ST. MARYS CORDMARKED[1] POTTERY (FORMERLY SAVANNAH FINE CORD MARKED OF NORTHEASTERN FLORIDA AND SOUTHEASTERN GEORGIA): A TYPE DESCRIPTION

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During the 1950s, archaeologists like John Goggin (1952), William Sears (1957), and Ripley Bullen and John Griffin (1952) all commented upon the occurrence of cordmarked pottery on archaeological sites in northeastern Florida (i.e., present-day Duval and Nassau counties). Based on the previous recovery of grossly similar-looking wares along the Georgia coast, these researchers and others (e.g., Larson 1958) linked the cordmarked pottery of northeastern Florida and southeastern Georgia to the north Georgia Savannah archaeological culture and identified it as Savannah Fine Cord Marked. Building upon the signal works of these researchers, subsequent archaeologists variously interpreted northeastern Florida (and southeastern Georgia) cordmarked pottery as Savannah trade wares or local products manufactured either by Savannah immigrants or by indigenous potters copying the Savannah pottery tradition (e.g., Ashley 1995; Deagan 1978; Dickinson and Wayne 1987; Johnson 1988; Jordan et al. 1963; Russo 1992; Russo et al. 1993; Saunders 1989). But often accompanying such interpretations is the caveat that northeastern Florida cordmarked wares differed, at both the type and assemblage levels, from the traditional Savannah series ceramic (Russo 1992:117).

Before we can begin to unravel the cordmarked pottery mystery in northeastern Florida, we first must recognize that two temporally and technologically distinct cordmarked wares actually occur in northeastern Florida and southeastern Georgia. The earlier type is a grit-tempered ware found exclusively in St. Johns II contexts (ca. A.D. 900-1250). Though it has traditionally been considered Savannah Cord Marked, due to its grit tempering, the recovery of vessels with folded rims suggests that it more closely resembles Ocmulgee III Cordmarked pottery from the Ocmulgee-Oconee-Altamaha river region of south-central Georgia (Snow 1977). The second or later cordmarked type is a thin, sand-tempered ware manufactured by Ocmulgee immigrants, who we believe moved into northeastern Florida via southeastern Georgia some time after A.D. 1250 (Ashley n.d.:13-26).

We propose the type name *St. Marys Cordmarked* for this later cordmarked pottery, produced locally in northeastern Florida and southeastern Georgia and dated to the *St. Marys II* period, ca. A.D. 1250-1500+. In northeastern Florida, the St. Marys II period is preceded by St. Johns II period (A.D. 900-1250), which is preceded by the St. Marys I period (500 B.C. – A.D. 900), not the St. Johns I period (Ashley n.d.:7). We further believe that the type designation is applicable to cordmarked pottery manufactured locally in coastal Camden County, Georgia, although its beginning date there may be a millennia or so earlier (ca. A.D. 1100) than in northeastern Florida. However, we urge that the St. Marys pottery designation not be extended north of the Satilla River into Glynn County, since the cultural affiliation of cordmarked wares there remains uncertain. The production of St. Marys Cordmarked pottery, therefore, is restricted to coastal Duval and Nassau counties, Florida and coastal Camden County, Georgia, a cultural region known as St. Marys (Figure 1).

The objective of this brief paper is to forward a formal type description for St. Marys Cordmarked. We are well aware of the problems attending the careless addition of unwarranted pottery type (or variant) designations to existing regional ceramic inventories. However, we believe that a new type name is necessary to highlight the local manufacture of St. Marys Cordmarked pottery and to differentiate it geographically and culturally from both classic Savannah and Ocmulgee wares in order to avoid conflating distinct types during analysis. Additionally, despite being the dominant ware on archaeological sites in northeastern Florida after A.D. 1250, there presently is no cordmarked pottery category on the Florida Master Site File form that specifically recognizes either these wares or their proper cultural affiliation. Instead of forcing northeastern cordmarked pottery into analytical categories meant for other regions of Florida or relegating them to a nondescript "other" status, the St. Marys designation and definition will afford the pottery (and its people) recognition in time and space.

Background

The manufacture of cordmarked pottery has a long history along the Atlantic seaboard. On the north Georgia coast, its production began around A.D. 800 and covered three sequential archaeological phases – Wilmington, St. Catherines, and Savannah – between ca. A.D. 800 and 1300 (Caldwell and Waring 1968; DePratter 1979, 1991). This was followed by the production of complicated stamped and incised pottery during the Irene phase, ca. A.D. 1300 and 1550+ (Braley 1990; Caldwell 1971; DePratter 1979, 1991; cf. Crook 1986:37).

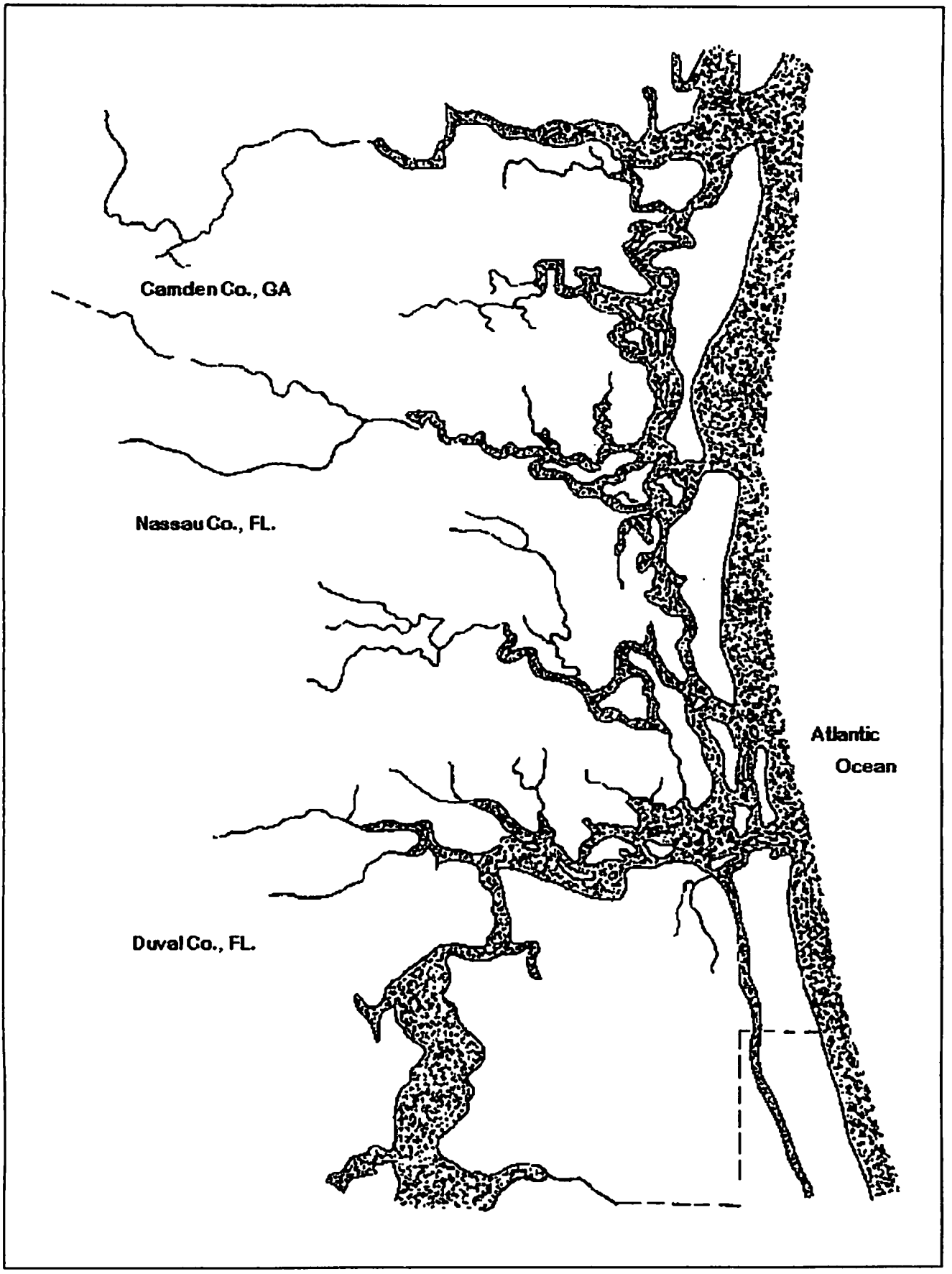

Figure 1. St. Marys Region.

Presently, there is no evidence supporting the Wilmington-St. Catherines-Savannah-Irene ceramic sequence south of the Satilla River in the St. Marys region. In fact, the heavily grog-tempered cordmarked sherds from the Kings Bay locality (Georgia), previously typed as Wilmington Cord Marked, now appear to represent sixteenth/seventeenth-century San Pedro pottery (Ashley and Rolland 1997a).

Radiocarbon dates from sites at Kings Bay indicate that an essentially Woodland period ceramic assemblage that included cordmarked pottery (St. Marys) was in use from about A.D. 1000 until some time during the sixteenth century (Adams 1985; Saunders 1989; Smith et al. 1981). Though Espenshade (1981) has argued for a beginning date of ca. A.D. 450 for cordmarked pottery along the southeastern Georgia coast, the uncalibrated radiocarbon dates he draws upon are based on materials equivocally associated with cordmarked pottery. Northeastern Florida cordmarked sites are more-securely dated, with 18 calibrated radiocarbon assays from 8 sites yielding dates that range from ca. A.D. 1250 to 1500+, or the St. Marys II period (Table 1). Though frequently assumed to have its origin along the coast, cordmarking as a primary decorative ware may have originally developed within the hinterland river valleys of Georgia and subsequently spread to the coast via the Savannah, Ogeechee, Altamaha, and Satilla rivers.

Cordmarked pottery recovered from late prehistoric sites in the St. Marys region has been classified in a variety of formal and descriptive ways that include Savannah, Savannah-derived, Savannah\Wilmington-derived, Savannah phase or period, Savannah-like, Savannah-related, or nondescriptly as sand, grit, and/or grog-tempered cordmarked (e.g., Adams 1985; Ashley 1995; Cook 1977; Cordell 1993; Crook 1986; Deagan 1978; Dickinson and Wayne 1987; Espenshade 1981, 1985; Johnson 1988; Jordan et al. 1963; Kirkland 1979; Milanich 1994; Russo 1992; Russo et al. 1993; Saunders 1989; Smith et al. 1981). Lee et al. (1984), however, rejected a Savannah cultural affiliation interpretation by considering the sand-tempered cordmarked wares from two Duval County sites (8DU634 and 8DU669) to be Alachua (i.e., Prairie Cord Marked) or some other inland pottery type.

Taxonomic problems in pottery classification stem primarily from the fact that the original type descriptions for coastal cordmarked pottery were based mainly on specimens recovered from Chatham County in north Georgia (Caldwell and Waring 1968). These normative type descriptions have been mistakenly applied to pottery recovered from all areas of the Georgia coast and beyond, overstretching the utility of the original Savannah Fine Cord Marked definition. Archaeologists have since begun to acknowledge both intra- and interregional variability in coastal cordmarked wares (Braley 1983; Cordell 1993; Crook 1986; DePratter 1979; Espenshade 1981, 1985; Milanich 1977; Saffer 1979; Smith et al. 1981). In fact, Crook (1986:42) in his review of the late prehistoric chronology of the Georgia coast suggests that regional variants of the Savannah culture mark the mouth and lower course of both the Savannah and Altamaha rivers and that a "marginal extension of the Altamaha region" variant is found in the St. Marys region.

In an attempt to shed light on the taxonomic dilemma attending coastal cordmarked pottery, Cordell (1993) performed a technological analysis of cordmarked pottery from the St. Marys region. Her methodological approach was grounded in the use of explicit analytical terminology and routine microscopy in order to develop replicable criteria by which to classify pottery from the region. Cordell examined 30 cordmarked sherds from 4 sites in northeastern Florida, and 9 cordmarked sherds from 2 sites in southeastern Georgia. All 39 sherds were believed to date to the local "Savannah Period" (ca. A.D. 800-1500). In addition, 15 problematic Savannah Plain sherds from the St. Marys region were examined. Finally, to explore the possibility of nonlocal production origins for some of the cordmarked specimens, a sample of north Georgia (Chatham County) Savannah Fine Cord Marked (n=5) and north-central Florida Prairie Cord Marked (n=5) sherds also were analyzed (Cordell 1993:34-36).

Cordell (1993) assigned each of the 39 cordmarked sherds in her sample to one of four technologically defined paste categories: Group 1) non-spiculate and non-micaceous (n=9 or 23%); Group 2) sponge spiculate (n=14 or 36%); Group 3) micaceous (n=15 or 38%); and, Group 4) micaceous and spiculate (n=1 or 3%). The first three categories were further subdivided on the basis of sand, grit, or grog inclusions. It should be noted that her sponge spiculate paste category (i.e., Group 2) is "characterized by occasional to common sponge spicules," and *differs* "from St. Johns or 'chalky ware' paste in terms of sponge spicule size, relative abundance of sponge spicules and quartz sand, and in lacking the tactile 'chalkiness' characteristic of St. Johns pottery" (Cordell 1993:42-43).

Subsequent to Cordell's (1993) work, information provided by various projects involving shovel test surveys, stratigraphic excavations, calibrated radiocarbon dates, or ceramic analysis/reanalysis of other cordmarked pottery collections permits us to comment upon two of her paste categories for cordmarked pottery. Of greatest importance to our study is her identification of 7 grit-tempered cordmarked sherds from the Brown Site (8DU58) in northeastern Florida. These 7 sherds were assigned to the GROUP 2A-GRIT paste category, characterized by occasional sponge spicules and common coarse to very coarse quartz particles. According to Cordell (1993:54), "this paste appears to conform to the pottery that Bullen and Griffin (1952:24) and Sears (1957:24) considered similar to the north Georgia coast Savannah Fine Cord Marked." She further notes that all 5 Prairie Cord Marked and 4 of the 5 north Georgia Savannah Fine Cord Marked sherds in her sample possessed the same gritty paste. It should be noted that Ocmulgee III Cordmarked pottery is also grit-tempered.

An important point to be made here is that all pottery assemblages containing gritty cordmarked pottery in northeastern Florida are dominated by St. Johns II types, implying that the gritty cordmarked vessels are trade wares (or possibly local copies). This begs the question: Were these wares originally made by Savannah potters along the north Georgia coast? We do not believe so since it is now known that a small percentage of the grit-tempered cordmarked sherds recovered from

Table 1. St. Marys II period radiocarbon dates from sites in Northeastern Florida.

Site	Beta #	Material	Measured Radiocarbon Age (BP)	Conventional Radiocarbon Age (BP)	Calibrated* 1 Sigma (AD)	Calibrated* 2 Sigma (AD)	Calibrated* Intercept (AD)	Reference
8DU669	6633	oyster	840 ± 70	1250 ± 70	1070-1250	1025-1295	1180	Lee et al. 1984
8DU669	6634	oyster	830 ± 80	1240 ± 80	1070-1265	1020-1310	1190	Lee et al. 1984
8DU634	6625	oyster	720 ± 50	1130 ± 50	1250-1310	1200-1345	1285	Lee et al. 1984
8NA703	147516	charcoal	680 ± 60	680 ± 60	1280-1390	1250-1410	1290	Hendryx et al. 2000
8DU5545	145293	oyster	690 ± 60	1060 ± 60	1290-1390	1240-1420	1310	Smith et al. 2001
8DU5545	145292	oyster	650 ± 60	1030 ± 60	1300-1400	1270-1440	1330	Smith et al. 2001
8DU634	6627	oyster	620 ± 50	1030 ± 50	1310-1405	1285-1430	1345	Lee et al. 1984
8NA41	44968	oyster	570 ± 60	---	1315-1425	1285-1455	1390	Saunders pers. Comm.
8DU625	84076	oyster	570 ± 70	950 ± 70	1360-1455	1305-1500	1420	Ashley 1997
8DU634	6623	clam	540 ± 50	950 ± 50	1390-1445	1325-1475	1420	Lee et al. 1984
8NA703	147518	charcoal	520 ± 60	520 ± 60	1400-1440	1300-1460	1420	Hendryx et al. 2000
8DU634	6626	oyster	520 ± 50	930 ± 50	1405-1455	1345-1485	1420	Lee et al. 1984
8DU669	6628	oyster	490 ± 70	900 ± 70	1410-1485	1335-1540	1430	Lee et al. 1984
8DU669	6631	oyster	470 ± 50	880 ± 50	1430-1485	1405-1520	1445	Lee et al. 1984
8NA41	44967	oyster	400 ± 60	---	1445-1530	1410-1640	1455	Saunders pers. Comm.
8NA43	109253	oyster	370 ± 60	760 ± 60	1490-1640	1455-1675	1485	Ashley and Rolland 1997
8DU634	6622	oyster	350 ± 60	760 ± 60	1490-1640	1455-1675	1540	Lee et al. 1984
8DU634	6624	oyster	340 ± 50	750 ± 50	1505-1640	1475-1670	1540	Lee et al. 1984

* all calibrations performed by Beta Analytic, Inc.

northeastern Florida sites have folded rims (actually rim appliqués) (Ashley 2000, n.d.; Rolland 2000). To our knowledge, Ocmulgee series pottery is the only type of cordmarked wares with folded/appliqué rims in the vicinity of the St. Marys region. In south-central Georgia, Ocmulgee Cordmarked consists of three areal varieties designated, from west to east, Ocmulgee I, II, and III (Snow 1977; Stephenson 1990). Of these, Ocmulgee III is reported to be primarily grit-tempered, with a low incidence (less than 30 percent) of rim sherds exhibiting folds/ appliqués. The other two Ocmulgee types are thinner and sand tempered, with a much higher percentage (ca. 70%) of folded/appliqué rims. Regardless of whether the northeastern Florida specimens are Ocmulgee III Cordmarked pottery or a local St. Johns II variant, there is little doubt that these grit-tempered cordmarked wares are temporally and technologically distinct from St. Marys Cordmarked, as defined herein.

The second paste category deserving comment is Cordell's identification of 7 "Savannah Plain" and 2 Savannah Cord Marked sherds with grog tempering from coastal Georgia. The former, which are thicker than the Savannah (St. Marys) Cord Marked sherds in her sample, may actually represent San Pedro Plain, which itself is part of the San Pedro series that characterizes sixteenth/seventeenth-century coastal Timucua sites in the St. Marys region (Ashley and Rolland 1997a). Thus we believe that the wide tempering variance of Cordell's "Savannah Period" sample from the St. Marys region contains several sherds that fall outside our definition of St. Marys Cordmarked. Specifically, we consider her 7 gritty sherds from 8DU58 to be Ocmulgee III Cordmarked pottery (or a local copy ware made by St. Johns II potters) and her 2 grog-tempered cordmarked and 7 plain grog-tempered plain sherds from 9Cm177 to be part of the site's later and well documented San Pedro component.

St. Marys Cordmarked: A Type Description

St. Marys Cordmarked is distinguished by a combination of formal and stylistic characteristics that contrast sharply with the spiculate-paste, check-stamped-dominated assemblages of the preceding St. Johns II period in northeastern Florida. It also differs from the thicker bodied grit-tempered cordmarked wares found within St. Johns II pottery assemblages in the St. Marys region. The most salient attributes of St. Marys Cordmarked pottery include sand tempering, often with mica inclusions; consistently thin vessel wall construction; exterior surface modification produced by twisted fiber cordage; unburnished, yet well compacted, interior surfaces often shell scraped; and a conservative range of simple vessel forms (simple bowls and jars). These and other attributes are outlined in Appendix I, and examples of St. Marys Cordmarked pottery are depicted in Figure 2.

The Sample

Fifty sherds were randomly selected from St. Marys II sites in Duval and Nassau counties, Florida. These include the Quercus site or 8DU625 (Ashley 1997), Greenfield Site # 9 or 8DU5545 (Smith et al. 2001), and the Thundercrack site or 8NA43 (Ashley and Rolland 1997b). In our opinion these 50 randomly chosen sherds are "typical" of St. Marys Cordmarked in northeastern Florida; an assessment that we recognize is subjective. These sherds provide the metric data (e.g., sherd thickness) used in the type description. We also draw upon general observations on cordmarked pottery made by ourselves and others working in northeastern Florida (e.g., Ashley and Rolland 1997b:B1-B2; Ashley and Thunen 1999:59; Cordell 1993; Dickinson and Wayne 1987:5.5-5.6; Dickinson and Wayne 1999:44-48; Lee et al. 1984:92-102, 176-201, 235-242; Russo et al. 1993:174-204; Sears 1957:24; Saunders 1989). It should be further acknowledged that aspects of the following St. Marys Cordmarked type description build upon the important work of Cordell (1993:56), who established a regional paste typology and laid a foundation for future ceramic paste investigations in the St. Marys region.

Paste

St. Marys II potters routinely produced ceramic vessels with clay containing fine- and medium-sized quartz particles (.125 - .50 mm) and varying frequencies of mica; coarse-sized (.5 – 1.0 mm) grains are less common (Cordell 1993:39-40, 50-52). Grit inclusions, quartz grains 1 to 2 mm in size, are rare. Occasionally, sponge spicules are observed in some St. Marys Cordmarked wares in low frequency, but these should be considered a commensal paste constituent; perhaps inadvertently added as ground raw clay was rehydrated with spring or creek water. Grog-tempering is not a defining characteristic of St. Marys paste, though Cordell (1993:52) reports its presence in plain wares presumed to be associated with St. Marys Cordmarked. But as stated earlier, these grog-tempered sherds may actually be San Pedro Plain. Grog is occasionally found with grit inclusions in some earlier grit-tempered cordmarked wares from the Shields site (Rolland 2000), and crushed sherd tempering is common in latter sixteenth/seventeenth-century San Pedro pottery (Ashley and Rolland 1997a).

Thickness

The 50 sherds in the sample ranged in thickness from 3.5 and 7.7 mm, though the majority (76%) measured between 4.5 and 6.5 mm. The sample's mean thickness was 5.5 mm. Cordell's (1993:48) findings were similar within her micaceous paste category (Paste Group 3A-C), with a mean thickness of 5.1 mm. Such thin vessels walls may have been attained utilizing a construction process that combined coiling and drawing or pulling techniques.

Exterior Surface Modification

Both exterior and interior vessel finishes are very consistent within the type. Vessel exteriors are impressed with a narrow or fine gauge vegetal-fiber cordage utilized in a variety

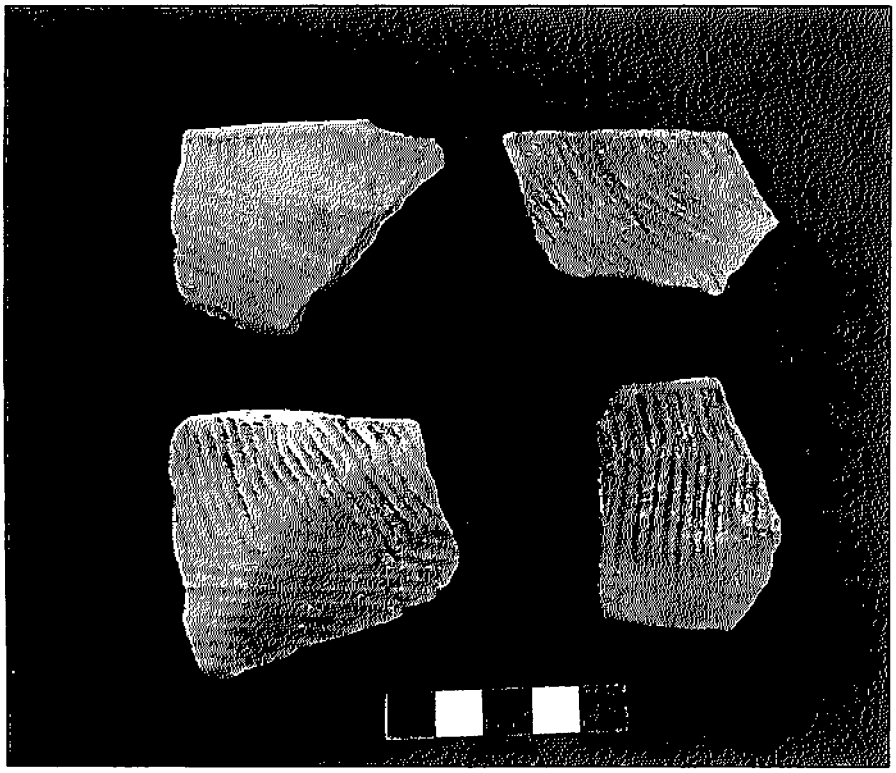

Figure 2. St. Marys Cordmarked sherds.

of forms. Cordmarking involved wrapping tightly twisted cordage around a paddle that was pressed against wet clay. Simple parallel impressions are observed, but overstamping is the norm (see Figure 2). Overstamping can produce oblique or, less often, perpendicular cross-cord impressions.

A range of variations occur in cord width, cord twist, and impression spacing. Cordage was tightly (narrow spacing) or loosely (wider spacing) wrapped around the paddle, though the former is by far the most typical. Fine cordmarking (< 1 mm) is the norm, but coarser gauged cordage (i.e., heavy cordmarked) is observed infrequently. Cordmarked sherds from various sites in northeastern Florida have been examined by the authors and Jill Minar (1999) to identify final cord twist, which is determined by the direction of the cord slant; a slant in this direction (/) is referred to as Z-twist and in the opposite direction (\) is S-twist (Maslowski 1973:4). The overwhelming majority (upper 90 percentile) of St. Marys Cordmarked sherds are Z-twist, which seems to be the most common form noticed on Alachua, Ocmulgee, and Savannah cord marked types as well (Minar 1999).

In relation to the lip, parallel cord impressions on vessel bodies reveal that the paddle was most often applied at an oblique angle, although perpendicular impressions are rarely observed. While surface impressions are most often clear and well executed, vague stamping is sometimes noted, but in many cases this may have resulted from post-depositional erosion rather than poor execution. Thus, closely spaced, well executed, and fine cord impressions are the norm.

In addition to cordmarking, two other forms of processed fiber have been noted by the authors: soft, woven fabric or open-knotted netting. Warp and weft fabric impressions appear to be seamless across the surface and not the result of paddle stamping. Netting strands and knots are often very fine and somewhat difficult to discern without magnification or casting (see Drooker 1992:114). Net impressions do not overlap. Woven and knotted fabric impressions are a minority surface treatment noted among the more dominant cordmarked wares (Ashley and Rolland 1997c:25; Ashley and Rolland 1997d:24; Dickinson and Wayne 1997:113). We recommend that analysts report these types descriptively as net-marked, fabric-impressed, etc., rather than under the umbrella of cordmarked.

It should be mentioned that similarly tempered plainwares wares are typically found in association with St. Marys Cordmarked, although cordmarking clearly predominates in St. Marys assemblages. Though we believe a plain/undecorated counterpart of St. Marys Cordmarked occurs as a minority ware, it is difficult and problematic to distinguish it from other generic-looking plain wares, particularly within multicomponent middens. Conspicuously absent or rare in contexts dominated by St. Marys Cordmarked are sand-tempered burnished, check stamped, or complicated stamped wares, hallmarks of the central and north Georgia coast Savannah assemblages.

Interior Surface Modification

Vessel interiors are uniformly well smoothed, which is accomplished by shell scraping followed by compaction with a hard surfaced finishing tool. Evidence of shell scraping is exhibited in the form of even and parallel fine ridges and indentations, similar in appearance to those of a small scallop shell. Traces of shell scraping are not always completely obliterated by subsequent hard-tooling. Burnished lip and interior surfaces are rare.

Rim/Lip

Rims and lips are simply finished. Rims are most often direct and straight, but may be slightly incurvate or excurvate. Lips may be finished as rounded, flat, or tapered, with the first being most common. Lips do not exhibit cordmarking, and there is no evidence of intentional rim/lip modification, such as folding or adding an appliqué strip, as is the case with Ocmulgee III Cordmarked pottery (Figure 3). Lips are often finished with a stroke that smoothed the clay from the interior

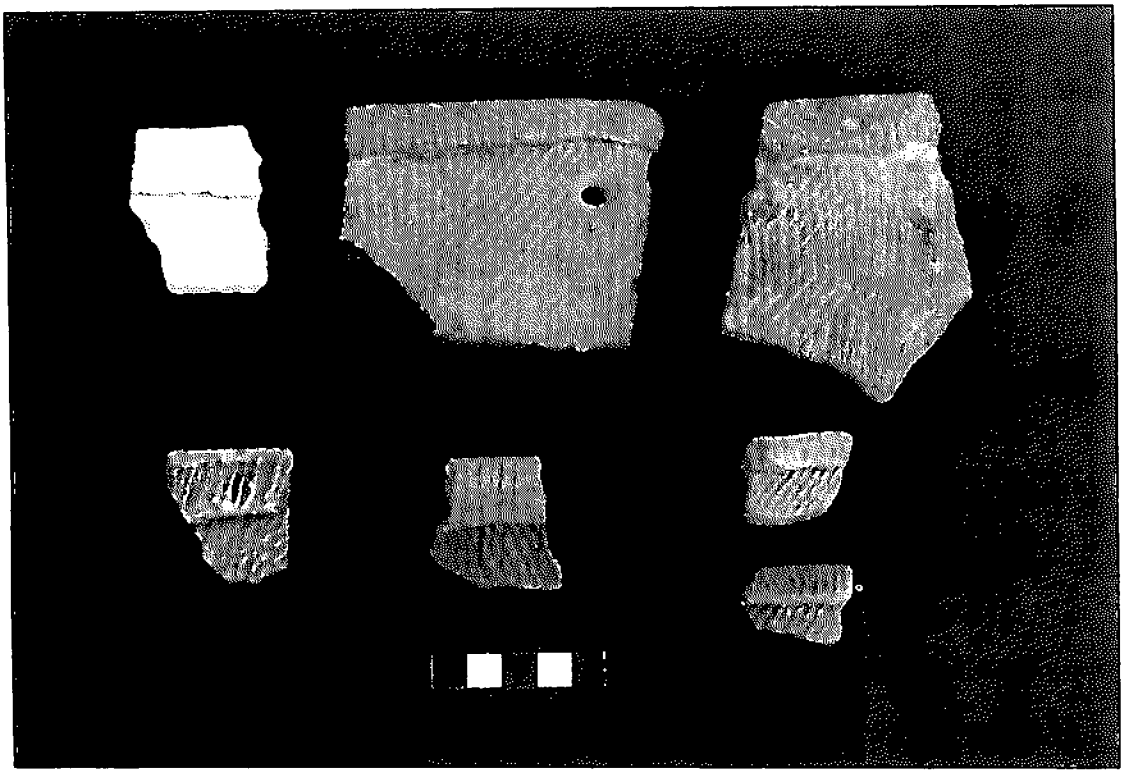

Figure 3. Grit-tempered cordmarked. Top row: Ocmulgee III Cordmarked sherds from south-central Georgia. Bottom row: Grit-tempered cordmarked sherds from the Shields site (8DU12), Duval County, Florida.

to the exterior, commonly leaving a slight extrusion along the exterior lip margin. This gives the lip a rather sloppy appearance, at times resembling a small, poorly formed fold.

Vessel Forms

Vessel forms appear to consist of a variety of simple bowls and jars. Unfortunately, in the authors' experience, the thin walled nature of St. Marys vessels combined with post depositional processes and lack of reporting has not allowed for rim/lip reconstructions that might yield specific vessel diameter or height information. Generally speaking, bases are either rounded or slightly concoidal. No vessels with sharp wall inflections (e.g. cazuela or carinated) or tightly incurving restricted containers have been observed. Vessel appendages such as nodes are not present. However, sherds with drilled holes have been observed. Typically, such vessel wall modification is thought either to be the consequence of impact stresses on thin walls (mend holes) or to accommodate suspension with fiber or leather straps or handles.

Firing

St. Marys sherds are most often dark gray or gray-brown in color, indicating that vessels were routinely fired in a reduced (low oxidizing) atmosphere. However, reddish and reddish-yellow colored sherds do occur infrequently. After refiring experiments, Cordell (1993:40, 55) recorded a range of oxidized colors suggesting to her that a wide variety of clay sources were utilized by potters.

Concluding Thoughts

The main purpose of our paper has been to present a formal definition of St. Marys Cordmarked pottery. To a lesser extent, we have tried to heighten awareness of the presence of a second, and earlier, grit-tempered cordmarked ware that occurs within St. Johns II contexts in northeastern Florida. Over the years, St. Marys Cordmarked has been referred to by a variety of names such as Savannah-derived, Savannah\Wilmington, Savannah Phase or Period, Savannah-like, Savannah-related, or simply Savannah to name a few. Radiocarbon dates indicate that St. Marys Cordmarked was produced in northeastern Florida during the St. Marys II period, between ca. A.D. 1250 and 1500+. Its emergence in northeastern Florida marks the intrusion of peoples from southeastern coastal Georgia (Camden County). Though radiocarbon dates are ambiguous and marred by mixed contexts, the production of St. Marys Cordmarked in Camden County, Georgia appears to have predated that of northeastern Florida by a century or so. More chronometric dates from secure proveniences are needed.

Of primacy to archaeologists working in northeastern Florida is to distinguish sand-tempered (St. Marys) from grit-

Table 2. Comparison of Selected Attributes of Savannah, Ocmulgee III, and St. Marys Cordmarked.

	St. Marys Cordmarked[1]	Ocmulgee III Cordmarked[2]	Savannah Fine Cord Marked[3]
PASTE			
Quartz:	Fine texture with very fine, fine, and medium inclusions dominate; coarse sand and grit sized particles rare.	Coarse texture with common to frequent angular to subangular grit-sized quartz temper. Not well documented at present: grit/grog and sand tempering.	Medium to coarse texture. Variable-sized inclusions, but often grit-sized particles are present.
Mica:	Very fine to medium platelets occasional to frequent, larger sized mica inclusions rare.	Occasional to common, medium to coarse platelets visible.	Rare.
THICKNESS	3.5 – 7.7 mm (mean = 5.1 mm, 5.5 mm).	5.1 – 12.5 mm (mean = 7.8 mm)[4].	7.3 – 9.6 mm (mean range from 4 sites).
ASSEMBLAGE COMPOSITION	Fine cord impressions predominate, heavy impressions less often observed. Similarly tempered net- and fabric-impressed and plain are minority types.	Heavy cord impressions dominate, finer impression occasionally present. Similarly tempered plain wares may also be present.	Fine cordmarking dominates; Similarly tempered check and complicated stamping and burnished plain also present.
Burnishing: Interior:	Occasionally observed.	Not observed.	Burnishing prevalent.
Shell Scraped Interior:	Commonly observed.	Not observed.	Condition variable by location.
FIRING CHARACTERISTICS	Typically fired in reduced atmosphere (dark grays, gray, and brown colors dominate); somewhat lighter oxidized coloration is very rare.	Typically fired in reduced atmosphere (dark grays, gray, and brown colors dominate); well-oxidized sherds occasionally noted.	Wide range of oxidized colors observed.

1. Information derived from present study and Cordell's (1993) St. Marys Savannah Period Cord Marked analysis (gritty cordmarked is excluded, however)
2. Information derived from Snow (1977:39-40) and authors' observations.
3. Information derived from Caldwell and Waring's (1968:127-128) type description of Savannah Fine Cord Marked.
4. Based on sherd sample (n=207) from Shields Mound, 8DU12 (Rolland 2000:27-28, Appendix C).

tempered (e.g., Ocmulgee) cordmarked wares and avoid combining them under the same type category (see Table 2). Context is very important here, since the two types can occur together on sites. In some cases, sequential St. Johns II and St. Marys II occupations of the same site have resulted in midden deposits that are mixed. In other instances, the co-occurrence of St. Johns II and St. Marys II sherds is the byproduct of trade (Ashley n.d.:13-26). More specifically, local St. Johns II groups acquired Ocmulgee trade wares during the period A.D. 900-1250 or perhaps even produced quantities of grit-tempered cordmarked themselves, whereas immigrant St. Marys II groups after A.D. 1250 received nonlocal St. Johns wares from the south via exchange. Thus, St. Marys Cordmarked was produced locally in northeastern Florida from about A.D. 1250 until some time during the sixteenth century. It was produced locally in southeastern Georgia as well, perhaps there as early as A.D. 1100. Presently, the timing of the discontinuation of St. Marys wares and the transition to San Pedro series pottery is uncertain.

In conclusion, we believe a new typological definition is warranted for late prehistoric cordmarked wares in northeastern Florida. As defined herein, St. Marys Cordmarked is sand tempered, and often micaceous; however, grit-sized quartz particles occur rarely as a paste constituent in a small percentage of St. Marys sherds. Exterior surfaces are cordmarked, although fabric-impressed and net-marked also occur. Vessels are routinely thin walled, and interior surfaces are well compacted and frequently shell scraped. Present information suggests a limited range of vessel forms with simple bowls and jars predominating. Although researchers continue to point out the atypical nature of St. Marys region cordmarked assemblages with respect to the classic Savannah series, they persist in using the Savannah Cord Marked designation in analyses and reporting. We hope this paper encourages archaeologists in the St. Marys region to pay close attention to temper and paste constituents as well as other physical attributes, such as rim form and lip modification, when analyzing cordmarked wares. Consideration of these characteristics in concert with the context of artifact recovery should aid in interpreting cultural affiliations, dating sites, and identifying long distance social exchange networks.

Appendix I. St. Marys Cordmarked Type Description

Type Sample: 50 randomly selected sherds from 8DU625 (n=15), 8DU5545 (n=17), and 8NA43 (n=18), along with observations of sherds from other sites.

Method of Manufacture: coiling and drawing, with a basal starting disc.

Paste: overwhelmingly sand-tempered; three variations have been noted (Cordell 1993): 1) sand-tempered, nonspiculate and non-micaceous; 2) sand-tempered, with sponge spiculate inclusions; and 3) sand- tempered, with micaceous inclusions. Abundant (20-30%) fine (.125-.25 mm) quartz particles dominate in all three varieties. Very fine (< .125 mm), medium (.25-.50 mm), and coarse (.50 –1.0 mm) quartz inclusions are observed in occasional (1-5%) to rare (<1%) frequencies. In the past it has been suggested that grog tempering occurs in low frequencies. This, however, appears to have been due to the inadvertent inclusion of San Pedro sherds in the study samples.

Thickness: the 50 sample sherds ranged between 3.5 and 7.7 mm, with a mean of 5.5 mm. The majority (n=38, 76%) were between 4.5 and 6.5 mm.

Exterior Surface Treatment and Decoration: entire exterior of vessel stamped with a paddle of tightly wrapped, fine cordage; however, thick cordage (heavy) also occurs. Imprints indicate that Z-twist cordage dominates. Cross-cordmarking is the rule, but parallel cordmarking occurs. It should be noted that the appearance of warp-weft patterning on some sherds indicates that a woven fabric or textile was used to impress some exterior vessel surfaces. Woven impressions are often continuous over broad areas, and thus do not appear to be the result of a textile or fabric covered paddle. Such a decoration should be typed as fabric-impressed or net-marked, but not cordmarked.

Interior Surface Treatment: Interior of vessels are uniformly well-smoothed, which was accomplished via hard-tooling or shell scraping. Shell scraping is very common, and interior burnishing is rare.

Coloring and Firing Technique: Sherds most often are dark gray or brown in color, indicating that vessels were routinely fired in a reduced atmosphere. However, reddish and reddish-yellow colored sherds do occur infrequently, indicating firing in an oxidized atmosphere in some instances.

Form: a variety of simple bowls and jars, with either round or slightly concoidal bases. No vessels with sharp wall inflections (e.g., cazuelas) have been observed, nor have vessel appendages.

Rim/Lip: Most often rims are straight, but may be incurvate or excurvate. Lips are simple round, flat, or tapered, with the first being most common. Lips do not exhibit cord marking. There is no evidence of intentional rim/lip modification, such as folding, or the addition of an applique strip. However, a common characteristic is clay extrusion along the exterior lip margin, resulting from the failure to fully clean (smooth) the rim after lip formation. This gives the rim/lip intersection a rather sloppy appearance; at times it resembles a small, poorly formed fold.

Geographical Range: coastal Camden County, Georgia; coastal Nassau and Duval counties, Florida. Though cordmarking is found in Glynn County, Georgia, it is unclear whether this is St. Marys.

Chronological Position: St. Marys II period, ca. A.D. 1250-1500+ in northeastern Florida; possibly earlier in southeastern Georgia (ca. A.D. 1100). Replaced by San Pedro pottery in the sixteenth century.

Note

[1] The word forms cordmarked and cordmarking are used as descriptive terms throughout this paper rather than cord marked and cord marking, respectively. This convention is also used in the type name St. Marys Cordmarked. However, previously defined pottery types such as Ocmulgee Cordmarked, Prairie Cord Marked, Savannah Fine Cord Marked, and Wilmington Cord Marked will retain their original designations.

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