

THE CERAMIC SEQUENCE FROM THE
MATTASSEE LAKE SITES: TOWARDS A
CULTURAL SEQUENCE FOR THE LOWER
SANTEE RIVER, SOUTH CAROLINA

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Introduction

The Mattassee Lake sites (38BK226, 38BK229, and 38BK246) are located along the Santee River in the lower coastal plain of South Carolina approximately 64 km inland from the Atlantic Ocean. The sites extended for over a kilometer along a low terrace defining the southern margin of the river swamp, which in this area was almost 5 km wide. A minor tributary of the Santee, Mattassee Lake, cuts through the swamp immediately below the terrace, and it was for this feature that the sites were named. The three sites, examined in 1979 as part of the U.S. Army Corps of Engineers' Cooper River Rediversion Canal Project, produced stratified artifacts and features spanning the Early Archaic through the Mississippian periods. A comprehensive report on the investigations at Mattassee Lake has recently been released by the National Park Service (Anderson et al. 1982). This paper provides a brief abstract of the ceramic analysis and sequence from that volume (Figure 1).

The ceramic sequence from the Mattassee Lake sites is the first developed from along the Santee drainage in the coastal plain of South Carolina. Stratigraphic and absolute controls--including 15 radiocarbon dates--document a succession from Late Archaic Stallings and Thom's Creek ceramics prior to

1000 B.C. to (predominantly) clay-grog tempered Refuge and Wilmington wares and simple and check stamped Deptford ceramics. Of these, the Refuge wares are the earliest, followed by the Wilmington and Deptford types. The later Woodland (after c. A.D. 200) is characterized by cord and fabric impressed Cape Fear and Yadkin-like wares, which are in turn succeeded (after c. A.D. 700) by a previously unrecognized simple stamped ceramic complex that has been classified Santee. The Santee series appears to be coeval with both the Late Woodland and the Early Mississippian in the lower Santee River area, and it is only after about A.D. 1200 that traditional Mississippian complicated stamped ceramics of the Savannah, Pee Dee, and Ashley series appear.

The Need for Sequence Definition in Coastal South Carolina Ceramic Analyses

Until recently, the primary ceramic sequence used in the South Carolina coastal plain was that from the mouth of the Savannah River, which was based on a series of large excavations dating from the WPA era (Caldwell and Waring 1939a, b; Williams 1968, DePratter 1979). Comparable sequences, solidly based on excavation data, were not available from within South Carolina prior to the work at Mattassee Lake, although several tentative formulations had appeared, based on comparatively limited survey and excavation data (e.g. Waddell 1970; South 1973, revised 1976; Anderson et al. 1979; Trinkley 1980b, 1981e).

In the absence of a secure local sequence, the framework most widely used to classify and date South Carolina's prehistoric ceram-

FIGURE 1
 A CERAMIC SEQUENCE FOR THE LOWER SANTEE RIVER
 BASED ON EXCAVATIONS AT THE MATTASSEE LAKE SITES & INTERSITE COMPARISONS

PERIOD	PHASE	DATES	CERAMIC TYPE
PROTO-HISTORIC	Ashley	A.D. 1600-1715	Ashley Complicated Stamped, <i>var. unspecified</i> Mississippian Plain, <i>var. unspecified</i>
LATE MISSISSIPPIAN	Pee Dee	A.D. 1400-1600	Pee Dee Complicated Stamped, <i>var. unspecified</i> Mississippian Plain, <i>var. unspecified</i>
MIDDLE MISSISSIPPIAN	Jeremy	A.D. 1200-1400	Savannah Complicated Stamped, <i>var. Jeremy</i> Savannah Check Stamped, <i>var. unspecified</i> Savannah Fine Cord Marked, <i>var. unspecified</i> Santee Simple Stamped, <i>var. Santee</i> Mississippian Plain, <i>var. unspecified</i>
EARLY MISSISSIPPIAN	Santee II	A.D. 900-1200	Santee Simple Stamped, <i>var. Santee</i> Woodland Plain, <i>var. unspecified</i> Wilmington Heavy Cord Marked, <i>var. Wilmington</i> Wilmington Plain, <i>var. unspecified</i>
LATE WOODLAND	Santee I	A.D. 700-900	Santee Simple Stamped, <i>var. Santee</i> Woodland Plain, <i>var. unspecified</i> Cape Fear Fabric Impressed, <i>var. St. Stephens</i> Cape Fear Cord Marked, <i>var. unspecified</i> Wilmington Heavy Cord Marked, <i>var. Wilmington</i> Wilmington Plain, <i>var. unspecified</i>
	McClellanville	A.D. 500-700	Cape Fear Fabric Impressed, <i>var. St. Stephens</i> Cape Fear Cord Marked, <i>var. unspecified</i> Woodland Plain, <i>var. unspecified</i> Yadkin Fabric Marked, <i>var. Manon</i> Yadkin Plain, <i>var. unspecified</i> Yadkin Cord Marked, <i>var. unspecified</i> Wilmington Fabric Impressed, <i>var. Berkeley</i> Wilmington Plain, <i>var. unspecified</i>
MIDDLE WOODLAND	Deptford III	A.D. 200-500	Deptford Linear Check Stamped, <i>var. Deptford</i> Deptford Simple Stamped, <i>var. Cal Smoak</i> Deptford Incised, <i>var. Alvin</i> Deptford Brushed, <i>var. unspecified</i> Woodland Plain, <i>var. unspecified</i> Wilmington Fabric Impressed, <i>var. Berkeley</i> Wilmington Fabric Impressed, <i>var. Hanover</i> Wilmington Cord Marked, <i>var. Hanover</i> Wilmington Plain, <i>var. unspecified</i> Wilmington Check Stamped, <i>var. Wadmacon</i> Cape Fear Fabric Impressed, <i>var. St. Stephens</i> Cape Fear Cord Marked, <i>var. unspecified</i> Yadkin Fabric Marked, <i>var. Manon</i> Yadkin Cord Marked, <i>var. unspecified</i> Yadkin Plain, <i>var. unspecified</i> Yadkin Linear Check Stamped, <i>var. unspecified</i>
	Deptford II	200 B.C. A.D. 200	Deptford Linear Check Stamped, <i>var. Deptford</i> Deptford Simple Stamped, <i>var. Cal Smoak</i> Deptford Brushed, <i>var. unspecified</i> Woodland Plain, <i>var. unspecified</i> Wilmington Fabric Impressed, <i>var. Berkeley</i> Wilmington Fabric Impressed, <i>var. Hanover</i> Wilmington Cord Marked, <i>var. Hanover</i> Wilmington Plain, <i>var. unspecified</i> Wilmington Check Stamped, <i>var. Wadmacon</i>
EARLY WOODLAND	Deptford I	600-200 B.C.	Deptford Linear Check Stamped, <i>var. Deptford</i> Deptford Simple Stamped, <i>var. Cal Smoak</i> Woodland Plain, <i>var. unspecified</i> Wilmington Fabric Impressed, <i>var. Berkeley</i> Wilmington Fabric Impressed, <i>var. Hanover</i> Wilmington Cord Marked, <i>var. Hanover</i> Wilmington Plain, <i>var. unspecified</i>
	Refuge II	800-600 B.C.	Refuge Dentate Stamped, <i>var. Mattassee</i> Refuge Plain, <i>var. unspecified</i> Refuge Simple Stamped, <i>var. unspecified</i> Deptford Linear Check Stamped, <i>var. Deptford</i> Woodland Plain, <i>var. unspecified</i>
	Refuge I	1000-800 B.C.	Refuge Plain, <i>var. unspecified</i> Refuge Punctate, <i>var. Moutne</i> Refuge Punctate, <i>var. Allendale</i> Refuge Dentate Stamped, <i>var. Mattassee</i> Refuge Simple Stamped, <i>var. unspecified</i> Woodland Plain, <i>var. unspecified</i>
LATE ARCHAIC	Thom's Creek II	1500-1000 B.C.	Thom's Creek Plain, <i>var. unspecified</i> Thom's Creek (Reed Separate) Punctate, <i>var. Thom's Creek</i> Thom's Creek (Reed Drag & Jab) Punctate, <i>var. Spanish Mount</i> Thom's Creek (Shell) Punctate, <i>var. Fig Island</i> Thom's Creek Simple Stamped, <i>var. unspecified</i> Thom's Creek Incised, <i>var. unspecified</i> Thom's Creek Finger Pinched, <i>var. Awencaw</i> Refuge Punctate, <i>var. Moutne</i>
	Thom's Creek I Stallings	2000-1500 B.C. 2500-2000 B.C.	Stallings Plain, <i>var. Stallings</i> Thom's Creek Plain, <i>var. unspecified</i> Thom's Creek (Reed Separate) Punctate, <i>var. Thom's Creek</i> Thom's Creek (Reed Drag & Jab) Punctate, <i>var. Spanish Mount</i> Stallings Plain, <i>var. Stallings</i>

ics has been South's (1973, 1976) "Indian Pottery Taxonomy for the South Carolina Coast." While explicitly advanced as a taxonomy, and not meant to be used as a cultural/chronological sequence on other than a very general level, in practice this framework has been widely used to date ceramics and sites of all periods in South Carolina. Such a use goes well beyond the author's intent and, in the absence of supporting data for at least parts of the sequence, beyond the capabilities of the framework itself.

In spite of an increasing number of radiocarbon dates for specific wares or series from sites within South Carolina, the ceramic sequences used in the state have continued to be, for the most part, inferred from sequences developed in Georgia and North Carolina. Local sequences, based on excavation data from South Carolina, are clearly essential to further taxonomic and chronological refinement. It should be stressed, however, that both the Georgia and North Carolina sequences do work, on at least a general level, in portions of coastal South Carolina. Wares clearly recognizable as Stallings, Refuge (Fig. 2), Deptford, Wilmington, Savannah, and Irene (fundamental categories in the Savannah River sequence) occur on large numbers of sites, and when recovered in excavation context occur with the same general temporal and typological associations noted at the mouth of the Savannah (e.g., South 1971; Anderson et al. 1979; Trinkley 1980b, 1981d; Hanson et al. 1978). What is argued here is that these constructs are often applied rotely, without critical scrutiny, a procedure that can lead to serious errors of identification and interpretation when these formulations break down.

The primary problem with the use of the mouth of the Savannah Sequence throughout the coastal plain of South Carolina is that it fails to encompass an appreciable portion of the variability present within local pottery assemblages. Fabric impressed finishes, for example, which are quite common at Mattassee Lake as well as throughout much of the northeastern coastal plain of South Carolina (Anderson 1975), are rare to nonexistent in coastal Georgia, and are not represented in the Savannah sequence (e.g., Williams 1968; DePratter 1979). A similar ambiguity pervades the identification and temporal placement of South Carolina ceramics characterized by plain, simple stamped, cord marked, brushed, and incised finishes.

A second major problem impairing the utility of the Savannah River sequence in the South Carolina area arises from the spatially restricted distribution of several of the more temporally sensitive types. Several key wares--Deptford Complicated Stamped, Walthour Check Stamped and Complicated Stamped, and all of the St. Catherines and Altamaha types--are currently known to occur only in the southwestern portion of the coastal plain, near the mouth of the Savannah River. These wares, the only diagnostic indicators for several phases in the Savannah sequence, are absent throughout most of the remainder of South Carolina (e.g., Trinkley 1980b; Anderson and Logan 1981).

These problems also apply to the use of coastal North Carolina sequences in South Carolina. Unlike the mouth of the Savannah sequence, however, the coastal North Carolina sequences that have appeared (e.g., South 1960, 1976; Phelps 1981)

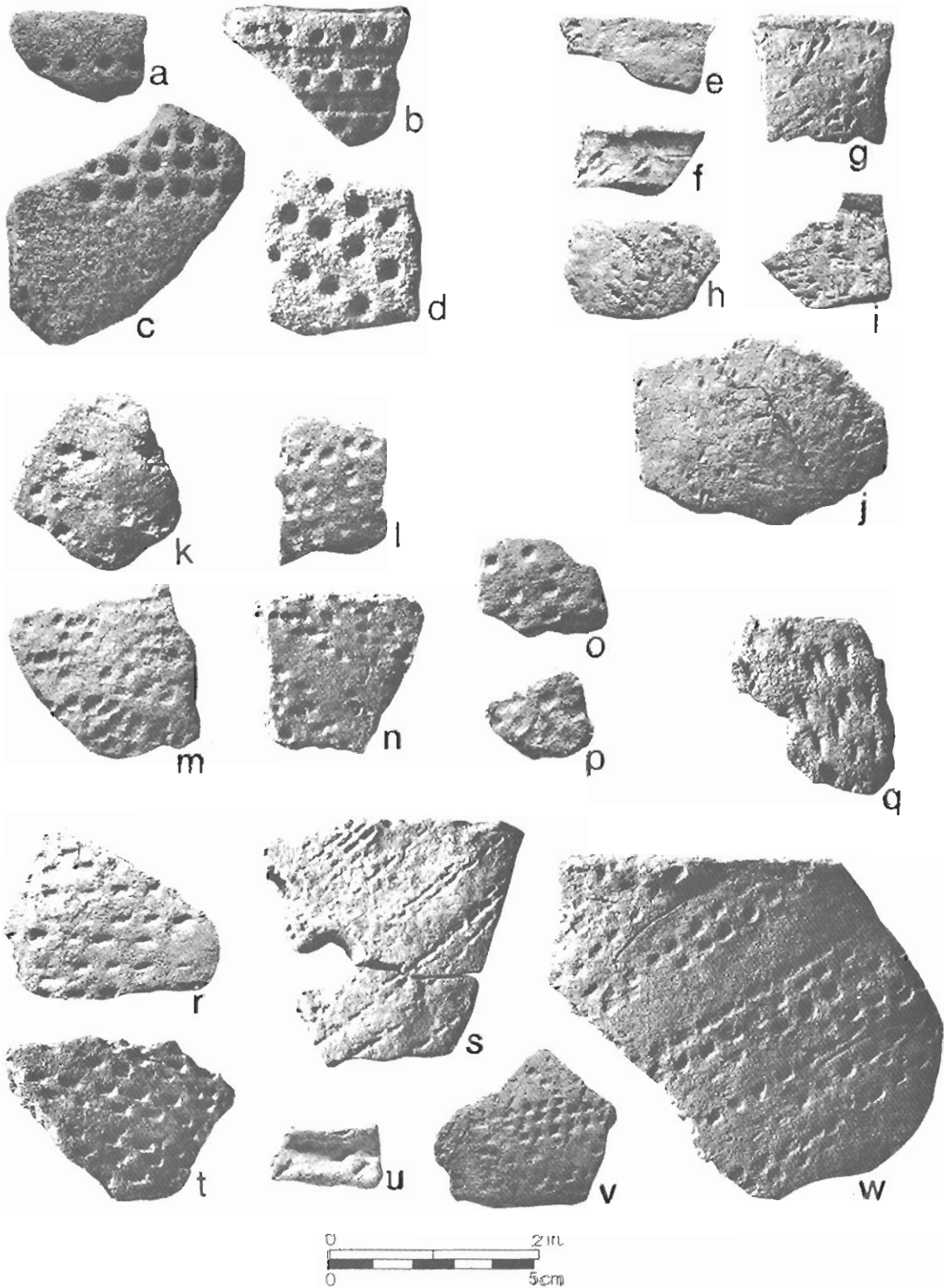


FIGURE 2. Thom's Creek Shell Punctate, Refuge Punctate, and Refuge Dentate Stamped ceramics from Mattassee Lake. a-d Thom's Creek (Shell) Punctate, var. *Fig Island*; e-j Refuge Punctate, var. *Allendale*; k-q Refuge Punctate, var. *Moultrie*; r-w Refuge Dentate Stamped, var. *Mattassee*.

remain largely untested locally. Hanover ceramics (reported here as Wilmington var. Hanover types) are currently the only well documented and dated coastal North Carolina wares found in coastal South Carolina (e.g., South and Widmer 1976; Dorian and Logan 1979; Scurry and Brooks 1980), and even within this series major questions about temporal extent remain to be answered (e.g., Anderson and Logan 1981: 107-108). Trinkley (1981e, this volume) has recently argued that the northern coastal North Carolina Deep Creek/Mt. Pleasant succession of cord and fabric impressed wares (Phelps 1981, 1982) is applicable in coastal South Carolina. Such a succession is not evident at Mattassee Lake, and until it can be securely documented through stratigraphic controls and absolute dating use of these taxa should proceed cautiously.

What is indicated by this review is that existing typological constructs are of limited utility in the analysis of ceramics recovered from sites in the South Carolina coastal plain. Clear, unambiguous typologies need to be developed particularly for the plain, simple stamped, cord marked, and fabric impressed wares that dominate Woodland period assemblages over much of the coastal plain. These typologies can only come from artifacts gathered in secure context, necessitating continued excavation. Until the Savannah River and coastal North Carolina sequences can be verified locally, they should only guide, and not dictate, South Carolina ceramic analyses.

The Mattassee Lake Collections:
The Sample, and its Analysis,
and Classification

The deposits along Mattassee Lake were initially sampled with 144 0.5 m test pits (dug in 20 cm levels) systematically dispersed in a 20 m grid. The testing revealed several artifact concentrations, which were examined further using larger, 2 m squares opened in 5 or 10 cm levels. A total of 59 2 m squares were opened, 46 in three moderate sized excavation blocks of 10, 10, and 26 squares (at 38BK246, 38BK229, and 38BK226, respectively). Artifact stratification was noted in several areas, and 84 features were encountered and excavated. The assemblage included a total of 27,354 sherds, the first major ceramic collection from the lower Santee River area recovered with reasonably secure stratigraphic and absolute chronological controls. A research orientation stressing sequence definition was therefore inevitable.

Prior to initiating detailed analyses, the entire ceramic attribute analysis was then implemented (after considerable trial and error), using a special judgemental sample of 1208 sherds pulled from the collection. This sample included most of the large rim, body, and basal sherds recovered from along the terrace. Over 40 % of the total rim assemblage, and all of the recovered basal fragments were included in this sample. In addition, the sample included all sherds exhibiting unique or unusual paste, surface finish, rim, or other attributes.

Each sherd in the special sample was examined and coded using 11 attributes, including interior and exterior surface finish, primary and

minor paste inclusions, interior and exterior color, portion of vessel represented (i.e., rim, body, or base), rim form, lip treatment, the orientation of the exterior finish with the rim, and thickness. Once the sample had been coded it was examined employing a variety of analytical procedures to prepare a provisional taxonomy for the assemblage. Key attributes and attribute combinations useful for recognizing and sorting both known and suspected (previously unrecognized) types were initially resolved using associational (crosstabulation) procedures. Not altogether unexpectedly, exterior surface treatment and paste were found to be the most sensitive attributes for resolving known types; these are virtually the only criteria used to differentiate local ceramics (see Caldwell and Waring 1939a; South 1976; DePratter 1979). The analyses also indicated, however, that rim form and lip treatment were critical sorting attributes for several wares where the use of paste and surface finish attributes, by themselves, tended to produce ambiguous or overly broad classifications.

To independently test this provisional taxonomy a series of four monothetic subdivisive cluster analyses were performed, using the rim sherds (N = 328) in the special sample. Analyses were run on all of the rimsherds (N = 328), and on the simple stamped (N = 58), fabric impressed (N = 86), and cordmarked (N = 11) rims. The results, coupled with the data from the previous analyses, were used to prepare a second provisional taxonomy, which was then used to sort the entire assemblage (N = 27,354 sherds). During this sort, rim form, lip treatment, and stamp orientation attributes were recorded for every

diagnostic rimsherd; this served to increase the sample of rims from 328 to 754. The stratigraphic and spatial distributions of all of the ceramics were then examined, to assess the integrity of the taxa and to assign age estimates to them.

The data collected in the final sort, particularly the rim attributes, were used to refine the (second) provisional taxonomy. The results provide the basis for the descriptions of each type and variety in the Mattassee Lake sequence, as detailed in the excavation report (Anderson et al. 1982). Attribute measurements by individual artifact, for all of the sherds in the special sample (N = 1208) and for all of the diagnostic rimsherds (N = 754) from the terrace, are given in the appendix volume accompanying the final report (Anderson et al. 1982), together with the incidence of all final sorting categories (taxa) by specific provenience.

Temporal Ordering of the Mattassee Lake Ceramaic Assemblage

Temporal ordering of the Mattassee Lake ceramic assemblage was accomplished using stratigraphic data, cross-dating with known types, and the results of radiocarbon determinations run from ceramic bearing features. While cross-dating formed a useful initial guide, stratigraphic/distributional analyses and radiocarbon dates obtained from along the terrace proved essential to the resolution of chronology, particularly for the later Woodland periods for which few useful types were known.

In the large excavation blocks the average depth for each category was calculated. Arranging the aver-

age depths of the taxa from the lowest to the highest, the ceramics in both the 38BK226 and 38BK229 excavation blocks exhibited a logical superposition or stratification (Anderson et al. 1982: 218-222). Stalling's and Thom's Creek ceramics were the lowest (earliest), overlain by Refuge, then Wilmington and Deptford, then Cape Fear, and finally Santee Simple Stamped and Mississippian complicated stamped wares. While some ambiguity was evident, notably in the placement of wares with low totals, the general sequence appeared sound and was largely duplicated in both blocks.

Fifteen radiocarbon dates, all from ceramic-bearing features, were collected at Mattassee Lake (Table 1). One sample (DIC-1844, 1160 ± 185 B.C.) dates what appears to be Thom's Creek Plain; six samples, ranging from A.D. 520 to A.D. 710, date Cape Fear Fabric Impressed var. St. Stephens and Cape Fear Cord Marked wares; and six samples, ranging from A.D. 810 to A.D. 1340, date Santee Simple Stamped ceramics. The remaining two samples (DIC-1843, A.D. 1590 ± 125 ; DIC-2114, Modern) date plain, cord marked, and simple stamped ceramics thought to belong to the Cape Fear or Santee series. Excluding these two somewhat anomalous determinations, the remaining 13 dates help to provide a reliable absolute chronology for portions of the ceramic assemblage.

Taken together, the radiocarbon dates, stratigraphic evidence, and cross-dating results were in close agreement and generally complemented each other. The replacement of fabric impressed wares with simple stamped ceramics (Figure 3) in the later Woodland, for example, was documented both by 12 radiocarbon dates and clear evidence for strati-

graphic succession in the 38BK226 block, where a large sample (N = 2486 sherds) was recovered.

The Ceramic Sequence from The Mattassee Lake Sites

The ceramic artifacts from Mattassee Lake were classified using the type-variety system, in an effort to overcome perceived ambiguity and duplication pervading local ceramic typologies. When the names of otherwise identical wares change from state line to state line, or even from drainage to drainage or researcher to researcher (as is currently the case in the southeast Atlantic slope), then some degree of clarification or simplification is necessary. The type-variety system is ideal in this regard, since it "permits expansion and refinement of classification with the least amount of disturbance to existing formulations" (Phillips 1970: 26). In the present analysis established type descriptions were used wherever possible or practical. Where these type descriptions were ambiguous or redundant, however, they were readily dropped or subsumed into what were considered more appropriate categories. In spite of a few departures from traditional terminology and format, readers should have little trouble recognizing the wares (taxa) presented here.

The primary goals of the type-variety system of ceramic classification are cultural-historical, that is, directed toward temporal and/or cultural identification. The division of types into varieties reflects a concern for greater precision, both in prescription and classification, and in cultural-historical identification. Under the type-variety system types retain

TABLE 1
RADIOCARBON DATES

DICARB RADIOISOTOPE LAB NUMBER	RADIOCARBON AGE, (YEARS BP)	RADIOCARBON AGE (AD/BC DATE)	MA SCA CORRECTED DATE*	SAMPLE PROVENIENCE	ASSOCIATED MATERIAL REMAINS
2114	—	—	MODERN	38BK226,F21	Santee Simple Stamped, <i>var. Santee</i> -Corn Cobs
1843	360 ± 125	A.D.1590	A.D.1500- A.D.1460	38BK229,F2	Santee Simple Stamped, <i>var. Santee</i>
1838	610 ± 55	A.D.1340	A.D.1330	38BK226,F34	Santee Simple Stamped, <i>var. Santee</i> -Small Square Stemmed (Group 7) -Small Contracting Stemmed
1836	630 ± 65	A.D.1320	A.D.1310	38BK246,F10	Santee Simple Stamped, <i>var. Santee</i>
1845	760 ± 110	A.D.1190	A.D.1220- A.D.1200	38BK246,F2	Santee Simple Stamped, <i>var. Santee</i>
1840	910 ± 70	A.D.1040	A.D.1050	38BK226,F45	Santee Simple Stamped, <i>var. Santee</i> -Eared Yadkin ?(Group 4)
1841	1130 ± 55	A.D.820	A.D.850	38BK226,F31	Santee Simple Stamped, <i>var. Santee</i> -Small Contracting Stemmed
2115	1140 ± 115	A.D.810	A.D.810	38BK226,F26	Santee Simple Stamped, <i>var. Santee</i>
1837	1240 ± 60	A.D.710	A.D.730- A.D.700	38BK226,F36	Cape Fear Fabric Impressed, <i>var. St. Stephens</i>
1835	1250 ± 55	A.D.700	A.D.720- A.D.700	38BK226,F28	Cape Fear Fabric Impressed, <i>var. St. Stephens</i>
1839	1260 ± 60	A.D.690	A.D.690	38BK226,F14	Cape Fear Cord Marked, <i>var. unspecified</i>
1836	1300 ± 55	A.D.650	A.D.670- A.D.650	38BK226,F28	Cape Fear Fabric Impressed, <i>var. St. Stephens</i>
1833	1390 ± 155	A.D.560	A.D.600	38BK226,F29	Cape Fear Fabric Impressed, <i>var. St. Stephens</i>
1834	1430 ± 70	A.D.520	A.D.570	38BK226,F29	Cape Fear Fabric Impressed, <i>var. St. Stephens</i>
1844	3110 ± 185	1160B.C.	1460B.C.- 1480B.C.	38BK229,F4	Thom's Creek Plain, <i>var. unspecified</i> -Gary-like form (Group 14)

*From Ralph et al., 1973.

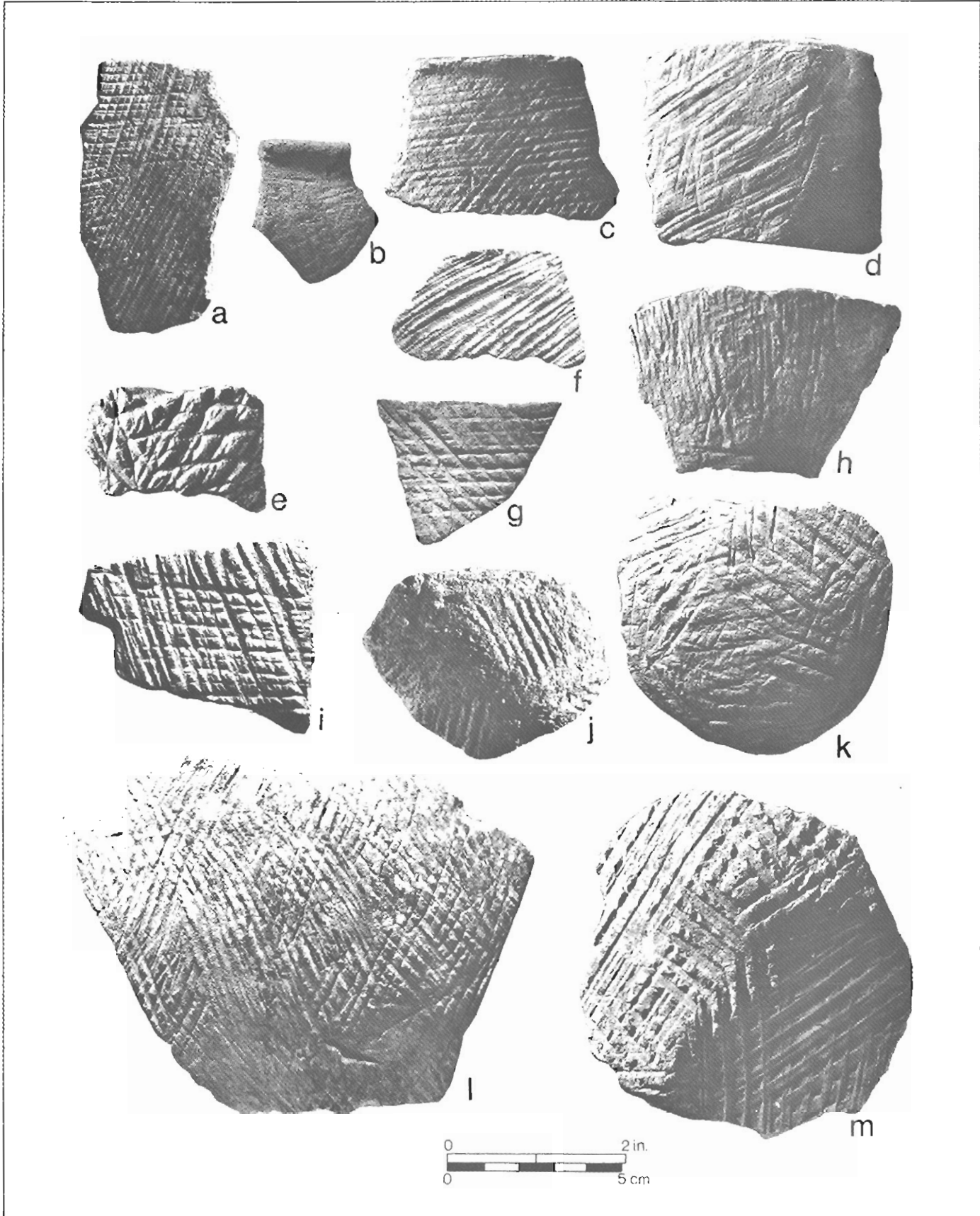


FIGURE 3. Santee Simple Stamped sherds from Mattassee Lake. Sherds j, k, and m are bases.

their traditional meaning. The primary rule for type classification is the sortability, or discreteness of the materials being typed. Varieties, in contrast, reflecting local expressions of the type, intergrade with one another. In the lower Santee River sequence several local types have been relegated to varieties because they did not meet the rule of sortability. Types in South's (1960, 1976) clay/grog tempered Hanover series, for example, which cannot be reliably sorted from clay/grog tempered Wilmington series types on a sherd by sherd basis, are reported as varieties of Wilmington types.

Use of the type variety system follows several basic ground rules. Following Phillips (1970: 26-27), these are (1) sortability, (2) utility and, (3) continuity:

(1) Sortability. Types should be based primarily on criteria that can be identified on sherds of average size, i.e., on features of paste, surface and decorative technique.... From this it follows that types are expected to be sortable. The outstanding characteristic of varieties, on the other hand, as local or temporal expressions of the type, is that they intergrade.... The rule of sortability therefore does not apply to varieties....

(2) Utility. There is not sense in setting up varieties just to fill out the classification....

(3) Continuity. No limits can be put on the areal and temporal distribution of pottery types. It is conceivable that a given type might appear in widely separated areas.... The usefulness of varieties, on the other hand,

depends on judicious limitation in both dimensions.... (Phillips 1970: 26-27).

Following Phillips' (1970) example with lower Mississippi Valley pottery, each variety at Mattassee Lake was described employing the following major headings: Background, Sorting Criteria, Distribution, Chronological Position, and Documentation. These descriptions are included in the final excavation report, under the "Chronological Roster of Types and Varieties in the Mattassee Lake/Lower Santee River Cultural Sequence" (Anderson et al. 1982: 246-319). Readers are directed to that volume for a comprehensive discussion of each ware found at these sites.

The ceramic sequence from the Mattassee Lake sites is given in Figure 1. The position of specific wares over time is documented using a series of period and phase categories. Period terminology and absolute chronology closely follow Griffin's (1967) overview article on eastern North American archaeology, while the phase designations accommodate perceived groupings of local sites, ceramics, and other artifacts that are inferred to reflect aboriginal cultural entities. Precise agreement with other local sequences (e.g., DePratter 1979; Phelps 1981) is not intended. The chart specifically reflects artifacts and events along the lower Santee River, and should not be rigorously applied too far afield.

General Physical Characteristics
of the Mattassee Lake Ceramic
Assemblage: A Brief Commentary

Unambiguous temporally and/or taxonomically sensitive inclusions

in the Mattassee Lake assemblage included fiber lacunae (characteristic of the Stallings wares), clay/grog (characteristic of both the Refuge and Wilmington wares), and coarse sand/grit (characteristic of the Yadkin-like wares). Differences in paste, in fact, proved to be the only reliable method for sorting the Wilmington, Cape Fear, and Yadkin-like wares recovered on the terrace, all of which were characterized by virtually identical fabric impressed and cord marked surface finishes.

A shift from predominantly incurvate to predominantly straight or excurvate vessel assemblages was evident from the Thom's Creek to the Refuge assemblages, a change that was maintained throughout the ensuing Woodland and Mississippian wares. While incurvate rims dominated the Thom's Creek assemblage, they were a distinct minority in Refuge, Deptford, and other succeeding wares (Anderson et al. 1982: 228-234). This shift in vessel form, occurring at the transition from the Late Archaic to the Early Woodland, may reflect the major changes in subsistence and settlement strategies believed to be occurring at this time (see Stoltman 1972, 1974; DePratter 1977; Trinkley 1980b). Exactly what this shift in vessel form may signify is still unknown, although it may reflect a change in food storage or preparation procedures, or possibly in the nature of the foods processed themselves.

Conclusions

The analyses of ceramic artifacts from the Mattassee Lake sites was directed primarily toward questions of classification and chronology, necessitated by the absence of

all but the most general of outlines for the identification and dating of many local ceramics. Detailed stratigraphic and classificatory analyses were undertaken and used to advance an initial ceramic sequence for the lower Santee River. Through the use of type-variety classification, coupled with extensive descriptive and comparative analyses, the terrace sequence has been related to sequences defined from elsewhere in the region, most notably along the lower Savannah River and in coastal North Carolina. A shift from predominantly carved paddle stamping to predominantly wrapped paddle stamping is evident during the Early and Middle Woodland, followed by a return to carved paddle stamping in the later Woodland and Mississippian periods. These shifts have often been interpreted as reflecting population movements, or intrusions, from areas to the north or south, although the dynamics of the situation remain largely unknown. The earliest ceramics are the punctated wares of the Stallings, Thom's Creek, and Refuge series, followed by the cord and fabric impressed Wilmington wares, and the carved paddle stamped Deptford wares. By the later Woodland, sites along the lower Santee River are characterized by first fabric and cord marked ceramics, and then by simple stamped ceramics. The simple stamped (Santee) material continues into the Mississippian period, when Savannah and Pee Dee/Lamar complicated stamped ceramics appear across much of South Carolina.