1	3
stone (natural?)					1	1																					1	1
slate frag modern																									1	8	1	8
mica? frag			1	1																							1	1
whelk shell tool	1	311																									1	311
shell columella tool	1	27																									1	27

Table 4. Composite list of faunal remains from USF Investigations at 8FR364, identified by Rochelle Marrinan, Alexandra Parsons, and FSU students.

Scientific Name	Taxonomic Name	NISP	%	Wt (g)	%	Biomass	%	Burnt	%	Worked	%	MNI	%
Mammal, Large	probably deer, bear, panther	5	0.03	13.0	1.21	264.5751	2.12	1	0.74		0.00		0.00
Mammal, Medium	probably raccoon, dog, fox	1	0.01	0.6	0.06	16.6087	0.13		0.00		0.00		0.00
Mammal, Small	probably rabbits, squirrels	6	0.03	0.9	0.08	23.9231	0.19		0.00		0.00		0.00
Mammal	unidentified mammal	5	0.03	2.7	0.25	64.3024	0.51		0.00		0.00		0.00
Sylvilagus spp.	rabbits	1	0.01	0.6	0.06	16.6087	0.13		0.00		0.00	1	0.74
Sigmodon hispidus	hispid cotton rat	12	0.07	0.5	0.05	14.0953	0.11		0.00		0.00	2	1.48
Cetacea	whale	1	0.01	67.6	6.28	1166.6807	9.34		0.00		0.00	1	0.74
Odocoileus virginianus	white-tailed deer	4	0.02	24.2	2.25	462.8431	3.71		0.00		0.00	1	0.74
All Mammals		**35**	**0.20**	**110.1**	**10.23**	**2029.6373**	**16.25**	**1**	**0.74**	**0**	**0.00**	**5**	**3.70**
Aves	unidentified birds	12	0.09	2.4	0.34	67.1527	0.54		0.00		0.00	1	0.74
Anas crecca	teal (duck)	1		0.1					00.0		00.0	1	00.0
Larus marinus	great black-backed gull	1		0.2					00.0		00.0	1	00.0
Fulica americana	American coot	1		0.5					00.0		00.0	1	00.0
Corvus brachyrynchos	fish crow	1		0.5					00.0		00.0	1	00.0
All Birds	**unidentified birds**	**16**	**0.09**	**3.7**	**0.34**	**67.1527**	**0.54**		**0.00**		**0.00**	**1**	**0.74**
Testudines	unidentified turtles	33	0.18	14.1	1.31	186.1988	1.49	3	2.22		0.00		0.00
Kinosternidae	mud or musk turtles	8	0.04	3.1	0.29	67.4858	0.54		0.00		0.00	2	1.48
Cheloniidae	sea turtles	2	0.01	6.9	0.64	115.3530	0.92		0.00		0.00	1	0.74
All turtles		**43**	**0.24**	**24.1**	**2.24**	**369.0376**	**2.96**	**3**	**2.22**	**0**	**0.00**	**3**	**2.22**
Iguanidae	probably chameleon	**5**	**0.03**	**0.3**	**0.03**	**5.5863**	**0.04**		**0.00**		**0.00**	**2**	**1.48**
Actinopterygii	ray-finned fishes	14502	80.91	615.9	57.21	5364.1790	42.96	105	77.78		0.00		0.00
Lepisosteus spp.	gar	2	0.01	13.8	1.28	247.3444	1.98		0.00		0.00	2	1.48
Elops saurus	ladyfish	3	0.02	0.1	0.01	4.5709	0.04		0.00		0.00	1	0.74

Scientific Name	Taxonomic Name	NISP	%	Wt (g)	%	Biomass	%	Burnt	%	Worked	%	MNI	%
Clupeidae	herrings	72	0.40	2.0	0.19	51.7409	0.41		0.00		0.00	3	2.22
Siluriformes	all catfishes	4	0.02	0.3	0.03	6.3572	0.05		0.00		0.00		0.00
Ictaluridae	freshwater catfishes	1	0.01	0.1	0.01	2.2387	0.02		0.00		0.00	1	0.74
Ariidae	marine catfishes	365	2.04	42.2	3.92	698.3077	5.59	1	0.74		0.00	12	8.89
Ariopsis felis	hardhead catfish	90	0.50	17.6	1.63	304.2545	2.44	1	0.74		0.00		0.00
Bagre marinus	gafftopsail catfish	15	0.08	3.8	0.35	70.9242	0.57		0.00		0.00		0.00
Mugil spp.	mullet	1137	6.34	124.6	11.57	1470.1770	11.77	13	9.63		0.00	76	56.30
Caranx sp.	probably jack crevalle	2	0.01	2.8	0.26	96.2718	0.77		0.00		0.00	1	0.74
Sparidae	porgies	1	0.01	0.1	0.01	1.9055	0.02		0.00		0.00	1	0.74
Archosargus probatocephalus	sheepshead	55	0.31	25.6	2.38	313.0263	2.51		0.00		0.00	5	3.70
Sciaenidae	drums	5	0.03	1.0	0.09	38.9045	0.31		0.00		0.00		0.00
Cynoscion spp.	seatrout	87	0.49	15.6	1.45	297.1065	2.38	5	3.70		0.00	9	6.67
Micropogonias undulatus	Atlantic croaker	6	0.03	1.2	0.11	44.5240	0.36		0.00		0.00	2	1.48
Pogonias cromis	black drum	148	0.83	37.2	3.46	565.1995	4.53	3	2.22		0.00	2	1.48
Sciaenops ocellatus	redfish	44	0.25	13.7	1.27	269.8816	2.16	1	0.74		0.00	6	4.44
Paralichthyidae	flounder family	69	0.38	7.8	0.72	163.6682	1.31		0.00		0.00	2	1.48
Diodontidae	puffers	1	0.01	0.1	0.01	4.5709	0.04		0.00		0.00	1	0.74
All bony fishes		**16609**	**92.66**	**925.5**	**85.97**	**10015.1532**	**80.21**	**129**	**95.56**	**0**	**0.00**	**124**	**91.85**
Unidentified Vertebrate	all unidentified fragments	1216	6.78	12.8	1.19		0.00	2	1.48	1	100.00		0.00
Total Vertebrate		**17924**	**100.00**	**1076.5**	**100.00**	**12486.5670**	**100.00**	**135**	**100.00**	**1**	**100.00**	**135**	**100.00**
Invertebrates													
Decapoda	crabs	6	66.67	0.4	36.36	15.9841	38.73		0.00				0.00
Callinectes sp.	blue crab	3	33.33	0.7	63.64	25.2918	61.27	2	100.00			2	100.00
All crabs		**9**	**100.00**	**1.1**	**100.00**	**41.2760**	**100.00**	**2**	**100.00**	**0**	**0.00**	**2**	**100.00**

Scientific Name	Taxonomic Name	NISP	%	Wt (g)	%	Biomass	%	Burnt	%	Worked	%	MNI	%
Mollusca	unidentified mollusks	7	0.04	8.1	0.75	8.2377	0.07		0.00		0.00		0.00
Bivalvia	unidentified bivalves	9	1.34	6.5	0.07	33.9454	1.75		0.00		0.00		0.00
Arcidae	arks	1	0.15	1.3	0.01	11.3627	0.58		0.00		0.00		0.00
Anadara brasiliana	incongruous ark	32	4.77	26.1	0.27	87.3606	4.49		0.00		0.00	3	1.45
Anadara transversa	transverse ark	19	2.83	36.6	0.37	109.9429	5.65		0.00		0.00	6	2.90
Geukensia demissa	atlantic	98	14.61	20.3	0.21	73.6372	3.79		0.00		0.00	2	0.97
Cryptopleura costata	angel wing	26	3.87	24.8	0.25	84.3776	4.34		0.00		0.00	2	0.97
Crassostrea virginica	eastern oyster	486	72.43	9732.7	98.83	1543.7833	79.40		0.00		0.00	194	93.72
Total bivalves		**671**	**100.00**	**9848.3**	**100.00**	**1944.4097**	**100.00**	**0**	**0.00**	**0**	**0.00**	**207**	**100.00**
Gastropoda	unidentified gastropods	26	24.76	63.8	6.31	90.5459	6.24		0.00		0.00	3	8.57
Littorina irrorata	marsh periwinkle	2	1.90	1.7	0.17	1.1393	0.08		0.00		0.00	1	2.86
Busycon sp.	whelks	1	0.95	3.6	0.36	4.9644	0.34		0.00		0.00	1	2.86
Busycon contrarium	lightning whelk	2	1.90	380.5	37.65	549.7411	37.91		0.00	1	11.11	2	5.71
Fasciolariidae	horse and tulip conchs	1	0.95	34.0	3.36	47.9506	3.31		0.00		0.00	1	2.86
Pleuroploca gigantea	Florida horse conch	53	50.48	217.7	21.54	312.7786	21.57		0.00	7	77.78	10	28.57
Melongena corona	Florida crown conch	8	7.62	178.4	17.65	255.8049	17.64		0.00	1	11.11	6	17.14
Polynices duplicatus	atlantic moon snail	11	10.48	130.9	12.95	187.1152	12.90		0.00		0.00	10	28.57
Odostomia impressa	impressed odostome	1	0.95	0.1	0.01	0.1330	0.01		0.00		0.00	1	2.86
Total marine gastropods		**105**	**100.00**	**1010.7**	**100.00**	**1450.1729**	**100.00**	**0**	**0.00**	**9**	**100.00**	**35**	**100.00**
Total Marine molluscs		**783**	**200.04**	**10867.1**	**200.75**	**3402.8203**	**200.07**	**0**	**0.00**	**9**	**100.00**	**242**	**200.00**
Gastropoda	unidentified terrestrial snail	7	0.04	0.1	0.01	0.1445	0.00		0.00		0.00		0.00
Euglandina rosea	rose snail	1	0.01	0.2	0.02	0.2735	0.00		0.00		0.00	1	0.74
Polygyra sp.		2	0.01	0.1	0.01	0.1445	0.00		0.00		0.00	2	1.48
Total terrestrial snails		**10**	**0.06**	**0.4**	**0.04**	**0.5626**	**0.00**	**0**	**0.00**	**0**	**0.00**	**3**	**2.22**

rabbit, rat, other small creatures and, surprisingly, whale. Invertebrates were mostly oyster but included conchs, whelks, ark shells, marsh periwinkle, other bivalves and gastropods, and terrestrial snails.

Paradise Point Site, 8FR71

On the east side of the island's north shore and close to the other rich oyster bar, Paradise Point offered a good, if limited research opportunity. The site is difficult to reach, requiring an airboat (or wading some 700 m), and the work needed complex scheduling around winter tides and limited daylight. Geologists Donoghue and Stapor and students joined us to excavate a 1-m wide shoreline profile that showed 30 cm of blackish oyster shell midden overlying about 30 cm of browner clayey sand and less dense shell. Below this was the 20-cm-thick gray clay stratum (Munsell Gley 1 3/N or 3/10Y, very dark greenish gray) with no artifacts, interpreted to be the result of a sea-level stand higher than at present. Below that was at least 10 more cm of oyster shell midden. Braley's (1982) work had included a radiocarbon date placing this lower, Woodland midden at about A.D. 630-700, but the date was on shell, not charcoal, so possibly questionable because of the marine reservoir effect. The upper midden is clearly Fort Walton.

Though the tide came in quickly, drowning the lower midden exposed in our test, we were able to recover cultural materials and also take from the upper midden a soil sample, a horizontal core (Figure 11) for optimally-stimulated luminescence (OSL) dating, which requires sand grains not exposed to sunlight since burial. The date returned, 550+50 B.P. or about A.D. 1400, fits well with the Fort Walton ceramics of the upper midden. Donoghue also obtained other new radiocarbon dates on shell from the upper midden at 770+60 B.P. (~A.D. 1180) and from the lower midden at 1500+60 and 1430+50 (about A.D. 450 and 520, respectively). These confirm the characterization of the upper midden as Fort Walton and the lower as Middle to Late Woodland. Other site components are known from collectors' materials, including possible Paleo-Indian, Archaic, and Woodland points, a large-biface cache, fiber-tempered sherds, greenstone celt fragments, a micaceous rock, and shell tools. But most of the site has washed away, taking along the potential for testing these earlier components.

Research Summary

The evidence of Paleo-Indian occupation from St. Vincent Island's shorelines has augmented and altered the known settlement pattern of the first inhabitants of the

Figure 11. Geologist Frank Stapor pounds horizontal core tube into the profile at Paradise Point site, 8FR71, right above dark clay stratum representing higher-than-present sea level, to get OSL date, 10 March 2010.

Apalachicola valley region. It demonstrates that Paleo-Indian sites throughout the South may be greatly obscured by Holocene geomorphological processes in a large alluvial valley, so it is a mistake to think that "absence of evidence is evidence of absence" until data are obtained from deeply buried, intact sources. The newly-recorded Paleo-Indian and Archaic components indicate mainland occupation here before Holocene sea-level rise and the formation of the barrier island some 4000-5000 years ago, probably because the river (and perhaps springs) ran nearby and attracted human habitation.

The relative remoteness of St. Vincent and similar islands that we perceive today may be more of a recent historical phenomenon, a result of our modern expertise in traveling to most places by land vehicles. To natives whose fastest means of travel was by water, an island close to the mainland and rich in resources would be the equivalent of today's attractive shopping mall complex, with grocery stores, restaurants, and nearby inexpensive housing. Late Archaic peoples with fiber-tempered pottery, chert microtools, and Poverty-Point-related clay and stone objects were present as soon as the island formed. The Woodland occupation is extensive, and the Fort Walton evidence even more so. The rich aquatic ecosystems supported frequent, possibly long-term habitation of St. Vincent over prehistoric time, even through the late prehistoric period, when interior societies became more sedentary farmers. Protohistoric Native Americans producing Lamar ceramics and apparently some later Creek/Seminole Indians made short-term visits to the island.

At least as early as Late Archaic times, people came to fish, especially for mullet. Schooling mullet are easily available, especially in early fall, about the time of a full-moon cold front, when they move, fat with roe, en masse into the sea to spawn, "long streaks in the Gulf, roiling the surface"; a single fisher with a boat and net can catch more than 70 fish in a short time (Watts 1975:91). Prehistoric peoples covered the sheltered north and east shores with cumulative, linear midden refuse, which may represent thousands of (seasonal?) visits over some 5 millennia. Beyond just seasonal or continual trips for subsistence, there may have been elements of prestige or obtaining special seasonal foods. The material record that includes burials and presumably high-status and non-utilitarian items such as quartz crystal pendants, a jasper bead, and a galena cube, demonstrate that there may have been ceremonial activities associated with the island (or else these were favored charms to insure good fishing!).

Stratigraphic evidence at Paradise Point, on the oldest ridge of the island, helps geological interpretation of a time of higher sea level, a possible occupational hiatus, after which Fort Walton people apparently came right back to these good fishing grounds. There is great additional potential on the island for research on seasonality and settlement through time, zooarchaeological, geological, and other issues.

Public Archaeology

Major goals of our project also included contributing to public archaeology and aiding the U.S. Fish and Wildlife Service's management of the Refuge's cultural resources. St. Vincent is famous for illegal artifact collecting, which is difficult to prevent since its 12,350 acres cannot be regularly patrolled. A monitoring program we established with the Supporters of St. Vincent organization trains volunteers to photograph and document in situ the ceramics and other materials washing out of the shoreline without picking them up. Recommendations outlined in our draft technical report (submitted to the FWS for review pursuant to an ARPA permit) also include better signs, more public education, and other policies to help protect the rapidly disappearing archaeological record.

The wide extent of this project encompasses another crucial aspect of public archaeology: sharing of data by collectors. Most visitors to St. Vincent pick things up, and many know it is illegal; some save information and materials that would otherwise be lost with the receding shoreline. We hope our work has discouraged casual collectors, or turned them into careful monitors who understand the archaeology and the legal and ethical issues and can contribute, instead of damaging the resource more.

The vast amount of additional data on St. Vincent Island, from collections beyond what professional survey could obtain, has enormously expanded archaeological interpretation for the whole Apalachicola region, especially for the least-known, oldest time periods. Collectors' biases are obvious: relatively little plain pottery, but many sherds with elaborate decoration, unusual items of all kinds, and abundant lithic materials – points, other tools, debitage – which our fieldwork just did not produce. We hope to have demonstrated the value of learning from private collections, even those that may have been obtained under less than approved circumstances. Many professionals now recognize that such information adds new dimensions to archaeological interpretation. Pitblado (2014) has eloquently demonstrated how our current knowledge of Paleo-Indian adaptation across the U.S. would have been impossible without collectors' data; she contends that we have an ethical obligation to use such data as well as we can. We agree, and are grateful for the help of others who share our passion for the past.

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