ARCHAEOLOGICAL INVESTIGATIONS AT BUTLER ISLAND NORTHEAST (8DI50), DIXIE COUNTY, FLORIDA

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Technical Report 20
Laboratory of Southeastern Archaeology
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October 2014

Cover photo: Ginessa Mahar (left) and Andrea Palmiotto (right) documenting profiles in Test Unit 3N at Butler Island NE (8DI50), March 2014.

MANAGEMENT SUMMARY

A crew from the Laboratory of Southeastern Archaeology, Department of Anthropology, University of Florida conducted archaeological survey and testing at Butler Island Northeast (NE) (8DI50) from March 2–4, 2014 under permit from the Dixie County Board of County Commissioners. Even though the site has been impacted by erosion along the shoreline and by the construction of two structures, augering identified two areas of intact archaeological deposits at the site, designated Locus A and Locus B. Two test units were excavated in Locus A, near one of the structures. Test Unit 1 contained intact midden deposits and two possible posthole features that suggest this may have been the location of a pre-Columbian structure. Pottery diagnostic of the Deptford through Weeden Island periods was recovered. A radiocarbon date obtained from charcoal in the upper portion of the midden suggests occupation of this area of the site from A.D. 1035 to 1215, although that occupation may have been ephemeral because no sherds diagnostic of that timeframe were recovered. Test Unit 3 and 3N were excavated to the east of the modern structure and revealed deeply stratified midden deposits. The upper 60 cm appear to be redeposited midden materials and include modern debris. The top of the intact archaeological deposits lie beneath the redeposited materials and contain pottery that is temporally consistent with that found in Test Unit 1. A date from the base of the anthropogenic deposits suggests that significant human occupation of the site began around 170 B.C. to A.D. 5 and continued through A.D. 885 to 1015, evidenced by a radiocarbon age estimate from the top of the intact midden. Test Unit 2 was excavated in Locus B, south of the second modern structure, and contained shallow shell midden deposits with diagnostic pottery consistent with that of the other test units. Additionally, two overlapping pit features were identified during excavation. The very shallow nature of the midden suggests that some portion of the upper elevations may have been removed. Overall, the occupational sequence of 8DI50 spans a chronological position between the seaward Bird Island (8DI52) and the inland Garden Patch (8DI4) archaeological sites, suggesting that people occupied progressively more inland areas as sea level rose and the shoreline transgressed in the Horseshoe Cove area during the late Holocene. Continued erosion along the shoreline threatens the Butler Island NE site and additional excavations are warranted to salvage the archaeological information before it is destroyed. Data retrieved from these excavations will be useful for addressing questions of environmental change and the subsequent human response.

ACKNOWLEDGMENTS

Fieldwork at Butler Island was conducted by a crew from the Laboratory of Southeastern Archaeology: Hayley Singleton, Melissa Ayvez, Ginessa Mahar, Andrea Palmiotto, Stephanie Boothby, Cristina Oliveira, Ken Sassaman, and Stephen McFadden. Permission to excavate on the island was given by the Dixie County Board of County Commissioners and was greatly facilitated by the County Manager, Mike Cassidy. Charles B. Stoer provided luxury accommodations at his wonderful Gulf front home that overlooks Butler Island. Jamie Cona assisted with analysis of sediment samples. John Jaeger provided access to the Marine Sedimentology Laboratory facilities in the Department of Geological Sciences, and William Kenney with the Land Use and Environmental Change Institute (LUECI) provided access to the Paleoenvironmental Research Laboratory. Ken Sassaman provided laboratory access and logistical support as well as lending his expertise and guidance during this project. Funding was provided by the Hyatt and Cici Brown Endowment for Florida Archaeology.

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CHAPTER 1
BACKGROUND AND PREVIOUS RESEARCH

Butler Island is a parabolic-shaped island situated 0.8 km to the southeast of the town of Horseshoe Beach, Florida in the very shallow marine and marsh area of Horseshoe Cove. This county-owned island is the location of an archaeological site (8DI50) that contains cultural materials dating to the Early Woodland period and later. In addition to ongoing erosion along the shoreline caused by storms, waves, and boat wakes, the site has also been impacted by the construction and habitation of two structures atop the pre-Columbian midden deposits.

In March of 2014, the Laboratory of Southeastern Archaeology conducted survey and test unit excavations to recover archaeological data from Butler Island as part of an overall research project that has been outlined in the initial Lower Suwannee Archaeological Survey report (Sassaman et al. 2011). This research project includes Butler Island and the surrounding area of Horseshoe Cove.

BACKGROUND

With a central goal of exploring the pre-Columbian archaeological record along the northern Gulf Coast of Florida, the Laboratory of Southeastern Archaeology at the University of Florida, Department of Anthropology, launched the Lower Suwannee Archaeological Survey (LSAS). This long-term research project focuses on the 47-km-long coastline that stretches from Horseshoe Beach, south, to Cedar Key, and includes the Lower Suwannee and Cedar Keys National Wildlife Refuges (Figure 1-1). Results from investigations in the research area suggest that this region supported large aboriginal populations spanning the last 4,500 years (Sassaman et al. 2011) and includes small residential areas, civic-ceremonial centers (Wallis and McFadden 2014), monumental mounds (Sassaman et al. 2013), shellfish processing sites (McFadden and Palmiotto 2012), and areas of specialized bead manufacture (Micah Monés, personal communication 2014). The LSAS project is still in the early stages and there are a significant number of archaeological sites that have yet to be investigated, many threatened by erosion due to storms and sea-level rise. One of the primary goals of the LSAS is to salvage threatened archaeological sites in the study area for insights on the poorly understood pre-Columbian history of this region.

Excavations at Butler Island are also part of a geoarchaeological research project that seeks to understand how the aboriginal inhabitants in the area of Horseshoe Cove adapted to environmental changes, specifically sea-level rise during the late Holocene. This project includes the collection of marine sediment cores in Horseshoe Cove and test unit excavations at the nearby archaeological sites of Butler Island Northeast (NE) (8DI50), Bird Island (8DI52), and Garden Patch (8DI4), near the town of Horseshoe Beach.

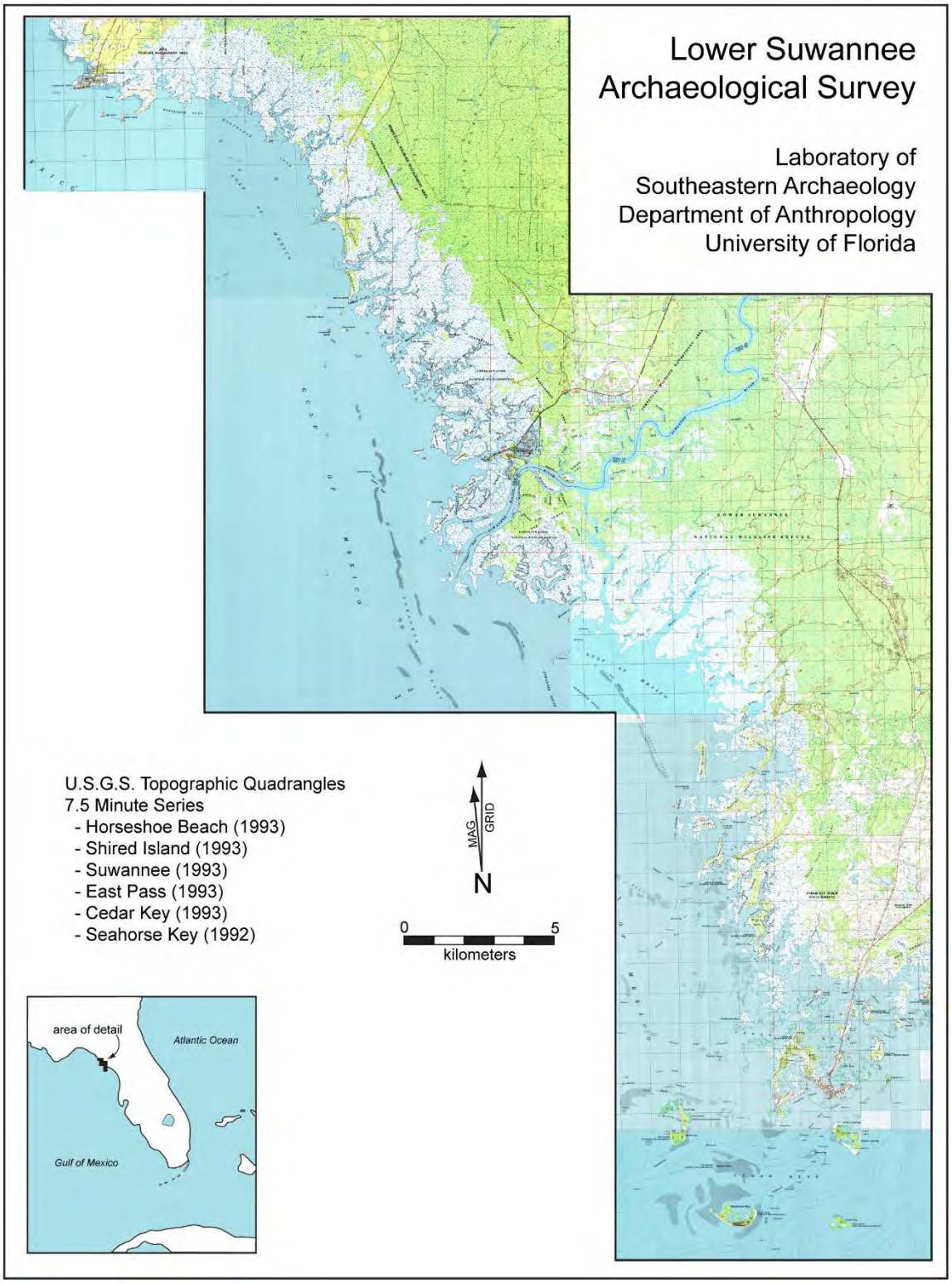

Figure 1-1. Study area of the Lower Suwannee Archaeological Survey (Sassaman et al. 2011).

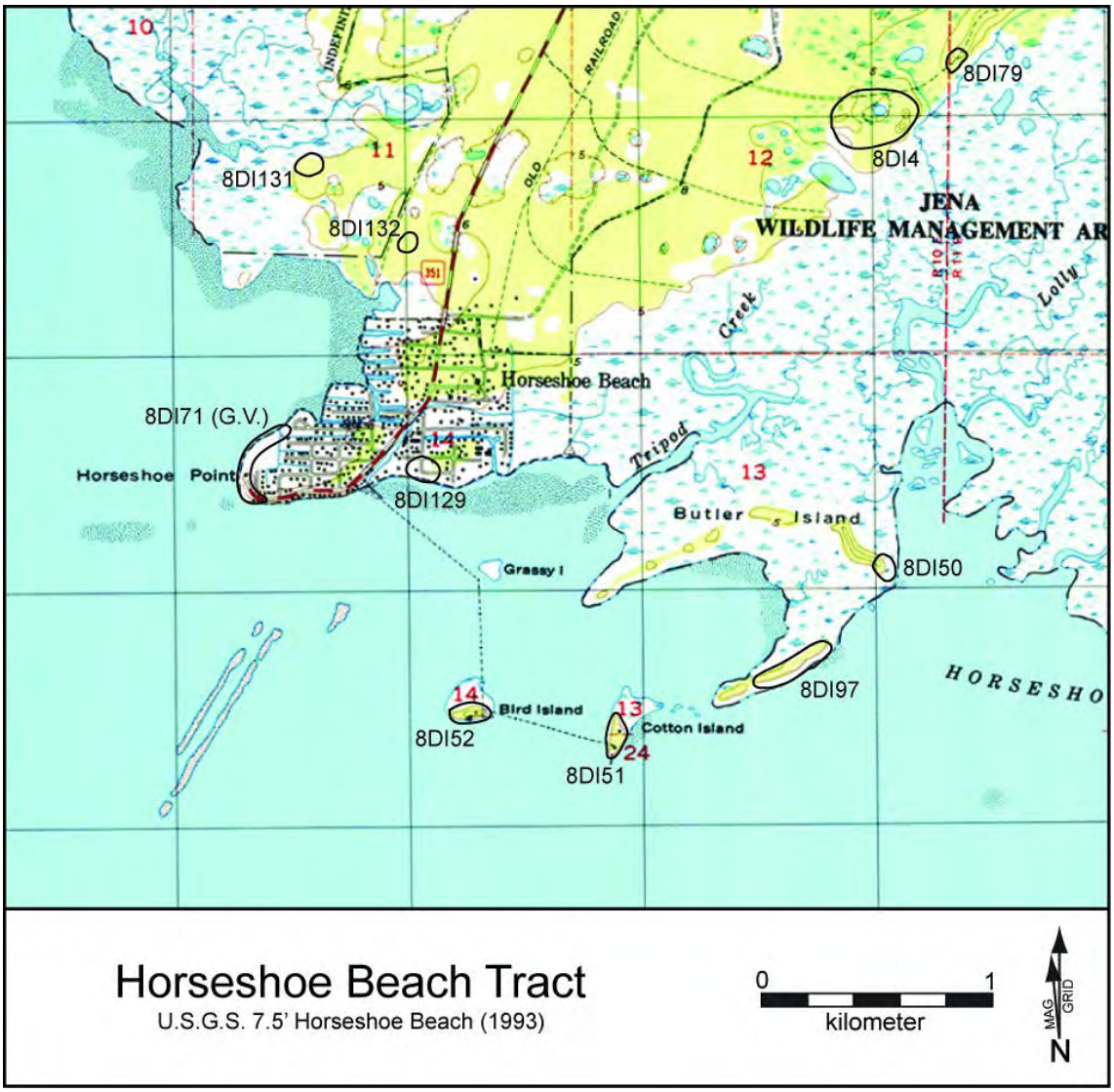

Figure 1-2. Topographic map of Horseshoe Beach tract, showing locations of sites on file with the Florida Master Site Files, Bureau of Archaeological Research (Sassaman et al. 2011).

Setting

A comprehensive description of the physiographic setting of the entire LSAS study area is provided in Sassaman et al. (2011) and need not be repeated here. Horseshoe Cove is located at the northernmost extent of the LSAS research area, approximately 16 km north of the mouth of the Suwannee River, and is bordered on the northwest by the mainland town of Horseshoe Beach, to the north and east by extensive salt marsh and low-lying forested areas, and to the south by Fishbone Creek. In addition to Butler Island, several small islands are encompassed by the cove, including Bird and Cotton islands, and numerous other small islands and hammocks are located within the marshy areas.

A relatively thin sediment cover overlies the limestone substrate in the area. The remnants of relict parabolic-shaped paleodunes and sandsheets that accreted during the late Pleistocene and early Holocene are prominent features on the landscape. The geomorphologic and sedimentary characteristics of Butler Island suggest that it is the remnant of a drowned paleodune, and those characteristics are consistent with other paleodunes that formed throughout the southeastern United States between 30,000 and 15,000 years ago during a period of glaciation and drier climatic conditions (Ivester 2003). The distinctive filled-in parabolic, or U-shape is a product of the direction of the prevailing winds in the region at the time of formation (Markewich and Markewich 1994), and in the case of the coastal region, reworking by marine processes as sea level rose and the land around the dunes was inundated (Wright et al. 2005).

Significant oyster bars characterize the offshore areas of Horseshoe Cove. The eastern oyster (*Crassostrea virginica)* thrives in both subtidal and intertidal zones of brackish water estuaries and can grow from a small colony of around one square meter to reefs that are hundreds of hectares in size (Kilgen and Dugas 1989). Large reefs tend to parallel the coastline and can act as barriers that trap sediment landward and stall shoreline transgression during periods of rising sea.

Butler Island is situated in a very shallow area within Horseshoe Cove and consists of three main upland areas connected by low-lying marsh. The island is bounded by salt marsh to the north and northwest, and by shallow water and extensive oyster beds to the south and southeast. Lolly Creek flows from the marsh to the south of the main portion of the island and several small tidal creeks are located in the marsh to the north. The two arms of the u-shaped island extend to the southwest and are cut off from the central portion of the island by marsh. Bird Island, situated at the tip of the northern arm, and Cotton Island, at the tip of the southern arm, were also part of the paleodune landform prior to shoreline transgression in this area.

The Butler Island NE site is located on the northeastern portion of the main island. Eroding midden materials are visible along a meter-high escarpment that truncates the site along the shoreline, and cultural materials are easily found on the beach at low tide. On the elevated upland area, two abandoned fishing shacks sit atop the main part of the site. Scattered shell is visible on the ground surface, particularly around the drip line of one of the shacks (See Figure 1-4).

Background

Butler Island is undeveloped with the exception of the two previously mentioned shacks. Both were constructed prior to 1986 by Olief Edmonds Nash and her sister Ivy Edmonds Hutchinson, who had frequented the island for decades. On Saturday, September 18, 2004, the sisters left Horseshoe Beach in a small aluminum boat, paddled toward Butler Island, and disappeared. Despite an intensive search by Florida Fish and Wildlife, the Dixie County Sheriff's Office, the U.S. Coast Guard, and local residents, the two ladies were never found (Krueger 2004; Voyles 2005). The shacks have not been reoccupied.

Figure 1-2. Structure 1 at Butler Island NE, 8DI50.

Figure 1-3. Structure 2 at Butler Island NE, 8DI50.

Figure 1-4. Drip line of Structure 1 showing exposed shell on the ground surface.

Primitive camping is allowed on the island, as it is one of the stops on the Florida Fish and Wildlife Big Bend Saltwater Paddling Trail. A picnic table and signage are located on the southern arm of the island, but camping debris can be found along much of the shoreline, including near the Butler Island NE site.

Two archaeological sites have been documented on Butler Island. Site 8DI50, originally named the Lolly Creek site, was first reported by John Goggin in 1954. He described the site as oyster shell midden on an old dune that was 200 ft wide by 300 ft long and extended to a depth of 12 ft in some areas. He further noted that there was an area of black, consolidated dirt with shells and potsherds along the shoreline. Based on pottery types observed in the eroding midden, Goggin determined that the site dated to the Deptford period, regionally from ca. 500 B.C. to A.D. 200. No map of the site location was provided, but Goggin describes it as being on the right bank at the mouth of Lolly Creek, south of Horseshoe, on the west side of Horseshoe Cove.

Timothy A. Kohler and G. Michael Johnson revisited the site in the company of Dr. Julian Granberry as part of the Dixie County Archaeological Reconnaissance project in 1986. They identified two distinct areas of midden on the island, one on the northeast portion of the main upland area, near Lolly Creek, and the other on the southern arm of the island. They determined that Goggin's description only applied to the northeastern site and, based on that, recommended that the site name be changed to Butler Island NE. Kohler and

Johnson note that the island was owned by the county but someone was allowed to live on it temporarily in the area south of the site. This is presumably a reference to the shacks constructed by Nash and Hutchinson. Pottery types collected during the survey included Simple Stamped, Cross Simple Stamped, and Linear Check Stamped sherds, all of the Deptford period. Swift Creek and St. Andrews Complicated Stamped and Pasco Plain sherds were also collected, prompting Kohler and Johnson to extend the temporal range of the site into the Swift Creek period, as late as A.D. 850 (Wallis 2011:28). Lithic artifacts included a limestone plummet, a biface, and debitage.

The second midden area on the southern arm of the island reported by Kohler and Johnson was designated as site number 8DI97, and named Butler Island South. They describe the site as a linear shell midden with dense cultural materials, including pot sherds. The 400-m long by 40-m wide midden contained mostly oyster shell with some clam and whelk. Pottery types represented in their surface collection included Deptford series Simple Stamped, Cross Simple Stamped, and Linear Check Stamped sherds. Pasco Plain pottery was also recovered. No Swift Creek Complicated Stamped sherds were found, and the midden was assigned to the Deptford Period.

During the 2014 survey, discretionary augering and shovel testing on the main portion of the island revealed no intact archaeological deposits in areas other than the Butler Island NE site. No exposed midden was observed during visual survey of the shoreline at Butler Island South and, due to time constraints, that area of the island was not surveyed. Lithic materials had been reported at the tip of the northern arm of the island, and the lack of pottery in association suggested this may be the location of a site that dates to the pre-pottery Archaic period. During the summer of 2013, a group of students from the Florida Museum of Natural History Lower Suwannee Archaeological Field School conducted a foot survey along the shoreline at that location during low tide. Numerous chert flakes were observed among the sea grass and no pottery was found. The area was revisited during the 2014 survey and the upland area was shovel tested in hopes of identifying intact archaeological remains in this area. Unfortunately, no cultural remains were found and it is likely that the lithic materials are the remnants of a site that has been destroyed.

Summary

Butler Island is the remnant of a Pleistocene parabolic-shaped dune that has been isolated from the mainland by late Holocene sea-level rise and is now situated in the shallow, estuarine environment of Horseshoe Cove. With the exception of two shacks, the island has seen no modern development. There are two archaeological sites that have been reported on the island. The first, Butler Island NE (8DI50), was reported by Goggin in 1954 and contained Deptford through Swift Creek period cultural remains. The second site, Butler Island South (8DI97), was reported by Kohler and Johnson in 1986 and contained only Deptford period artifacts. Scattered lithic materials recovered during low tide at the tip of the northern arm of the island suggest that an earlier, pre-pottery site may have been located in that area. However, no evidence of intact deposits have been identified and it is likely that the site has been destroyed by millennia of sea-level rise. Survey and test unit

excavations at Butler Island NE (8DI50) are part of a larger research project that seeks to reconstruct late Holocene environmental change, specifically sea-level rise, and how the pre-Columbian residents of the area adapted to the changing landscape in the Horseshoe Beach tract of the LSAS study area.

CHAPTER 2
METHODS AND RESULTS OF SURVEY AND TEST UNIT EXCAVATION

Archaeological investigations at Butler Island NE (8DI50) were conducted by a crew from the Laboratory of Southeastern Archaeology from March 2–4, 2014, and included bucket augering, shovel test pit excavation, and test unit excavation. The site was mapped using a Nikon Total Station and all locations of bucket augers, shovel test pits, and excavation units were referenced to Datums A and B, established to the south and west of Structure 1 respectively (see Figure 2-1). This chapter reports the methods and results of the survey and test unit excavations at Butler Island NE.

AUGER AND SHOVEL TEST PIT SURVEY

Augering to delineate the site boundaries and determine the integrity of the archaeological deposits consisted of 11 auger holes, placed at discretionary locations, and one shovel test pit (STP). Augers 1 and 2 both revealed what appeared to be intact midden deposits, but cultural materials from these locations were not collect. Materials recovered in subsequent auger tests were collected to characterize variation in the artifact assemblage across the site. Materials retrieved in four-inch bucket augers were screened through ¼-in hardware cloth and all artifacts were bagged. Stratigraphic information for each hole was recorded and included depth in centimeters below surface (cm BD), description of soil, and density of shell, bone, pottery, lithics, and historic materials. Table 2-1 provides an inventory of the materials recovered from the augers and the shovel test pit.

Two main areas of midden deposits were identified and are designated as Locus A and Locus B in Figure 2-1. The loci are separated by an area devoid of intact archaeological deposits. Locus A is located in the eastern portion of the site (see Figure 2-1). Auger 4 was placed to the east of Structure 1 and revealed stratified shell midden deposits to a depth of 130 cm BD, which merited further subsurface testing to verify the results of the auger test. A 30 x 30-cm STP was excavated to a depth of 60 cm BD, with all materials screened through ¼-in hardware cloth. Sherd frequency was high in the STP and excavation was terminated prior to reaching culturally sterile sediments because this area was deemed a likely candidate for test unit excavation. Two additional augers in Locus A (2 and 10) contained similar deposits. Auger 11 was located to the east of Auger 4, just above an erosional escarpment that transitions to marsh, which obviously truncates the site to the east. Auger 1, located to the west of Structure 1 in a relatively clear area above the shoreline escarpment, revealed intact, but relatively shallow midden deposits.

Auger 5, located to the west of Structure 2, had no cultural materials or shell and appeared to mark the western boundary of the site. A roughly northwest to southeast transect was tested by an additional three auger holes. Augers 6 and 8 had shell scatter at the surface with very low density of cultural materials. Auger 7 was placed at the highest elevation of the site and contained only low density shell fragments and cultural materials. The lack of intact midden deposits on this transect appeared to verify that the site boundary

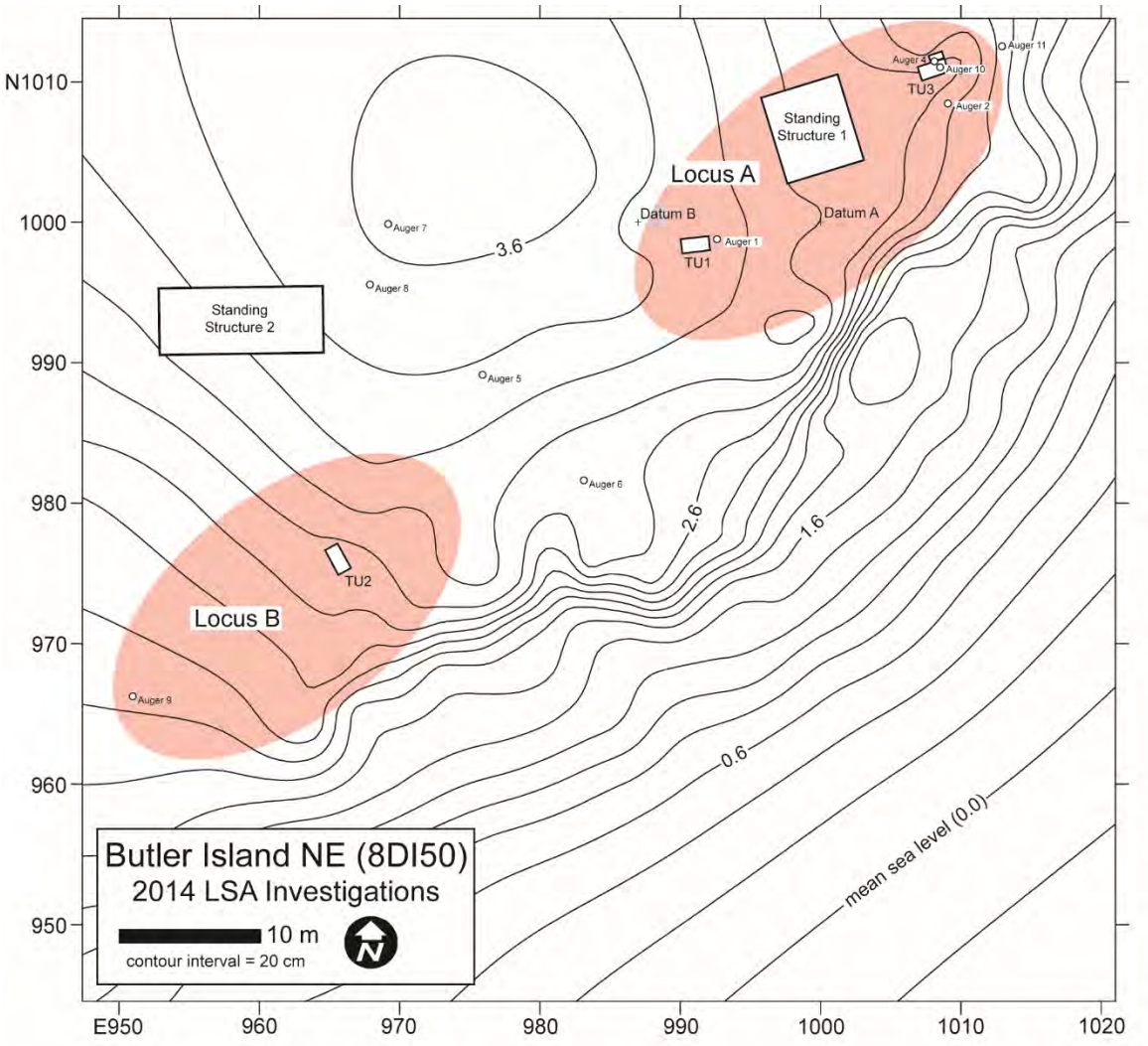

Figure 2-1. Topographic map of Butler Island NE (8DI50) showing locations of structures, augers, and test units (TU). Loci A and B are designated by shaded areas. Map courtesy of Ken Sassaman.

had been located. However, Auger 9, further to the west revealed intact, but shallow, midden deposits. This area, to the south of Structure 2 was designated Locus B.

In summary, two main areas of intact midden were identified by augering and the excavation of one STP. Locus A is located in the eastern portion of the site and contains significant stratified midden deposits near Structure 1 and shallower intact midden to the west of that structure. An area with no intact deposits bounds Locus A on the west and separates it from Locus B. Locus B is located in the western portion of the site, just south of Structure 2, and has shallow but intact midden. Overall, the site is bounded to the southeast by a meter-high erosional escarpment, and extends to the northwest approximately 10 meters. Midden deposits thin to the west near the marsh that separates the main part of the island from the southern arm.

Table 2-1. Inventory of Archaeological Materials Collected from Augers and Shovel Test Pit 1 (STP1), 8DI50.

Auger/ STP	Pottery Sherd (n)	Lithic Artifact (n)	Invertebrate Fauna (g)	Vertebrate Fauna (g)	Historic Artifact (g)	Charcoal (g)
3	5	2	0.3	5.7	0.1	
4	10			15.6		<0.1
6	1	2				
7	2			0.2	0.1	
8	1	1				
9	1			0.6	<0.1	
10	4			8.5		
11	1		22.7	23.0		0.3
STP1	14	2		1.4		
Total	39	7	23.0	55.0	0.2	0.3

TEST UNIT EXCAVATIONS

Based on the results of augering, three areas were targeted for excavation of 1 x 2-m test units. Test Unit 1 (TU1), Test Unit 3 (TU3) were placed in Locus A. TU1 was located in the midden deposits identified by Auger 1. TU3 was excavated in the midden to the east of Structure 1, at the location of Auger 4. Test Unit 2 (TU2) was located to the south of Structure 2 in Locus B.

TU1 and TU2 were excavated in arbitrary 10-cm levels using standard archaeological procedures. The excavation of TU3 deviated from standard procedures due to massive roots that hindered subsurface penetration and required placement of a subunit to the north (TU3 North [TU3N]) to reach deeper strata. Matrix from all units was screened through 1/4-in hardware cloth, and artifacts and vertebrate faunal remains were bagged by level. Level forms were completed after each level, and included depths for each corner and center below the local datum (cm BD), observations on the content and composition of level matrix, and notes on any obvious features. Anomalies defined as features were described and photographed in plan before vertical sections were exposed. Unless otherwise noted, the fill from sections was screened through ¼-in hardware cloth, and the remaining portion taken as a bulk sample. At the completion of unit excavation, all four profiles were cleaned, photographed, and drawn to scale and bulk samples were collected. All recovered materials were bagged and transported to the Laboratory of Southeastern Archaeology in Gainesville for analysis. At the laboratory, artifacts were washed, sorted, and cataloged. Bulk samples were processed in a Dausman flotation tank. The light fraction was preserved for future analysis, and the heavy fraction was further divided into ¼-in, 1/8-in, and less than 1/8-in fractions, each of which was sorted and cataloged.

Test Unit 1

Test Unit 1 (TU1) was located approximately 10 m to the southwest of Structure 1 in a relatively clear area that served as a path between the two structures. Vegetation consisted of large deciduous trees intermingled with palms and a scrub and weedy understory (see Figure 2-2). The unit was oriented roughly east to west at an elevation of approximately 3.2 m amsl. A surface datum was established at the northwest corner.

Photographs of the south and north profiles are provided in Figures 2-3 and 2-4 respectively. Scaled drawings of all four profiles are provided in Figure 2-5. Table 2-2 gives descriptions of the identified strata and an inventory of the cultural materials recovered by level is presented in Table 2-3.

Five distinct strata were identified in TU1. Stratum I extended to a maximum depth of 10 cm BD and consisted of a moderately dense root mat in very dark grayish brown sand. Modern debris, including pieces of plywood and metal, were present in this uppermost stratum along with aboriginal remains, including pottery, vertebrate fauna, and lithics. Level A excavations, which removed the uppermost 20 cm of the unit, recovered the highest frequency of pottery, half of which was classified as crumb sherds, and included Deptford Linear Check Stamped, Pasco Plain, and Weeden Island Punctated types. The high frequency of crumb sherds, the wide temporal range of the diagnostic types, and the inclusion of modern materials suggest that the upper 20 cm BD may contain redeposited or disturbed materials. These disturbed deposits may extend into the upper portions of Stratum II.

Figure 2-2. Excavation of Test Unit 1 by a crew from the Laboratory of Southeastern Archaeology, March 2, 2014.

Figure 2-3. Photograph of the south profile of Test Unit 1, 8DI50.

Figure 2-4. Photograph of the north profile of Test Unit 1, 8DI50.

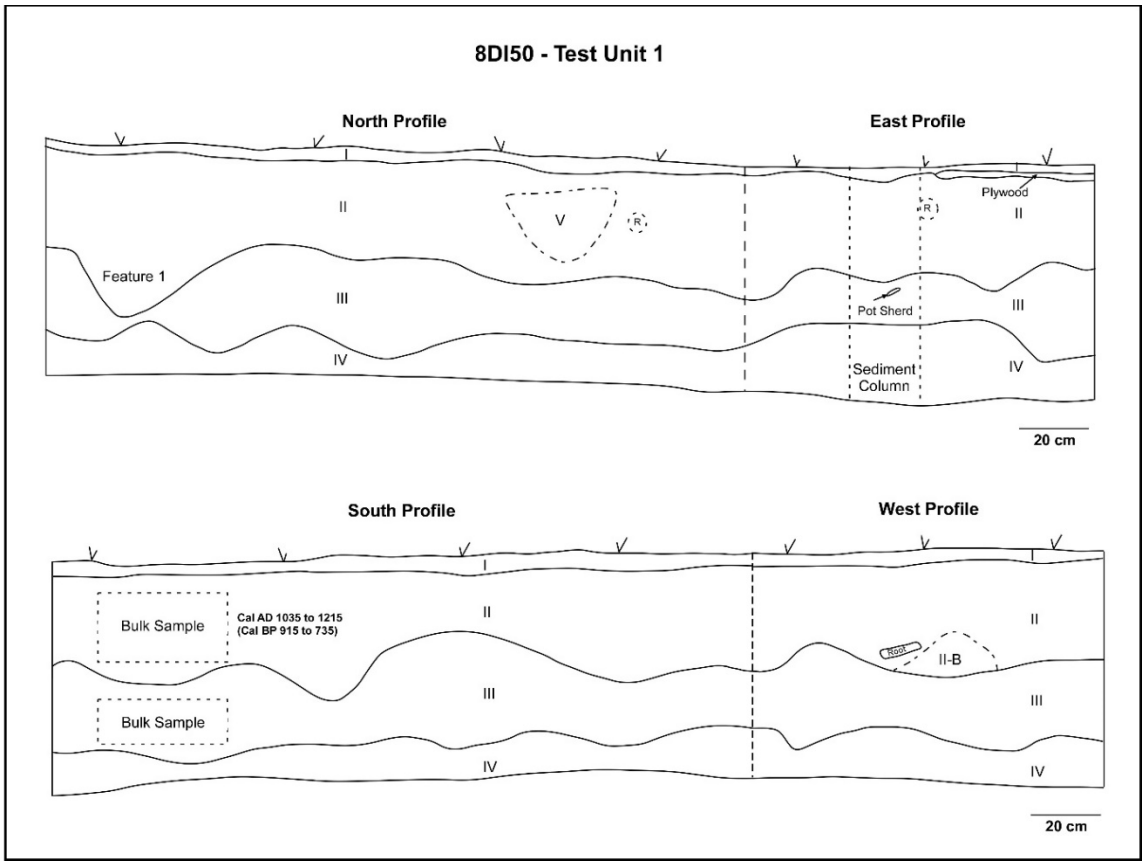

Figure 2-5. Scaled drawings of all four profiles from Test Unit 1, 8DI50.

Table 2-2. Stratigraphic Units of Test Unit 1, 8DI50.

Stratum	Max. Depth (cm BD)	Munsell Color	Description
I	10	10YR3/2	Very dark grayish brown fine sand with moderate root mat.
II	50	10YR4/2	Shell midden with dark grayish brown sand matrix and whole oyster shell.
IIB	35	10YR4/2	Dark grayish brown sand with no shell.
III	63	10YR2/1	Black fine loamy, highly organic sand with no shell.
IV	70	10YR4/3	Brown fine sand.
V	35	10YR2/1	Black loamy sand containing charcoal and whole oyster shell.

Table 2-3. Inventory of Archaeological Materials Collected from Test Unit 1, 8DI50.

	Pottery Sherd (n)	Lithic (n)	Modified Bone (n)	Invertebrate Fauna (g)	Vertebrate Fauna (g)	Historic (g)	Concretion (g)	Charcoal (g)
Level								
A	101	2		68.0	104.8	9.0		11.2
B	77	3		28.7	139.4			14.9
C	69	2	1	5.7	99.2			4.2
D	38	5			26.9		0.1	1.4
E	15				10.0			0.2
F		1		0.3	0.3			
Stratum								
II	7	1		6,037.1	42.6		0.3	0.1
III	1			215.5	13.0		0.1	0.3
Feature								
1	6			413.9	0.2		0.2	0.1
4				0.3	0.6			0.9
Total	314	14	1	6,769.5	437.0	9.0	0.7	33.3

Stratum II consisted of moderately dense oyster shell midden in a matrix of dark grayish brown sand that extended to a maximum depth of 50 cm BD. This stratum represents the bulk of the pre-Columbian deposits in TU1 and contained pottery, lithic flakes, a Bradford type biface, a small chunk of hematite, modified bone, and vertebrate fauna. A piece of charcoal recovered from the bulk sample collected in this stratum returned an AMS assay of 900 ± 30 B.P., which results in a two sigma calibrated age range of A.D. 1035 to 1215. The artifact assemblage in this unit consists mainly of Deptford and Swift Creek types, which predate the radiocarbon age by at least several hundred years. However, this age estimate is consistent, within 20 years, of a date obtained from TU3N. Even though diagnostic artifacts that date to this later age were not recovered in TU1, it is possible that at least ephemeral occupation continued in this area into the Late Woodland period. Alternatively, the area from which the bulk sample was collected may have experienced some disturbance in the past that mixed younger materials in with older deposits. There is a marked transition to the shell-free dark grayish brown sand deposits of Stratum III. Extending to a maximum depth of 63 cm BD, this stratum contains significantly reduced frequencies of pottery and vertebrate fauna.

Stratum IV consists of brown fine sand that is devoid of cultural materials and extends below the terminus of the excavation unit at 70 cm BD. Stratum II-B contained dark grayish brown fine sand with no shell and was observed only in the lower portion of Stratum II in the west profile. Finally, Stratum V was an area of black loamy sand that

contained charcoal and whole oyster shell that was observed in the north profile of Stratum II.

Features. Two features were encountered during excavation of TU1. Figure 2-6 provides a plan view drawing of Features 1 and 4. Photographs of both features in plan are provided in Figures 2-7 and 2-8, and a photograph of Feature 4 in profile is provided in Figure 2-9.

Feature 1 was identified in both plan and in the profile at 35 cm BD. It measured 24 cm long by 17 cm wide and terminated at 48 cm BD. The feature extended into the north profile so it was not bisected in the field and the entire exposed portion of the feature was taken as a bulk sample. The fill consisted of shell in a matrix of 10YR2/2 very dark brown sand that also contained sparse vertebrate fauna. Five crumbs sherds and one unidentified sand-tempered sherd were also recovered from the bulk sample.

Feature 4 was identified in plan at 53 cm BD and extended to a depth of 68 cm BD. It measured 27 cm long by 21 cm wide. The feature was bisected and the west half was taken as a bulk sample. The feature profile was photographed and the remaining feature was recovered in bulk. The fill contained sparse charcoal and vertebrate fauna in a matrix of 10YR2/1 black sand. Both features are possible postholes.

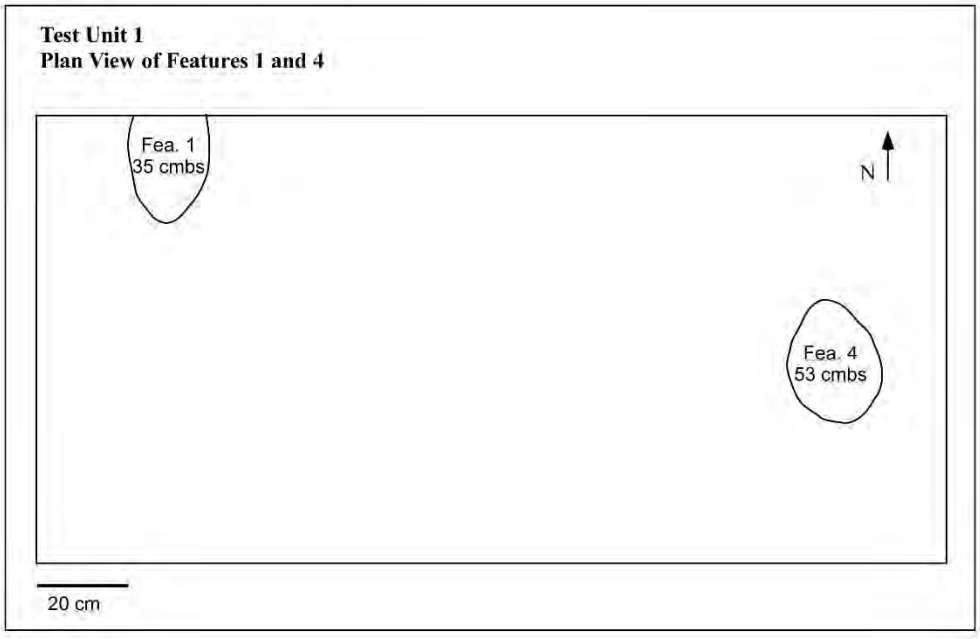

Figure 2-6. Plan view drawing of Features 1 and 4, Test Unit 1, 8DI50.

Figure 2-7. Photograph of Feature 1, Test Unit 1, 8DI50.

Figure 2-8. Photograph of Feature 4, Test Unit 1, 8DI50.

Figure 2-9. East profile of Feature 4, Test Unit 1, 8DI50.

Test Unit 2

Test Unit 2 (TU2) was placed approximately 30 m to the southwest of TU1 and 15 m to the south of Structure 2 where auger testing revealed a thin stratum of midden materials that appeared to be intact. The unit was placed in a clear area between 2.6 and 2.8 m amsl, just above a nearly meter-high escarpment where midden materials had been eroded by wave and storm energies, and was roughly northwest to southeast in orientation (Figure 2-10). A surface datum was established at the northeast corner of the unit. Large roots from a nearby tree crisscrossed the unit and because of the time constraints and the shallow nature of the deposits, the roots were left intact and materials were excavated from around the roots by trowel.

Photographs of the west and east profiles are provided in Figures 2-11 and 2-12, respectively. Scaled drawings of all four profiles are provided in Figure 2-13. Table 2-4 gives descriptions of the identified strata and an inventory of the cultural materials recovered by level is presented in Table 2-5.

With the exception of the uppermost root mat that extended to a depth of no more than 5 cm BD, only two distinct strata were identified in TU2. Stratum I extended to a maximum depth of 24 cm BD and consisted of a heavy, predominately oyster shell layer in dark grayish brown sand matrix. The upper 20 cm BD was encompassed in excavation Level A and included the majority of the cultural deposits. Diagnostic pottery recovered from this stratum included Deptford Linear Check Stamped and Pasco Plain sherds, and a

Figure 2-10. A crew from the Laboratory of Southeastern Archaeology document Feature 2 in Test Unit 2, 8DI50.

Figure 2-11. West profile of Test Unit 2, 8DI50.

Figure 2-12. East profile of Test Unit 2, 8DI50.

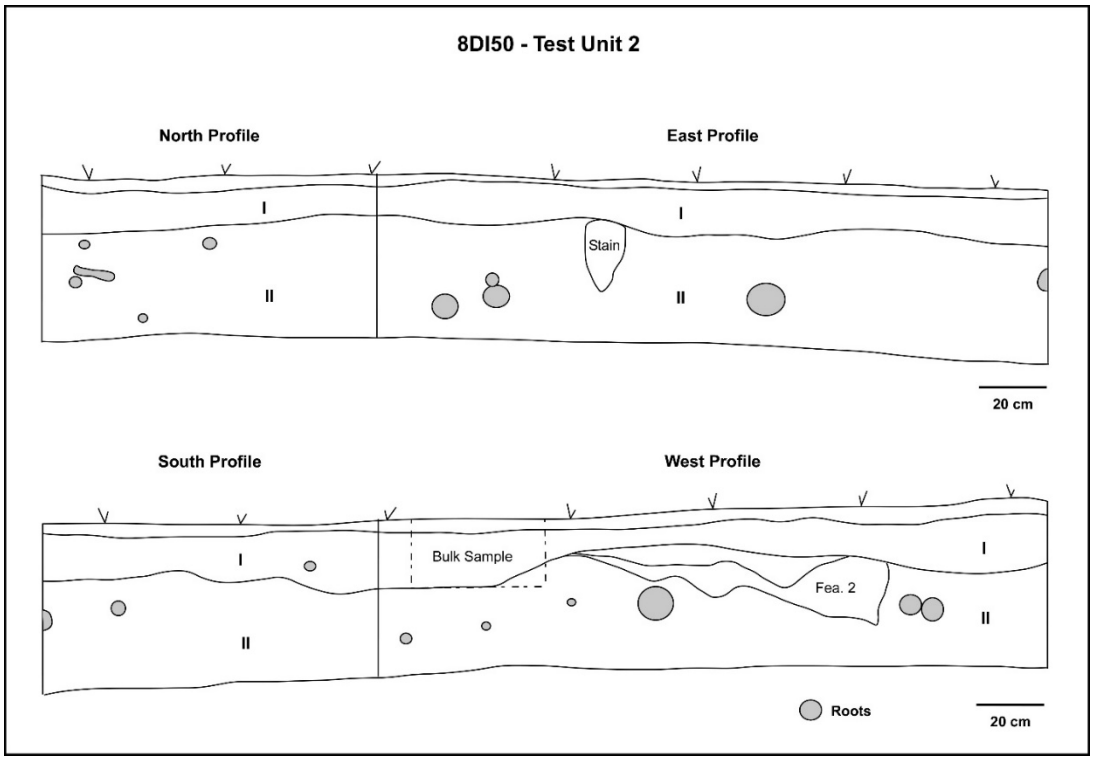

Figure 2-13. Scaled drawings of all four profiles from Test Unit 2, 8DI50.

Table 2-4. Stratigraphic Units of Test Unit 2, 8DI50.

Stratum	Max. Depth (cm BD)	Munsell Color	Description
I	24	2.5Y4/2	Heavy shell layer in dark grayish brown matrix.
II	70	10YR5/4	Yellowish brown sand with no shell.
Feature 2	34	2.5 YR3/1	Dark reddish gray sand.

Table 2-5. Inventory of Archaeological Materials Collected from Test Unit 2, 8DI50.

	Pottery Sherd (n)	Lithic (n)	Modified Bone (n)	Invertebrate Fauna (g)	Vertebrate Fauna (g)	Historic (g)	Concretions (g)	Charcoal (g)
Level								
A	75	2		22.7	85.0	24.2	2.8	19.8
B	36	2	1		39.7			0.1
C	9	2			2.8			1.4
D	1	3			2.8			0.3
Stratum								
I	1	2		1,733.6	22.7	0.6	0.2	0.6
Feature								
2	3	2		110.6	16.2		0.3	4.5
3	1			1,706.6	12.8		0.1	3.1
Total	126	13	1	3,573.5	182	24.8	3.4	29.8

large chert core/hammerstone was recovered from just below the surface at the top of the stratum. The deposits in this thin stratum appear to be intact. Indeed, the proximity of this unit to the shoreline and the open marine environment make it more likely that these deposits represent the remnants of a midden, the upper portion of which has been scoured.

The contact between Stratum I and Stratum II was marked by a change in sediment color and content. Stratum II consisted of yellowish brown sand with no shell that extended below the terminus of the unit at 50 cm BD. Cultural materials significantly decrease in this stratum and are largely confined to the upper portion of the stratum. A Woodland period stemmed biface was recovered from Level C (30–40 cm BD) near one of the large roots (Figure 2-14).

Figure 2-14. Woodland stemmed biface recovered from Level C of Test Unit 2, 8DI50.

Features. TU2 contained two pit features, both of which were recognized in plan beneath the strata containing the bulk of the cultural deposits. Figure 2-15 provides plan view drawings of Features 2 and 3, Figures 2-16 and 2-17 provide photographs of both features in plan, and Figure 2-18 provides a photograph of both features after excavation.

Feature 2 was a pit feature that was identified at 24 cm BD and extended to a depth of 50 cm BD. Initially, this pit feature measured 57 cm wide by 77 cm long, but further excavation revealed that there were actually two overlapping features, with Feature 2 intruding into an earlier pit feature. Feature 2 was isolated and bisected; the north half was screened through ¼-in hardware cloth and the south half was collected as a bulk sample. The fill consisted of a dark gray brown (10YR2/2) sand matrix with sparse shell and vertebrate fauna. A concentration of charcoal was observed in the center of the feature. Pottery and lithic materials recovered from the feature included one Pasco Plain sherd, one sand tempered plain sherd, one crumb sherd, a chert flake, and one small chunk of burned limestone.

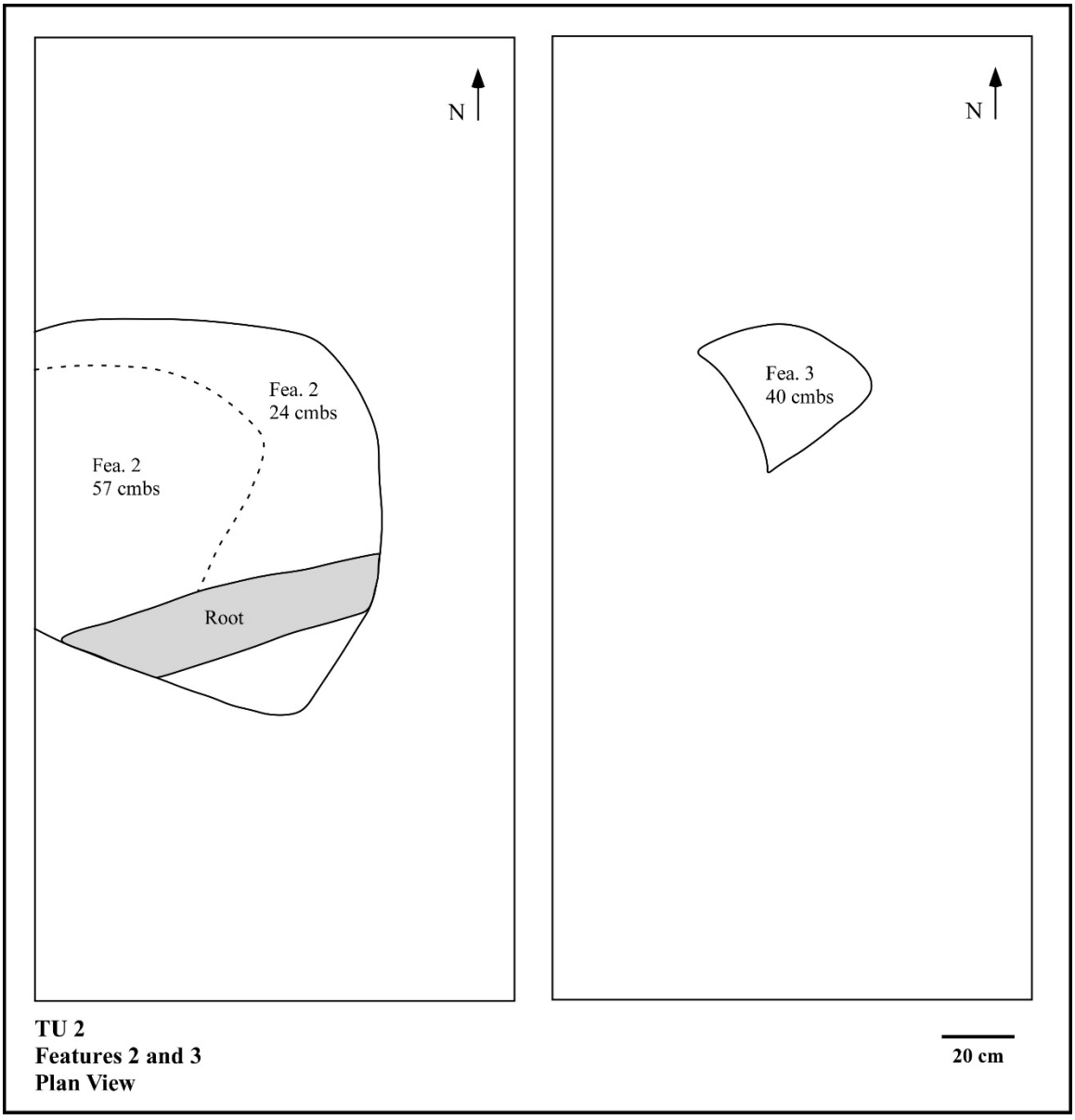

Figure 2-15. Plan view drawings of Features 2 and 3 in Test Unit 2, 8DI50.

Figure 2-16. Photograph of Feature 2 in Test Unit 2, 8DI50.

Figure 2-17. Photograph of Feature 3 in Test Unit 2, 8DI50.

Figure 2-18. Photograph of Features 2 and 3 after excavation in Test Unit 2, 8DI50.

Feature 3 extended to a depth of 40 cm BD and contained dark gray brown (10YR3/2) sand with bone and shell. The feature was bisected and the north half screened through ¼-in hardware cloth and the south half was collected as a bulk sample. The vertebrate fauna density was comparable to that of Feature 2, however, there was substantially more shell, which was concentrated in the upper portion of the feature. With the exception of one crumb sherd, no artifacts were recovered from the fill.

Test Units 3 and 3 North

Test Unit 3 (TU3) was placed approximately 5 m to the east of Structure 1 where augering and shovel testing revealed the deepest archaeological deposits. The area of the test unit was heavily vegetated and contained a significant amount of modern debris that had to be removed prior to excavation. Initially, TU3 was a 1 x 2-m unit that was oriented east to west. Large roots from a nearby cedar tree intruded into the unit, forcing the termination of excavation at 30 cm BD (see Figure 2-19). On the north side, a smaller 1 x 0.5-m unit was opened adjacent to TU3 and designated TU3 North (TU3N). Level A of TU3N was excavated to 35 cm BD because excavation of TU3 had revealed that the upper portion of this area was highly disturbed. Subsequent excavation consisted of 10 cm arbitrary levels, with the exception of Level D, which was only a 5 cm level.

Figure 2-19. A member of the Laboratory of Southeastern Archaeology crew excavates around a large root in Test Unit 3, 8DI50.

Profiles were not recorded for TU3. Photographs of the north and east profiles of TU3N are provided in Figures 2-20 and 2-21, and scaled drawings of both profiles are provided in Figure 2-22. Table 2-6 gives descriptions of the identified strata. Inventories of the cultural materials recovered by level for TU3 and TU3N are presented in Tables 2-7 and 2-8, respectively.

Nine distinct strata were identified in TU3N. Stratum I extended to a maximum depth of 20 cm BD and was described as a humic layer consisting of dark yellowish brown sand. Stratum II extended to a maximum depth of 27 cm BD and contained mostly oyster shell, vertebrate fauna, aboriginal pottery and modern artifacts, including glass and nails, in a matrix of gray brown sand.

Stratum III-A extended to a maximum depth of 40 cm BD and consisted of shell and cultural materials in ashy gray sand. Pottery sherds recovered from this stratum include Swift Creek Complicated Stamped, Deptford Linear Check Stamped, and Pasco Plain, along with large metal fragments. One human (*Homo sapiens*) tooth was recovered from the lower portion of this stratum. A lens of crushed shell, designated as Stratum IIIB, bisects Stratum III-A at 34 cm BD. A change in sediment color marked the transition to the gray brown sand of Stratum IV-A. This stratum, which terminated at 53 cm BD, contained no shell and rare artifacts.

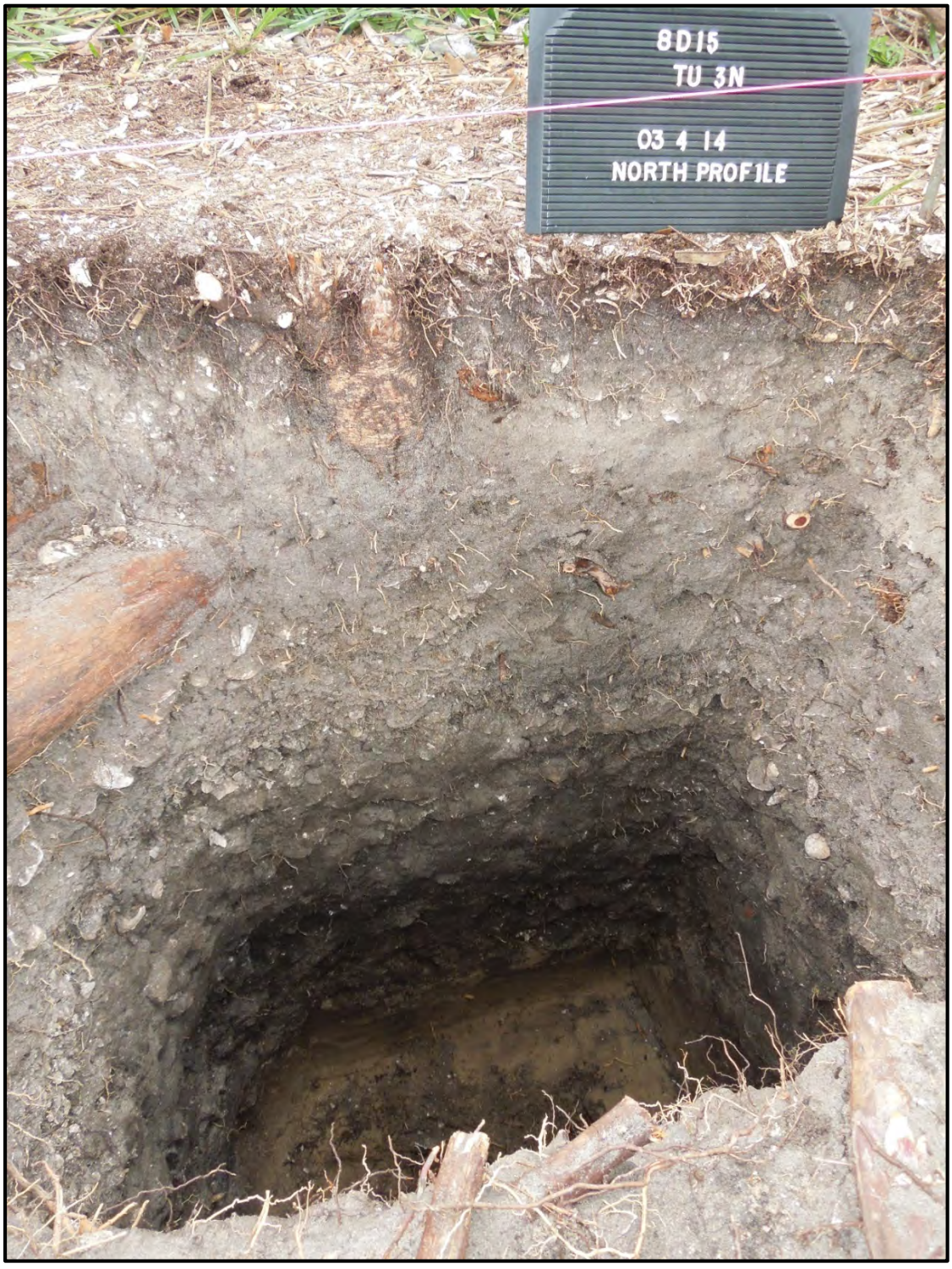

Figure 2-20. North profile of Test Unit 3N, 8DI50.

Figure 2-21. East profile of Test Unit 3N, 8DI50.

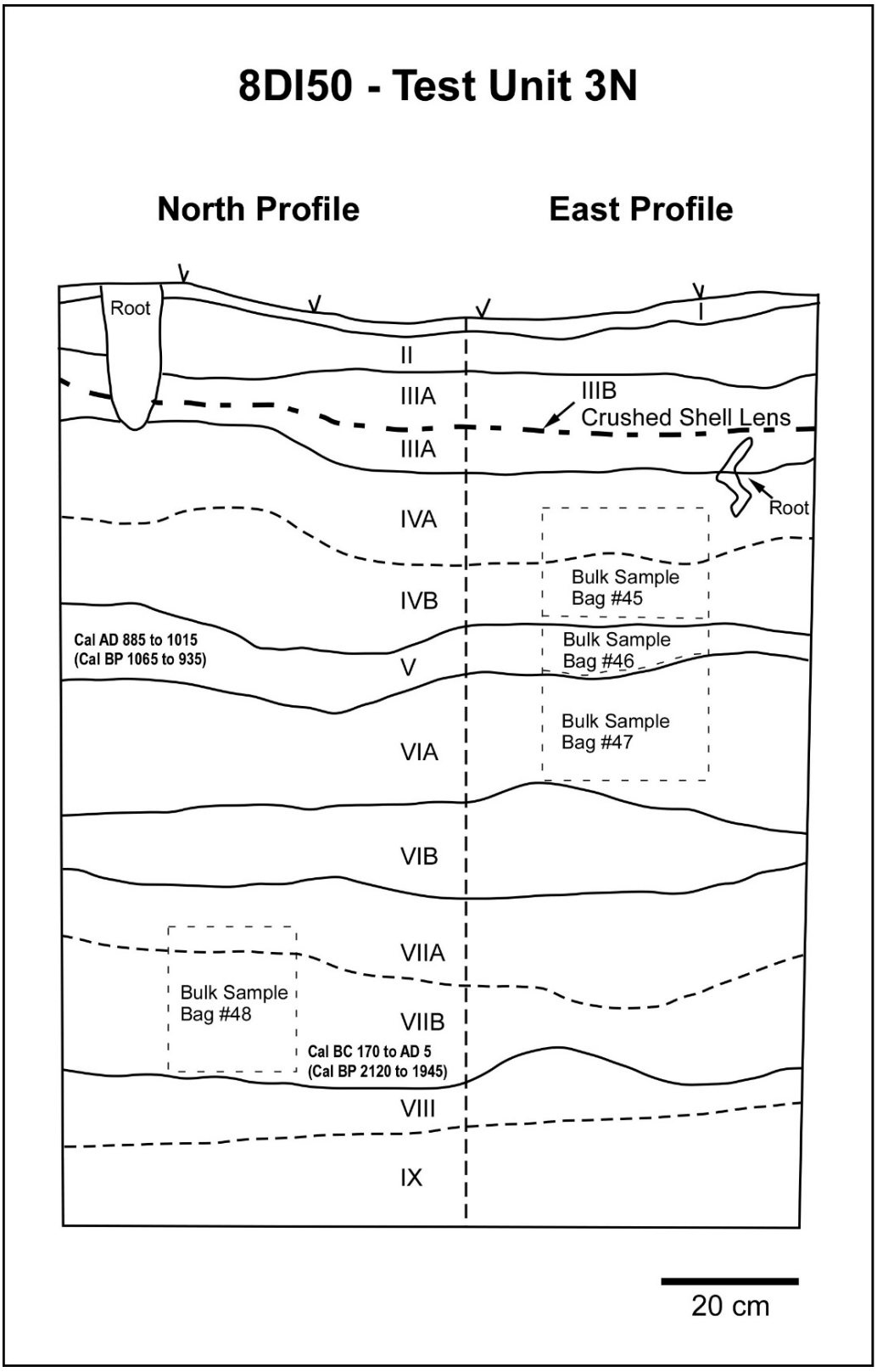

Figure 2-22. Scaled drawing of the north and east profiles of Test Unit 3N, 8DI50.

Table 2-6. Stratigraphic Units of Test Unit 3N, 8DI50.

Stratum	Max. Depth (cm BD)	Munsell Color	Description
I	20	10YR2/2	Humic Layer.
II	27	10YR4/1	Modern midden with gray brown sand matrix.
III-A	40	10YR6/1	Ashy gray sand with shell.
III-B	34		Crushed shell.
IV-A	53	10YR4/1	Gray brown sand with little shell.
IV-B	66	10YR4/1	Gray brown sand with whole shell.
V	75	10YR5/1	Crushed shell in gray sand matrix.
VI-A	92	10YR4/1	Gray brown sand with whole shell and increased sharkeye and wolf snail shells.
VI-B	102	10YR4/1	Gray brown sand with reduced shell density.
VII-A	118	10YR2/1	Black sand with little shell.
VII-B	130	10YR2/1	Black sand with whole shell.
VIII	139	10YR3/2	Very dark grayish brown sand with sparse shell.
IX	150	10YR4/4	Yellow brown sand with no shell.

Table 2-7. Inventory of Archaeological Materials Collected from Test Unit 3, 8DI50.

	Pottery Sherd (n)	Lithic (n)	Modified Bone (n)	Invertebrate Fauna (g)	Vertebrate Fauna (g)	Historic (g)	Concretions (g)	Charcoal (g)
Level								
A	180	5	2	36.8	121.0[1]	317.4	5.6	4.2
B	60	2		8.5	82.2	5.7		0.3
Total	240	7	2	45.3	203.2	323.1	5.6	4.5

[1] includes one *H. sapiens* tooth.

Table 2-8. Inventory of Archaeological Materials Collected from Test Unit 3N, 8DI50.

	Pottery Sherd(n)	Lithic (n)	Modified Bone (n)	Modified Shell (n)	Invertebrate Fauna (g)	Vertebrate Fauna (g)	Historic (g)	Concretions (g)	Charcoal (g)
Level									
A	43	1				39.7	11.6		1.4
B	25	1			19.8	58.4[1]	10.2		0.2
C	18	1			87.9	78.0	0.1		0.1
D	4		1			32.6	0.1		0.1
E	18				80.8	43.9			
F	6	1			42.5	114.8			0.1
G	7				15.6	53.9			0.1
H	19			1	53.9	114.8			0.1
I	6	1	1			85.3[2]			2.8
J	3				0.3	97.8			0.1
K					59.5	97.8			
L	1		1			0.3			
M	1					0.1			
Stratum									
IV-B	2	2			1,559.3	53.8[3]		0.1	0.6
V	4				3,121.2	53.9		1.4	0.9
VI-A	4				4,061.0	51.0		4.3	0.5
VII-B					2,891.6	41.1		0.3	0.1
Total	161	7	3	1	11,993.4	1,017.24	22.0	6.1	7.1

[1] includes one *H. sapiens* tooth
[2] includes two *H. sapiens* teeth
[3] includes 2.8 g of paleofeces

Stratum IV-B consisted of gray brown sand with whole oyster shell and extended to a maximum depth of 66 cm BD. Even though there was an increase in shell, cultural materials continued to be sparse, but included vertebrate fauna and crumb sherds. Modern materials included one nail. No modern debris was recovered below this stratum in the unit.

The upper strata, Stratum I through Stratum IV-B, appear to be a mixture of redeposited pre-Columbian midden materials mixed with modern materials deposited by the people who utilized the nearby structure. The inclusion of modern debris and the wide temporal range of diagnostic pottery, along with the variation in shell content suggests that these upper strata are all materials that have been redeposited during separate events, likely due to high energy storms that scoured materials from elsewhere and redeposited them in this location. For instance, the crushed shell of Stratum III-B suggests movement of these materials that sorted out larger and smaller material, in effect conflating the shell into this

crushed lens. Additionally, between these events, materials continued to be deposited in this area by the people who utilized the nearby structure.

Stratum V consisted of very dense crushed shell in a matrix of gray sand that extended to a maximum depth of 75 cm BD. Cultural materials, including Weeden Island Incised and a Pasco Plain pottery sherds, increase and appear to be in stratigraphic order below. It is likely that this stratum represents the upper portion of intact midden deposits. A charcoal sample recovered from the bulk sample collected in this strata returned an AMS assay of 1070 ± 30 B.P., which provides a two-sigma calibrated date range of A.D. 885 to 1015.

Stratum VI-A contained whole shell, with a noted increase in sharkeye and wolf snail shells, in a matrix of gray brown sand that extended to a maximum depth of 92 cm BD. There is an increase in vertebrate fauna density in this stratum, even as there is a decrease in pottery frequency. However, that decrease is only in the frequency of crumb sherds. A reduction in shell density marks the transition to Stratum VI-B, which continues to consist of gray brown sand that terminates at a maximum depth of 102 cm BD.

Stratum VII-A was recognized by a very marked transition to black, organic rich sand. The decreased shell density of this stratum coincided with an increase in pottery and vertebrate fauna over Stratum VI-B. Diagnostic pottery types include a Deptford Linear Check Stamped sherd that was found at the same elevation as a Swift Creek Complicated Stamped sherd. A second human (*Homo sapiens*) tooth was recovered from this stratum. With the exception of the two human teeth, no human remains were encountered in the unit. An increase in shell density, particularly whole oyster shell marked the transition to Stratum VII-B, which extended to a depth of 130 cm BD and continued to produce cultural materials, including pottery, lithics, and a modified bone. A charcoal sample recovered from the bulk sample collected in this strata returned an AMS assay of 2060 ± 30 B.P., which gives a two-sigma calibrated date range of 170 B.C. to A.D. 5.

Stratum VIII consisted of very dark grayish brown sand with sparse shell and extended to a maximum depth of 139 cm BD. Only one crumb sherd was recovered from this stratum. At the base of the stratum, just above the contact with sterile sand, a bone tool was recovered. Stratum IX consisted of culturally sterile yellow brown sand with no shell and extended below the terminus of the unit at 150 cm BD.

ARTIFACT ASSEMBLAGE FROM TEST UNITS

Pottery

Pottery frequencies by level for each unit are provided in Tables 2-9 through 2-12, with representative sherds shown in Figure 2-23. Sherds diagnostic of a particular culture-historical type were designated as such. When diagnostic attributes were not present, a generic classification system was utilized and was based on descriptive characteristic of temper and surface treatment, for example, “sand-tempered plain” or “sand-tempered check stamped.” Sherds that were smaller than ½ inch in maximum dimension were

Table 2-9. Absolute Frequencies of Pottery Sherds from Levels, Features, and Bulk Samples (Strata) of Test Unit 1, 8DI50.

									----------Sand Tempered----------					
	Swift Creek C.S.	New River C.S.	St. Andrews C.S.	WI Punct.	Deptford L.C.S.	Deptford S.S.	St. Johns Check Stamped	Pasco Plain	Check Stamped	Incised	Plain	UID	Crumb	Total
Level														
A	3			3	2	1	1	5	4		29	3	50	101
B					6	3		1	7		11	8	41	77
C	1	14	1					2	12		6	6	27	69
D	2				1	1	1	2	4	5	5		17	38
E						1		1	2		1[1]		10	25
Feature														
1												1	5	6
Stratum														
II	1												6	7
III					1									1
Total	7	14	1	3	10	6	2	11	29	5	62	18	156	324

[1] Burnished

Table 2-10. Absolute Frequencies of Pottery Sherds from Levels, Features, and Bulk Samples (Strata) of Test Unit 2, 8DI50.

			--------sand tempered---------					
Level	Swift Creek Comp. Stamped	Deptford Lin. Check Stamped	Pasco Plain	Check Stamped	Plain	UID	Crumb	Total
A		1	6	8	3	10	47	75
B	1		1	4		9	21	36
C					2		7	9
D							1	1
Feature								
2			1		1		1	3
3							1	1
Stratum								
I			1					1
Total	1	1	9	12	6	19	78	126

classified as “crumb” sherds and were not part of the analytical unit. Crossmends—pieces of pottery that can be fitted back together—were sought during the sorting process. Crossmends that were from fresh breaks were counted as one sherd to avoid inflating the type frequencies in the assemblage.

A total of 851 pottery sherds were recovered during excavations at Butler Island NE, over half of which were crumb sherds (n = 478), resulting in 373 sherds available for analysis. TU1 had the highest frequency of pottery with 168 sherds available for analysis, with over half of that represented by sand-tempered plain (37 percent) and sand-tempered check stamped (17 percent). The next highest frequency type in terms of number of sherds is New River Complicated Stamped (n = 14). These 14 sherds were concentrated in the western half of the unit between 30–40 cm BD and likely represent one pot, making that type a minority in the TU1 assemblage. Pasco Plain sherds were present throughout the unit, but increased in frequency in the upper 20 cm BD. Deptford Linear Check Stamped, Deptford Simple Stamped, and Swift Creek Complicated stamped sherds were distributed throughout the excavation levels, with the Deptford series sherds decreasing in frequency in the upper 20 cm BD. One Weeden Island Punctated sherd was recovered from Level A.

TU3 was excavated to only 30 cm BD, but contained a significant number of sherds, the majority of which were concentrated in the upper 20 cm BD. Ninety sherds above the size of crumbs were collected, with the majority of the assemblage represented by sand-tempered plain (n = 30) and sand tempered check stamped (n = 19). Diagnostic types included Pasco Plain and Deptford and St. Johns series sherds.

Table 2-11. Absolute Frequencies of Pottery Sherds from Levels of Test Unit 3, 8DI50.

							------Sand Tempered-------					
	Swift Creek Comp. Stamp	Deptford L.C.S.	Deptford S.S.	St. Johns Plain	St. Johns Check Stamped	Pasco Plain	Check Stamped	Plain	UID	Crumb	Total
Level											
A	1	5	1	3[2]	1	9	16[1]	20	9	115	180
B	1				2	6	3	10	3	35	60
Total	2	5	1	3	3	15	19	30	12	150	240

[1] One zoned check stamped

[2] Two UID sherds

Table 2-12. Absolute Frequencies of Pottery Sherds from Levels and Bulk Samples (Strata) of Test Unit 3 North, 8DI50.

						----------Sand Tempered----------						
	Swift Creek C. S.	WI Incised	Deptford L.C.S.	Deptford S.S.	Pasco Plain	Check Stamped	Punct	Dent.	Plain	UID	Crumb	Total
Level												
A					1	2			11	2	27	43
B	2		1		1				4	4	13	25
C						4	1		3		10	18
D											4	4
E		1			1				1		15	18
F				1[1]		1			1		3	6
G						3				1	3	7
H	2			2		5		1	3		6	19
I						2					4	6
J						2					1	3
K												
L											1	1
M											1	1
Stratum												
IV-B										1	1	2
V						1					3	4
VI-A									2		2	4
Total	4	1	1	3	3	20	1	1	25	8	94	161

[1] Cross Simple Stamped

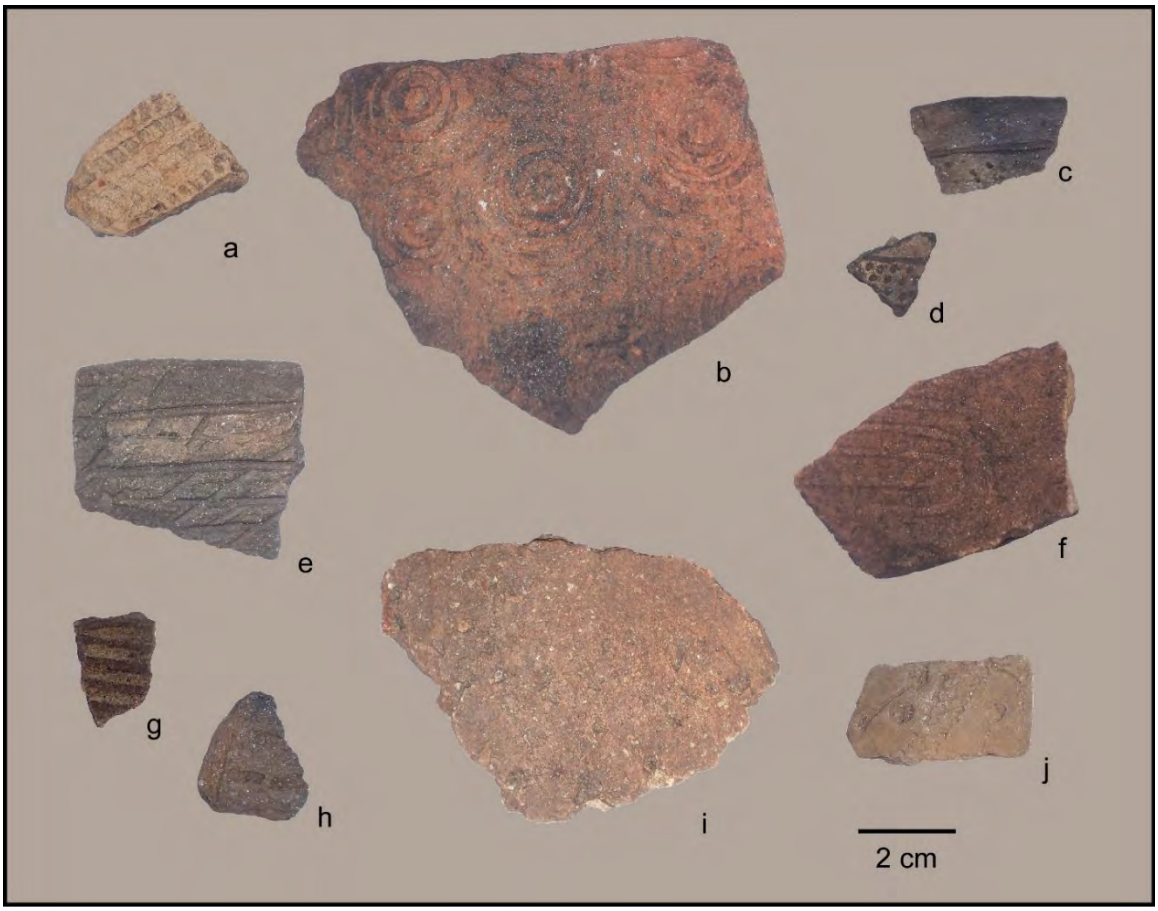

Figure 2-23. Representative pottery sherds recovered from test unit excavations at Butler Island NE, 8DI50: (a) Deptford Linear Check Stamped (TU2); (b) New River Complicated Stamped (TU1); (c, d) Weeden Island Punctated (TU1); (e) Sand Tempered Incised (TU1); (f) Swift Creek Complicated Stamped (TU3N); (g) Deptford Simple Stamped (TU1); (h) sand-tempered punctated (TU3N); (i) Pasco Plain (TU1); (j) Weeden Island Punctated (TU3N).

Sixty-seven sherds above the size of crumb were recovered from TU3N. As with the other units, the assemblage was dominated by sand-tempered plain and sand-tempered check stamped sherds. Swift Creek Complicated Stamped sherds (n = 4) were restricted to two levels in the unit, between 35–45 cm BD and between 90–100 cm BD. Pasco Plain sherds (n = 3) were all recovered from levels above 60 cm BD. Pottery frequencies are highest in levels above 70 cm BD, and there is an increase in frequency between 90–100 cm BD. Deptford Simple Stamped and Pasco Plain sherds were present in small frequencies, with all of the former stratigraphically below the latter. One Weeden Island Incised sherd was recovered from Level E, between 60–70 cm BD, at least 15 cm below earlier Deptford Linear Check Stamped and Swift Creek types, which supports the suggestion that the upper portions of the unit may contain redeposited materials. Below Level E, pottery types appear to be in stratigraphic order, with the Weeden Island and Pasco sherds above Swift Creek and Deptford sherds.

TU2 had the lowest frequency of pottery, and the most shallow midden deposits. Forty-eight sherds were recovered that could be analyzed. The assemblage of identifiable sherds was dominated by sand-tempered check stamped (n = 12) and Pasco Plain (n = 9) sherds, the majority of which came from the upper 20 cm BD. A Pasco Plain sherd was also recovered in Feature 2 and an additional one from the Stratum I bulk sample. One sherd each of Deptford Linear Check Stamped and Swift Creek Complicated Stamped were also recovered from the upper 30 cm BD. Below 30 cm BD, only two identifiable sherds were recovered, both sand-tempered plain.

Overall, the pottery assemblage was consistent across all three of the units, with each having variable frequencies of sherds diagnostic of Deptford through Late Swift Creek to Weeden Island traditions. Radiocarbon assays from TU3N further support this timeframe. No sherds diagnostic of the later date from TU1 were recovered; however, Pasco Plain, sand-tempered check stamped, and sand-tempered plain sherds recovered from the upper 20 cm BD of the unit are ubiquitous and temporally long-lived types that extend well into the timeframe of the age estimate from TU1.

Lithics

A total of 41 lithic artifacts were recovered from all of the test units combined. Artifact frequencies by level for each unit are provided in Tables 2-13 through 2-15. Photographs of stone tools are presented in Figure 2-24. Over half, 58 percent, of the assemblage consists of chert flakes. Burned limestone was collected and quantified since it appears to be associated with anthropogenic deposits and therefore is considered an artifact. TU1 had the highest frequency of lithics (n = 14), including a Bradford type biface, a biface fragment, and a small chunk of hematite. The Bradford type biface (Figure 2-24e) was recovered from the Stratum II bulk sample from TU1. With the exception of the very tip, the biface is whole and measures 3.7 cm from base to tip and 1.6 cm wide at the shoulders. It has a slight waist above a broad stem and a thickness of 0.9 cm. It is made on a grayish tan chert banded with pinkish tan chert that has a small inclusion on the edge of one side.

The biface fragment was recovered from Level D of TU1 (Figure 2-24d). The dark to light pink chert fragment appears to be a portion of a stem and shoulder of a corner notched biface. It measures 2.2 cm long by 1.2 cm wide and terminates in an oblique perverse fracture that removed the bulk of the biface. Finally, the small chunk of hematite (Figure 2-24c) was collected from Level C of TU1. It measures 2.3 cm long by 1.9 cm wide. The irregular shaped chunk retains the smooth cortex on two surfaces, with the other outer portions irregularly shaped due to breakage. It is dark reddish brown with areas of lighter colored oxidized iron on the broken surfaces.

TU2 had a total of 13 lithic artifacts, including a large chert core and a stemmed biface. The chert core (Figure 2-24b) was recovered from Level A of TU2. It measures 11.3 cm long by 6.3 cm wide and is 4.9 cm thick. The outside is highly weathered to a light beige color. A small chip near a step fracture on one side exposes the unweathered grayish beige color of the chert. It has a marine shell mold fossils on one side and multiple large

Table 2-13. Absolute Frequencies of Lithic Artifacts from Levels and Bulk Samples (Strata) of Test Unit 1, 8DI50.

	Bradford Hafted Biface	Biface Fragment	Hematite	Flake	Chunk	Burned Limestone	Total
Level							
A				2			2
B					1	2	3
C			1	1			2
D		1		3		1	5
E							
F				1			1
Stratum							
II	1						1
Total	1	1	1	7	1	3	14

Table 2-14. Absolute Frequencies of Lithic Artifacts from Levels, Bulk Samples (Strata), and Features of Test Unit 2, 8DI50.

	Stemmed Biface	Flake	Core	Burned Limestone	Total
Level					
A		1	1		2
B		1		1	2
C	1	1			2
D		3			3
Stratum					
I		1		1	2
Feature					
2		1		1	2
Total	1	8	1	3	13

Table 2-15. Absolute Frequencies of Lithic Artifacts from Levels and Bulk Samples (Strata) of Test Unit 3N, 8DI50.

	Flake	Burned Limestone	Fossilized Coral	Total
Level				
A	1			1
B	1			1
C	1			1
D				
E				
F		1		1
G				
H				
I		1		1
Stratum				
IV-B		1	1	2
Total	3	3	1	7

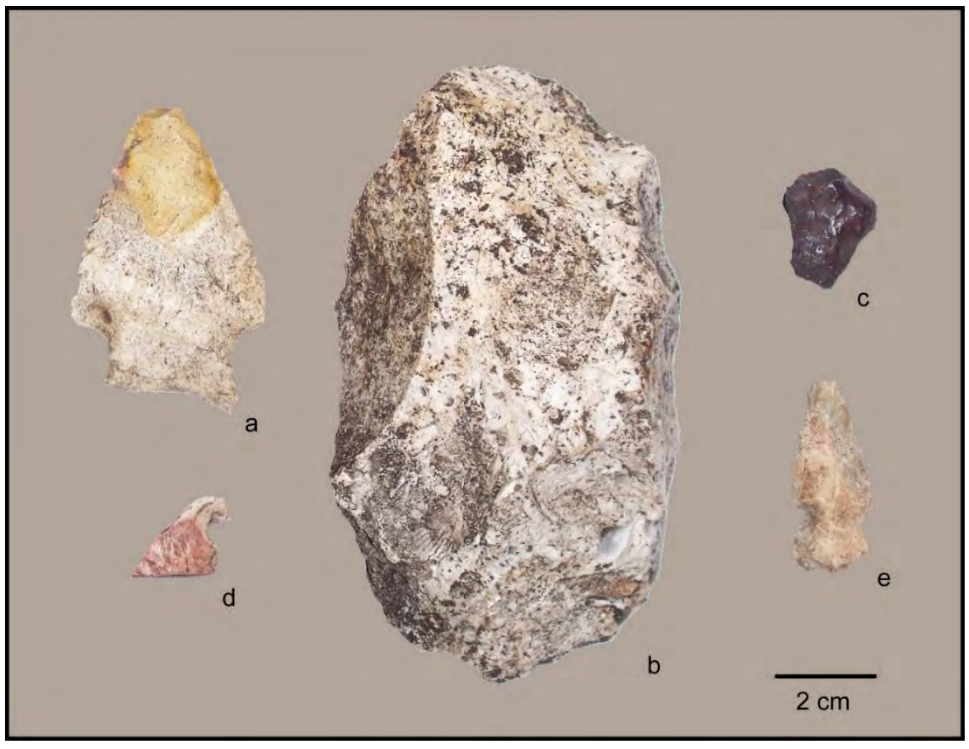

Figure 2-24. Lithic tools recovered during test unit excavations at Butler Island NE, 8DI50: (a) Woodland stemmed biface (TU2); (b) chert core/hammerstone (TU2); (c) hematite chunk (TU1); (d) biface fragment (TU1); (e) Bradford biface (TU1).

negative flake scares. One end has numerous smaller flake scares, including several hinge fractures that suggest it was used as a hammerstone.

The stemmed biface (Figure 2-24a), recovered from Level C of TU 2, measures 6.1 cm from the tip to the base and 3.7 cm at the widest point. The asymmetrical stem measures 1.7 cm from base to the shoulders and 2.5 cm wide. It is made on a good-quality beige chert that transitions to tan in color near the broken tip and appears to be only lightly patinated. Several flake scars emanating from the base of the stem terminate in step fractures on both sides, likely attempts to thin the body of the biface and one edge on the blade appears to be either intentionally serrated or nicked by use.

TU3 and TU3N had the lowest frequencies of lithic artifacts and no stone tools. TU3 contained six chert flakes and one small pebble. A total of seven lithic artifacts were recovered from TU3N, three chert flakes, three fragments of burned limestone, and one small chunk of fossilized coral.

Modified Bone

Seven modified bones were recovered during test unit excavation, one each from TU1 and TU2, two from TU3, and three from TU3N. The distal portion of a modified bone (Figure 2-25a), likely a deer metapodial, was recovered from Level C of TU1. It measures 7.0 cm long by 1.1 cm wide and crossmends on a fresh break. The piece is oval in cross section and the distal end is tapered. The tip at the distal end is broken, as is the proximal end. The distal portion of a modified bone (Figure 2-25c) was recovered from Level B of TU2. It measures 3.4 cm long by 0.7 cm wide and is round in cross section. It is tapered to a point at one end and terminates in a break at the other.

Two medial fragments of modified bone were recovered from Level A of TU3. The first (Figure 2-25b) is 3.3 cm long by 0.7 wide and is squarish in cross section with a slight tapering toward one end. The second (Figure 2-25d) is 3.8 cm long by 0.8 cm wide and has a round cross section with no evidence of tapering.

TU3N contained three modified bone implements. The medial portion of a modified bone (Figure 2-25e) was recovered from Level D. The fragment of bone is 3.7 cm long and 0.8 cm wide at the widest point. The tapered fragment is rounded and smoothed and broken on both ends. The small size of the fragment makes it difficult to determine the species, but the bone appears to be mammalian.

A small bone tool (Figure 2-25f) that could be a fish gorge was recovered from Level I of TU3N, 100–110 cm BD. It is likely made from a deer bone and measures 5.3 cm long and 0.7 cm at the widest portion, in the center. The piece is smoothed and polished, terminating into rounded points at both ends. One end has additional beveling (see top in Figure 2-25f), suggesting either repeated wear in that area or perhaps a break that was smoothed.

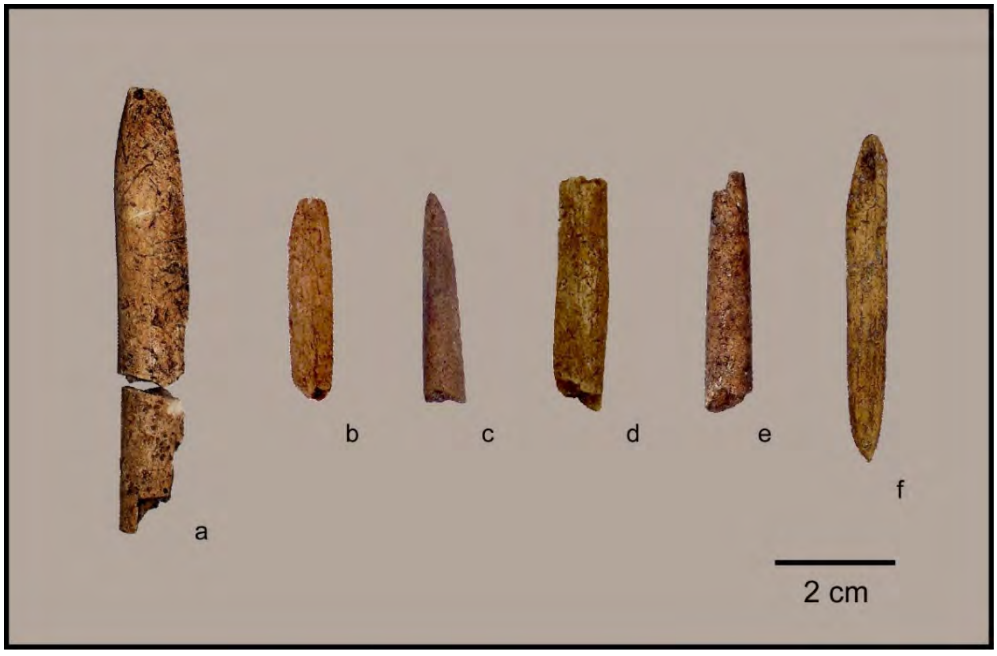

Figure 2-25. Modified bone recovered from test units at Butler Island NE, 8DI50.

Figure 2-26. Three views of a perforated bone tool recovered from Test Unit 3N, 8DI50.

A small perforated bone tool (Figure 2-26) was recovered from Level L of TU3N, at the base of the anthropogenic deposits. It measures 4.7 cm long by 1.7 cm wide and is make on the cortical bone of a mammal species, likely deer. The nearly perfectly round perforation is 1.0 cm in diameter, and the perforation and the outer edges of the tool are beveled from the process of shaping it, with the exception of one end that has broken off. A small notch that is 0.5 cm long and 0.2 cm wide has been carved into one side just below the perforation. Examples of similar bone tools have been found in other coastal sites, however, the function of this tool is unknown (Ricklis and Weinstein 2005). The carved notch just below the perforation suggests that this is not a pendant, but a tool of specific use, perhaps an implement used for making nets.

All of the modified bone has been obviously shaped, but, with the exception of the perforated bone tool from TU3N, there is little polish on any of them but they all exhibit significant weathering, likely due to taphonomic processes.

Modified Shell

One modified gastropod shell was recovered from Level H of TU3N, 90–100 cm BD, and may be the remnant of a gastropod hammer (Figure 2-27). It is made from a crown conch (*Melongena corona*) and measures 6.3 cm from the apex to the base. A significant portion of the body whorl, including the aperture, is missing and there is no evidence of hafting holes. The base is truncated and smoothed due to attrition, likely from battering, and the tip of the apex is broken.

Faunal Remains

Faunal remains collected during level excavations and recovered from bulk samples have yet to be analyzed, therefore discussion of faunal remains in this chapter is restricted to density of materials in each level and observations made in the field and during sorting in the laboratory. A total of 1,839.4 gm of faunal material was recovered, 437.0 gm from TU1, 182.0 gm from TU2, 203.2 gm from TU3, and 1017.2 gm from TU3N. One member of the crew responsible for excavating TU1 was a zooarchaeologist and noted several fish species in matrix of TU1, including mullet (*Mugil* sp.), catfish (*Ariopsis felis*), sea trout (*Cynoscion* sp.), toadfish (*Opsanus* sp.), and gar (*Lepisosteus* sp.). Additional remains of turtle (Testudines), rat (Rodentia), bird (Aves), and mammalian species were also noted.

Invertebrate faunal remains were abundant in the anthropogenic levels. During level excavations, only gastropod shells were collected and other shell was not quantified. Shell collected in bulk samples was quantified but awaits further analysis. Density of invertebrate fauna correlates with higher frequencies of cultural materials, and in TU3N, density of shell increases below Stratum IV-B.

Figure 2-27. Possible gastropod hammer from TU3N, 8DI50.

Human Teeth

Four human (*Homo sapiens*) teeth were recovered, one from TU3 and three from TU3N. The tooth from TU3 was recovered in the upper portion near the surface. One tooth was recovered from Level B, and the remaining two from Level I of TU3N. No other human remains were encountered, and there was no evidence of human burials in the excavation units.

SEDIMENT ANALYSIS

The analysis of sediment samples collected from TU1 is a component in a larger research project that seeks to reconstruct paleoenvironmental conditions as a means to understand how the changing environment in Horseshoe Cove affected human relationships with the landscape (McFadden 2014). In addition to sediment samples collected from terrestrial test units, marine sediment cores were collected along a 2-km transect that encompasses Butler Island. This section provides the methods and results of analysis of the TU1 sediment samples.

Methods

Samples were collected at 2.5-cm intervals from the surface to 100 cm BD in the east profile of TU1 (see Figure 2-28). All sediment samples were transported to the Paleoenvironmental Research and Marine Sedimentology Laboratories in the Department of Geological Sciences at the University of Florida for analysis. Analysis of the sediment samples collected from the excavation unit included: percentage of fines, which are primarily silts and muds that are smaller than .062 mm; sediment texture characteristics of the sand-size fraction, between .062m and 2 mm; mineralogy; and sediment composition. Grain size is expressed in phi units, a logarithmic transformation that converts millimeters into whole numbers that normalize the grain size distribution for easier analysis and comparison using the formula:

$$\Phi = -\text{Log}_2 d$$

Where Φ = phi size and d = grain diameter in millimeters (Boggs 2005). Characterization of grain size classes uses the Wentworth size scale.

Figure 2-28. Laboratory of Southeastern Archaeology crew collecting sediment samples from Test Unit 1, 8DI50.

Each sediment sample was homogenized by stirring and a subsample of approximately 8–10 gm was removed and placed in an aluminum tin to dry at 35 degrees Celsius for at least two days. After all moisture was removed, the samples were stirred again and a subsample of approximately 5 gm was placed in a jar with a 5% solution of sodium hexametaphosphate and agitated for 60 minutes in an ultrasonic bath. The deflocculated samples were wet sieved through a .062 mm sieve and placed in the drying oven at 35 degrees celsius to dry. After drying, the sample was weighed again. The resulting loss was the weight of the fine-grained (less than .062 mm) materials and the percentage of fines was calculated. The samples were then split to about 1 gm and processed in a settling column to determine sediment characteristics and the data were processed in Matlab.

Results

Descriptions of stratigraphic units of TU1, including color and content have been provided previously in this chapter. Table 2-16 provides statistics for each sediment sample, including mean grain size, median grain size, sorting, skewness, and modal grain size within the sand fraction. Figure 2-29 provides a photograph of the sediment column from TU1 along with mean grain size and sorting for the sand fraction, percentage of fines, and frequencies of lithics, pottery, and

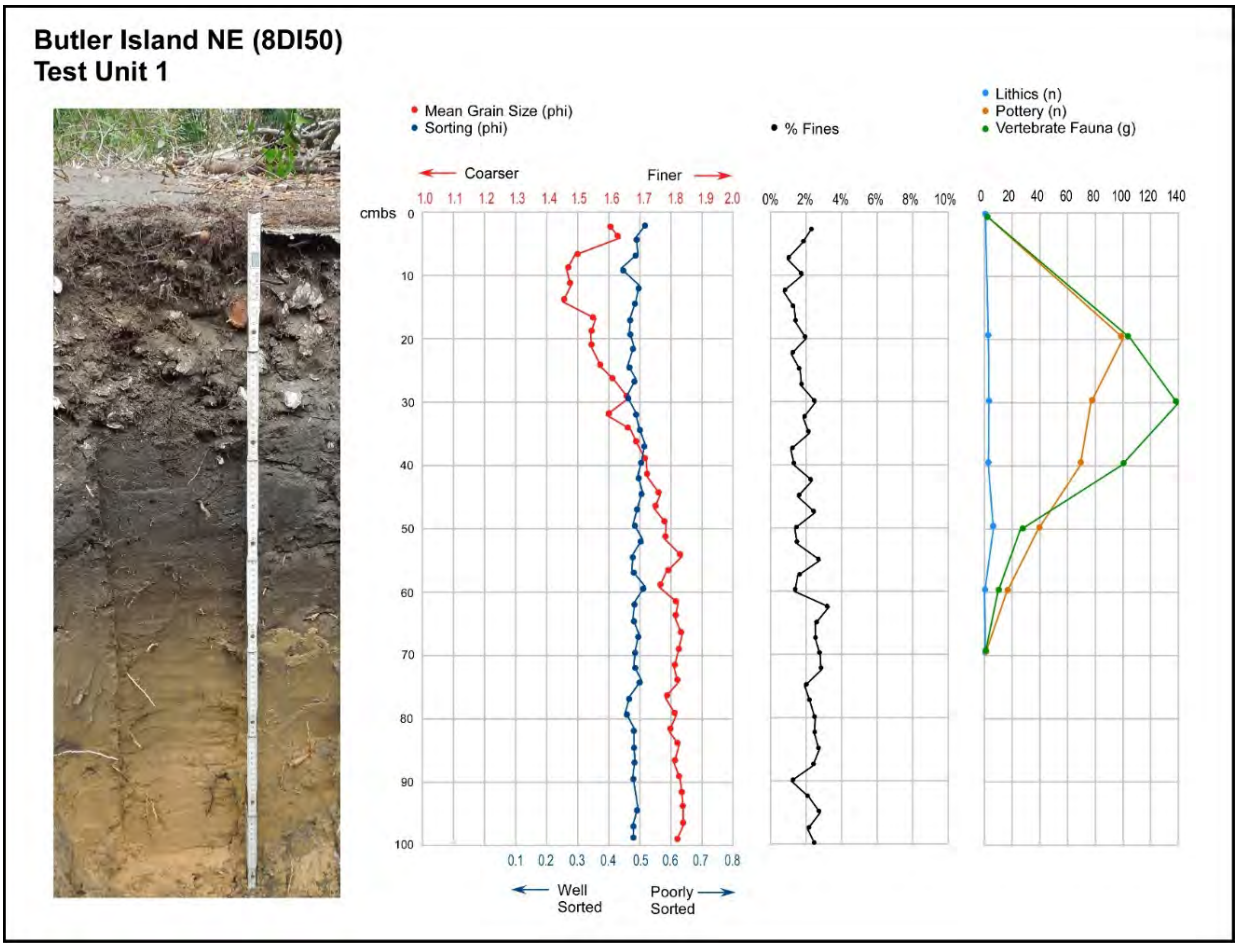

Figure 2-29. East profile of TU1 with graphs for grain size and sorting within the sand fraction, percentage fines, and artifact frequencies by excavation level.

Table 2-16. Sediment Sample Statistics by Depth for Test Unit 1, 8DI50.

Sample ID	CMBS	Median	Mean	Sorting	Skewness	Mode
8DI50.49	2.5	1.60	1.60	0.53	0.02	1.80
8DI50.50	5.0	1.63	1.63	0.50	0.02	1.70
8DI50.51	7.5	1.49	1.48	0.49	0.00	1.50
8DI50.52	10.0	1.49	1.46	0.44	-0.05	1.60
8DI50.53	12.5	1.49	1.47	0.50	-0.03	1.60
8DI50.54	15.0	1.46	1.45	0.49	0.00	1.50
8DI50.55	17.5	1.55	1.55	0.47	0.01	1.40
8DI50.56	20.0	1.56	1.53	0.47	-0.05	1.60
8DI50.57	22.5	1.55	1.54	0.48	0.01	1.60
8DI50.58	25.0	1.58	1.57	0.47	-0.02	1.70
8DI50.59	27.5	1.59	1.62	0.49	0.10	1.60
8DI50.60	30.0	1.67	1.66	0.46	-0.02	1.80
8DI50.61	32.5	1.59	1.59	0.49	0.01	1.60
8DI50.62	35.0	1.67	1.66	0.50	-0.02	1.80
8DI50.63	37.5	1.69	1.69	0.52	0.00	1.80
8DI50.64	40.0	1.71	1.71	0.51	0.00	1.80
8DI50.65	42.5	1.74	1.72	0.50	-0.06	1.90
8DI50.66	45.0	1.76	1.76	0.51	-0.02	1.80
8DI50.67	47.5	1.76	1.74	0.50	-0.05	1.80
8DI50.68	50.0	1.77	1.78	0.48	0.01	1.80
8DI50.69	52.5	1.79	1.78	0.51	-0.07	1.90
8DI50.70	55.0	1.84	1.83	0.48	-0.02	2.00
8DI50.71	57.5	1.78	1.78	0.48	-0.04	1.70
8DI50.72	60.0	1.76	1.76	0.52	0.01	1.70
8DI50.73	62.5	1.81	1.81	0.49	-0.02	1.80
8DI50.74	65.0	1.81	1.81	0.48	-0.06	1.80
8DI50.75	67.5	1.83	1.83	0.50	-0.03	1.90
8DI50.76	70.0	1.83	1.82	0.49	-0.05	1.90
8DI50.77	72.5	1.82	1.81	0.48	-0.04	1.80
8DI50.78	75.0	1.83	1.82	0.50	-0.08	1.80
8DI50.79	77.5	1.79	1.78	0.47	-0.05	1.80
8DI50.80	80.0	1.81	1.81	0.46	-0.03	1.80
8DI50.81	82.5	1.80	1.79	0.48	-0.05	1.80
8DI50.82	85.0	1.83	1.82	0.49	-0.06	2.00
8DI50.83	87.5	1.80	1.80	0.49	-0.02	1.80
8DI50.84	90.0	1.83	1.82	0.48	-0.05	1.90
8DI50.86	95.0	1.86	1.83	0.50	-0.10	1.90
8DI50.87	97.5	1.86	1.84	0.48	-0.08	1.90
8DI50.88	100.0	1.82	1.82	0.48	-0.05	1.90

vertebrate fauna. Overall, the sediments collected from TU1 at Butler Island NE are medium quartz sand that is well sorted with between 1 and 3 percent fines, all consistent with the expected suite of characteristics for paleodune sediments. Samples observed microscopically are all exclusively composed of well-rounded, frosted quartz grains, suggesting heavy weathering and reworking as well as significant distance from the parent rock. Occasional conchoidal fractures were noted, evidence of impact during saltation and/or suspension and suggestive of aeolian (wind) transport. The minimum grain size is 1.83Φ and the maximum grain size is 1.46Φ. All of the samples are well sorted and skewness is symmetrical.

There are two main zones identifiable within the sediment column, characterized by sediment texture, consistency of fine-grain material percentage, and presence of anthropogenic deposits. Below 60 cm BD, grain size and sorting are consistent down the column, with three slight coarsening upward sequences suggested in the percentage of fine-grained materials. At 60 cm BD there is a transition to erratic shifts in percentage of fine-grained materials and an overall trend toward coarser sediments with elevation. This transition coincides with the apparent initial deposition of cultural materials. Sorting is consistent throughout, and does not shift significantly in conjunction with the coarsening of the sand fraction or changes in percentage of fine-grained materials.

SUMMARY

Survey at Butler Island identified intact midden deposits at the Butler Island NE site (8DI50) on the northeastern portion of the island. The site is bounded by the eroding coastline to the south and east, salt marsh to the west, and extends to the north approximately 10 meters. Two main areas of intact midden were identified, separated by an area devoid of archaeological deposits. Test Units 1, 3, and 3N were excavated in Locus A, which contained the deepest deposits, near an abandoned structure, designated Structure 1. TU2 was excavated in shallower midden deposits, located to the south of a second abandoned shack, Structure 2, in Locus B.

TU1 was located to the southwest of Structure 1 and had deposits to a depth of 70 cm BD that included diagnostic sherds from the Deptford through Weeden Island periods. A radiocarbon assay on charcoal from the upper stratum of midden deposits suggests a possible later ephemeral occupation of this area of the site through A.D. 1035 to 1215, although diagnostic artifacts from this timeframe were not recovered.

TU2 had shallow midden deposits to about 30 cm BD and contained sherds diagnostically consistent with TU1. Because of the shallow nature of the deposits in the unit, and its location near the shoreline, it is possible that some portion of the top of the midden has been removed, and for that reason, no materials from this unit were dated.

TU3 and TU3N were located in Locus A to the west of Structure 1. Large roots from a nearby tree forced the termination of excavation in TU3 at 30 cm BD. A smaller test unit was excavated on the north side of TU3 and designated TU3N. Stratified shell midden deposits extended to a depth of 135 cm BD in TU3N. The upper 60 cm BD are

likely redeposited materials, but below that depth the deposits are intact. Diagnostic pottery sherds from the Deptford through Weeden Island Periods were recovered.

CHAPTER 3
CONCLUSIONS AND RECOMMENDATIONS

In addition to cultural materials and sediment samples collected during excavations at Butler Island NE, results from analysis of marine sediment cores collected in 2012 from Horseshoe Cove can help to reconstruct a chronology of environmental change and occupation at the site (McFadden 2014). The first people to habitually occupy Butler Island NE during the Early Woodland Deptford Period, around 170 B.C. to A.D. 5, likely chose the area because of its close proximity to reliable fresh water and nearby marine resources. Analysis of marine sediment cores collected from Horseshoe Cove suggest that at the time of initial occupation of the site, fresh to brackish marsh and perhaps salt marsh had developed in the inner portion of Butler Island and to the south of the archaeological site. A radiocarbon assay on bulk sediment from a marine core collected from north of the archaeological site suggests that fresh to brackish marsh did not develop in that area until around A.D. 660 to 770, and Butler Island was likely still connected to the mainland prior to that time.

A radiocarbon assay on bulk sediment from a core collected from the fresh water pond at the inland site of Garden Patch, suggests that ground water elevation had increase enough to fill the shallow pond by 405 to 370 B.C. (Wallis and McFadden 2014). It is likely that Lolly Creek was either already active, or came on line around the same time, and it may have provided a convenient fresh water resource that flowed from north to south right by the Butler Island NE site. The creek could also have provided a path through the surrounding marsh, allowing access to the open marine environment by canoe.

Sedimentary data, along with the geomorphology of the landform, support the suggestion that Butler Island is the remnant of a late Pleistocene to early Holocene paleodune. The trend toward coarser sediments with elevation in TU1 is likely due to two concurrent variables. Human activity, evidenced by the initiation of anthropologic deposition, disturbed the sediments and allowed for the mobilization of smaller grains. These smaller sediments were transported away from the area as the shoreline transgressed, isolating the island from the mainland and exposing it to the higher energy open marine environment.

Age estimates for the initial occupations at Butler Island NE, Bird Island, and Garden Patch appear to suggest a landward movement of people that coincides with environmental shifts and shoreline transgression. The Deptford Period deposits at Bird Island, which are situated above older Late Archaic deposits, have a slightly earlier date range (McFadden and Palmiotto 2012). The inland site of Garden Patch also has a Deptford component, but it postdates the earliest Butler Island NE deposits by as little as 5 or as much as 300 years (Wallis and McFadden 2014), placing the initial occupation of Butler Island NE between the most seaward site and the mainland site. No Late Archaic deposits have been identified at Butler Island or Garden Patch.

Midden accumulation continued through the Late Woodland Weeden Island Period until around A.D. 1035 to 1215. During the span of habitation at Butler Island NE, the residents witnessed the continued transgression of the shoreline and the eventual transformation from dry land to marsh to the north.

Finally, the characteristics of each test unit at Butler Island NE suggest variable practices in different areas. TU1 had two possible postholes, suggestive of some type of structure, perhaps a domestic dwelling. The intact midden deposits of TU3N are thicker, lack features, and are obviously stratified, suggesting changing practices through time in this area of the site. TU2 has two overlapping pit features but no evidence of a structure and a very thin, shallow midden deposit. It is possible that the top portion of the midden has been removed, but it could also suggest that this area was not extensively used by the pre-Columbian residents.

FUTURE RESEARCH

Further excavation, particularly in the area of TU3N is recommended at Butler Island NE. Addition survey is also needed on the southern arm of the island to determine if intact midden deposits are still present at the site recorded as 8DI97. Because these sites are threatened by shoreline erosion and damage by high energy storms, it is important to salvage as much information as possible before the sites are destroyed.

The archaeological deposits at Butler Island NE have the potential to provide important information about environmental change and the resulting shifts in human practices on the landscape. Butler Island NE is situated between two sites that are at the extreme end of a marine to terrestrial gradient in Horseshoe Cove, Bird Island to the west, and the inland site of Garden Patch to the northeast. Initial occupation at Butler Island NE occurred after that of Bird Island, but prior to Garden Patch, suggesting a landward movement of people as the shoreline transgressed and the cove was flooded. After initial occupation the sites all appear to have been utilized for at least a millennium, although it is likely that the way they were used changed through time as the environment changed. The deeply stratified remains near Structure 1 certainly provide an opportunity to further investigate how site use changed, but because the midden appears to have accreted throughout the span of occupation of the site, it could provide additional data that could be used to construct a more complete record of environmental change.

APPENDIX A:

CATALOG

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.24.1	Auger 10		Pottery	Sand Tempered	Body	Stamped	Linear Check Stamped		Deptford LCS	1/4"	1	2.8	
8DI50.24.2	Auger 10		Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	1	2.8	
8DI50.24.3	Auger 10		Pottery	Sand Tempered	Body	Plain				1/4"	1	17.0	
8DI50.24.4	Auger 10		Pottery		Crumb					1/4"	1	0.3	
8DI50.24.5	Auger 10		Vert. Fauna	Bone						1/4"		8.5	
8DI50.25.1	Auger 11		Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	1	2.8	
8DI50.25.2	Auger 11		Vert. Fauna	Bone						1/4"		23.0	
8DI50.25.3	Auger 11		Invert. Shell	Merceneria						1/4"		22.7	
8DI50.25.4	Auger 11		Charcoal							1/4"		0.3	
8DI50.11.1	Auger 3		Pottery	Sand Tempered	Body	Plain				1/4"	2	17.0	
8DI50.11.2	Auger 3		Pottery		Crumb					1/4"	3	2.8	
8DI50.11.3	Auger 3		Lithic	Chert	Flake					1/4"	2	2.8	
8DI50.11.4	Auger 3		Vert. Fauna	Bone						1/4"		5.7	
8DI50.11.5	Auger 3		Invert. Shell	Gastropod						1/4"	1	0.3	
8DI50.11.6	Auger 3		Historic	Metal						1/4"		0.1	
8DI50.12.1	Auger 4		Pottery	Spicule Tempered	Body	Stamped	Check Stamped		St. Johns Check Stamped	1/4"	1	2.8	
8DI50.12.2	Auger 4		Pottery	Limestone Temp	Body	Plain			Pasco Plain	1/4"	1	14.2	
8DI50.12.3	Auger 4		Pottery	Sand Tempered	Body	Plain				1/4"	3	8.5	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.12.4	Auger 4		Pottery		Crumb					1/4"	5	5.7	
8DI50.12.5	Auger 4		Vert. Fauna	Bone						1/4"		15.6	
8DI50.12.6	Auger 4		Charcoal							1/4"		0.1	
8DI50.13.1	Auger 6		Lithic	Chert	Flake					1/4"	2	0.6	
8DI50.13.2	Auger 6		Pottery		Crumb					1/4"	1	0.1	
8DI50.15.1	Auger 7		Pottery	Sand Tempered	Body	Stamped	Simple Stamped		Deptford Simple Stamped	1/4"	1	5.7	
8DI50.15.2	Auger 7		Pottery		Crumb					1/4"	1	2.8	
8DI50.15.3	Auger 7		Vert. Fauna	Bone						1/4"		0.1	
8DI50.15.4	Auger 7		Historic	Metal						1/4"		0.1	
8DI50.16.1	Auger 8		Pottery		Crumb					1/4"	1	0.1	
8DI50.16.2	Auger 8		Lithic	Chert	Flake					1/4"	1	0.3	
8DI50.17.1	Auger 9		Pottery	Sand Tempered	Rim	Incised				1/4"	1	9.9	
8DI50.17.2	Auger 9		Vert. Fauna	Bone						1/4"		0.6	
8DI50.17.3	Auger 9		Historic	Metal						1/4"		0.1	
8DI50.14.1	STP1		Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	2	7.1	
8DI50.14.2	STP1		Pottery	Sand Tempered	Body	Stamped	Complicated Stamped		Swift Creek Complicated Stamped	1/4"	2	12.8	
8DI50.14.3	STP1		Pottery	Spicule Tempered	Rim	Stamped	Check Stamped		St. Johns Check Stamped	1/4"	1	8.5	
8DI50.14.4	STP1		Pottery	Sand Tempered	Body	Plain				1/4"	2	8.5	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.14.5	STP1		Pottery	Sand Tempered	Body	UID				1/4"	1	7.1	
8DI50.14.6	STP1		Pottery		Crumb					1/4"	6	5.7	
8DI50.14.7	STP1		Lithic	Limestone				Burned		1/4"	2	5.7	
8DI50.14.8	STP1		Vert. Fauna	Bone						1/4"		1.4	
8DI50.2.1	TU1	A	Pottery	Sand Tempered	Body	Stamped	Simple Stamped			1/4"	1	7.1	
8DI50.2.10	TU1	A	Pottery		Crumb					1/4"	50	58.1	
8DI50.2.11	TU1	A	Lithic	Chert	Flake					1/4"	2	4.2	
8DI50.2.12	TU1	A	Vert. Fauna	Bone						1/4"		104.8	
8DI50.2.13	TU1	A	Invert. Shell	Gastropod						1/4"	5	68.0	
8DI50.2.14	TU1	A	Historic	Metal						1/4"		8.5	
8DI50.2.15	TU1	A	Historic	Glass						1/4"		0.5	
8DI50.2.16	TU1	A	Charcoal							1/4"		11.2	
8DI50.2.17	TU1	A	Pottery	Sand Tempered	Rim	Plain				1/4"	3	8.5	
8DI50.2.18	TU1	A	Pottery	Spicule Tempered	Body	Stamped	Check Stamped		St. Johns Check Stamped	1/4"	1	0.5	
8DI50.2.2	TU1	A	Pottery	Sand Tempered	Body	Stamped	Complicated Stamped		Swift Creek	1/4"	3	5.7	
8DI50.2.3	TU1	A	Pottery	Sand Tempered	Rim	Punctated	Punctated Zoned		Weeden Island Punctated	1/4"	1	2.8	
8DI50.2.4	TU1	A	Pottery	Sand Tempered	Body	Punctated	Punctated Zoned		Weeden Island Punctated	1/4"	2	2.8	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.2.5	TU1	A	Pottery	Sand Tempered	Body	Stamped	Linear Check Stamped		Deptford LCS	1/4"	2	17.0	
8DI50.2.6	TU1	A	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	4	19.8	
8DI50.2.7	TU1	A	Pottery	Limestone Temp	Body	Plain			Pasco Plain	1/4"	5	19.8	
8DI50.2.8	TU1	A	Pottery	Sand Tempered	Body	Stamped	UID			1/4"	3	7.8	
8DI50.2.9	TU1	A	Pottery	Sand Tempered	Body	Plain				1/4"	26	155.9	
8DI50.3.1	TU1	B	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	6	32.0	
8DI50.3.10	TU1	B	Lithic	Chert	Chunk			Modified Cobble		1/4"	1	156.3	
8DI50.3.11	TU1	B	Lithic	Limestone				Burned		1/4"	2	3.3	
8DI50.3.12	TU1	B	Vert. Fauna	Bone						1/4"		139.4	
8DI50.3.13	TU1	B	Invert. Shell	Gastropod						1/4"		28.1	
8DI50.3.14	TU1	B	Invert. Shell	Other Shell						1/4"		0.6	
8DI50.3.15	TU1	B	Charcoal							1/4"		14.9	
8DI50.3.2	TU1	B	Pottery	Sand Tempered	Body	Stamped	Linear Check Stamped		Deptford	1/4"	6	54.3	
8DI50.3.3	TU1	B	Pottery	Sand Tempered	Body	Stamped	Simple Stamped		Deptford	1/4"	3	15.5	
8DI50.3.4	TU1	B	Pottery	Sand Tempered	Rim	Stamped	Check Stamped			1/4"	1	2.5	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.3.5	TU1	B	Pottery	Limestone Temp	Body	Plain			Pasco	1/4"	1	15.9	
8DI50.3.6	TU1	B	Pottery	Sand Tempered	Body	Plain				1/4"	9	44.7	
8DI50.3.7	TU1	B	Pottery	Sand Tempered	Rim	Plain				1/4"	2	5.7	
8DI50.3.8	TU1	B	Pottery	Sand Tempered	Body	UID				1/4"	8	23.1	
8DI50.3.9	TU1	B	Pottery		Crumb					1/4"	41	39.7	
8DI50.4.1	TU1	C	Pottery	Sand Tempered	Body	Stamped	Complicated Stamped		New River Complicated Stamped	1/4"	14	134.6	
8DI50.4.10	TU1	C	Pottery	Sand Tempered	Rim	UID				1/4"	1	0.5	
8DI50.4.11	TU1	C	Pottery		Crumb					1/4"	27	26.9	
8DI50.4.12	TU1	C	Lithic	Hematite	Chunk					1/4"	1	7.1	
8DI50.4.13	TU1	C	Lithic	Chert	Flake					1/4"	1	0.5	
8DI50.4.14	TU1	C	Vert. Fauna	Bone				Modified		1/4"	1	5.7	Modified Bone - 2 pieces crossmend on fresh break
8DI50.4.15	TU1	C	Vert. Fauna	Bone						1/4"		99.2	
8DI50.4.16	TU1	C	Invert. Shell	Gastropod						1/4"	1	5.7	
8DI50.4.17	TU1	C	Charcoal							1/4"		4.2	
8DI50.4.2	TU1	C	Pottery	Sand Tempered	Body	Stamped	Complicated Stamped		St. Andrews Complicated Stamped	1/4"	1	1.4	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.4.3	TU1	C	Pottery	Sand Tempered	Rim	Stamped	Complicated Stamped		Swift Creek Complicated Stamped	1/4"	1	2.8	
8DI50.4.4	TU1	C	Pottery	Sand Tempered	Rim	Stamped	Check Stamped			1/4"	1	4.3	
8DI50.4.5	TU1	C	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	11	49.6	
8DI50.4.6	TU1	C	Pottery	Sand Tempered	Body	Plain				1/4"	5	12.7	
8DI50.4.7	TU1	C	Pottery	Sand Tempered	Rim	Plain				1/4"	1	4.2	
8DI50.4.8	TU1	C	Pottery	Limestone Temp	Body	Plain			Pasco Plain	1/4"	2	17.0	
8DI50.4.9	TU1	C	Pottery	Sand Tempered	Body	UID				1/4"	5	19.8	
8DI50.8.1	TU1	D	Pottery	Sand Tempered	Body	Stamped	Complicated Stamped		Swift Creek Complicated Stamped	1/4"	2	19.8	
8DI50.8.10	TU1	D	Pottery		Crumb					1/4"	17	15.6	
8DI50.8.11	TU1	D	Lithic	Chert	Biface Fragment					1/4"	1	0.3	
8DI50.8.12	TU1	D	Lithic	Chert	Flake					1/4"	3	2.8	
8DI50.8.13	TU1	D	Lithic	Limestone				Burned		1/4"	1	2.8	
8DI50.8.14	TU1	D	Concretion							1/4"		0.1	
8DI50.8.15	TU1	D	Vert. Fauna	Bone						1/4"		26.9	
8DI50.8.16	TU1	D	Charcoal							1/4"		1.4	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.8.2	TU1	D	Pottery	Sand Tempered	Body	Stamped	Simple Stamped		Deptford Simple Stamped	1/4"	1	5.7	
8DI50.8.3	TU1	D	Pottery	Sand Tempered	Body	Incised				1/4"	5	70.9	
8DI50.8.4	TU1	D	Pottery	Sand Tempered	Rim	Stamped	Linear Check Stamped		Deptford LCS	1/4"	1	2.8	
8DI50.8.5	TU1	D	Pottery	Sand Tempered	Rim	Stamped	Check Stamped			1/4"	1	14.2	
8DI50.8.6	TU1	D	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	3	53.9	
8DI50.8.7	TU1	D	Pottery	Spicule Tempered	Body	Stamped	Check Stamped		St. Johns Check Stamped	1/4"	1	11.3	
8DI50.8.8	TU1	D	Pottery	Sand Tempered	Body	Plain				1/4"	5	18.4	
8DI50.8.9	TU1	D	Pottery	Limestone Temp	Body	Plain			Pasco Plain	1/4"	2	29.8	
8DI50.9.1	TU1	E	Pottery	Sand Tempered	Body	Stamped	Simple Stamped		Deptford Simple Stamped	1/4"	1	1.4	
8DI50.9.2	TU1	E	Pottery	Sand Tempered	Body	Plain	Burnished			1/4"	1	0.3	
8DI50.9.3	TU1	E	Pottery	Limestone Temp	Body	Plain			Pasco Plain	1/4"	1	59.5	
8DI50.9.4	TU1	E	Pottery		Crumb					1/4"	2	1.4	
8DI50.9.5	TU1	E	Vert. Fauna	Bone						1/4"		4.3	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.9.6	TU1	E	Charcoal							1/4"		0.1	
8DI50.10.1	TU1	E	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	2	14.2	
8DI50.10.2	TU1	E	Pottery		Crumb					1/4"	8	5.7	
8DI50.10.3	TU1	E	Vert. Fauna	Bone						1/4"		5.7	
8DI50.10.4	TU1	E	Charcoal							1/4"		0.1	
8DI50.28.1	TU1	F	Lithic	Chert	Flake			Modified		1/4"	1	0.6	Modified Flake
8DI50.28.2	TU1	F	Vert. Fauna	Bone						1/4"		0.3	
8DI50.28.3	TU1	F	Invert. Shell	Gastropod						1/4"	1	0.3	
8DI50.7.1	TU1	FEA 1	Invert. Shell	Other Shell						1/4"		411.1	
8DI50.7.10	TU1	FEA 1	Unsorted									28.3	< 1/8"
8DI50.7.2	TU1	FEA 1	Vert. Fauna	Bone						1/4"		0.1	
8DI50.7.3	TU1	FEA 1	Pottery	Sand Tempered	Body	Stamped	UID			1/4"	1	2.8	
8DI50.7.4	TU1	FEA 1	Pottery		Crumb					1/4"	5	2.8	
8DI50.7.5	TU1	FEA 1	Concretion							1/4"		0.1	
8DI50.7.6	TU1	FEA 1	Invert. Shell	Other Shell						1/8"		2.8	
8DI50.7.7	TU1	FEA 1	Vert. Fauna							1/8"		0.1	
8DI50.7.8	TU1	FEA 1	Concretion							1/8"		0.1	
8DI50.7.9	TU1	FEA 1	Charcoal							1/8"		0.1	
8DI50.21.1	TU1	FEA 4	Invert. Shell	Other Shell						1/4"		0.3	
8DI50.21.2	TU1	FEA 4	Charcoal							1/4"		0.3	
8DI50.21.3	TU1	FEA 4	Vert. Fauna	Bone						1/8"		0.3	
8DI50.21.4	TU1	FEA 4	Charcoal							1/8"		0.3	
8DI50.21.5	TU1	FEA 4	Unsorted									2.8	< 1/8"
8DI50.22.1	TU1	FEA 4	Vert. Fauna	Bone						1/8"		0.3	
8DI50.22.2	TU1	FEA 4	Charcoal							1/8"		0.3	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.22.3	TU1	FEA 4	Unsorted									1.4	< 1/8"
8DI50.33.1	TU1	Piece Plot	Pottery	Sand Tempered	Body	Stamped	Check Stamped		Deptford LCS	1/4"	1	5.7	
8DI50.31.1	TU1	STR II	Invert. Shell	Other Shell						1/4"		5658.6	
8DI50.31.10	TU1	STR II	Unsorted									425.2	< 1/8"
8DI50.31.2	TU1	STR II	Vert. Fauna	Bone						1/4"		12.8	
8DI50.31.3	TU1	STR II	Pottery	Sand Tempered	Body	Stamped	Complicated Stamped		Swift Creek Complicated Stamped	1/4"	1	1.4	
8DI50.31.4	TU1	STR II	Pottery		Crumb					1/4"	6	5.7	
8DI50.31.5	TU1	STR II	Lithic	Chert	Biface				Bradford Type	1/4"	1	4.3	Bradford Type
8DI50.31.6	TU1	STR II	Vert. Fauna	Bone						1/8"		29.8	
8DI50.31.7	TU1	STR II	Invert. Shell	Other Shell						1/8"		378.5	
8DI50.31.8	TU1	STR II	Charcoal							1/8"		0.3	
8DI50.31.9	TU1	STR II	Concretion							1/8"		0.3	
8DI50.32.1	TU1	STR III	Invert. Shell	Other Shell						1/4"		192.8	
8DI50.32.2	TU1	STR III	Vert. Fauna	Bone						1/4"		2.8	
8DI50.32.3	TU1	STR III	Vert. Fauna							1/4"	1	0.3	H. Sapiens tooth - Canine
8DI50.32.4	TU1	STR III	Charcoal							1/4"		0.3	
8DI50.32.5	TU1	STR III	Invert. Shell	Other Shell						1/8"		22.7	
8DI50.32.6	TU1	STR III	Vert. Fauna	Bone						1/8"		9.9	
8DI50.32.7	TU1	STR III	Charcoal							1/8"		2.8	
8DI50.32.8	TU1	STR III	Concretion							1/8"		0.3	
8DI50.32.9	TU1	STR III	Unsorted									66.6	< 1/8"

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.5.1	TU2	A	Pottery	Sand Tempered	Body	Stamped	Linear Check Stamped		Deptford LCS	1/4"	1	5.7	
8DI50.5.10	TU2	A	Vert. Fauna	Bone						1/4"		85.0	
8DI50.5.11	TU2	A	Invert. Shell	Gastropod						1/4"	14	22.7	
8DI50.5.12	TU2	A	Historic	Glass						1/4"		0.1	
8DI50.5.13	TU2	A	Historic	Ceramic						1/4"		2.8	
8DI50.5.14	TU2	A	Historic	Metal						1/4"		21.3	
8DI50.5.15	TU2	A	Charcoal							1/4"		19.8	
8DI50.5.2	TU2	A	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	8	38.3	
8DI50.5.3	TU2	A	Pottery	Limestone Temp	Body	Plain			Pasco Plain	1/4"	6	26.9	
8DI50.5.4	TU2	A	Pottery	Sand Tempered	Body	Plain				1/4"	3	9.9	
8DI50.5.5	TU2	A	Pottery	Sand Tempered	Body	UID				1/4"	10	26.9	
8DI50.5.6	TU2	A	Pottery		Crumb					1/4"	47	46.8	
8DI50.5.7	TU2	A	Lithic	Chert	Core					1/4"	1	328.9	
8DI50.5.8	TU2	A	Lithic	Chert	Flake					1/4"	1	0.1	
8DI50.5.9	TU2	A	Concretion							1/4"		2.8	
8DI50.6.1	TU2	B	Pottery	Sand Tempered	Rim	Stamped	Complicated Stamped		Swift Creek Complicated Stamped	1/4"	1	4.3	
8DI50.6.10	TU2	B	Vert. Fauna	Bone				Modified		1/4"	1	0.1	
8DI50.6.11	TU2	B	Vert. Fauna	Bone						1/4"		39.7	
8DI50.6.12	TU2	B	Charcoal							1/4"		0.1	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.6.2	TU2	B	Pottery	Sand Tempered	Body	Stamped	UID			1/4"	1	7.1	
8DI50.6.3	TU2	B	Pottery	Sand Tempered	Rim	Stamped	Check Stamped			1/4"	1	4.3	
8DI50.6.4	TU2	B	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	3	8.5	
8DI50.6.5	TU2	B	Pottery	Limestone Temp	Body	Plain			Pasco Plain	1/4"	1	8.5	
8DI50.6.6	TU2	B	Pottery		Crumb					1/4"	21	28.3	
8DI50.6.7	TU2	B	Pottery	Sand Tempered	Body	UID				1/4"	8	26.9	
8DI50.6.8	TU2	B	Lithic	Chert	Flake					1/4"	1	0.1	
8DI50.6.9	TU2	B	Lithic	Limestone				Burned		1/4"	1	2.8	
8DI50.29.1	TU2	C	Pottery	Sand Tempered	Body	Plain				1/4"	2	7.1	
8DI50.29.2	TU2	C	Pottery		Crumb					1/4"	7	7.1	
8DI50.29.3	TU2	C	Lithic	Chert	Biface					1/4"	1	14.2	Stemmed Biface
8DI50.29.4	TU2	C	Lithic	Chert	Flake					1/4"	1	0.3	
8DI50.29.5	TU2	C	Vert. Fauna	Bone						1/4"		2.8	
8DI50.29.6	TU2	C	Charcoal							1/4"		1.4	
8DI50.30.1	TU2	D	Pottery		Crumb					1/4"	1	2.8	
8DI50.30.2	TU2	D	Lithic	Chert	Flake					1/4"	3	0.3	
8DI50.30.3	TU2	D	Vert. Fauna	Bone						1/4"		2.8	
8DI50.30.4	TU2	D	Charcoal							1/4"		0.3	
8DI50.89.1	TU2	FEA 2	Pottery	Sand Tempered	Body	Plain				1/4"	1	2.8	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
				Limestone Temp	Body	Plain			Pasco Plain				
8DI50.89.2	TU2	FEA 2	Pottery							1/4"	1	2.8	
8DI50.89.3	TU2	FEA 2	Invert. Shell	Gastropod						1/4"	1	4.3	
8DI50.89.4	TU2	FEA 2	Vert. Fauna	Bone						1/4"		15.6	Some burned
8DI50.89.5	TU2	FEA 2	Charcoal							1/4"		0.3	
8DI50.91.1	TU2	FEA 2	Invert. Shell	Other Shell						1/4"		90.7	
8DI50.91.10	TU2	FEA 2	Charcoal							1/8"		2.8	
8DI50.91.11	TU2	FEA 2	Unsorted									24.1	< 1/8"
8DI50.91.2	TU2	FEA 2	Vert. Fauna	Bone						1/4"		0.3	
8DI50.91.3	TU2	FEA 2	Pottery		Crumb					1/4"	1	1.4	
8DI50.91.4	TU2	FEA 2	Lithic	Limestone				Burned		1/4"	1	0.3	
8DI50.91.5	TU2	FEA 2	Charcoal							1/4"		1.4	
8DI50.91.6	TU2	FEA 2	Invert. Shell	Other Shell						1/8"		15.6	
8DI50.91.7	TU2	FEA 2	Vert. Fauna	Bone						1/8"		0.3	
8DI50.91.8	TU2	FEA 2	Lithic	Chert	Flake					1/8"	1	0.3	
8DI50.91.9	TU2	FEA 2	Concretion							1/8"		0.3	
8DI50.90.1	TU2	FEA 3	Vert. Fauna	Bone						1/4"		1.4	Some Burned
8DI50.92.1	TU2	FEA 3	Invert. Shell	Other Shell						1/4"		1503.9	
8DI50.92.2	TU2	FEA 3	Vert. Fauna	Bone						1/4"		4.3	
8DI50.92.3	TU2	FEA 3	Pottery		Crumb					1/4"	1	0.3	
8DI50.92.4	TU2	FEA 3	Charcoal							1/4"		0.3	
8DI50.92.5	TU2	FEA 3	Invert. Shell	Other Shell						1/8"		202.7	
8DI50.92.6	TU2	FEA 3	Vert. Fauna	Bone						1/8"		7.1	
8DI50.92.7	TU2	FEA 3	Concretion							1/8"		0.3	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.92.8	TU2	FEA 3	Charcoal							1/8"		2.8	
8DI50.92.9	TU2	FEA 3	Unsorted									124.7	< 1/8"
8DI50.34.1	TU2	STR I	Invert. Shell	Other Shell						1/4"		1489.8	
8DI50.34.10	TU2	STR I	Charcoal							1/8"		0.3	
8DI50.34.11	TU2	STR I	Vert. Fauna							1/8"		1.4	Rodent Feces
8DI50.34.12	TU2	STR I	Concretion							1/8"		0.3	
8DI50.34.13	TU2	STR I	Historic	Metal						1/8"		0.3	
8DI50.34.14	TU2	STR I	Unsorted									178.6	< 1/8"
8DI50.34.2	TU2	STR I	Vert. Fauna	Bone						1/4"		8.5	
8DI50.34.3	TU2	STR I	Lithic	Chert	Flake					1/4"	1	0.3	
8DI50.34.4	TU2	STR I	Lithic	Limestone				Burned		1/4"	1	0.3	
8DI50.34.5	TU2	STR I	Charcoal							1/4"		0.3	
8DI50.34.6	TU2	STR I	Pottery	Limestone Temp	Body	Plain			Pasco Plain	1/4"	1	4.3	
8DI50.34.7	TU2	STR I	Historic	Metal						1/4"		0.3	
8DI50.34.8	TU2	STR I	Invert. Shell	Other Shell						1/8"		243.8	
8DI50.34.9	TU2	STR I	Vert. Fauna	Bone						1/8"		12.8	
8DI50.18.1	TU3	A	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	15	63.7	
8DI50.18.10	TU3	A	Pottery		Crumb					1/4"	115	117.6	
8DI50.18.11	TU3	A	Pottery	Spicule Tempered	Rim	Plain			St. Johns Plain	1/4"	1	4.3	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.18.12	TU3	A	Pottery	Spicule Tempered	Body	UID			St. Johns UID	1/4"	2	5.7	
8DI50.18.13	TU3	A	Invert. Shell	Whelk/Conch	Columella			Modified		1/4"	1	9.9	Possible Modified Columella
8DI50.18.14	TU3	A	Invert. Shell	Gastropod						1/4"	6	26.9	
8DI50.18.15	TU3	A	Vert. Fauna	Bone				Modified		1/4"	2	2.8	Modified Bone
8DI50.18.16	TU3	A	Lithic	Chert	Flake					1/4"	5	2.8	
8DI50.18.17	TU3	A	Vert. Fauna	Bone						1/4"		120.5	
8DI50.18.18	TU3	A	Charcoal							1/4"		4.2	
8DI50.18.19	TU3	A	Historic	Glass						1/4"		26.9	
8DI50.18.2	TU3	A	Pottery	Spicule Tempered	Body	Stamped	Check Stamped		St. Johns Check Stamped	1/4"	1	5.7	
8DI50.18.20	TU3	A	Vert. Fauna							1/4"	1	.5	H. Sapiens Tooth
8DI50.18.21	TU3	A	Historic	Metal						1/4"		286.3	
8DI50.18.22	TU3	A	Historic	Plastic						1/4"		2.8	
8DI50.18.23	TU3	A	Historic							1/4"	1	1.4	Graphite

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.18.24	TU3	A	Misc. Rock							1/4"	3	5.6	
8DI50.18.3	TU3	A	Pottery	Sand Tempered	Body	Stamped	Linear Check Stamped		Deptford LCS	1/4"	5	25.5	
8DI50.18.4	TU3	A	Pottery	Sand Tempered	Body	Stamped	Check Stamped	plain		1/4"	1	8.5	Zoned Check Stamped
8DI50.18.5	TU3	A	Pottery	Sand Tempered	Body	Stamped	Simple Stamped		Deptford Simple Stamped	1/4"	1	1.4	
8DI50.18.6	TU3	A	Pottery	Sand Tempered	Body	Stamped	Complicated Stamped		Swift Creek Complicated Stamped	1/4"	1	2.8	
8DI50.18.7	TU3	A	Pottery	Limestone Temp	Body	Plain			Pasco Plain	1/4"	9	32.6	
8DI50.18.8	TU3	A	Pottery	Sand Tempered	Body	Plain				1/4"	20	70.8	
8DI50.18.9	TU3	A	Pottery	Sand Tempered	Body	UID				1/4"	9	28.3	
8DI50.19.1	TU3	B	Pottery	Sand Tempered	Body	Stamped	Complicated Stamped		Swift Creek Complicated Stamped	1/4"	1	2.8	
8DI50.19.10	TU3	B	Lithic		Pebble					1/4"	1	0.3	
8DI50.19.11	TU3	B	Invert. Shell	Gastropod						1/4"	2	8.5	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.19.12	TU3	B	Vert. Fauna	Bone						1/4"		82.2	
8DI50.19.13	TU3	B	Charcoal							1/4"		0.3	
8DI50.19.14	TU3	B	Historic	Metal						1/4"		5.7	
8DI50.19.2	TU3	B	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	3	14.2	
8DI50.19.3	TU3	B	Pottery	Spicule Tempered	Body	Stamped	Check Stamped		St. Johns Check Stamped	1/4"	2	14.2	
8DI50.19.4	TU3	B	Pottery	Sand Tempered	Rim	Plain				1/4"	2	8.5	
8DI50.19.5	TU3	B	Pottery	Sand Tempered	Body	Plain				1/4"	8	42.5	
8DI50.19.6	TU3	B	Pottery	Sand Tempered	Body	UID				1/4"	3	17.0	
8DI50.19.7	TU3	B	Pottery	Limestone Temp	Body	Plain			Pasco Plain	1/4"	6	29.8	
8DI50.19.8	TU3	B	Pottery		Crumb					1/4"	35	38.3	
8DI50.19.9	TU3	B	Lithic	Chert	Flake					1/4"	1	0.3	
8DI50.20.1	TU3N	A	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	2	7.1	
8DI50.20.10	TU3N	A	Historic	Glass						1/4"		0.3	
8DI50.20.11	TU3N	A	Historic	Metal						1/4"		11.3	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.20.2	TU3N	A	Pottery	Sand Tempered	Rim	Plain				1/4"	1	5.7	
8DI50.20.3	TU3N	A	Pottery	Sand Tempered	Body	Plain				1/4"	10	56.7	
8DI50.20.4	TU3N	A	Pottery	Limestone Temp	Body	Plain			Pasco Plain	1/4"	1	1.4	
8DI50.20.5	TU3N	A	Pottery	Sand Tempered	Body	UID				1/4"	2	7.1	
8DI50.20.6	TU3N	A	Pottery		Crumb					1/4"	27	29.8	
8DI50.20.7	TU3N	A	Lithic	Chert	Flake					1/4"	1	0.3	
8DI50.20.8	TU3N	A	Vert. Fauna	Bone						1/4"		39.7	
8DI50.20.9	TU3N	A	Charcoal							1/4"		1.4	
8DI50.23.1	TU3N	B	Pottery	Sand Tempered	Body	Stamped	Complicated Stamped		Swift Creek Complicated Stamped	1/4"	2	12.8	
8DI50.23.10	TU3N	B	Invert. Shell	Gastropod						1/4"	4	19.8	
8DI50.23.11	TU3N	B	Vert. Fauna	Bone						1/4"		58.1	
8DI50.23.12	TU3N	B	Vert. Fauna							1/4"	1	0.3	H. Sapiens Tooth - Molar
8DI50.23.13	TU3N	B	Charcoal							1/4"		0.3	
8DI50.23.14	TU3N	B	Historic	Glass						1/4"		0.3	
8DI50.23.15	TU3N	B	Historic	Metal						1/4"		9.9	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.23.2	TU3N	B	Pottery	Sand Tempered	Body	Stamped	Linear Check Stamped		Deptford LCS	1/4"	1	5.7	
8DI50.23.3	TU3N	B	Pottery	Sand Tempered	Rim	Plain				1/4"	1	2.8	
8DI50.23.4	TU3N	B	Pottery	Sand Tempered	Body	Plain				1/4"	3	15.6	
8DI50.23.5	TU3N	B	Pottery	Sand Tempered	Rim	UID				1/4"	1	2.8	
8DI50.23.6	TU3N	B	Pottery	Sand Tempered	Body	UID				1/4"	3	9.9	
8DI50.23.7	TU3N	B	Pottery	Limestone Temp	Body	Plain			Pasco Plain	1/4"	1	8.5	
8DI50.23.8	TU3N	B	Pottery		Crumb					1/4"	13	12.8	
8DI50.23.9	TU3N	B	Lithic	Chert	Flake					1/4"	1	4.3	
8DI50.26.1	TU3N	C	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	4	14.2	
8DI50.26.2	TU3N	C	Pottery	Sand Tempered	Body	Punctated				1/4"	1	2.8	
8DI50.26.3	TU3N	C	Pottery	Sand Tempered	Body	Plain				1/4"	3	25.5	
8DI50.26.4	TU3N	C	Pottery		Crumb					1/4"	10	9.9	
8DI50.26.5	TU3N	C	Invert. Shell	Gastropod						1/4"	12	87.9	
8DI50.26.6	TU3N	C	Vert. Fauna	Bone						1/4"		78.0	
8DI50.26.7	TU3N	C	Historic	Metal						1/4"		0.3	
8DI50.26.8	TU3N	C	Charcoal							1/4"		0.3	
8DI50.26.9	TU3N	C	Lithic	Chert	Flake					1/4"	1	0.9	
8DI50.35.1	TU3N	D	Pottery		Crumb					1/4"	4	1.4	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.35.2	TU3N	D	Vert. Fauna	Bone				Modified		1/4"	1	1.4	Modified Bone
8DI50.35.3	TU3N	D	Vert. Fauna	Bone						1/4"		32.6	
8DI50.35.4	TU3N	D	Historic	Metal						1/4"		0.3	
8DI50.35.5	TU3N	D	Charcoal							1/4"		0.3	
8DI50.36.1	TU3N	E	Pottery	Limestone Temp	Rim	Plain			Pasco Plain	1/4"	1	7.1	
8DI50.36.2	TU3N	E	Pottery	Sand Tempered	Body	Punctated	Incised and Punctated		Weeden Island Incised	1/4"	1	5.7	
8DI50.36.3	TU3N	E	Pottery	Sand Tempered	Body	Plain				1/4"	1	15.6	
8DI50.36.4	TU3N	E	Pottery		Crumb					1/4"	15	12.8	
8DI50.36.5	TU3N	E	Invert. Shell	Other Shell						1/4"	3	80.8	2 gastropods and 1 mercenaria
8DI50.36.6	TU3N	E	Vert. Fauna	Bone						1/4"		43.9	
8DI50.37.1	TU3N	F	Pottery	Sand Tempered	Body	Stamped	Cross Simple Stamped			1/4"	1	1.4	
8DI50.37.2	TU3N	F	Pottery	Sand Tempered	Body	Plain				1/4"	1	5.7	
8DI50.37.3	TU3N	F	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	1	2.8	
8DI50.37.4	TU3N	F	Pottery		Crumb					1/4"	3	7.1	
8DI50.37.5	TU3N	F	Lithic	Limestone				Burned		1/4"	1	195.6	
8DI50.37.6	TU3N	F	Invert. Shell	Gastropod						1/4"	5	42.5	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.37.7	TU3N	F	Vert. Fauna	Bone						1/4"		114.8	
8DI50.37.8	TU3N	F	Charcoal							1/4"		0.3	
8DI50.38.1	TU3N	G	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	3	19.8	
8DI50.38.2	TU3N	G	Pottery	Sand Tempered	Body	Impressed	UID			1/4"	1	2.8	
8DI50.38.3	TU3N	G	Pottery		Crumb					1/4"	3	0.3	
8DI50.38.4	TU3N	G	Vert. Fauna	Bone						1/4"		53.9	
8DI50.38.5	TU3N	G	Invert. Shell	Gastropod						1/4"	3	15.6	
8DI50.38.6	TU3N	G	Charcoal							1/4"		0.3	
8DI50.39.1	TU3N	H	Pottery	Sand Tempered	Body	Stamped	Complicated Stamped		Swift Creek Complicated Stamped	1/4"	2	45.4	2 pcs. Fresh break (counted as 1).
8DI50.39.10	TU3N	H	Vert. Fauna	Bone						1/4"		114.8	
8DI50.39.11	TU3N	H	Charcoal							1/4"		0.3	
8DI50.39.2	TU3N	H	Pottery	Sand Tempered	Body	Stamped	Simple Stamped		Deptford Linear Check Stamped	1/4"	1	28.3	
8DI50.39.3	TU3N	H	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	4	19.8	
8DI50.39.4	TU3N	H	Pottery	Sand Tempered	Rim	Stamped	Check Stamped			1/4"	1	1.4	
8DI50.39.5	TU3N	H	Pottery	Sand Tempered	Body	Stamped	Dentate			1/4"	1	7.1	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.39.6	TU3N	H	Pottery	Sand Tempered	Body	Plain				1/4"	3	9.9	
8DI50.39.7	TU3N	H	Pottery		Crumb					1/4"	6	7.1	
8DI50.39.8	TU3N	H	Invert. Shell	Whelk/Conch	Hammer					1/4"	1	63.8	Gastropod Hammer
8DI50.39.9	TU3N	H	Invert. Shell	Gastropod						1/4"	2	53.9	
8DI50.40.1	TU3N	I	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	2	4.3	
8DI50.40.2	TU3N	I	Pottery		Crumb					1/4"	4	5.7	
8DI50.40.3	TU3N	I	Vert. Fauna	Bone				Modified		1/4"	1	1.4	Modified Bone
8DI50.40.4	TU3N	I	Lithic	Limestone				Burned		1/4"	1	100.6	
8DI50.40.5	TU3N	I	Vert. Fauna							1/4"	2	0.3	H. sapiens Teeth
8DI50.40.6	TU3N	I	Vert. Fauna	Bone						1/4"		85.0	
8DI50.40.7	TU3N	I	Charcoal							1/4"		2.8	
8DI50.41.1	TU3N	J	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	2	15.6	
8DI50.41.2	TU3N	J	Pottery		Crumb					1/4"	1	0.3	
8DI50.41.3	TU3N	J	Vert. Fauna	Bone						1/4"		97.8	
8DI50.41.4	TU3N	J	Invert. Shell	Gastropod						1/4"	1	0.3	
8DI50.41.5	TU3N	J	Charcoal							1/4"		0.3	
8DI50.42.1	TU3N	K	Invert. Shell	Gastropod						1/4"	2	59.5	
8DI50.42.2	TU3N	K	Vert. Fauna	Bone						1/4"	.95	0.0	
8DI50.43.1	TU3N	L	Pottery		Crumb					1/4"	1	0.3	
8DI50.43.2	TU3N	L	Vert. Fauna	Bone	Tool			Modified		1/4"	1	2.8	Modified Bone
8DI50.43.3	TU3N	L	Vert. Fauna	Bone						1/4"		9.9	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.44.1	TU3N	M	Pottery		Crumb					1/4"	1	0.3	
8DI50.44.2	TU3N	M	Vert. Fauna	Bone						1/4"		0.3	
8DI50.45.1	TU3N	STR IV-B	Invert. Shell	Other Shell						1/4"		1431.7	
8DI50.45.10	TU3N	STR IV-B	Vert. Fauna	Bone						1/8"		31.2	
8DI50.45.11	TU3N	STR IV-B	Concretion							1/8"		0.3	
8DI50.45.12	TU3N	STR IV-B	Charcoal							1/8"		0.3	
8DI50.45.13	TU3N	STR IV-B	Unsorted									188.5	< 1/8"
8DI50.45.2	TU3N	STR IV-B	Vert. Fauna	Bone						1/4"		19.8	
8DI50.45.3	TU3N	STR IV-B	Vert. Fauna							1/4"	1	2.8	Paleofeces
8DI50.45.4	TU3N	STR IV-B	Pottery	Sand Tempered	Body	UID				1/4"	1	2.8	
8DI50.45.5	TU3N	STR IV-B	Pottery		Crumb					1/4"	1	0.3	
8DI50.45.6	TU3N	STR IV-B	Lithic	Limestone				Burned		1/4"	1	1.4	
8DI50.45.7	TU3N	STR IV-B	Lithic	Coral						1/4"	1	0.3	
8DI50.45.8	TU3N	STR IV-B	Charcoal							1/4"		0.3	
8DI50.45.9	TU3N	STR IV-B	Invert. Shell	Other Shell						1/8"		127.6	
8DI50.46.1	TU3N	STR V	Invert. Shell	Other Shell						1/4"		2606.7	
8DI50.46.10	TU3N	STR V	Unsorted									442.3	< 1/8"
8DI50.46.2	TU3N	STR V	Vert. Fauna	Bone						1/4"		17.0	
8DI50.46.3	TU3N	STR V	Pottery	Sand Tempered	Body	Stamped	Check Stamped			1/4"	1	2.8	
8DI50.46.4	TU3N	STR V	Pottery		Crumb					1/4"	3	2.8	
8DI50.46.5	TU3N	STR V	Charcoal							1/4"		0.3	

Catalog Number	TU/Auger	Level/STR /Fea	Material	Material Type	Form	Surface Treatment	Decoration	Modification	Culture Type	Size Frac	Cnt (N)	Wt (g)	Notes/General Observations
8DI50.46.6	TU3N	STR V	Invert. Shell	Other Shell						1/8"		514.5	
8DI50.46.7	TU3N	STR V	Vert. Fauna	Bone						1/8"		36.9	
8DI50.46.8	TU3N	STR V	Charcoal							1/8"		0.6	
8DI50.46.9	TU3N	STR V	Concretion							1/8"		1.4	
8DI50.47.1	TU3N	STR VI-A	Pottery	Sand Tempered	Body	Plain				1/4"	2	22.7	
8DI50.47.10	TU3N	STR VI-A	Unsorted									643.5	< 1/8"
8DI50.47.2	TU3N	STR VI-A	Pottery		Crumb					1/4"	2	2.8	
8DI50.47.3	TU3N	STR VI-A	Vert. Fauna	Bone						1/4"		18.4	
8DI50.47.4	TU3N	STR VI-A	Invert. Shell	Other Shell						1/4"		3587.6	
8DI50.47.5	TU3N	STR VI-A	Charcoal							1/4"		0.3	
8DI50.47.6	TU3N	STR VI-A	Vert. Fauna	Bone						1/8"		32.6	
8DI50.47.7	TU3N	STR VI-A	Invert. Shell	Other Shell						1/8"		473.4	
8DI50.47.8	TU3N	STR VI-A	Concretion							1/8"		4.3	
8DI50.47.9	TU3N	STR VI-A	Charcoal							1/8"		0.3	
8DI50.48.1	TU3N	STR VII-B	Invert. Shell	Other Shell						1/4"		2749.9	
8DI50.48.2	TU3N	STR VII-B	Vert. Fauna	Bone						1/4"		15.6	
8DI50.48.3	TU3N	STR VII-B	Concretion							1/4"		0.3	
8DI50.48.4	TU3N	STR VII-B	Invert. Shell	Other Shell						1/8"		141.7	
8DI50.48.5	TU3N	STR VII-B	Vert. Fauna	Bone						1/8"		25.5	
8DI50.48.6	TU3N	STR VII-B	Charcoal							1/8"		0.3	
8DI50.48.7	TU3N	STR VII-B	Concretion							1/8"		0.3	
8DI50.48.8	TU3N	STR VII-B	Unsorted									191.4	< 1/8"

APPENDIX B:

RADIOCARBON DATA

Prov.	Material	Beta Lab Number	Measured 14C Age BP	13C/12C Ratio (o/oo)	Conventional 14C Age BP	2-sigma Cal AD/BC	2-sigma Cal BP
TU3N Str VIIB	wood charcoal	388844	2060 ± 30	-25.1	2060 ± 30	BC 170-AD 5	2120-1945
TU3N Str V	wood charcoal	388845	1070 ± 30	-22.9	1100 ± 30	AD 885-1015	1065-935
TU1 Str II	wood charcoal	388846	900 ± 30	-25.3	900 ± 30	AD 1035-1215	915-735