ARCHAEOLOGICAL INVESTIGATIONS AT DEER ISLAND, LEVY COUNTY, FLORIDA

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Technical Report 15
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Cover photo: Eroding shell midden along western shoreline of Deer Island, October 2010.

MANAGEMENT SUMMARY

Archaeological investigations at Deer Island, Levy County, Florida, were carried out by staff of the Laboratory of Southeastern Archaeology in three phases from May 2010 to March 2011. As part of the Lower Suwannee Archaeological Survey (LSAS), archeological fieldwork at Deer Island commenced with reconnaissance survey of the entire island. Shovel tests revealed buried archaeological remains across most of the island, with concentrations of shell-bearing deposits in five discrete locations. Two such locations at the north end of the island are exposed in eroding cutbanks. Recorded in the Florida Master Site Files as sites 8LV75 and 8LV76, these locations are among many in the greater study area that are vulnerable to destruction from wave action, storm surge, and rising sea level. Secondary testing at 8LV75 began the long process of salvaging information from this eroding site before it is further impacted. In addition, secondary testing was conducted at two of the other locations of buried shell deposits on Deer Island to provide samples for radiometric dating and subsistence analyses.

Radiometric assays on charcoal from three of the five site locations on Deer Island show that the earliest shell deposits were laid down during the latter portion of the Late Archaic period (ca. 4000-3500 years ago) when the island was likely a near shore hammock and not an island. Below these Late Archaic deposits in some locations are occasional lithic artifacts indicative of earlier uses of the landform. Later occupations are well represented by shell-bearing deposits at both the north and south ends of the island, where radiometric assays place occupations in the range of 2700 to 1900 years ago, and again at ca. 1200 years ago. The most conspicuous archaeological site on Deer Island is the shell ring recorded as 8LV75. The ring proved to be an Early Woodland deposit dating to approximately 2500–2000 years old, consistent with the age of Deptford pottery found throughout the interior of the ring. Because the ring is being actively eroded at the shoreline and given the limited knowledge we have about Deptford-period rings in general, 8LV75 was targeted for more intensive secondary testing than the other sites on Deer Island.

Deer Island offers a unique laboratory in which archaeology can make observations and inferences at the crossroads of natural and cultural processes. The potential for additional research on Deer Island and the surrounding islands is enormous. This report of preliminary investigations concludes with recommendations for further fieldwork.

ACKNOWLEDGMENTS

Without the support and permission of Deer Island's owner and steward, Mr. George Foster, our investigations would not have been possible. We are grateful for his interest in our work and trust that the results of this project help to substantiate the historical value of Deer Island. The island's caretaker Dan Smith provided the LSA crew with invaluable infield logistical support (and delicious blue crabs) and a helping hand whenever the need arose.

Silas Campbell was the first to point out the potential for research on Deer Island with the generous donation of his collection of artifacts from the island as well as his insight on the location and condition of many sites in the area.

Field work on Deer Island was carried out by Micah Monés, Elyse Anderson, Jessi Halligan, Paulette McFadden, Neill Wallis, and Ken Sassaman, who all persevered through violent storms, high winds, freezing nights, a plague of caterpillars, and a few sunken boats. We are grateful for Asa Randall's expertise in preparing LiDAR-generated topographic maps of Deer Island. Karen Jones handled the finances with her usual aplomb. Funding for this project was provided by the Hyatt and Cici Brown Endowment for Florida Archaeology.

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CHAPTER 1
INTRODUCTION AND RESEARCH ORIENTATION

Archaeological survey and test excavations on Deer Island were carried out by staff of the Laboratory of Southeastern Archaeology (LSA), Department of Anthropology, University of Florida from May 2010 to March 2011. This effort was part of the Lower Suwannee Archaeological Survey (LSAS), a long-term archaeological project to investigate the archaeological resources of the northern Gulf Coast of Florida from Cedar Key to Horseshoe Beach (Figure 1-1). The Lower Suwannee and Cedar Key National Wildlife Refuges comprise most of the study area with the exceptions of a few private inholdings as well as some state and county lands. Deer Island is among the larger private inholdings in the study area, in an area the LSAS designates the Shell Mound Tract (Figure 1-2).

The prehistory of the study area remains one of the least understood along Florida's Gulf Coast. Since the establishment of near-present sea level stands approximately 4,500 years ago, indigenous Floridians initiated settlement and land-use practices that were sustained more-or-less continuously until Europeans arrived in the sixteenth century. The evidence for past human activity is well known to local fishermen, hunters, and relic seekers. Shell deposits that were laid down by humans over the past millennia are ubiquitous on the landscape, especially along actively eroding shorelines of islands in the tidal zone. Unfortunately, little is known about most of the sites. Our work on Deer Island is among the first systematic efforts to document not only sites that are exposed at the shoreline, but also subsurface remains across interior portions of the island.

BACKGROUND AND SETTING

The research orientation for Deer Island is set out in the LSA technical report *Lower Suwannee Archaeological Survey 2009-2010: Investigations at Cat Island (8DI29), Little Bradford Island (8DI32), and Richards Island (8LV137)* (Sassaman et al. 2011). The stated goal of the LSAS is to sustain a program of investigations in cooperation with U.S. Fish and Wildlife to inventory, assess, and manage archaeological resources on the refuges. The overarching research objective of the survey is to investigate changing relationships between humans and their environments, particularly as it relates to sea level rise. Rescue and reconnaissance efforts are among the more pragmatic goals of the survey, as sites in the refuges and adjoining non-federal lands are poorly documented and subject to ongoing erosion from tidal action, boat wake, and storm surge.

Following on the goals of the LSAS, archaeological work at Deer Island was designed to both salvage information from sites that are actively eroding along the shoreline, and to conduct full-coverage reconnaissance of the interior of the island to detect subsurface remains other than those exposed in shoreline cutbanks. This report provides details on the methods and results of these efforts.

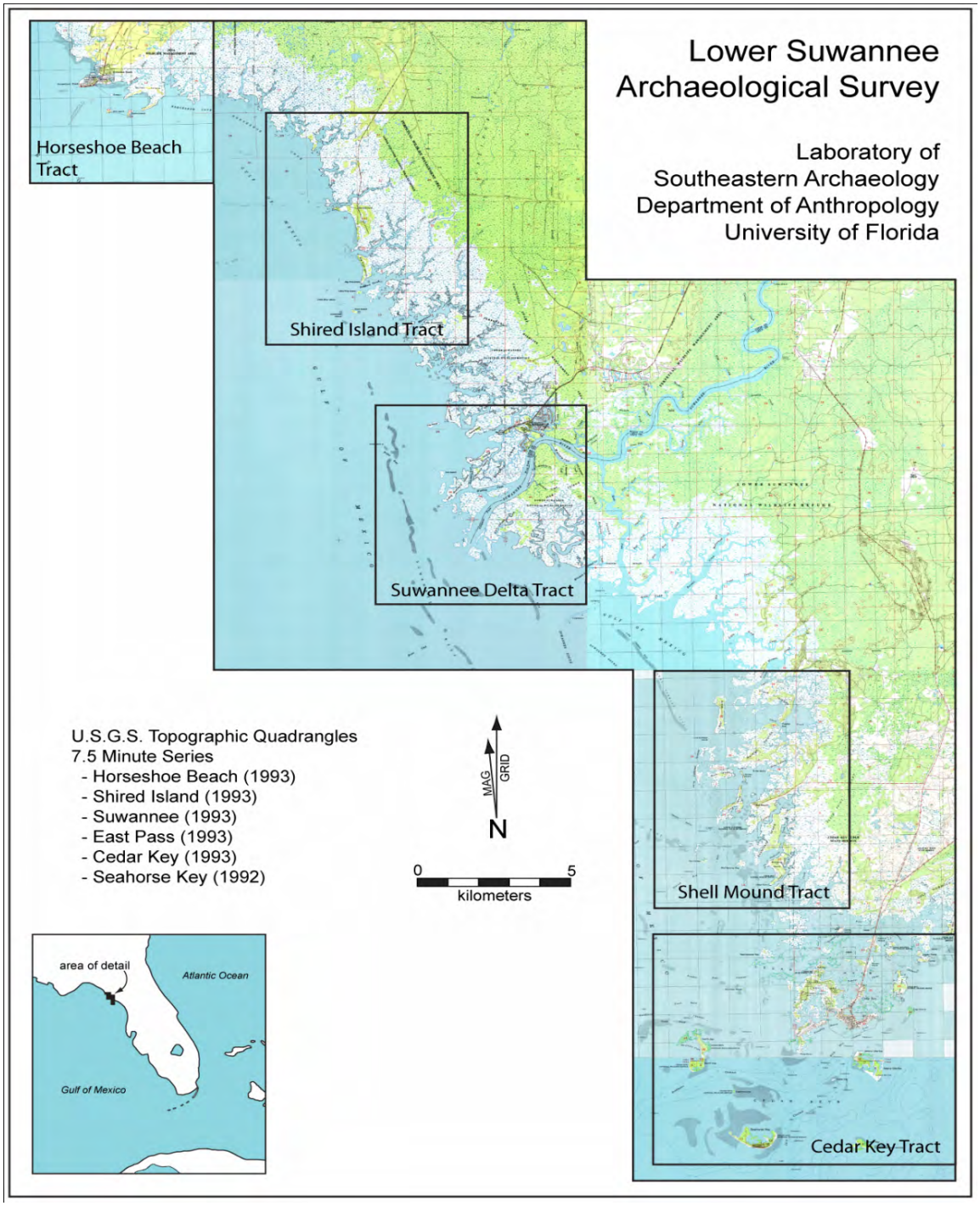

Figure 1-1. Composite topographic map of study area, showing inset maps of the five tracts of the Lower Suwannee Archaeological Survey (Sassaman et al. 2011). Deer Island is located in the northeast quadrant of the Shell Mound Tract.

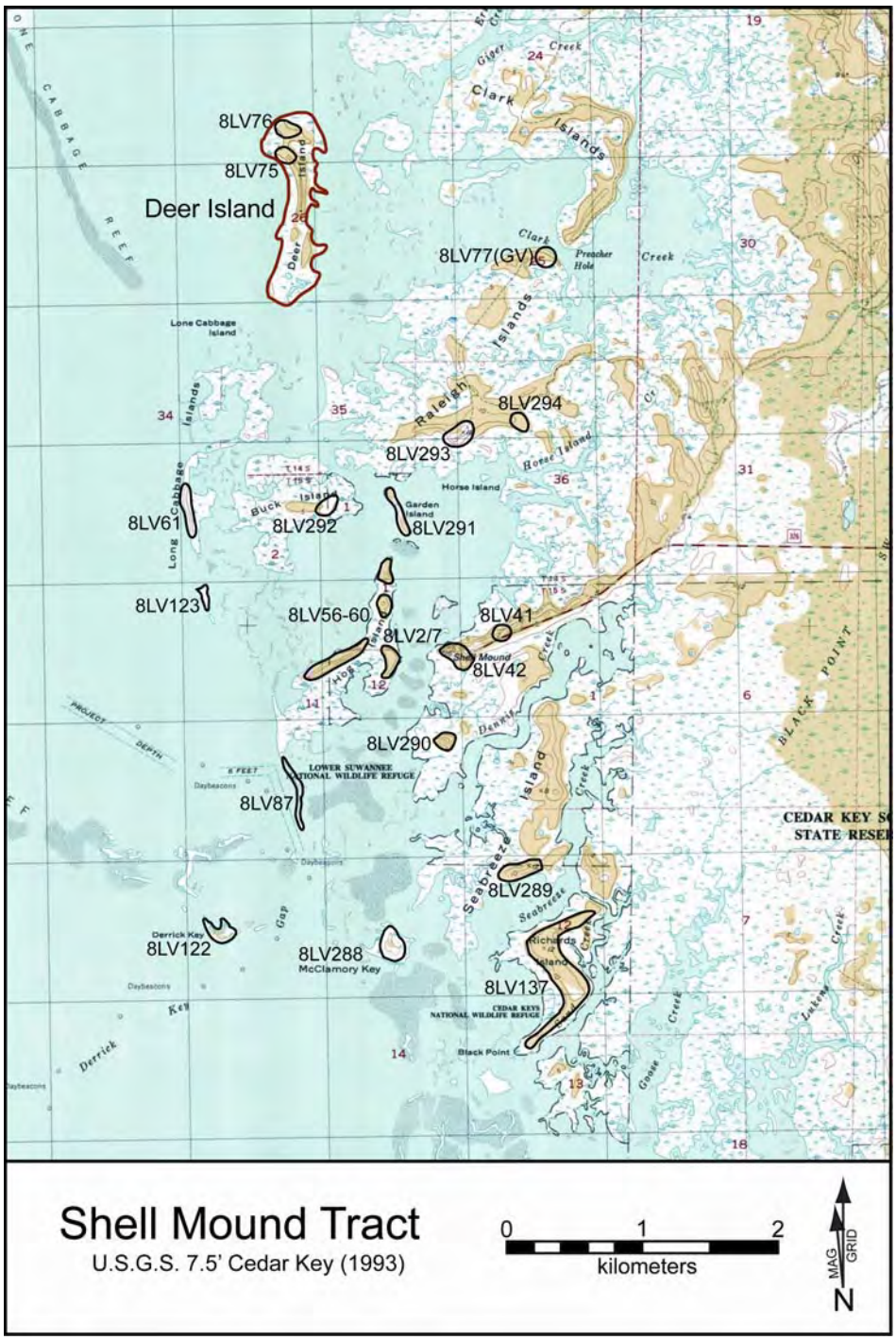

Figure 2-1. Topographic map of Shell Mound tract, showing location of Deer Island (outlined in red) and all sites on record in the Florida Master Site Files.

Site Setting

Deer Island is a private inholding located within the Lower Suwannee National Wildlife Refuge (LSNWR). The property is roughly 9 km northwest of Cedar Key and less than 2 km northwest of the closest boat launch at the Shell Mound campsite. The island is approximately 1,300 m long from north-south, and 250 m across its widest point near the north end of the island. East of the island are large mud flats crisscrossed by oyster shoals and channels that are apparent only at low tide. Approximately 1–1.5 km to the east of Deer Island are Raleigh and Clark islands. Both of these islands are known to contain archaeological deposits but only those on Raleigh Island have been recorded with the Florida Master Site Files. Separating Clark and Raleigh islands is a deep hole in the marsh rumored to be a sink hole in excess of 40 feet deep called Preacher Hole. According to one history, the sinkhole was given its name because a local preacher had become tangled in his nets while fishing and drowned.

Physiography and Vegetation

Deer Island is one of many remnant parabolic dunes in the Shell Mound tract that are believed to have formed in the late Pleistocene (Wright et al. 2005). The island consists of three discrete "upland" units with the largest to the north (Figure 1-3). This part of the island extends ~750 m in a general north/south direction with a ridge that follows the length of the landform. The northern end of this section pinches to a narrow pass and attaches to a lobe of land that was badly damaged in the 1993 "Storm of the Century," losing as much as 10–15 meters of land in this single event (Goodbred and Hine 1995). Tree cover in this section of the island consists of live oak, palm, and juniper with occasional long-leaf pine. The understory is choked with dense palmetto and greenbrier and thick patches of Spanish bayonet that can make traveling through the scrub very hazardous. The western shore of the island is exposed to the Gulf of Mexico with erosional faces reaching 2 m in height at the north end. In parts of this erosional exposure there are archaeological deposits of shell over 1 m thick that have been exposed. Some of these deposits are comprised of dense shell midden containing very little soil. Palmettos and scrub oak become more dominant towards the shore, and beyond that is a long uninterrupted light sand beach littered with shell and occasional artifacts washed loose by high tide and storms surges. The eastern shore of the north end of the island is markedly different. As the island slopes down from the main ridge to the east the vegetation becomes increasingly scrubby with more palmetto and scrub oak. The shoreline is completely covered with cordgrass (*Spartina* spp.) and extends out to the mud flats and oyster bars that surround the entire eastern shore of the island. The lobe that extends the north end of the island has a swale with standing water that is fed by a seep spring. The flora of this part of the island has an understory of very dense palmetto with the canopy dominated by large oaks and pine, with juniper common along the shoreline before giving way to the cordgrass marsh that surrounds the shoreline.

South of the largest upland unit are two smaller units, one each to the southwest and southeast. The southwest unit has a central north-south ridge 125 m in length, and 75 m at its widest point. It is connected to the main upland unit by a narrow ridge of sand that has been blown up off the western beach. The vegetation of this southwest landform

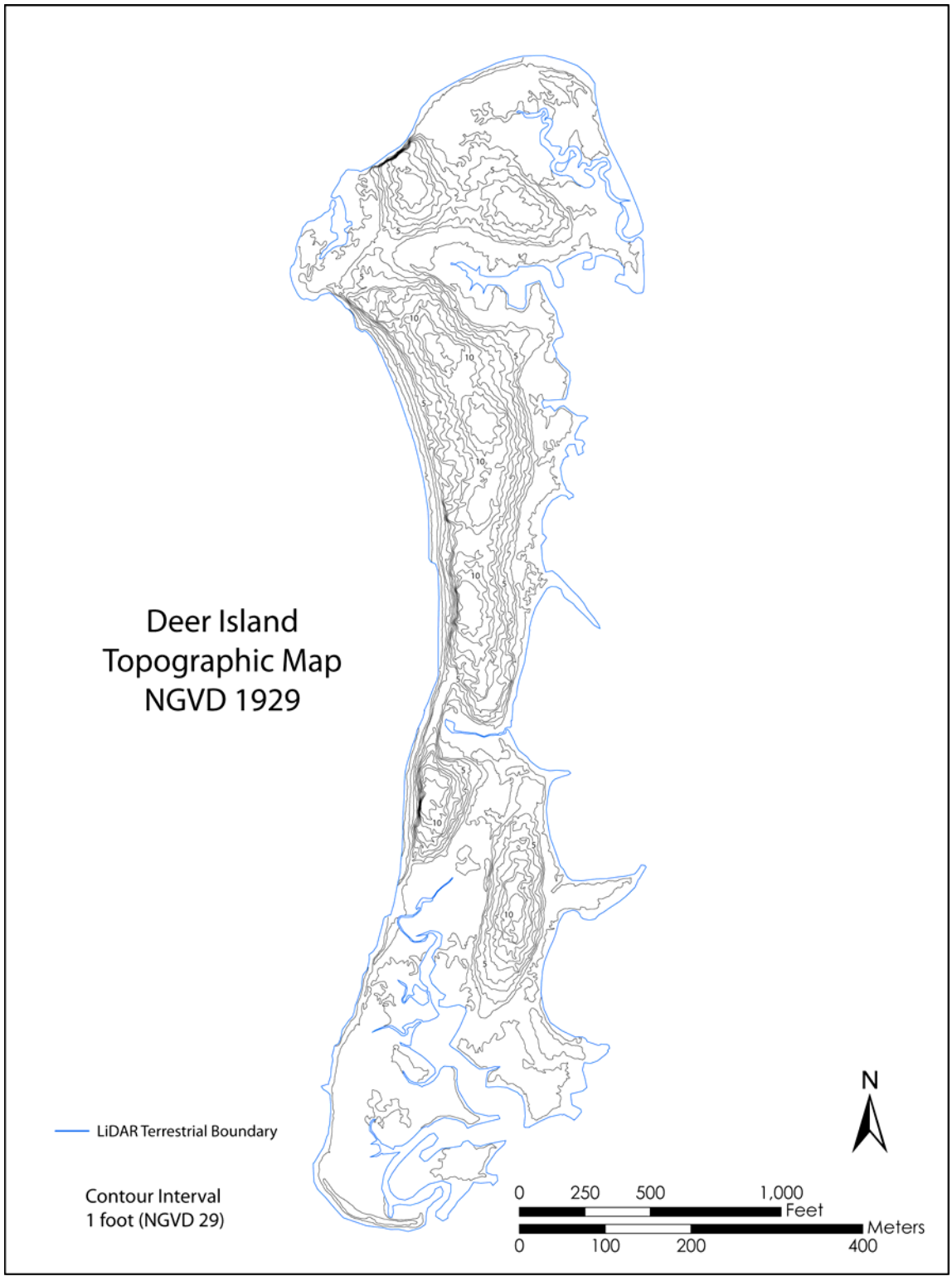

Figure 1-3. Topographic map of Deer Island based on LiDAR data using NGVD 1929 datum (LiDAR projection courtesy of Asa R. Randall).

consists of live oaks and palms with occasional pines, with an understory of very dense thicket. Surveying this area required heavy machete work and even then space was very limited. The western shore of the southwest unit also has a high erosional face that is over 2 m in places with occasional thin deposits of shell midden exposed. The eastern shore of the southwest unit slopes to the east and is more open with larger oaks and ending in cordgrass and a tidal creek that separates it from the southeast island.

The creek and salt marsh that separates the two southern units is 45 m at its widest point. The southeast unit is separated from the other two units at all times except at low tide. Like the north and southwest units, the dominant feature of the southeast unit is a high main ridge that runs roughly north-south. Vegetation over most of the southeast unit is dominated by scrub oak with patchy palmetto common in the understory.

Historic-period land use seems to have had a relatively minimal effect on Deer Island. Presently, there are three main areas of activity on the property, all located on the main island. There are two infrequently occupied primitive campsites, one at the north end of the island above the large erosional face and one located near the center of the island. These camps are no more than clearings with perhaps a few shallow fire pits and sparse historic debris. At the south end of the main island is a large camp, consisting of three permanent structures and a mobile trailer. The camp is frequently occupied by the island's caretaker, owner, and visitors. Even with the structures and frequent human presence in the camp, impact on this part of the island is relatively light due to the diligence of the land owner to preserve and manage Deer Island. There is, however, evidence of use of this part of the island in previous decades in the form of thin historic refuse dumps in and near the present camp.

The USDA (USDA Natural Resources Conservation Service 1996) soil survey describes Deer Island as being comprised of two main soil types: Orsino series sand along the main spine of the northern unit, and Myakka series mucky sand across much of the surrounding, low-lying areas, as well as all of the southeast, and southwest units. Both soils are deep, marine sediments that formed in thick, sandy beds. The Orsino series sand is described as a moderately well drained soil and the Myakka series mucky sand is poorly drained. Some of the soil descriptions reported by the USDA soil survey are inconsistent with what was encountered in subsurface testing on Deer Island. We did not encounter any soils that are consistent with the description of the Myakka series. Intact soils encountered in subsurface testing consisted mostly of fine light gray to brown well drained sand with yellow brown and white sand substrate, which is consistent with the description of the Orsino series soils. The largest variation in soil types tended to occur in anthropogenic deposits. These deposits contained much darker soils with high organic content, and often dense deposits of marine shell.

Previous Research

No previous research has been reported for Deer Island. According to the Florida Master Site Files (accessed 8/18/2011), sites 8LV75 and 8LV76 were reported by Elizabeth Wing in 1958. Wing performed a pedestrian survey of the area and reported both sites as having shell mounds and associated middens with a low density of artifacts. No diagnostic artifacts were reported in the site files, only the "presence of potsherds and

flint." The western shore with the eroding middens is well known to local collectors who frequent the beach in search of artifacts after particularly high tides and storm events.

CONCLUSION

Archaeology survey and test excavations at Deer Island in Levy County, Florida contributed much new information to the ongoing Lower Suwannee Archaeological Survey. Full-coverage survey of the island resulted in the definition of five locations of subsurface archaeological deposits, two of which were previously recorded in the Florida Master Site Files as 8LV75 and 8LV76. Testing at 8LV75 and two of the newly documented sites provided samples for radiocarbon dating, paleoenvironmental reconstruction, and the interpretation of prehistoric land use. The results of survey are reported in the chapter that follows. Results of testing at 8LV75 are reported in Chapter 3, and Chapter 4 provides the results of testing at two new sites at the south end of the island. Recommendations for further work on Deer Island are provided in a concluding chapter of this report, followed by appendices containing the artifact catalog (Appendix A) and radiocarbon data (Appendix B).

CHAPTER 2
METHODS AND RESULTS OF SURVEY

Micah P. Monés

The goal of survey by staff of the Laboratory of Southeastern Archaeology (LSA) was to examine the subsurface of Deer Island through a series of shovel tests along transects spanning the entire landform. This method allowed LSA archaeologists to both locate previously known archaeological deposits and to examine unknown areas. This effort resulted in the documentation of two previously recorded sites and the discovery of three new sites. The results of survey are detailed after describing survey methods.

SURVEY METHODS

Using topographic maps of Deer Island generated from LIDAR data relative to the NAVD 1988, six main transects of shovel test pits (transects T1-T6) were established (Figure 2-1). These transects followed the upland ridges along azimuths aligned with the main contours of the landform. Three additional transects, T-7, T-8, and T-9, were positioned to test the widest parts of the island for additional deposits. Shovel test pits (STPs) were assigned sequential numeric designations that were recorded along with the azimuth of the transects as well as distance to the previous STP. The UTM location of every STP was recorded with a Magellan Mobile Mapper CX Handheld GPS Receiver. All material excavated from STPs was passed through ¼-inch hardware cloth. All recognizable cultural material and vertebrate faunal remains was collected from all STPs. Most STPs were excavated to a depth of at least one meter, and in cases where it was still viable and deemed necessary, excavations continued past a meter with a maximum of 1.25 meters. In a few cases, STPs were terminated early due to large root obstructions or water. If the STP was shallow and/or had not already produced cultural materials, it was moved to a nearby spot and restarted. Along transect 4 STP T4-6 was moved approximately 20 meters to the east and thereafter an azimuth heading of 180 degrees was continued to follow the main landform of the island. After excavation of each STP, a sketch profile was recorded on standardized forms, along with notes on the nature and number of cultural materials recovered. All cultural materials were bagged and labeled with provenience information.

SURVEY RESULTS

Survey and test excavation at Deer Island took twelve days to accomplish with several short excursions beginning in early May of 2010 and extending through early March of 2011. Through to the courtesy of the owner of Deer Island we were permitted to camp on the property while the island was being surveyed. Unlike many of the other islands in the Shell Mound Tract, Deer Island was relatively easy to reach by boat from the Shell Mound Campground's boat ramp as long as the tide was high and the wind had not forced the water off of the shallow mud flats. When the tide is out, or the tidal conditions are less than optimal, the boat ramp ends in thick, viscous mud. The distance from the boat ramp to the dock at the south end of Deer Island is approximately 4 km and with good tides we were able to reach the island in 20 minutes.

Figure 2-1. LIDAR-generated topographic map of Deer Island showing locations of shovel test transects excavated by LSA archaeologists in 2010-2011.

During the 2010-2011 survey of Deer Island, a total of 53 STPs were excavated, 47 of which yielded cultural materials in the form of artifacts, shell deposits, or both (Figure 2-2). Positive STPs were encountered over much of the island, with the exception of the northeastern aspect of the island.

Diagnostic artifacts recovered from the survey indicate that the greatest occupations of Deer Island occurred during the Early and Middle Woodland periods, with nearly ubiquitous Late Archaic remains underlying most of the younger deposits. Five separate loci can be identified based on preliminary results (Figure 2-3). They are defined as discrete areas (Loci A, B, C, D and E) due to relative density of material, clustering of materials, diagnostic artifacts, location, or a combination of these criteria. These should be considered provisional designations and will require additional testing to determine if indeed they are spatially discrete. Loci A and B correspond with the locations of archaeological sites previously recorded with the Florida Master Site Files as sites 8LV76 and 8LV75, respectively. Loci C, D, and E are newly discovered sites and will require eventual reporting to the Florida State Site Files once boundaries are better defined.

Locus A (8LV76)

Locus A is located on the northern end of the island where transects 1 and 2 intersect (Figure 2-4). Identified by the Florida Master Site Files as 8LV76, the site was first reported to the state in 1958. Since then, encroachment of the sea and the 1993 Storm of the Century have had a huge impact on the northern and western shores of Deer Island. The single storm event in 1993 is responsible for washing away several meters of island, leaving an erosional escarpment up to 2m in height. In the escarpment moderately dense shell midden is exposed. The locus sits atop a high point on the main spine of the island that drops off to a low area to the east, to the Gulf to the west, and to the escarpment to the north. The area is covered by oak and palm with palmetto and coontie increasing to the west with proximity to the water. The beach and shallows near the escarpment have many old trees that were felled in the 1993 storm, laying far below where they had once been firmly planted. A modern campground is present atop the site and receives occasional visitors who have left a small amount of debris on the forest floor as well as several fire pits. During the first visit to the island we camped at this spot but abandoned the island because of heavy rains after our first day of work, and a weather report that promised more. Shovel testing of the site yielded seven positive shovel tests out of nine (Table 2-1), with six containing sparse marine shell or moderate density shell midden. The cultural materials in this area are most dense on the highpoint of the locus directly adjacent to the escarpment.

In Locus A, 48 pottery sherds were recovered in shovel tests (Table 2-2; Figure 2-5). The most common pottery type identified in this area is St. Johns plain. A total of 21 of these sherds were recovered and represent 44 percent (by count) of the total number of sherds in Locus A STPs, the majority of which (n = 19) was found in STP T2-2 and possibly represents a single vessel. Plain sand-tempered pottery was the second most common type of pottery, accounting for 29 percent (by count) of the assemblage in Locus A.

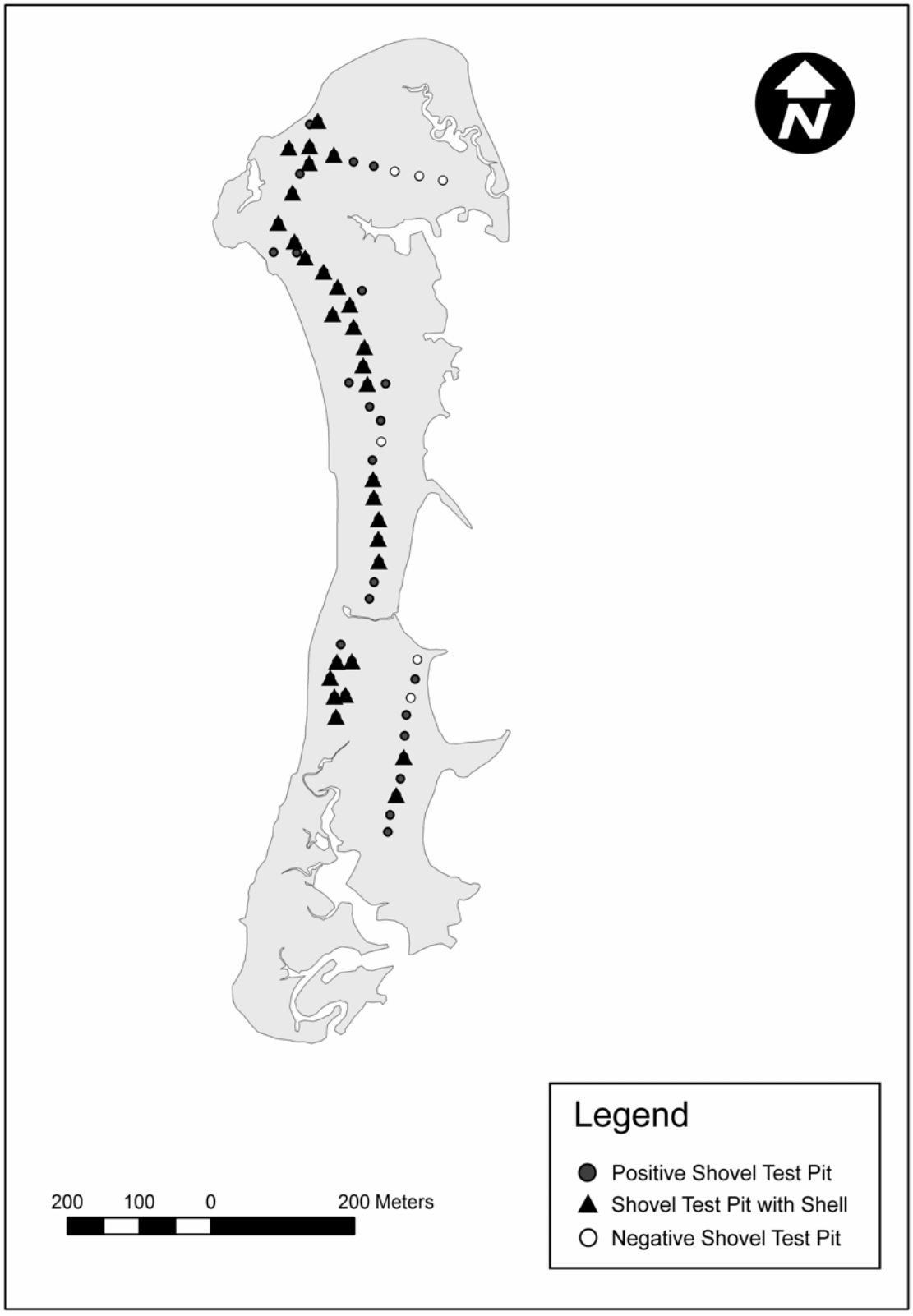

Figure 2-2. Map of Deer Island showing results of shovel testing.

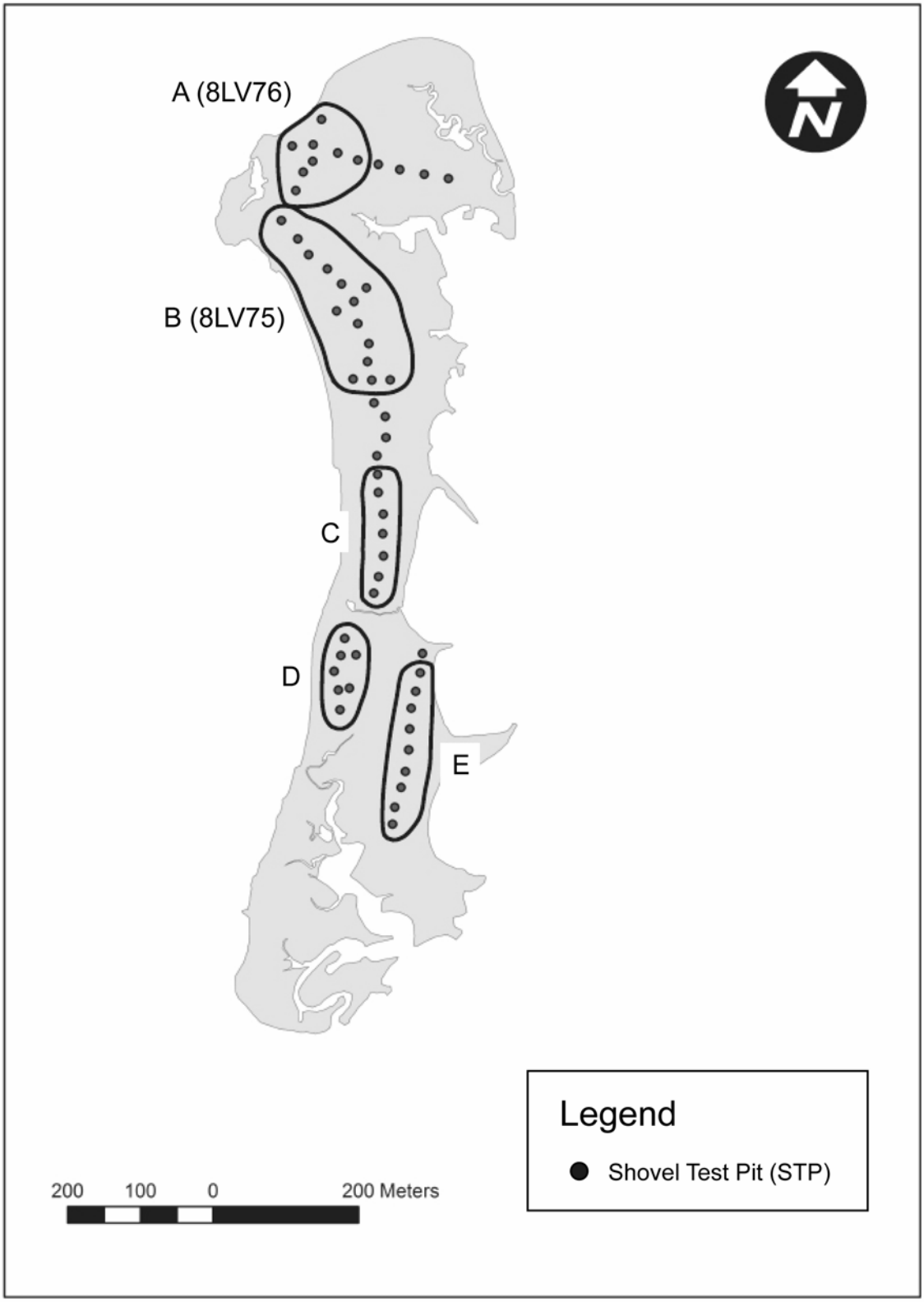

Figure 2-3. Map of Deer Island showing distribution of loci inferred to be discrete archaeological deposits.

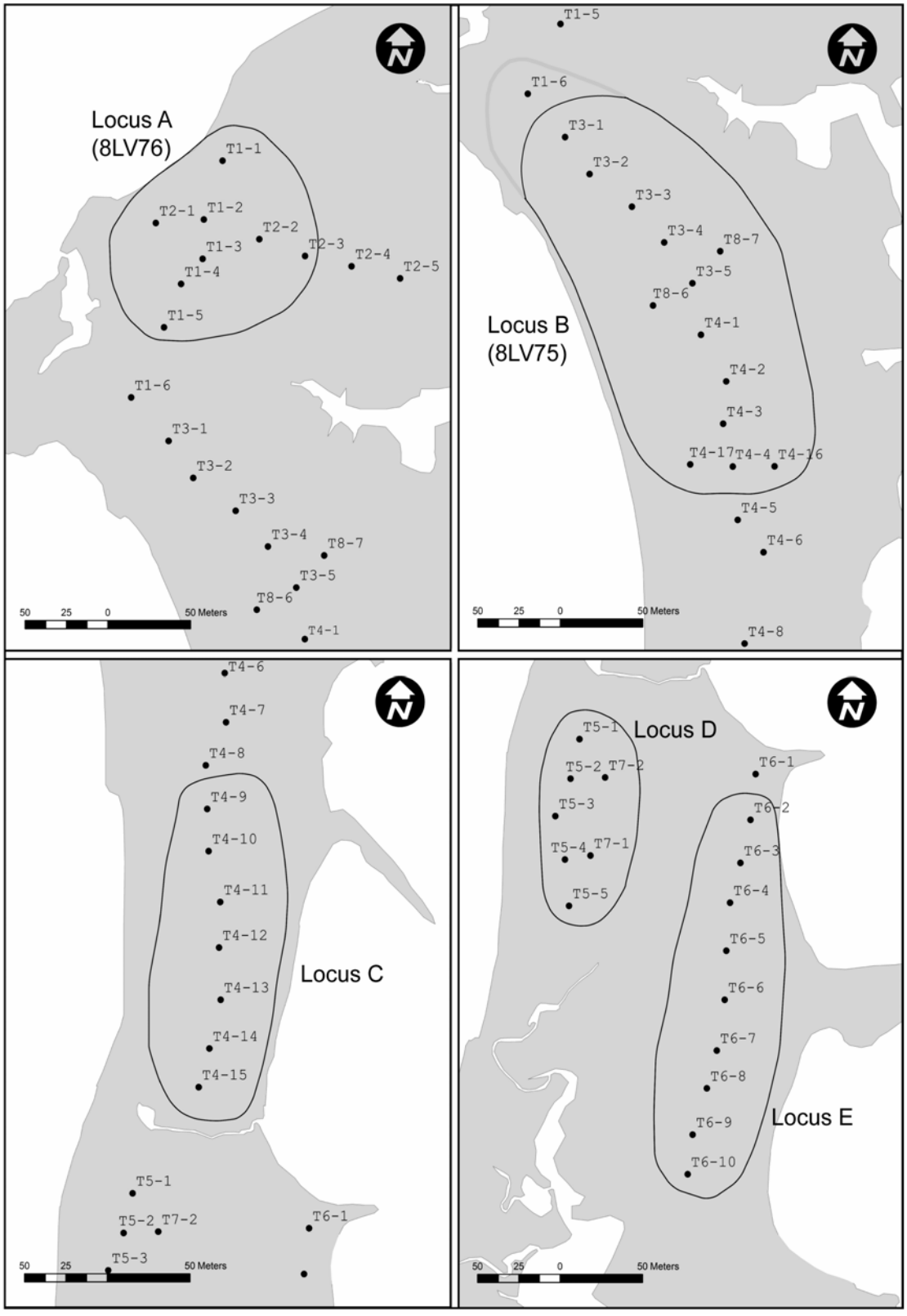

Figure 2-4 Close-up view of loci of Deer Island showing locations of shovel test pits (STPs).

Table 2-1. Inventory of Materials Recovered from Shovel Test Pits (STPs), Locus A (8LV76).

STP#	Pottery Sherd (n)	Lithic Artifact (n)	Vertebrate Fauna (g)
T1-1	11		
T1-2	2		0.6
T1-3	1		
T1-4		1	
T1-5	9		18.9
T2-2	19		15.5
T2-3	6		1.6
Total	48	1	36.6

Table 2-2. Absolute Frequency of Pottery Sherds from Shovel Test Pits (STPs), Locus A (8LV76).

				-------Sand-Tempered-------				
STP#	St. Johns Plain	Pasco Plain	Swift Creek	Plain	Punctate	Incised	Crumb Sherd	Total
T1-1			4	4			3	11
T1-2		2						2
T1-3	1							1
T1-4								
T1-5	1	2		4	1	1		9
T2-2	19							19
T2-3				6				6
Total	21	4	4	14	1	1	3	48

Although the majority of the material recovered from STPs in Locus A appears to be Middle Woodland in age, some deeper deposits were encountered that lacked pottery or other diagnostic artifacts. Midden exposed in the shoreline escarpment suggested that these deeper deposits date to at least the Late Archaic period. We avoided excavation of the escarpment so as not to exacerbate erosion, but were able to photograph, draw, and sample a meter-wide section (Figure 2-6). Descriptions of the strata observed in this section are provided in Table 2-3.

Stratum I in this shoreline profile contained the only visible cultural material with a soil matrix consisting of brown fine sand with moderately dense oyster shell. A single 1-gallon bulk sample was collected from the bottom of the stratum, which reached a maximum depth of 40 cmbs. Wood charcoal taken from the sample was submitted for AMS dating and returned a conventional age estimate of 3510±40 B.P., which is calibrated at the two-sigma range to 1940-1740 cal B.C. Below this shell-bearing stratum is a pale brown, fine sand (Stratum III), with an intervening ~18-cm-thick stratum of brown fine sand (Stratum II) that appears to be a zone of leaching from the midden above. The profile terminates at about 130 cmbs.

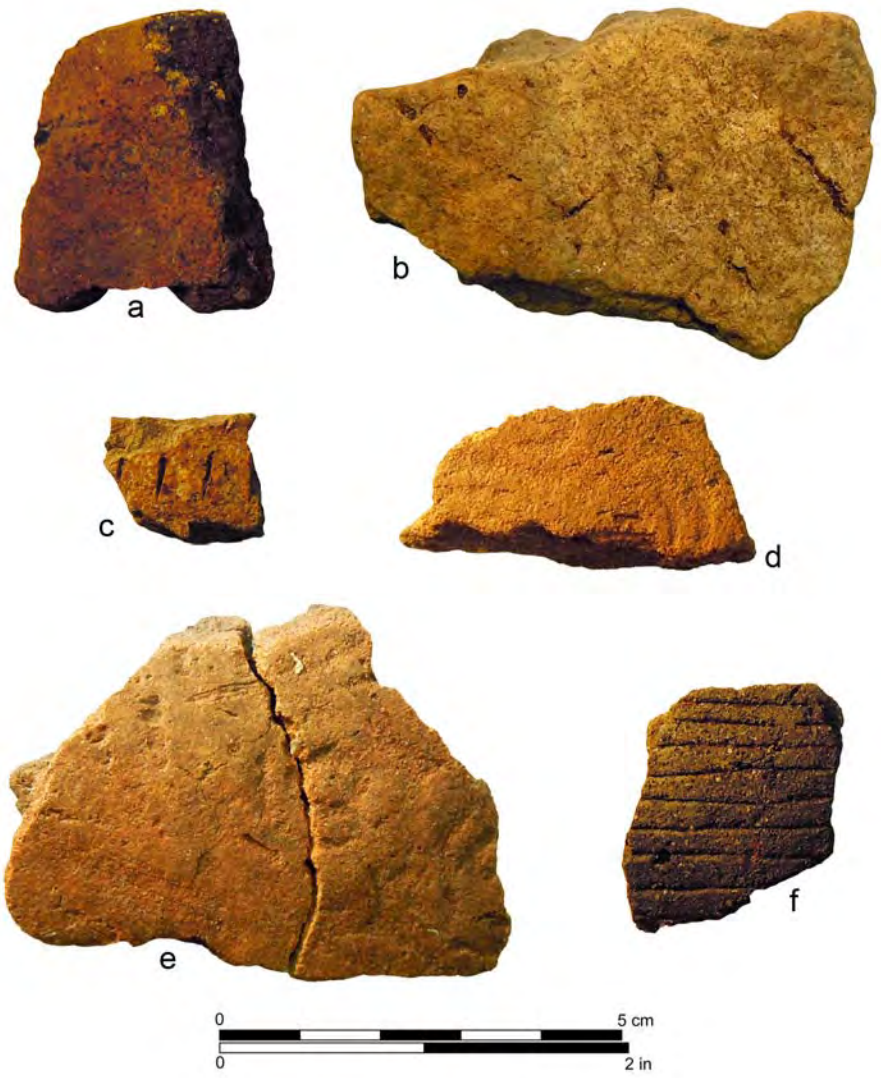

Figure 2-5. Examples of sherds recovered from STPs of transects in Locus A, 8LV76 (a. Pasco plain [T1-5-4]; b. St. Johns plain [T1-5-6]; c. Carrabelle Punctated [T1-5-3]; d, e. Swift Creek complicated stamp [T1-1-2, T1-1-1]; f. incised [T1-5-2]).

Locus B (8LV75)

Locus B is located directly south of a low swale that separates the main ridge of the island from the lobe that extends north and slightly east (Figure 2-3). The western edge of this locus is made up an extensive shell deposit that is actively eroding on the gulf side beach, much like the deposit at Locus A. Directly to the east of the beach is dense underbrush that prevents a clear view of the full extent of above-ground features. During the STP survey, the course of the transect went directly through the dense growth and it was not until the crew went deep into the thicket that an arcuate ridge of shell became visible. The feature consists of a 35-m diameter circular ridge of mostly

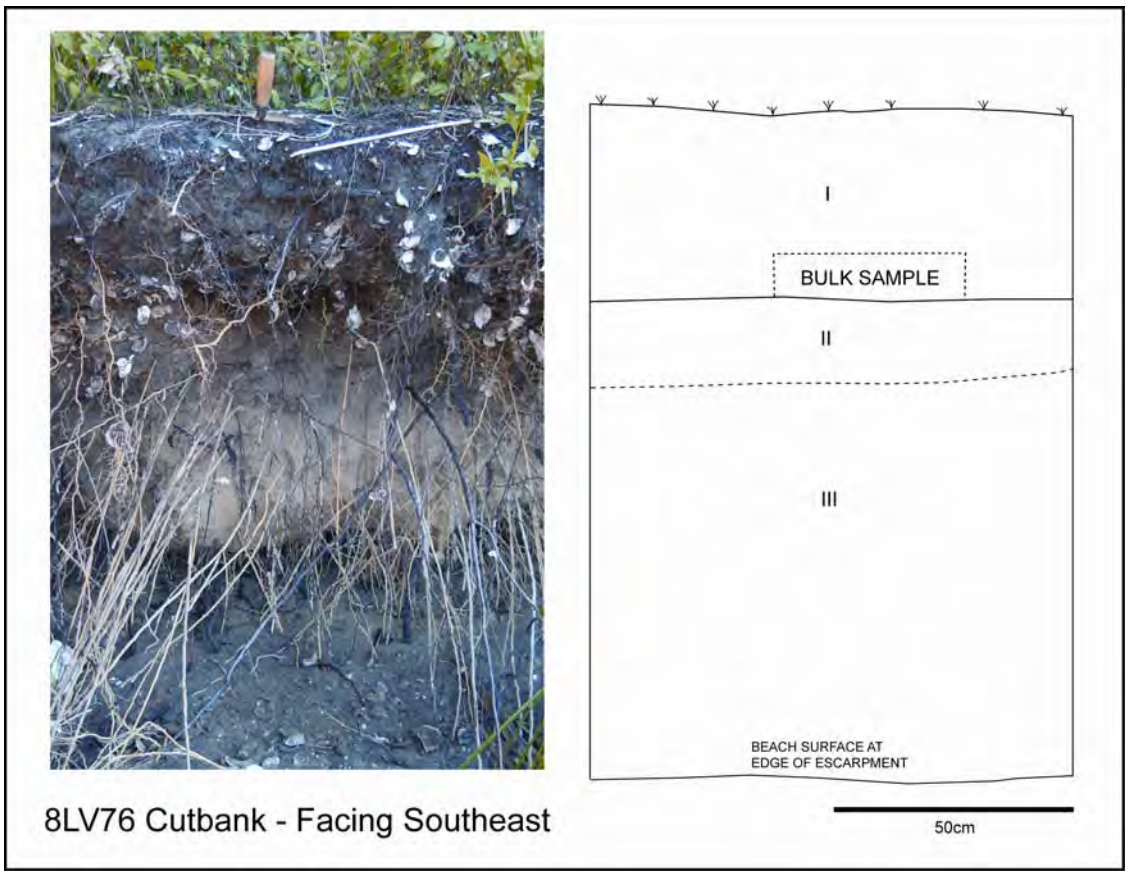

Figure 2-6. Photograph and profile drawing of cutbank at north end of Locus A (8LV76).

Table 2-3. Stratigraphic Units of Profile 1, 8LV76.

Stratum	Max. Depth (cmbs)	Munsell Color	Description
I	40	7.5YR5/3	brown fine sand with moderate density oyster shell
II	58	7.5YR4/3 - 10YR6/3	brown fine sand grading to pale brown fine sand
III	130	10YR6/3	pale brown fine sand

unconsolidated oyster shell that reaches a height of over 1 m. The shell ridge opens to the northeast and its western margin encompasses the dense shell eroding out of the shoreline escarpment.

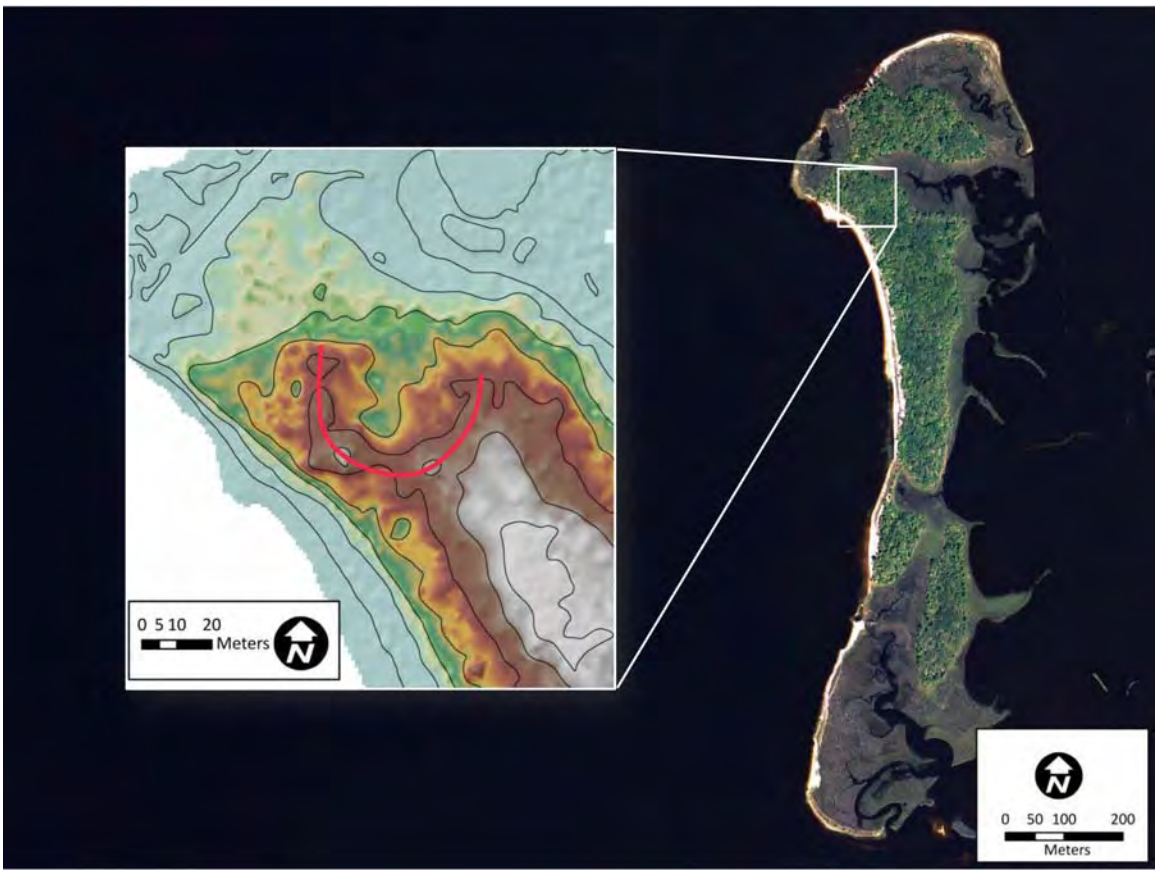

Figure 2-7. Aerial photography of Deer Island with cutout topographic map of 8LV75 derived from LiDAR, showing arcuate shell deposit.

A total of 13 positive shovel tests were excavated in Locus B (Figure 2-4), most of which encountered shell deposits of varying density. STP T3-1 was excavated directly atop the shell ridge and provided a glimpse into its composition. The ring is made largely of unconsolidated oyster shell with frequent pottery along with sparse animal bone. It proved somewhat difficult to dig because the loose shell would slump back into the shovel test from the walls of the pit.

The artifact assemblage from Locus B STPs is dominated by ceramic sherds (*n* = 123), more recovered than from any other area on Deer Island. Plain sand tempered sherds dominate the recovered materials at 51 percent (*n* = 63). The most common diagnostic sherds found in this locus are Pasco Plain at 19 percent (*n* = 23) followed by Deptford simple stamp (Figure 2-8) and linear check stamped making up 8 percent (*n* = 11) of total sherds. Four Type G crown conch hammers (Luer 1986) were found in this locus as well, as was a possibly modified columella and a flaked *Mercenaria* shell.

Table 2-4. Inventory of Materials Recovered from Shovel Test Pits (STPs), Locus B (8LV75).

STP#	Pottery Sherd (n)	Lithic Artifact (n)	Vertebrate Fauna (g)	Modified Shell (n)[2]	Historic Artifact (g)
T3-1	44	2	14.2		
T3-2	10		24.2		
T3-3	11		16.2		
T3-4	2		119.0		5.5
T3-5	5		16.6	1	
T8-6	5		6.5		
T8-7		6			
T4-1	26		14.1	2	
T4-2	2		0.1	2	
T4-3	12	9[1]			
T4-4	4		14.2	1	
T4-16	2	2	1.2		
T4-17			5.6		
Total	123	19	231.9	6	5.5

[1] core fragment.

[2] modified shell includes a ground columella, flaked *Mercenaria*, and *Melongena* hammer with hafting holes and battering.

Table 2-2. Absolute Frequency of Pottery Sherds from Shovel Test Pits (STPs), Locus B (8LV75).

	St. Johns	Pasco	Dept-	----------Sand-Tempered----------				Crumb	
STP#	Plain	Plain	ford	Plain	Incised	CS	UID	Sherd	Total
T3-1	1	10		18		2	1	12	44
T3-2		2	3	4		1			10
T3-3		6	1	2		2			11
T3-4		1	1						2
T3-5				5					5
T8-6			3	2					5
T8-7									
T4-1		2	2	15	1			6	26
T4-2			1	1					2
T4-3				12					12
T4-4		2		2					4
T4-16				2					2
T4-17									
Total	1	23	11	63	1	5	1	18	123

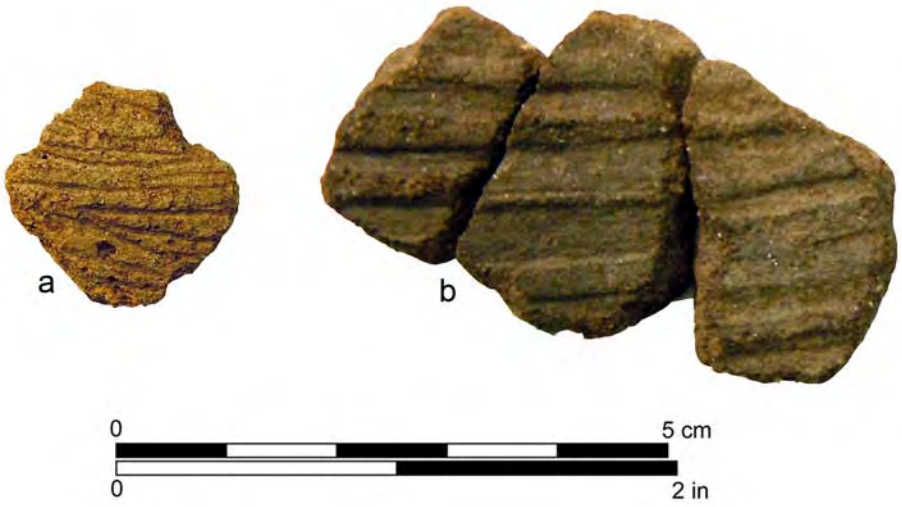

Figure 2-8. Examples of sherds recovered from STPs of transects in Locus B, 8LV75 (a. incised [T4-1]; b. Deptford Simple Stamp [T3-2]).

Locus C

Locus C is located at the southern end of the main island (Figure 2-3). Here, Deer Island narrows to less than 100 m in width and is perhaps a maximum of 2 m above sea level. The owner of the island has a well established camp with an assemblage of small structures, a well, and a dock on the east shore. The owner has largely cleared the area of brush but retains the larger oak and palm trees. The southern end of the locus ends in a small tidal creek and marsh that separates the main island from the two smaller islands.

The survey of this area yielded seven positive shovel tests (Figure 2-4; Tale 2-6). The transect was aligned with the general north-south orientation of the island and terminated when salt marsh was encountered south of the main camp. Most shovel tests encountered moderately dense shell midden that likely extends under much of Locus C. Some scattered shell midden was seen on the surface near the eastern shore of the cleared ground of the camp with some exposed midden and occasional pottery sherds that are visible at low tide near the dock. Most of the intact shell deposits occurred in the first 50 cm of testing with some sparse shell found below, but never in the same density as the upper deposit.

Thirty ceramic sherds were recovered from the STPs of this locus, 21 of which are Pasco Plain, making up 70 percent (by count) of the assemblage (Table 2-7). The remainder of the ceramics are sherds of plain sand-tempered wares. In the excavation of STP T4-11, two lithic artifacts of special interest were recovered (Figure 2-9). Between 40-50 cmbs a finely flaked trifacial stone artifact was found and a groundstone bannerstone fragment was recovered within the upper 20 cm. Both artifacts were found in shell midden with no ceramics below ~40 cmbs. The midden contained moderately dense shell with plentiful vertebrate faunal remains. The bannerstone fragment appears to

be made of non-local red siltstone. The artifact is a medial fragment of what is likely a Double-Edged or Southern Ovate type bannerstone. These types of bannerstones are found in Archaic mounds in northeast Florida but are exceedingly rare on the northern Gulf coast. This type of bannerstone has been recorded in Mount Taylor (ca. 5200-4700 cal B.P.) contexts in the St. Johns river drainage (Sassaman and Randall 2007). It is unclear if the bannerstone fragment is indicative of the age of the deposit in which it was found or if it occurred incidentally in a later context, possibly being picked up by an individual at a later time or perhaps it was an heirloom item that was deposited at a later date. The remaining STPs proved to have only a moderate density of artifacts, with sparse to dense oyster shell midden occurring most often in the upper 50 cm, often with some moderate expression at the surface

While excavating shovel test T4-13 after only a few shovels full of soil, skeletal elements that were believed to be human were encountered. After pictures were taken and a description of the contexts was recorded, all material was returned into the STP. After review of the photographs by a zooarchaeologist, it was determined that they were not human, but most likely pig.

Table 2-6. Inventory of Materials Recovered from Shovel Test Pits (STPs), Locus C.

STP#	Pottery Sherd (n)	Lithic Artifact (n)	Vertebrate Fauna (g)	Historic Artifact (g)
T4-9	1	1	0.6	
T4-10	9		3.3	1.3
T4-11		2[1]	8.1	0.9
T4-12	15	15	38.2	
T4-13	4		18.6	
T4-14	1	1	2.8	
T4-15		2		
Total	30	21	71.6	2.2

[1] Bannerstone fragment and trifacially flaked tool

Table 2-7. Absolute Frequency of Pottery Sherds from Shovel Test Pits (STPs), Locus C.

STP#	Pasco Plain	Sand Tempered Plain	Total
T4-9		1	1
T4-10	6	3	9
T4-11			
T4-12	13	2	15
T4-13	1	3	4
T4-14	1		1
Total	21	9	30

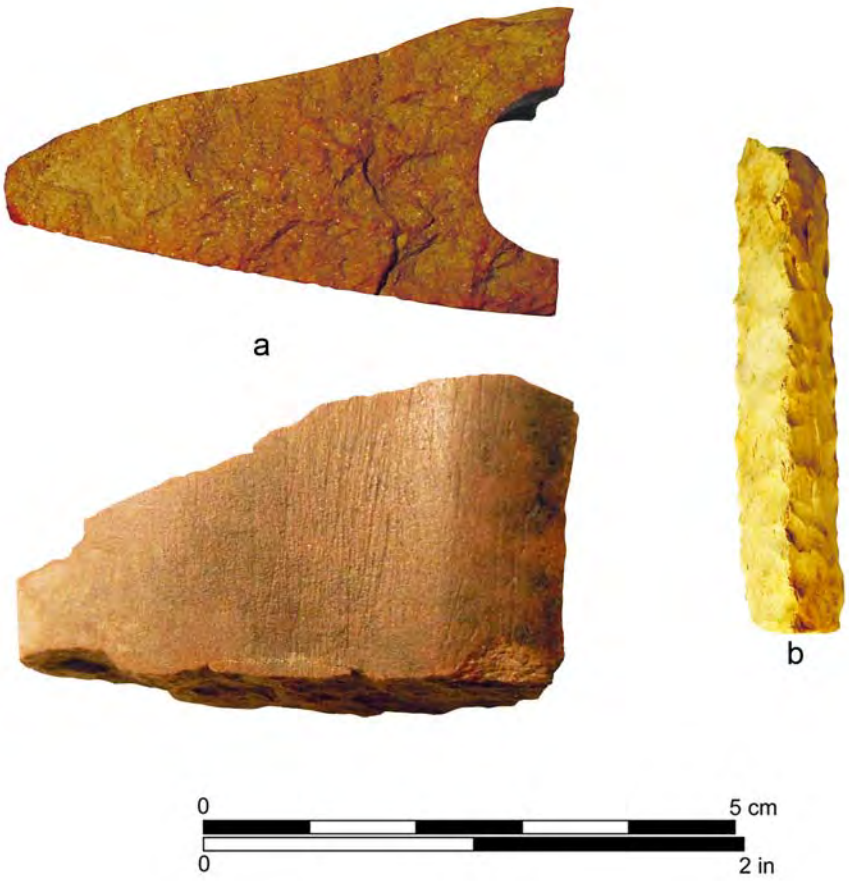

Figure 2-9. Examples of artifacts recovered from STPs of transects in Locus C, Deer Island South (a. bannerstone fragment, top and side views; c. trifacially flaked tool [T4-11-1]).

Locus D (Deer Island Southwest)

Locus D is a small island southwest of the main landform (Figure 2-3). The area is not truly a separate island, as it is connected to the main island via a narrow beach dune that runs along the western shoreline. The area to the southwest measures approximately 140 m north/south and a maximum of 70 m east/west. The western shore faces the Gulf of Mexico with a sandy beach and an erosional face that reaches a height of approximately 2 m. Adjacent to the beach the area has a short ridge that rises to 3 m amsl.

The western shore of Locus D has some moderately dense midden exposed in an erosional face that abuts the beach. The dislodged surface scatters of mostly oyster shell are eroding from intact archaeological deposits. Occasional pottery is seen in these scatters, most of which is plain sand-tempered sherds, as well as a small number with

check stamping. There are no other exposed cultural materials in Locus D. Shovel testing proved to be somewhat problematic in this area due to the dense undergrowth and roots.

A total of seven STPs were excavated on Deer Island Southwest with six containing cultural materials (Figure 2-4; Table 2-8). Locus D is not defined by a particular cluster of materials or diagnostic types, but by geographic position. Cultural materials recovered in Locus D occurred in both shallow and more deeply buried context. Deposits are located from immediately below the topsoil to at least 135 cmbs. Sparse midden associated with ceramics was present in three of the shovel tests located on the landform's highest point near the center with more deeply buried midden at the south end of the locus in which no ceramics were found in excavation. The ceramic assemblage is largely unremarkable in Locus D. A scant 10 sherds were recovered in survey, three St. Johns plain and seven plain sand-tempered sherds. Four lithic flakes were found in testing along with two Type G crown conch hammers (Luer 1986), and example of which is seen in Figure 2-10.

Table 2-8. Inventory of Materials Recovered from Shovel Test Pits (STPs), Locus D.

STP#	Pottery Sherd (n)	Lithic Artifact (n)	Vertebrate Fauna (g)	Modified Shell (n)[1]
T5-2	5	2	9.4	
T5-3	1		12.7	
T5-4	4		15.4	
T5-5			36.0	2
T7-1		1		
T7-2		1	3.7	
Total	10	4	77.2	2

[1] Crown conch (*Melongena corona*) hammers with hafting holes and battering.

Table 2-9. Absolute Frequency of Pottery Sherds from Shovel Test Pits (STPs), Locus D.

STP#	St. Johns Plain	Sand Tempered Plain	Total
T5-2		5	5
T5-3		1	1
T5-4	3	1	4
Total	3	7	10

Figure 2-10. Example of hafted hammer (Type G) made from shell of Crown conch (*Melongena corona*), Locus D, STP T5-5-2.

Locus E (Deer Island Southeast)

Locus E encompasses most of the southeast portion of Deer Island (Figures 2-3). This portion of the island is ~270 m long north/south, and 70 m at its widest. The landform has an upland ridge that runs down the center and is covered by dense upland scrub oak and palmetto. With proximity to the shoreline and a decrease in elevation the vegetation changes to large pines, juniper, and finally high tide bush before the landform ends in the grassy marsh that surrounds the entire shoreline.

Archaeological deposits were located over most of Deer Island Southeast (Figure 2-4), all below 45 cmbs with the densest deposits occurring atop the ridge near the center of the landform in STPs T6-6 and T6-7 (Table 2-10). A sparse oyster shell midden was located in T6-6 with a single fiber-tempered ceramic sherd and three lithic flakes. The midden deposit is discrete and no materials were located above 45 cmbs. The shell that was recovered in testing appeared to be heavily eroded and friable in comparison to most shell found throughout the survey. Thirty meters to the south, STP T6-7 contained 74 lithic artifacts in shell-free strata, all below 58 cmbs. The amount of lithic artifacts found in this single STP is greater than all the lithic artifacts recovered from all of the loci.

Table 2-10. Inventory of Materials Recovered from Shovel Test Pits (STPs), Locus E.

STP#	Pottery Sherd (n)	Lithic Artifact (n)	Vertebrate Fauna (g)
T6-4		1	
T6-5		3	
T6-6	1	1	
T6-7		74	
T6-8		2	0.1
T6-9		3	
T6-10		7	
Total	1	93	0.1

Locus E is the only area without deposits in the upper levels of the STPs. On the rest of Deer Island these shallower deposits commonly contained Woodland-era diagnostic sand tempered pottery as well as dense shell midden.

Survey Summary

The 2010-2011 LSA reconnaissance survey of Deer Island recovered diagnostic artifacts that indicate an intensive Woodland occupation with possible earlier occupations as old as 4500 B.P. While no conclusive data was collected for a 4500 B.P. date of occupation, the presence of the bannerstone fragment and the trifacially flaked lithic artifact may indicate people were present on the island during the middle Holocene. Further evidence for this early date of occupation can be inferred by the presence of artifacts in shell-free strata located below strata with shell and artifacts of lesser antiquity. At times, the artifacts continued well past 1 m, below the depth easily recovered in shovel test pits. The remaining materials in the artifact assemblage indicate that the bulk of the archaeological deposits encountered during the 2010-2011 survey accumulated during the terminal Late Archaic to Middle Woodland periods.

As a result of this first round of investigation, five loci were established based on relative density of material, clustering of materials, diagnostic artifacts, location, or a combination of these criteria. The first two Loci, A and B, approximate the locations of sites 8LV76 and 8LV75 respectively, as they were described by Elizabeth Wing in 1958 in the Florida Master Site Files. Locus A is defined by the presence of two, or possibly three distinct components. The oldest component is Late Archaic with a date range of cal 1940-1740 cal B.C. The second and possibly third components include both Swift Creek (A.D. 150-350; Milanich 1994:144) and Weeden Island (A.D. 250-1000; Milanich 2002:352) ceramic sherds. The four complicated stamped sherds belong to types defined as Swift Creek, while the Carrabelle Punctated and incised sherds are common Weeden Island types. It is possible that these types, which are part of the Weeden Island series in Willey's (1949) original typology, may represent a single occupation due to the overlap of the dates assumed to represent the duration of Swift Creek and Weeden Island materials. St. Johns ceramics were actually the most common type of pottery found in Locus A making up 44 percent of the total ceramic artifacts with 19 of the sherds coming

from a single STP. Pasco Plain was also present, but far less common, with only four sherds recovered. These types are defined largely by temper, which is not necessarily the best temporal indicator. On Florida's North Gulf Coast, St. Johns and Pasco pottery have been found in contexts with Deptford and Weeden Island traditions indicating the persistence of the pottery type during all of the Woodland periods in the Shell Mound Tract (Sassaman et al. 2010).

Locus B is defined by the only above-ground feature observed on Deer Island. Subsurface shovel testing near the shell ring revealed the densest archeological deposits for the entire survey with a ceramic assemblage dominated by Deptford Linear Check Stamped and Simple Stamped sherds. The assemblage points to a single occupation by Deptford people during the Early Woodland period.

Locus C is the southern most of the loci on the main portion of Deer Island. Shovel tests yielded 29 ceramic sherds in total, 21 of which are Pasco plain and the remainder sand tempered plain, revealing an occupation sometime during the Woodland period. Two very interesting lithic artifacts were found in STP T4-11 at the north end of the main camp. A finely flaked trifacial tool was recovered in relatively close proximity to a bannerstone fragment. Both artifacts were recovered in shell midden in which no pottery was recovered. The bannerstone and the three sided flaked artifact may indicate an earlier occupation by people during the Late or Middle Archaic periods.

Locus D is defined largely by topography. Survey in this locus recovered only ten ceramic sherds in total, three St. Johns and seven plain sand tempered sherds. The pottery indicates a general Woodland occupation. The densest midden in this locus was located near the center of the landform but dense vegetation made testing very difficult.

Locus E is designated by both topography and artifact assemblage. The southeastern landform on which it is located has no surficial expression of past human occupation. All of the archaeological deposits are located below 45 cmbs with lithics artifacts being the dominant artifact type by far. Throughout the rest of Deer Island, a total of 44 lithics were recovered in shovel testing. Locus E yielded 93 lithics in STPs, 74 of which came from a single shovel test. The single fiber tempered pottery sherd was found in association with sparse oyster shell, and only one additional shovel test out of ten excavated in Locus E contained any shell whatsoever. There is no evidence for a Woodland occupation in Locus E. The youngest deposit is likely no younger than about 3000 years old, the same time people stopped manufacturing fiber-tempered pottery in the region. Several shovel tests yielded artifacts beyond 1 m in depth and beyond what is possible to excavate in shovel testing. The possibility for yet older deposits exists in Locus E.

The 2010-2011 survey of Deer Island has revealed that much of the island is mantled by shell-bearing archaeological deposits laid down approximately 2500-1000 years ago. These deposits contained Deptford, Swift Creek and Weeden Island ceramic types with plain St. Johns, Pasco and sand-tempered wares making up the majority of ceramic assemblages throughout. Anthropogenic deposits of shell were discovered in all loci with Locus E having only two shovel tests that contained sparse shell. Wherever shell was present, the conditions proved favorable for the preservation of vertebrate

fauna. The vertebrate fauna from the survey of the island are unanalyzed to date. The deposits of shell midden on Deer Island are ubiquitous, especially between Loci A-C. The density and presence of shell midden deposits is variable; only one small stretch of four STPs was absent of shell. The greatest concentration of artifacts and shell occurs in Locus B, in and around the shell ring. Older deposits occupied prior to 2500 B.P. are located in at least two areas, at the far northern end of Deer Island and the other located at the southeastern extent. It is likely that there are more deposits of equal or greater age on the island, but they were not encountered or recognized in shovel testing. The results of this preliminary phase of the investigation made it possible to focus test excavations in areas of greatest artifact density and organic preservation, the results of which are presented in the next two chapters.

CHAPTER 3
METHODS AND RESULTS OF TEST EXCAVATION, 8LV75

Neill J. Wallis

Site 8LV75 is a large arcuate ridge of shell located on the northwest corner of Deer Island, in the area designated Locus B during survey. Testing during the 2010 and 2011 field visits was designed to achieve two goals. First, active erosion from the western shoreface of the site necessitated rescue of stratigraphic samples. Second, the preliminary fieldwork was aimed at defining the chronology of site occupation and delineating intrasite variation across areas of the distinctive arcuate-shaped shell ridge. The testing consisted of three 1 x 1 m test units, two 1 x 2 m test units, and systematic cleaning of a 1-m portion of the site's eroding shoreface. This chapter describes the methods and results of these excavations.

BACKGROUND

Site 8LV75 was first recorded for the state site file in 1958 by Elizabeth S. Wing. In a brief site form, Wing documented the location of the site on the northwestern shore of Deer Island and characterized it as a "shell mound" that extended 75 yards along the beach and an unknown distance inland from the beach. A surface collection was made that consisted of 86 sherds and three chert artifacts. The Florida Museum of Natural History made two accessions of surface collected material from 8LV75 in the early 1970s, perhaps the result of this or subsequent site visits. The collections include 72 artifacts, primarily made up of Deptford series, St. Johns Plain, sand-tempered plain, and cordmarked sherds. These large surface collections indicate that the site has been eroding into the Gulf of Mexico for many decades. Avocational surface collecting along the beach has likely been constant, but apparently no subsurface investigations had been conducted prior to work by the LSA in 2010.

Although precise dimensions are pending, the horseshoe-shaped ridge at 8LV75 can be tentatively defined as rising between 1 and 2 m above the natural ground surface, up to nine feet above mean high water (Figure 3-1). The core of the site extends approximately 70 m from north to south and somewhat less from east to west. The apex of the shell ridge is on the Gulf-facing side (facing southwest) and is actively eroding into the Gulf, as indicated by a steep cutbank, fallen trees, and an overwash zone of jumbled oyster shells on the ridge summit (Figure 3-2). The western, northern, and southern extensions of the ridge define a low central area that extends northeast toward an opening in the ridge arc. The arcuate shape of the site is not easily detected in the topographic map derived from LiDAR coverage but was quite obvious during fieldwork.

METHODS AND RESULTS OF 2010 AND 2011 INVESTIGATIONS

Archaeological investigations of 8LV75 were conducted by the LSA on October 1-2, 2010 and March 8-9, 2011. Profile 1 was excavated adjacent to the eroding shoreface

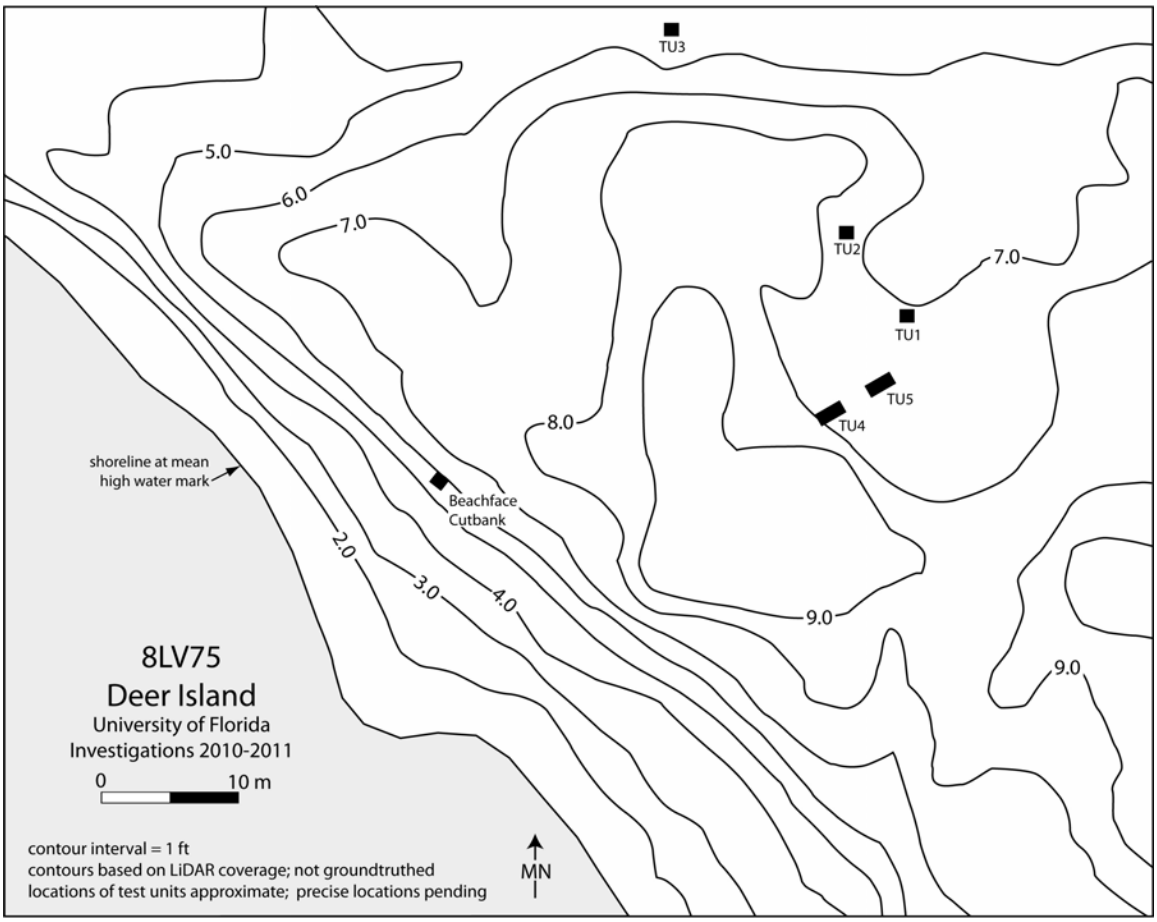

Figure 3-1. Topographic map of 8LV75 derived from LiDAR coverage with approximate location for LSA test units (precise locations pending).

at the location of maximum height of the shell ridge. This location was most suitable for investigating the full history of shell deposition, and particularly for identifying the earliest date associated with site formation. A one meter long section of the eroding shoreface was "cleaned" by cutting back, approximately 10 cm, the irregular surface of the existing profile with a trowel. In addition, a sterile beach sand deposit that superposes the base of the site was excavated in order to expose the entire stratigraphic sequence down to culturally sterile soil.

During the initial site testing in October 2010, 1 x 1-m test units were excavated in various locations for the purpose of delineating the potential for subsurface variation across different surface features, such as ridge summits, depressions, and "interior" and "exterior" spaces defined by the arcuate ridge. Thus, Test Unit 1 (TU1) was located near the middle of the central depression defined by the arcuate ridge. Test Unit 2 (TU2) was excavated approximately 8 m northwest of TU1 and adjacent to the interior edge of the northern portion of the arcuate shell ridge. Test Unit 3 (TU3) was excavated about 10 m northwest of the exterior edge of the shell ridge, placing it approximately 20 m northwest of TU2. Following these tests, excavations in March focused on systematic investigation

Figure 3-2. Facing east toward eroding shoreline at location of Profile 1 at 8LV75. Note fallen trees and shells lining the beach.

of the "interior" spaces of the arcuate ridge. Accordingly, two 1 x 2 m test units, Test Unit 4 (TU4) and Test Unit 5 (TU5), were placed 2 m apart and oriented along a line that approximately bisects the northern and southern distal extensions of the ridge. This bisecting line will serve as a baseline for orienting future excavation units.

All test units were excavated in 10-cm arbitrary levels within observable strata and all fill passed through 1/4-inch hardware cloth. All artifacts and vertebrate fauna were collected from the screen and bagged by level. Observations made concerning the content and composition of each level, depths taken from a corner datum at each unit, and any discernable features were recorded on forms. Upon the completion of unit excavation, profiles were cleaned, photographed, and drawn to scale. Descriptions of strata, including texture, density, and color, were recorded on profile drawings.

Profile 1

A photograph of the west shoreface at Profile 1 is provided in Figure 3-3, and Figure 3-4 displays a corresponding scaled drawing. Table 3-1 provides descriptions of the strata indicated in Figure 3-4.

Figure 3-3. Photograph of Profile 1, west shoreface (facing east), 8LV75.

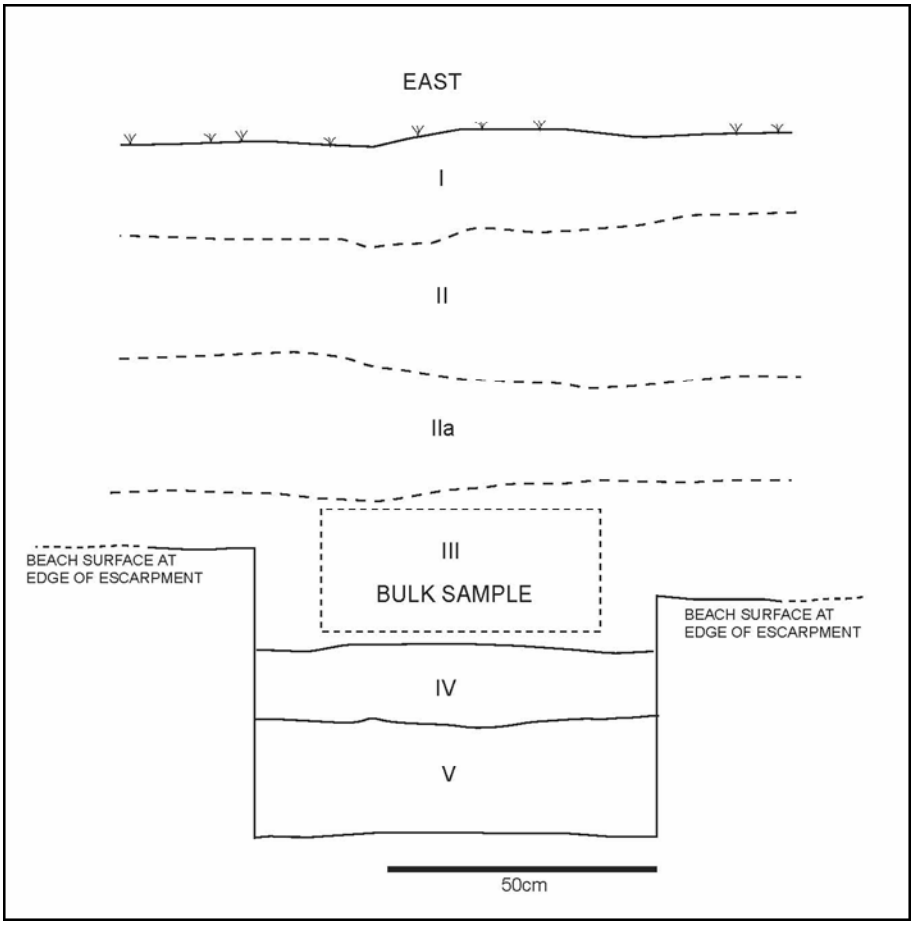

Figure 3-4. Stratigraphic profile of Profile 1, 8LV75.

The cleaned profile revealed 96 cm of vertical shell deposits comprised overwhelmingly of oyster (Strata I- III). Within this column of moderately to densely packed whole oyster shells, several strata were identified, primarily on the basis of amount and color of fine sand matrix. Stratum I contained a matrix of light brownish gray fine sand and roots that extended to 18 cmbs, while directly underneath, Stratum II contained a dark grayish brown fine sand and was devoid of roots. Strata II and III are identical, but are separated by Stratum IIa, a roughly 25-27-cm thick layer that is devoid of any matrix, perhaps representing a washout episode from a high water event. Stratum III is the deepest dense shell-bearing deposit and terminates at 96 cmbs. A small bulk sample was collected from Stratum III out of the wall of Profile 1. This bulk sample contained a St. Johns Plain sherd and a sample of charcoal that yielded an AMS assay of 1990 ± 40 B.P., which gives a two-sigma calibrated range of 90 B.C. to A.D. 80 (see Appendix B).

Beneath the thick deposit of dense oyster that terminates at the base of Stratum III, Stratum IV is less than 15 cm thick and contains only sparse and fragmented oyster shells

Table 3-1. Stratigraphic Units of Profile 1, 8LV75.

Stratum	Max. Depth (cmbs)	Munsell Color	Description
I	18	10YR6/2	whole oyster shell moderate to high density with fine sand and moderate root density
II	41	10YR4/2	whole oyster shell moderate to high density with fine sand
IIa	68		whole oyster shell; matrix washed out from possible high water event
III	96	10YR4/2	whole oyster shell moderate to high density with fine sand 1990 ± 40 B.P.
IV	110	10YR3/1	fine sand with sparse oyster shell (possible buried A horizon)
V	132	10YR5/4	fine sand; the contact with stratum III is diffuse. There is leaching between III and IV that appears to be indicative of pedogenesis

and a very dark gray fine sand, possibly representing a buried A horizon. Culturally sterile yellowish brown fine sand (Stratum V) is immediately below Stratum IV, and the diffuse contact between these two strata appears to be indicative of pedogenesis. Stratum V extended to the maximum depth of the cleaned profile at 132 cmbs.

Test Unit 1

Photographs of the north and west profiles of TU1 are provided in Figure 3-5, and Figure 3-6 gives the scaled drawings of these profiles. Table 3-2 provides descriptions of the strata marked in Figure 3-5, and Table 3-3 gives an inventory of the archaeological materials recovered by level and column strata.

TU1 was excavated near the center of the arcuate ridge in a low elevation area that exhibited no shell on the ground surface. Excavation of TU1 revealed three distinct strata, only one consisting of shell-bearing midden. Extending from the ground surface to 21 cmbs, Stratum I is comprised of brown fine sand and contains a light density of artifacts that include pottery and vertebrate fauna. Stratum II, which is a moderately dense shell midden consisting of mostly crushed oyster shell in a brown fine sand matrix, yielded the majority of artifacts from the test unit, comprised primarily of Deptford series ceramics, as well as vertebrate fauna. The thickness of Stratum II varies from 4 cm to 15 cm, with a maximum depth of 25 cmbs. Beneath this midden, Stratum III consists of pale brown fine sand devoid of shell that grades into light yellowish brown fine sand with depth. The excavation was terminated at 70 cmbs.

Figure 3-5. Photographs of the north (top) and west (bottom) profiles of Test Unit 1, 8LV75.

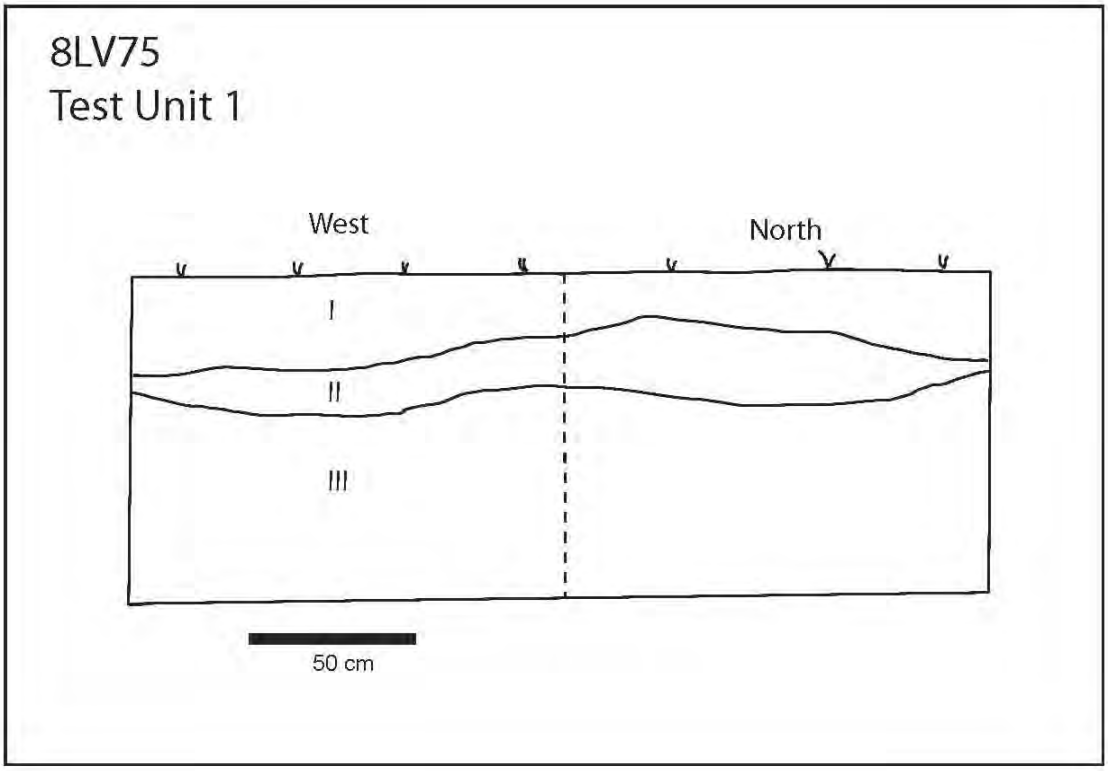

Figure 3-6. Stratigraphic profiles of Test Unit 1, 8LV75.

Table 3-2. Stratigraphic Units of Test Unit 1, 8LV75.

Stratum	Max. Depth (cmbs)	Munsell Color	Description
I	21	7.5YR5/3	brown fine sand
II	25	7.5YR4/3	brown fine sand with moderate crushed shell
III	70	10YR6/3-10YR6/4	pale brown fine sand grading to light yellowish brown fine sand

Table 3-3. Inventory of Materials Recovered from Test Unit 1, 8LV75.

Level	Pottery (n)	Lithics (n)	Vert. Fauna (g)	Shell (g)
A	7		2.8	
B	5		5.3	36.8[1]
C	4	1	42.2	
D	22		22.8	
E		1	1.2	0.3
F				
G		3		
Total	38	5	74.3	37.1

[1] crown conch hammer with hafting holes and battering

Test Unit 2

Photographs of the north and west profiles of TU2 are provided in Figure 3-7, and Figure 3-8 gives the scaled drawings of these profiles. Figure 3-9 gives a perspective of the relative elevation of the arcuate ridge north of TU2. Table 3-4 provides descriptions of the strata marked in Figure 3-8, and Table 3-5 gives an inventory of the archaeological materials recovered by level and column strata.

TU2 was excavated adjacent to the interior edge of the northern extension of the arcuate shell ridge, placing it approximately 8 m northwest of TU1. Excavation revealed three strata, quite similar to TU1. Stratum I extends to 19 cmbs, consisting of a grayish brown fine sand that contains sparse artifacts and vertebrate fauna, capped by a thin but dense organic mat. This culturally ephemeral stratum is underlain by Stratum II, which consists of moderately dense shell in a very dark grayish brown matrix. This shell midden is between 15 and 20 cm thick and contains Deptford series sherds that make up the majority of recovered material. Compared to TU1, Stratum II in TU2 represents a similar midden deposit with equivalent faunal and artifact densities but consistently greater thickness and a higher proportion of crown conchs. These crown conchs are generally small and unmodified, but two crown conch hammers were recovered, along with an unidentified gastropod columella. A sample of charcoal taken from the base of Stratum II yielded an AMS assay of 2060 ± 40 B.P., giving a 2-sigma calibrated range of B.C. 180 to A.D. 20. This date range is statistically indistinguishable from the calibrated range associated with the base of the midden at Profile 1.

Beneath Stratum II in TU2, Stratum III consists of a brown fine sand that grades into a light yellowish brown fine sand with depth. Excavation was terminated at 60 cmbs.

Figure 3-7. Photographs of the north (top) and west (bottom) profiles of Test Unit 2, 8LV75.

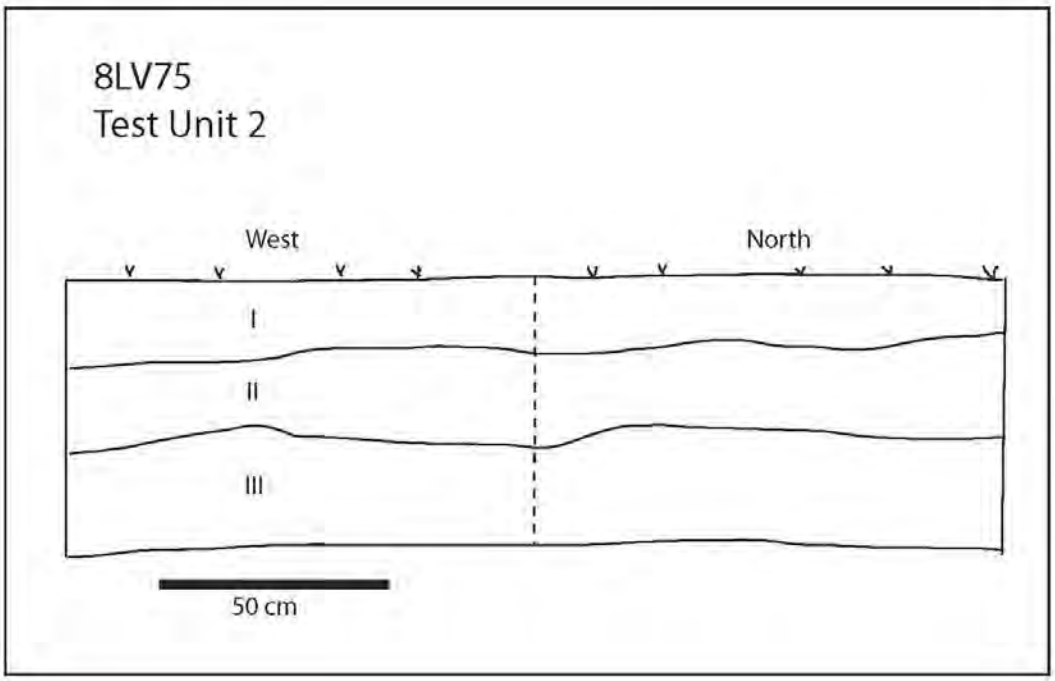

Figure 3-8. Stratigraphic profiles of Test Unit 2, 8LV75.

Figure 3-9. North-facing view of LSA Crew excavating Test Unit 2 at 8LV75, October 1, 2010.

Table 3-4. Stratigraphic Units of Test Unit 2, 8LV75.

Stratum	Max. Depth (cmbs)	Munsell Color	Description
I	19	10YR5/2	grayish brown fine sand with heavy organic mat on top
II	38	10YR3/2	very dark grayish brown sand with moderate shell
III	60	10YR4/3-10YR5/4	brown sand with grading to yellowish brown fine yellowish brown fine sand

Table 3-5. Inventory of Materials Recovered from Test Unit 2, 8LV75.

Level	Pottery (n)	Lithics (n)	Vert. Fauna (g)	Shell (g)
A	2		0.4	
B	14		29.0	121.8[2]
C	9		88.4	111.5[3]
D	1	1[1]	18.2	
E	4		1.7	
F			6.7	
Total	30	1	144.4	233.3

[1] stemmed biface fragment
[2] crown conch hammer
[3] one crown conch hammer and one UID gastropod columella

Test Unit 3

Photographs of the north and west profiles of TU3 are provided in Figure 3-10, and Figure 3-11 gives the scaled drawings of these profiles. Table 3-6 provides descriptions of the strata marked in Figure 3-11, and Table 3-7 gives an inventory of the archaeological materials recovered by level and column strata.

TU3 was excavated about 10 m northwest of the exterior edge of the northern extension of the arcuate shell ridge, placing it approximately 20 m northwest of TU2. Excavation revealed three distinct strata. Stratum I consists of gray fine sand with light density, mostly crushed, oyster shell that is capped by a heavy organic mat. The depth of this layer is irregular, undulating from ground surface to only 11 cmbs in some areas and as much as 41 cmbs in others. Underlying this sandy deposit, Stratum II is a midden with moderate to high density shell in a matrix of brown fine sand. The shell is comprised predominantly of oyster, occasionally crushed, and occasional unmodified crown conchs, not as abundant as in TU2 Stratum II. Shell tools, including two crown conch hammers and a gastropod columella, were recovered from Stratum II. As in TU1 and TU2, the midden deposit represented by Stratum II contains the bulk of vertebrate fauna and artifacts, which consist primarily of Deptford series pottery. The midden extends to a maximum depth of 44 cmbs and is underlain by Stratum III, which consists of yellowish brown fine sand with very light shell density that diminishes with depth.

Figure 3-10. Photographs of the north (top) and west (bottom) profiles of Test Unit 3, 8LV75.

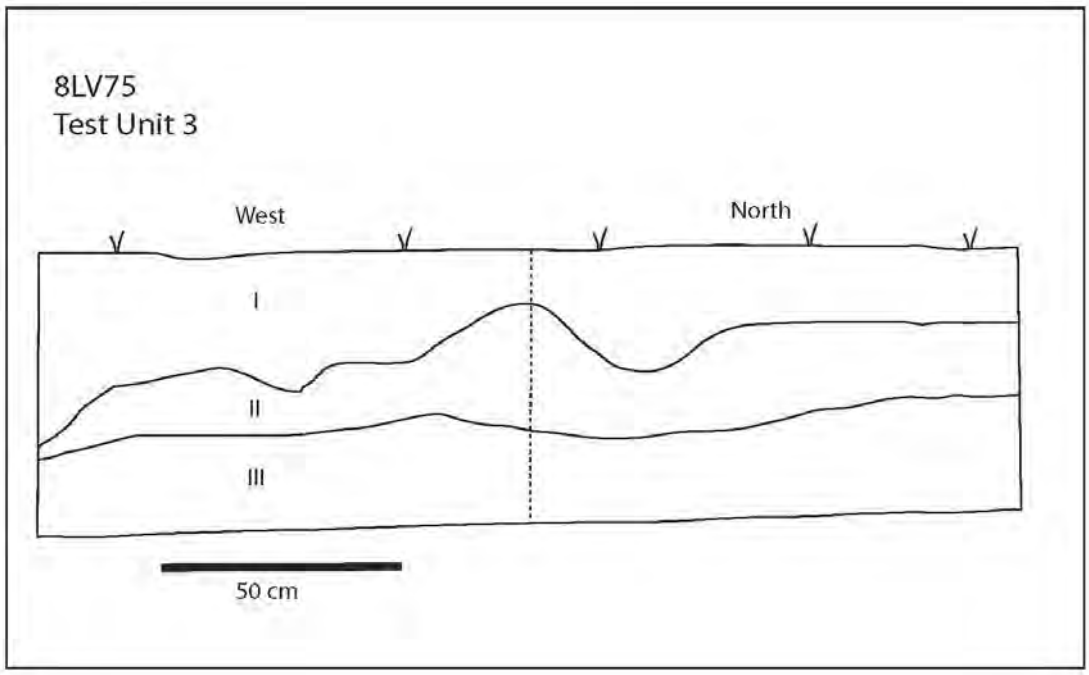

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Figure 3-11. Stratigraphic profiles of Test Unit 3, 8LV75.

Table 3-6. Stratigraphic Units of Test Unit 3, 8LV75.

Stratum	Max. Depth (cmbs)	Munsell Color	Description
I	41	10YR5/1	gray sand with sparse shell density beneath a heavy organic mat
II	44	10YR4/3	brown fine sand with moderate to heavy shell density
III	60	10YR5/4	yellowish brown fine sand with very light shell density grading to no shell at the bottom of stratum

Table 3-5. Inventory of Materials Recovered from Test Unit 3, 8LV75.

Level	Pottery (n)	Lithics (n)	Vert. Fauna (g)	Shell (g)
A	4			
B	19		9.5	
C	5	1	4.7	
D			0.8	29.9[1]
E		1	1.0	142.3[2]
F			13.1	
Total	28	2	29.1	172.2

[1] includes one crown conch hammer and one scallop shell

[2] includes one crown conch hammer and one gastropod columella

Test Unit 4

Photographs of north and south profiles of TU4 are provided in Figure 3-12, and the east and west profiles are shown in Figure 3-13. Figure 3-14 gives the scaled drawings of these profiles. Table 3-8 provides descriptions of the strata marked in Figure 3-14, and Table 3-9 gives an inventory of the archaeological materials recovered by level and column strata.

Both TU4 and TU5 were 1 x 2-m units oriented along a line that approximately bisects the arcuate ridge of shell. This line extends northeast from the apex of the mound and remains roughly equidistant from the northern and southern branches of the ridge. TU4 was excavated approximately 10 m northeast of the western interior apex of the arcuate shell ridge and TU5 was located exactly 2 m northeast of TU4. The long dimension of both test units was oriented parallel to the bisecting line.

Excavation of TU4 revealed six distinct strata. Stratum I is brown fine sand overlaid by a dense root mat. The depth of this sand layer varies between 5 and 10 cmbs in the western and southern portions of TU4 to more than 30 cmbs in the eastern and northern sections. In all areas of the excavation, Stratum I contained few artifacts and fauna. Underlying Stratum I in the northwestern portion of TU4 in a fairly discrete pit-like deposit, Stratum II, comprised of dark grayish brown fine sand with sparse shell. In the TU4 north wall profile, Stratum II extends to a maximum depth of 44 cmbs and has a horizontal extent of 78 cm. The stratum appears to represent bioturbation, perhaps the result of a root ball that penetrated into underlying Stratum III and subsequently rotted to be later filled in by the overlying A horizon.

Stratum III is an organically enriched black fine sand with moderate shell density. This midden deposit spans the entire extent of TU4 but varies in thickness, from 19 cm near the northeast corner to as much as 45 cm in the west wall profile at a maximum depth of 65 cmbs. Stratum III was excavated separately as Zone 1 in levels D through G. This distinct zone contains moderate whole and crushed shells of oyster and crown conch and moderate amounts of fauna and artifacts. Stratum IV underlies Stratum III and consists of very pale brown fine sand with no shell. Stratum IV was excavated separately as Zone 2 in levels D through G and contains an abundance of artifacts and vertebrate fauna in the uppermost level, perhaps originating from the contact with Stratum III above. Very few cultural materials were encountered in levels E through G from Zone 2.

Stratum V is a distinct lens that seems to originate at the contact between Stratum I and Stratum III, extending across the southeastern portion of TU4 and down to 27 cmbs. The deposit consists of brown fine sand with moderate oyster shell, no artifacts, and only a small trace of vertebrate fauna. Stratum V was first encountered at the bottom of Level C and excavated separately as Zone 3 in Level D. In plan view, the top of the deposit was characterized by dense whole oyster shell that became less dense with depth.

Intersecting the base of Stratum III, Stratum VI is very dark grey fine sand with moderate shell density and exhibits a pit-like shape. This possible shallow pit feature is

Figure 3-12. Photographs of the north (top) and south (bottom) profiles of Test Unit 4, 8LV75.

differentiated from the surrounding Stratum III only in the color of soil matrix. The contact between Stratum III and Stratum VI is diffuse and quite subtle, and was not observed during excavation.

A 40 x 40 cm sondage was excavated by shovel in the center of TU4. The test was culturally sterile but showed that Stratum IV continues to 113 cmbs, after which the very pale brown fine sand becomes mottled with reddish-brown iron oxide concentrations. The sondage was terminated at 127 cmbs.

Figure 3-13. Photographs of the east (top) and west (bottom) profiles of Test Unit 4, 8LV75.

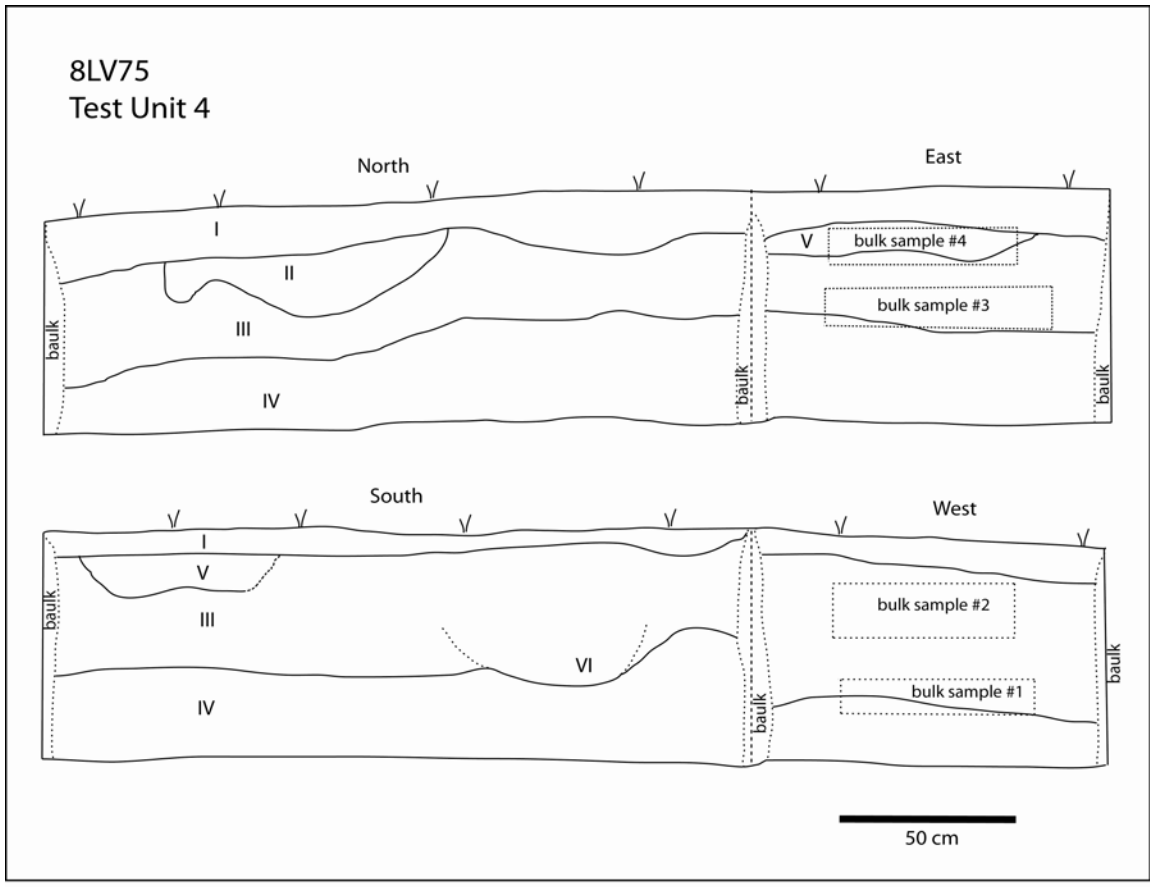

Figure 3-14. Stratigraphic profiles of Test Unit 4, 8LV75.

Table 3-8. Stratigraphic Units of Test Unit 4, 8LV75.

Stratum	Max. Depth (cmbs)	Munsell Color	Description
I	33	10YR5/3	brown fine sand with dense root mat
II	44	10YR4/2	dark grayish brown fine sand with sparse shell density
III	65	10YR2/1	black fine sand with moderate shell density
IV	78	10YR7/4	very pale brown fine sand with no shell
V	27	10YR4/3	brown fine sand with moderate shell
VI	53	10YR3/1	very dark grey fine sand with moderate shell density

Table 3-9. Inventory of Materials Recovered from Test Unit 4, 8LV75.

Level	Pottery (n)	Lithics (n)	Vert. Fauna (g)	Shell[1] (g)	Historic (g)
A	1		4.0		0.2
B	12	1	57.2	64.5	
C	48		51.5	201.3	
D (Zone 1)	1	1	25.6	34.9	
D (Zone 2)	11	3	41.9	211.3	
D (Zone 3)			0.4		
E (Zone 1)	1		5.0		
E (Zone 2)		1	56.7		
F (Zone 1)		2	6.9	41.0	
F (Zone 2)		1	86.0	60.9	
G (Zone 1)			0.2		
G (Zone 2)		1			
Total	74	10	331.8	613.9	0.2
Bulk					
Sample 1			3.4	1538.8	
Sample 2	1		27.4	2475.0	
Sample 3		1	7.7	819.7	
Sample 4				1847.3	
Total	1	1	38.5	6680.8	

Four 1-gallon bulk samples were taken from the walls of TU4. In the west wall, Sample 1 was removed from the base of the midden (Stratum III), Sample 2 was taken from the top of the midden (west wall). In the east wall, Sample 3 was removed from the base of the midden (Stratum III) and Sample 4 was taken from Stratum V. All samples contained moderate amounts of shell and were dominated by oyster, but also contained much smaller numbers of crown conch, scallop, and miscellaneous gastropods, land snails, and barnacles. Of the Stratum III samples, shell and vertebrate fauna were most abundant in Sample 2 from the west wall, and least abundant in Sample 3. This distribution demonstrates the comparatively high density of midden deposits at the base of Stratum III toward the western end of TU4 compared the eastern end and this density shows a positive correlation with the thickness of the stratum. Bulk Sample 4 indicates that Stratum V is a pure shell deposit and devoid of artifacts or vertebrate fauna.

Test Unit 5

Photographs of north and south profiles of TU4 are provided in Figure 3-15, and the east and west profiles are shown in Figure 3-16. Figure 3-17 gives the scaled drawings of these profiles. Table 3-10 provides descriptions of the strata marked in Figure 3-17, and Table 3-11 gives an inventory of the archaeological materials recovered by level and column strata.

Figure 3-15. Photographs of the north (top) and south (bottom) profiles of Test Unit 5, 8LV75.

Excavation revealed four stratigraphic units and three cultural features. Stratum I is a humic layer with grayish brown very fine sand and abundant rootlets, extending down to 23 cmbs. Stratum II lies directly beneath the humic layer and consists of yellowish brown very fine sand that extends to a maximum depth of 41 cmbs. Stratum II spans the entire excavation unit except the northeast corner, where it is intersected by Stratum III. Both Stratum I and Stratum II contain sparse artifacts and only occasional shells, apparently originating from the midden below.

Stratum III consists of moderate oyster shell and occasional crown conch shell in a matrix of yellowish brown very fine sand that grades into very dark brown fine sand with depth. This midden deposit corresponds to Stratum III in TU4 and has comparable

Figure 3-16. Photographs of the east (top) and west (bottom) profiles of Test Unit 5, 8LV75.

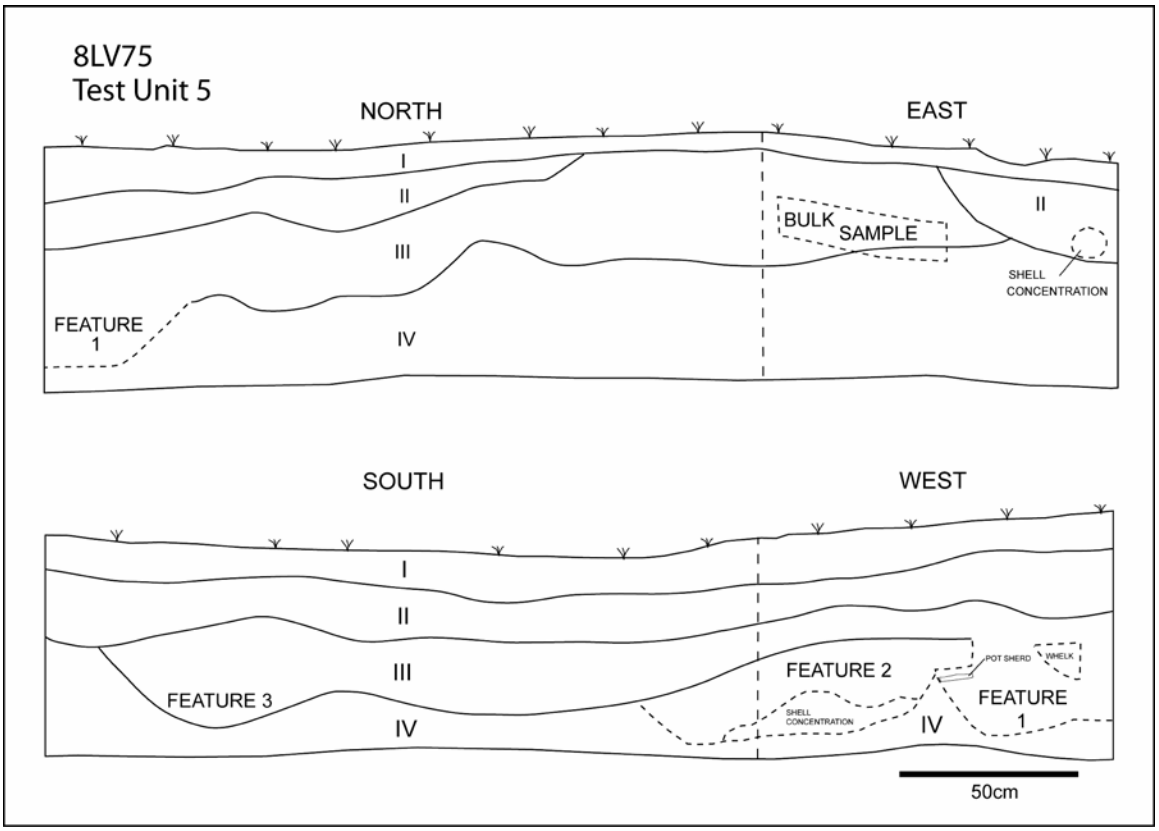

Figure 3-17. Stratigraphic profiles of Test Unit 5, 8LV75.

Table 3-10. Stratigraphic Units of Test Unit 5, 8LV75.

Stratum	Max. Depth (cmbs)	Munsell Color	Description
I	23	10YR5/2	grayish brown very fine sand with abundant small roots
II	41	10YR5/4	yellowish brown very fine sand
III	69	10YR5/4-10YR2/2	Moderate shell and yellowish brown very fine sand grading into very dark brown fine sand with depth moderate oyster and crown conch
IV	76	10YR6/3	pale brown fine sand

Table 3-11. Inventory of Materials Recovered from Test Unit 5, 8LV75.

Level	Pottery (n)	Lithics (n)	Vert. Fauna (g)	Shell[1] (g)	Historic (g)
A	4				
B	8		8.9		0.6
C	26		103.2	104.2	
D	24		38.4	318.4	
E	7	2	29.2		
F	1	1	0.4		
Total	70	3	180.1	422.6	0.6
Bulk					
Feature 1	1		1.8	660.8	
Feature 2			2.3	809.4	
Feature 3			5.7	602.6	
East Wall	5		9.7	1247.2	
Total	6		19.5	3320	

densities of fauna and artifacts. Stratum III is intersected by three cultural features, all of which penetrate into underlying Stratum IV, which consists of pale brown fine sand virtually devoid of cultural materials.

Feature 1 extends across the northwest corner of TU5 to a maximum depth of 69 cm below surface. This roughly flat-bottomed pit originates in Stratum III, but due to the similarity in color and content with the surrounding matrix, the top of the feature was not observed. The base of the feature provides a clear contrast with the Stratum IV matrix, extending 40 cm along the west wall and 30 cm along the east wall. Feature 1 contained the greater portion of a large whelk shell and a large sand-tempered rim sherd (Figure 3-18j), both visible in the west wall profile. The rim sherd could be classified as Weeden Island plain on the basis of an incised line below the lip. However, AMS assays from Feature 1 yielded a uncalibrated age of 2450 ± 30 B.P., which gives calibrated 2-sigma ranges of 760 to 680 B.C. and 670 to 410 BC., the oldest age estimate at the site by several centuries. Moreover, the age is as much as a millennium too early for the presumed origins of Weeden Island Plain pottery. Such a disparity reinforces the notion that a folded rim or an incision below the lip is not a reliable diagnostic attribute of Weeden Island phase pottery if Deptford and Swift Creek cultures also employed these techniques.

Feature 2 is another nearly flat-bottomed pit that intersects the southern portion of Feature 1. Feature 2 spans the southwestern corner of TU5 and its base measures approximately 35 cm along the western and southern unit profiles. The discernment of the top of Feature 2 and its relationship to Feature 1 was prevented by its nearly identical appearance to the surrounding matrix of Stratum III. The base of Feature 2, however, is

clearly defined as a separate feature. Dense shell lines the bottom 10 cm of the feature, while only light to moderate shell density characterizes the areas above.

Feature 3 is a rounded-bottom pit on the southeastern end of TU5. At its eastern extent, the feature originates at the base of Stratum II and then grades into Stratum III toward the west. The base of Feature 3 that extends into Stratum IV down to 67 cmbs shows it to be at least 50 cm wide across the southern wall of TU5. In plan view at the base of Level E (60 cmbs), Feature 3 formed a half circle that extended 30 cm out of the southern wall. The feature contained moderate density shell throughout, but like the other features in this excavation, upper boundaries could not be discerned from the surrounding matrix.

A bulk sample was taken from each of the three features as well as one from the east wall near the base of Stratum III. Each of the feature samples were comparable, containing moderate densities of shell comprised primarily of oyster, but also including crown conch, whelk, and miscellaneous gastropods and bivalves. Vertebrate fauna were present but not dense in each feature sample. The bulk sample from Stratum III yielded the greatest density of shell, vertebrate fauna, and pottery.

ARTIFACT ASSEMBLAGE

A total of 297 artifacts were recovered from the five excavation units at 8LV75. The assemblage is dominated by pottery sherds (n = 254), which were fairly evenly distributed among the test units. Lithic artifacts make up a small portion of the inventory (n = 24) and are comprised of small chert flakes and chert shatter, sandstone abraders, limestone fragments, and one fragment of a chert biface. Worked shell artifacts (n = 19) were also a minor constituent of the assemblage. Descriptions of these classes of artifact follow in the subsections below.

Pottery

The frequency of pottery by levels and type in each test unit is provided in Tables 3-12 through 3-16, and representative sherds are depicted in Figure 3-18.

The types listed in these tables include both culture-historical types and “generic” or analytical types that are not diagnostic of particular archaeological cultures. For example, the only variety of Deptford series pottery listed in Table 3-12 is the Linear Check-Stamped (LCS) variety. Other types of Deptford pottery such as plain or check-stamped are not sufficiently diagnostic to warrant sherd-level classification. Sherds tempered with sand or grit and a plain surface treatment are simply classified as “sand-tempered plain” and those with incising or check-stamping are listed as “sand-tempered incised” and “sand-tempered check-stamped,” respectively. Sand-tempered sherds with eroded or undetectable surface treatments are listed as “sand-tempered unidentifiable” (UID). All sherds less than ½-inch in maximum dimension are categorized as “crumb” sherds and are not classified by type.

Table 3-12. Absolute Frequency of Pottery Sherds from Test Unit 1, 8LV75

Level	Deptford LCS	St. Johns C-S	Pasco Plain	Sand-Tempered Plain	Sand-Tempered C-S	Crumb	Total
A				3		4	7
B		1		4			5
C				1	1	2	4
D	2		1	1		18	22
Total	2	1	1	9	1	24	38

Table 3-13. Absolute Frequency of Pottery Sherds from Test Unit 2, 8LV75

Level	Deptford LCS	St. Johns Plain	--------Sand-Tempered-------- Plain	C-S	Incised	Crumb	Total
A						2	2
B		3	5		1	5	14
C	1	1	4			3	9
D				1			1
E		4					4
Total	1	8	9	1	1	10	30

Table 3-14. Absolute Frequency of Pottery Sherds from Test Unit 3, 8LV75

Level	Pasco Plain	Ruskin Dentate Stamped	Sand-Tempered Plain	Crumb	Total
A			1	3	4
B		7	10	11	28
C	1		4		5
Total	1	7	15	14	37

Table 3-15. Absolute Frequency of Pottery Sherds from Test Unit 4, 8LV75

Level	Deptford LCS	Pasco Plain	St. Johns Plain	Sand-Tempered Plain	Crumb	Total
A				2	1	3
B	2			8	2	12
C	6	3		15	24	48
D			3	9		12
E				1		1
Total	8	3	3	35	27	76
Bulk						
Sample 2				1		1
Total				1		1

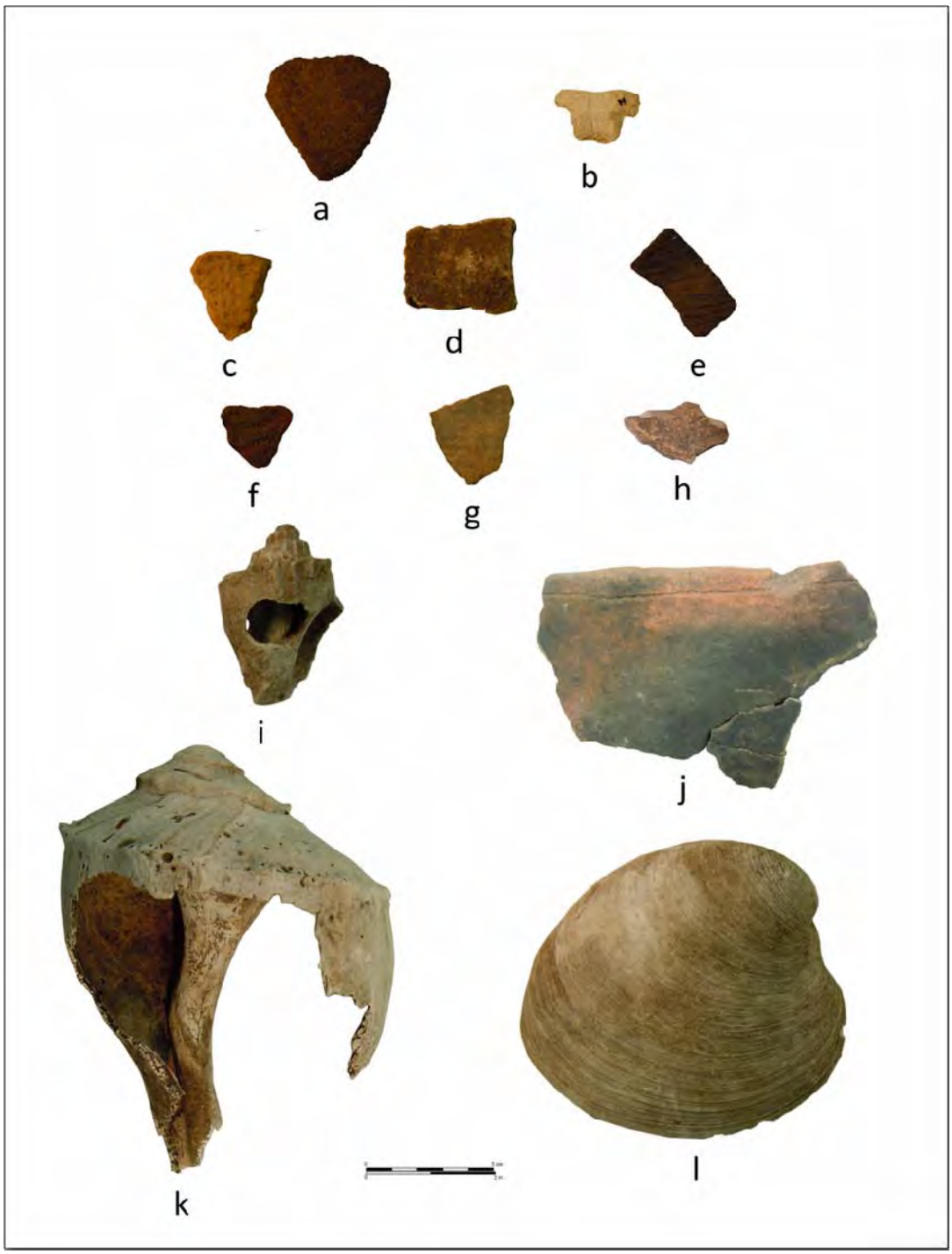

Figure 3-18 Examples of artifacts recovered from test units at 8LV75 (a. sandstone abrader; b. hafted biface fragment; c. St. Johns check stamped sherd; d. Pasco plain sherd; e. Deptford Simple Stamp sherd; f. Ruskin dentate sherd; g. Deptford linear check stamp sherd; h. St. Johns incised sherd; i. hafted hammer (Type G) made from shell of Crown conch (*Melongena corona*); j. large rim sherd with folded/incised rim; k. large lightning whelk shell (*Busycon contarium)* from Feature 1; large quahog shell (*Mercenaria mercenary).*

Table 3-16. Absolute Frequency of Pottery Sherds from Test Unit 5, 8LV75

	----Deptford----		Pasco	St. Johns	Weeden Island		Sand-Tempered			
Level	LCS	Simple St.	Plain	Plain	Incised	Plain	Plain	UID	Crumb	Total
A							4			4
B						1	6		1	8
C	5	1	1				11	1	8	27
D			1				10	1	9	21
E				1	1				3	5
F		1								1
Total	5	2	2	1	1	1	31	2	21	66
Bulk										
Feature 1						1				1
East Wall							5			5
Total						1	5			6

The TU1 inventory of sherds greater than ½-inch is dominated by sand-tempered plain pottery (*n* = 9). These sherds come mostly from the top 20 cmbs in Stratum I above the shell-midden (Stratum II). One St. Johns Check-Stamped sherd comes from the same stratigraphic unit and may indicate a post-A.D. 750 component in this uppermost stratum. The remaining sherds come from 20 to 40 cmbs (Levels C and D) in the shell-midden and include two Deptford Linear Check-Stamped, one Pasco Plain, and one sand-tempered check-stamped. Compared to Stratum I, the sherds from the midden are more likely to come from a Deptford component.

Sand-tempered plain sherds (*n* = 9) are the most frequent class in the TU2 assemblage of non-crumb sherds, but St. Johns Plain sherds are nearly as frequent (*n* = 8). Sherds of both pottery types were recovered from Levels B and C (10 to 30 cmbs), but only St. Johns Plain sherds (*n* = 4) came from Level E (40-50 cmbs). The abundance of St. Johns Plain in the earliest levels of the midden in TU2 parallels the findings at the base of Profile 1 at the western shoreface, where a St. Johns Plain sherd was recovered from the base of the midden. Besides the two dominant types, one sand-tempered incised sherd came from Level B, one Deptford Linear Check-stamped was recovered from Level C, and one sand-tempered check-stamped was found in Level D. The majority of the assemblage is contemporaneous with a Deptford component.

Pottery was recovered from only the top 30 cmbs in TU3. Like the previous test units, the TU3 inventory of non-crumb sherds is dominated by sand-tempered plain (*n* = 15), which was recovered from Levels A through C. The assemblage also contains a remarkable number of Ruskin Dentate Stamped sherds (*n* = 7), all from Level B. Nearly three-fourths of the non-crumb sherds from TU3 come from Level B, mostly from the shell midden that comprises Stratum II, and these sand-tempered plain and Ruskin Dentate Stamped sherds would seem to reflect a Weeden Island I component. The remainder of the assemblage includes a single sand-tempered plain sherd in Level A, four sand-tempered plain sherds in Level C, and one Pasco Plain sherd in level C. Notably,

TU3 is the only test unit from which diagnostic Deptford series pottery was not recovered. Neither were St. Johns Plain sherds recovered that appear to be contemporaneous or slightly earlier than the Deptford series on other parts of the site.

The TU4 non-crumb sherd inventory was dominated by sand-tempered plain sherds (*n* = 35), but also contained an appreciable quantity of Deptford Linear Check-Stamped (*n* = 8). Most sherds were recovered from Level C (20 to 30 cmbs) in the shell midden that comprised Strata II, III, and V. The Level C inventory includes six Deptford Linear Check-Stamped, three Pasco Plain, and 15 sand-tempered plain sherds. In Level D, three St. Johns Plain sherds and nine sand-tempered plain sherds were recovered.
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Like in the other test units, the TU5 inventory of sherds greater than ½-inch is dominated by sand-tempered plain. There is a similar vertical distribution of sherds as encountered in TU4, with Level C containing the highest density. Deptford Linear Check-Stamped, Deptford Simple-Stamped, Pasco Plain, and sand-tempered plain are all represented in the Level C assemblage. These sherds were recovered above St. Johns series and Deptford Simple-Stamped pottery in Level E. A Weeden Island Plain sherd was recovered above the bulk of the TU5 assemblage in Level B. This sherd could represent a late-period component, or, more likely given the results of AMS assays on charcoal from Feature 1, it dates to Deptford times.

In summary, in TU2, TU4, and TU5, there were St. Johns series (mostly plain) sherds recovered in levels below diagnostic Deptford series sherds. Although there is some overlap in their vertical distribution, the stratigraphic distribution of these two types indicates that much of the spiculate-pasted sherds at the site predate the Deptford component. St. Johns Plain, and to a lesser extent, St. Johns Incised, seem to be coeval with the earliest occupation of the site and the initiation of the arcuate shell deposit. Pasco Plain also appears to be early, given its most common recovery from lower levels of the test excavations. Although sample sizes remain small, the vertical distribution of these types within the current assemblages indicates that Pasco Plain pottery may be coeval with the Deptford series and may postdate St. Johns Plain. In any case, production of St. Johns Plain and Pasco Plain seems to have continued throughout much of the culture historical sequence represented at 8LV75. There is some indication of a later Weeden Island I component (on the basis of Ruskin Dentate Stamped and possible Weeden Island Plain in TU3 and TU5), but the minor occurrence of these surface treatments may merely represent idiosyncrasies in the Deptford tradition. Given the AMS assays associated with all areas of the site so far investigated, the bulk of the non-diagnostic pottery assemblage, especially the ubiquitous sand-tempered plain pottery, is most likely associated with the Deptford archaeological culture.

Lithic Artifacts

Lithic artifacts are not abundant at the site, but a few were recovered from every test excavation unit. A total of 10 chert flakes were found, as well as four pieces of chert shatter, and a randomly flaked chert core. Also recovered were four limestone fragments, two of which exhibit possible thermal alteration, a quartz pebble, and two sandstone

abraders (both from Level D in TU4), one of which exhibited a smoothed surface. Finally, a stemmed biface fragment, possibly a Hamilton (Figure 3-18b), was the only lithic artifact recovered from TU2.

Modified Shell

Modified shells of crown conch (*Melongena corona*) were recovered in every test unit, for a total of 17 from the site. Each exhibits battering at the basal end and a hole that likely received a handle. Accordingly, each of the artifacts was likely used as a hafted hammer, such as that defined as Type G in the south Florida typology (Luer et al. 1986; Marquardt 1992). In addition, two columella of unidentified gastropod that were possibly modified were also collected, one each from TU2 and TU3.

CONCLUSION

The arcuate shell ridge at 8LV75 appears to have accumulated during the Deptford period through activities that included the processing and deposition of mostly oyster shell, along with the inedible remains of other invertebetates and vertebrate species, and the use, breakage, and discard of pottery and stone and shell tools. Evidence for architecture features was not observed, although the occurrence of several pit features attests to relatively intensive use of the interior of the arc. One of the features (Feature 1) contained charcoal that predates the other age estimates by a few centuries, and may indicate that occupation of the site elapsed for a while before the surrounding ridge of shell was erected. Further testing at 8LV75 is needed to determine more precisely the sequence and nature of occupations.

CHAPTER 4
METHODS AND RESULTS OF TEST EXCAVATION, LOCI C AND E

Micah P. Monés

Based on the results of survey reported in Chapter 2, two locations at the south end of Deer Island were selected for secondary testing. Testing in Locus C was carried out to investigate the area where a shovel test pit (STP T4-13) yielded Weeden Island pottery in an oyster midden that also contained the remains of sturgeon and what were first thought to be human, but later proved to be pig. The test unit at Locus E was located adjacent to STP T6-6, where a buried shell midden was located with fiber-tempered pottery in association.

Test units in both loci consisted of 1 x 1-m units excavated in 10-cm arbitrary levels within visible strata and all excavated fill was passed through ¼-inch hardware cloth. All artifacts and vertebrate fauna that were recovered from the screen were bagged by level. For each level removed, standardized forms were used to record observations on the content and composition of the level. Notes were recorded on the archaeological materials recovered along with variations in soil matrix, as well the presence of possible features. Depths below surface were measured from corner data established for each unit. After excavation was completed, all walls were scraped clean and photographed, and profiles drawn to scale with notes recorded on the texture, consistency, and color of observed strata. In cases where deposits of particular interest were encountered, bulk samples were removed from profiles and reserved for flotation and fine screening.

LOCUS C

Test Unit 1 (TU1) at the Deer Island South, Locus C was placed directly on top of STP T4-12. Because that STP was aborted after being excavated down to only 17 cm below surface (cmbs), the location warranted further investigation. As noted above, STP T4-12 contained bone that was mistakenly identified as human, but later determined to be pig. Despite the fact that pig was introduced to the Americas by the Spanish, and thus could not be part of the aboriginal deposits on the island, STP T4-12 also revealed an oyster shell midden with Weeden Island pottery and invertebrate faunal remains. The pig remains attest to disturbance to the upper portion of this area of the site, but hope remained that the shell midden below was intact. Incidentally, adjacent to TU1 was a large oak tree in which a modern urn burial was deposited in a hollow at the base (Figure 4-1). Care was taken to not disturb the interment.

Test Unit 1 was excavated to a maximum depth of 138 cmbs. Photographs of north and east profiles of TU1 are provided in Figure 4-2, and scale drawings of these same profiles are given in Figure 4-3. Table 4-1 provides a description of the mapped strata. Table 4-2 gives an inventory of the archaeological materials recovered by level and column stratum, and Table 4-3 provides counts of pottery recovered by type.

Figure 4-1. View of Test Unit 1, Locus C, facing southeast from atop the pump house.

Strata I-III of TU1 ranges from gray to brown fine silty sand with sparse historic materials near the surface and a concentration of 20th-century refuse extending 20-25 cmbs in the east half of the unit. Consisting of historic refuse (glass, metal, plastic, and other materials) in a mottled dark gray and brown sandy matrix with ash and charcoal, this recent disturbance continued into the eastern wall, recorded in the profile as Stratum VIII (Figure 4-3). Prehistoric pottery sherds were recovered throughout the first three strata, as was disturbed shell midden, which became more dense at the base of Stratum III. Located in the lower portion of the historic-period intrusion was additional pig and sturgeon bone, like that encountered in STP T4-13.

Dense oyster shell midden was encountered in Stratum IV, beginning around 30 cmbs. The soil matrix of this midden consists of a dark grayish brown, organically enriched fine sand. The midden contained mostly oyster (*C. virginica)* shell with crown conch (*Melongena corona*) as well as an increase in prehistoric artifacts and charcoal over the overlying strata. Pottery sherds recovered in Stratum IV include examples of Carrabelle Punctate and Ruskin Dentate (Figure 4-4), as well as plain sherds with burnished surfaces (Table 4-3). Ubiquitous plain sand-tempered sherds made up the bulk of the assemblage with a trace of Pasco plain sherds also present.

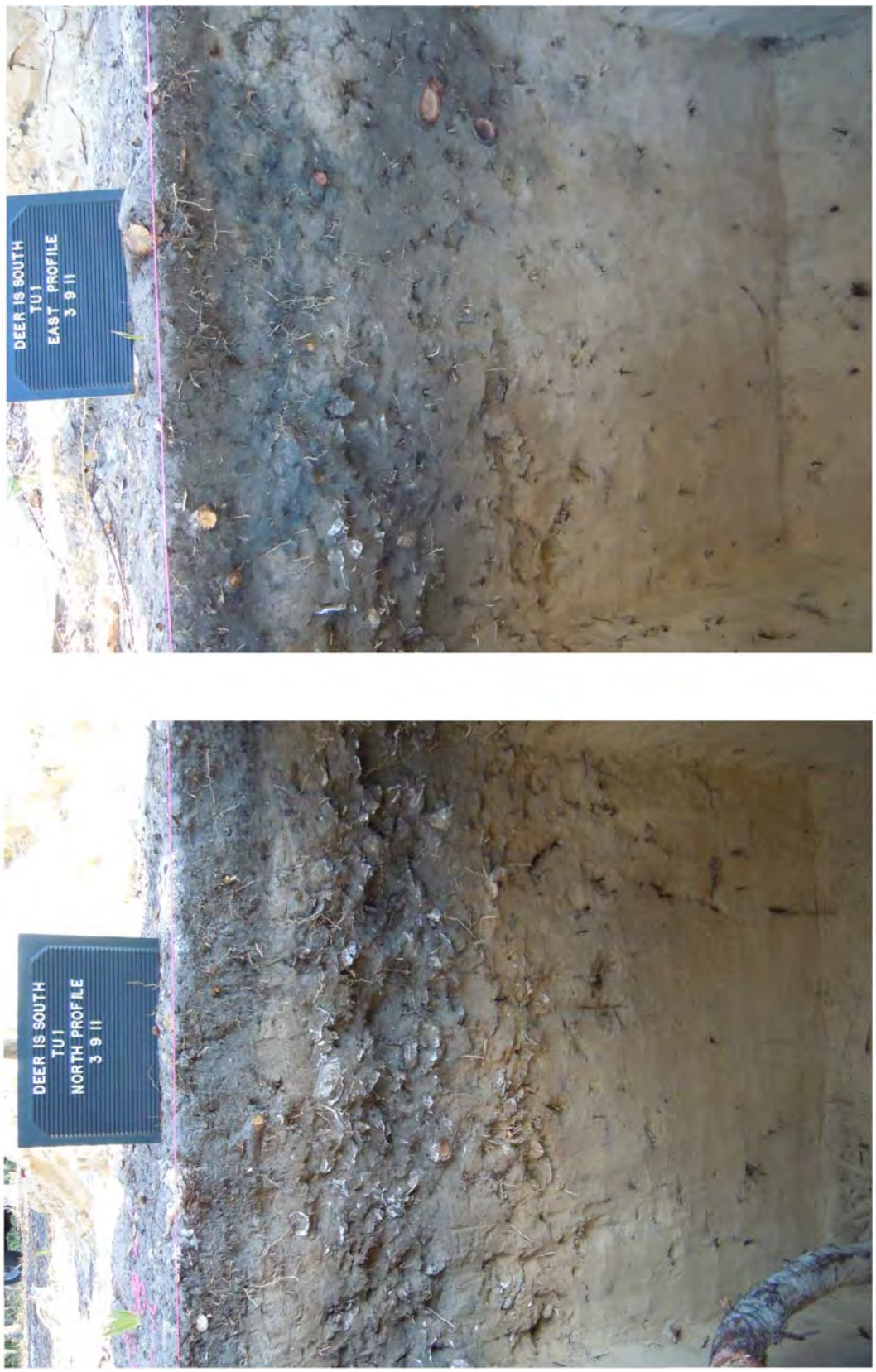

Figure 4-2. Photographs of the north and east profiles of Test Unit 1, Deer Island South, Locus C.

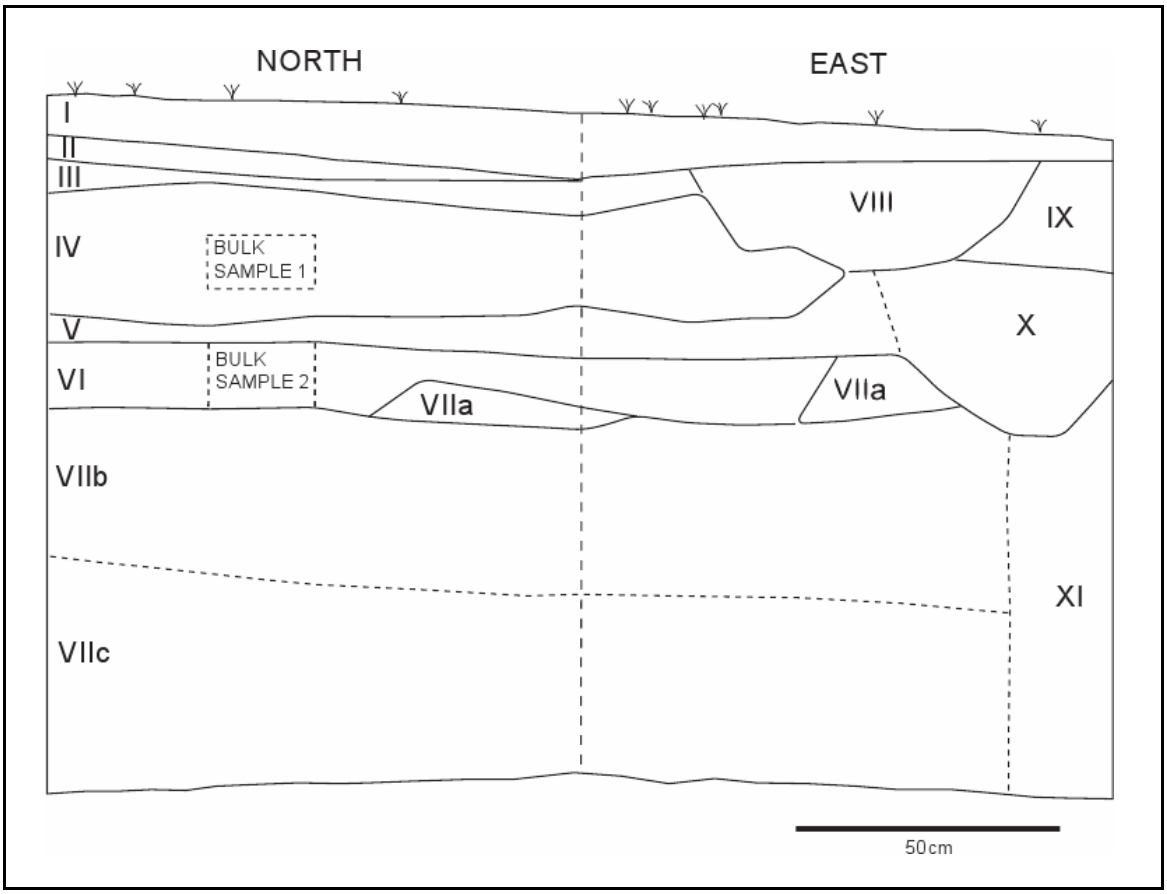

Figure 4-3. Drawings of the north and east profiles of Test Unit 1, Deer Island South, Locus C.

Bulk Sample 1, taken from the core of Stratum IV (Figure 4-3) contained charcoal that was submitted for radiocarbon dating. An AMS assay of 1280 ± 30 B.P. produces a 2-sigma calibrated age range of A.D. 660-780 (see Appendix B), putting the shell midden of Stratum IV in the latter half of the Weeden Island Period (ca. A.D. 200-900) and coeval with the Weeden Island components at Shell Mound (8LV42) and McClamory Key (8LV288), both to the south.

Near the bottom of Stratum IV the density of cultural materials drops off dramatically as the shell midden gives way to a grayish brown fine silty sand with sparse shell, recorded in Figure 4-3 as Stratum V. This is essentially a 5-10-cm-thick zone of leaching of particulate organic matter and the mixing of occasional shell from the midden.

At about 56 cmbs the soil changes to a light yellowish brown sand with a moderate amount of oyster shell, but far less organic matter than in the upper shell midden (Stratum IV). This second midden, designated Stratum VI, yielded no pottery and only a small amount of vertebrate fauna. There is also a noticeable difference in the condition of the oyster shell compared to that of Stratum IV, specifically in the greater level of degradation of shell in the deeper deposit.

Table 4-1. Stratigraphic Units of Test Unit 1, Deer Island South, Locus C.

Stratum	Max. Depth (cmbs)	Munsell Color	Description
I	20	10YR5/2	grayish brown silty medium sand
II	20	10YR7/2	light gray very fine sand
III	31	10YR5/3	brown silty fine sand
IV	49	10YR4/2	dark grayish brown fine sand with abundant oyster shell 1280 ± 30 B.P.
V	56	10YR5/2	grayish brown silty fine sand
VI	70	10YR6/4	light yellowish brown sand with moderate density shell 3310 ± 30 B.P.
VIIa	65	10YR6/4	light yellowish brown sand
VIIb	99	10YR7/6	yellow fine sand
VIIc	138	10YR8/6	yellow fine sand
VIII	36		intrusive feature with historic artifacts, ash, and charcoal
		10YR4/1	dark gray sand
		10YR4/2	dark grayish brown sand
		10YR5/3	brown sand
IX	38	10YR7/3	very pale brown sand
X	67	10YR5/2	brown sand
XI	134	10YR8/4	very pale brown fine sand

Charcoal pulled from Bulk Sample 2 of Stratum VI (Figure 4-3) was submitted for radiocarbon dating and returned an AMS assay of 3310 ± 30 B.P., which is calibrated at two sigma to the range of 1670-1510 B.C. This places Stratum VII in the last half-millennium of the ceramic era (Orange) Late Archaic period (ca. 4200-3000 B.P. or calibrated ca. 2800-1200 B.C.). This is the latest Late Archaic age among the eight assays available to date from seven components in the greater Lower Suwannee study area. The lack of Orange fiber-tempered pottery in Stratum VII is a bit surprising, although many of the components of this era also lack or contain only trace amounts of pottery. As described below, the Locus E components of Deer Island yielded a small number of sherds associated with charcoal estimated to date to ca. 1880-1670 B.C., only a bit older than Stratum VI at Locus C.

Table 4-2. Inventory of Materials Recovered from Test Unit 1, Deer Island South, Locus C.

Level	Pottery (n)	Lithics (n)	Vert. Fauna (g)	Shell[1] (g)	Historic[2] (g)
A	1		9.0	34.1	43.3
B	13	1	78.8		253.6
C	39	2	181	32.7	3.3
D	32		89.3		
E	1		19.4		
F			5.1	35.7	
G		1	5.9		
H		3	10.3		
I		26	0.4	127.2	
J		25[3]	0.9	16.9	
K		13	1.0		
L		9			
M		4			
N		6			
Total	86	65	401.1	246.6	300.2
Bulk					
North Wall IV (Bulk 1)			31.7	2,699.3	
North Wall VI (Bulk 2)			0.5	1,985.2	
Total			32.2	4,684.5	

[1]shell recovered in levels display some modification, including hafted hammers (Type G) made from shells of Crown conch (*Melongena corona*); shell removed in bulk represent all shell in gallon-size sample, both modified and unmodified.
[2]historic artifacts include glass, metal, plastic, and other modern materials.
[3]hafted biface.

Table 4-3. Absolute Frequency of Pottery Sherds from Test Unit 1, Deer Island South, Locus C.

				-------Sand-Tempered-------				
Level	Pasco Plain	Ruskin Dentate	Carrabelle Punctate	Plain	Burnished	Punctate	Crumb Sherd	Total
A				1				1
B	2			3			8	13
C		2		15	1	4	17	39
D			4	19			9	32
E				1				1
Total	2	2	4	39	1	4	34	86

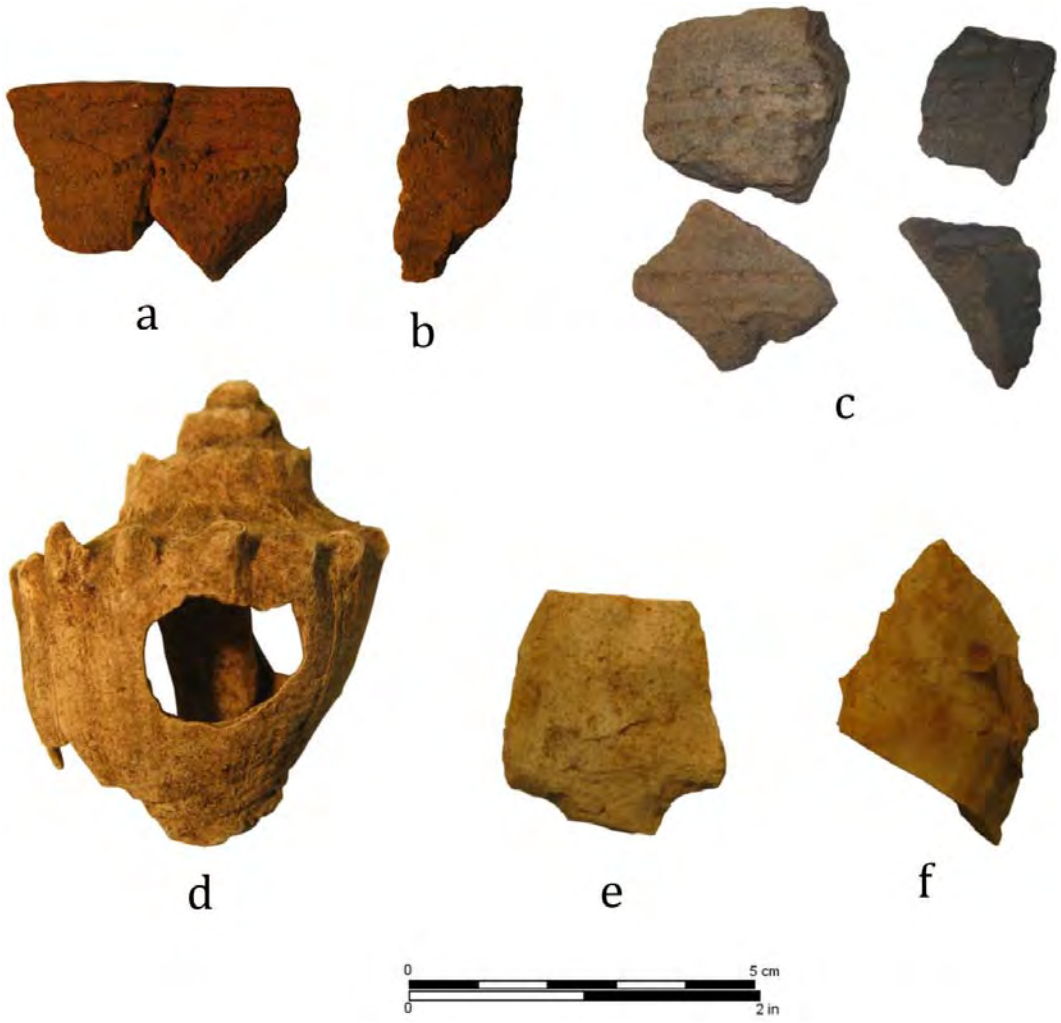

Figure 4-4. Examples of artifacts recovered from Test Unit 1, Deer Island South, Locus C (a. Ruskin Dentate sherd; b. Pasco plain sherd; c. Carrabelle Punctate sherds; d. hafted hammer (Type G) made from shell of Crown conch (*Melongena corona*) ; e. midsection of hafted biface; f. biface fragment)

The profile of TU1 beneath the lower shell midden (Stratum VI) consists of light colored sands. Stratum VIIa, a light brown yellowish sand, appears as a lens beneath Stratum VI and as a truncation of the latter. Strata VIIb and VIIc are both fine yellow sands but they are separated because the sub-angular blocky structure of Stratum VIIc is weaker than that of Stratum VIIb. Lithic flakes and occasional bifacial tool fragments continue to the deepest stratum in TU1, as does occasional, eroded oyster shell that may have precipitated down from the higher strata. The density of lithic artifacts is greatest from about 80-100 cmbs (Strata VI-VIIb). Among an assemblage dominated by flakes are two biface fragments, one from a nondiagnostic hafted biface (Figure 4-4e).

Two 1-gallon bulk samples were removed from the north profile after the completion of photos and profiling in TU1. Bulk Sample 1 was collected from the shell midden of Stratum IV and Bulk Sample 2 was taken from the deeper shell midden in Stratum VI. As noted earlier, charcoal from the bulk samples was submitted for AMS dating (Appendix B). Secondary analyses of the shell and vertebrate fauna from the bulk sample are pending the availability of larger samples.

LOCUS E

A single 1 x 1-m test unit was excavated in the center of Locus E (Deer Island Southeast) with the goal of exposing the buried shell-bearing stratum observed during shovel testing. Located about 0.5 m south of STP 6-6, Test Unit 1 (TU1) was excavated to 105 cmbs and succeeded in establishing the stratigraphic position and age of the shell stratum.

A photograph of the north profile of TU1 is provided in Figure 4-5, and a scale drawing of this same profile is given in Figure 4-6. Table 4-4 provides a description of the mapped strata and Table 4-5 is an inventory of the archaeological materials recovered by level and column stratum.

The first several centimeters of the profile is comprised of a 10-cm-thick organic duff under which lies a grayish brown medium silty sand (Stratum I) to a maximum depth of 15 cmbs. Stratum II goes to a depth of 28 cmbs and consists of fine silty white sand. This is likely an aeolian deposit and retains a relatively soft and "fluffy" texture that was noted in excavation. A single lithic flake was recovered from Stratum II. Stratum III consists of a very pale brown silty fine sand that terminated at ~45 cmbs but still contained a good amount of roots that penetrated through the first two strata.

Stratum IV marks a strong change in soil. Below Stratum III, the soil is a reddish yellow, slightly compacted sand with a maximum depth of 71 cmbs, the thickest stratum of TU1. The greater part of all artifacts from TU1 were recovered in this stratum, particularly in discrete pockets of shell midden in the lower half of the stratum, recorded in Figure 4-5 as Stratum VII. The matrix in these pockets is a dark yellow brown silty fine sand with degraded oyster and occasional lithic flakes. It is not apparent if the discontinuous midden was deposited in its current patchy form or if this is a result of later processes. A one-gallon bulk sample was collected from Stratum VII in the north profile (Figure 4-5). Charcoal removed from the bulk sample provided an AMS age estimate of 3450 ± 40 B.P. which gives a 2-sigma calibrated date range of 1880-1670 B.C. The later end of this range matches the earlier end of the date range of Stratum VI in TU1 of Locus C.

Beneath the midden, Stratum V is a yellow fine sand up to a depth of 88 cmbs, which grades into the very pale brown fine sand of Stratum VI. Excavation was terminated at 105 cmbs without observing additional stratigraphic change

The artifact assemblage from TU1 in Locus E is sparse, consisting of only 25 lithic flakes and a single Orange Period fiber-tempered sherd (Figure 4-6). Most of the lithics and the solitary sherd were found in the midden pockets of Stratum IV. The single

Figure 4-5. Photograph of the north profile of Test Unit 1, Deer Island Southeast, Locus E.

AMS assay of 3450 ± 40 B.P. In conjunction with the Orange period sherd, the AMS assay of 3450 ± 40 B.P. substantiates a Late Archaic component at Locus E. However, at greater depths, small numbers of lithic flakes continued in Strata V and VI, being found even within the final arbitrary 10 cm of excavation. No dateable material was recovered in association with the deeper material. Given the low frequency of artifacts in Stratum IV, it is not likely that all of the lithic flakes found in the lower half of TU1 precipitated down to their current positions. It is more probable that those flakes are older; additional tests would be needed to substantiate older deposits at the south end of Deer Island and to determine if large-scale excavations are warranted.

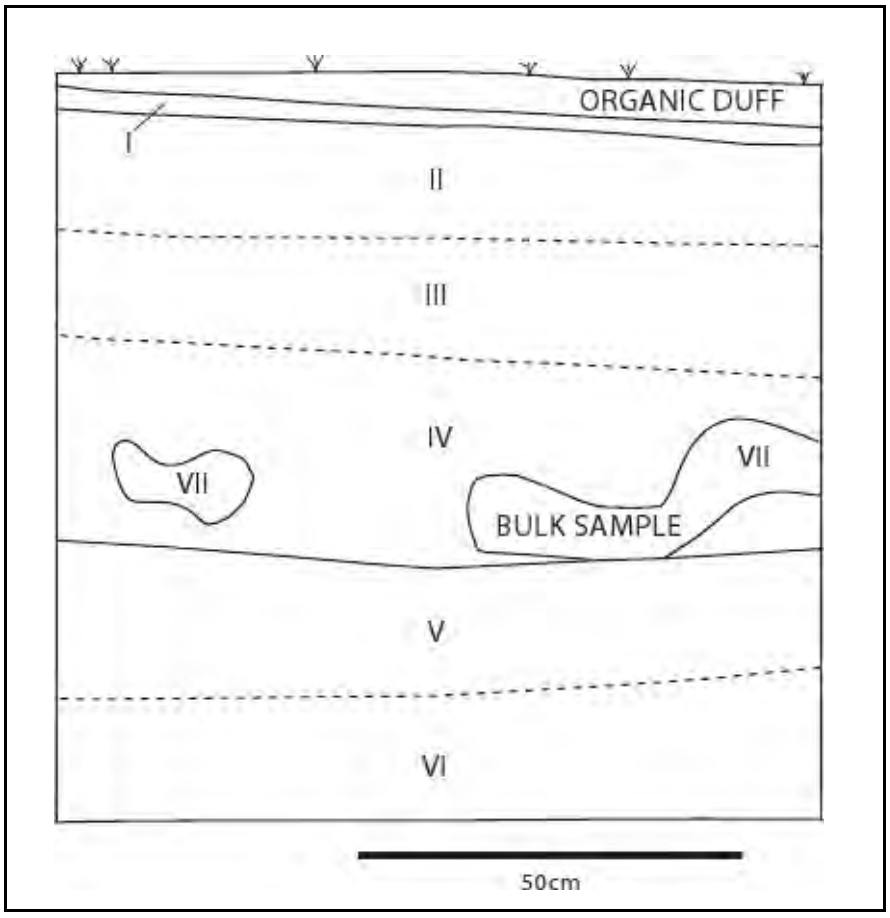

Figure 4-5. Drawing of the north profile of Test Unit 1, Deer Island Southeast, Locus E.

Table 4-4. Stratigraphic Units of Test Unit 1, Deer Island South, Locus E.

Stratum	Max. Depth (cmbs)	Munsell Color	Description
I	15	10YR5/2	grayish brown silty medium sand
II	28	10YR8/1	white silty fine sand
III	45	10YR7/1	very pale brown silty fine sand
IV	71	7.5YR6/8	reddish yellow slightly compacted fine sand
V	88	7YR8/6	yellow fine sand
VI	105	10YR8/4	very pale brown very fine sand
VII	70	10YR4/4	dark yellow brown silty fine sand with degraded oyster 3450 ± 40 B.P.

Table 4-5. Inventory of Materials Recovered from Test Unit 1, Deer Island Southeast.

Level	Pottery (n)	Lithics (n)	Vert. Fauna (g)	Shell[1] (g)
B		1		
F	1	4	0.6	
G		11	12.7	
H		5	1.6	
I		4	0.1	
Total	1	25	15	
Bulk				
North Wall VII			6.1	1,078.9

[1]shell removed in bulk represents all shell in gallon-size sample, both modified and unmodified.

Figure 4-6. Orange Plain fiber-tempered sherd recovered from Level F (Stratum VII) of Test Unit 1, Deer Island Southeast, Locus E.

CONCLUSION

Two loci at the south end of Deer Island were examined through the excavation of 1 x1-m test units. Locus C, at the south end of the main island, contains a stratified sequence of oyster shell midden and sand, with components dating to the Weeden Island and Late Archaic periods. To the southeast of Locus C, on a small islet of Deer Island, Locus E contains a buried but ephemeral shell-bearing stratum dating to the Late Archaic period. Preservation in shell-bearing strata is fair to excellent, and thus further testing for larger, more representative bulk samples of midden is warranted.

CHAPTER 5
CONCLUSIONS AND RECOMMENDATIONS

Archaeological investigations of Deer Island in 2010-2011 by staff of the Laboratory of Southeastern Archaeology, University of Florida, consisted of reconnaissance survey of the entire island, as well as secondary testing at three locations of prehistoric occupation. Reconnaissance transects were established over the main landforms of the island with shovel tests pits (STPs) excavated at an interval of 30 m to provide island-wide subsurface samples. A total of 53 STPs were completed, 47 of which yielded cultural materials in the form of artifacts, shell deposits, or both. The second phase of investigation consisted of the excavation of five 1 x 1-m test units and two 1 x 2-m test units in three locations where STPs revealed well-preserved subsurface components ranging in age from the Orange Late Archaic (2500-1000 B.C.) to the Weeden Island periods (A.D. 200-900).

Five distinct loci of subsurface remains (Loci A-E) were identified in the STP survey of Deer Island. Loci A and B correspond to the general vicinities of the previously known sites 8LV76 and 8LV75, respectively. Located at the north end of the island, both of these sites are actively eroding along a cutbank fronting the Gulf of Mexico. The other three loci are located at the south end of the island, one (Locus C) at the south tip of the main landform, and the other two (Loci D, E) on islets to the southeast and southwest. All three of these southerly loci contain buried components with no obvious surface exposures and no serious erosion.

Material assemblages recovered in both survey and excavation on Deer Island revealed that the bulk of archaeological materials accumulated between the Late Archaic (oldest two-sigma calibrated AMS age range: 1940-1740 B.C.) and Late Woodland periods (youngest two-sigma calibrated AMS age range: A.D. 660-780). All such deposits contained oyster shell and other invertebrate remains, as well as varying densities of vertebrate fauna (mostly fish), and artifacts such as pottery sherds, lithic flakes, and shell tools.

The age of Late Archaic occupations of Deer Island is known from three AMS assays on charcoal taken from sealed midden contexts: the shoreface profile in Locus A (3510 ± 40 B.P.), Stratum VI of the test unit at Locus C (3310 ± 30 B.P.), and Stratum VII from the test unit at Locus E (3450 ± 40 B.P.). In calibrated years, these assays produce a combined two-sigma range of 1940-1670 B.C., with a 140-year overlap between the two oldest (1940-1740 B.C.; and 1880-1670 B.C.), and temporal continuity with the youngest (1670-1510 B.C.). The oldest Late Archaic component identified is also the location of densest midden of this period (8LV76), which it is actively eroding into the gulf.

Further evidence of a Late Archaic presence on the island is found in a small handful of diagnostic artifacts recovered in testing. Two fiber tempered sherds were recovered in Locus E, and a bannerstone fragment was found in a STP from Locus C. It is worth noting that secondary testing has yet to be conducted at 8LV76, the eroding

midden, so the lack of Late Archaic artifacts at the north end of the island is most likely a bias of limited sampling.

Still more deeply buried artifacts below shell-bearing strata were located throughout the island. The presence of these artifacts below dated Late Archaic deposits indicates even older occupations. The age is not yet discernable since no datable material or diagnostic artifacts have been recovered below the known Late Archaic deposits. The lack of preserved organic materials in the deeper deposits is likely due at least in some part to the lack of shell. This lack of shell itself may indicate a greater age since the age of the deposits may be greater than the establishment of near present sea-levels approximately four millennia ago.

The most intense use of the island occurred during occupations of the Woodland period. Archaeological deposits estimated by four AMS assays to span ~1500 years (760 B.C. to A.D. 780) comprise the vast majority of materials retrieved during investigations of Loci A, B, C, and D. Locus E is the only area on the entire island in which no Woodland age deposits were found.

The oldest Woodland component on Deer Island is associated with the arcuate shell ridge at 8LV75 (Locus B). Shovel test pits across this area produced diagnostic Deptford Simple Stamped and Linear Check Stamped sherds (estimated to date regionally from ca. 500 B.C. to A.D. 200), along with the more plentiful Pasco limestone-tempered sherds and ubiquitous plain sand tempered sherds. In the excavation of five test units at 8LV75, St. Johns pottery was found in direct association with and below Deptford pottery. These spiculate paste wares may signify the initial occupation of the site, dating perhaps to the age range of 760 to 680 B.C. obtained from charcoal in a pit feature (Feature 1) in the center of the arc. The large rim sherd found in Feature 1 was clearly not a St. Johns type, but rather exhibits qualities that place it in the Deptford series, at the earliest, and the Weeden Island period, at the latest. This sherd could have certainly intruded upon a St. Johns period feature, or just as likely reflect the lack of precision in our knowledge about the cultural-historical sequence of the northern Gulf coast. A small number of more definitive Weeden Island sherds (e.g., Ruskin Dentate and Indian Pass Incised) were recovered in both survey and excavation of Locus B, but the context of these finds remains ambiguous.

Irrespective of the differences in pottery types at Locus B, it would appear that the outer mantle of shell that forms the arcuate ridge of 8LV75 and is now actively eroding into the gulf began to accumulate in the range of 90 B.C. to A.D. 80., squarely in the assumed span of the Deptford period. If this dating holds, 8LV75 represents a site type not well known for northern Florida. The basal age of the outer edge of the arc is conformant with an age estimate on charcoal from Test Unit 2, in the center of the arc. Thus, the accumulation of shell in a ~60-m-diameter semicircle, and at least some of the midden in the center of this enclosure is coeval, lending credence to the hypothesis that 8LV75 was a Deptford-period circular village around which a formed an arc of largely whole oyster shell, closed to the gulf side (southwest), and open to the interior of the island (northeast).

The most recent prehistoric occupations of Deer Island are represented by Weeden Island and Swift Creek pottery sherds from Loci A and C. The materials discovered in survey of Locus A (Swift Creek Complicated Stamp, Carrabelle Punctated, and Indian Pass Incised) represent either a separate Swift Creek and Weeden Island component or possibly an early Weeden Island occupation in which the presence of complicated stamped pottery would be expected. Weeden Island ceramic types (Carrabelle Punctated, Ruskin Dentate) were also recovered from a midden deposit in TU1 in Locus C. An AMS assay on charcoal from this midden yielded a calibrated two-sigma age estimate of A.D. 660-780. Little else is known about Swift Creek and Weeden Island occupations of the island, although the potential for learning more is good.

This first archeological investigations of Deer Island show that native Floridians have been coming to the island beginning at least as early as the Late Archaic period. The presence of marine shell in deposits of this age suggests that Deer Island was at least near shore if not wholly an island by that time. Lithic artifacts below shell-bearing strata throughout the island occur with sufficient frequency to suggest that people made use of the remnant dune that now forms Deer Island while the shoreline was some distance away. Rising sea has since brought great changes to the local ecology and landscape. The stabilization of near-present sea level stands permitted the establishment of larger and more complex settlements, such as the arcuate shell ridge and associated village at 8LV75.

Site 8LV75 is by far the largest accumulation of shell on the island. Our test excavations suggest that the occupation may have been initiated by people who used St. Johns pottery, a type with origins in or near the St. Johns River drainage and dating well before 500 B.C. Within a few centuries pottery of the Deptford tradition and Pasco limestone tempered pottery were used alongside St. Johns wares. The outer (southwestern) edge of the shell ridge formed during this time. It is not yet clear when shell ceased being deposited on the ridge; later period Swift Creek and Weeden Island pottery is located in and around the site, but not yet in contexts that lend themselves to stratigraphic interpretation or radiometric dating. Weeden Island pottery at the south end of the island, in Locus C, was recovered from a subsurface shell midden dating to ca. A.D. 660-780, but the relationship of this component to activities at the north end of the island remains unknown.

RECOMMENDATIONS

The survey and test excavations reported here show the potential and need for further archaeological investigations on Deer Island. Recommendations for additional field work entail three tasks:

> (1) Large-scale excavation of 8LV75: testing to date shows that the interior of the arcuate shell ridge holds good potential for the preserved remains of a circular village. To investigate this potential, we propose a continuation of the test units in a trench bisecting the interior of the arc, plus an additional line set perpendicular to the first. Units in both transects should extend into and beyond the shell ridge. With the results of this three-dimensional cross-section of the site, block excavations should be conducted in

locations lost likely to yield architectural evidence and associate domestic features. A village of this form and age has never been excavated in the region, and so we have little presumption about the permanence, scale, and organization of settlement. It may be possible to deploy remote sensing in the central, village area of the ridge to detect clusters of features. With or without remote sensing, the goal of excavation would be to reconstruct the details of the archaeological remains encircled by the ridge of shell and to sample those deposits for data on chronology, subsistence, and community organization, among other basic topics. The aggressive approach advocated here is consonant with the ongoing erosion and ultimate destruction of the site as sea level continues to rise in the coming decades.

(2) Testing of 8LV76: the other site eroding into the gulf, just north of the arcuate shell ridge, has not yet been tested. A modest program of two or more 1 x 2-m units is needed to establish the stratigraphic nature of this site and to determine if block excavations are warranted. Like 8LV75, it will be destroyed in the coming decades.

(3) More intensive sampling of Loci C and E: two locations at the south end of the island proved to contain buried shell midden, one of which (Locus C) is a multicomponent site with good stratigraphic integrity. Additional subsurface testing is warranted to collect larger bulk samples for paloenvironmental and subsistence data. Work throughout the Lower Suwannee Survey area aims to collect data such as these for building a regional database on the changing relationship between environment and human settlement, particularly as it relates to sea level rise.

The research potential of the archaeological record of Deer Island is considerable. The arcuate shell ridge and village at 8LV75 holds particular promise because circular Deptford villages are known from the greater region, but they are not known to be associated with shell “rings” (Russo 2010). In addition, the island has a record of occupation spanning at least 2500 years. Over this span of time, sea level rose, then receded for many centuries (some time between ca. 1500-500 B.C.), only to rise again. Archaeological remains of food collected from coastal waters and discarded on the islands register how people responded to changes associated with fluctuations in sea level, and, with these data, we may be in a position to shed light on changes we can expect to coastal ecologies and human use of marine resources in the future.

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APPENDIX A
CATALOG

PROV. TYPE	Locus A	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
STP		PROFILE 1		1	0.250	UID		19	3.7	EROSIANAL PROFILE
STP		PROFILE 1		2	0.250	MARINE SHELL	HAMMER	1	53.7	EROSIANAL PROFILE
STP		PROFILE 1		3	0.250	MARINE SHELL		1	44.8	EROSIANAL PROFILE
STP		PROFILE 1		4	0.250	VERTFAUNA		11	2.1	
STP		T1-1		1	0.250	POTTERY	BODY	2	24.6	SWIFT CREEK/ WEEDEN ISLAND
STP		T1-1		2	0.250	POTTERY	BODY	2	9.0	SWIFT CREEK
STP		T1-1		3	0.250	POTTERY	BODY	4	9.8	
STP		T1-1		4	0.250	POTTERY	CRUMB SHERD	3	1.2	
STP		T1-1		5	0.250	VERTFAUNA			9.1	
STP		T1-2		1	0.250	POTTERY	BODY	4	6.7	
STP		T1-2		2	0.250	POTTERY	BODY	2	1.8	PASCO
STP		T1-2		3	0.250	VERTFAUNA			0.6	
STP		T1-3		1	0.250	POTTERY	BODY	1	1.3	
STP		T1-4		1	0.250	LITHIC	FLAKE	1	0.1	
STP		T1-5		1	0.250	POTTERY	BODY	4	6.6	
STP		T1-5		2	0.250	POTTERY	BODY	1	5.9	
STP		T1-5		3	0.250	POTTERY	BODY	1	2.3	CARRABELL PUNCTATE? WEEDEN ISLAND
STP		T1-5		4	0.250	POTTERY	RIM	1	9.4	PASCO
STP		T1-5		5	0.250	POTTERY	BODY	1	1.0	PASCO
STP		T1-5		6	0.250	POTTERY	BODY	1	23.4	ST. JOHNS
STP		T1-5		7	0.250	VERTFAUNA			18.9	
STP		T2-2		1	0.250	POTTERY	BODY	19	11.0	ST. JOHNS. ALL 1 VESSEL
STP		T2-2		2	0.250	VERTFAUNA			15.5	
STP		T2-3		1	0.250	POTTERY	BODY	5	16.0	
STP		T2-3		2	0.250	POTTERY	RIM		1.6	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus B									
STP	T3-1		1	0.250	POTTERY	BODY	17	74.8	
STP	T3-1		2	0.250	POTTERY	RIM	1	7.6	
STP	T3-1		3	0.250	POTTERY	BODY	2	4.6	
STP	T3-1		4	0.250	POTTERY	UID	1	2.3	ODD SHERD. POSSIBLE TRACE OF SPICULE TEMP AND SINGLE LINE OF CHECK STAMP
STP	T3-1		5	0.250	POTTERY	BODY	9	29.9	PASCO
STP	T3-1		6	0.250	POTTERY	RIM	1	5.0	PASCO
STP	T3-1		7	0.250	POTTERY	BODY	1	7.8	ST. JOHNS
STP	T3-1		8	0.250	POTTERY	CRUMB SHERD	12	6.6	
STP	T3-1		9	0.250	LITHIC	SHATTER	2	13.8	2 PIECES REFIT
STP	T3-1		10	0.250	VERTFAUNA			14.2	
STP	T3-2		1	0.250	POTTERY	BODY	4	12.9	
STP	T3-2		2	0.250	POTTERY	BODY	3	18.7	DEPTFORD
STP	T3-2		3	0.250	POTTERY	BODY	1	5.4	
STP	T3-2		4	0.250	POTTERY	BODY	1	1.8	PASCO
STP	T3-2		5	0.250	POTTERY	RIM	1	0.7	PASCO
STP	T3-2		6	0.250	VERTFAUNA			24.2	
STP	T3-3		1	0.250	POTTERY	BODY	2	4.0	
STP	T3-3		2	0.250	POTTERY	BODY	1	2.4	DEPTFORD
STP	T3-3		3	0.250	POTTERY	BODY	2	6.9	
STP	T3-3		4	0.250	POTTERY	BODY	6	23.8	PASCO
STP	T3-3		5	0.250	VERTFAUNA			16.2	
STP	T3-4		1	0.250	POTTERY	BODY	1	2.7	PASCO
STP	T3-4		2	0.250	POTTERY	BODY	1	0.6	DEPTFORD
STP	T3-4		3	0.250	VERTFAUNA			119.0	
STP	T3-4		4	0.250	HISTORIC	BODY	6	5.1	
STP	T3-4		5	0.250	HISTORIC	WHOLE	1	0.4	
STP	T3-5		1	0.250	POTTERY	BODY	5	9.9	
STP	T3-5		2	0.250	VERTFAUNA			16.6	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus B (cont'd)									
STP	T3-5		3	0.250	MARINE SHELL	COLLUMELLA	1	63.7	
STP	T8-6		1	0.250	POTTERY	BODY	2	15.5	
STP	T8-6		2	0.250	POTTERY	BODY	3	24.3	
STP	T8-6		3	0.250	VERTFAUNA			6.5	
STP	T8-6		4	0.250	LITHIC	UID	1	29.5	
STP	T8-7		1	0.250	LITHIC	FLAKE	6	0.9	
STP	T4-1		1	0.250	POTTERY	BODY	13	26.2	
STP	T4-1		2	0.250	POTTERY	RIM	2	6.2	SHERDS MEND
STP	T4-1		3	0.250	POTTERY	BODY	2	7.0	PASCO
STP	T4-1		4	0.250	POTTERY	BODY	1	1.4	INDIAN PASS, WEEDEN ISLAND
STP	T4-1		5	0.250	POTTERY	BODY	1	3.8	DEPTFORD
STP	T4-1		6	0.250	POTTERY	BODY	1	2.2	DEPTFORD
STP	T4-1		7	0.250	POTTERY	CRUMB SHERD	6	3.9	
STP	T4-1		8	0.250	VERTFAUNA			14.1	
STP	T4-1		9	0.250	MARINE SHELL	UID	1	65.4	
STP	T4-1		10	0.250	MARINE SHELL	HAMMER	1	50.2	
STP	T4-2		1	0.250	POTTERY	BODY	1	3.0	
STP	T4-2		2	0.250	POTTERY	BODY	1	3.1	DEPTFORD
STP	T4-2		3	0.250	LITHIC	FLAKE	1	LESS THAN .1	
STP	T4-2		4	0.250	VERTFAUNA		1	0.1	
STP	T4-2		5	0.250	MARINE SHELL	HAMMER	2	91.9	
STP	T4-3		1	0.250	POTTERY	BODY	12	67.1	CROSS MEND? SOOT?
STP	T4-3		2	0.250	LITHIC	CORE FRAG	1	48.0	
STP	T4-3		3	0.250	LITHIC	FLAKE	8	4.1	
STP	T4-4		1	0.250	POTTERY	BODY	2	13.7	PASCO CROSS MEND
STP	T4-4		2	0.250	POTTERY	RIM	2	6.6	
STP	T4-4		3	0.250	VERTFAUNA		3	14.2	
STP	T4-4		4	0.250	MARINE SHELL	HAMMER	1	48.8	
STP	T4-16		1	0.250	POTTERY	BODY	2	9.4	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus B (cont'd)									
STP	T4-16		2	0.250	LITHIC	TOOL	1	0.2	VERY SMALL UNIFACE OR TOOL FRAGMENT
STP	T4-16		3	0.250	LITHIC	FLAKE	1	0.1	
STP	T4-16		4	0.250	VERTFAUNA			1.2	
STP	T4-17		1	0.250	VERTFAUNA			5.6	
TU	1	A	1	0.250	POTTERY	BODY	3	801.0	
TU	1	A	2	0.250	POTTERY	CRUMB SHERD	4	2.9	
TU	1	A	3	0.250	VERTFAUNA			2.8	
TU	1	B	1	0.250	POTTERY	BODY	3	7.0	
TU	1	B	2	0.250	POTTERY	RIM	1	0.8	
TU	1	B	3	0.250	POTTERY	BODY	1	5.5	ST. JOHNS
TU	1	B	4	0.250	MARINE SHELL	HAMMER	1	36.8	
TU	1	B	5	0.250	VERTFAUNA			5.3	
TU	1	C	1	0.250	POTTERY	BODY	1	16.7	
TU	1	C	2	0.250	POTTERY	BODY	1	5.7	UID
TU	1	C	3	0.250	POTTERY	CRUMB SHERD	2	0.7	
TU	1	C	4	0.250	LITHIC	SHATTER	1	30.1	SHATTER/CORE FRAG ?
TU	1	C	5	0.250	VERTFAUNA			42.2	
TU	1	D	1	0.250	POTTERY	BODY	1	5.7	
TU	1	D	2	0.250	POTTERY	BODY	2	11.1	DEPTFORD
TU	1	D	3	0.250	POTTERY	BODY	1	2.4	PASCO
TU	1	D	4	0.250	POTTERY	CRUMB SHERD	18	6.7	
TU	1	D	5	0.250	VERTFAUNA			22.8	
TU	1	E	1	0.250	LITHIC		1	0.4	
TU	1	E	2	0.250	VERTFAUNA			1.2	
TU	1	F	1	0.250	VERTFAUNA			1.3	
TU	1	G	1	0.250	LITHIC	FLAKE/SHATTER	3	2.2	
TU	2	A	1	0.250	POTTERY	CRUMB SHERD	2	0.9	
TU	2	A	2	0.250	VERTFAUNA			0.4	
TU	2	B	1	0.250	POTTERY	BODY	4	11.0	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus B (cont'd)									
TU	2	B	2	0.250	POTTERY	RIM	1	1.1	
TU	2	B	3	0.250	POTTERY	RIM	1	1.5	UID. 2 INCISED LINES PARALLEL TO RIM
TU	2	B	4	0.250	POTTERY	RIM	1	8.1	ST. JOHNS?
TU	2	B	5	0.250	POTTERY	BODY	2	2.7	ST. JOHNS
TU	2	B	6	0.250	POTTERY	CRUMB SHERD	5	2.5	
TU	2	B	7	0.250	VERTFAUNA			29.0	
TU	2	B	8	0.250	MARINE SHELL	HAMMER	2	121.8	
TU	2	C	1	0.250	POTTERY	BODY	4	13.8	
TU	2	C	2	0.250	POTTERY	BODY	1	13.7	DEPTFORD
TU	2	C	3	0.250	POTTERY	RIM	1	4.8	ST. JOHNS. MENDS WITH SHERD FROM LEVEL B
TU	2	C	4	0.250	POTTERY	CRUMB SHERD	3	1.0	
TU	2	C	5	0.250	MARINE SHELL	HAMMER	2	74.2	
TU	2	C	6	0.250	MARINE SHELL	COLLUMELLA	1	37.3	
TU	2	C	7	0.250	VERTFAUNA			88.4	
TU	2	D	1	0.250	POTTERY	BODY	1	5.7	UID
TU	2	D	2	0.250	LITHIC	STEMMED BIFACE FRAGMENT	1	4.2	HAMILTON POINT?
TU	2	D	3	0.250	VERTFAUNA			18.2	
TU	2	E	1	0.250	POTTERY	BODY	4	20.6	ST. JOHNS
TU	2	E	2	0.250	VERTFAUNA			1.7	
TU	2	F	1	0.250	VERTFAUNA			6.7	
TU	3	A	1	0.250	POTTERY	BODY	1	4.3	
TU	3	A	2	0.250	POTTERY	CRUMB SHERD	3	2.1	
TU	3	B	1	0.250	POTTERY	BODY	10	46.4	
TU	3	B	2	0.250	POTTERY	CRUMB SHERD	11	6.6	
TU	3	B	3	0.250	POTTERY	BODY	7	41.7	RUSKIN DENTATE/ WEEDEN ISLAND
TU	3	B	4	0.250	POTTERY	RIM	1	10.7	PASCO
TU	3	B	5	0.250	VERTFAUNA			9.5	

Locus B (cont'd)

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
TU	3	C	1	0.250	POTTERY	BODY	3	11.3	
TU	3	C	2	0.250	POTTERY	RIM	1	1.2	
TU	3	C	3	0.250	POTTERY	BODY	1	14.4	PASCO
TU	3	C	4	0.250	LITHIC		1	3.1	
TU	3	C	5	0.250	VERTFAUNA			4.7	
TU	3	D	1	0.250	VERTFAUNA			0.8	
TU	3	D	2	0.250	MARINE SHELL	HAMMER	1	19.9	
TU	3	D	3	0.250	MARINE SHELL		2	10.0	MATCHED SCALLOP SHELLS
TU	3	E	1	0.250	LITHIC	FLAKE	1	1.5	
TU	3	E	2	0.250	VERTFAUNA			1.0	
TU	3	E	3	0.250	MARINE SHELL	COLLUMELLA	1	101.6	POSSIBLE MODIFIED COLLUMELLA
TU	3	E	4	0.250	MARINE SHELL	HAMMER	1	40.7	
TU	3	F	1	0.250	VERTFAUNA			13.1	
TU	4	A	1	0.250	POTTERY	BODY	2	11.5	
TU	4	A	2	0.250	POTTERY	CRUMB SHERD	1	0.5	
TU	4	A	3	0.250	VERTFAUNA			4.0	
TU	4	A	4	0.250	HISTORIC	FRAGMENT	1	0.2	
TU	4	B	1	0.250	POTTERY	BODY	8	31.4	
TU	4	B	2	0.250	POTTERY	BODY	2	17.9	DEPTFORD STAMPING IS FAINT AND SMOOTHED
TU	4	B	3	0.250	MARINE SHELL		3	64.5	3 GASTROPODS-MODIFICATIONS?
TU	4	B	4	0.250	POTTERY	CRUMB SHERD	2	0.7	
TU	4	B	5	0.250	LITHIC	FLAKE	1	0.1	
TU	4	B	6	0.250	VERTFAUNA			57.2	
TU	4	C	1	0.250	POTTERY	BODY	15	58.7	
TU	4	C	2	0.250	POTTERY	BODY	6	53.1	DEPTFORD
TU	4	C	3	0.250	POTTERY	BODY	3	23.8	PASCO
TU	4	C	4	0.250	POTTERY	CRUMB SHERD	24	27.0	
TU	4	C	5	0.250	MARINE SHELL	HAMMER	4	178.0	
TU	4	C	6	0.250	MARINE SHELL		1	9.7	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus B (cont'd)									
TU	4	C	7	0.250	MARINE SHELL	FRAGMENT	1	13.6	
TU	4	C	8	0.250	VERTFAUNA			51.5	
TU	4	D	1	0.250	POTTERY	BODY	1	7.5	
TU	4	D	2	0.250	LITHIC	ABRADER	1	57.6	
TU	4	D	3	0.250	MARINE SHELL	WHOLE	1	25.6	
TU	4	D	4	0.250	VERTFAUNA			34.9	
TU	4	D	1	0.250	POTTERY	BODY	4	17.0	
TU	4	D	2	0.250	POTTERY	BODY	3	30.1	
TU	4	D	3	0.250	LITHIC	ABRADER	1	35.8	
TU	4	D	4	0.250	POTTERY	BODY	4	3.8	
TU	4	D	5	0.250	LITHIC	CORE	1	221.0	
TU	4	D	6	0.250	LITHIC	UID	1	58.3	
TU	4	D	7	0.250	MARINE SHELL	HAMMER	1	40.2	
TU	4	D	8	0.250	MARINE SHELL	FRAGMENTS	1	171.1	
TU	4	D	9	0.250	VERTFAUNA			41.9	
TU	4	D	1	0.250	VERTFAUNA			0.4	
TU	4	E	1	0.250	POTTERY	BODY	1	19.4	
TU	4	E	2	0.250	VERTFAUNA			5.0	
TU	4	E	1	0.250	LITHIC	SHATTER/FRAG	1	69.5	
TU	4	E	2	0.250	VERTFAUNA			56.7	
TU	4	F	1	0.250	LITHIC	FLAKE	2	0.8	
TU	4	F	2	0.250	MARINE SHELL	FRAGMENT	1	41.0	
TU	4	F	3	0.250	VERTFAUNA			6.9	
TU	4	F	1	0.250	MARINE SHELL	HAMMER	1	60.9	
TU	4	F	2	0.250	LITHIC	PEBBLE	1	0.7	
TU	4	F	3	0.250	VERTFAUNA			86.0	
TU	4	G	1	0.250	VERTFAUNA			0.2	
TU	4	G	1	0.250	LITHIC	FRAGMENT	1	3.4	
TU	4	WEST PROFILE	1	0.250	MARINE SHELL			1503.2	

Locus B (cont'd)

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
TU	4	WEST PROFILE	2	0.250	MARINE SHELL			27.6	
TU	4	WEST PROFILE	3	0.250	MARINE SHELL			6.5	
TU	4	WEST PROFILE	4	0.250	MARINE SHELL			1.2	
TU	4	WEST PROFILE	5	0.250	LAND SNAIL			0.3	
TU	4	WEST PROFILE	6	0.250	LITHIC	UID		31.4	
TU	4	WEST PROFILE	7	0.250	VERTFAUNA			1.3	
TU	4	WEST PROFILE	8	0.250	MARINE SHELL			183.2	
TU	4	WEST PROFILE	9	0.250	MARINE SHELL			1.2	
TU	4	WEST PROFILE	10	0.250	MARINE SHELL			1.5	
TU	4	WEST PROFILE	11	0.250	MARINE SHELL			2.1	
TU	4	WEST PROFILE	12	0.250	LAND SNAIL			0.1	
TU	4	WEST PROFILE	13	0.250	VERTFAUNA			2.1	
TU	4	WEST PROFILE	14	0.250	CHARCOAL			0.1	
TU	4	WEST PROFILE	15	LESS THAN .125	UNSORTED			XX	
TU	4	WEST PROFILE	1	0.250	MARINE SHELL			2051.0	
TU	4	WEST PROFILE	2	0.250	MARINE SHELL			83.2	
TU	4	WEST PROFILE	3	0.250	MARINE SHELL			21.8	
TU	4	WEST PROFILE	4	0.250	POTTERY	BODY		1.2	
TU	4	WEST PROFILE	5	0.250	MARINE SHELL			1.4	
TU	4	WEST PROFILE	6	0.250	MARINE SHELL			0.1	
TU	4	WEST PROFILE	7	0.250	LAND SNAIL			0.2	
TU	4	WEST PROFILE	8	0.250	CHARCOAL			0.1	
TU	4	WEST PROFILE	9	0.250	VERTFAUNA			12.2	
TU	4	WEST PROFILE	10	0.250	MARINE SHELL			313.9	
TU	4	WEST PROFILE	11	0.250	MARINE SHELL			0.8	
TU	4	WEST PROFILE	12	0.250	MARINE SHELL			0.3	
TU	4	WEST PROFILE	13	0.250	SHELL MISC.			2.3	
TU	4	WEST PROFILE	14	0.250	VERTFAUNA			15.2	
TU	4	WEST PROFILE	15	0.250	CHARCOAL			0.6	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus B (cont'd)									
TU	4	WEST PROFILE	16	LESS THAN .125	UNSORTED			XX	
TU	4	EAST PROFILE	1	0.250	MARINE SHELL			681.8	
TU	4	EAST PROFILE	2	0.250	LITHIC	FLAKE	1	1.4	
TU	4	EAST PROFILE	3	0.250	MARINE SHELL			62.9	
TU	4	EAST PROFILE	4	0.250	MARINE SHELL			0.3	
TU	4	EAST PROFILE	5	0.250	VERTFAUNA			2.7	
TU	4	EAST PROFILE	6	0.250	MARINE SHELL			71.8	
TU	4	EAST PROFILE	7	0.250	MARINE SHELL			2.4	
TU	4	EAST PROFILE	8	0.250	MARINE SHELL			0.5	
TU	4	EAST PROFILE	9	0.250	VERTFAUNA			5.0	
TU	4	EAST PROFILE	10	0.250	CHARCOAL			0.1	
TU	4	EAST PROFILE	11	LESS THAN .125	UNSORTED			XX	
TU	4	EAST PROFILE	1	0.250	MARINE SHELL			1688.4	
TU	4	EAST PROFILE	2	0.250	MARINE SHELL			25.1	
TU	4	EAST PROFILE	3	0.250	VERTFAUNA			3.6	
TU	4	EAST PROFILE	4	0.250	MARINE SHELL			130.9	
TU	4	EAST PROFILE	5	0.250	MARINE SHELL			1.5	
TU	4	EAST PROFILE	6	0.250	MARINE SHELL			0.3	
TU	4	EAST PROFILE	7	0.250	MARINE SHELL			0.6	
TU	4	EAST PROFILE	8	0.250	LAND SNAIL			0.5	
TU	4	EAST PROFILE	9	0.250	VERTFAUNA			6.8	
TU	4	EAST PROFILE	10	0.250	CHARCOAL			0.1	
TU	4	EAST PROFILE	11	LESS THAN .125	UNSORTED			XX	
TU	5	A	1	0.250	POTTERY	BODY	4	8.0	
TU	5	B	1	0.250	POTTERY	BODY	5	9.4	
TU	5	B	2	0.250	POTTERY	CRUMB SHERD	1	3.1	UID
TU	5	B	3	0.250	POTTERY	RIM	1	3.2	WEEDEN ISLAND
TU	5	B	4	0.250	POTTERY	RIM	1	5.6	
TU	5	B	5	0.250	VERTFAUNA			8.9	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus B (cont'd)									
TU	5	B	6	0.250	HISTORIC	NAIL	1	0.6	
TU	5	C	1	0.250	POTTERY	BODY	1	2.6	
TU	5	C	2	0.250	VERTFAUNA			0.3	
TU	5	C	1	0.250	POTTERY	BODY	11	44.4	
TU	5	C	2	0.250	POTTERY	BODY	5	31.4	DEPTFORD
TU	5	C	3	0.250	POTTERY	CRUMB SHERD	8	6.2	
TU	5	C	4	0.250	POTTERY	BODY	1	19.7	PASCO
TU	5	C	5	0.250	MARINE SHELL	HAMMER	2	71.0	
TU	5	C	6	0.250	MARINE SHELL	FRAGMENT	2	33.2	WHELK FRAGMENTS
TU	5	C	7	0.250	VERTFAUNA			102.9	
TU	5	D	1	0.250	POTTERY	BODY	10	50.4	
TU	5	D	2	0.250	POTTERY	CRUMB SHERD	9	5.3	
TU	5	D	3	0.250	POTTERY	BODY	1	2.9	
TU	5	D	4	0.250	POTTERY	BODY	1	12.1	
TU	5	D	5	0.250	POTTERY	BODY	1	2.1	PASCO
TU	5	D	6	0.250	POTTERY	BODY	1	1.5	ST. JOHNS
TU	5	D	7	0.250	POTTERY	UID	1	2.9	ST. JOHNS INCISED ST. JOHNS SHERD WITH CROSS-HATCHING
TU	5	D	8	0.250	VERTFAUNA			38.4	
TU	5	D	9	0.250	MARINE SHELL	HAMMER	2	61.6	
TU	5	D	10	0.250	MARINE SHELL		1	256.8	
TU	5	E	1	0.250	POTTERY	BODY	4	64.2	MENDS WITH LARGE SHERD FROM FEATURE-1
TU	5	E	2	0.250	POTTERY	CRUMB SHERD	2	1.7	
TU	5	E	3	0.250	POTTERY	CRUMB SHERD	1	0.2	ST. JOHNS
TU	5	E	4	0.250	LITHIC	SHATTER/CORE FRAG	2	38.3	
TU	5	E	5	0.250	VERTFAUNA			24.1	
TU	5	E	1	0.250	VERTFAUNA			5.1	
TU	5	F	1	0.250	POTTERY	BODY	1	3.8	DEPTFORD
TU	5	F	2	0.250	LITHIC	FLAKE	1	0.9	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus B (cont'd)									
TU	5	F	3	0.250	VERTFAUNA			0.4	
TU	5	FEATURE 1	1	0.250	POTTERY	RIM	1	112.7	WEEDEN ISLAND
TU	5	FEATURE 1	2	0.250	MARINE SHELL			326.0	
TU	5	FEATURE 1	3	0.250	MARINE SHELL			300.0	
TU	5	FEATURE 1	4	0.250	MARINE SHELL			10.9	
TU	5	FEATURE 1	5	0.250	MARINE SHELL			10.9	
TU	5	FEATURE 1	6	0.250	VERTFAUNA			0.1	
TU	5	FEATURE 1	7	0.250	MARINE SHELL			12.6	
TU	5	FEATURE 1	8	0.250	MARINE SHELL			0.1	
TU	5	FEATURE 1	9	0.250	MARINE SHELL			0.2	
TU	5	FEATURE 1	10	0.250	LAND SNAIL			0.1	
TU	5	FEATURE 1	11	0.250	VERTFAUNA			1.7	
TU	5	FEATURE 1	12	LESS THAN .125	UNSORTED			XX	
TU	5	FEATURE 2	1	0.250	MARINE SHELL			661.4	
TU	5	FEATURE 2	2	0.250	MARINE SHELL	UID	1	67.4	
TU	5	FEATURE 2	3	0.250	MARINE SHELL	FRAGMENT	4	9.6	
TU	5	FEATURE 2	4	0.250	SHELL	UID	3	0.7	
TU	5	FEATURE 2	5	0.250	VERTFAUNA			0.7	
TU	5	FEATURE 2	6	LESS THAN .125	UNSORTED			101.7	
TU	5	FEATURE 2	7	0.250	SHELL	CRUSHED/FRAGMENT		70.2	
TU	5	FEATURE 2	8	0.250	VERTFAUNA			1.6	
TU	5	FEATURE 2	9	0.250	SHELL	WHOLE	1	0.1	
TU	5	FEATURE 2	10	0.250	CHARCOAL			LESS THAN .1	
TU	5	FEATURE 3	1	0.250	MARINE SHELL			434.3	
TU	5	FEATURE 3	2	0.250	MARINE SHELL			61.6	
TU	5	FEATURE 3	3	0.250	MARINE SHELL			43.9	
TU	5	FEATURE 3	4	0.250	MARINE SHELL			0.2	
TU	5	FEATURE 3	5	0.250	MARINE SHELL			7.7	
TU	5	FEATURE 3	6	0.250	MARINE SHELL			0.2	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus B (cont'd)									
TU	5	FEATURE 3	7	0.250	VERTFAUNA			1.9	
TU	5	FEATURE 3	8	0.250	MARINE SHELL			53.1	
TU	5	FEATURE 3	9	0.250	MARINE SHELL			0.5	
TU	5	FEATURE 3	10	0.250	MARINE SHELL			0.2	
TU	5	FEATURE 3	11	0.250	MARINE SHELL			0.9	
TU	5	FEATURE 3	12	0.250	MARINE SHELL			4.0	
TU	5	FEATURE 3	13	0.250	LAND SNAIL			0.2	
TU	5	FEATURE 3	14	0.250	VERTFAUNA			3.8	
TU	5	FEATURE 3	15	LESS THAN .125	UNSORTED			XX	
TU	5	EAST PROFILE	1	0.250	POTTERY	BODY	5	13.3	
TU	5	EAST PROFILE	2	0.250	MARINE SHELL			1042.7	
TU	5	EAST PROFILE	3	0.250	MARINE SHELL			79.5	
TU	5	EAST PROFILE	4	0.250	MARINE SHELL			0.9	
TU	5	EAST PROFILE	5	0.250	VERTFAUNA			4.3	
TU	5	EAST PROFILE	6	0.250	CHARCOAL			0.1	
TU	5	EAST PROFILE	7	0.250	MARINE SHELL			119.4	
TU	5	EAST PROFILE	8	0.250	MARINE SHELL			1.6	
TU	5	EAST PROFILE	9	0.250	MARINE SHELL			2.9	
TU	5	EAST PROFILE	10	0.250	LAND SNAIL			0.2	
TU	5	EAST PROFILE	11	0.250	VERTFAUNA			5.4	
TU	5	EAST PROFILE	12	0.250	CHARCOAL			0.3	
TU	5	EAST PROFILE	13	0.250	UNSORTED			XX	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus C									
STP	T4-9		1	0.250	POTTERY	BODY	1	3.3	
STP	T4-9		2	0.250	LITHIC	FLAKE	1	0.6	
STP	T4-10		1	0.250	POTTERY	BODY	6	19.2	PASCO
STP	T4-10		2	0.250	POTTERY	BODY	3	5.0	
STP	T4-10		3	0.250	VERTFAUNA		3	3.3	
STP	T4-10		4	0.250	HISTORIC	FRAGMENT	1	1.3	
STP	T4-11		1	0.250	LITHIC	BANNERSTONE FRAGMENT	1	29.2	
STP	T4-11		2	0.250	LITHIC	ELONGATE	1	4.2	
STP	T4-11		3	0.250	VERTFAUNA			8.1	
STP	T4-11		4	0.250	HISTORIC	FRAGMENT	2	0.9	
STP	T4-12		1	0.250	POTTERY	BODY	2	6.1	
STP	T4-12		2	0.250	POTTERY	BODY	13	39.3	PASCO SAME VESSEL, CROSS MEND
STP	T4-12		3	0.250	VERTFAUNA			38.2	
STP	T4-12		4	0.250	LITHIC	FLAKE/SHATTER	1	3.4	0-60CMBS
STP	T4-12		5	0.250	LITHIC	FLAKE	14	7.3	60-130CMBS
STP	T4-13		1	0.250	POTTERY	BODY	3	3.4	
STP	T4-13		2	0.250	POTTERY	RIM	1	2.1	
STP	T4-13		3	0.250	VERTFAUNA			18.6	STURGEON
STP	T4-14		1	0.250	POTTERY	BODY	1	3.7	
STP	T4-14		2	0.250	LITHIC	FLAKE	1	0.3	
STP	T4-14		3	0.250	VERTFAUNA			2.8	
STP	T4-15		1	0.250	LITHIC	FLAKE/SHATTER	2	2.2	
TU	1	A	1	0.250	POTTERY	BODY	1	3.6	
TU	1	A	2	0.250	VERTFAUNA			9.0	
TU	1	A	3	0.250	MARINE SHELL	HAMMER	1	34.1	
TU	1	A	4	0.250	HISTORIC	NAIL	15	23.8	
TU	1	A	5	0.250	HISTORIC	UID	1	2.5	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus C (cont'd)									
TU	1	A	6	0.250	HISTORIC	BULLET CASING	2	5.3	.22 AND 30 CARBINE
TU	1	A	7	0.250	HISTORIC	UID	2	2.1	
TU	1	A	8	0.250	HISTORIC	UID	8	9.6	
TU	1	B	1	0.250	POTTERY	BODY	3	7.1	
TU	1	B	2	0.250	VERTFAUNA			78.8	
TU	1	B	3	0.250	POTTERY	BODY	2	5.1	PASCO
TU	1	B	4	0.250	POTTERY	CRUMB SHERD	8	5.1	
TU	1	B	5	0.250	HISTORIC	FRAGMENT	17	23.0	
TU	1	B	6	0.250	HISTORIC	BULLET CASING	5	3.4	
TU	1	B	7	0.250	HISTORIC	UID	1	2.7	
TU	1	B	8	0.250	HISTORIC	NAIL/UID	58	138.9	
TU	1	B	9	0.250	HISTORIC	BOLT	1	84.1	UNKNOWN METAL
TU	1	B	10	0.250	HISTORIC	SPRING	1	1.5	UNKNOWN METAL
TU	1	B	11	0.250	LITHIC	FLAKE		0.2	
TU	1	C	1	0.250	POTTERY	BODY	10	33.5	
TU	1	C	2	0.250	POTTERY	BODY	1	4.1	
TU	1	C	3	0.250	POTTERY	BODY	1	18.1	RUSKIN DENTATE/ WEEDEN ISLAND
TU	1	C	4	0.250	POTTERY	RIM	3	13.7	
TU	1	C	5	0.250	POTTERY	BODY	4	23.5	WEEDEN ISLAND
TU	1	C	6	0.250	POTTERY	CRUMB SHERD	17	11.2	
TU	1	C	7	0.250	LITHIC	FLAKE/SHATTER	1	1.0	
TU	1	C	8	0.250	LITHIC	PEBBLE	1	106.2	
TU	1	C	9	0.250	MARINE SHELL	FRAGMENT	1	32.7	
TU	1	C	10	0.250	VERTFAUNA			55.6	
TU	1	C-STP FILL	1	0.250	POTTERY	RIM	1	3.7	RUSKIN DENTATE/ WEEDEN ISLAND
TU	1	C-STP FILL	2	0.250	POTTERY	BODY	1	1.1	
TU	1	C-STP FILL	3	0.250	POTTERY	RIM	1	4.6	
TU	1	C-STP FILL	4	0.250	VERTFAUNA			125.4	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus C (cont'd)									
TU	1	C-STP FILL	5	0.250	HISTORIC	NAIL	1	2.1	
TU	1	C-STP FILL	6	0.250	HISTORIC	FRAGMENT	2	1.2	
TU	1	D	1	0.250	POTTERY	BODY	19	47.6	
TU	1	D	2	0.250	POTTERY	BODY	4	12.8	CARRABELLE PUNCTATED/ WEEDEN ISLAND MENDS WITH PLAIN SHERDS
TU	1	D	3	0.250	POTTERY	CRUMB SHERD	9	5.9	
TU	1	D	4	0.250	VERTFAUNA			89.3	
TU	1	E	1	0.250	POTTERY	CRUMB SHERD	1	0.2	
TU	1	E	2	0.250	VERTFAUNA			19.4	
TU	1	F	1	0.250	MARINE SHELL	HAMMER	1	35.7	
TU	1	F	2	0.250	VERTFAUNA			5.1	
TU	1	G	1	0.250	LITHIC	PEBBLE	1	0.8	
TU	1	G	2	0.250	VERTFAUNA			5.9	
TU	1	H	1	0.250	LITHIC	PREFORM?	1	10.4	
TU	1	H	2	0.250	LITHIC	FLAKE	2	2.9	
TU	1	H	3	0.250	LITHIC	SHATTER	2	1.5	
TU	1	H	4	0.250	VERTFAUNA			10.3	
TU	1	I	1	0.250	LITHIC	FLAKE/SHATTER	22	10.8	
TU	1	I	2	0.250	LITHIC	SHATTER	4	2.0	
TU	1	I	3	0.250	MARINE SHELL		1	127.2	
TU	1	I	4	0.250	VERTFAUNA			0.4	
TU	1	J	1	0.250	LITHIC	HAFTED BIFACE	1	9.8	
TU	1	J	2	0.250	LITHIC	FLAKE/SHATTER	24	10.4	
TU	1	J	3	0.250	VERTFAUNA			0.9	
TU	1	J	4	0.250	MARINE SHELL	FRAGMENT	1	16.9	
TU	1	K	1	0.250	LITHIC	FLAKE/SHATTER	13	7.1	
TU	1	K	2	0.250	VERTFAUNA			1.0	
TU	1	L	1	0.250	LITHIC	FLAKE/SHATTER	8	3.8	
TU	1	L	2	0.250	LITHIC	PEBBLE	1	1.1	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus C (cont'd)									
TU	1	M	1	0.250	LITHIC	FLAKE	4	10.4	
TU	1	N	1	0.250	LITHIC	FLAKE	3	0.2	
TU	1	N	2	0.250	LITHIC	UID	3	8.2	
TU	1	NORTH PROFILE	1	0.250	MARINE SHELL			2202.5	
TU	1	NORTH PROFILE	2	0.250	MARINE SHELL			261.5	
TU	1	NORTH PROFILE	3	0.250	MARINE SHELL			20.3	
TU	1	NORTH PROFILE	4	0.250	MARINE SHELL			9.2	
TU	1	NORTH PROFILE	5	0.250	MARINE SHELL			2.3	
TU	1	NORTH PROFILE	6	0.250	MARINE SHELL			61.2	
TU	1	NORTH PROFILE	7	0.250	MARINE SHELL			24.8	
TU	1	NORTH PROFILE	8	0.250	VERTFAUNA			19.1	
TU	1	NORTH PROFILE	9	0.250	MARINE SHELL			110.9	
TU	1	NORTH PROFILE	10	0.250	MARINE SHELL			4.0	
TU	1	NORTH PROFILE	11	0.250	MARINE SHELL			2.5	
TU	1	NORTH PROFILE	12	0.250	LAND SNAIL			0.1	
TU	1	NORTH PROFILE	13	0.250	VERTFAUNA			12.6	
TU	1	NORTH PROFILE	14	0.250	CHARCOAL			0.4	
TU	1	NORTH PROFILE	15	LESS THAN .125	UNSORTED			XX	
TU	1	NORTH PROFILE	1	0.250	MARINE SHELL			1670.5	
TU	1	NORTH PROFILE	2	0.250	MARINE SHELL			140.5	
TU	1	NORTH PROFILE	3	0.250	MARINE SHELL			1.3	
TU	1	NORTH PROFILE	4	0.250	LAND SNAIL			LESS THAN .1	
TU	1	NORTH PROFILE	5	0.250	MARINE SHELL			162.5	
TU	1	NORTH PROFILE	6	0.250	MARINE SHELL			3.8	
TU	1	NORTH PROFILE	7	0.250	MARINE SHELL			6.4	
TU	1	NORTH PROFILE	8	0.250	LAND SNAIL			LESS THAN .1	
TU	1	NORTH PROFILE	9	0.250	VERTFAUNA			0.5	
TU	1	NORTH PROFILE	10	0.250	CHARCOAL			LESS THAN .1	
TU	1	NORTH PROFILE	11	LESS THAN .125	UNSORTED			XX	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus D									
STP	T5-2		1	0.250	POTTERY	BODY	5	24.1	
STP	T5-2		2	0.250	LITHIC	FLAKE/SHATTER	2	0.2	
STP	T5-2		3	0.250	VERTFAUNA			9.4	
STP	T5-3		1	0.250	POTTERY	BODY	1	1.4	PASCO
STP	T5-3		2	0.250	VERTFAUNA			12.7	
STP	T5-4		1	0.250	POTTERY	BODY	1	3.2	
STP	T5-4		2	0.250	POTTERY	BODY	3	11.8	
STP	T5-4		3	0.250	VERTFAUNA			15.4	
STP	T5-5		1	0.250	VERTFAUNA			36.0	MOSTLY DEER BONE
STP	T5-5		2	0.250	MARINE SHELL	HAMMER	2	64.3	
STP	T7-1		1	0.250	LITHIC	UID	1	1.8	QUARTZ WITH POSSIBLE BIFACIAL FLAKING/MODIFICATION
STP	T7-2		1	0.250	VERTFAUNA			3.7	
STP	T7-2		2	0.250	LITHIC		1	5.8	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus E									
TU	1	B	1	0.250	LITHIC	FLAKE	1	0.2	
TU	1	F	1	0.250	POTTERY	BODY	1	5.6	ORANGE
TU	1	F	2	0.250	LITHIC	FLAKE	4	3.4	
TU	1	F	3	0.250	VERTFAUNA			0.6	
TU	1	G	1	0.250	LITHIC	FLAKE	11	1.6	
TU	1	G	2	0.250	VERTFAUNA			12.7	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRAD E	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus E (cont'd)									
TU	1	H	1	0.250	LITHIC	FLAKE	4	3.8	
TU	1	H	2	0.250	LITHIC	PEBBLE	1	62.0	
TU	1	H	3	0.250	VERTFAUNA			1.6	
TU	1	I	1	0.250	LITHIC	FLAKE	4	0.5	
TU	1	I	2	0.250	VERTFAUNA			LESS THAN .1	
TU	1	J	1	0.250	LITHIC	FLAKE	2	0.1	
TU	1	NORTH PROFILE	1	0.250	MARINE SHELL			844.7	
TU	1	NORTH PROFILE	2	0.250	MARINE SHELL			164.9	
TU	1	NORTH PROFILE	3	0.250	MARINE SHELL			0.4	
TU	1	NORTH PROFILE	4	0.250	MARINE SHELL			0.6	
TU	1	NORTH PROFILE	5	0.250	VERTFAUNA			1.5	
TU	1	NORTH PROFILE	6	0.250	MARINE SHELL			66.1	
TU	1	NORTH PROFILE	7	0.250	MARINE SHELL			0.2	
TU	1	NORTH PROFILE	8	0.250	MARINE SHELL			1.3	
TU	1	NORTH PROFILE	9	0.250	MARINE SHELL			0.7	
TU	1	NORTH PROFILE	10	0.250	VERTFAUNA			4.6	
TU	1	NORTH PROFILE	11	0.250	CHARCOAL			LESS THAN .1	
TU	1	NORTH PROFILE	12	LESS THAN 1.25	UNSORTED				
STP	T6-2		1	0.250	LITHIC	FLAKE	2	3.0	
STP	T6-4		1	0.250	LITHIC	FLAKE	1	0.3	
STP	T6-5		1	0.250	LITHIC	FLAKE	3	LESS THAN .1	
STP	T6-6		1	0.250	POTTERY	BODY	1	2.2	ORANGE
STP	T6-6		2	0.250	LITHIC	FLAKE	2	LESS THAN .1	
STP	T6-6		3	0.250	LITHIC	PEBBLE	1	1.0	
STP	T6-7		1	0.250	LITHIC	FLAKE/SHATTER	71	31.6	
STP	T6-7		2	0.250	LITHIC	RETOUCHED	3	3.2	STEEPLY RETOUCHED UNIFACIAL TOOLS
STP	T6-8		1	0.250	LITHIC	RETOUCHED	1	5.1	ELONGATE BIFACIAL TOOL
STP	T6-8		2	0.250	LITHIC	FLAKE	1	LESS THAN .1	
STP	T6-8		3	0.250	VERTFAUNA		2	0.1	

PROV. TYPE	PROV.	STRAT.	CAT #	SIZEGRADE	MATERIAL	FORM	COUNT	WEIGHT	NOTES
Locus E (cont'd)									
STP	T6-9		1	0.250	LITHIC	FLAKE	3	0.5	
STP	T6-10		1	0.250	LITHIC	FLAKE	7	3.9	
Not Assigned to Loci									
STP	T4-5		1	0.250	POTTERY	BODY	2	8.6	
STP	T4-8		1	0.250	LITHIC	FLAKE	2	1.0	

APPENDIX B:

RADIOCARBON DATA

Provenience	Material	Beta Lab Number	Measured 14C Age BP	13C/12C Ratio	Conventional 14C Age BP	2-sigma Cal AD/BC	2-sigma Cal BP
8LV76 (Locus A)							
Profile 1	charcoal	289505	3510±40 BP	-25.2 o/oo	3510±40 BP	BC 1940-1740	BP 3890-3690
8LV75 (Locus B)							
TU5-F.1	charcoal	301597	2470±30 BP	-26.4 o/oo	2450±30 BP	BC 760-680 BC 670-410	BP 2710-2630 BP 2620-2360
TU2-STRII	charcoal	289504	2040±40 BP	-23.9 o/oo	2060±40 BP	BC 180-AD 20	BP 2130-1930
Profile1	charcoal	289503	1990±40 BP	-24.4 o/oo	2000±40 BP	BC 90-AD 80	BP 2040-1870
Deer Island South (Locus C)							
TU1-VI	charcoal	301592	3300±30 BP	-24.1 o/oo	3310±30 BP	BC 1670-1510	BP 3620-3460
TU1-IV	charcoal	301591	1280±30 BP	-25.3 o/oo	1280±30 BP	AD 660-780	BP 1280-1170
Deer Island Southeast (Locus E)							
TU1-VII	charcoal	301593	3460±40 BP	-25.8 o/oo	3450±40 BP	BC 1880-1670	BP 3830-3620