

SWIFT CREEK MAINFESTATIONS ALONG THE LOWER ST. JOHNS RIVER

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Introduction

The results of a series of recent archaeological investigations have demonstrated that Swift Creek pottery was more common along the lower St. Johns River than originally anticipated (Johnson 1988; Ashley and Johnson 1990; Russo 1991a, 1991b; Ashley 1991). In the past, limited quantities of Swift Creek pottery have been recovered from multicomponent sites within northeast Florida, but the regional significance of this ceramic type seems to have been underestimated. The intent of this paper is to examine our current state of knowledge concerning Swift Creek manifestations along the lower St. Johns River. An overview of past research at sites containing Swift Creek ceramics in the Jacksonville area will be presented, as well as preliminary results derived from an ongoing reanalysis of artifacts recovered from the Dent Mound (8Du68) during the years 1977-1984 (Lafond n.d.). Finally, a hypothetical model explaining the presence of early and late Swift Creek pottery types within the lower St. Johns is presented.

Lower St. Johns River

The lower St. Johns lies within the northern extent of the St. Johns or East Florida culture area (Goggin 1952; Milanich and Fairbanks 1980). Definition of this area as an archaeological district was alluded to, but never explicitly defined by Sears (1957, 1959). For the purpose of this paper, the lower St. Johns will refer to the terminal segment of the northern St. Johns River valley, from downtown Jacksonville to the Atlantic Ocean (Figure 1). From its mouth at Mayport, the waterway's low gradient combined with daily tidal flow allows the river to remain brackish for over 100 miles upstream (McLane 1955; Anderson and Goolsby 1973). The study area covers approximately twenty-four miles and includes archaeological sites located along the north and south banks of the St. Johns River.

The lower course of the St. Johns is rich in archaeological resources, with cultural components representing both indigenous and non-local aboriginal activities. The assemblage of archaeological sites investigated within the lower St. Johns River valley has generated a variety of cultural data pertaining to the aboriginal history and development of the area (Goggin 1952; Sears 1957, 1959; Jordan *et al.* 1963; Wilson 1965; Nidy 1980; Lee *et al.* 1984; Dickinson and Wayne 1987; Johnson 1988; Johnson and Ste.

Claire 1988; Ashley and Johnson 1990). In terms of prehistoric manifestations, the region is a "cultural ecotone", maintaining local cultural traits as well as non-local artifacts generally viewed as peripheral to Northeast Florida. St. Johns influences have migrated up from the south, while non-local Deptford, late Swift Creek and Savannah influences have filtered down from the lower Georgia coast.

Environmental Setting

The St. Johns River is the paramount hydric feature within Northeast Florida (Figure 2). From its headwaters in central Florida, this tannin stained waterway flows in a northerly direction and covers a total distance of approximately 315 miles. Along its lower course, excess surface runoff and ground water is channeled into the river which eventually empties into the Atlantic Ocean. The reversal of flow by tidal action forces marine waters to displace and mix with freshwater, creating a tidal estuary along the lower reaches of the St. Johns. Within the study area, salinity levels maintain a range of 900-9,600 ppm near downtown Jacksonville and 11,400-20,000 ppm near the river's debouchment (McLane 1955:17; Anderson and Goolsby 1973:12). The importance of the St. Johns' estuarine resources to the region's native inhabitants is demonstrated by the presence of numerous oyster shell middens along the banks of its lower course.

The physiography of the lower St. Johns region has developed as the result of deposition and erosion caused by fluctuations in Pleistocene and Holocene sea levels (White 1970). The south bank of the lower St. Johns is comprised of marine terraces and high relict beach dunes, while the north side contains remnant ridge and erosional hill formations surrounded by expansive networks of coastal marshes (Brooks 1981). As a result of Jacksonville's urban sprawl, little remains of the xerophytic and mesophytic forest communities that once thrived along the south bank of the lower St. Johns River. Congested residential and commercial developments now dominate the river's shoreline. In contrast, the river's north side is comprised primarily of marsh, with small scattered hammock islands. Portions of the grassy marshes have been filled to accommodate urban development. The city's burgeoning rate of development and its adverse effects on the natural landscape has prompted the implementation of two reconnaissance level surveys along the river's south bank (Johnson 1988; Ashley and Johnson 1990).

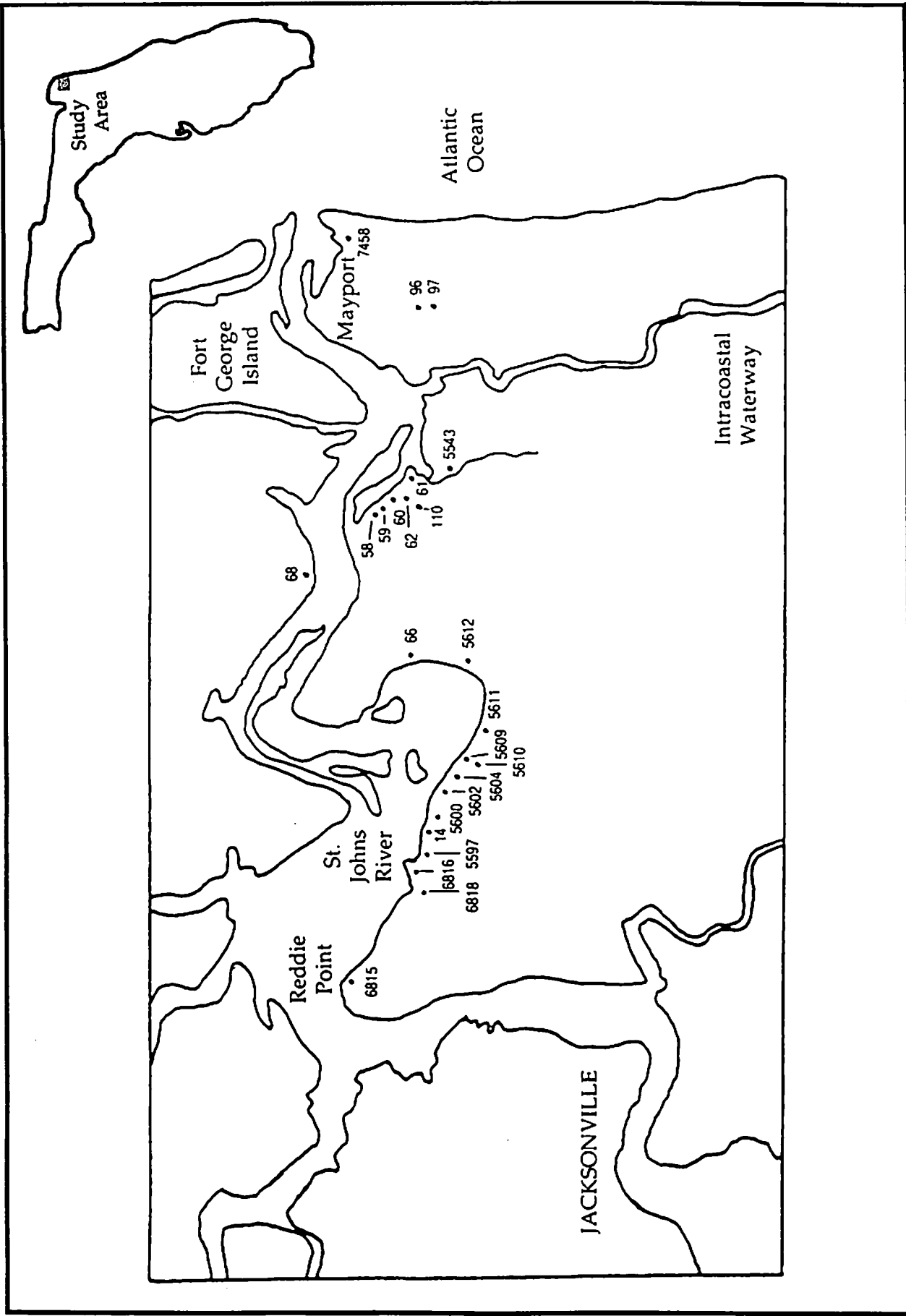
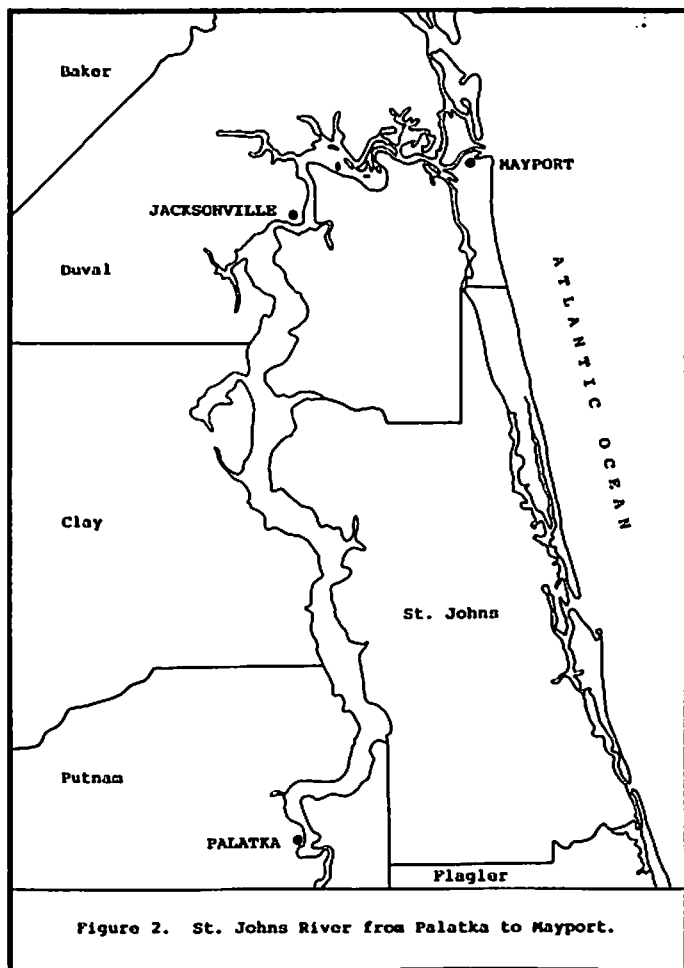


Figure 1. Lower St. Johns River Study Area. (Site numbers are Florida Master Site File designations; all Site numbers are preceded by 8Du.)



Swift Creek Distributions and Chronology

Swift Creek is a Woodland culture that seems to have originated within the hinterland river valleys of southwestern Georgia and southeastern Alabama, subsequently expanding its influence into the Gulf coastal section of Florida. The emergence and pervasive spread of the Weeden Island culture (A.D. 500-1000) seems to have forced Swift Creek groups into peripheral areas that included the northern piedmont and lower Georgia coast regions (Kelly and Smith 1975; Cook 1977; Blanton 1979; Kirkland 1979; Adams 1985; Desjean *et al.* 1985; Wood *et al.* 1986). Except for the Swift Creek deposits found along the northern St. Johns River, the vast majority of Florida sites affiliated with this cultural tradition are found between Escambia County (Escambia River) on the west and Taylor County (Steinhatchee River) on the east (Milanich and Fairbanks 1980:117; Milanich *et al.* 1984:114; Johnson and Kohler 1987:282).

Although the origin of Swift Creek is unclear, cultural sequences demonstrating a ceramic assemblage evolution from check stamped (Deptford) into complicated stamped (Swift Creek) decorated wares have been revealed at several inland and coastal Woodland sites (B. Smith 1975; Phelps

1966; Thomas and Campbell 1985, 1990). This transitional pottery assemblage dates to A.D. 140-245 at Mandeville (9Cal1) in southwest Georgia (B. Smith 1979:182), and to a slightly earlier time (50 B.C. - A.D. 140) at Pirates Bay in northwest Florida (Thomas and Campbell 1985:118). Although specific dates for regional variants of the Swift Creek ceramic complex differ throughout the Southeast, the culture as a whole generally belongs to the period A.D. 100-700.

In southwest Georgia, chronometric dating of the Mandeville site revealed that Swift Creek domestic and ceremonial activities occurred during the time span A.D. 250-420, while the chronological position of the Swift Creek ceramic assemblage nearby at Kolomoki (Sears 1956) is estimated at A.D. 100-500 (Milanich *et al.* 1984:19-20). A single C-14 sample from the Halloca Creek site in eastern Alabama produced a date of 70 B.C. \pm 150 (Milanich *et al.* 1984:13). Radiocarbon dates obtained from several sites along the lower Ocmulgee River in south-central Georgia place the range of Swift Creek occupation between A.D. 100-580 (Snow *et al.* 1979:8; Snow 1980:7; Snow and Stephenson 1990:5). Although absolute age determinations for the Swift Creek type site (9Bi3) in middle Georgia are lacking, the site's complicated stamped component was assigned a relative seriation date of A.D. 500-750 (Kelly and Smith 1975:114).

Within northwest Florida, the Swift Creek component at the Tucker site (8Fr4) was radiocarbon dated to A.D. 345 (Phelps 1966:20), whereas further to the west near Pensacola, the Third Gulf Breeze Site (8Sa8) produced a series of absolute dates ranging from A.D. 390 to 675 (Phelps 1969:18). Additional radiometric data obtained from several coastal Swift Creek contexts near Eglin Air Force Base (Fort Walton Beach) indicate dates of A.D. 150-450 for Swift Creek presence in northwest Florida (Thomas and Campbell 1990:5-6). Based on the latter set of dates, researchers now concur with Phelps who suggested that the terminal date of A.D. 675 was too late for Gulf coast Swift Creek (Thomas and Campbell 1990:6).

A collection of radiometric dates secured from Swift Creek deposits at the Kings Bay site (9Cam171a) along the lower Georgia coast ranges from A.D. 300-700 (Adams 1985:44; Desjean *et al.* 1985:162; Saunders 1986:23). At the Catfish Creek site (9Mc360) in the Altamaha delta, a large, refuse filled storage pit attributed to the site's Swift Creek inhabitants was radiocarbon dated A.D. 500 \pm 100 (Dickinson and Wayne 1986:3-10; Wayne 1987:56). There are two prevailing hypotheses explaining the presence of Swift Creek middens along the lower Georgia Coast. Some researchers suggest that Swift Creek peoples from the interior of Georgia moved to the coast (Kelly and Smith 1975; Cook 1977; Blanton 1979; Desjean *et al.* 1985; Wayne 1986), while others contend that the Atlantic coastal Swift Creek culture developed out of the local Deptford culture (Adams 1985; R. Smith 1986).

Regional Data Base

Subsequent to the recent identification and relocation of sites containing Swift Creek ceramics (Johnson 1988; Ashley and Johnson 1990), a review of past archaeological investigations involving the occurrence of Swift Creek pottery within the study area was undertaken. Published studies shedding some light on local Swift Creek manifestations include Moore's (1894, 1895, 1896) early mound explorations; Goggin's (1952) summary of Northeast Florida archaeology; Sears' (1957, 1959) shell midden and mound investigations; Wilson's (1965) excavation of a sand burial mound at Mayport; two recent reconnaissance surveys within a restricted segment of the lower St. Johns (Johnson 1988; Ashley and Johnson 1990); and, limited sampling of a saturated shell midden near the river's mouth (Ashley 1991; Russo 1991a, 1991c). Additional information concerning Swift Creek manifestations can be derived from a large artifact collection retrieved from the Dent Mound (8Du68), which is located along the river's north side (Lafond nd).

During the late 19th century, Clarence B. Moore made several explorations along the St. Johns River, excavating a total of 28 sand mounds within the study area (Moore 1894, 1895, 1896). Of these 28 mortuary earthworks, 26 were situated along the river's south shore, while only two were located to the north. Based on vague references to the presence of complicated stamped pottery, as well as several detailed drawings made by Moore, 11 of the burial mounds appear to have contained Swift Creek ceramics. These earthworks include the Johnson, Shields, Monroe, Grant, Grant A, Grant E, Horseshoe Landing, Reddie Point, Alicia, Arlington, and South Jacksonville mounds. Within these mortuary features, Swift Creek pottery occurred as intact and killed pots, broken and scattered vessels, and isolated sherds. There is the possibility that not all ceramic remains were intentionally deposited within the mounds as burial wares; some may have been displaced from nearby refuse contexts (middens) during earthwork construction.

Unfortunately, Moore's improvident field methodologies, which incorporated haphazard data recovery and recording techniques, have greatly diminished the interpretive value of his excavations. Today, many of the burial mounds within the lower St. Johns are no longer extant, and others are severely impacted. In addition, none of the study area's mounds have been subjected to controlled, scientific investigations. Survey level sampling procedures were conducted near the Shields Mound in 1988, while limited test excavations have been conducted within shell middens adjacent to the Grant and Reddie Point mounds (Johnson 1988; Ashley and Johnson 1990). Only the latter contained appreciable quantities of Swift Creek ceramics.

According to Goggin (1952:106), Swift Creek pottery occurs infrequently throughout the St. Johns area, but is most common along the lower St. Johns River. He interprets the

presence of Swift Creek ceramics within the northern St. Johns area as the consequence of trade with Gulf coast natives, indicating transpeninsular exchange networks between the two culture areas (Goggin 1952:50). Further, Goggin (1952:39, 49-51, 70) views the complicated stamped ware as a mortuary item primarily found within St. Johns I period mounds, and generally occurring in association with exotic, non-local grave goods.

At the time of Goggin's research, few systematic archaeological investigations had been conducted within the region, forcing him to rely heavily upon information derived from surface collections, limited excavations, and the past work of others (Goggin 1952:38). In fact, most of Goggin's interpretations concerning local Swift Creek pottery were deduced from a detailed study of mortuary mounds excavated by Clarence Moore. Because of his strong reliance on Moore's data, Goggin placed excessive emphasis on Swift Creek ceramics as a ceremonial ware within the northern St. Johns region. Willey (1949:380) also viewed Swift Creek as an "important minority type" along the St. Johns. Unfortunately, neither Goggin nor Willey specifically discuss the occurrence of Swift Creek ceramics within village sites of northeast Florida.

In the fall of 1955, William Sears of the Florida State Museum conducted test excavations at six shell middens (sites 8Du58-62 and 8Du66) along the south bank of the St. Johns River near Fort Caroline (Sears 1957). One of these multicomponent sites (8Du62) also contained a sand earthwork (Browne Mound), which Sears later interpreted as a single phase mortuary construct dating to circa A.D. 800-1200 (Sears 1959:10). Although varying amounts of Swift Creek pottery were recovered from four of the six middens, the complicated stamped ware was always a minority type. The only context in which Swift Creek was the dominant decorated variety was the general fill comprising the Browne Mound (Sears 1959:8). Sears (1959:9) interprets these ceramics as "accidental inclusions" removed from an adjacent borrow pit during mound construction. In light of the data derived from these excavations, Sears (1957, 1959) devised an "idealized" chronological classification for aboriginal ceramics from the lower St. Johns region.

Within Sears' temporal sequence and without the benefit of local radiocarbon dates, Swift Creek pottery was assigned to the period A.D. 1-400. In addition, Sears identified a local "limestone/hole-tempered" ware consisting of a plain and complicated stamped variant. However, Sears did not associate this unique ceramic type with the Swift Creek pottery tradition. Recently, sherds thought to represent the limestone/hole variety described by Sears have been recovered from several shell midden sites within the study area (Johnson 1988; Ashley and Johnson 1990; Lafond nd). Rim forms associated with these pottery fragments include assorted notched forms similar to those classified as early Swift Creek by Willey (1949). To date, no evidence of folded

rim vessels (late Swift Creek) have been found of the limestone/hole-tempered variety, reinforcing the contention that this pottery type is part of an early to middle Swift Creek pottery assemblage (cf. Caldwell 1978:60; Snow 1980:9).

A preliminary examination of several limestone/hole-tempered sherds from the Dent Mound (8Du68) by Lee Newsom and Ann Cordell of the Florida Museum of Natural History, identified the presence of pine charcoal inclusions rather than burned or leached out limestone flecks (Michael Russo personal communication, 1991). Since charcoal-tempered complicated stamped wares have not been reported elsewhere, it seems safe to conclude that this unique Swift Creek variant is a local product. A detailed microscopic examination of this type specimen should shed some light on local Swift Creek ceramic technologies and potential clay sources.

Unfortunately, Sears did not provide any interpretable data on Swift Creek subsistence, settlement or culture change through time. The major contribution of Sears' work was his development of a relative ceramic chronology for the lower St. Johns region; this cultural sequence has not been accepted by recent archaeologists (cf. Milanich and Fairbanks 1980). The ceramic chronology posited by Sears is as follows: Orange, Deptford, limestone-tempered, sand-tempered, Colorinda, and St. Johns II, with complicated stamping occurring during the limestone and sand tempered phases (Sears 1959:16-17). Unfortunately, Sears' ceramic seriations are inserted within a temporal framework based on non-local radiocarbon dates, and his chronology remains to be tested.

At another Swift Creek related area, Rex Wilson conducted archaeological excavations at the Mayport Mound (8Du96) and midden (8Du97) sites. Forty-five human interments were systematically removed from the oblong earthwork at 8Du96 (Wilson 1965). The presence of Swift Creek mortuary ceramics and exotic burial items made of mica and copper suggests the incorporation of non-local mortuary traits within the indigenous St. Johns culture system (Wilson 1965:30). Because the lack of extensive village or shell midden excavations at the Mayport sites, however, settlement by migrant Swift Creek cannot be completely ruled out.

The Mayport Mound was a "continuous use type", as defined by Sears (1958), formed over "a period of years" by successive interments (Wilson 1965:26). Complete mortuary vessels recovered from the 8Du96 include St. Johns Plain, Dunn's Creek Red, Deptford, Swift Creek, and Weeden Island types. In addition, two plain limestone/hole-tempered vessels similar to the type described by Sears (1957) near Fort Caroline were retrieved from the Mayport Mound. Wilson classified six of the Swift Creek vessels as late variants, while only one was viewed as early Swift Creek. Based on macroscopic identification of tempering agents, Wilson identified sand/grit-tempered complicated stamped ceramics (Swift Creek) as well as a fine sandy paste variant

that may have been manufactured locally (Wilson 1965:21-22, 30).

A charcoal sample obtained approximately two feet below the mound's surface produced a radiocarbon date range of 10 B.C. - A.D. 180 (Wilson 1965:31). This date seems too early to be associated with the collection of pottery vessels recovered from the mound during excavation. The possibility exists that the dated context was located below the base of the mound, suggesting that the C-14 date is unrelated to mound construction. However, the A.D. 180 date could conceivably relate to an incipient stage of mound preparation and/or building. Based on the ceramic data, the Mayport Mound's pottery assemblage dates to the St. Johns Ia period (A.D. 100-500), as defined by Milanich and Fairbanks (1980:148).

In conclusion, Wilson (1965:31) states that "the Mayport Mound represents a marginal Swift Creek manifestation which ... was substantially influenced by the Hopewellian tradition of north central United States". Following the lead of Sears (1957, 1959), Wilson (1965:30-31) attributes the presence of Deptford and Swift Creek materials within the lower St. Johns to influences and/or population migrations from the Georgia coast. In addition, he acknowledges local interaction with groups indigenous to the Florida Gulf Coast. Although it is unclear whether 8Du96 was occupied by Swift Creek peoples, there is no question that the builders of the Mayport Mound were in contact with and influenced by Swift Creek groups.

Two Florida Department of State, Division of Historical Resources grant-funded archaeological reconnaissance surveys have been conducted along the lower St. Johns River over the past four years (Johnson 1988; Ashley and Johnson 1990). The surveyed area included the south side of the St. Johns River from Reddie Point eastward to Mayport (see Figure 1). Although developmental impact and access restrictions to lands with a high potential for archaeological site occurrence resulted in a biased sampling design, 46 prehistoric sites were either identified or relocated during fieldwork. Swift Creek ceramics were recovered at 14 of the 46 archaeological sites. Two additional sites contained small amounts of charcoal-tempered plain and/or complicated stamped sherds, but no sand-tempered Swift Creek pottery. Unfortunately, most of the Swift Creek sites suffer from low ceramic samples, resulting from limited excavations and, in some instances, short-term site occupancy.

Swift Creek pottery recovered during the St. Johns Bluff surveys was found at three different site types: large multicomponent middens with dense shell (8Du14, 8Du61, 8Du66, 8Du5597); smaller, multicomponent deposits with scattered shell (8Du5602, 8Du5604, 8Du5609, 8Du5611, 8Du6815, 8Du6816); and small artifact scatters generally confined to the higher sand ridges (8Du5600, 8Du5610, 8Du5612, 8Du6818). A fourth Swift Creek component type found in the area is the sand burial mound, but ceremonial

earthworks were not excavated during the two surveys. Most of the sites containing Swift Creek pottery occurred on sandy, well drained soils, and all are situated within at least 300 meters of the river or a tributary.

The relative percentage of Swift Creek pottery at each of the 14 St. Johns Bluff sites ranged from less than one to 75 percent. The frequency of Swift Creek sherds ($n=26$) was highest at 8Du5602, with the complicated stamped ware comprising approximately 59% of the site's diagnostic ceramic sample (Johnson 1988:93). Plain sand-tempered sherds ($n=116$) were the dominant variety at this shell midden site, with very minor quantities of Deptford, Weeden Island, and St. Johns pottery also recovered. According to Johnson (1988:94), the Swift Creek sherds at 8Du5602 occurred in discrete clusters suggesting possible household loci. The site is now located within a heavily developed residential neighborhood, but intact site areas may exist (Johnson 1988:94).

Sites 8Du5610, 8Du5612, and 8Du6818 were described as low density artifact scatters and interpreted as small sand ridge encampments (Johnson 1988; Ashley and Johnson 1990). Swift Creek Complicated Stamped was the dominant diagnostic type at these ephemeral campsites, comprising 25%, 75%, and 50% of the pottery assemblages, respectively. At 8Du66, only one complicated stamped sherd was found during the reconnaissance survey. However, a recent surface collection from this large shell field resulted in the recovery of over 150 Swift Creek pottery fragments (Robert Richter personal communication, 1992). Since the focus of the St. Johns Bluff surveys was reconnaissance, the nature and intra-site structure of sites containing Swift Creek ceramics has yet to be fully explored.

Subsequent to the St. Johns Bluff project, four one-half meter square shovel tests were excavated within the extreme northwest segment of 8Du5611 (Ashley and Wheat 1991). In addition, a private surface collection of pottery from the site was analyzed (Ashley and Wheat 1991). Sand-tempered plain ceramics ($n=167$) dominated the site's artifact assemblage, with Deptford ($n=44$) and Swift Creek ($n=44$) representing the most prevalent diagnostic decorative wares. However, since the vast majority of these Woodland ceramics were retrieved via surface collection, the stratigraphic relationship between Deptford and Swift Creek at 8Du5611 is unclear. A heavily folded rim and a notched variant were recovered, suggesting the presence of early and late Swift Creek pottery types. The sampled segment of 8Du5611 suggests that the shoreline deposit was the scene of short-term settlement from the late Archaic and into the St. Johns II period. Although a sparse oyster shell scatter was revealed, the low density of invertebrate remains suggests that shellfish were not heavily exploited at the site.

The Naval Midden (8Du7458) is a multicomponent site comprised of a series of adjacent and overlapping shell middens (Russo 1991a, 1991b; Ashley 1991). This extensive

deposit measures 300x100 meters and contains St. Johns I, Swift Creek, St. Johns II and Savannah components. The site was first discovered during a reconnaissance survey within the Mayport Naval Station (Russo 1991a). This field study was conducted in association with an investigation of the Timucuan Historical and Ecological Preserve sponsored by the National Park Service. Subsequent archaeological monitoring activities were performed at two small areas to be impacted by proposed construction along the northwest section of 8Du7458 (Ashley 1991). Presently, the site consists of a wet, "mucky" oyster shell and bone midden buried beneath 60-90 cm of artificial fill. Unlike the St. Johns Bluff sites, this midden was not located on well drained soils, but rather refuse seems to have been originally deposited along the bank of a tidal creek (Russo 1991b).

Two fine screen samples (50 cm square) were systematically removed from the Swift Creek/St. Johns I component of the midden during controlled monitoring activities (Ashley 1991). Although a large, well preserved faunal and floral collection was gathered, budgetary constraints precluded detailed identification and analysis. A cursory inspection of the subsistence remains indicates a coastal economy based heavily on the exploitation of estuarine aquatic resources, especially fish. The midden's anaerobic environment has resulted in excellent preservation of floral and faunal materials. In spite of survey-level data recovery at the Naval Midden, both investigations concluded that the site is potentially significant (Ashley 1991; Russo 1991a, 1991b).

Finally, several archaeological studies have been conducted at sites along the river's north side, but very few Swift Creek remains have been unearthed (Rudolph 1980; Rudolph and Gresham 1980; Lee *et al.* 1984; Dickinson and Wayne 1987). Extensive excavations have been conducted on Fort George Island, but only a handful of Swift Creek sherds have been found (McMurray 1973; Nidy 1980; Hart and Fairbanks 1981; Hart 1982; Dickinson and Wayne 1987; Jones personal communication 1991). A recent reconnaissance survey of lands along the north side of the St. Johns River, including Fort George, resulted in the recovery of little Swift Creek pottery (Russo 1991b). The paucity of complicated stamped wares from sites along the river's north bank led Dickinson and Wayne (1987:3-10) to conclude that there is "little evidence" of Swift Creek along the northeast Florida coast. In contrast, Swift Creek ceramics are quite common on the south side of the river, from Reddie Point eastward to Mayport (see Figure 1).

From 1977 through 1984, members of the Northeast Florida Anthropological Society excavated a small, mortuary earthwork known as the Dent Mound (8Du68). This sand burial mound is situated on Pelotes Island amid prehistoric shell middens, dating from Orange through Savannah times. Pelotes Island is part of a series of small islands within an extensive network of marshes along the river's north shore

(Figure 1). Almost the entire mound was excavated as well as small, select portions of the surrounding shell midden (Lafond n.d.). While early and late Swift Creek and Weeden Island vessels were common within the mound (Lafond n.d.), few sherds representative of these pottery types were recovered from adjacent refuse deposits (Russo 1991b). A mantle of shell and bone refuse dating to the subsequent St. Johns II period blanketed the southern and northern slopes of the mound (Lafond n.d.).

Recently, the author has undertaken a reanalysis of artifacts recovered from the Dent Mound. These materials along with field notes and maps are currently curated at the Jacksonville Museum of Science and History. The mound's artifact inventory is impressive in terms of the quality and quantity of prehistoric remains. Reconstructed vessels unearthed at 8Du68 include early and late Swift Creek, St. Johns Plain, Dunns Creek Red, Weeden Island and charcoal-tempered plain and complicated stamped wares. The latter variant demonstrated either simple round or notched rim forms, whereas the sandy paste Swift Creek vessels displayed simple round, notched, and folded rims. A radiocarbon date of 690 ± 90 B.C. was obtained from a charcoal sample near the base of the mound (Lafond n.d.). Based on our current knowledge of mound building practices within the northern St. Johns area, this date probably does not relate to construction of the mound, but rather dates to a submound Orange/Transitional component clearly revealed during excavations. Russo (1991b) also described an Orange component within close proximity to the mound.

The Dent Mound manifests many of the same characteristics as the Mayport Mound (8Du96). Both are "continuous use" type mounds containing St. Johns, early and late Swift Creek, and Weeden Island mortuary ceramics. Both earthworks also possessed exotic items of mica, indicating possible Hopewellian affinities. Mound interments included extended, flexed, bundle, and partial burials. Albeit limited, the available data from midden excavations near both mounds support the hypothesis that Swift Creek pottery served mainly a mortuary function at 8Du68 and 8Du97. Deptford and St. Johns series ceramics were the dominant pottery types found within the nearby shell middens (Wilson 1965; Russo 1991b), suggesting a potential sacred-secular ceramic dichotomy at the sites. The combined presence of Swift Creek and Weeden Island vessels within the earthworks suggests that both mounds served as repositories for the dead during the period A.D. 100-500. It is hoped that future radiocarbon dates will be generated for the Dent Mound from samples now curated at the museum.

Discussion

Recent studies along the lower St. Johns River have convincingly demonstrated that Swift Creek ceramics were an important part of the region's Woodland pottery tradition. In

spite of the recovery of complicated stamped ceramics from the study area during the 1950s and 1960s, the regional significance of this ware is only now coming into focus. To date, Swift Creek pottery has been recovered from sand burial mounds (8Du14, 8Du62, 8Du68, 8Du96, 8Du110), multi-component middens (8Du14, 8Du59, 8Du61, 8Du66, 8Du669, 8Du5597, 8Du5602, 8Du5604, 8Du5609, 8Du5611, 8Du6815, 8Du6816, 8Du7458), artifact scatters (8Du5600, 8Du5610, 8Du5612, 8Du6818), and at least one single component shell midden (8Du5543). This latter deposit is currently under investigation by Florida Archeological Services and interpretable data are unavailable at this time. In addition, complicated stamped sherds and vessels suspected to be Swift Creek were found in at least 11 burial mounds (8Du10, 8Du12, 8Du13, 8Du14, 8Du15, 8Du19, 8Du21, 8Du25, 8Du31, 8Du33, 8Du35) investigated by Clarence B. Moore (1894, 1895, 1896).

Presently, the origin of Swift Creek pottery within the northern St. Johns area is unclear. While Swift Creek ceramics seem to have evolved out of Deptford pottery assemblages elsewhere in the Southeast (Phelps 1966; B. Smith 1975; Thomas and Campbell 1985, 1990), there is currently no evidence indicating the development of the complicated stamped ware from an earlier ceramic complex along the lower St. Johns River. Based on the available data, the stylistic idea for Swift Creek pottery seems to have spread into the area from the west. From a stratigraphic perspective, both early and late Swift Creek ceramics are undeniably a St. Johns I period occurrence (500 B.C. - A.D. 800). Unfortunately, local contexts demonstrating the presence of Swift Creek pottery are poorly documented in terms of C-14 dates.

Because of the lack of radiocarbon dates, analysis of pottery attributes provides the best means by which to date local Swift Creek manifestations. Both the early and late varieties of the complicated stamped ware, as defined by Willey (1949), occur along the lower St. Johns. Diagnostic criteria used to distinguish between early, late and an intermediate middle style include rim morphology, basal mode, and design field (Phelps 1969). Analysis of Swift Creek ceramics from the Gulf coast and inland Georgia sites has indicated that rim forms are temporally sensitive. Scalloped and notched rims characterize early Swift Creek pottery; rounded and slightly folded rims identify middle Swift Creek ceramics; and medium to large folds are indicative of late Swift Creek pottery (Willey 1949; Kelly and Smith 1975; Caldwell 1978; Snow 1980). Examination of middle to late Swift Creek ceramics recovered from the Kings Bay site (9Cam171a) demonstrated wide variability in rim fold depths, although the "mean rim depth" of the Kings Bay sample closely approximated that at coeval interior Swift Creek sites (Saunders 1986:19-20).

Assuming that notched rim forms denote early Swift Creek wares and folded rims signify middle to late Swift

Creek pottery, a preliminary model can be developed for Swift Creek manifestations along the lower St. Johns River. Within this model, three primary factors are responsible for the presence of Swift Creek ceramics in northeast Florida: acquisition of early and late varieties through trade; production of early Swift Creek pottery by indigenous groups (i.e., Deptford, St. Johns); and local manufacture of the late variety by immigrant Swift Creek peoples. Because of the dearth of local radiocarbon dates, comparative temporal data from the lower Georgia seaboard and the Florida Gulf coast are utilized. Since this model has not been tested, its speculative nature is emphasized.

It is hypothesized that groups indigenous to the lower St. Johns region were first introduced to Swift Creek pottery through a transpeninsular exchange network, which brought exotic mortuary items to northeast Florida. It is postulated that the increased demand for complicated stamped ceramics along the lower St. Johns led to a period of local manufacture. The resultant product was a charcoal-tempered ware (interpreted by Sears as limestone-tempered) that included a plain and complicated stamped version. This unique pottery type represents regional variation in the widespread Swift Creek pottery style. Although primarily used as a mortuary ware, charcoal-tempered sherds are scattered throughout various shell middens within the region (Sears 1957, 1959; Ashley and Johnson 1990; Ashley 1991). It is suggested that local Swift Creek pottery may have been manufactured at a only a few sites and dispersed throughout the lower St. Johns through local trade.

Examination of the Dent Mound ceramics as well as a review of published pottery descriptions and sherd photographs and illustrations indicates that notched rim forms are most characteristic of the local charcoal-tempered variant (Moore 1895; Sears 1957, 1959; Wilson 1965; Ashley and Wheat 1991; Lafond nd). Moreover, charcoal-tempered vessels and/or sherds demonstrating folded rims have yet to be recovered, implying local florescence during the period ca. A.D. 150-300. Classic sand- and/or sand/grit-tempered Swift Creek ceramics displaying notched and deeply folded have been recovered locally (Sears 1957, 1959; Wilson 1965; Johnson 1988; Ashley and Johnson 1990; Ashley and Wheat 1990; Lafond nd), suggesting acquisition of extra-local trade wares throughout the period A.D. 100-500. Wilson (1965:21-22, 30) hinted that a very sandy paste Swift Creek variant at 8Du96 may have been manufactured locally, but this remains to be investigated.

With regards to the initial source of Swift Creek influence along the lower St. Johns, we again must primarily depend on ceramic data at this time. The Florida Gulf coast seems to be the most likely donor, since scalloped and notched rims predominate in that region during early Swift Creek times (Willey 1949). Moreover, early Swift Creek rim forms are lacking along the lower Georgia coast to the north (cf. Kirkland 1979; Adams 1985; Desjean *et al.* 1985;

Dickinson and Wayne 1986). Only one scalloped rim was recovered from the Kings Bay site (9Cam171a), and the morphology of this specimen differed slightly from the classic early Swift Creek version (Saunders 1986:74). Settlement of the northeast Florida through a cross-state migration of Swift Creek peoples seems highly unlikely, since very few Swift Creek sites are known for the North Florida culture region (Milanich *et al.* 1984: 10,16,40,198). Thus, the development of local Swift Creek pottery occurred only after interaction with Gulf coast groups.

Local production of the charcoal-tempered variant apparently ceased around A.D. 300, since folded rim vessels are non-existent. However, evidence of late Swift Creek pottery within local mound and midden contexts has been presented by several excavators (Moore 1894:plate 33, 1895:plates 77 and 80; Sears 1957:26-27, 1959:8-9; Wilson 1965:21; Ashley and Wheat 1990:16; Lafond nd). Although indigenous groups may have continued limited or sporadic production of Swift Creek pottery (sand-tempered), local populations presumably imported late Swift Creek vessels from the Florida Gulf coast. In addition, survey level data from sites 8Du66 and 8Du5602 as well as preliminary indications from 8Du5543 suggest that late Swift Creek populations may have actually inhabited sites along the lower St. Johns River. At this point, data supportive of late Swift Creek occupation of Atlantic coastal Florida are not overwhelming, however, the possibility cannot be completely dismissed.

Movement of inland Swift Creek to the Atlantic seaboard around A.D. 300-500 is well documented for the lower Georgia coast (Kelly and Smith 1975; Cook 1977; Blanton 1979; Kirkland 1979; Adams 1985; Desjean *et al.* 1985; Dickinson and Wayne 1987). Presently, there is no reason to reject the possibility that the southern range of Atlantic coastal Swift Creek extends down to the mouth of the St. Johns River. Speculative migrations of coastal Swift Creek groups into the area was limited, and currently there is no evidence suggestive of a massive Swift Creek population intrusion. The few possible late Swift Creek sites (e.g., 8Du66, 8Du5602, 8Du5543) suggest occupations that are smaller than those attributed to Deptford, St. Johns and Savannah groups. Preliminary data derived from ongoing Phase II excavations at 8DU5543 suggest that the local Swift Creek economy was oriented toward the exploitation of estuarine vertebrate and invertebrate species (cf. Quitmyer 1985; Reitz and Quitmyer 1988).

The hypothetical explanations presented in this study are tentative and unproved at this time. Future researchers working in the region need to formulate and implement specific archaeological measures that will attempt to solve questions regarding local Swift Creek manifestations. Of paramount importance are radiocarbon dates from secure contexts containing the various Swift Creek pottery styles. Confirmation of the precise chronological position and

temporal range of Swift Creek pottery within northeast Florida must await such chronometric analysis. In addition, detailed microscopic examinations should be undertaken to determine whether complicated stamped wares are manufactured from local and/or foreign clays. Finally, future ceramic studies similar to those conducted by Broyles (1968), Snow (1975), and Saunders (1986) should provide valuable comparative data about social uses and regional distributions of Swift Creek Complicated Stamped pottery.

To test the hypothesis that late Swift Creek groups from the lower Georgia coast expanded southward to the mouth of the St. Johns, future studies should examine the settlement structure of components containing high percentages of late Swift Creek pottery. The settlement pattern at these sites should be similar to that demonstrated at Kings Bay and other permanent Swift Creek sites (cf. Adams 1985; Desjean *et al.*). Theoretically, these sites should contain similar features such as arc-shaped shell midden accumulations, large storage features, and shell-lined pits. In addition, late Swift Creek deposits should be located along estuarine environments along the Atlantic coast between the St. Marys and St. Johns rivers. Clearly more work must be done in the region to support the inferences presented in this study.

Conclusions

The objectives of this study have been to provide an overview of the known occurrences of Swift Creek ceramics along the lower St. Johns, and present a preliminary model regarding regional Swift Creek manifestations. Ongoing investigations at Swift Creek sites such as 8DU5543 contain immense research potential, and it is anticipated that final analysis of the artifactual, ecofactual and contextual data from this site will contribute substantially to our understanding of the coastal Woodland period within northeast Florida. It is hoped that this study has provided a general foundation from which subsequent, more detailed interpretations of Swift Creek life along the lower St. Johns River can be built.

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