South Carolina Antiquities

Volume 43

Jodi A. Barnes, Editor

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BOOK REVIEWS

Letter from the Editor

Jodi A. Barnes

Great things are happening in South Carolina archaeology. This year's issue clearly demonstrates some of the exciting projects happening throughout the state. I'd like to thank all of the contributors for making this such a robust and interesting issue of *South Carolina Antiquities*. From work on Contact period ceramics, to the analysis of a chert flake tool assemblage, this volume demonstrates the various methods archaeologists are utilitizing to study South Carolina past. From the ongoing work at the Edgefield Pottery District, to the study of an enslaved cemetery at Historic Brattonsville and an African American Beach in Horry County, the authors in this volume, are asking new questions and developing new ways to interpret and preserve South Carolina's rich heritage. The variety of essays and updates on current projects demonstrate the importance of understanding and protecting South Carolina's archaeological and historical resources.

South Carolina Antiquities has been going through some changes since I became editor in 2010. Linda Toro laid out the journal in InDesign in 2010. I had never used InDesign prior to this and I apologize for the errors that occurred from my inexperience. Thanks to Stacey Young for helping me proofread this issue. I have been working to include a number of books for review. There is a list of books available for review on the ASSC website (http://www.assc.net/publications/sc-antiquities). We regularly receive new books, so check back. I also included the Notes from the Field section to the journal. This is for shorter articles that update readers of *South Carolina Antiquities* about ongoing research or outreach projects or interesting finds. We are always accepting articles. This year, Linda Toro re-designed the cover of the journal, which I think looks great. The cover photograph will change annually, so please consider submitting a photograph to be considered for next year's issue.

I mentioned the errors in the 2010 issues. These included:

For Douglas Sain's article, Clovis Blade Technology at the Topper Site (38AL23), the incorrect captions were placed on "A" and "B" of Figure 4 and Figures 6 and 7 were the same photograph. See page 101-102.

Also in the In Memoriam, Remembering the Contributions of Kevin H. Eberhard to the Field of Archaeology, words were omitted from Mark Brooks's section. See page 103.

Again, I apologize for these errors. The revised pages are included at the end of this issue.

If this is your first time reading *South Carolina Antiquties*, please consider becoming a member of the Archaeological Society of South Carolina. If you have yet to contribute to the journal, please submit an article in 2012. The Archaeological Society of South Carolina and this journal can only exist with your help.

Revisiting the Ashley-series: A Quantitative Analysis of a Contact-period Household Ceramic Assemblage

Jon Bernard Marcoux, Brent Lansdell, and Eric C. Poplin

Punctuated by contact with Europeans, outbreaks of disease, and violent slave raids from hostile Indian groups, the decades bracketing the founding of Charles Town in 1670 mark an incredibly pivotal time for Indian communities settled along the central South Carolina coast. Indeed, this period saw the disappearance of virtually all local Indian groups from the historical record. While local groups were doubtless crucial players in the early history of the South Carolina colony, we know very little about who these folks were or what daily life was like in their communities. In this paper, we begin to address this gap by presenting an analytical and chronological framework for studying the pottery made by Contact-period Indian communities around Charleston Harbor (Figure 1). Focusing on the ceramic assemblage from 38BK1633, a site containing a relatively brief 17th-century household occupation, we offer a detailed description of Ashley-series surface treatments and vessel forms. We also suggest some temporal changes within the Ashley series that are derived from multivariate frequency seriation and are corroborated with radiocarbon assays.

Native American Communities in the Charleston Harbor Area

By virtue of the constraints imposed by historical (i.e., European written) records, our current understanding of the Contact period along the South Carolina coast is heavily biased toward the decades following the founding of Charles Town. Waddell (1980) summarized the scant historic record from this early period along coastal South Carolina. He identified 19 distinct groups living between the mouth of the Santee River and the mouth of the Savannah River at the beginning of the 17th century (Waddell 1980). These groups, which included the Coosaw, Kiawah, Etiwan, and Sewee "tribes" near Daniel Island, apparently lived in small, politically and socially autonomous groups that may have earlier been under the aegis of the paramount chiefdom of Cofitachequi, the dominant Mississippian polity in South Carolina (Anderson and Logan 1981). The Coosaw inhabited the area to the north and west along the Ashley River. The Kiawah apparently were residing at Albemarle Point and along the lower reaches of the Ashley River in 1670, but gave their settlement to the English colonists and moved to Kiawah Island; in the early 18th century, they moved south of the Combahee River (Swanton 1952). The Etiwans were mainly settled on or near Daniel Island, but their range extended to the head of the Cooper River. The territory of the Sewee met the territory of the Etiwan high up the Cooper and extended to the north as far as the Santee River (Orvin 1973).

Because we are limited to a relatively small number of pre-1670 Spanish and English accounts of the region, our understanding of local Native American lifeways and material culture prior to the founding of Charles Town must rely more heavily on archaeology. Based on analogy to late prehistoric Mississippian groups, we think that the communities around Charleston Harbor practiced a semi-sedentary seasonal subsistence strategy that included the exploitation of both wild and domesticated foods. Some have suggested that the soils of inland river valleys along the coast were unsuitable for large-scale agriculture (Crook 1986; Larson 1980). Consequently, coastal Mississippian groups are argued to have migrated seasonally to different wild resource areas as an alternative settlement/subsistence strategy. This strategy was characterized by summer-early fall aggregation in villages for planting and harvesting domesticates and dispersal into smaller one- to three-family settlements for the remainder of the year (Waddell 1980). More recent investigations of food remains from homesteads and farmsteads (Keene 2004) and bioarchaeological data (Hutchinson et al. 1998) from

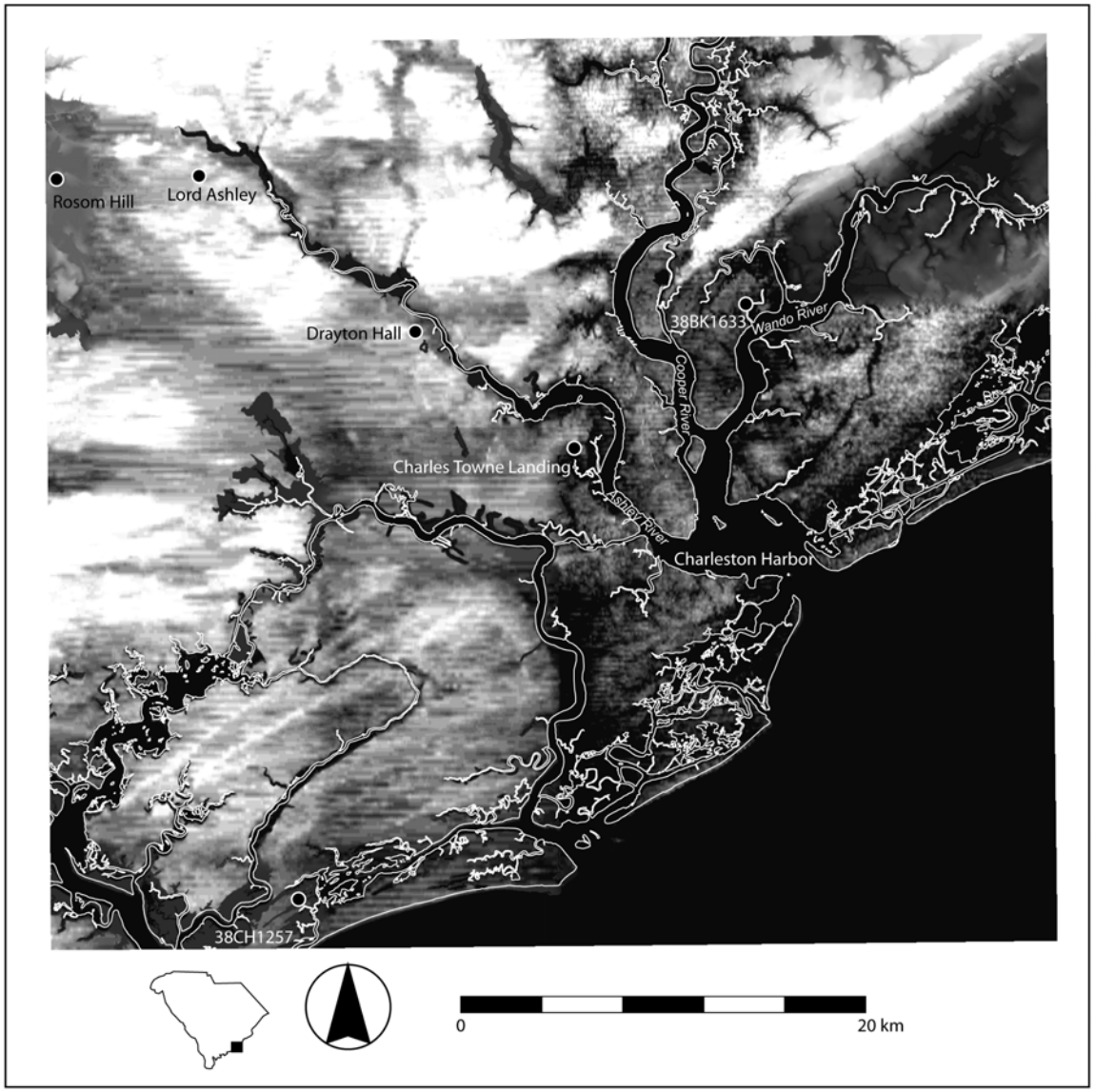

Figure 1. Map depicting the Charleston Harbor and archaeological sites discussed in the text.

sites in Florida and Georgia have demonstrated that wild resources comprised a significant part of the coastal Mississippian diet.

Much less is currently known about the material culture of groups living around the Charleston Harbor during the 17th century (Figure 1). The Contact-period occupation at the Charles Towne Landing site (38CH1) provides the most well known assemblage (South 2002). This assemblage, which is derived from three Ashley phase pit features located approximately 100 meters northeast of the ceremonial center, consists primarily of pottery, along with four clay pipe fragments and a few whelk and bone tools (South 2002:259-261). Absent from these pits were any European artifacts such as iron tools or glass beads. South (2002:256) reports a single radiocarbon date of A.D. 1659 to 1702 associated with one of the Ashley phase features, which he argues fits with his belief that the Ashley pottery series spans from A.D. 1650 to 1725.

The corpus of Ashley-phase artifacts from other sites is scant at best. Anderson et al. (1982) identified a small sample of 36 complicated stamped sherds in the upper levels of excavation units at the Mattassee Lake sites. They attributed these sherds to the Ashley-series based on South's (1973) original definition. Trinkley (1999:31-44) identified a portion of a rectangular structure and one pit feature associated with the Ashley pottery on Seabrook Island (38CH1257). A total of 12 Ashley sherds was recovered from the feature along with two pipe fragments. The

feature also contained a significant number of peach pits and returned a conventional radiocarbon date of A.D. 1645 to1670 (Trinkley 1999:54).

In a recent paper, we present preliminary ceramic data from a number of late 17th and early 18th-century contexts in the area including the Lord Ashley settlement, Drayton Hall Plantation, and three planter settlements located on Rosom Hill between the Edisto and Ashley rivers (Lansdell and Marcoux 2010). We find an incredible amount of variability in temper and surface treatment among these assemblages, which are very different from a typical sand-tempered complicated stamped Ashley phase assemblage. This suggests that during the decades immediately following the founding of Charles Town local Native American potting traditions underwent tremendous changes and pottery made by Native American groups elsewhere in the southeast, or the potters themselves, were being transported to the area. Given that this process appears to have occurred in the short span of a single generation, the ceramic assemblage from 38BK1633 becomes a crucial benchmark for measuring the tempo and degree of change that occurred in local potting traditions during the late 17th century.

The Ashley Pottery Series

The Ashley series was first defined by Stanley South (1973) based on pottery assemblages recovered from three pit features at the Charles Towne Landing site. As chronicled in South's (2002:248-250) monograph on the site, the distinct characteristics of Ashley-series assemblages include the dominance of bold complicated paddle stamping, consisting of very wide lands and grooves, and the presence of carelessly executed punctations and pinched or stylus notched appliqué rimstrips on vessels. South defined four types in the series including Ashley Complicated Stamped, Ashley Simple Stamped, Ashley Burnished, and Ashley Corncob Impressed. South also noted the appearance of corncob impressing and the significant increase in simple stamping and burnishing in the Ashley series. As we will discuss later, an increase in simple stamping does appear to be a good chronological marker.

Comparing the surface treatments and rim elaborations of this pottery to that recovered from features associated with an earlier 14th-century Mississippian occupation at the site, South (2002:245-246) noted what he called "considerable degeneration" in manufacturing and decorative techniques. Indeed, as others researchers have noted (e.g., Anderson et al. 1982; South 2002; Trinkley 1981) Mississippian-period pottery from the area (vexingly called by various names such as the Charles Towne Series, Savannah, Pee Dee, and Jeremy) can be characterized by finely executed complex stamped motifs and the addition of well-executed rim elaborations including rosettes, large riveted nodes, and reed punctations. While both the Ashley-series and earlier Mississippian-period pottery assemblages are sand-tempered and are dominated by complicated stamping, the lack of these attributes in Ashley phase assemblages makes distinguishing the two quite easy with a large enough sample.

In the years since South's excavations, surprisingly little research attention has been paid to Contact-period archaeology around the Charleston Harbor. As mentioned above, Anderson and co-authors (1982:314-317) offer a type description for Ashley Complicated Stamped. This type is basically set up as a residual category for bold, sloppily executed complicated stamped sherds that do not fit the sorting criteria of Mississippian-period Savannah or Pee Dee series. As stated above, the total sample included just 36 sherds, and these were recovered from general excavation contexts not features. Fortunately, the gap in our knowledge about Contact-period pottery around Charleston Harbor is rapidly dwindling thanks to the ongoing projects of University of South Carolina graduate students Brooke Brilliant (2011) and James Nyman (2011). We eagerly look forward to seeing the results of their research, which will doubtlessly improve the interpretations offered here.

38BK1633: An Ashley Phase Household Occupation

Coinciding with this renewed interest is the expansion of the Contact-period dataset resulting from cultural resource management excavations at Native American communities around Charleston Harbor. Site 38BK1633, whose excavation was made necessary by the construction of a residential development, presents us with crucial information with which we can begin to reconstruct the lifeways of local Contact period groups (Figure 1) (Lansdell et al. 2005; Lansdell et al. 2008).

The excavations at 38BK1633 were originally focused on the 18th- to 19th-century occupation including the Moonham Plantation main house, slave quarters, and outbuildings. Though earlier testing excavations at the site had identified one Contact-period pit feature, the extent of this occupational component was not fully appreciated. During the mechanical stripping of the plow zone around the Moonham main house, however, excavators identified several soil stains and posthole patterns clearly associated with an earlier Native American occupation. These intact deposits and the identification of a burial constituted late discovery finds that necessitated additional archaeological investigations. The subsequent excavations included the mechanical excavation of 3,500 m2.

This effort exposed a total of 446 Contact-period features (Figure 2). The majority of these consist of

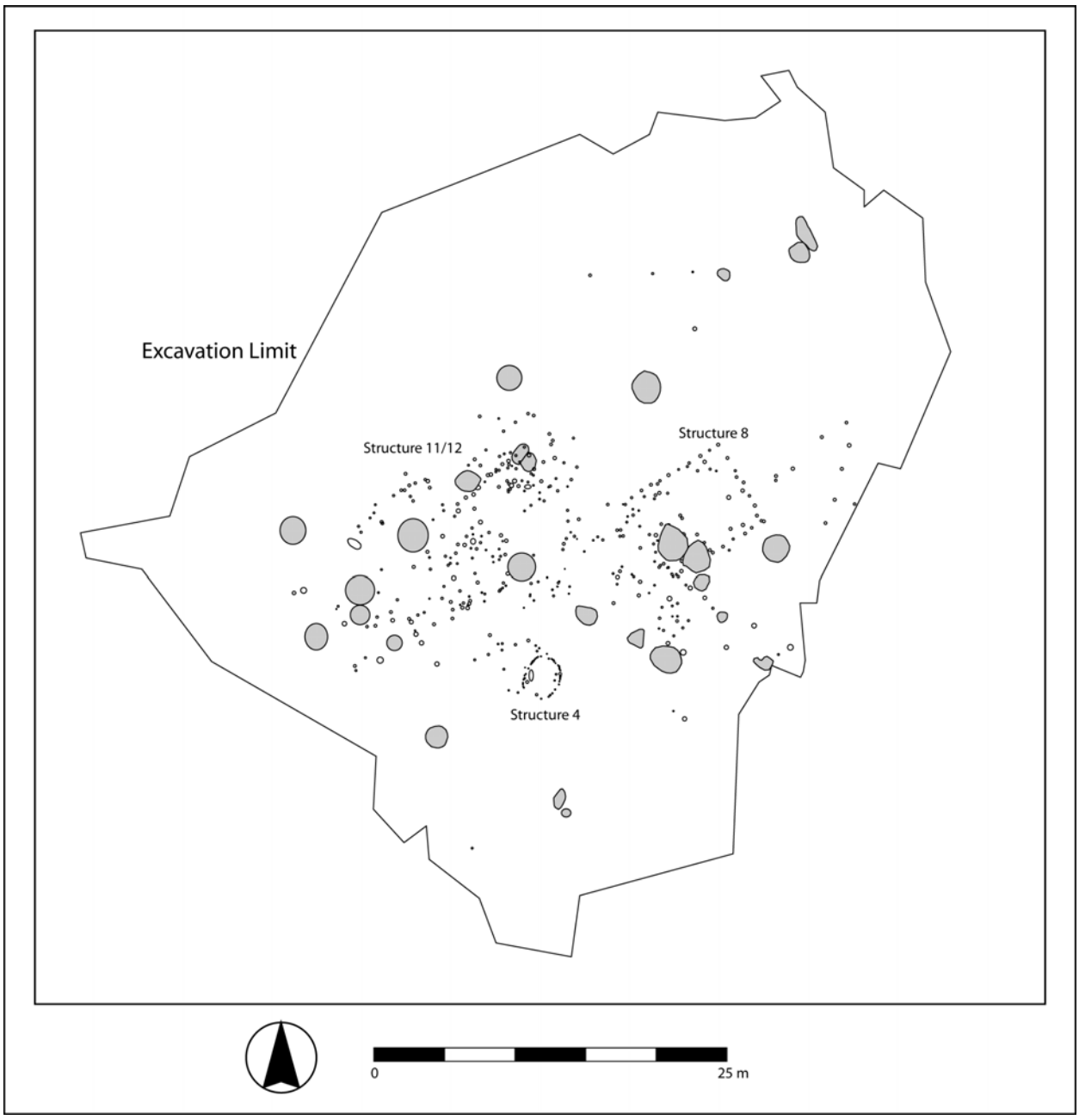

Figure 2. Site plan of 38BK1633.

postholes, from which two clear structure patterns, a house (Structure 8) and a probable storage structure (Structure 4), and one large palimpsest of posts likely representing a rebuilt house (Structure 11/12) were discerned. The remainder of the features includes thirteen refuse-filled pits and one burial pit. Based on pottery seriation, radiocarbon dating, the presence of European cultigens (peaches and cowpeas) but absence of European-made artifacts, and the superpositioning of postholes and pits, we believe that the Contact-period component at this site consists of a relatively brief household occupation during the period from A.D. 1590–1670.

Analysis of Ashley Series Pottery from 38BK1633

Excavations at 38BK1633 resulted in the recovery of 1,126 Ashley-series potsherds greater than 1/2-inch in size (Table 1). In general, this assemblage follows the series description offered by South (1973, 2002) and broadly reflects the late prehistoric and protohistoric South Appalachian regional potting tradition associated with the Lamar culture

Table 1. Pottery assemblage recovered from 38BK1633.

Surface Treatment	n	%
Curvilinear Complicated Stamped	362	32.1
Linear Stamped Indeterminate	169	15.0
Stamped Indeterminate	153	13.6
Rectilinear Complicated Stamped	134	11.9
Plain	123	10.9
Simple Stamped	58	5.2
Complicated Stamped	40	3.6
Burnished	34	3.0
Incised	20	1.8
Cord Marked	13	1.2
Shell Scraped	12	1.1
Cob Marked	8	0.7
Total	1126	

(Hally 1994; Williams and Shapiro 1990). That is, the vast majority of sherds in the sample (over 80%) are stamped with carved wooden paddles and the vessel assemblage includes globular jars and a smaller number of bowls and cazuelas.

With regard to surface treatment, there has been little consistency in the way that carved paddle stamped pottery has been recorded and analyzed in Lamar pottery assemblages like that from 38BK1633. Because this surface treatment makes up such a large percentage of the assemblage and because variability in this surface treatment may be temporally sensitive, these differences in classification method can become serious impediments to constructing a robust ceramic chronology.

The major differences among current classification methods result from the way each method deals with the fact that the entire design field of a carved paddle is often not present on a single sherd. For example, how does one classify a sherd that features a stamped impression consisting solely of parallel lines? In one classification system, this sherd would be classified as "simple stamped," in another system, it would be called "rectilinear complicated stamped," and in yet another classification system, it would be called "linear stamped." Given the possibility that the relative percentages of sherds bearing curvilinear complicated stamped motifs and rectilinear complicated stamped motifs change through time, these three classificatory schemas will give different chronological estimates to the same assemblage. Recognizing the promise of carved paddle stamped pottery to be a powerful component in constructing ceramic chronologies, we argue for a classificatory system that strives for the greatest specificity while at the same time acknowledges the fragmentary nature of potsherd samples.

Fortunately, this system has already been developed and employed by Riggs, (Shumate et al. 2005), Rodning (2004), and Marcoux (2010) for Cherokee pottery. With relatively minor differences, ours is a hierarchical classification system for carved paddle stamped pottery that can be thought of as progressing from least to most specific given the size and surface conditions of each sherd. The least specific group in the system is called "Stamped Indeterminate." This group consists of sherds exhibiting evidence of being stamped with carved wooden paddles but whose surfaces had been smoothed over or were otherwise modified precluding the identification of any decorative pattern (e.g., check stamped, simple stamped, complicated stamped).

Moving up the hierarchy, the next group is called "Indeterminate Linear Stamped." Sherds belonging to this group bear the impressions of a series of straight parallel lines (2-5 mm in width) formed by the lands and groves of a carved wooden paddle. These lines could have been part of paddle carved solely with a series of straight parallel lines (i.e., simple stamped), or they might represent a portion of a complex rectilinear or curvilinear motif. Because the fragmentary nature of the sherds makes distinguishing among these motifs impossible, analytically these sherds are all considered to be part of the same group. Simple stamping is a rather difficult surface treatment to identify with certainty in samples dominated by small sherds. In keeping with the conservative structure of the hierarchical paddle stamped classification method, we only identify sherds as simple stamped when two abutting edges of a single paddle are visible. Consequently, it is likely that the "linear stamped indeterminate " category contains some simple stamped sherds and that simple stamped sherds are underrepresented in this analysis.

The next category, which is called "Complicated Stamped," includes sherds that bear impressions of multiple adjoining lines whose junctures form distinct angles. In this case, the analyst knows that the potter used a paddle bearing a complex motif; however, the sherds in this category are too small to determine whether the motif was curvilinear or rectilinear. The most specific analytical groups are "Curvilinear Complicated Stamped" and "Rectilinear Complicated Stamped." These groups include sherds featuring multiple parallel or intersecting curved lines in the case of the former, and multiple intersecting straight lines in the latter case. In most cases, the small size of sherds makes identifying any particular motif very difficult.

Figure 3 is a histogram depicting the relative frequencies of surface treatments in the 38BK1633 sample. Composing over 30 percent of the assemblage, the dominant surface treatment in the 38BK1633 sample is curvilinear

complicated stamping (Figure 4a-d). The decorative motif could not be identified on most sherds. On sherds where motif could be identified, concentric circles are by far the most numerous (Table 2). Sherds identified as Linear Stamped Indeterminate are second in frequency, totaling 15 percent of the assemblage (Table 1). Rectilinear complicated stamped sherds comprise approximately 12 percent of the assemblage (Figure 4h-i). Identified rectilinear motifs in the 38BK1633 assemblage include a distinct form of line-block with check-stamp surround, concentric squares, line-block, herringbone, and panel (Table 2). Incising was very rare in the assemblage totaling less than two percent (Figure 4j-k). Like other Lamar assemblages, incising appears to be restricted to bowls and cazuelas. Incised motifs include nested chevrons, scrolls, and nested semicircles. As with the Charles Towne Landing site, corncob impressing is present, although it totals less than one percent in the 38BK1633 assemblage. Other minority surface treatments include plain, burnished, cord marked, and shell scraped.

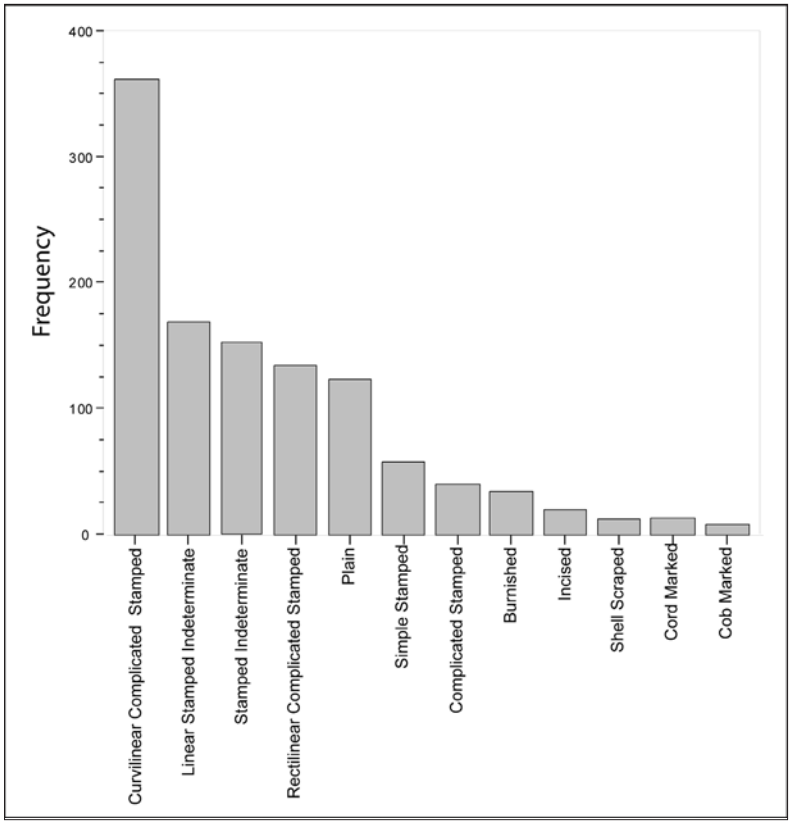

Figure 3. Histogram depicting the relative frequencies of surface treatments in the 38BK1633 assemblage.

Table 2. Complicated stamped decorative motifs in the 38BK1633 assemblage.

Surface Treatment	Motif	n	%
Curvilinear Complicate Stamped	Concentric circle	45	12.4
	Figure "9" and "P" Scrolls	5	1.4
	Figure "8"	1	0.3
	Indeterminate	311	85.9
	Total	362	
Rectilinear Complicated Stamped			
	Line block w/ check stamp	36	26.9
	Concentric squares	11	8.2
	Line block	8	6.0
	Herringbone	4	3.0
	Panel	3	2.2
	Indeterminate	72	53.7
	Total	134	

Our analysis of the 38BK1633 pottery assemblage also includes a study of vessel form. Based on similarities in morphology, our definitions of vessel classes are borrowed from Boudreaux's (2005, 2010) work with assemblages from the Town Creek site in North Carolina. In order to provide a relatively unbiased basis for quantitative comparison, our analyses use minimum number of vessel (MNV) estimates based on counts of unique rim sherds. This method results in the most conservative vessel count estimates reflecting the composition of the vessel assemblages that were used and discarded by the households at 38BK1633. Approximately 65 percent of the vessel assemblage at 38BK1633 is comprised of utilitarian jars (Table 3). Two forms of jar are present in the vessel assemblage. Open jars are tall vessels with excurvate rims and relatively straight sides (Figure 5a-c). Restricted jars are also tall and have excurvate rims, but these vessels are recurvate in profile rather than having straight sides (Figure 5d-f). The range of orifice diameters among restricted jars in the 38BK1633 sample is 16 cm-45 cm (Figure 6). The unimodal distribution of these estimates suggests that jars were made in a rather large range of sizes but lacked well-defined size classes. Serving wares compose approximately 25 percent of the vessel assemblage at 38BK1633. These include simple bowls, restricted orifice bowls, a single cazuela, and a single small vessel that we classify

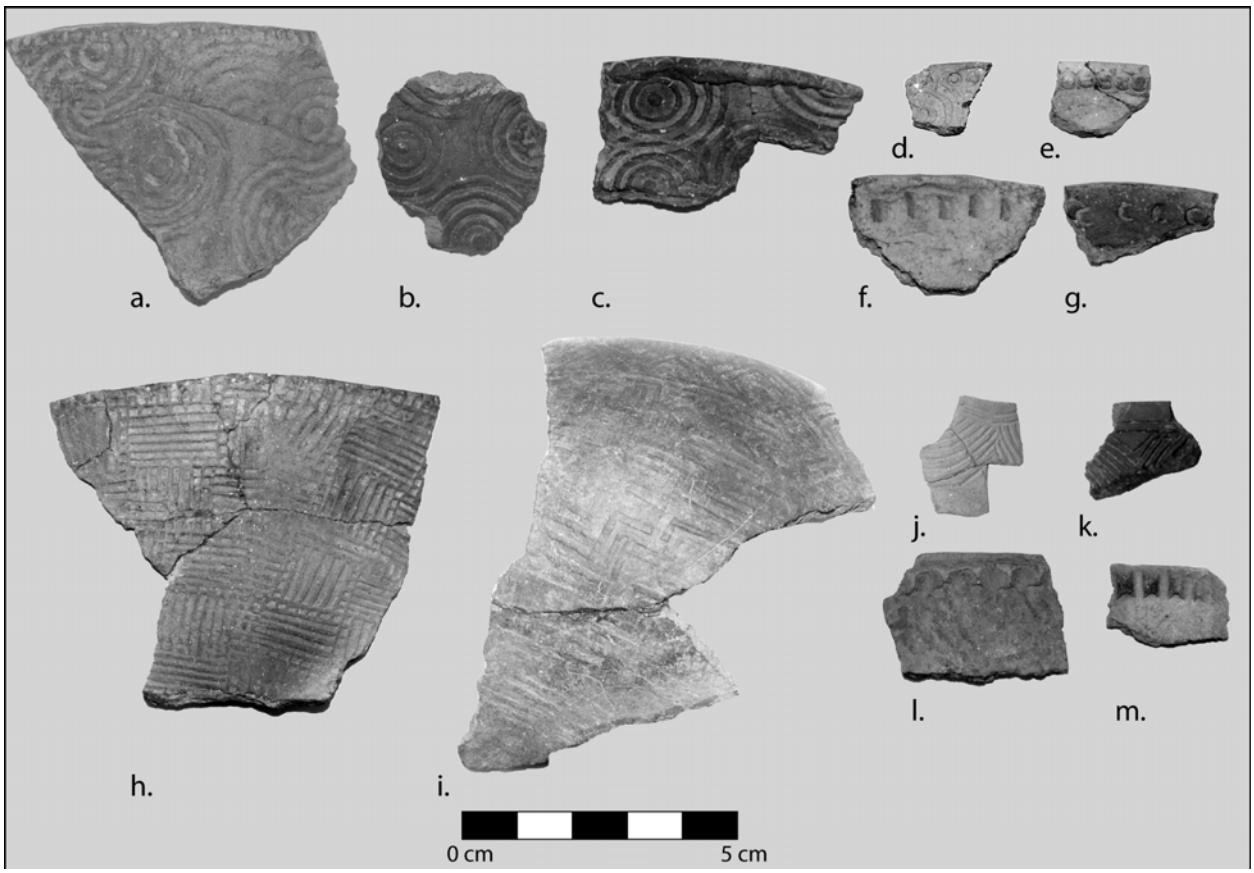

Figure 4. Diagnostic pottery recovered from 38BK1633: a) Curvilinear complicated stamped jar rim (figure "8" motif) with stylus notched lip; b) Curvilinear complicated stamped (concentric circles motif); c) Curvilinear complicated stamped jar rim (concentric circles motif) with direct half reed punctated lip; d) Curvilinear complicated stamped jar rim with direct full reed punctated lip and rosette scar; e) Plain jar rim with direct full reed punctated lip; f) Indeterminate stamped jar rim with oblique dowel punctated lip; g) Curvilinear complicated stamped jar rim with oblique reed punctated lip; h) Rectilinear complicated stamped jar rim (line block with check surround motif) with stylus notched lip; i) Rectilinear complicated stamped simple bowl (herringbone motif); j) Incised cazuela rim (nested semicircles motif); k) Incised restricted orifice bowl (nested chevrons motif); l) Complicated stamped jar rim with pinched appliqué rimstrip; m) Indeterminate stamped jar rim with stylus notched appliqué rimstrip.

Table 3. Vessel forms in the 38BK1633 assemblage.

Vessel Form	n	%
Indeterminate Jar	29	26.9
Open Jar	21	19.4
Restricted Jar	19	17.6
Simple Bowl	17	15.7
Restricted Orifice Bowl	7	6.5
Cazuela	1	0.9
Cup	1	0.9
Undetermined	13	12.0
Total	108	

as a cup (Figure 7). Estimated orifice diameters of bowls in the assemblage range from 6 to 34 cm. This suggests that restricted orifice bowls were also made in a large range of sizes, but the sample size (n = 9) is too small to distinguish any size modes.

Over 50 percent of the Ashley-series vessels, 57 jars and one simple bowl, evince decorative rim attributes. We divide these into six modes (Table 4). One mode involves notching along the lip of the vessel with a rounded stylus (Figure 4a, h). Some vessels have lips punctated with what appears to be a split reed (Figure 4c). Other vessels evince circular punctates just below the lip that are made with full reeds (Figure 4d-e). Another decorative mode includes punctation at an oblique angle using a reed, dowel, or stick (Figure 4f-g). Some rims are modified with the addition of a coil or strip of clay at or near the lip of the vessel. These decorative additions, called appliqué or filleted rimstrips, are either finger pinched or stylus notched (Figure 4l-m). One jar rim evinced the scar from a rosette and another had

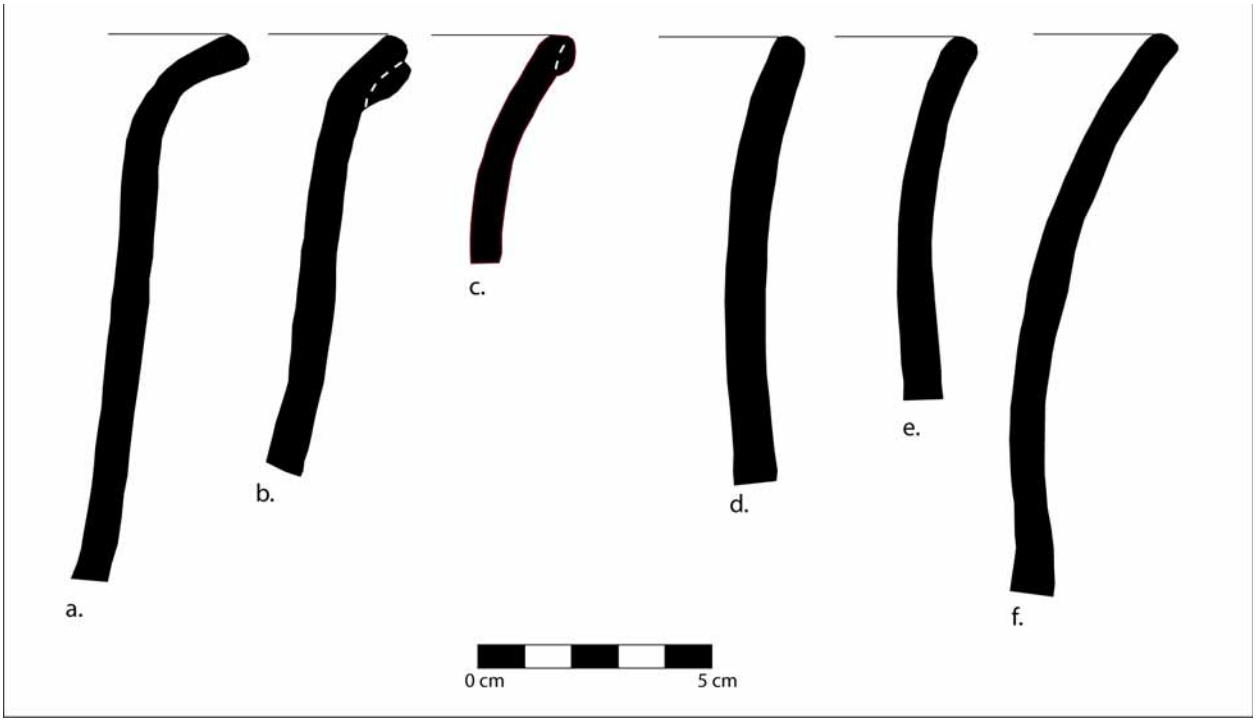

Figure 5. Jars in the 38BK1633 assemblage: a-c) Open jars; d-f) Restricted jars.

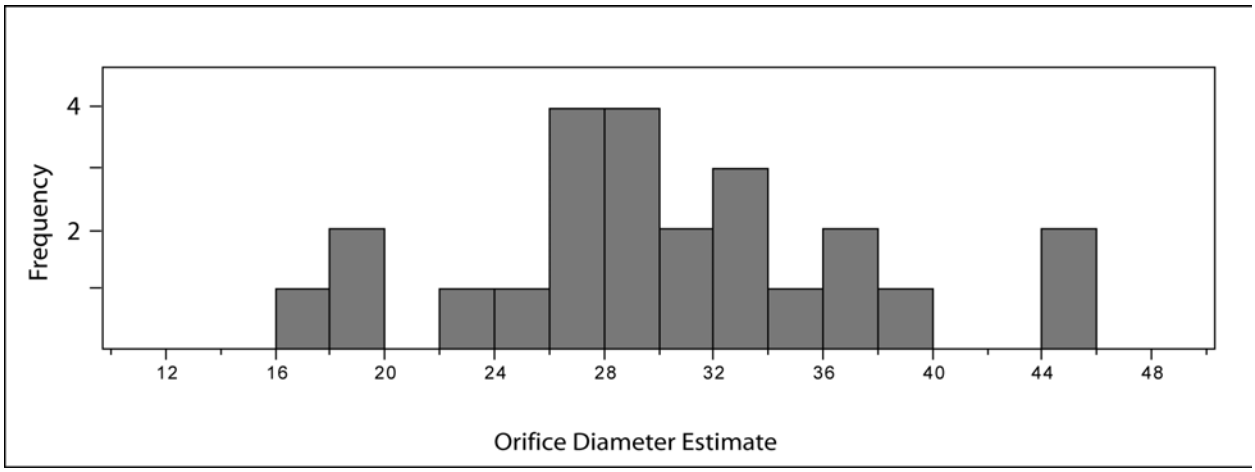

Figure 6. Histogram depicting the distribution of orifice diameter estimates for jars in the 38BK1633 assemblage.

Table 4. Rim embellishments in the 38BK1633 assemblage.

Rim Embellishments	n	%
Stylus Notched Lip	3	5.2
Direct Reed Half Punctate	8	13.8
Direct Reed Full Punctate	4	6.9
Obique Reed/Dowel Punctate	26	44.8
Pinched Appliqué Rimstrip	6	10.3
Stylus Notched Appliqué Rimstrip	9	15.5
Rosettes	2	3.4
Total	58	

two rosettes (Figure 4d). The large riveted nodes that are common on Mississippian-period jars around Charleston Harbor are completely absent from the 38BK1633 assemblage.

A Tentative Chronology for Ashley-series Pottery

The pottery sample recovered from 38BK1633 and a number of radiocarbon assays provide us with substantial data with which to test and refine the temporal place of the Ashley series. In the Southeast, ceramic seriation has historically been the dominant method for establishing chronological order across regions. This has generally

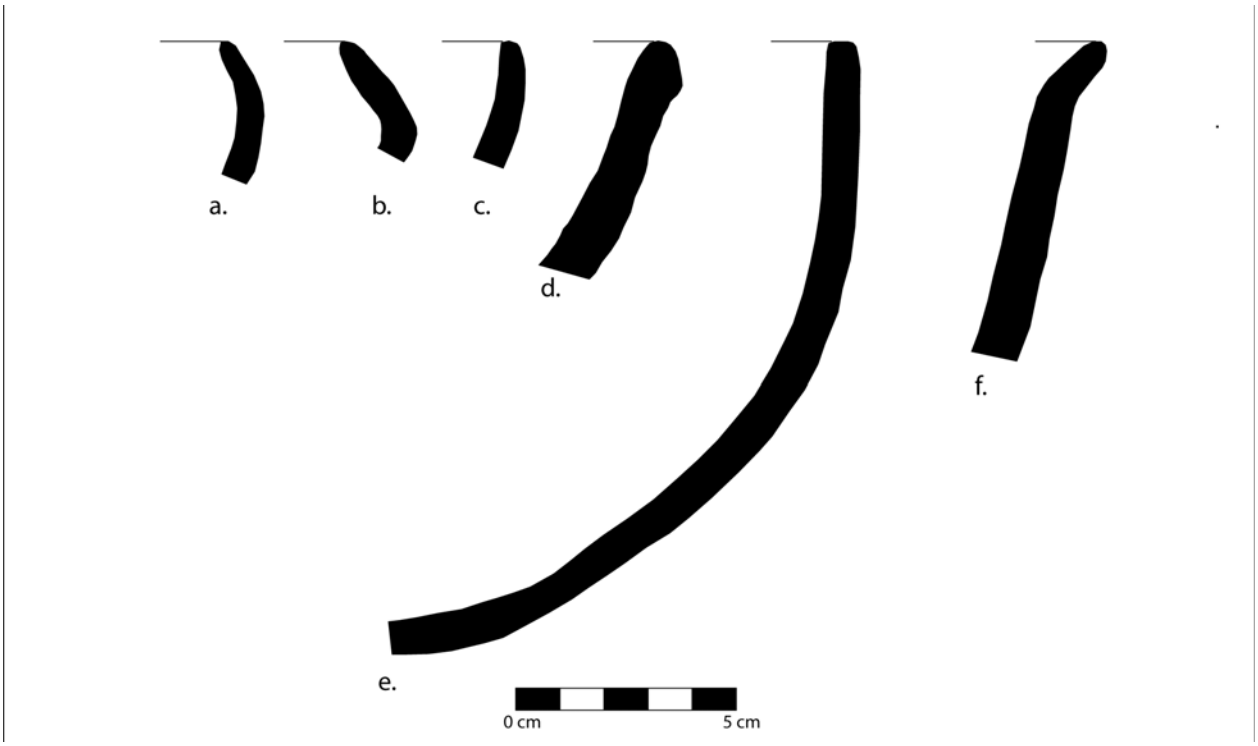

Figure 7. Servingware in the 38BK1633 assemblage: a) Restricted orifice bowl; b) Cazuela; c-e) Simple bowls; f) Cup.

been accomplished though visual frequency seriation with its familiar figures featuring battleship-shaped frequency curves (Dunnell 1970; Phillips et al. 1951). These curves are thought to represent the "popularity principal," which can be used to gauge relative time based upon the waxing and waning of relative percentages (as a proxy for popularity). While this method is simple and effective at portraying trends in the data, it can be tremendously time consuming. Consequently, for this project we add an alternative method of seriating ceramic assemblages called correspondence analysis (CA) (Baxter 1994; Shennan 1997).

CA is a multivariate statistical technique that is especially well suited for count-based archaeological data, but one rarely sees discussions of CA in the archaeological literature of North America. CA shares the benefits of the Chi-Square test in that it is non-metric and is resistant to differences in sample sizes. CA provides the analyst with a way to visually explore and present multivariate data by reducing the dimensionality of a data matrix. Using our seriation as an example (Table 5), the data matrix consists of ten ceramic assemblages from particular archaeological contexts (rows) and ten separate pottery types each representing a single dimension of variability (columns). While we could plot the assemblages in terms of the frequencies of two or perhaps three pottery types in the same figure, it would be impossible to simultaneously visualize the ten dimensions that represent the pottery types. CA is an ordination technique that seeks to represent as accurately as possible the relationships between cases (i.e., individual ceramic assemblages) and between variables (i.e., pottery types) using a small number of dimensions. These dimensions can be seen as meta-variables that are comprised of groups of the original variables (in our case pottery types).

How CA reduces the dimensionality of a data matrix is a bit involved, but a brief discussion should suffice to make it clearer (see Baxter 1994 and Shennan 1997 for in-depth discussions). CA can be viewed as a more complex Chi-Square test that compares all of the row profiles of a data matrix and computes the departure of each case (i.e., pottery assemblage) from an average profile. In this case, the average case profile would be a hypothetical pottery assemblage consisting of the average proportions of each pottery type. In the bi-plot produced by CA, the average profiles are represented by the intersection of the x and y-axes. Using simple Chi-square calculations, CA measures both the degree and the direction of departure of each pottery assemblage from the average profile. In interpreting these bi-plots, one can assume that the pottery assemblages located near one another have similar compositions and those located far away from each other have very different compositions. In order to reduce bias associated with small sample size, we restrict the seriation to assemblages from pit features that contained 50 or more sherds. The sample includes the pottery assemblages from nine features at

Table 5. Pottery assemblages included in the correspondence analysis seriation.

	Curvilinear Complicated Stamped		Rectilinear Complicated Stamped		Linear Stamped Indetermi-nate / Simple Stamped		Plain		Stamped Indetermi-nate		Burnished		Complicated Stamped		Incised		Cord Marked		Cob Marked		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	Total
F1139	10	7.0	5	3.5	94	66.2	3	2.1	14	9.9	3	2.1	5	3.5	8	5.6	0	0.0	0	0.0	142
CL-F237	67	31.9	6	2.9	85	40.5	0	0.0	0	0.0	34	16.2	0	0.0	5	2.4	0	0.0	13	6.2	210
F619	25	20.7	15	12.4	27	22.3	28	23.1	16	13.2	4	3.3	4	3.3	2	1.7	0	0.0	0	0.0	121
F1644	15	13.8	33	30.3	18	16.5	10	9.2	23	21.1	6	5.5	1	0.9	1	0.9	1	0.9	1	0.9	109
F1030	14	20.0	17	24.3	9	12.9	9	12.9	11	15.7	3	4.3	4	5.7	1	1.4	1	1.4	1	1.4	70
F1741	36	23.4	35	22.7	13	8.4	18	11.7	28	18.2	6	3.9	9	5.8	3	1.9	5	3.2	1	0.6	154
F1652	18	28.1	11	17.2	6	9.4	8	12.5	11	17.2	4	6.3	2	3.1	3	4.7	0	0.0	1	1.6	64
F890	55	35.3	3	1.9	24	15.4	26	16.7	29	18.6	3	1.9	9	5.8	0	0.0	6	3.8	1	0.6	156
F1187	126	68.5	3	1.6	34	18.5	6	3.3	8	4.3	1	0.5	4	2.2	1	0.5	1	0.5	0	0.0	184
F784	35	70.0	1	2.0	1	2.0	4	8.0	2	4.0	3	6.0	3	6.0	1	2.0	0	0.0	0	0.0	50

38BK1633 (Table 5). We also include the frequency data reported by South (2002:Table 9.2) for Feature 237 at the Charles Towne Landing site.

Figure 8 presents the bi-plot showing the seriation results. The distribution of the ceramic assemblages in Figure 8 has the classic parabola or "twisted one-dimensional object" shape that is the hallmark of chronological seriation using multidimensional techniques (Cowgill 1972; Kendall 1971; Steponaitis 1983). The temporal trend depicted in the figure follows the parabolic curve fitted to the data, with the earliest pottery assemblage associated with Feature 784 and the latest assemblage associated with Feature 1139.

The CA seriation provides an order, but we must still characterize the purported chronological patterns of change in surface treatment that are behind this order. To identify these patterns, we further explore the seriation solution by arranging the assemblages using the classic "Fordian" frequency seriation method (Figure 9). We order the assemblages in the same presumed chronological order determined in the CA seriation. The chronological order of the seriation solution proceeds from earliest at the bottom to latest at the top. The seriation solution presented in the figure portrays the typical monotonic changes in relative frequency that are indicative of ceramic change through time. Three significant temporal patterns are revealed: 1) there is a decrease in the relative frequency of curvilinear complicated stamping through time; 2) there is an initial increase in rectilinear complicated stamping followed by a decrease; and 3) there is an increase in simple stamping through time. Of particular note is the fact that the earliest two pottery assemblages and the latest two pottery assemblages are drastically different from the rest of the sample. In Features 784 and 1187, curvilinear complicated stamping is by far the dominant surface treatment composing approximately 70% of each assemblage. These proportions are much more similar to the composition of assemblages associated with earlier 14th and 15th- century Mississippian groups (Cable et al. 1995; Poplin et al. 1993; South 2002; Trinkley 1981). The two latest features in the seriation, Feature 1139 and Feature 237 from the Charles Towne Landing site, also form a separate group. Curvilinear complicated stamped pottery is a minority type in these features; instead, simple stamping and linear stamped indeterminate pottery make up 66% and 40% of these assemblages respectively. This pattern of change is identical to the pattern described by South (2002:257) in his discussion of the Chicora- and York-ware groups.

By definition, the use of seriation techniques will always result in some order, so we must look for additional evidence to support our argument that the order is chronological. Additional evidence can be found in radiocarbon assays recovered from a number of features at 38BK1633 and from Feature 237 at Charles Town Landing. Investigators submitted a total of 14 samples from 38BK1633 to Beta Analytic, Inc. for radiocarbon dating. Ten samples were submitted for conventional analysis and four samples were submitted for accelerator mass spectrometry [AMS]. Eight pit features were dated using conventional radiocarbon dating methods. The four samples dated with AMS methods were associated with Structures 4, 8, and 11/12. Table 6 presents the conventional radiocarbon dates and calibrated intercept ranges obtained from pit features and structures at 38BK1633 as well as those reported from Feature 237 at the Charles Towne Landing site and Feature 3 at site 38CH1257, the two other published dates from contexts containing Ashley-series pottery (South 2002; Trinkley 1999).

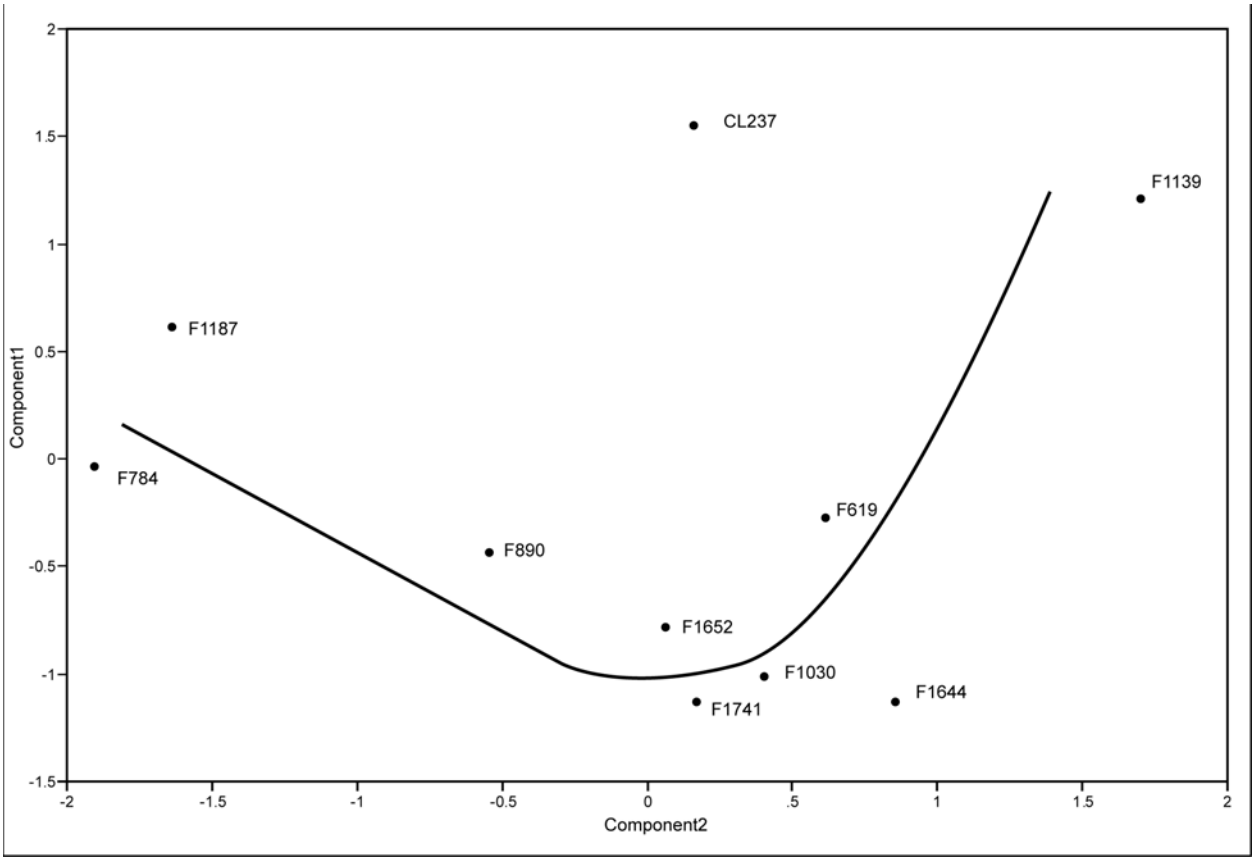

Figure 8. Bi-plot depicting the results of the correspondence analysis seriation conducted pottery assemblages from 38BK1633 and Charles Towne Landing (CL-237).

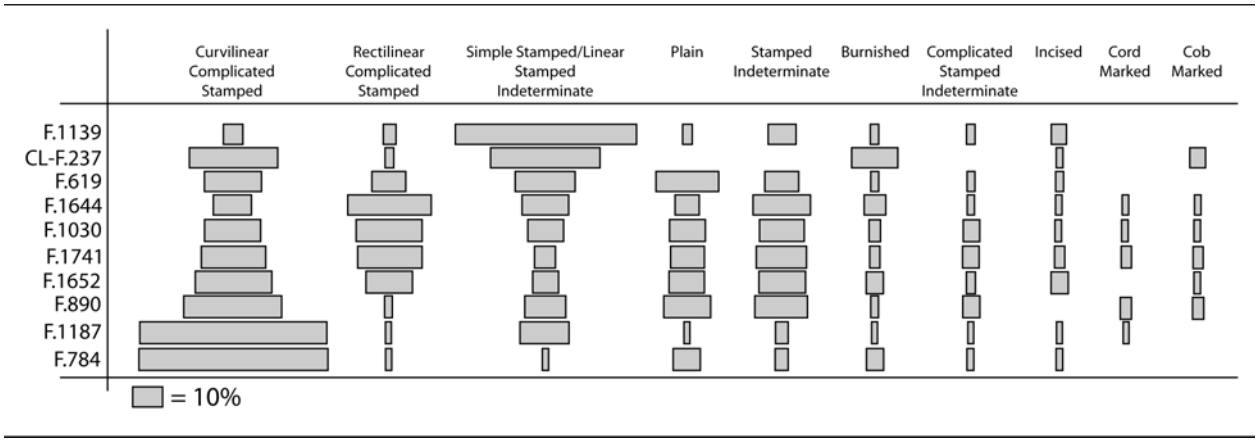

Figure 9. Results of a frequency seriation of ceramic assemblages from 38BK1633 and Charles Towne Landing (CL-F.237).

The process of calibrating the conventional dates is made difficult by the fact that background levels of global atmospheric carbon-14 fluctuated dramatically during the 16th and 17th centuries. These fluctuations are manifested as oscillations in the portion of the radiocarbon calibration curve associated with this period. Thus, a single conventional radiocarbon date corresponds to multiple intercepts along the curve. Fortunately, researchers have devised methods that help deal with multiple intercepts (Bronk Ramsey 1995; Stuiver and Reimer 1993). These methods, which are found in software under the titles OxCal® and Calib®, divide the probability of the calculated date range among the various intercepts and provide a visual means to interpret the distribution of a number of different assays. Figure 10 depicts ten of the radiocarbon assays from 38BK1633 as well as those from Charles Towne Landing

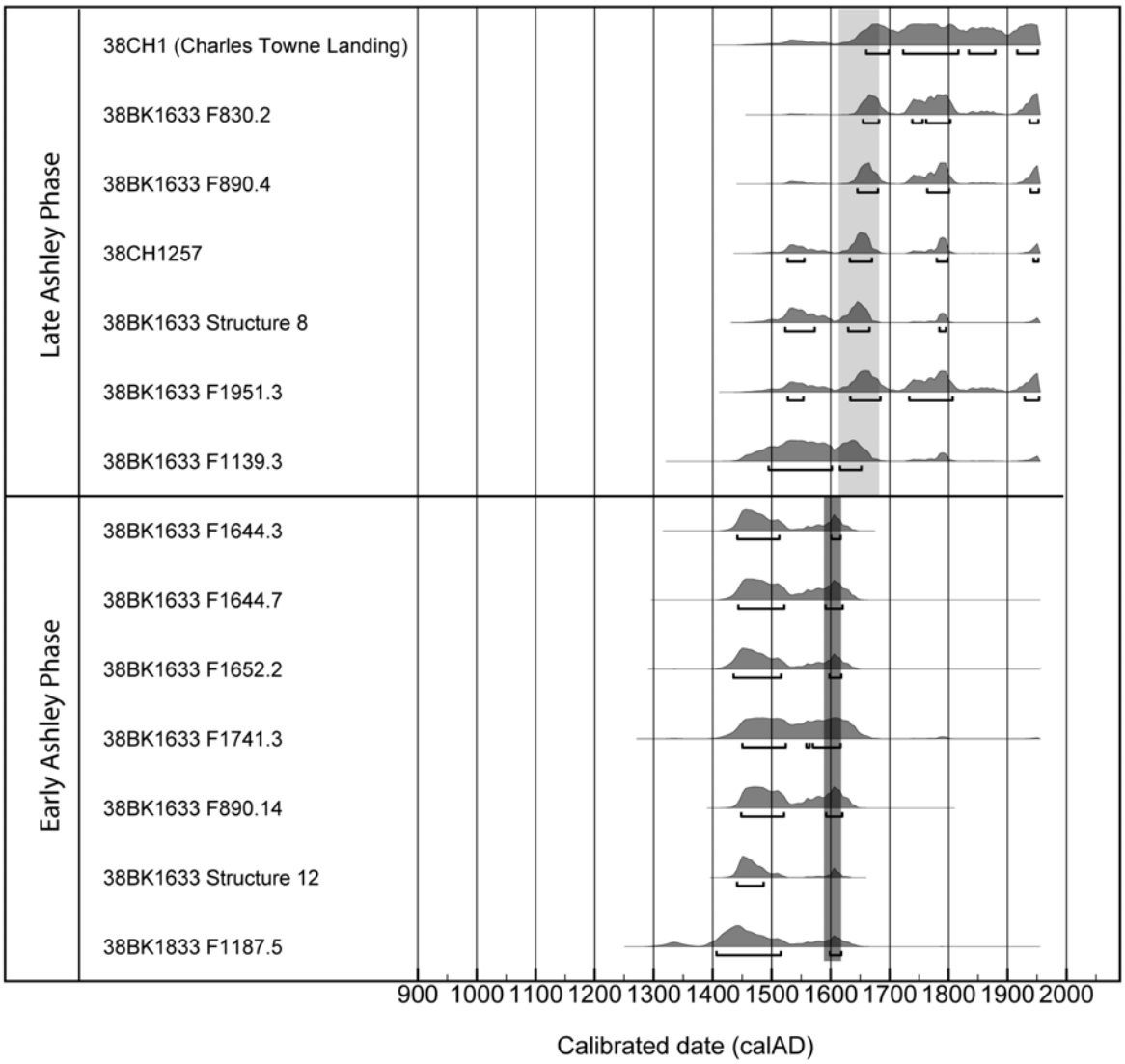

Figure 10. Calibrated radiocarbon assays from contexts at 38BK1633, 38CH1257, and 38CH1 (Charles Towne Landing). Calibration conducted with OxCal v4.0.5 by Bronk Ramsey (2008); r:5 IntCal04 atmospheric curve (Reimer et al. 2004).

and 38CH1257. For each sample, the program OxCal® (Bronk Ramsey 1995, 2001) produces a histogram that depicts the total probability of the calibrated age range (1-Sigma = 0.68) divided among the various intercepts. The specific probability calculated for each intercept and age range is listed in Table 6.

When considered alone, the age ranges boasting the highest probability values do not provide much agreement among the samples. A much clearer pattern emerges, however, when the "overlap" of ranges is considered (the light and dark gray shaded regions in the figure). We argue that the common date range, ca. cal. A.D. 1590-1670, offers the most accurate estimate of the entire occupation span at 38BK1633. The presence of peach pits and cowpeas and the absence of European-made artifacts in features at 38BK1633 lend corroboration to this occupation estimate. The presence of European cultigens signifies an occupation that must postdate ca. A.D. 1540, and one would expect European-made artifacts to be common if occupation at the site post-dated the A.D. 1670 founding of Charles Town less than ten miles to the west. This date range overlaps with South's (2002) most recent chronological placement of Ashley-series ceramics at the Charles Towne Landing site (ca. A.D. 1650-1725) and falls within the range posited by Anderson et al. (1982) (ca. A.D. 1550-1715) based on their investigations of stratified sites along the Santee River.

The occupation estimate of A.D. 1590-1670 can be further broken down into early and late sub-phases, representing material culture changes throughout the occupation of

Table 6. Radiocarbon assays for contexts at 38BK1633, 38CH1 (Charles Towne Landing), and 38CH1257.

Sample Code	Context	Conventional 14C Age (BP)	Calibrated Age Range	Probability
			1-Sigma (cal. A.D.)a	
Beta 191568	Feature 830	200 +/- 40	1650 - 1685	0.183
			1735 - 1805	0.389
			1935 - 1955	0.11
Beta 191569	Feature 890	220 +/- 40	1645 - 1680	0.286
			1760 - 1805	0.389
			1935 - 1955	0.104
Beta 191573	Feature 890	380 +/- 40	1445 - 1525	0.505
			1590 - 1620	0.177
Beta 191570	Feature 1139	300 +/- 60	1490 - 1605	0.506
			1615 - 1655	0.176
Beta 191574	Feature 1187	450 +/- 70	1405 - 1515	0.611
			1595 - 1620	0.071
Beta 191575	Feature 1644	400 +/- 40	1440 - 1515	0.574
			1600 - 1620	0.108
Beta 191576	Feature 1644	390 +/- 50	1440 - 1525	0.513
			1590 - 1620	0.169
Beta 191577	Feature 1652	410 +/- 50	1435 - 1520	0.569
			1595 - 1620	0.113
Beta 191571	Feature 1741	370 +/- 70	1450 - 1525	0.368
			1555 - 1635	0.314
Beta 191572	Feature 1951	230 +/- 60	1525 - 1555	0.07
			1630 - 1685	0.233
			1730 - 1810	0.289
			1925 - 1955	0.091
Beta 191564	Structure 4b	830 +/- 40	1180 - 1260	68.2
Beta 191567	Structure 8 b	270 +/- 40	1520 - 1575	0.317
			1625 - 1670	0.31
			1780 - 1795	0.055
Beta 191566	Structure 11 b	1250 +/- 40	680 - 785	0.606
			790-810	0.076
Beta 191565	Structure 12 b	410 +/- 30	1440 - 1490	0.651
			1590-1620	0.031
Beta 118433	38Ch1257	250 +/- 40	1525 - 1555	0.133
	Feature 3			
			1630 - 1670	0.357
			1775 - 1800	0.151
			1940 - 1955	0.041
GX2287	38Ch1	170 +/- 80	1660 - 1700	0.124
	Feature 237			
			1720 - 1820	0.313
			1830 - 1880	0.128
			1915 - 1955	0.117

a Conventional radiocarbon dates were calibrated using Oxcal 4.0 software (Bronk Ramsey 1995, 2001). b Samples dated using accelerator mass spectrometry.

38BK1633. As shown in Figure 10, there is a separation in the probability distributions of radiocarbon assays into early and late Ashley sub-phases spanning A.D. 1590-1620 and A.D. 1620-1670 respectively. These are depicted in the figure as the gray shaded areas. Taken by itself, this separation would be extremely tenuous; however, the existence of early and late sub-phases is corroborated by the drastic changes in pottery assemblages discussed above and by the superpositioning of features at the site. In the seriation, the two latest assemblages evince dramatic increases in simple stamping/linear stamping and concomitant decreases in complicated stamping. Indeed, plotting the study assemblages using the relative percentages of the three most common surface treatments shows definite clustering into assemblages dominated by curvilinear complicated stamping, assemblages containing a mixture of all three surface treatments in similar proportions, and features dominated by simple stamping/linear stamping (Figure 11). The clusters correspond to the separation in radiocarbon ranges with Feature 1139 and Feature 237 from Charles Towne Landing falling in to the late Ashley sub-phase from ca. A.D. 1620-1670 and the remainder of the features falling into the early Ashley sub-phase ca. A.D. 1590-1620. These results suggest that pottery styles changed dramatically within a very brief period of time - probably a single generation. A brief and dramatic shift in pottery style has also been documented for pottery made by contemporaneous Guale groups to the south (Saunders 2000).

Superpositioning among postholes in structure patterns and pit features also suggests that there are temporally distinct occupation episodes at 38BK1633. When features are coded into early and late sub-phases based on radiocarbon dating results and a ratio of simple stamping/linear stamping to curvilinear/rectilinear complicated stamping, a provocative pattern emerges. As seen in Figure 12, the distribution of pit features from early and late Ashley sub-phases are relatively discrete. The early Ashley sub-phase occupation consists of a palimpsest of postholes associated with one or two structures (Structure 11/12) and a number of refuse-filled pits (denoted in the figure as polygons filled with diagonal lines). A radiocarbon assay from one of the postholes composing the Structure 11/12 pattern comfortably falls within the early Ashley sub-phase (Table 6). The late Ashley sub-phase occupation includes a number of pits (denoted in the figure as polygons filled with cross-hatched lines) and a square structure pattern

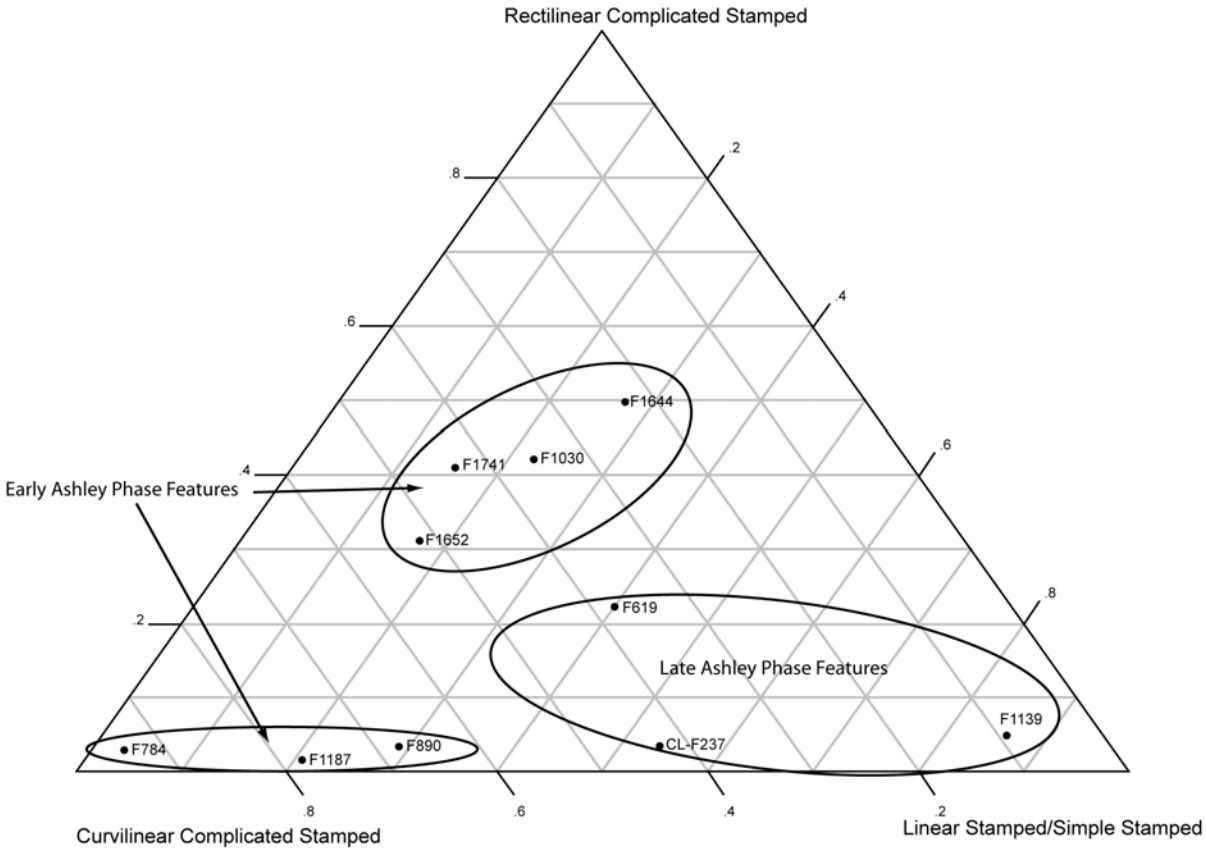

Figure 11. Ternary plot depicting the relative frequencies of the three dominant surface treatments in the study sample.

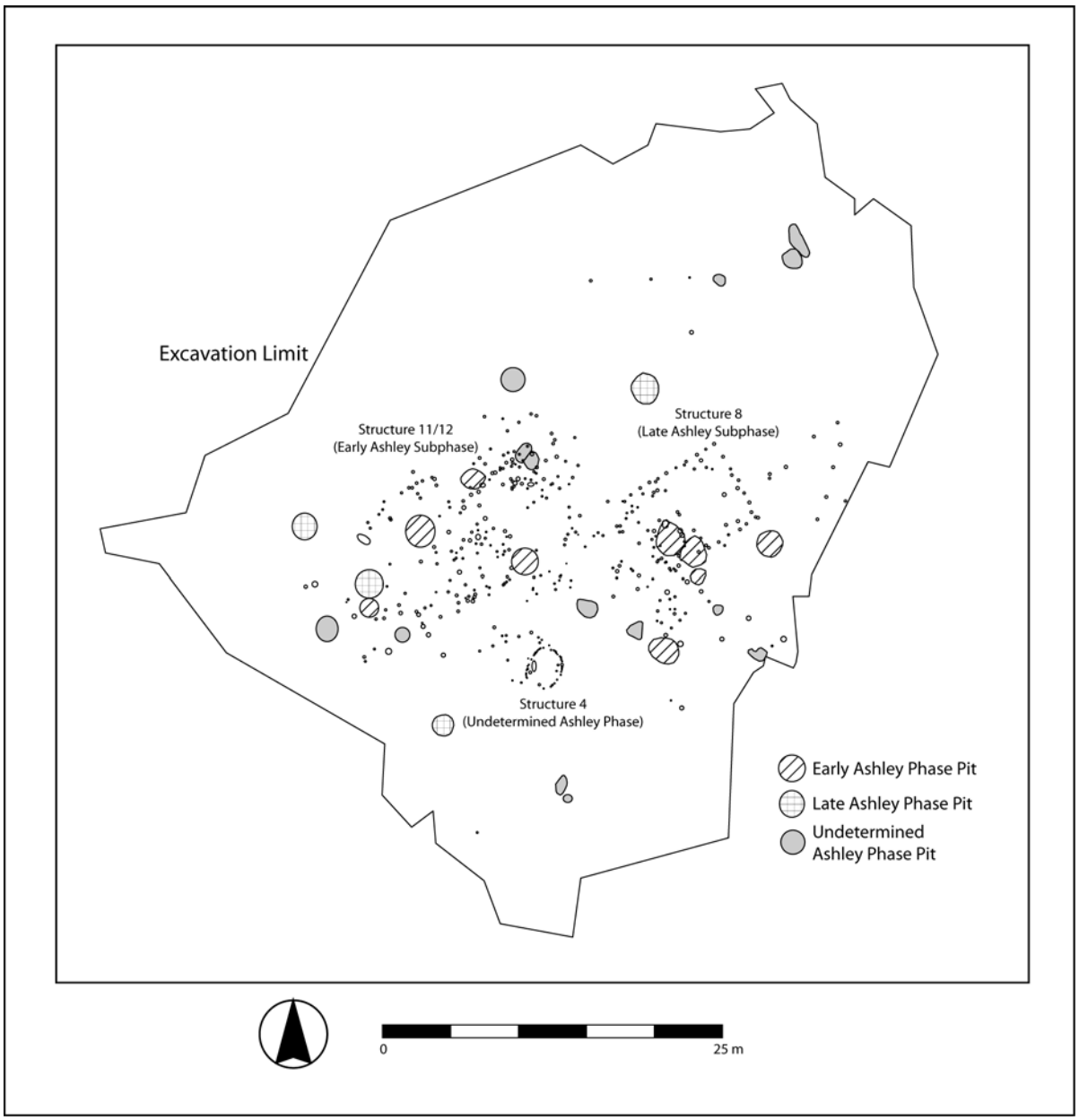

Figure 12. Site plan of 38BK1633 depicting the distribution of early and late sub-phase structures and pit features.

(Structure 8) of post holes, some of which clearly intrude upon the early Ashley phase pits. The radiocarbon assay associated with this intrusive structure places it clearly in the late Ashley sub-phase (Table 6).

Based on this distribution pattern, we believe that the site contains a serial occupation by a single Ashley household. Taking into account all of the patterns we identify above, we suggest the following site narrative. During the early Ashley sub-phase, the householders at 38BK1633 built and after some time repaired a house, shifting it slightly, which resulted in the palimpsest of posts that make up Structure 11/12. During the early years of the occupation when Structure 11/12 was occupied, this group also excavated a number of pits in the vicinity of the house and to the east. At some point during this early period they deposited trash in the pits. After some short period of time (5-10 years), perhaps following a relatively brief occupational hiatus, the late Ashley sub-phase at 38BK1633 began when an entirely new house (Structure 8) was built to the east of Structure 11/12 directly over some existing trash-filled pits. Again a number of pits were excavated at the site by the householders and eventually were filled with trash. These pits, however, were located to the north and west of Structure 8, in the vicinity of Structure 11/12,

which had presumably been abandoned by this time. Based on the lack of evidence of repair to Structure 8 and the lower number of late Ashley sub-phase pits, we believe that the later occupation of 38BK1633 was substantially shorter than the early occupation - with the occupants abandoning the site around the time of the founding of Charles Town in A.D. 1670.

Conclusion

This essay marks the first analysis of Ashley-series pottery in over three decades. Site 38BK1633 provides a great source of data for furthering our understandings of this pottery series and the role that potting traditions played in the history of local 17th-century Native American communities. We have provided an empirical description of the pottery assemblage from this briefly occupied site so that data from future excavations at other Ashley phase sites can be easily incorporated. As we know many readers are thinking right now, it would be folly for us to neglect to mention that the patterns and interpretations presented above are quite tenuous, being based on pottery assemblages from a handful of features at just two archaeological sites. That said, we reason that in presenting our arguments in this paper, we are offering others researching Contact-period groups around Charleston Harbor some empirical statements that they can test with their own archaeological data. Consequently, as more sites are excavated and as collections of previously excavated site are analyzed, we hope that additional data will be used to test and refine the seriation results we have presented here.

The continuation of the research we present here will result in a firm chronological framework; however, chronology should not be viewed as an end in and of itself. Instead, chronology should be seen as a foundation upon which we build our historical narratives of Contact-period Indian groups. This means using the chronology to ask anthropological questions. For example, Marcoux's (2010) research addressing Contact-period Cherokee households has shown that archaeology can identify a number of complex strategies people used to adapt to the economic and demographic disruptions that followed European contact. We are currently exploring how identity was materialized in the potting traditions practiced among Indian groups immediately following the settling of Charles Towne (Lansdell and Marcoux 2010). This work is at a very early stage, but we are seeing exciting signs of rapid and dramatic change in pottery assemblages over a very short period of time (see also Brilliant 2011; Nyman 2011). This, of course, cannot be a singular effort. Working together with historians and other archaeologists to bring archaeological data to bear on the Contact period, we are confident that we will be able to construct more detailed and perhaps more entertaining narratives of life in local Indian communities.

Acknowledgments

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Alkaline Glazed Stoneware Origins

Carl Steen

When Abner Landrum reported in 1809 (Figure 1) that high quality kaolin had been discovered in the Edgefield District it marked the beginning of a stoneware pottery tradition that lasted more than a century, and spread across the south as far as Texas (e.g., Brackner 1983; Burrison 1983; Greer 1970, 1980; South 1970). Before him only a handful of Euro-Americans are known to have made pottery of any kind in South Carolina (Rauschenburg 1991a, 1991b, 1991d). Here, a society developed where the focus of the economy was the mass production of agricultural commodities (Weir 1983: 161). Pottery making and manufacturing in general were not significant in the Carolina colony because the cost of the labor usually outweighed the value of the goods manufactured. This differed from the Northern colonies in which the European settlers, mostly British, brought an entire society with them, including farmers, traders, workmen and artisans, such as potters (Bridenbaugh 1950).

South Carolina, on the other hand, was settled as an agricultural enterprise by plantation owners from Barbados, along with British and French immigrants who followed their lead (Lesser 1995; South Carolina Historical Society 2000:29-49; Wallace 1951). The enslaved outnumbered Euro-Americans by 1708 (Menard 1995). Fearing slave revolts and attack by Native Americans, the colonial governor devised a Township system in the 1730s in which large settlements of white Europeans would be established (Meriwether 1940). Free land and a degree of start-up encouragement drew settlers to six townships, which were arranged on the frontier encircling Charleston (Figure 2). This provided a buffer between the more wealthy Lowcountry and the increasingly hostile Indians of the interior, and provided militia troops in the event of a slave revolt.

The intent was to bring self-sufficient communities with a full range of occupants, but attempts at growing mulberries for silk, and flax and cotton for linen and fine cloth faltered. Andrew Grenier of Purrysburg, John Hershinger of Saxe-Gotha, and Henry Gossman of New Windsor were identified as potters in the documentary record (Rauschenberg 1991b) but no details were given and nothing firm is known of their contribution. Their identity as potters was simply mentioned in passing. At frontier sites in Purrysburg, Ebenezer (Daniel Elliott 2010, personal communication), Fort Moore (38AK4 artifact collection) and Saxe-Gotha (Adams 2000) similar earthenwares with light red bodies and thin green lead glazes have been found. These are anomalous in the collections. The surfaces are not as smooth, and the glazes are not as thick and vitreous as is typical on English and European wares. This is not "proof" that they are local products, and this is a case where petrographic analysis could be applied to settle the question, but they may be locally made.

The earliest well documented Colonial era potter working in the European tradition, (producing glazed ceramics on a wheel, fired in a kiln) is Andrew Duche, the son of Anthony Duche, one of Philadelphia's most successful colonial stoneware potters (Bower 1985; Rauschenburg 1991a). Andrew Duche came south and is known to have attempted pottery making in Charleston in 1734 to 1735, and in Savannah in 1736 to 1742. It is also known that he exported kaolin clay to England, and is thought to have met with English potters who were experimenting with porcelain (Ramsay et al. 2004: 63; Rauschenberg 1991c). A redware vessel marked AD has been attributed to him, but his kiln sites have not been identified (Rauschenberg 1991a).

The next known European style potter was John Bartlam, who came to Charleston in 1763 (Rauschenburg 1991d:6). He set up a pottery shop in the city, then apparently moved his operation to Cain Hoy, a small settlement on the Wando River about seven miles from the city. Bartlam was a trained master potter from Staffordshire

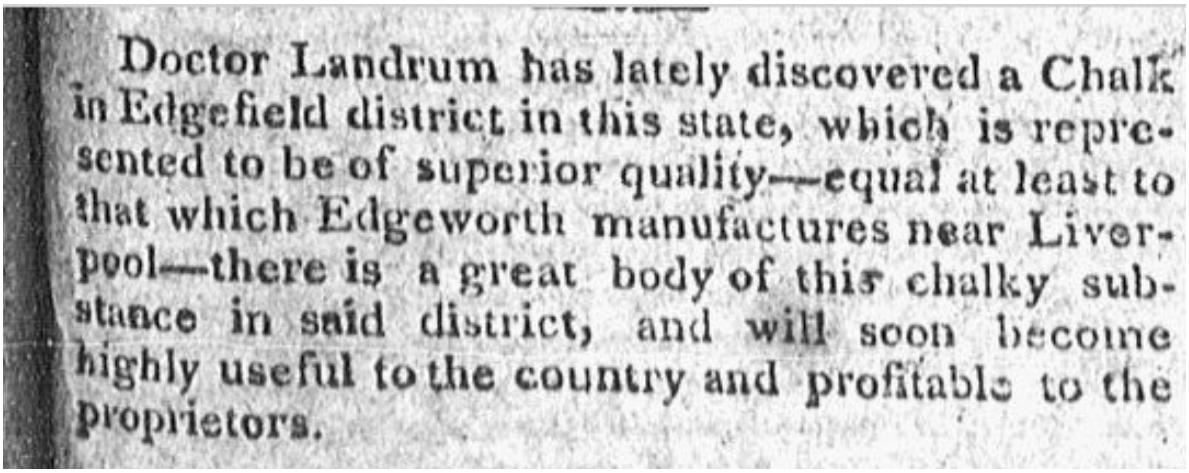

Doctor Landrum has lately discovered a Chalk in Edgefield district in this state, which is represented to be of superior quality—equal at least to that which Edgeworth manufactures near Liverpool—there is a great body of this chalky substance in said district, and will soon become highly useful to the country and profitable to the proprietors.

Figure 1. *Augusta Chronicle,* July 15 1809.

(Barker 1991; Rauschenburg 1991d). After facing financial problems he was induced to come to Charleston. He came with molds, tools and trained workers. Excavations at the Cain Hoy site (South and Steen 1993) show that Bartlam was apparently trying to make nearly everything that Greatbatch and the other Staffordshire potters were making, from early style creamware and green and splattered glaze Whieldon type wares to soft paste porcelain (Barker 1991, 2001; Hunter 2007:193; Noel Hume 1970). The earthenwares include plates made on common white salt glazed stoneware motif molds, teapots in "cauliflower ware" type molds, and wheel turned redware pitchers and mugs. Numerous wasters were found at the Cain Hoy site, but no kiln or kiln remnants like firebrick were found.

It is interesting that Bartlam moved to Camden, SC, because the year after he died another Englishman with a porcelain and pottery connection moved there: Richard Champion. Champion's name is often mentioned in connection with the origin of alkaline glazes for stoneware (Baldwin 1993; Burrison 1983; Greer 1970), which will be discussed below. William Cookworthy was a Bristol chemist who, in the late 1750s, partnered with businessman Richard Champion. The two held the patent on the formula for hard paste porcelain until the 1770's. Ceramics thought to have been made by Bartlam have been found in Camden (Lewis 1976) but no kiln site has been identified (and this is a meaningful distinction).

Making Pottery in the Old Edgefield District

The Old Edgefield District (Figure 3) encompassed the modern counties of Edgefield, Aiken, McCormick, and Saluda. As we have seen, pottery making before about 1810 in South Carolina remains a mystery. There are hints, but although the materials were available for making earthenwares, stonewares and porcelains, no kiln sites from this period have been found. But by around 1810, a new industry had emerged which made use of glazes consisting of silica and alumina in the form of sand and clay, with an alkaline flux derived from lime or wood ash (Figure 4).

The use of this variant of ash and lime based alkaline glazes on stoneware is a tradition shared by South Carolinians and Asians that seems to have bypassed England and Europe. Considerable discussion and speculation surround the origin of the alkaline glazes used in Edgefield, but an empirically

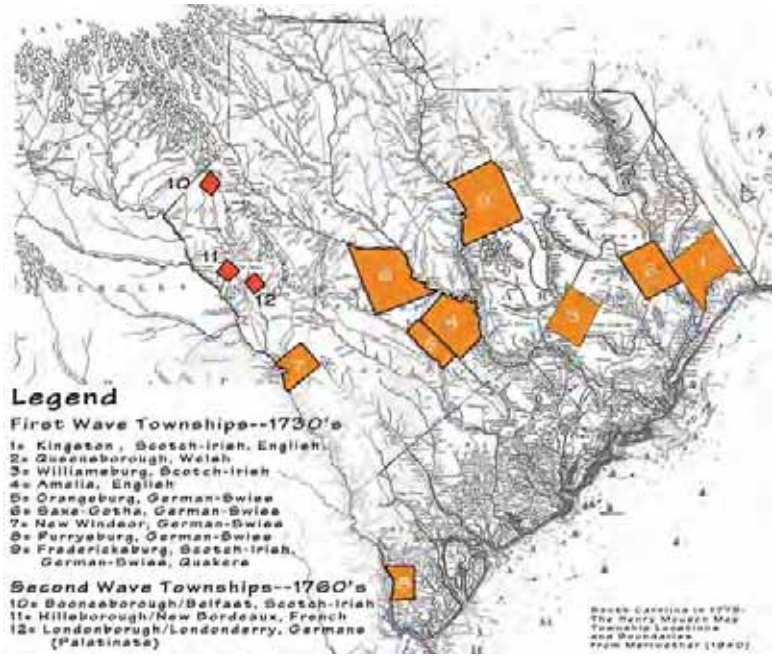


Figure 2. South Carolina Townships. The Henry Mouzon Map of 1780.

Figure 3. Alkaline glazed stoneware jug.

verifiable explanation remains to be found. In 1825, Robert Mills credited Abner Landrum with the introduction of stoneware manufacturing in South Carolina (Figure 5), and most researchers accept this. But how did he come up with this innovation? Georgianna Greer (1970, 1980) began this speculation with the Cookworthy-Champion line of reasoning previously mentioned. She believed that during his attempts to make porcelain William Cookworthy may have discovered their utility and adapted alkaline glazes for stoneware, which Richard Champion passed on to someone in South Carolina. Both potters and information about pottery making were transferred between the continents, so this is reasonable. However, Champion is not known to have made pottery himself, and no documentary evidence has been found linking him to pottery making in South Carolina.

John Burrison (1983) took up the issue next, with the more conservative view that since alkaline / ash glaze recipes and porcelain manufacture were discussed in Du Halde's 1738 General History of China, and since Du Halde's book was excerpted in Charleston newspapers, and available in the colony, that someone had read it and put the recipes to use. For Landrum to read of a glaze recipe in a book or newspaper, and then put it to work seems unrealistic. Making even simple unglazed hand made pottery requires training. And it has long been recognized that even experienced potters have a period of uncertainty and experimentation when they start a new operation, as will be discussed below.

So how did the practice originate? If we take a different approach, still assuming that the glaze was produced as a corollary of experimentation with porcelain manufacture then it is still possible to say that Abner Landrum was responsible for developing the glaze and spreading its use, but where exactly he obtained his knowledge remains a matter of speculation. A recently discovered document (Hardman 2010; Smedley 1883) from the 1880s says he visited potters in Pennsylvania seeking advice on making porcelain and "fine wares" but does not name anyone he consulted with specifically. The potter named in the document, John Vickers, is thought to have made earthenwares primarily, though he also made creamwares early in the 19th century, and at least some porcelain after the 1830s (James 1978:165-185).

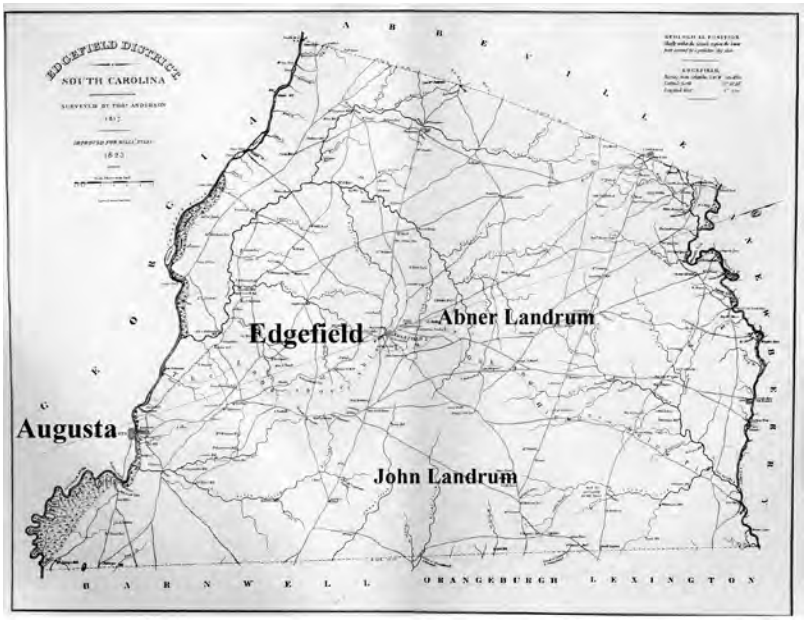
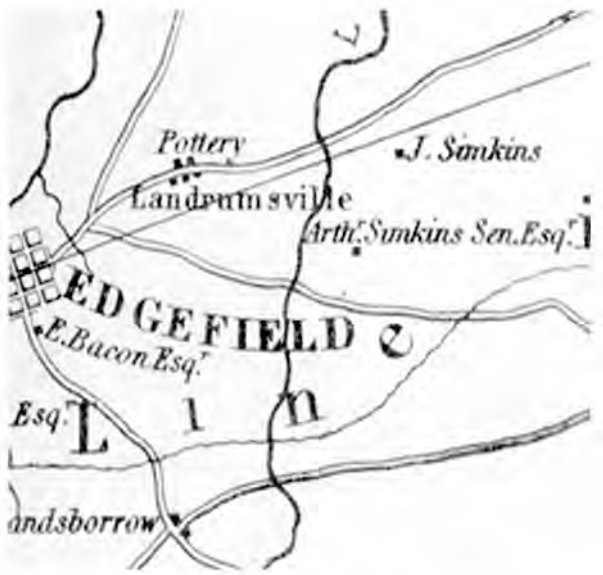


Figure 4. The Robert Mills Map of the old Edgefield District, Abner and John Landrum sites emphasized.

Landrum himself said that he could make porcelain. In his newspaper, the Edgefield Hive, he said that he would "manufacture a specimen of the upcountry porcelain" for the inspection of the editors of the Charleston Courier (Edgefield Hive 4-9-1830) and discusses the difference between "upcountry porcelain" and imported wares. None of his "upcountry porcelain" has been found to date (Castille et al. 1988; Steen 1994), but planned excavations at his Pottersville kiln site may produce clues (Fennell 2010). Artifacts recovered at Landrum family sites, discussed below, provide evidence of experimentation with glazes, clays and firing techniques but no translucent or even pure white sherds have been found.



There is another village of sixteen or seventeen houses, and as many families, within a mile and a half of Edgefield court-house, called the Pottery, or Pottersville, but which should be called Landrumville, from its ingenious and scientific founder, Dr. Abner Landrum. This village is altogether supported by the manufacture of stoneware, carried on by this gentleman; and which, by his own discoveries is made much stronger, better, and cheaper than any European or American ware of the same kind. This manufacture of stoneware may be increased to almost any extent; in case of war, &c. its usefulness can hardly be estimated.

Figure 5. The Robert Mills Map of the old Edgefield Dis trict, Abner and John Landrum sites emphasized.

Abner Landrum may have attended the Willington Academy in Mt. Carmel, near Abbeville (Baldwing 1993:199n 48) for his primary education. In the first decade of the 19th century, he is known to have studied medicine in Augusta, forming a partnership with Dr. Benjamin Harris in 1807 (*Augusta Chronicle* 1807). This is significant because research by Bradford Rauschenburg (1991b:102-119) has brought to light the presence of a pottery in Augusta during the first decade of the 19th century owned by Virginia native Nathanael Durkee. In the August 7, 1801 issue of the *Augusta Chronicle*, he advertised pottery for sale:

Pottery

The subscriber begs leave to inform the public that he has been at a very considerable expense in establishing this business, as it required time to find out the temperature of the different clays in this climate, he flatters himself that now he can furnish as good ware as any on the continent, if not better, as he has found out clay of a superior quality. He has on hand an assortment of ware, consisting of jugs of different sizes, milk pans, pickle pots, sweet meat jars, butter pots, bowls, mugs, flour pots, pitchers of all sizes, &C. which he is determined to sell on very low terms, and at one uniform price: Country store keepers can be supplied to great advantage and their orders will be attended to; any kind of produce will be received in payment. Those persons who want ware, will please apply at the old Academy, on the River Bank, where the manufactory is established, and constant attendance will be given.

N. Durkee.

August 7

N.B. Tyle for covering houses can be furnished at short notice, and warranted as good quality as any from Hamburg, Liverpool, or Holland--A few thousand now on hand.

N.D. TWO apprentices wanted.

From his advertisements in the *Chronicle*, Nathanael Durkee appears to have been an investor and speculator, which is one of the most common of the false leads that plagues studies of Edgefield pottery and potters. It is possible that he never dirtied his hands in the pottery shop. Indeed another ad for a newly opened pasture states: "those who wish to put in their horses, will please to leave a line at my pottery, at the old Academy, with Mr. Fouts, the head workman" (*Augusta Chronicle* 1801). Durkee must have moved his pottery operation outside of town because in 1803 he advertised his plantation, Summerville, for sale:

It contains upwards of five thousand acres of land, about one hundred of which are under cultivation, and mostly enclosed by a new fence, there is a comfortable two story house, with several out houses, a stone springhouse, an excellent, and never failing spring of water, a large garden, containing two acres, in which upwards of 100 bearing quince trees, and about 30 apple trees of excellent fruit, a few choice pear trees, plumbs and Dansons -- a peach orchard containing 1000 peach trees, 500 of which are in perfection; there is a saw mill in complete order, that now cuts near 1000 feet of lumber per day, and several more mill seats on the tract; and it is the opinion of some of the best mill wrights that each mill might saw from 150 to 200,000 feet a ber [?]--a Grist Mill in good order, a distillery, a brewery, and pottery are all at work on the premises... (*Augusta Chronicle* 1803).

He sold the property to Henry Evans and in 1804 he advertised his new "City Hotel" downtown in Augusta. Durkee does not show up as a potter after selling Summerville, so it is entirely possible that before he left he sold the shop and equipment, and taught the buyer the trade – or, more likely, the potters working at the site stayed on.

Thus a pottery shop owned by Henry Evans, with Hightower Davis serving as his manager, seems to have been in operation in Augusta at the time that Abner Landrum was developing his alkaline glaze. However, nothing clearly attributed to this shop has been found. No marked

pieces are known and the kilns remain undiscovered. In an 1813 newspaper ad, Evans stated that he was making earthenwares, presumably lead glazed (Rauschenberg 1991b:108; Smith 1986:51).

A final judgment about a connection between the Durkee/Evans pottery and the development of alkaline glazed stoneware manufacture will have to be withheld until we find the Durkee pottery site and see what was being made there. It seems clear that Abner Landrum was instrumental in the introduction of alkaline glazing, but I do not believe that someone without a thorough knowledge of pottery making could adapt the DuHalde recipe or any other printed formula without help and training. Even Durkee alluded to a period of experimentation with the local clays in the previous ad: "it takes time to find out the temperature of the different clays in this climate" (*Augusta Chronicle* 1801).

A safer bet may lie in a Durkee, Fouts, Evans or Davis connection. The recently discovered document from the 1880s opens another possibility. Through local connections Landrum could have become familiar with pottery making and clay. Through his interest in science, he may indeed have read of alkaline glazes and stoneware making. Philadelphia, home of the American Philosophical Society and the American Society for Promoting Useful Knowledge, was the center of learning for the developing Industrial Revolution in the United States at the turn of the 19th century (Myers 1989). His partner Dr. Brazier studied under the nation's leading medical scholar, Dr. Benjamin Rush, in Philadelphia (Baldwin 1993). With Brazier's introduction, Landrum may have made a trip there to learn more, and induced a stoneware potter from the north to come south and set up his shop.

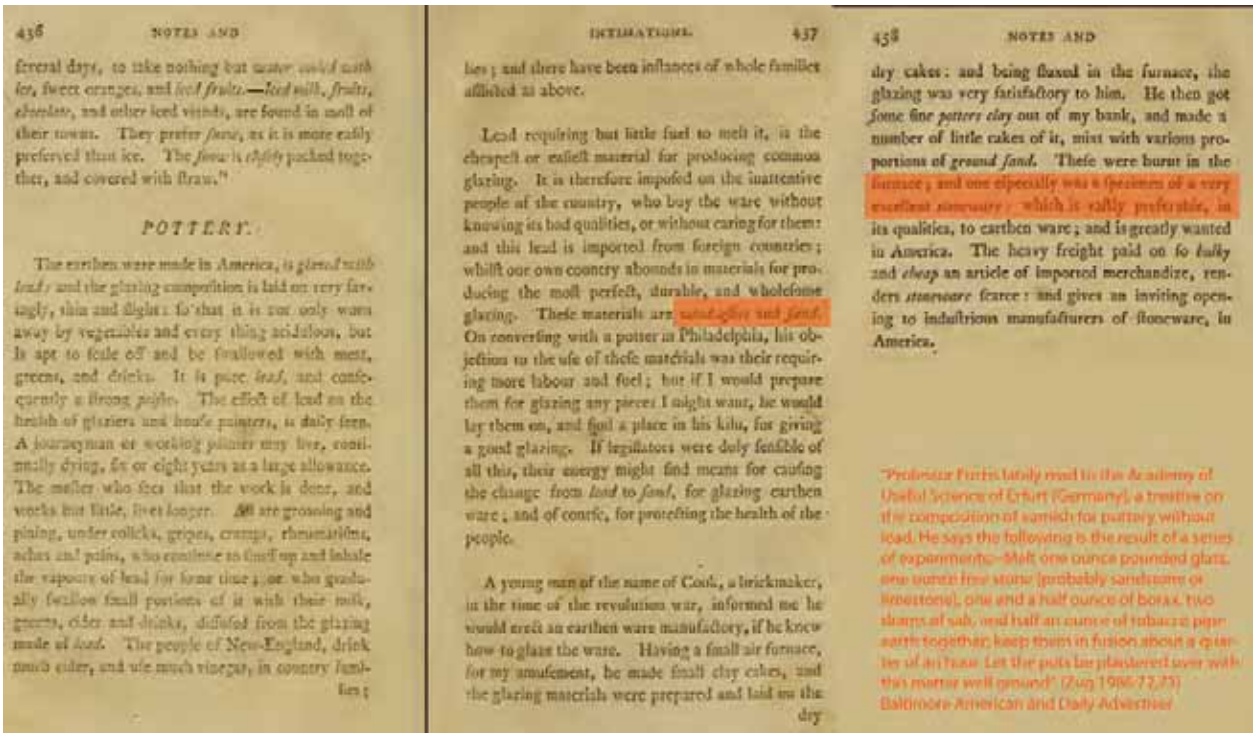
This is off of the subject of pottery making, but is presented as an example of Landrum's intelligence, free thinking, and his interest in manufactures and science: the enabling factor that allowed him to innovate while his neighbors stubbornly stuck to plantation agriculture. In my opinion, it is entirely conceivable that Abner Landrum learned about making pottery in Augusta as a teenager. Perhaps he only learned enough about the process to recognize good clays and hire a potter. Then through his reading, spurred by progressive views regarding manufacturing, he learned of a cheap way of making pottery using only locally available materials.

This fits in with trends in society at large and in the pottery industry of the times as well. By the turn of the 19th century the deleterious effects of lead in pottery glazes was well known, and methods of reducing the amount needed were a matter of constant discussion. Folklorist Charles Zug (1986) provides a valuable clue to the mystery of how alkaline glazed stoneware may have come to South Carolina that fits well with the present line of reasoning. Two American accounts published in 1801--one in Philadelphia, and one in Baltimore -- well illustrate the increasing desire for a lead substitute. John Beale Bordley (1801) observed: "Lead requiring but little fuel to melt it, is the cheapest or earliest material for producing common glazing..." Lead was dangerous to the potters who used it, and to consumers. As an alternative, Bordley continued: "our own country abounds in materials for producing the most perfect, durable, and wholesome glazing. These materials are wood ash and sand". He goes on to say that he had a Philadelphia brickmaker named Cook experiment with the glaze on earthenware and stoneware bodies and "the glazing was very satisfactory to him." So alkaline glazes were known and had been used in Philadelphia by 1801.

The second article, published in the Baltimore American and Daily Advertiser, offers a somewhat more complex fritted borax glaze formula. Frits are glazes made of a combination of ingredients that were melted, cooled, and finely ground for application. This formula was put forth by a Professor Fuchs, of the Academy of Useful Science in Erfurt, Germany (Figure 6). Zug (1986:73) continues by saying that "although the folk potter did not use fritted glazes, most of the ingredients here are familiar enough". The latter recipe is for a type of glaze more common on refined tablewares, and thus is not entirely relevant -- or is it? During our 1987 survey, a storage jar base filled with unground frit (Figure 7) was, in fact, found at the John Landrum site (38AK497). Further, the John Landrum site and the Amos Landrum site examined in 1993 both produced kiln furniture and tablewares and other forms in bisque indicating that at the early sites at least, experimentation with "non-folk" forms, methods, and glazes did take place. Later potters focused on utilitarian vessels and storage wares.

Zug (1986) also makes a convincing case for potters learning of alkaline glazes from glassmakers, who used many of the same raw materials. So, as Dr. Zug said years ago, Southern potters did not necessarily have to rely on foreign sources, and thus it is possible that the letters in Du Halde, and all of Champion and Cookworthy's discoveries had a peripheral role in the adoption of alkaline glazes in South Carolina pottery.

Further evidence for local innovation lies in our knowledge of society at the time. The period leading up to the War of 1812 was one where reliance on domestic goods took on a new life, with non-importation movements growing just as they had before the American Revolution (Myers 1989; Steen 1989). The United States had managed to stay neutral, and even profited by providing neutral shipping for the warring nations, but in 1807 President Jefferson imposed an embargo prohibiting the buying or



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several days, to take nothing but water cooled with ice, sweet oranges, and iced fruits.—Iced milk, fruits, chocolate, and other iced viands, are found in most of their towns. They prefer snow, as it is more easily preserved than ice. The snow is tightly packed together, and covered with straw."

POTTERY.

The earthen ware made in America, is glazed with lead; and the glazing composition is laid on very sparingly, thin and slight: so that it is not only worn away by vegetables and every thing acidulous, but is apt to scale off and be swallowed with meat, greens, and drinks. It is pure lead, and consequently a strong poison. The effect of lead on the health of glaziers and house painters, is daily seen. A journeyman or working painter may live, continually dying, six or eight years at a large allowance. The master who sees that the work is done, and works but little, lives longer. All are groaning and pining, under colicks, gripes, cramps, rheumatisms, aches and pains, who continue to dust up and inhale the vapours of lead for some time; or who gradually swallow small portions of it with their milk, greens, cider and drinks, dilated from the glazing made of lead. The people of New-England, drink much cider, and use much vinegar, in country families;

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lies; and there have been instances of whole families afflicted as above.

Lead requiring but little fuel to melt it, is the cheapest or easiest material for producing common glazing. It is therefore imposed on the inattentive people of the country, who buy the ware without knowing its bad qualities, or without caring for them: and this lead is imported from foreign countries; whilst our own country abounds in materials for producing the most perfect, durable, and wholesome glazing. These materials are sand-stone and sand. On conversing with a potter in Philadelphia, his objection to the use of these materials was their requiring more labour and fuel; but if I would prepare them for glazing any pieces I might want, he would lay them on, and find a place in his kiln, for giving a good glazing. If legislators were duly sensible of all this, their energy might find means for causing the change from lead to sand, for glazing earthen ware; and of course, for protecting the health of the people.

A young man of the name of Cook, a brickmaker, in the time of the revolution war, informed me he would erect an earthen ware manufactory, if he knew how to glaze the ware. Having a small air furnace, for my amusement, he made small clay cakes, and the glazing materials were prepared and laid on the dry

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dry cakes: and being fluxed in the furnace, the glazing was very satisfactory to him. He then got some fine *potters clay* out of my bank, and made a number of little cakes of it, mixt with various proportions of *ground sand*. These were burnt in the furnace; and one especially was a specimen of a very excellent *stoneware*; which is vastly preferable, in its qualities, to earthen ware; and is greatly wanted in America. The heavy freight paid on so *bulky* and *cheap* an article of imported merchandize, renders *stoneware* scarce: and gives an inviting opening to industrious manufacturers of stoneware, in America.

"Professor Fuchs lately read to the Academy of Useful Science of Erfurt (Germany), a treatise on the composition of varnish for pottery without lead. He says the following is the result of a series of experiments:—Melt one ounce pounded glass, one ounce fine stone (probably sandstone or limestone), one and a half ounce of borax, two drams of salt, and half an ounce of tobacco pipe earth together; keep them in fusion about a quarter of an hour. Let the pots be plastered over with this matter well ground." (Aug 1986:72,73) Baltimore American and Daily Advertiser

Figure 6. J.B. Bordley, Dr. Fuchs observations.

Figure 7. Unground frit from 38AK497 (the John Landrum site).

selling of goods from France, England, and the other European nations tied up in the Napoleonic wars.

In the cities of the north, local manufactures were encouraged. In response the Philadelphia merchant the firm of Binny and Ronaldson formed the Columbian Pottery, and in 1807 advertised in the *Savannah Public Intelligencer* for clay samples:

A person who has been born and bred in Britain to the pottery business...being anxious to procure the best possible materials... hereby solicits the attention of such patriotic gentlemen throughout the union as may feel disposed to patronize his establishment, to such clays or flints as may be found in their respective neighborhoods and invites them to send specimens...to Messrs (Binny and Ronaldson in Myers 1989:6).

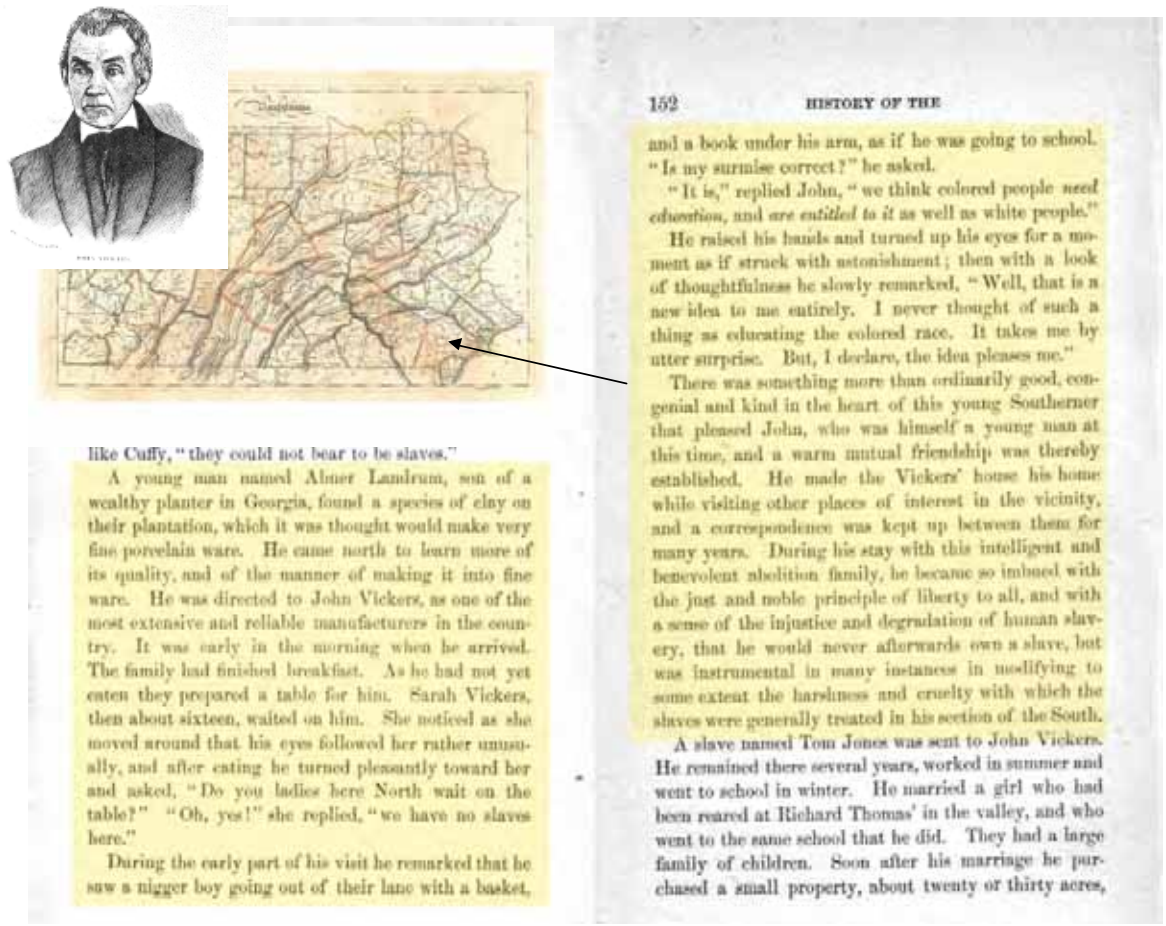
The Savannah newspaper would surely have been read in Augusta, so we can see that for anyone interested in manufacturing there would at the least have been access to ideas regarding clay and its uses and potential value. It is likely that the ad was placed in this particular paper because of the 18th century interest in Carolina clays discussed previously (see Ramsay et al. 2004; Rauschenburg 1991c:67-78). This advertisement may have served, even if his association with Nathanael Durkee had not, to raise Abner Landrum's consciousness regarding clay and pottery. At any rate, on July 15, 1809 it was announced in the Augusta Chronicle that he had discovered clay and associated it with making pottery, and in 1812 he requested a grant from the state legislature to "assist him in the manufacturing of China." (*Charleston Gazette* 1812).

John Vickers and Abner Landrum

Nearly everything presented up until now was written, to a degree, by 1994. The recent discovery of the Smedley (1883) document by researcher Samuel Hardman (2010) supports the line of reasoning outlined and refines it considerably while still not exactly answering the question of where Landrum learned of alkaline glazes.

Some discoveries are serendipitous. A colleague forwarded me an email on another subject entirely which just incidentally contained an email with a copy of a passage from a book (Figure 8) on the Underground Railroad concerning Chester County, Pennsylvania potter John Vickers. This passage discusses a visit by Abner Landrum. John Vickers was a Quaker abolitionist (James 1978; Smedley 1883). He learned the pottery trade from his father, Thomas Vickers. They are known for making redwares and Pennsylvania Queensware. Later in the 19th century, they began making porcelain. John Vickers started several potteries and eventually ended up near Liontown, Pennsylvania. His farm and shop were well known stops on the Underground Railroad. The farmhouse he built in 1823 is still standing, and today serves as an inn and tavern.

R.C. Smedley (1883:151-153) describes the meeting of John Vickers and Abner Landrum in his book (Figure 8) on the activities of the Underground Railroad in Chester County. The date of their meeting is not given, but Sarah



like Cuffy, "they could not bear to be slaves."

A young man named Abner Landrum, son of a wealthy planter in Georgia, found a species of clay on their plantation, which it was thought would make very fine porcelain ware. He came north to learn more of its quality, and of the manner of making it into fine ware. He was directed to John Vickers, as one of the most extensive and reliable manufacturers in the country. It was early in the morning when he arrived. The family had finished breakfast. As he had not yet eaten they prepared a table for him. Sarah Vickers, then about sixteen, waited on him. She noticed as she moved around that his eyes followed her rather unusually, and after eating he turned pleasantly toward her and asked, "Do you ladies here North wait on the table?" "Oh, yes!" she replied, "we have no slaves here."

During the early part of his visit he remarked that he saw a nigger boy going out of their lane with a basket,

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and a book under his arm, as if he was going to school. "Is my surmise correct?" he asked.

"It is," replied John, "we think colored people *need education*, and *are entitled to it* as well as white people."

He raised his hands and turned up his eyes for a moment as if struck with astonishment; then with a look of thoughtfulness he slowly remarked, "Well, that is a new idea to me entirely. I never thought of such a thing as educating the colored race. It takes me by utter surprise. But, I declare, the idea pleases me."

There was something more than ordinarily good, congenial and kind in the heart of this young Southerner that pleased John, who was himself a young man at this time, and a warm mutual friendship was thereby established. He made the Vickers' house his home while visiting other places of interest in the vicinity, and a correspondence was kept up between them for many years. During his stay with this intelligent and benevolent abolition family, he became so imbued with the just and noble principle of liberty to all, and with a sense of the injustice and degradation of human slavery, that he would never afterwards own a slave, but was instrumental in many instances in modifying to some extent the harshness and cruelty with which the slaves were generally treated in his section of the South.

A slave named Tom Jones was sent to John Vickers. He remained there several years, worked in summer and went to school in winter. He married a girl who had been reared at Richard Thomas' in the valley, and who went to the same school that he did. They had a large family of children. Soon after his marriage he purchased a small property, about twenty or thirty acres,

Figure 8. John Vickers meets Abner Landrum, Smedley 1883, with 1804 map and image from James 1978.

Vickers, who in the passage is said to be "about 16" was born in 1794, so 1809-1810 sounds reasonable.

The passage itself is extremely valuable in a number of ways. Previously I discussed the speculation regarding the origin of alkaline glazing. I concluded that one could probably not read about making pottery in a book or newspaper and then start making and firing pots. Rather one would have to learn from an expert. This passage supports that argument: "A young man named Abner Landrum, son of a wealthy planter in Georgia found a species of clay on their plantation, which it was thought would make very fine porcelain ware. He came north to learn more of its quality, and of the manner of making it into fine ware" (Smedley 1883:151).

Porcelain, which has a highly refined alkaline glaze, was made in Philadelphia in the early 1770s, though the operation failed and was abandoned before the American Revolution (Hunter 2007). The knowledge of lead free glazing apparently survived though, as J.B. Bordley clearly described experiments with making alkaline ("wood ash and sand") glazed pottery in Philadelphia, including stoneware, in 1799 and 1801. So it would seem that Landrum would have learned about the practice there, perhaps in research at the Society for the Promotion of Useful Knowledge or from a local potter.

Stoneware was made in Philadelphia during the 18th century (Bower 1985) and in the first decade of the 19th century, but most Pennsylvania potters focused on lead glazed earthenwares before the 1830s as Bordley (1801) noted. Potters in New Jersey and New York were more likely to make stonewares (James 1978), and Landrum may have visited with them during his travels in the North. Likewise potters in Maryland and Virginia were making salt glazed stonewares at the time (see Hunter and Goodman 2005:37-132, for example) and he may have visited them on his way to Philadelphia.

However, the New York stoneware potter Branch Green had moved to Philadelphia by 1809 (Bower 1985) so he may have been a contact for Abner Landrum. During his visit Landrum may have recruited an experienced stoneware potter, brought him south and experimented with the new glaze. Vessel forms from the potters of Virginia and Maryland referenced above, particularly the DuVal Pottery (Hunter and Goodman 2005) are very similar to early Landrum forms. So as stated above, we still cannot say precisely where Landrum found his glaze formula and stoneware medium for it, but we have narrowed it down considerably. The southern tradition in stoneware making probably has northern roots.

The 1809 announcement in the Augusta Chronicle is the earliest indication of Abner Landrum's interest in matters of clay. In my opinion it is no coincidence, because the Nonintercourse Act of 1809 led to the United States involvement in the War of 1812. Susan Myers (1989:5) notes "diminished imports led to rises in the price of manufactured goods, and many businessmen shifted their capital from shipping to developing American industries... American manufacturing launched upon a period of expansion that lasted until the end of the war in 1815". A severe recession followed the war, but the Industrial Revolution began in earnest in the 1820s.

Thus we can see that the developments in the Old Edgefield District did not occur in a vacuum. Abner Landrum did not casually read about ash glazes in a newspaper and give it a try. Rather the innovations were spurred by national and global influences. The accelerated development of pottery manufacture and clay extraction in the Edgefield District after 1809 was not a result of a folk tradition growing naturally from roots hidden in time, but rather was the result of forward thinking businessmen, participating in the growing capitalist system and seeking to develop local manufactures. Pottery was a minor link in this development, as the 19th century also saw the growth of cotton mills and other industries in the Augusta/Hamburg/Horse Creek Valley area that were far more important to the economy. But the alkaline glazed stonewares made in the area loom large in the archaeological record, as they are found all across the state, and the practice was carried west when the frontier was opened in the 1830s forming a cultural horizon that will be visible to archaeologists of the future (Winberry 1997).

But Abner Landrum learned other important lessons from John Vickers and his family. Landrum is said to have watched John's sister Sarah set the breakfast table and serve him, with bemusement. "Do you ladies here in the North wait on the table?" he asked. "Oh yes! We have no slaves here." she replied. He saw a black child leaving the house with a book under his arm, and asked if he was going to school. John Vickers replied that he was. "We think colored people need education and are entitled to it." To a southerner this was astonishing. "I never thought of such a thing as educating the colored race... But, I declare the idea pleases me."

The article goes on to say that Landrum "became so imbued with the just and noble principle of liberty to all ... that he would never afterwards own a slave." This is not precisely true, though compared to many of his social status, he owned few slaves. According to the U.S. Census, in 1820 his household contained a mulatto girl who was less than 14 years of age. In 1830, a male age 24-35, and another aged 10-23, along with a woman age 10-23 lived in his household. The woman is probably the same girl in the 1820 census. In 1840, she is aged 24-36, and seems to have children of her own, a boy and two girls less than ten years

old. She is not seen in 1850, but her children, now said to be two females 17 and 20 and a boy 11, are still living in the Landrum household. So Abner Landrum seems never to have owned more than four slaves, and those he did own were women and children, for the most part. It does not appear that he relied on slave labor like his neighbors. Whether he affected the community or society at large in this regard is questionable, but in his own home it appears that Smedley's observation that he "was instrumental in modifying to some extent the harshness and cruelty with which the slaves were generally treated in this section of the South" seems to have merit.

As noted by Samuel Hardman (2010), the idea of educating slaves seems to have achieved fruition in the case of the famed potter Dave, who, according to a 19th century newspaper article (Koverman 1998), worked in Landrum's print shop and pottery. Dave is known for the inscribed signatures, lines of verse and dates with which he sometimes decorated his pots (Todd 2008). On hearing of Abner Landrum's death he marked one vessel with a memorial: "Over Noble Dr. Landrum's Head / May Guardian Angels Visit His Bed." Date April 14, 1859 (in Goldberg and Witkofski 2005). In this regard, Landrum's visit to the Vickers' home may have made a significant impact, as Dave's pots are owned by major institutions such as the Smithsonian, and are highly sought after by collectors and extensively studied by scholars. Dave, rather than Abner Landrum, is probably the best- known potter from Edgefield.

The question of precisely who taught Abner Landrum to make his alkaline glazed stonewares remains unanswered. The social and economic conditions of the early 19th century contributed to an atmosphere conducive to innovation and experimentation. Before he ventured north, Landrum had an interest in developing a pottery industry. His meeting with John Vickers and other potters along the road to Philadelphia provided him with the knowledge he needed, and probably allowed him to recruit a journeyman potter. His association with John Vickers and his family also seems to have influenced Landrum's views on slavery, perhaps showing him that it was possible to earn a living without being a large slaveholder like his neighbors. Whether it was he who taught Dave to read, write, and express himself in script is not known for sure, but he was clearly in a position to do so, and to create an atmosphere where Dave's gifts were encouraged.

Acknowledgements

Thanks to Georgianna Greer, Stanley South, John Burrison, Linda Carnes McNaughton, Cinda Baldwin and Brad Rauschenberg for their pioneering research in this area, from which I have borrowed liberally. Special thanks to Samuel J. Hardman for finding and sharing the Vickers reference, and to Martha Zierden for forwarding me his email.

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Archaeological Investigations, LiDAR Aerial Survey, and Compositional Analysis of Pottery in Edgefield, South Carolina

George Calfas, Chris Fennell, Brooke Kenline, and Carl Steen

The first innovation and development of alkaline-glazed stoneware pottery in America occurred in the "Old Edgefield District" of South Carolina in the early 1800s (Figure 1). It remains an enduring mystery as to how these new ceramic methods were developed in that place and time, and how the techniques of clay choice, temper, and glaze developed over the following century (Greer 1981; Horne 1990). These potteries employed enslaved and free African-American laborers in the 19th century, and the stoneware forms also show evidence of likely African cultural influence on stylistic designs (Baldwin 1993; Koverman 1998; Vlach 1990a, 1990b). Edgefield potteries thus present fascinating research questions of understanding technological innovations and investigating the impacts of African cultural knowledge and racial ideologies on a craft specialization during the historic period in America. This project entails an interdisciplinary, collaborative, and archaeological study of the first development in America of alkaline-glazed stoneware pottery forms, the development of that South Carolina industry over time, and the impacts of racism and African cultural influences on those processes.

The technological innovation of alkaline-glazed stoneware pottery was introduced in North America by potteries operated by Abner and John Landrum in the Edgefield area in the first decades of the 19th century. These technological developments by entrepreneurs of Scots-Irish heritage played out in a landscape shaped by racial difference. Numerous African-American laborers, including "Dave the Potter" who added inscriptions to his vessels, worked at these production sites (Figure 2). Advertisements in local newspapers in the early decades of the 1800s listed enslaved laborers with skills in pottery production. African Americans most likely participated in all phases of the production process, such as: building and maintaining the kilns; digging and transporting clay; working and grinding raw clay in "pug" mills; chopping wood for fuel; preparing glaze mixtures, tempers, and clay pastes; turning the pottery wheels and shaping the vessels; loading and unloading the kiln firings; and work in transporting and marketing the wares.

As local historians Holcombe and Holcombe (1989:22) observed, the "District's ceramic entrepreneurs would never have been able to manufacture such large quantities of Edgefield wares without the slave participation." Indeed, in the period of 1800-1820, the recorded number of enslaved African Americans in the surrounding area had increased to comprise half of the Edgefield District's population. An illegal transport of enslaved laborers on the ship Wanderer delivered newly-captive Africans to the Edgefield District in 1858. The production of remarkably shaped "face vessels" at local potteries have also been analyzed as presenting evidence of the influence of stylistic traditions from cultures of West Central Africa (Figure 3) (Todd 2008; Vlach 1990a, 1990b).

This project seeks to undertake detailed archaeological investigations of principal sites in Edgefield, conduct archival research, and start a multi-year community engagement and education program related to these subjects. Archaeological field schools and research teams at such pottery sites can explore both the production facility remains and the residential sectors for the enslaved and free African-American laborers. Primary research questions include: (1) examining the distribution of work areas and residential locations in each pottery site and analyze the degree of spatial segregation due to the impacts of slavery and racism; (2) understanding differential uses and development of those work and residential spaces, as reflected in archaeological features and artifact distributions, and the degree to which variations correlate with different racial categories associated with the occupants;

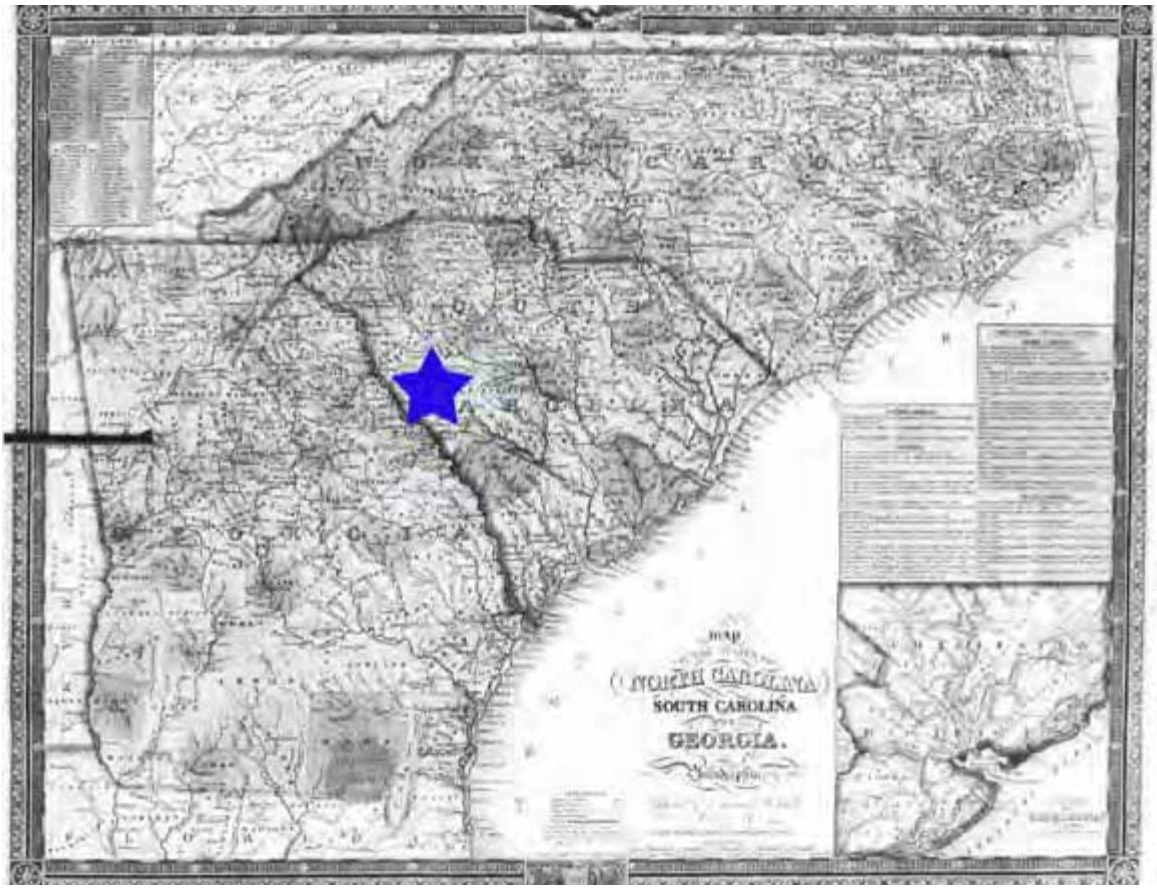

Figure 1. Mitchell 1835 map of North Carolina, South Carolina, and Georgia, with the Edgefield district highlighted with a star. Courtesy of Hargrett Library Digital Collections, University of Georgia.

Figure 2. Storage jar made by Dave Drake, Edgefield, SC. Philadelphia Museum of Art collections.

Figure 3. Mid-19th century face vessel produced in Edgefield, SC. Smithsonian collections.

(3) analyzing faunal and botanical remains to explore and contrast dietary and health patterns between residential sites and the degree to which variations correlate with different racial categories associated with the occupants; and (4) understanding the development and changes over time in the technologies of pottery production at these manufacturing sites.

Archaeological Field School

A six-week archaeological field school in 2011 will focus on the site of Pottersville (earlier called "Landrumsville"), where Abner Landrum started the first stoneware production facility in the Edgefield district in the early 1800s (Figure 4). We will excavate the kiln and related production areas and conduct surveys to locate the house sites of the craftspeople and laborers who created the Pottersville village surrounding that manufacturing facility. Instructors will include the authors of this article. In 2009, Calfas launched a project of compositional analysis of the differential elemental contents of clay sources and ceramic sherds from several Edgefield potteries, and he plans to continue this project during the 2011 field season. A collaborative group of researchers, advisors, consultants, and community members provide guidance for our research activities and plans, including (among others) Vernon Burton, Beth Cali, Chris Espenshade, Leland Ferguson, Stephen and Terry Ferrell, Joe Joseph, Ken Kelly, Jill Koverman, Ethan Lasser, Robert Marcom, Carol McDavid, Carrie Monday, Jon Prown, Bettis Rainsford, Edward Redman, Tim Scarlett, Stan South, Sean Taylor, Robert Farris Thompson, Leonard Todd, John Michael Vlach, and Terry Weik.

This field school will provide training in the techniques of excavation, mapping, controlled surface surveys, artifact classification and contextual interpretation. Students will work in supervised teams, learning to function as members of a field crew, with all of the skills necessary for becoming professional archaeologists. Laboratory processing and analysis will be ongoing during the field season. Evening lectures by project staff, visiting archaeologists, and historians will focus on providing background on how field data are used to answer archaeological and historical research questions. The instructors and students will stay in local housing in the Edgefield area during this six-week field school, and visit nearby archaeology sites and museums on weekend trips. Additional information and updates on the field school are available online at http://www.histarch.uiuc.edu/Edgefield/ (Also see the Notes from the Field Section for an update on the 2011 field work).

Figure 4. Excerpt of a map of the Edgefield District of SC surveyed by Thomas Anderson in 1817 and printed in the Robert Mills Atlas in1825. Courtesy of the Library of Congress.

LiDAR Aerial Survey

The University of Illinois has provided funding support to conduct a low-altitude aerial survey using Light Detection and Ranging (LiDAR) technology to determine the actual spatial extent and contours of the Pottersville production center and surrounding cultural landscape. This first pottery center expanded rapidly to meet a strong demand by neighboring agricultural producers for large, durable storage vessels, and produced a high volume of utilitarian stoneware vessels over several decades. Success of Pottersville stoneware led to the development of the working village around the kiln site. Documentary evidence in 1826 indicates that the complex included 16 to 17 laborer residences, and facilities for preparing clay, turning and shaping the vessels, and firing ceramics in a cross-draft, "groundhog" style kiln. This production center, with its associated village of laborers, operated at least through the 1850s, with a succession of owners and managers (Castille et al. 1988; Mills 1826; Vlach 1990b). The site of the Pottersville kiln is already recognized as nationally significant based on historical, documentary evidence, and is listed on the National Register of Historic Places (NPS 2009). However, no in-depth archaeological investigations have been undertaken there. Archaeological reconnaissance surveys conducted in 1987 demonstrated that the kiln site is intact, but no surveys have been undertaken of the surrounding area that contained the craft village (Castille et al. 1988; Steen 1994).

This remote-sensing aerial survey will provide a micro-topographic map of the landscape surface for a five-square-mile area surrounding the Pottersville kiln. This high resolution, three dimensional surface map will reveal surface contours shaped by the buried remains of the surrounding pottery production facilities and neighboring residential locations of the enslaved African-American laborers, none of which have been located to date. These cultural features will be subject of archaeological investigations in a multi-year project in Edgefield, which will include archaeological field schools and future applications for larger-scale grant support.

The use of low altitude aerial surveys with high-resolution LiDAR imaging has been applied successfully at prehistoric and historic-period sites in the United States (Harmon et al. 2006; Petzold et al. 1999; Riley 2009). LiDAR technology transmits a stream of high-resolution laser light to the ground surface and records the differential time with which each pulse is reflected back to a receiving device (Figure 5). This high-resolution survey method records a three-dimensional elevation map of the micro-topography of the ground surface, accurate to mere centimeters of spatial resolution. Importantly, the stream of laser pulses penetrate beneath any vegetation coverage to measure the underlying undulations of the ground surface, producing a high-resolution, "bare earth," micro-topographic map of features impacting the ground surface contours. LiDAR surveys have been used successfully on other sites to detect historic-period roads, pathways, and site contours not readily visible on the surface. LiDAR surveys can also detect the surface manifestations of buried archaeological remains of structures and activity areas that were otherwise obscured from visibility by vegetation cover (Ackermann 1999; Harmon et al. 2006; Petzold 1999).

LiDAR will be collected across five-square-miles of landscape, centered on the Pottersville kiln site, with multiple points per square meter and elevation resolution with an error factor of no more than 15 centimeters for each data point. The LiDAR survey will provide a micro-topographic data set across the contours of that area with surface contours measured to bare earth levels. LiDAR data will be acquired using aircraft equipped with an Optech Gemini Airborne Laser Terrain Mapper sensor array or comparable Leica ALS system. These systems utilize variable pulse and scan rates that enable the sensors to adapt immediately to varying topography and ground cover. This multipulse technology thus provides the data acquisition benefits of acquiring maximum point density in the most cost-effective manner.

Employment of such LiDAR surveys from low-altitude aerial platforms is particularly valuable when the resulting data are incorporated into a Geographic Information Systems (GIS) database and compared and contrasted with other types of archaeological and remote sensing data (Ackermann 1999; Harmon et al. 2006). In this project, the LiDAR data will be incorporated into a GIS database and evaluated in comparison with visible-spectrum aerial photographs, satellite images, plat maps, geological surveys, and historic-period maps. The results of this LiDAR survey will also provide a template for planning ground-based excavations scheduled for 2011.

Future Plans

In our larger-scale research initiative, we seek to understand how European Americans and enslaved African Americans negotiated the impacts of racism and the institution of slavery in the unique setting of the Edgefield pottery district. In those craft communities, African Americans worked in an array of skilled occupations to produce a remarkable volume of ceramic wares. This project will contribute to understanding facets of the changing meanings of racism in particular periods and locations by investigating the ways in which racial ideolo-

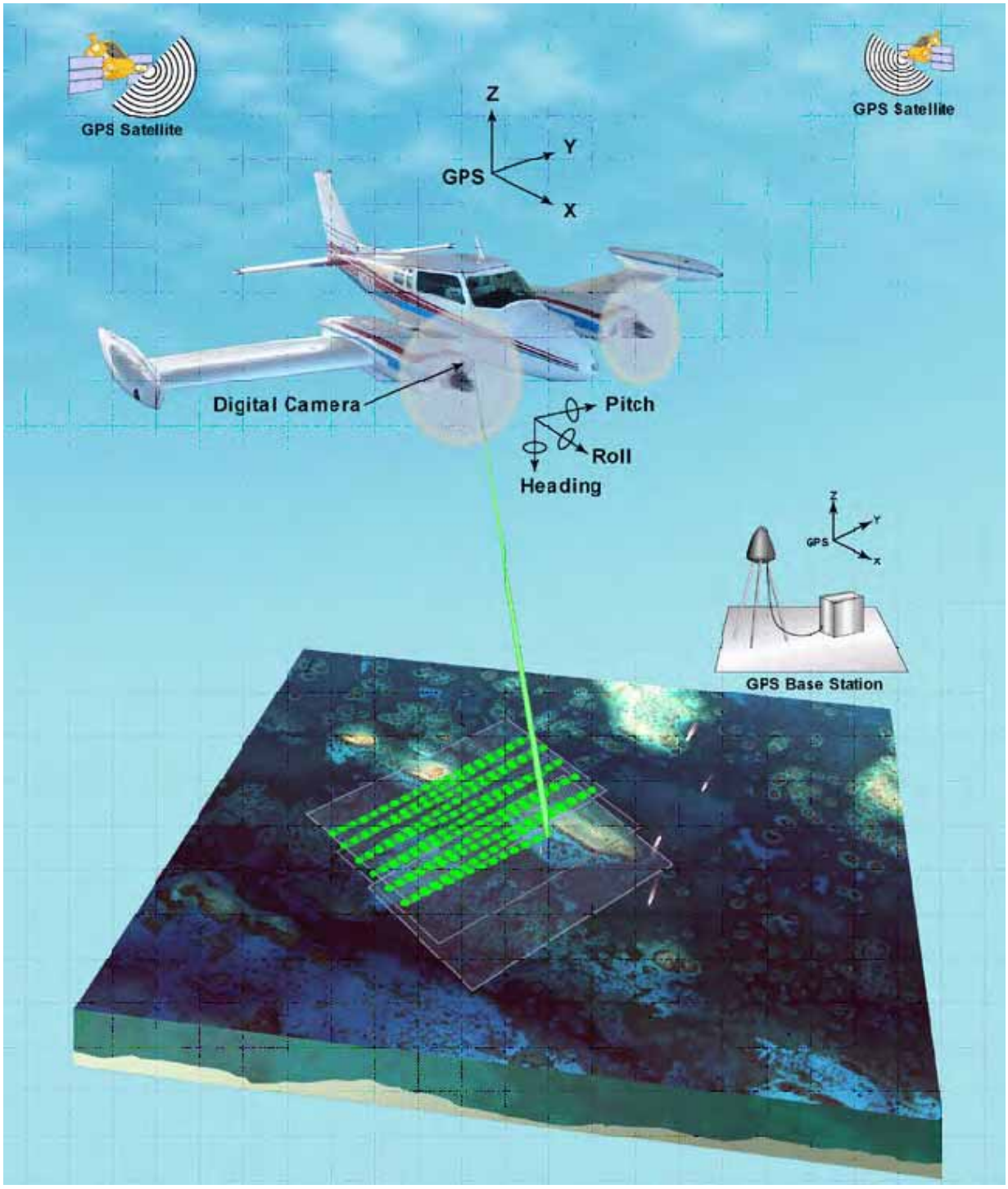

Figure 5. This illustration from the U.S. Geological Survey web site details the main components and process for collecting LiDAR aerial survey data. Courtesy of the U.S. Geological Survey.

gies were created and maintained or at times subverted and dissipated. This research will also contribute to a growing, comparative set of studies addressing the contours of racism, slavery, and economic enterprise in the periods of slavery and in post-emancipation developments of the later 19th century (e.g., Burton 1985; Fennell et al. 2009; Ferguson 1992; Leone et al. 2005; Omi and Winant 1994; Upton 1988).

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An Archaeological Surface Survey and Assessment of the Historic Brattonsville Plantation Enslaved Cemetery, McConnells, South Carolina

Christina Brooks, Ally Temple, Roxanne Ayers, and Andrew Harris

Dell Upton (1985) successfully argued that there is in fact a difference between "black and white landscapes". While his discussion focuses primarily on living spaces, his ideas are relevant to death spaces as well. From January through May 2011, Winthrop University students conducted a survey of the Historic Brattonsville Enslaved African Cemetery. Historic Brattonsville, located in McConnells, South Carolina, is operated by the York County Cultural and Heritage Museums. Historic Brattonsville is a Revolutionary War site, historic plantation and living history site with African-American interpretation. From our research on the cemetery, it is clear that both groups inhabiting the Brattonsville plantation, the enslaved and the Bratton family, utilized the plantation landscape, particularly the cemetery landscape, in extremely different manners. Research at the Historic Brattonsville Enslaved Cemetery provides new information about the life and culture of the Bratton's enslaved population and the creation of an African American cemetery landscape.

A Short History of Brattonsville Plantation

Historic Brattonsville has deep historical roots. Originally located within Mecklenburg County in North Carolina, the state survey lines were redrawn in 1772 to become Craven County, South Carolina which was later renamed York County. Brattonsville is named for the Bratton family. The Brattonsville area has been settled almost as long as the Carolina backcountry itself. Beginning in the 1740s, the South Carolina backcountry saw its first European settlers, most of who were of Scotch-Irish or German descent. Many of these early settlers migrated from colonies further north, particularly Virginia and Pennsylvania (Jones 1991). Like others, the Bratton family emigrated directly from Ireland via Virginia. Originally from the Ulster Province in Northern Ireland, the Bratton family had previously resided in Augusta County, Virginia around 1740, where they were quite prominent (Scoggins 2002). However, Augusta County was plagued with Indian raids during the French and Indian War from 1754 to 1763, and the Brattons likely moved to avoid these raids (Scoggins 2002). The Bratton family moved into the York County area around 1766, when William Bratton purchased a tract of land on Fishing Creek (Scoggins 2002).

William Bratton began establishing himself in the area immediately and was called upon by the county of Tryon, North Carolina for service. In 1769, the County Court made Bratton overseer of a local road and ordered another road to be laid between Bratton's house and King's Mountain. Bratton moved into North Carolina at the end of the Regulator Movement, which was a series of violent protests and revolts against what was seen as a corrupt Colonial Government (Whittenburg 1974). While Bratton has no recorded involvement either with the movement or against it, it's likely that his overseeing duties came in the wake of the Regulator Movement as nearby Mecklenburg County saw heated violence after 1765 (Whittenburg 1974). In 1772, the boundary between the colonies of North Carolina and South Carolina were surveyed west of the Catawba River. Bratton's home, previously in North Carolina, was located in South Carolina's Craven County ot the New Acquisition District (Scoggins 2002).

According to tradition, the surviving William Bratton house was built during this time, but that has not been confirmed. Bratton became a captain and later a major and colonel in the Colonial Army during the American Revolution, and for the rest of his life he would go by the title of "Colonel". Modern-day York County was an important location in the American Revolution, where a civil war raged between Tories and Patriots and neighbors clashed with one another (Scoggins 2011). Colonel Bratton would see action near his home on July 12th, 1780 at the Battle of Huck's Defeat.

Slavery at Brattonsville

There is no documentary history suggesting when Colonel William Bratton acquired his first enslaved person. Colonel Bratton owned at least two slaves during the Revolutionary War, young Watt and his wife Polly. Watt, identified as a local historical hero, aided Colonel Bratton and the Bratton family before the Battle of Huck's Defeat thereby saving the life of the Brattons. According to tradition, the young slave named Watt alerted Colonel Bratton to Tory commander Christian Huck's position, thus saving the Colonel's brother and ensuring a victory for the Patriots. Watt was approximately twenty years old (Scoggins 2011, personal communication) at the time of his celebrated heroic efforts, making him approximately six years old when the Brattons arrived in South Carolina. Records suggest that the Brattons did not sell many of their enslaved workers as they generally tried not to separate families. Given this logic, it is reasonable to believe that William Bratton may have arrived from Virginia with enslaved persons with him. In a South Carolina narrative (Rawick 1972), ex-slave Jim Henry explained how General John Bratton bought his father from Patrick Henry's estate in Virginia. While John Bratton is the grandson of William Bratton, it is plausible to believe that many of the enslaved persons on the Brattonsville plantation arrived from Virginia (Scoggins 2011, personal communication).

Watt and Polly, along with 21 other slaves were bequeathed to Bratton's wife, Martha, for use during her natural life. Upon his death on February 9, 1815, Bratton's will read, "it is further my will and desire that all my negroes shall continue and remain on my plantation and continue to work the same in the usual manner that I have been in the practice of doing until a crop or crops shall be raised sufficient to pay and satisfy all just demands against my estate at my death or at the death of my wife should she survive me" (Scoggins 2002). Upon Martha's death, the slaves were to be divided amongst his children.

The Bratton's wealth continued to increase, due to the productive labors of the enslaved population. In 1843, upon Dr. John Bratton's death, an appraisal showed an increase in the number of slaves the Bratton family own; the value of the slaves was placed at $41,643.66 and included 147 slaves (Scoggins 2002). The Bratton family increased their acreage until the Civil War. After the Civil War, any slaves that were still located at Brattonsville were emancipated by the confederate army's surrender and became tenant farmers or were paid wages. A listing at the end of the Civil War showed that the number of slaves owned decreased to 87 (Scoggins 2002).

The Bratton family remained extremely grateful for Watt and Polly. Upon their death in in July 1837 and December 1838 respectively, the two were buried in the enslaved cemetery with an engraved headstone placed at their burial site by the Bratton family. In the enslaved cemetery, Watt and Polly's side-by-side grave was the only burial marked with an engraved tablet marker. The Brattons are buried in Bethesda Presbyterian Church cemetery, located a few miles from the property. The cemetery for the enslaved people is on the Bratton property, but located some distance from the main house, the Homestead.

The Cemetery

The enslaved cemetery is located in an approximate two-acre patch of woods, surrounded by farmland and two state roads. The cemetery at first approach is completely invisible much like the people who have been laid to rest had lived. An expanse of trees and a ground cover of leaves have protected the cemetery to date. The burial area appears untended; however, this is a typical characteristic of southern enslaved African cemeteries. Rice and Katz-Hyman (2010: 254) state, "Graves may appear to be untended, because these rural burial grounds largely did not participate in the Euro-American "beautification of death movement".

Methods

The goal of the project was to document the enslaved African cemetery on the Historic Brattonsville Plantation. The cemetery survey project included oral histories with descendants of Brattonsville's enslaved community, an archaeological surface survey and historical research. The historical documentation was primarily provided by Michael Scoggins, Historian, Culture and Heritage Museums. Descendants of the Brattonsville enslaved community were contacted prior to the start of the survey. While the descendants did not visit the cemetery while the survey was in progress, upon conclusion of the cemetery survey Christina Brooks spoke with the descendant community again. On June 13, Brooks met with James Cathcart, a descendant of Lila Bratton, who was mentioned in Harriet Bratton's Freedmen list reportedly taken sometime in 1865 (Scoggins 2003). Mr. Cathcart provided additional historical information and ideas on who may be buried in the cemetery.

A surface survey was completed by Brooks and fifteen archaeology students at Winthrop University from January 15 through May 6. Students participated in every aspect of the project such as historical research and mapping and documenting the site during the surface survey of the cemetery. Topics addressed included grave marker variability, material culture availability, cemetery landscape and funerary practices.

Before clearing the cemetery of leaves and surface debris and deciding where to establish a datum point, we

walked the area to identify the preliminary boundaries. We looked for cemetery indicators such as grave markers, field stones, artifacts, and depressions. Possible markers and depressions were marked with survey flags (Figure 1) to provide an idea of cemetery layout and organization.

All of the flags placed in the field were labeled with "HBSC," an abbreviation for the Historic Brattonsville Slave Cemetery, and a number. The initial boundaries of the cemetery were mapped providing the general overview and size.

Next we cleared the surface of leaves, branches, small trees and other organic debris by rake and by hand to reveal field stones and depressions. Once the surface was cleared the class began to divide the cemetery into 4x4 meter units. The cross-shaped grave marker now located at Watt and Polly's grave was chosen as datum (Figure 2). In total, 22 4x4 meter squares were laid out in the cemetery. All features and artifacts were mapped, sketched and photographed in each unit.

Once documentation was complete, the ground surrounding all four sides of each marker and all depressions were probed using a metal T-bar soil probe. The probe was pushed into the soil near the markers and depressions and if the probe faced no resistance then the soil there was likely disturbed at some point in time and thereby marked as a grave. By using a compass with the T-bar probe, we were able to determine the orientation of the graves. All possible graves were identified, mapped, and labeled.

Results

Burial traditions emerged from religious cosmologies that were transported with the enslaved during their involuntary migration to America. The enslaved Africans transported to Brattonsville brought many of their traditional burial practices with them from Virginia and ultimately from their respective parts of Africa. These beliefs were reinterpreted utilizing European material culture and landscape and ultimately manifested into a unique worldview regarding death. The primary focus that this modified worldview stemmed around was putting the spirit of deceased loved ones to rest by ensuring proper burial. Lack of a proper burial, according to beliefs, would ensure that the spirit would not rest and the living would suffer (Finley and Alexander 2009; Harris 1992; Stuckey 1988). This belief about death possibly stemmed from as far reaching as Africa. While the exact importation location of Bratton's enslaved is undocumented, the most common peoples being imported into Virginia were the Igbo people from the Bight of Biafra (Morgan 1998). To the Igbo, life did not end at death, it simply continued into another realm, and proper burial was necessary to achieve this relocation of the spirit.

In the Historic Brattonsville Enslaved African Cemetery, 46 possible burials were identified. Field stones made up 99 percent of the material culture identified in the cemetery (Figure 3). These stones all varied in shape and size and were from a local source. It is unclear if the shape and

Figure 1. Possible markers and depressions were marked with survey flags.

Figure 2. Cross-shaped grave marker located at Watt and Polly's grave.

Figure 3. An example of the material culture identified in the cemetery.

size of the stones correlate to any social behaviors. Further study needs to be done.

Material culture, such as glass, ceramics, metal, and shells, found in other South Carolina enslaved or free African American cemeteries (Blassingame 1979; Bolton 1891; Ingersoll 1892; Jones-Jackson 2004; Morgan 1998; Sheumaker and Wajda 2008; Thompson 1984) is typically found in the Low Country south (including coastal South Carolina, Georgia and North Carolina and northern Florida). Aside from the field stones, believed to represent head and foot markers for those interred, no additional artifacts or features were found in the cemetery. The lack of material culture, outside of the field stone markers, says a lot about the cemetery. The lack of artifacts could reflect the economic standing of those interred (Little 1989). Moreover, this lack of material culture within the cemetery might also reflect the cultural identity formed by the group interred. The lack of material culture in the Historic Brattonsville Enslaved African Cemetery possibly points to an origin of the enslaved outside of the Low Country South. This is consistent with the Tidewater Chesapeake region (including coastal Virginia and Maryland), in which African and African American cemeteries are often not marked with additional material culture outside of markers.

While the absence of material culture available in the cemetery greatly differs from enslaved cemeteries of the Low Country, the cemetery landscape shares many similarities. The cemetery is situated away from the main house on the Brattonsville plantation. The cemetery is hidden on a wooded tract of land approximately two acres in size. The wooded copse is a common feature among enslaved African cemeteries. The enslaved often met in woods to communicate and keep alive African traditions (Fitts 1996), including funerals traditions.

In addition, the graves were located in a general east-west direction. Although this is often attributed to Christian influences, some have suggested that east-faced burials in enslaved cemeteries may suggest an intentional orientation to Africa (Rice and Katz-Hyman 2010). Despite a general east-west orientation, the layout of the cemetery is rather arbitrary with no defined rows or other organizational patterns. In addition to single stone markers, clusters of markers exist throughout the cemetery. While a single fieldstone may identify one person or a couple, a cluster of stones may indicate multiple burials that represent family groups within the cemetery since there does not appear to be any barriers, natural or cultural, that would obstruct interment anywhere within the cemetery. Finally, the cluster of burials may indicate burials that occurred during a relatively short period of time. Often markers were set at what is presumed to be the head of a depression (based on the common east-west orientation of the burials). These cultural characteristics identified in the Historic Brattonsville Enslaved Cemetery are representative of enslaved African burial practices found in both Virginia and South Carolina and perhaps throughout the south. The idiosyncrasies of the enslaved cemetery are what distinguish these sites from traditional European cemetery sites, sharing temporal and geographic space, by offering what might be referred to as "untraditional" landscapes.

Conclusions

This cemetery survey is the beginning of a long project partnership between Winthrop University and Historic Brattonsville. The process has begun of honoring the enslaved people that were buried at Brattonsville. One of their many contributions, a unique cultural perspective on death and dying, will be brought to the forefront of the public's attention. This project serves as the first step in protecting the historic cemetery and remembering the people that history has forgotten.

Acknowledgments

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Macroscopic Analysis of an Allendale Chert Flake Tool Assemblage from Northeastern Lake Marion

Robert C. Costello

This essay presents some of the essential features of an Allendale/Brier Creek chert tool assemblage recovered during the drought of the winter of 2008 from a normally submerged portion of the bed of Lake Marion. The assemblage was arrayed in a cluster approximately one meter in diameter (Figure 1) and was located approximately 260 meters north northeast of site 38CR117 on Persanti Island. This study encompasses 71 tools, 64 collected by the author (Figures 2, 3, 4, and 5), and seven additional ones collected by other avocational archaeologists (Figures 6 and 7).

Two features of the assemblage provided the primary impetus for this study. The entire assemblage was manufactured exclusively from unaltered Allendale/Brier Creek chert or Savannah River agate or chert. This represents a distinctly exotic, or non-local, lithic raw material for the area where it was recovered (Costello 2008). The nearest known sources of Allendale/Brier Creek chert are the Savannah River quarries located approximately 70 miles distant (Goodyear 1985; Goodyear and Charles 1984). The second striking feature of the assemblage is that each member exhibited utilization as a tool when examined closely by a lithic expert. Very few of these artifacts would be recognized as tools without close examination, as most lack the overall morphological traits which would place them into specific tool classes such as end scraper, side scraper, graver, or knife. The majority is expedient rather than formal tools. As such, their analysis and description posed several challenges.

Kenneth Steffy and I initially thought that the artifact assemblage represented a cache (Costello and Steffy 2009). A cache is "a group of artifacts deposited in the same safe place, usually of the same type or lithic origin. Generally, the assumption is that caches were created to store tools for some future use" (Gumbus 2008). However, further review determined that this could not be substantiated. No evidence could be found supporting the intentional deposition of the assemblage; therefore, it does not fulfill the criteria for a cache. However, like a cache, it does represent a time capsule of functional and technological information based on its uniform material composition and limited range of lithic technology, and was cited by Goodyear and Anderson (2011) as the "Costello cache" in the context of their presentation on lithic caches from South Carolina.

Research Methods and Evaluation Criteria

A catalog reference number (1–71) was assigned to each artifact, and then individual and group photographs were taken of the artifacts. Artifacts 2, 35, 49, and 52 were subjected to cleaning with 6M HCl after collection (and thus appear in the group photos to be cleaner than untreated artifacts shown in situ in Figure 1). Essential quantitative data (mass, length, width, and thickness) were measured and recorded for each item. The recorded qualitative observations were limited to features observable using hand lenses of 15X or less magnification; no microscopy was attempted.

Qualitative macroscopic lithic analysis was conducted based upon criteria adapted from Andrefsky's (1998:Figure 4–7) generalized morphological typology for stone tools. Utilizing this scheme, any chipped stone is classified as either a tool or debitage. When subjected to human modification, either by use or by intentional flaking, the piece of chipped stone is classified as a tool. Tools are further classified as either bifacial or non-bifacial. However, as none of the assemblage is bifacial, analysis continued using the non-bifacial class only. The non-bifacial class may be further divided into two subclasses: flake tools or core tools.

Figure 1. The assemblage in situ on January 27, 2008.

Flake tools must exhibit at least one or more of the following flake characteristics: a distinguishable dorsal and/or ventral surface; a proximal and/or distal end; a discernible bulb of percussion; an eraillure flake scar; and/or radial fissures (Whittaker 1997:14–19). Those lacking a minimum of at least one of the aforementioned flake characteristics are classified as non-flake or core tools. While some of the assemblage members initially appeared core-like, each retained one or more flake characteristics, and therefore, was treated as a flake.

The final criterion employed in this study for describing flake tools is edge modification location. Andrefsky (1998) divides edge modification location into three categories: unimarginal, bimarginal, and combination. Unimarginal edge modification involves modification of the dorsal or ventral surface only and may be located anywhere along the edge of either surface, but it cannot overlap at a given edge location. Unimarginal edge modification may, however, alternate between opposing surfaces at different edge locations on an artifact. Bimarginal edge modification is restricted to bifacial modification of all modified edge locations on the tool. Finally, combination edge modification involves both unimarginal and bimarginal edge modification in one or more of the tool's edge areas (Andrefsky 1998:77-80). No members of the assemblage exhibited exclusively bimarginal edge modification; so the category of bimarginal edge modification is included herein for clarification and discussion purposes only.

Artifact orientation for linear measurements was determined by the fact that all artifacts within the assemblage were flakes. Flake length was measured as the maximum distance from the proximal to the distal end along a line perpendicular to the flake's platform (Andrefsky 1998: Figure 5.8c). Maximum width was measured at the flake's widest point parallel to the platform and perpendicular to the length measurement. Lastly, the flake was placed ventral surface down on a flat surface, and thickness was measured from the dorsal surface's highest prominence to the flat surface beneath. All measurements were taken to the nearest millimeter.

Flakes were typed according to the amount of observable dorsal cortex. Three categories were employed: primary, secondary, and tertiary, a simplification of the four rank ordinal scale suggested by Andrefsky (1998:102-105) for classifying flake debitage attributes. Since most

Figure 2. Assemblage items 1-16.

members of the assemblage are expedient flake tools which could have been abandoned as debitage rather than being used as tools, the choice of a flake debitage-based classification is appropriate. Primary flakes displayed 50 percent or more (≥50%) of the original cortical surface. Secondary flakes exhibited less than 50 percent (<50%), but somewhat greater than zero percent (>0%) of the original cortical surface. Tertiary flakes were those flakes displaying either no cortex or remaining areas of the original cortical surfaces that were too small to be accurately measured. The determination of each classification was occasionally subjective. Yet this system provided a rough sequence of a flake's removal during core reduction. Data indicative of tool usage: use wear, retouch, and use polish were also recorded.

Artifact #27 illustrates some of the methodology employed in this study. Figure 8 is a duplex view of this artifact; such photos were made of each member of the assemblage. The dorsal view is on the left, ventral on the right, with proximal end down and distal end up. Classification of this artifact as a primary flake is based on the large fraction (>50%) of cortex evident in the dorsal view. Unimarginal edge modification was observed on the right lateral dorsal area continuing to the distal end, as well as another region on the left lateral medial dorsal area, the latter containing retouch and a possible worn graver spur. No edge modification was observed from the ventral perspective.

Figure 9 illustrates retouch (large flake removals) and use wear (small, irregular flake removals from the very

Figure 3. Assemblage items 17-32.

edge) in an oblique view of the dorsal right lateral distal half of item #27. The dorsal cortex on this primary flake is also visible in this photograph. The large flake removals presumably were done in order to decorticate this working edge of the flake. Similar detailed observations on each of the members of the assemblage form the basis for the qualitative data presented in Table 1.

Results

Table 1 summarizes data for each of the assemblage members including a final row of statistical data for the entire assemblage. The final row incorporates both a mean value for quantitative data (including digitized flake type classification) along with the fraction of the assemblage exhibiting the given trait for qualitative data. For example, all of the assemblage (or 100%) exhibited use wear (UW), while only 83% exhibited retouch (R) and 89% use polish (P). Edge modification location data are treated qualitatively, employing the three categories previously cited: unimarginal (U), combination (C), and bimarginal (B). Nearly three quarters of the assemblage (73%) exhibited unimarginal modification; just over one quarter (27%) exhibited combination modification, and none (0%) exhibited exclusively bimarginal modification.

Quantitative measurements, with mean values, are presented for mass, length, width, and thickness of each artifact. The size extremes are represented by #6, which is small enough to be a projectile point, to #71, which is large enough to require the use of two hands when employed in its probable chopper function. All others could conve-

Figure 4. Assemblage items 33-48.

niently be used as tools held in one hand; no indication of hafting was observed among the assemblage artifacts. All except possibly item #6 contain sufficient lithic material to be reworked into other, more formal tools such as projectile points and scrapers, which would be consistent with the assemblage being deposited as a lithic materials cache.

Flake type, based on amount of cortex remaining on the dorsal surfaces, is distributed as follows: 23 primary, 28 secondary, and 20 tertiary. This result is consistent with the makers having smashed one or a few large cores down to expedient sizes rather than extensive processing of the resulting large flakes. Subsequently, selected flakes were removed from the site of manufacture.

Discussion and Conclusions

The possession of one or more flake characteristics by all the assemblage artifacts validates their classification as flakes. The universal presence of use wear among members of the assemblage clearly establishes their utilization as tools. Confirmation for these conclusions is also reflected in the assemblage's observed high incidences of retouch (83%) and use polish (89%). Thus each member of the assemblage can be classified as a flake tool.

The prevalence of platforms of opportunity, as opposed to prepared striking platforms, the use of hard hammer percussion, and the lack of extensive retouch suggest an immediate need for tools (Andrefsky 1998:213–214). 69 of the 71 members (97%) of the assemblage are expedient tools. However, tools #2 (scraper) and

Figure 5. Assemblage items 49-64

#71 (chopper) are classified as formal tools based both upon their recognizable morphology and the presence of extensive retouch. The total absence of artifacts exhibiting exclusively bimarginal edge modification is striking. Although analysis of specific uses of the members of the assemblage is beyond the scope of this essay, the absence of bimarginal edge modification may indicate that none of these artifacts was used exclusively for cutting. Those that exhibit combination edge modification, comprising 27% of the assemblage, can be assumed to be multi-purpose tools.

Evidence supports manufacture of the assemblage elsewhere, as no refits were achieved and there was a complete absence of small flake debitage within the assemblage recovery area (Schick and Toth 1993). The presence of an assemblage of small flake lithic debitage of a different material (Piedmont silicate) at a distant location in the area indicates that conditions such as flooding which might have swept away small flake debitage from the assemblage had not occurred. High velocity flooding would have swept away all small flake debitage from the area. Refitting has been attempted on several occasions, but so far, no refits have been found among any of the assemblage's 71 members. Likewise, no Allendale/Brier Creek chert debitage was discovered during several thorough subsequent searches of the immediate area of the original recovery before it was submerged by the rising lake level.

In addition to lack of debitage and failure to achieve refits, the confined area of recovery and similarity of lithic raw material suggests that the assemblage was not manufactured on site, but rather was transported in from another location. Should this be true; three possible modes of transportation may be postulated. First is overland, perhaps facilitated by a travois. A second mode would be utilizing the existing interconnecting system of inland

Figure 6. Assemblage items 65-68.

Figure 7. Assemblage items 69-71.

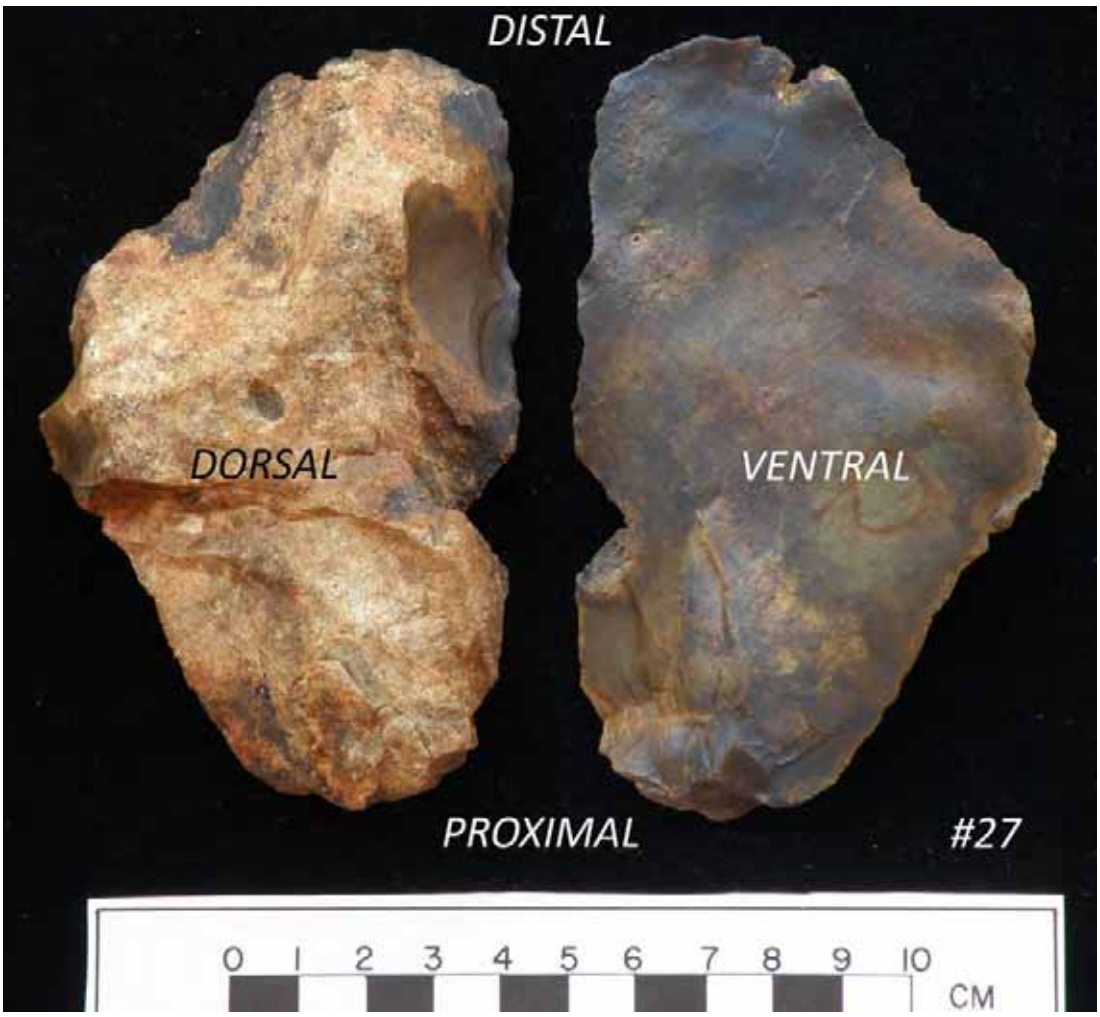

Figure 8. Duplex view of artifact #27.

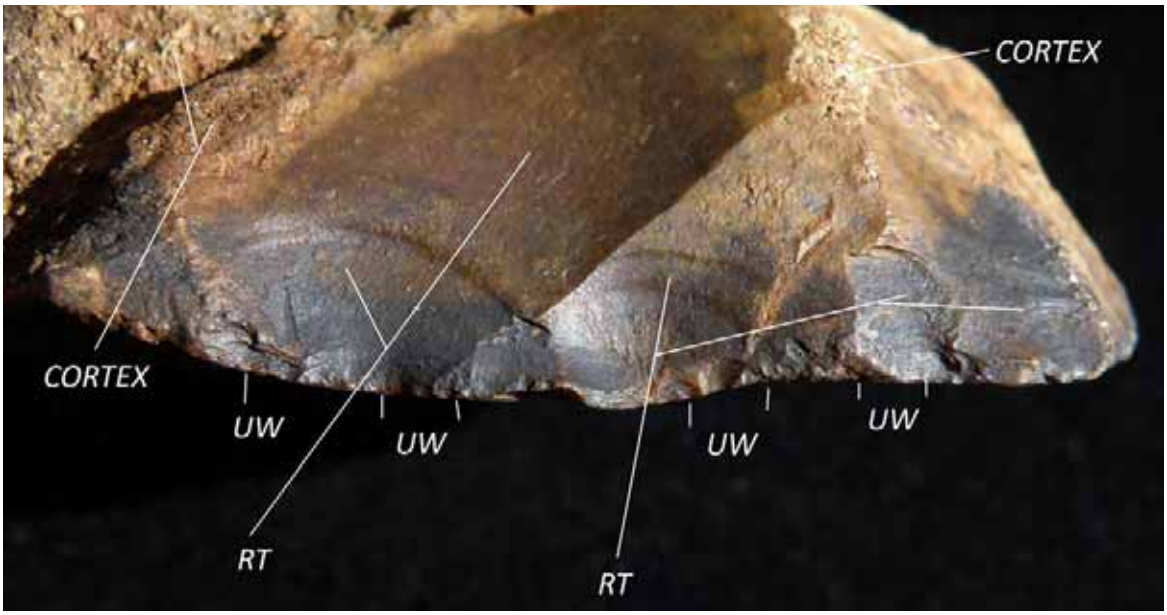

Figure 9. Retouch and use wear on artifact #27 right lateral distal dorsal edge.

Table 1. Selected attributes of assemblage members

#	WT (g)	L (mm)	W (mm)	T (mm)	FT	Tool Use Indicators			EML
						UW	R	P	
1	88.74	106	65	24	3	+	+	+	C
2	97.82	91	74	20	3	+	+	+	U
3	102.27	69	74	24	3	+	+	+	U
4	50.66	66	60	17	3	+	+	+	U
5	39.56	80	55	14	3	+	+	+	U
6	17.29	38	30	14	3	+	+	+	U
7	55.75	84	62	20	2	+	-	+	U
8	56.41	87	49	19	3	+	-	+	U
9	101.35	67	79	26	3	+	+	+	U
10	52.21	74	52	15	3	+	+	+	C
11	100.00	85	58	27	2	+	+	+	U
12	92.19	64	75	33	2	+	+	+	U
13	55.36	76	44	23	2	+	-	+	U
14	99.90	83	63	27	2	+	-	+	C
15	79.08	59	70	24	2	+	+	+	U
16	63.27	71	53	18	2	+	-	+	U
17	87.11	64	62	25	1	+	+	+	U
18	44.83	53	54	13	1	+	-	+	U
19	183.22	79	82	43	2	+	-	+	C
20	154.72	72	85	37	1	+	+	-	C
21	216.93	96	88	32	1	+	+	-	U
22	92.30	76	62	28	1	+	+	+	C
23	96.70	65	74	32	1	+	+	+	C
24	103.21	80	68	26	1	+	+	+	C
25	390.14	155	63	55	2	+	-	-	U
26	134.74	88	79	31	1	+	+	+	U
27	214.70	108	78	31	1	+	+	+	U
28	152.82	88	78	34	1	+	+	-	C
29	137.36	87	54	31	2	+	+	+	U
30	131.79	96	61	29	2	+	+	+	U
31	157.94	117	63	34	3	+	+	-	U
32	78.48	61	69	23	2	+	+	+	U
33	47.19	57	73	21	2	+	+	+	U
34	79.81	76	48	25	2	+	+	-	U
35	101.72	80	61	25	2	+	+	+	U
36	92.41	70	68	25	1	+	-	+	U
37	50.44	46	67	17	3	+	+	+	U
38	61.90	70	62	24	2	+	+	-	U
39	64.78	64	46	28	1	+	+	+	U
40	76.70	66	66	23	1	+	+	+	U
41	124.82	82	68	28	2	+	+	+	C
42	111.90	88	80	24	2	+	+	+	U
43	92.69	68	73	31	2	+	+	-	U
44	108.08	80	58	28	2	+	+	+	C
45	58.32	63	57	18	2	+	-	+	U
46	81.76	87	57	22	2	+	+	+	C
47	48.89	72	51	21	1	+	+	+	U
48	43.77	70	56	17	2	+	+	+	U
49	65.22	84	46	22	2	+	+	+	U

50	121.21	106	57	22	2	+	+	+	U
51	129.33	116	59	22	3	+	+	+	C
52	71.50	81	71	21	2	+	+	+	U
53	67.30	71	54	22	3	+	+	+	C
54	37.63	71	52	15	3	+	-	+	U
55	21.67	66	49	9	2	+	+	+	U
56	50.24	71	48	19	1	+	+	+	U
57	53.28	81	53	15	3	+	+	+	U
58	102.74	69	59	28	2	+	+	+	U
59	45.64	68	61	18	2	+	+	+	U
60	89.92	72	62	21	2	+	+	+	U
61	33.57	72	60	18	3	+	+	+	C
62	47.42	69	63	21	3	+	+	+	U
63	73.91	76	54	25	1	+	+	+	U
64	42.19	74	54	14	3	+	-	+	C
65	174.74	106	66	26	3	+	+	+	C
66	147.11	89	62	33	2	+	+	+	C
67	153.33	72	85	37	2	+	+	+	U
68	43.50	83	30	20	3	+	+	+	U
69	122.61	87	63	29	2	+	+	+	U
70	68.96	82	52	20	1	+	+	+	U
71	981.21	208	93	51	2	+	+	+	C
AV	105.89	80	62	25	2.0	1.0	0.83	0.89	.73 U

#: Assemblage artifact catalog number. Weight (WT) Length (L) Width (W) Thickness (T)
Flake type (FT): 1 = Primary or more than 50% dorsal cortex; 2 = Secondary or less than 50% dorsal cortex; 3 = Tertiary or zero or very little dorsal cortex
Tool use indicators: Use Wear (UW); Retouch (R) ; Use Polish (P)
Edge modification location (EML): Unimarginal (U) Combination (C).
Average value (AV): First five columns; or fraction exhibiting a given trait in the last four columns.

waterways: rivers, streams, and creeks. This could be feasibly accomplished with only minimal overland portage required (Steffy 2010, personal communication). The third mode would be by simply boating down the Savannah River, moving northward along the Atlantic Coast, and up the Santee River. Large loads could easily be transported using watercraft. Jodry (2005) provides a compelling argument for the long-term use of water transport dating back at least to the late Pleistocene in the Americas.

Most members of the assemblage are of a size sufficient for the manufacture of bifacial projectile points or other formalized tools, one possible use for the assemblage if it indeed was stored as a cache. One could envision the collection of the assemblage at another location and its transportation to the location of its discovery for this purpose. Alternatively, one could envision a use event such as animal processing at the site in which the products of the use were much more highly valued than the tools employed in the process, the tools simply being abandoned at the site afterwards. It remains a puzzle why a material of such seemingly high quality and value would be abandoned.

South Carolina expedient tools have received only minor research resulting in little in the way of guidance and pertinent literature to build upon, as most studies have focused on diagnostic projectile points and lithic tools and ceramics. The available reports and articles normally emphasize formal tools with only brief mention given to non-formal or expedient tools. Many expedient tools, if recognized, are simply labeled "utilized flakes" and relegated to the debitage bag. However, besides utilized flakes, O'Steen (1999) describes several additional expedient tool categories at the Bear Creek site including flake/core scrapers, perforator/gravers, spoke shaves, burins, scalloped flakes, serrated flakes, wedges, and prismatic blades. As discussed above, only two members of the assemblage fell clearly into morphologically recognizable tool categories (#2 scraper, #71 chopper). Detailed functional analysis of the assemblage is beyond the scope of this essay; however preliminary analysis has shown that many of the assemblage artifacts are multi-functional tools which were utilized on different edges. This is especially true of the 27% classified as exhibiting combination edge modification, but is not limited to that subset. For example, artifact #27 cited above has areas of unimarginal use wear and retouch on two different edges of its dorsal side.

The assemblage of artifacts was not initially identified as expedient tools, but rather as exceptional lithic material (Costello 2008). The standardized recording of location, collection, and a series of systematic examinations of each item has provided valuable insights into a South Carolina expedient tool assemblage. This essay presents the results of preliminary studies supporting the conclusion that each item was employed as a flake tool. It includes vital quantitative statistics (mass and linear dimensions) for each item and a tabulation of the qualitative evidence supporting tool use. The analysis provides a classification of types of edge modification of each artifact as unimarginal or combination (unimarginal on some edges, bimarginal on others). For future studies, these data could provide a starting point to analyze how each artifact was employed as a tool.

The lithic technology employed in the manufacture of these tools provides no definitive evidence regarding time of manufacture or cultural affiliation. It is core-flake technology characterized by hard hammer percussion using platforms of opportunity rather than prepared platforms. The most advanced technology evident in the assemblage is found in the flaking pattern of item #71 (see Figure 7), which exhibits a level of sophistication indicating that the maker systematically followed ridges in removing flakes (Steffy 2011, personal communication). However, the essence of expedient tools is immediate utility of flakes and cores with zero or minimal modification; thus such tools can be of any age, even historic.

The general area in which the assemblage was recovered has been described as a series of multiple occupation sites resulting from soil deflation at the edge of Lake Marion (Costello 2007). I have found a few Clovis artifacts intermingled with large numbers of prehistoric and a few historic pot sherds within a mile of the assemblage recovery site. In the same area, diagnostic lithic artifacts range from Clovis to Mississippian. Thus any statements regarding cultural affiliation of the creators of the assemblage based on other sites in the area would be unsupportable.

The data reported in this paper barely scratch the surface of what could be derived from this assemblage. I envision additional published reports and will entertain offers of collaborative work by other investigators. It is hoped that this paper and related presentations have enhanced the awareness, appreciation, and documentation of expedient lithic tools by both the avocational and the professional archaeologist.

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'Integration took the people:' Atlantic Beach, Segregation, and Cultural Landscape

Rebekah Dobrasko

Amid the multi-story hotels, restaurants, nightclubs, and mini-golf courses in North Myrtle Beach, South Carolina, lies an approximately 100-acre area with no large buildings or glitz. A five-block area of Atlantic Ocean beachfront shows the North Myrtle Beach area as it once appeared—intact sand dunes with one-story houses and buildings barely visible from the beach. Tourists driving along Ocean Boulevard in North Myrtle Beach encounter a barrier when attempting to drive through this five-block area. This is Atlantic Beach, one of only a handful of historically black beaches remaining in the nation.

Racial segregation in the South extended to all aspects of life, including recreation and leisure time. In South Carolina, African Americans had separate state parks, were required to sit in a segregated balcony when attending a movie, and conducted all their shopping on a Saturday (Weyeneth 2005). African Americans frequently accompanied their white employers to the beach, but worked in their roles of housekeeper or nanny to the children. Blacks were not allowed to spend time on the beach (Stokes 2007).

While African American beaches were located across the Atlantic seaboard, only a few of these communities still exist today. Atlantic Beach, developed in the 1930s and incorporated into the Town of Atlantic Beach in 1966, enjoyed a level of popularity in the 1940s and 1950s, and suffered under the blow of Hurricane Hazel in 1954. The community slowly recovered from the hurricane and then began an economic decline after public facilities were desegregated in 1964. When African Americans had the choice to stay in any hotel and eat at any restaurant on the coast, the black-owned businesses in Atlantic Beach slowly went out of business (Stokes 2007). Today, Atlantic Beach still maintains several motels and bars, although just as many motels have been demolished or are slowly deteriorating.

Atlantic Beach is not listed in the National Register of Historic Places even though the property is still visible and accessible today. Although of great historic significance, it was the opinion of the South Carolina State Historic Preservation Office that the collection of buildings at Atlantic Beach lacked historic integrity in building materials, workmanship, and design (SCDAH 2003). What lacked from this original determination, however, was an assessment of Atlantic Beach in its historic context. By only looking at the integrity of the buildings as the sole example of the beach's history and not the overall landscape, the SHPO missed the key to the significance and historic integrity of Atlantic Beach (Barile 2004). This essay argues that the integrity of Atlantic Beach lies in its landscape, not necessarily in its buildings, although the changes to the buildings also reflect the history of Atlantic Beach. The town remains physically segregated from the surrounding North Myrtle Beach streets (Figure 1). This landscape of racial segregation is a permanent reminder of the struggles and the creativity of the African American business classes during segregation and the devastation to black-owned businesses after the Civil Rights Act of 1964.

History of Atlantic Beach

George Tyson, an African American businessman from Conway, South Carolina, first purchased the 47 acres of land that would become Atlantic Beach in 1934. Tyson used family money to purchase the land from Ernest and Robert Ward, white landowners from Little River Township. This land, north of the resort town of Myrtle Beach, was initially called Tyson's Beach. Tyson later purchased another 49 acres in 1941, and named this tract Pearl Beach. In 1943, Tyson sold these 97 acres to the Atlantic Beach Company, comprised of ten doctors and other professionals that were eager to maintain the land in black hands. The

Figure 1. South boundary of Ocean Drive with North Myrtle Beach buildings in background. Photograph by the author, 2007.

Company subdivided its land into single lots approximately 50 feet wide and 150 feet deep (Stokes 2007; Suttles 2009).

The first vacation home at Atlantic Beach was constructed shortly after Tyson purchased the land. The development of the beach community, however, exploded in the 1940s after the Atlantic Beach Company assumed management. The community became home to restaurants, shops, motels, and vacation and year-round homes. A movie theater later moved into the community, and the Atlantic Beach amusement park housed a Ferris wheel and merry-go-round. Atlantic Beach copied the development of Myrtle Beach and constructed an open-air pavilion called the Cotton Club. This pavilion was home to popular black performers and all-night dances (Stokes 2007). Atlantic Street, running down the middle of Atlantic Beach, was the main entertainment center. The other three streets, Virginia, Carolina, and Tyson, were more residential in nature with vacation homes and motels clustered together (Stokes 2007; Suttles 2009).

The landowners, business owners, and vacationers in Atlantic Beach included prominent African Americans from across the South and the East. Doctors, lawyers, college professors, families, and pastors all vacationed at the beach or purchased land for a beach home. Esau Jenkins, a well-respected business owner and civil rights activist from Johns Island, South Carolina, opened a restaurant and later expanded to include a motel at Atlantic Beach. Every Thursday during the "season," which ran from Easter Monday to Labor Day, was considered "Maids Day," when white employers brought their employees to Atlantic Beach for the day (Suttles 2009; Vereen et al.1994).

The water and sand were the main attractions in Atlantic Beach. Orange ropes floated in the water on either side of Atlantic Beach, a stark indication of the white and black portions of the ocean (Suttles 2009). Vacationers came to Atlantic Beach from across South Carolina and portions of North Carolina. Many South Carolinians would visit Atlantic Beach for the day, piling into trucks and buses on Saturdays or after church on Sundays for a day of recreation and fun (Gullah Geechee Cultural Heritage Commission 2009).

For those that came for a week or a summer at the beach, Atlantic Beach's many hotels provided a place to stay. Hotel Gordon, one of the largest hotels in Atlantic

Beach, Hotel Marshall (Figure 2), and the Jenkins Motel (Figure 3) were some of the earliest motels built at the beach (Suttles 2009). The Evans Motel, Holiday Motel, and the Parkview Motel were built in the late 1950s and early 1960s as part of the rebuilding effort at Atlantic Beach after the devastation of Hurricane Hazel in 1954. Some families chose to purchase lots and erect small vacation homes at Atlantic Beach, and most homes at the beach today date after Hurricane Hazel (Figure 4).

In addition to the attractions at the beach, various forms of entertainment developed in Atlantic Beach. African Americans opened nightclubs, such as Punk's Patio, Felton's Patio, and Rooker's Patio where African American performers would sing and play throughout the night (GGCHC 2009). Patios were covered outdoor dance spaces, and the South Carolina State Dance, the shag, is widely thought to have originated in these African American beach patios (Suttles 2009). Many performers, such as Chubby Checker, Al Green, and Patti LaBelle, were booked to play in nightclubs in Myrtle Beach but could only find overnight accommodations in Atlantic Beach. Often, these performers would return from their engagements in Myrtle Beach and then play for the beachgoers in Atlantic Beach (Stokes 2007; Suttles 2009).

All the visitors had to eat and drink, and restaurants, hot dog stands, and grills operated to feed tourists. The fish sandwiches were legendary, containing fried fish caught from the Atlantic Ocean by fishermen each day. Hotels operated their own restaurants and employed many Atlantic Beach residents as waitresses, cooks, and bus boys in the restaurants. At Thanksgiving, the community held a clam bake on the beach with freshly harvested clams and cooked conches. Bars catered to the more adult pleasures at the beach, and small photograph stands captured the memories of beachgoers. Jeremiah Alston tracked the openings of new hotels, the performances, and gossip at Atlantic Beach through his weekly newspaper, *The Shadow* (Stokes 2007; Vereen et al. 1994).

Atlantic Beach continued to grow until 1954, when Hurricane Hazel hit South Carolina's northern coastline. At Atlantic Beach, Hazel destroyed all buildings along the oceanfront, including the open-air pavilion and the amusement park. Over 30 homes were destroyed, and washed away by the storm surge. A few buildings made of concrete block, such as the Hotel Marshall, survived relatively intact. The severity of the storm greatly impacted the built landscape of Atlantic Beach. Most property owners lacked insurance, and those that chose to rebuild after the

Figure 2. Hotel Marshall in 2007, Atlantic Beach, South Carolina. Photograph by the author.

Figure 3. Jenkins Motel in 2007, Atlantic Beach, South Carolina. Photograph by the author.

Figure 4. 406 Tyson Street, Atlantic Beach, South Carolina. Photograph by the author, 2000.

hurricane did so on a modest level. The pavilion and the amusement park were never rebuilt, and the waterfront remains devoid of buildings today (Stokes 2007; Vereen et al. 1994) (Figure 5).

The businesses and residents remaining in Atlantic Beach after Hurricane Hazel slowly began the process of rebuilding. The pace was relatively slow, and Atlantic Beach suffered another economic setback with the passage of the 1964 Civil Rights Act, outlawing segregation in public facilities. Many hotels and restaurants in South Carolina reluctantly complied with the Act and within a few years African Americans were able to stay or eat at any place they chose on the coast. The economic rationale for Atlantic Beach eroded with the end of racial segregation (Stokes 2007).

Figure 5. First Avenue with Atlantic Ocean to the right. Photograph by the author, 2007.

In an effort to retain its identity and maintain control over development, the community of Atlantic Beach decided to incorporate in 1966. The new Atlantic Beach Town Hall was constructed in 1971, and the town became eligible for economic development grants, paved its streets, and received funding for a community center. The new town also received funds to construct small public housing units to support its residents. In 1989, another damaging hurricane, Hugo, hit the coast causing additional damage to businesses and homes in the town. The population of Atlantic Beach remained small, with only a little over 200 as year-round residents. The community continues to serve seasonal tourists as opposed to attracting permanent residents. In an effort to increase tourism in Atlantic Beach, the community began to sponsor an African American motorcycle rally in 1980. "BikeFest" became an annual event held over Memorial Day weekend and continues at Atlantic Beach today (McMillan 2004; Reed et al. 2007; Stokes 2007; Suttles 2009).

Preservation Efforts

After incorporation, the Town of Atlantic Beach created a master plan to govern development within the town's limits. The town's organization around small lots for individual businesses and properties did not allow for the dense development of high rise hotels that characterized development in the Myrtle Beach area in the 1970s and 1980s. While these development regulations maintained the low scale and open access to the beach in Atlantic Beach, the town has struggled to access the economic opportunities created by other communities on the beach. Many of Atlantic Beach's original African American families began selling their lots and moving from the community. The town is struggling to assist the remaining African American landowners retain their property. The preservation of the community and its historic integrity could contradict the Town's ultimate goal of attracting hotels and other economic activities to its community (Zyscovich 2007).

In 2001, interested Atlantic Beach citizens and supporters founded the Atlantic Beach Historical Society (ABHS) to "preserve the history of our coastal Carolina's African American history" (ABHS c. 2007). The historical society began several initiatives to recognize the history of Atlantic Beach, including interviewing older residents about the beach's history, developing a photographic exhibit on Atlantic Beach at the Horry County Museum, and funding and erecting a South Carolina Historical Marker on Atlantic Beach (ABHS c. 2007).

Atlantic Beach Historical Society also began efforts to get local historic landmarks listed in the National Register of Historic Places (NRHP). The South Carolina State Historic Preservation Office (SHPO) conducted a site visit to Atlantic Beach in 2003 and determined that Atlantic Beach had lost historical integrity through the loss of its historic pavilion, motels, and other business and residences after Hurricane Hazel (SCDAH 2003). In 2006, the SHPO became involved again in the history of Atlantic Beach, this time in response to the Town's proposal to utilize federal funding for the demolition of about 15 structures in Atlantic Beach. The SHPO encouraged the photographic documentation of these structures prior to demolition, and the Atlantic Beach Historical Society held a weekend-long event to highlight the history of these buildings called "Preserving Memories" (Suttles 2009). Despite these ef-

forts on behalf of the historical society, little academic or historic preservation attention has been paid to Atlantic Beach on a wider scale. The information contained in the town's buildings, artifacts, and memories is significant and worth all preservation efforts.

Based on the continuing work by the historical society and the research efforts contained in the 2006 architectural survey of Horry County (Reed et al. 2007), I proposed that the SHPO conduct a building-by-building architectural survey of Atlantic Beach in order to assess its eligibility for the NRHP. The results of this survey reversed the SHPO's original determination that Atlantic Beach did not meet the criteria for listing in the NRHP. Although the National Register should not be the epitome of historical recognition of a place, the Atlantic Beach community justifiably felt slighted that the SHPO believed the National Register would not recognize the significance of their town. This decision of eligibility sent a clear message to the town on what the state, and presumably the National Register, deemed important. Recent African American communities that developed under segregation have been at a disadvantage when applying the criteria of the National Register (Barile 2004). The fact that Atlantic Beach has survived hurricanes, desegregation, and the rampant development of the coastline and still exists should be sufficient for listing in the NRHP.

The NRHP was created in 1966 as part of the National Historic Preservation Act. The National Park Service maintains the National Register, which is the federal list of historic properties significant to local communities, states, and the nation. The National Register recognizes places such as buildings, structures, objects, historic districts, and sites that hold significance in history and retain historic integrity. Integrity as defined by the National Park Service means that a property reflects its history through its location, design, materials, workmanship, setting, feeling, and association. Although a property is not required to meet all aspects of historic integrity, it still must possess the means to convey its historical significance to a visitor (National Park Service 1997).

As a historic district, Atlantic Beach is significant in conveying the history of segregation, the need for African American recreational opportunities during Jim Crow, and as an example of black entrepreneurship and economic opportunity. The beach community also reflects an organic development with a mixture of building materials, types, and uses. Although African American beaches and recreational areas were located across the United States in the first half of the 20th century, only a few of these areas remain visible today. Of the few remaining, Idlewild, Michigan; American Beach, Florida; Wink's Panorama Lodge, Colorado; and Fox Lake, Indiana are listed in the National Register (Everett Fly, personal communication, 2008). Atlantic Beach retains its physical segregation from the surrounding white beach communities as none of its cross streets are accessible from the adjacent streets. Only U.S. Highway 17, which bisects the community and is a major thoroughfare along South Carolina's coast, provides access to the interior of Atlantic Beach (Figure 6).

The results of the 2007 building-by-building survey of Atlantic Beach revealed a surprising level of historic integrity within the community. Atlantic Beach has four streets perpendicular to the ocean, which are bisected by First Avenue (now Ocean Avenue), Second Avenue, Third Avenue, and U.S. Highway 17. The two streets that form the edges of the historic district, Tyson Street (now 29th Street) and Virginia Street (now 32nd Street) are primarily residential streets. The two interior streets, Atlantic (now 30th Street) and Carolina (now 31st Street) comprise the commercial core of Atlantic Beach, harboring a concentration of one and two-story motor court motels, restaurants, and stores. While the town itself crosses U.S. Highway 17 and continues on the other side of the road, the historic core of Atlantic Beach stretches from the highway to the Atlantic Ocean.

The historic small lots sizes are evident in the current layout of the beach. Most of the motels occupy more than one lot, yet some motels, such as the Brown Inn and the Jenkins Motel, are squeezed onto one lot. The residential properties are mostly situated on one lot, although some owners own two lots with the second lot providing a side yard (Figure 7). The residences are vernacular in architecture and materials, with additions or changes made to the buildings as their residents were able. Most owners built their own homes or had a hand in the construction of their homes. The majority of the houses are small one-story buildings with brick veneer, asbestos shingles, or wood siding. Some houses are constructed of concrete blocks. Many have screened side porches and are set back from the road providing a small front yard.

Atlantic Beach has a significant number of historic motels, the majority of which were constructed after Hurricane Hazel. Only two motels, the Hotel Marshall and the Atlantic Inn, are known to predate Hazel. Other historic motels include the E&E Motel (c. 1954), the Evans Motel, the Woods Motel (now apartments), the Jenkins Motel (c. 1955), and Skeeter's Motel and Restaurant (c. 1961). Most motels are one- or two-stories with a motor court for parking and an office/restaurant in front of the motel. The rooms stretch behind the office in an L or U shape and open onto a courtyard/parking area. Many of the older hotels were brick veneered during the financial heyday of Atlantic Beach. Some motels still retain their historic signage (Figure 8).

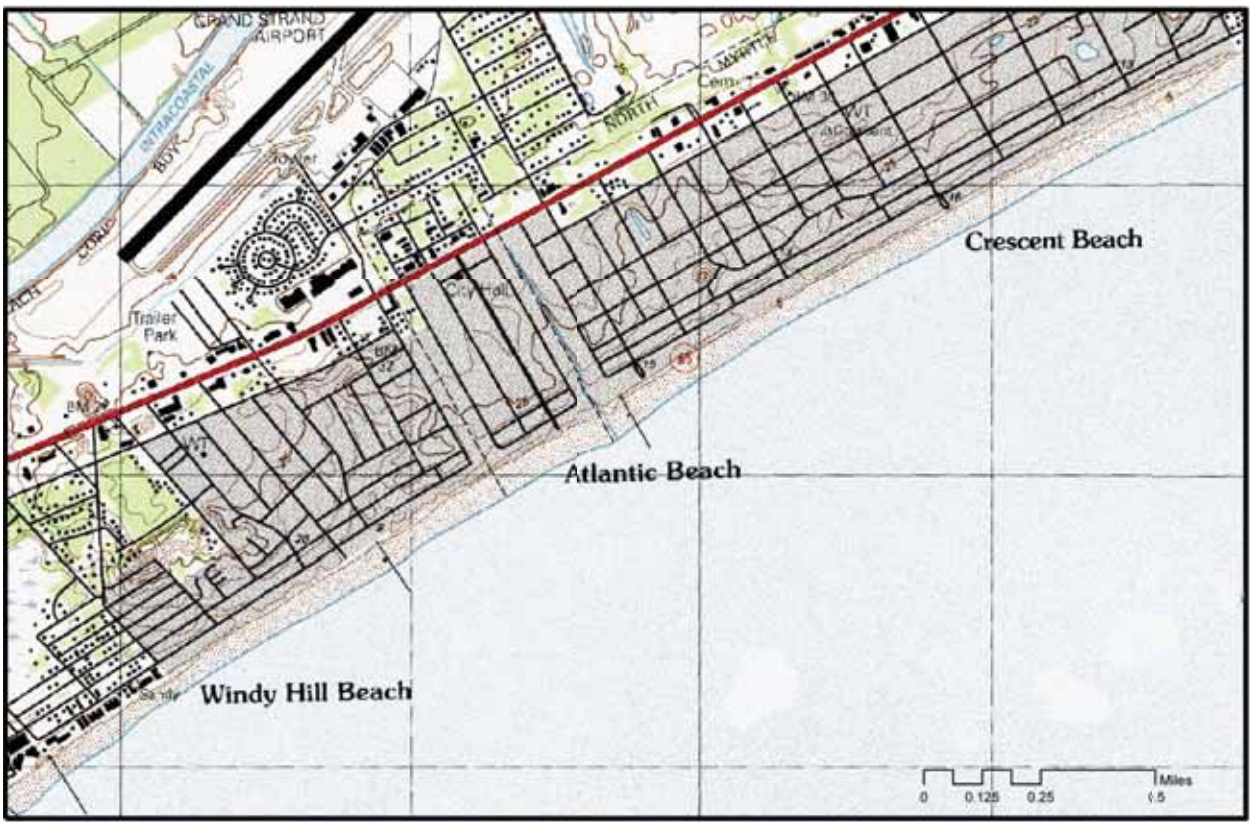

Figure 6. Map of Atlantic Beach.

There is some modern infill construction in the town, most notably the construction of brick fourplexes by the Atlantic Beach Housing Authority and the construction of several motels in the 1970s and 1980s, such as the French Quarters Inn. New residences, a church, and a childcare center are also found in the historic core of the town. Although the new construction does not contribute to the historic significance of the beach, it is similar in scale, design, and materials to the surrounding buildings and landscapes.

Atlantic Beach as a Cultural Landscape

Cultural landscapes are gaining prominence in the field of historic preservation as a way to understand historic communities and the way that the community interacted with the land. Cultural landscapes contain both cultural and natural features, generally associated with a historic event or culture and that also possess aesthetic values. People interact with their environment outside of buildings and structures, and the environment also acts upon the people living in it. These forces develop a landscape unique to a place and a community, and cultural landscapes deserve evaluation and preservation.

The National Park Service defines four types of cultural landscapes: historic designed landscapes, historic vernacular landscapes, historic sites, and ethnographic landscapes (National Park Service 1994). Atlantic Beach fits the definition of a historic vernacular landscape: "a landscape that evolved through use by the people whose activities or occupancy shaped that landscape" (National Park Service 1994). While the word "landscape" often conjures ideas of trees, shrubs, and ponds, the Atlantic Beach landscape reflects the relationships between nature and humanity. The relationship between the ocean, the streets, the houses, and the reality of racial segregation all form the Atlantic Beach vernacular landscape. The town is oriented to the ocean, and the ravages of hurricanes and other ocean-based storms are reflected in the town's layout and current appearance.

African American communities, especially resort and entertainment communities like Atlantic Beach, tended to develop as owners saved to purchase land and construct buildings. Often, cheap building materials such as concrete blocks were used in construction. As business improved, many motel and restaurant owners added brick veneer to their buildings, reflecting the influx of money into Atlantic Beach. Because the community was shaped by landowners and business owners, the landscape is also a reflection of middle class African Americans and the values they held. Small lots allowed for more people to become a part of

Figure 7. Residence showing surrounding yard. Photograph by the author, 2007.

Figure 8. Riviera Motor Lodge Sign, c. 1960. Photograph by the author, 2007.

Atlantic Beach, and the combination of smaller lots into larger ones for businesses such as motels and restaurants emphasized the importance of business and economics to the community. Lots were also set aside for churches, and later for community uses such as the Town Hall and low-income housing. The community's original small lot sizes contribute to the feeling of the landscape. Buildings remained small, even during the heyday of Atlantic Beach.

Cultural landscapes are important for the exchanges between humans and nature. Atlantic Beach's landowners acted upon the landscape by orienting its most important buildings to the most important natural feature, the beach. Businesses such as dance patios, restaurants, and the amusement park were located on the beachfront near the water. Hotels and residential sites were set further back from the water in the community, as places that were open to all visitors needed to be on the beach. Atlantic Beach's landscape was also acted upon by the surrounding white communities. As roads developed in the white beaches, they were not connected to Atlantic Beach's roads. Thick vegetation grew between the white beach community lines and Atlantic Beach property. This physical segregation reinforced the white community's desire to screen the black beach and have no contact with that community.

Nature also played a critical role in shaping the landscape of Atlantic Beach. The beach and the ocean were the main attraction for vacationers to Atlantic Beach, and the ocean provided recreation as well as food for visitors to the beach. Hurricane Hazel in 1954, and later Hurricane Hugo in 1989, significantly impacted the buildings and development in the community. Hazel was almost a direct hit to Atlantic Beach, and the hurricane demolished the majority of the buildings along the oceanfront and many further inland. As business owners and residents slowly rebuilt after the hurricane, hampered by lack of insurance and later by the desegregation of whites-only hotels and restaurants, Hugo hit the South Carolina coast in 1989 and destroyed more historic businesses in Atlantic Beach. The landscape today shows the effects of these hurricanes. Very few buildings are located along the beachfront in Atlantic Beach, and empty lots reflect the destruction of other buildings in the community.

The cultural landscape at Atlantic Beach encompasses the impacts of both humans and nature on creating this segregated African American community. The circulation within the community reflects the segregated nature. Through roads, especially Ocean Drive in North Myrtle Beach, do not connect with the roads in Atlantic Beach. Vegetation on the boundaries of the town screens it from the neighboring North Myrtle Beach community. North Myrtle Beach's multi-story hotels constructed on the beachfront tower over Atlantic Beach's boundaries and reinforce the sense of segregation.

Within the boundaries of Atlantic Beach, the cultural landscape is also historic. The view to the beach and the ocean are unobstructed by large buildings. The sand dunes are still intact, and the palmetto trees that line the streets of Atlantic Beach indicate the proximity to the ocean and are consistent with the historic landscape. Before South Carolina's coast became a major tourist destination, many of the buildings on the coast were small single-family homes or one- or two-story motor court hotels for visitors. Atlantic Beach's landscape retains many of these buildings and is one of the only historic landscapes related to tourism remaining on the Grand Strand. The landscape at Atlantic Beach was preserved due to economic decline in the community, beginning with Hurricane Hazel and continuing with the Civil Rights Act in 1964 and the subsequent desegregation of tourist destinations in the surrounding beach communities.

As Atlantic Beach resident Earlene Woods reflected, "The hurricane [Hazel] took the businesses, but integration took the people" (Stokes 2007:201). The businesses and motels along the coast of South Carolina slowly began to desegregate in the 1960s, and Atlantic Beach felt the effects of desegregation. Tourists were able to choose any place along the coast, and many chose not to return to Atlantic Beach. Black-owned businesses across South Carolina suffered this inadvertent effect of the Civil Rights Movement and vibrant African American business districts and resort areas declined. At the same time, tourism began to increase in Myrtle Beach as more companies began providing paid vacation days to employees in the 1960s. Better highways increased tourists' access to Myrtle Beach and the Chamber of Commerce continued to advertise and draw visitors to the beach from the state and beyond. As a result, the 1970s saw an increase in urbanization at the beach, leading to high-rise hotels and the addition of condominiums to assist those tourists that chose to live at the beach (Stokes 2007; Weyeneth 2005).

Atlantic Beach did not build any high-rise buildings. The town incorporated in 1966 in an attempt to keep its residential and small community identity. The numbers of small lots in Atlantic Beach, and thus the high number of land owners, hindered large-scale development as developers were required to negotiate with a number of landowners. As surrounding North Myrtle Beach continued to develop, Atlantic Beach missed economic opportunities for hotel and tourist development. These missed opportunities, however, caused the town to remain similar to its appearance in the 1950s and stand today as one of the few remaining historic landscapes in Myrtle Beach.

Conclusion

Atlantic Beach is a cultural landscape that has survived the effects of hurricanes, desegregation, economic decline, and rampant beachfront development. While the current historic district is not as dense or as original in materials as its historic appearance, Atlantic Beach retains its integrity as a planned and segregated African American community. It retains historic integrity of location and association, as the street system remains segregated from the surrounding beaches and the town still fronts the beach. The beach itself also retains its integrity of setting and feeling. The town's small lots are evident in the arrangement and size of the residences and motels. Standing in Atlantic Beach, a visitor gets a sense of a historic beach community, with sand dunes, an unobstructed view to the Atlantic Ocean, and low, small resort-type buildings.

The fact that Atlantic Beach remains on the landscape increases the town's historic significance. Much of the architecture and segregated spaces built in the early 20th century no longer exist. Signs designating "colored" and "white" entrances, drinking fountains, and waiting rooms disappeared. Historically black neighborhoods and business districts were demolished in the name of "urban renewal" during the 1960s and 1970s. Those historically black neighborhoods that do remain often house lower-income residents and business owners that are unable to fiscally care for their buildings (Weyeneth 2005).

African Americans view their history and its preservation in different ways than the prevailing white-dominated historic preservation culture. It is important to African Americans to remember and share their history through oral traditions that create a sense of shared history and community. Historic buildings themselves do not necessarily reflect the African American community's traditions and are often secondary to the remembering and teaching of local history to children and grandchildren (GGCHC 2009; Hendry and Edwards 2009). Historians researching the history of African American communities should rely heavily on oral histories and oral stories. During the 2007 survey of Atlantic Beach, I spent time touring the community with local elders and leaders, listening to stories about who lived where, the relationships between all residents, and the locations of buildings no longer on the landscape. The concerns expressed by these Atlantic Beach residents were community-based concerns: how the community can continue to grow, recognizing their heritage and importance to South Carolina even as more whites became landowners in the town, and bringing economic development to Atlantic Beach. The leaders' emphasis was on keeping the community itself intact, not keeping the historic buildings or open beachfront intact.

This type of thinking about historic preservation needs to be considered when working with African American communities to list sites in the National Register of Historic Places. The emphasis on community and place, rather than historic buildings or sites, calls for a way of considering African American communities as a more holistic landscape of historic changes and historic impacts. Communities that have developed over time in a certain area and still retain many descendants of original residents or owners are historically significant in the minds of their residents. They should be considered significant in the minds of researchers and historic preservationists as well.

Cultural resource managers and historic preservationists need to adjust their paradigms when assessing significance and National Register eligibility of African American sites and communities. The effects of changing economics as well as the effects of desegregation changed the built environment of African American communities in important ways. Some African Americans worked to physically improve their businesses, homes, and churches by adding on to the buildings or adding brick veneer to change the appearance of the buildings. Other communities sank into economic depression as African Americans were free to choose other businesses, hotels, and places to live once the Civil Rights Act passed in 1964. This shift in use of these buildings affects historic integrity, especially since many buildings were abandoned and have deteriorated. The effects of desegregation or of economic competition are significant historical events in the lifespan of African American buildings and should not be dismissed as loss of integrity.

Atlantic Beach stands today as a testament to the entrepreneurship of the African American community, the effects of racial segregation on the Southern landscape, and as a stark reminder of the power of hurricanes to alter the built environment. The citizens of Atlantic Beach continue to fight for the recognition of the history of their beach community, taking the newly-formed Gullah Geechee Cultural Heritage Corridor to task for not mentioning Atlantic Beach in its 2005 study (National Park Service 2005). In the recent book, *Images of America: Atlantic Beach*, Sherry Suttles (2009) collects historic photographs and images of Atlantic Beach and this book is intended to be a beginning for the community to collect its history. A revised 2007 Town of Atlantic Beach master plan promises to respect the historic culture and character of Atlantic Beach while planning for economic development with the construction of high-rises along the beachfront. Atlantic Beach today stands as a reminder of our recent history and the landscape of segregation and should be recognized as a significant historic landscape.

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NOTES FROM THE FIELD

Reports on Archaeology Projects

Johannes Kolb Site (38DA75) March 2011

Christopher Judge, University of South Carolina Lancaster

As we have since 1997, Carl Steen (Diachronic Research Foundation), Sean Taylor (SC Department of Natural Resources) and I spent two weeks at the Johannes Kolb site (38DA75) in March 2011 excavating seven 2 meter squares, sixteen 50cm squares and completing one 4 x 4 meter block begun in 2008. Our site is located along the Great Pee Dee River in Darlington County, South Carolina. This long-term effort has been underwritten by the three organizations and generous private donations. All labor is volunteered: we have a cadre of students and members of the general public of all ages and from all walks of life that pull together to make it happen.

Along with our numerous volunteers we continue to adhere to our sampling scheme which calls for a 50cm excavation square every 5 meters and a 2 meter excavation square within each 5 meter block across the site in an effort to obtain a 17% sample of the roughly 1.5 acre site.

Figure 1. Tariq Ghaffar leads a tour of Block One on Public Day.

Noteworthy discoveries during the 2011 field season include a silver cuff link (or perhaps button) with a "W" etched into it that was manufactured in the early 18th century. It was found in very close proximity to a 19th century slave row where a pierced 1856 "half" dime and a pierced button were recovered previously. In the 19th century the site was owned by Thomas C. Williamson. Although we have yet to be able to tie the cuff link directly to the Williamson family, the possibility remains tantalizing to us. It was found in a 2 x 2 meter square unit that had very dark, compact soil tentatively interpreted as a yard associated with a house or barnyard deposit. We also

Figure 2. Silver Cuff Link/Button from Kolb Site

dug several 2 x 2 meter squares in the vicinity of an early 20th century saw mill site, mid 20th century barn, and mid 1970s logging deck. This area proved to be the most disturbed area of our site.

In 2008, we initiated the careful excavation of a 4 x 4 meter excavation block along the bluff edge to see if we could identify a Late Woodland period house (A.D. 500–1500) in the vicinity of a number of large storage

pit features. Here we divided the 4 x 4 into 50 cm squares (n=64) and dug each level in 5 cm intervals isolating in 3D any large objects. We found features from both the 18th century Kolb family occupation and the 19th century slave occupation. Once we had excavated them we discovered three large Late Woodland storage pits, each over a meter in depth and diameter. Most of our work in 2011 was concentrated on the deepest artifact bearing level. The Early Archaic layer (10,000 to 8,000 years ago) in the 4 x 4 meter block proved to be the earliest occupation in this portion of the site, disappointing all of us who had hoped to find Paleoindian and Pre-Clovis components. However, the Early Archaic layer did produce a rather dense concentration of unifacial scraping tools made from rhyolite -- a metavolcanic rock available in the Great Pee Dee valley. Large plane like scrapers and thin thumb nail scrapers were recovered along with several notched spearpoints, a ferruginous sandstone abrader, fire cracked rock and burnt nut shells. Scrapers are interpreted as wood and leather working tools.

Figure 3. Chrs Young mapping storage pit features in Block One.

A number of friends visited us in the field. Our colleagues Mark Brooks and Christopher Moore from the Savannah River Archaeological Research Project returned once again to obtain samples of the sandy soils in the block as part of ongoing research to understand geologic depositional processes in Coastal Plain sites. Chief James Caulder and Tribal Elder Pete Parr of The Pee Dee Indian Tribe of South Carolina honored us with a visit as they have for many years. We have a great working relationship with them and they are not afraid to grab a shovel and throw dirt into the screen.

As always we held a Public Education Day halfway through our two-week field season. Jason Smith portrayed Johannes Kolb, while Scott Jones, Bobby Southerlin, Keith Grenoble and Fuzz Sanders joined our own Sean Taylor in demonstrating earth skills that included pottery making firing and cooking, flintknapping, and friction fire making. We had several hundred visitors as Emily Ligon describes below. Our 2012 Field Season is scheduled for March 5-16th with our Public Education Day scheduled for March 10, 2012. Interested parties will find that updates are periodically posted to our website: 38DA75.com.

Visitor Population Analysis and Interpretation Ratings at the 2011 Johannes Kolb Archaeological Site (38DA75) Public Day

Emily Ligon, Clemson University

On Saturday, March 12, 2011, the Johannes Kolb site (38DA75) held its annual Public Day. The purpose of this day is public outreach and education. To fulfill this purpose, site archaeologists offer tours, demonstration of archaeological methods, and various demonstrations, including a reenactor, prehistoric technologies, friction fire, pottery technologies, and cooking. In an effort to gauge the public's reaction to the site interpretation and demonstrations, visitor surveys were collected that asked a variety of questions about each interpretative element at the site. In addition, the survey asked questions that clarified the question of who the population is that visited the site.

Working in conjunction with Sean Taylor (SC DNR), Carl Steen (Diachronic Research Foundation), and Chris Judge (USC-Lancaster), I modified a survey that had been used at the Kolb Public Day over the previous three field seasons. (This survey was originally modified from a survey used at Historic Brattonsville.) The survey was modified to eliminate most open-ended questions, add demographic questions, and streamline the look and feel. Visitors were informed about the survey upon signing in at the site and were asked to complete a survey upon exit. In an effort to obtain a large sample size, natural obstructions (logs, stumps) were set up, so most visitors entered and exited through one unobstructed path.

There were approximately 200 visitors at the Johannes Kolb Public Day, and 130 filled out a survey and provided permission for the survey to be used for research purposes. The largest population visiting the site was children under the age of 18. The 18-34 age group constituted the smallest age range, and the rest of the age ranges (35-44, 45-54, 55-64, 65 and older) were equally distributed. Of these age

Figure 1. Tariq Ghaffar introduces a group of boy scouts to the site before giving them a tour.

Figure 1. Fuz Sanderson demonstrates friction fire techniques to a group of visitors.

populations, males were dominant in every group except the 25-34 age range. Distance traveled to the site was also equally distributed, with the smallest group falling into the "less than 10 miles away" range. Seventy percent of the total population were first time visitors to the site, and it was the first archaeological site 60 percent of the population have visited.

The visitor population rated the overall experience at the site as a 3.84 out of 4. Friction fire, primitive technologies, and staff knowledge received the highest ratings while posters received the lowest, 3.46 out of 4. Ratings among different age groups were consistent with the general population. Ninety-five percent of the population said they would visit again, and 90 percent said they would recommend the site to a friend. This word of mouth is extremely important in promoting the Kolb Site Public Day as 45 percent of the visitor population this year found out about the event through word of mouth.

As a result of this data, we have a better understanding of who the primary audience at the Kolb Site Public Day was this year, and as a result, we can try to reach out to underrepresented populations, discuss ways to increase effectiveness of the lowest rated demonstrations, and continue to provide an excellent overall experience for our visitors.

Summertime in the Old Edgefield District

Carl Steen, Diachronic Research Foundation

Did I mention it was hotter than Hades this May and June? A University of Illinois field school under the direction of Ph.D. candidate George Calfas excavated the kiln at the Pottersville site (38ED11) from late May to July 1. George will give more details, but I will share my impressions.

Pottersville was established around 1810 by Dr. Abner Landrum. He was credited by Robert Mills (1826) with developing the stoneware industry in the Old Edgefield District. The town was also the site of a print shop, carriage maker, blacksmith and tannery, among others. From Landrum it passed through several hands, finally ending up in the possession of Governor Francis W. Pickens in the 1850s.

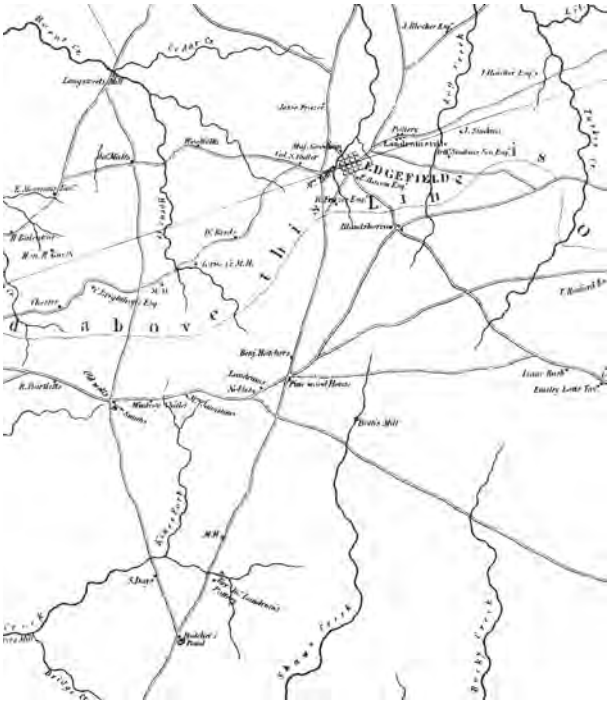

Figure 1: Robert Mills Atlas (1826).

The kiln site was placed on the National Register of Historic Places in the 1970s, and it has been protected by the landowners. At the beginning of the field season, it was thought that there might be a typical groundhog type cross draft kiln – or more likely a series of them that were constructed over time. Once the vegetation was cleared from the landform something very different became evident. Two long walls with a depression in the center stretched from the bottom of the hill to the top. When the work was done, we found that the firebox, ware chamber walls, and chimney form a structure over 32m (105 feet) long. Most groundhog kilns are less than 10m long (Espenshade 2002). These walls are about 4m apart (12 feet). So this clearly isn't a groundhog kiln, but it may be their precursor. This stands as one of the largest kilns ever excavated, anywhere.

Excavations were aimed at uncovering the firebox, chimney, and the kiln interior. With a kiln this size it is possible that separate chambers and stoke holes could be found, but the excavations have not produced evidence of this. Thus it appears that this is a climbing tunnel kiln like a Japanese Anagama type kiln with a single chamber. The temperature would vary considerably from one end to the other, and the chamber appears to be constricted at the chimney end to direct the flow of hot air. It is possible that bisque wares and bricks, which require less heat than stoneware, were placed at the far end. I'm looking forward to George's dissertation.

My role at Pottersville was mostly advisory – that is, standing around in the shade watching the students move tons of rock (used for buttressing the walls) and firebrick until my advice was needed, which was maybe once a day. So I decided to use the down time to take a look at 38AK497, the Reverend John Landrum site. This site was recorded in 1987 (Castille et al. 1988) and acquired as a Heritage Preserve by the SC Department of Natural Resources' Heritage Trust Program in the 1990s. It is shown on the 1816 draft of the Mills Atlas map of Edgefield District. Thus it is one of the earliest known potteries in the area. I believe that much of the development of alkaline glazes and stoneware making occurred here (as discussed elsewhere in this volume).

My plan was to excavate 50 cm test units in the area of a possible workshop, and to look for a second kiln. One was known, but another area also yielded numerous waster sherds and pieces of kiln brick. This was successful. A test unit exposed a burned, prepared firebrick clay floor, and others close by yielded impressive numbers of waster sherds and kiln remains. Ground hog kilns tend to run up slope, but the excavation of a one by seven meter trench suggest that this one runs parallel to the slope. One brick wall and a wide expanse of a burned floor were exposed, but the second wall appears to be missing. By the end of June it was clear that this kiln was a minimum of 16 m (about 52 feet) long and 3.5 m (11 feet) across. One end runs beneath a road, and the other runs off of the heritage preserve onto private land, so its full extent is not known. Given its size, this may be the prototype for the Pottersville kiln. Further work will be needed if this kiln is to be understood.

Excavations in the workshop area produced artifacts suggesting the presence of a building and people – nails, glass, and other domestic artifacts. More important, one of the units contained lenses of washed in sand, and a lens

Figure 2: A 50 cm test unit with kiln floor exposed.

Figure 3: Kiln floor exposed in 1x7m trench. Note unburned soil in the far end, exterior of kiln.

of gray potting clay at the base. This might be the site of a pug mill, for milling clay (see Burrison 1983:273) or a clay storage area. Further excavations may produce the evidence of a pottery shop and other associated structures that we seek.

Another aspect of the planned work is to explore the area of Reverend Landrum's house. This is marked by a large cellar depression and footing stones. Five meter interval shovel tests were excavated on either side of the cellar hole, and through the cellar itself. These were not as productive as I had hoped, yielding relatively few domestic artifacts. They did produce large amounts of plaster, nails, and window glass, both of which indicate the relatively high status of Reverend Landrum. This is a lesson that can be applied at other sites.

As part of the non-industrial focus of the University of Illinois field school, students led by Brooke Kenline, a USC graduate student excavated shovel tests in the area of a suspected slave cabin at the edge of the yard, north of the main house (see Kenline's article, this volume). These produced domestic artifacts and architectural materials which suggest that the building was a dwelling rather than a barn or some other support structure. Interestingly, examples of alkaline glazed plates, cups, bowls and other domestic wares were also found. Brooke has also been searching for worker house sites at Pottersville. Further excavations are planned, and she will write a masters thesis that summarizes the results.

We South Carolina citizens owe our thanks to George Calfas and his crew of Illini, as well as to two local volunteers, Madeline McCarty and Nancy Kempf, who spent the entire field season helping to move literally tons of brick, rock and soil from the kiln in an open horse pasture in temperatures that were always over 90, and for three days over a hundred degrees. They worked hard and were surprisingly cheerful in adverse conditions.

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Asian inspired kilns in South Carolina?

George Calfas, University of Illinois

The 2011 University of Illinois field school focused on the Pottersville kiln site (38ED011) in the Edgefield District of South Carolina. The Pottersville kiln remains are situated on the highest elevated point of a field, surrounded by a surface scatter of ceramic sherds in all directions. The seemingly gentle slope of the kiln actually allowed for the passage of cooling summer breezes. Aided by the use of light-weight tents and plenty of cold water, the Illinois-based field school students faired well in the southern heat.

Pottersville is home to America's first alkaline glazed stoneware vessels. The alkaline glazing process developed by Abner Landrum at Potterville replaced the need for lead and salt glazed vessels in South Carolina and remains a mainstay in modern day folk pottery. The *Camden Gazette* first wrote about the Pottersville vessels describing them as "the first of the kind" and "superior in quality" (1819:4-5). The high caliber of these vessels was later echoed by Robert Mills (1826) when he stated that the stoneware was "stronger, better, and cheaper than any European or American ware of the same kind".

About three years ago, with the support and guidance of Carl Steen, I began researching the Edgefield District and its outstanding pottery tradition. During the planning and preparation phase of the project we had planned to define the dimensions of the Pottersville kiln. Archaeological and archival research informed us that a "typical" alkaline stoneware kiln would be approximately 20-30 feet in length and 10-12 feet in width (Sweezy 1994; Zug 1986). While the kiln site at Pottersville has been known for decades, no one confidently knew which part of the hillside were kiln remains and which part was a waster pile. Without the assistance of geophysics, we began the project at the high point of the hill guided by stones just barely breaking through the topsoil. We felt that due to the elevation and prevailing winds this would be an ideal location for the kiln. We broke soil on the first afternoon of the field school and by the end of the day we realized that we were indeed on top of the kiln wall. The orientation of the wall was a bit different than we had expected; something we learned to get use to with this project. Using this same "exposed" stone methodology we inserted additional units down the hill and quickly learned that we were dealing with something much larger than we had planned.

Like all projects, the Pottersville kiln held many secrets until the final week of the field season and the project mantra became "Dig Deeper". By the end of the field season, we had discovered all of the major architectural features of a kiln; exterior walls to include all four corners; flues, firebox, bag wall, firing chamber, and chimney. The Pottersville kiln does fall within the average for kiln width (12 feet wide) but the field school discovered that the kiln is a jaw-dropping 105 feet in length. The exterior wall is over 6-feet in height and the firebox is approximately 6 feet deep, 10 feet long, and 12 feet wide. The aforementioned first unit captured the left and right walls of the firing chamber. By the end of the second week the team encountered the chamber floor approximately 2.5 feet below surface level (bsl). After digging deeper and following the walls in search of terminal soil, we quickly realized that this 2.5 bsl level was the last floor utilized in the kiln and that the original floor was actually 5.5 feet bsl. We counted seven floor-building episodes in the chamber (see Figure 3); presumably due to firing difficulties or a whole host of different production factors.

By 1820, the Edgefield District was the third most populated region in the South and an "industrial" sized kiln would have been needed to produce the colossal amount of vessels needed to store food for Edgefield's enslaved population. For example, pork was the main staple of the diet and for just its pickling and storage; over 11,000 five-gallon vessels would have been needed (Burton 1998; Vlach 1990).

Figure 1: View of kiln from above.

Figure 2: View of kiln firebox from above.

Figure 3: The floor-building episodes in the chamber.

The length of Pottersville would have made it possible to produce the volume of vessels needed in the Edgefield District in 1820.

Archaeology never seems to provide the answers expected, if it did why would we dig? With the new information before us, a mountain of additional research begins—perhaps even research that takes a turn to Asian methods of production. For over 1,000 years potters in Asia have been firing ceramics is hillside kilns, must often referred to as Anagama, Dragon, or Snake kilns (Medley 1976). The enormous length of the Pottersville kiln opens a host of research questions; including those regarding the fueling of the kiln, the regulation of internal firing temperatures, and many more. Thankfully I have the good people of Edgefield and many other great supporters on my team as I move forward with my dissertation.

I would like to give special thanks to Beth Cali for allowing the University of Illinois to conduct the field school on her property at Pottersville, Carl Steen for being a sounding board (even if he thinks differently), Brooke Kenline (USC) for teaching the student survey techniques, Nancy Kempf and Madelynn Mccarty -- our South Carolina volunteers, the incredibly dedicated field school students, and the gracious and welcoming community of Edgefield!

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Searching For Enslaved Laborers At The Reverend John Landrum Site (38AK497)

Brooke Kenline, University of South Carolina

As part of the 2011 Edgefield Field School run by the University of Illinois, University of South Carolina, and Diachronic Research Foundation, archaeological investigations into the domestic locations of the enslaved laborers of the Old Edgefield District's pottery industry were conducted at the Reverend John Landrum site (38AK497) located in present-day Aiken County, South Carolina.

The pottery site is situated in the Big Horse Creek Section of the Old Edgefield District, located approximately 11 miles south of the Edgefield town center. Reverend John Landrum, a Baptist minister and brother of Pottersville founder, Abner Landrum, erected the pottery in the early 19th century. Due to its inclusion on the Robert Mills Map (Figure 1), it is believed to have been an established enterprise by 1817.

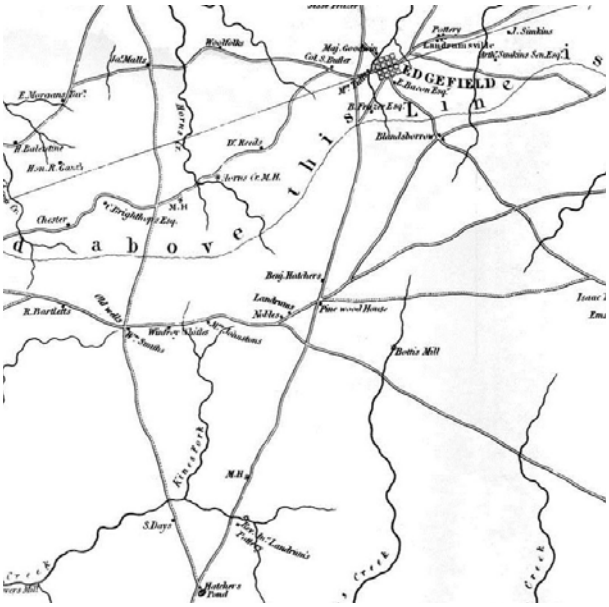

Figure 1: Mills' 1825 Atlas (originally surveyed in 1817) showing Rev. John Landrum's Pottery.

Slave labor played a major role in the success of the district's pottery production. In addition to turning vessels, African American slaves would have also participated in all stages of the production process including digging the clay, mixing the glazes, loading and unloading the kilns, as well as bringing the vessels to market. The enslaved pottery laborers have also been associated with the production of face jugs which are believed to exhibit African stylistic attributes. In an early 20th century interview, Colonel Davies, a pottery owner in Bath, South Carolina, noted that in their spare time workers were making "weird-looking water jugs, roughly modeled on the front in the form of a grotesque human face" (Barber 1909:466). At the time of his death in 1847, Reverend John Landrum was recorded as owning 18 slaves and would have hired slaves from various other owners (Holcombe and Holcombe 1989).

In a 1987 preliminary survey of the approximately nine acre site, the ruins of the main Landrum house were located in addition to a saw mill on Little Horse Creek (Castille et al. 1988). The area between these two structures would have a high probability of containing the enslaved labor housing due to its spatial relationship to the main house, historic roads and production facilities including the kilns. During the initial survey, a surface concentration of stoneware was also discovered on a flat ridge north of the main house within the targeted area. A preliminary walkover survey in 2011 also discovered large ferruginous sandstone footing stones along with a possible chimney base. The ridge and its surrounding area were therefore selected for subsurface exploration.

A 30 m x 35 m grid was established in reference to the site datum. A total of 56 50 cm shovel test pits (STPs) were excavated to sterile soil or hard compacted clay (approximately 40 cm) in 5 m intervals. Units located within the vicinity of the ridge depression were highly productive and contained a large quantity of domestic and architectural artifacts including wrought nails, brick, window glass, an upholstery tack, gunflint, an agateware doorknob, a brass button, a blue glass bead, non-local ceramics including creamware and blue and polychrome hand painted pearlware, oyster fragments, and numerous animal bones and teeth.

In addition to utilitarian stoneware vessels such as jars and jugs, more unusual stoneware forms were also recovered including cups, bowls, plates, pitchers, goblets, and a possible ashtray that indicate the potters were making domestic items for personal use. A stoneware sherd with a dotted dark brown slip decoration traditionally attributed to the Thomas Chandler pottery was also recovered suggesting exchange between the potteries.

One STP within the ridge depression also contained a large concentration of charcoal that extended to a depth of 45 cm indicative of the location of the chimney firebox or perhaps a fire event in which the structure was burned and the chimney later collapsed into the structure's interior.

Two additional artifacts may point to a late 19th century occupation or site visitation including South Carolina dispensary bottle fragments and an oval pressed metal tag or pendant associated with the Independent Order of Odd Fellows, a fraternal organization originating in 18th century England. Further archival work, archaeological investigation and analysis are needed before further conclusions can be made.

Perhaps of greater interest, a stoneware face jug nose was also discovered in one of the STPs (Figures 2 and 3). The slightly crooked nose which angles to the right measures approximately 6.5 cm and has a dark brown alkaline glaze. Although no evidence of face jug production has been discovered at the site nor have any face jugs in collections been attributed to the Reverend John Landrum pottery, the dark brown alkaline glaze may be evidence that it was indeed produced on site.

Figure 2: 2011 Edgefield Field School student Amandine Castex screens artifacts. Courtesy of the author.

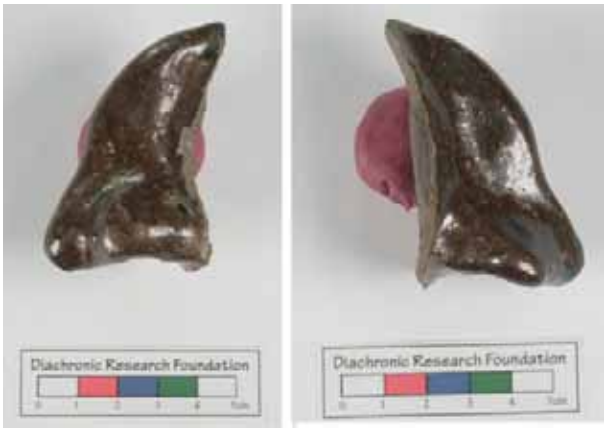

Figure 3: Side views of Face Jug Nose. Courtesy of Carl Steen.

Future excavations at the Reverend John Landrum site have been slated for the fall of 2011. Goals of the investigations include exploring additional possible locations of enslaved labor housing as well as determining whether face jugs were being produced on site.

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Marks In Common: Current Research on African American Marks on Colonoware and Edgefield Stoneware

J. W. Joseph, New South & Associates and Nicole Isenbarger, Independent Scholar

In a recent issue of *Historical Archaeology*, J. W. Joseph (2011) speculated that X, cross, and circle, and cross marks found on alkaline glazed stoneware of South Carolina's Edgefield District were placed by African American potters, rather than white stoneware pottery manufacturers, and served as symbols of African ethnic identify in the manufacture of southern stoneware. Joseph identified four sets of marks that he felt were African American symbols: impressed cross marks found on the pottery produced by Reverend John Landrum, a four punctate circle and cross mark used at the Reverend Landrum pottery, a circle and cross mark used at the B. F. Landrum pottery apparently made by a wooden dowel, and the use of "X" as a mark by the literate African American potter Dave Drake. In his review of marks used by the potters and potteries of the Edgefield District, Joseph noted that these marks were not consistent with other marks used by potters of the district to identify their ware, and speculated that cross marks, X's, and circle and cross marks (which resemble the African Bakongo Cosmogram or Dikenga de Kongo) all had African associations that would have made them recognizable to other African Americans working with stoneware from the Edgefield District as African marks, signifying African makers.

As Joseph's article and associated forum papers by Leland Ferguson (2011), Chris Fennell (2011), Carl Steen (2011), and Gray Gundaker (2011) were being prepared for press, Ferguson relayed to Joseph word of the discovery of decorated colonowares with marks that resembled the Edgefield marks from excavations by Brockington and Associates at Dean Hall Plantation. Andrew Agha and Nicole Isenbarger (2011) provided images and descriptions of an impressed mark found on Dean Hall colonowares that is virtually identical to the B. F. Landrum Cross found in Edgefield. The Dean Hall Plantation collections date to the late 1790s and early 1800s, prior to the formation of the Edgefield potteries in the 1810s, and suggest that this mark was first developed and used on Lowcountry colonoware and somehow later transferred to Edgefield stoneware.

The authors are currently working on a comparative analysis of marks found on colonoware and marks from Edgefield stoneware to better understand common marks and their meanings. To date, we have identified six marks that appear on both colonoware from Dean Hall and stoneware from the Edgefield District. These include the B. F. Landrum circle and cross mark, a circle and cross mark made from four punctuates similar to the Reverend John Landrum mark, a waffle stamp mark, an impressed "V" with associated line, a circle and line mark made by impressing a barrel or skeleton key into the clay body, and incised "X's." Other Edgefield marks include U's, crescents, stars, paired slashes, slashes, and other impressed letters including "C" and "E."

We are interested in receiving information on other colonoware marks to add to our catalog and analysis. Readers are encouraged to send descriptions, photographs, and measurements of marks on colonoware to nisenbarger@hotmail and jwjoseph@newsouthsassoc.com. We thank you in advance for your cooperation.

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Ethnohistorical Archaeology: Tom Yawkey Wildlife Center and the Hume Slave Street Research Project

Sharon Moses, Coastal Carolina University

Dr. Sharon Moses, Assistant Professor of Anthropology from Coastal Carolina University, began groundwork on a new research project this spring with the support of the Tom Yawkey Wildlife Center's biologist and manager, Jamie Dozier, and Sean Taylor, South Carolina Department of Natural Resources archaeologist. Sites at the Wildlife Center were initially identified and documented by a Heritage Trust archaeology survey conducted in 1993 on South and Cat Islands (Judge and Judge 1994) but to date have been largely unexamined. The Hume Plantation slave street is the primary focus of the research project and is a near pristine archaeological site located in Georgetown County on Cat Island in the lower coastal plain, adjacent to the Minim Creek Canal. Research questions and project investigation will include: 1) Native American influences on slave culture over time, an aspect seldom investigated archaeologically; 2) material culture, structural materials of family dwellings, and changing African American economic resources and values in antebellum versus postbellum eras with emphasis on women and children's lives; and 3) possible status differentiation among slaves, based upon plantation roles, changing social identity and other status markers within the slave community.

The Hume Plantation once produced Carolina Gold Rice, which was a successful cash crop primarily exported to England, from the 17th century until the Civil War turned the tide of economics in the South (Joyner 2009). Over time, the plantation lands passed into the hands of various owners but remained largely undeveloped. Thomas Yawkey, owner of the Boston Red Sox baseball team, purchased the future Wildlife Center lands in 1925 and used it as an elite wilderness club getaway for the wealthy. For a substantial membership fee, guests hunted, fished and celebrated outdoor life for days or weeks at a time (Giauque et al. 2010; Giltner 2008). In 1976,Tom Yawkey donated the property to the state of South Carolina as a wildlife preserve. It is currently managed by the Tom Yawkey Wildlife Center Foundation and the Department of Natural Resources.

The Hume slave street presents a unique opportunity in that in addition to textual and archaeological data, there are also ethnographic opportunities. Descendants of the original slave population can still be found living or working on the Islands or the Georgetown area and are willing to share family oral histories. One of the volunteers on the test excavations conducted this May was "Tiny," a descendant whose family has been associated with the Islands since the antebellum period.

Some emancipated Hume Plantation slaves opted to move no farther away than Georgetown because of family connections, yet far enough inland to escape island isolation. Others chose to continue working in the Hume rice fields in exchange for a roof over their heads and minimal wages. Labor costs and the southern economic crises took their toll on rice production in the post-Civil War period

Figure 1: Dr. Moses and "Tiny" – Dept. of Natural Resources volunteer.

and by the end of the 19th century rice had ceased to be a lucrative cash crop (Lawson 1972). Naval stores, timber, fishing, and indigo have all been a part of the economic history of the Tom Yawkey Wildlife preserve. However, no structures have been built, crops planted, or other significant contextual disturbances been conducted over the Hume slave street site in the intervening years since the Civil War. Rice fields and the Hume slave street village were gradually reclaimed by the marshy wetlands and woodland environment as the emancipated slave population diminished. Today, no slave cabins, communal kitchen facilities, livestock barn or mill structures are extant at the site.

A total of six 1 x 1 meter subsurface test units were opened after consulting an original 19th century hand drawn plat in the possession of the Yawkey Wildlife Center. The plat along with a metal detector and other surface survey methods were used to locate likely sites of the slave cabins and other structures no longer extant. Subsurface excavation extended down on average 50 or 60 centimeters.

The Hume Plantation slave street has proven to be an artifact rich environment in the initial text excavations.

The test units produced many different types of ceramics including pearl ware, white ware, transfer ware, colono ware, and Native American pottery, various types of glass, such as milk glass, pane glass, bottle glass, as well as glass beads, kaolin pipes, nails, livestock tack, kitchen utensils, metal buckles, buttons, hooks, shoe remnants, faunal bone and marine shells. These artifacts begin to paint a picture of daily life. In addition, several examples of worked glass in the manner of Native American obsidian and flint knapping have also been found in several units and will warrant further investigation.

Figure 2: Worked glass from Hume Slave Street .

Figure 3: Kaolin pipe pieces.

Future plans for the project include a Coastal Carolina University archaeological field school for students and volunteer excavators in the Spring 2012. Plans for larger scale excavations including 4 x4 meter units and more intensive surface survey to pinpoint slave street structures are a priority. The locations of the communal slave kitchen, thrashing mill, and livestock pens will be mapped and the location of the overseer's house, which according to the 19th century plat appears to be located in an area currently covered by heavy tree and shrub growth, will be identified.

Finally, efforts will be made to identify more slave street descendants and interviewees who can contribute oral histories of African American family life on Cat Island and the Hume Plantation slave street in particular, during the antebellum or postbellum period. Brief conversations with two Hume slave street descendants this spring suggest African Americans continued to inhabit some of the former slave cabins into the early 20th century. This will bear further investigation to determine the life cycle and changes made to structures along the slave street over time. As an ethnohistorical archaeology project, the material evidence, oral histories, and textual accounts will all contribute a voice to lend balance and a more comprehensive reconstruction of African American culture and life at a time when European perspectives predominated historically.

Acknowledgements

Thanks to the Tom Yawkey Wildlife Center and Jamie Dozier, Certified Wildlife Biologist and Project Manager, Sean Taylor, South Carolina Department of Natural Resources and Chris Judge, University of South Carolina Lancaster.

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The Sallie D. Boozer Metavolcanic Biface Cache from the G.F. Boozer Farm, Newberry County, South Carolina

Derek T. Anderson, SCIAA, Albert C. Goodyear, SCIAA and Rooney Floyd

The study of lithic artifact caches can be of great value to prehistorians since they have archaeological context like that of time capsules. That is, all of the items present within the cache can be assumed to be contemporary and can be treated as an assemblage. Over the past two decades, numerous biface caches have been reported to the South Carolina Institute of Archaeology and Anthropology where they have been photographed and described. A total of 11 caches containing bifaces of various metavolcanic raw materials are known counting the one described here. Of these 11, only one is from the Coastal Plain, which was located in Bamberg County, known as the Frazier site (38BM5) (Parler 1972), and the rest are from the Piedmont. These metavolcanic caches were recently summarized by Goodyear and Anderson (2011) at the Archaeological Society of of South Carolina's Annual Conference. The Sallie D. Boozer cache was brought to our attention afterwards and made available for study by Rooney Floyd.

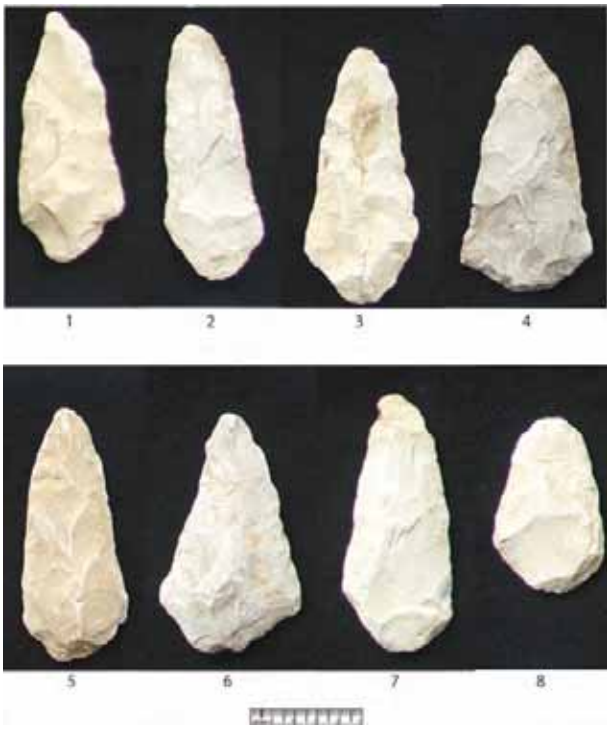

Figure 1: The Eight Bifaces from the Sallie D. Boozer Metavolcanic Biface Cache from the G.F. Boozer Farm Site, Newberry County, South Carolina.

The cache now consists of eight whole bifaces, but originally between 12 to 15 were found. They were all of the same size and shape and raw material. They were found by Sallie Davenport Boozer, the grandmother of Rooney Floyd, around 1930 on family land located about eight miles northwest of the town of Newberry, South Carolina. She dug them up in her garden using a hoe next to the foundation of the main house. Mrs. Boozer referred to them as "a little nest of arrows". The original house was located next to the present house, which shows up on the Newberry West, S.C. U.S.G.S (1969) quadrangle sheet. Mr. Floyd was able to locate the original house site accurately on the quadrangle sheet and it has been given the state site number of 38NE982. The Boozer farm is located on an extensive ridge oriented north and south and the nearest named stream is Bush River.

Morphologically the bifaces are unfinished preforms with rounded stems which most resemble Mack points (Figure 1), an Early Woodland large stemmed point associated with Thoms Creek pottery (Parler and Beth 1984). The raw material is a fairly weathered rhyolite-like material, except for two bifaces which are also rhyolitic but more siliceous (Table 1). None of the bifaces reacted to a magnet. Because of the chemically degraded condition of the material it seems likely they were quarried from the South Carolina Piedmont. Rhyolite-like outcrops and quarries are known nearby on U.S. Forest Service land in McCormick and Edgefield Counties (Benson 2007). These rhyolites are typically prone to weathering versus the North Carolina rhyolites, which appear more siliceous. These bifaces are reported here as part of an effort to inventory lithic artifact caches in South Carolina, in this case metavolcanic bifaces of a possible Early Woodland age.

Number	Weight (g)	Length (mm)	Width (mm)	Thickness (mm)
1	69.6	113.82	49.70	14.32
2	63.2	116.10	42.89	13.06
3	79.3	115.08	53.58	13.66
4*	80.8	110.63	59.04	14.79
5	78.2	112.58	46.68	16.30
6*	85.4	107.30	62.78	17.51
7	71.6	115.35	49.24	11.18
8	44.9	78.93	49.48	10.33

Table 1: Metric Attributes of the Eight Bifaces from the Sallie D. Boozer Metavolcanic Biface Cache from the G.F. Boozer Farm Site, Newberry County, South Carolina. *More grey colored, less weathered.

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BOOK REVIEWS

Tommy Charles. *Discovering South Carolina's Rock Art.* 2010. University of South Carolina Press, Columbia. ISBN: 978-1-57003-921-8.

In this highly readable and well-illustrated book Tommy Charles chronicles nine years of surveying to find 61 sites with petroglyphs (pecked and engraved images on rock) and three sites with pictographs (wet brush painted or dry crayon drawn images on rock) in South Carolina. As South Carolina Institute of Archaeology and Anthropology's collections coordinator, Charles built-up a vast network of people who know where archaeological sites are to be found in the state. When Charles started looking in earnest for rock art sites, he added to his existing network of informants and helpers by making public appeals for information in newspaper articles, television programs, notices in post offices and rural stores, and at public lectures. The phenomenal success of Charles' efforts is underscored by the fact that hardly a handful of rock art sites were documented prior to his quest.

Rock art sites are not easy to find on the numerous rock surfaces in the mountains and foothills of South Carolina, partly due to the effects of weathering and lightning conditions. Direct sunlight, particularly during the middle of the day, tends to "wash out" faint and weathered rock art. One consolation for the rock art surveyor is that many of the lightly pecked or incised images on upward-facing surfaces become noticeable on comparatively dark rainy days, whereas weathered pigmented images against walls and ceilings are most noticeable when reflected light from the ground hits the art perpendicularly. To wait for or create optimal conditions of detection accordingly requires additional time and effort, such as limiting searches to the early morning or late afternoon hours, when raking light and indirect light render rock art more readily visible. An unknown number of rock art sites may still be buried under a layer of colluvial soils, compost, pine straw, and root mat.

The selective placement of rock art against particular surfaces is another reason why sites are so difficult to find. Intriguingly, many well-preserved and thoroughly inspected rock surfaces suitable for the conservation of engravings or paintings simply do not show any traces of rock art. On a state-wide scale, rock art sites are yet to be discovered between 1,200 and 2,500 feet above sea level. Charles and his substantial team of volunteer helpers found that rock art sites are concentrated in the northwestern portion of South Carolina, mostly on the way up to rock domes in the mountains, or within shelters and on boulders near waterfalls and creeks in the foothills.

Among the main kinds of rock art and their associated locations identified by Charles and his team are boldly pecked circles on rock pavements in the high mountains, complex abstract and human and animal-like forms on various rock outcrops in the foothills, pictographs of animals and symbols in rock shelters of the mountains and foothills, and a variety of incised or scratched historic-period petroglyphs, occurring both in the foothills and mountains. Like buried features, such as pits or post holes, all these forms of fixed rock art have the advantage over movable archaeological artifacts in that the motifs are located exactly where they were made. An advantage that rock art sites have over buried features (which need excavation to be recorded and studied) is that rock art sites need not be destroyed or physically compromised during recording; being amenable to repeated recording, observations can be independently verified by other researchers.

Charles and his assistants, some of them experienced photographers, found that side-lighting with halogen lamps is the best way of recording petroglyphs at night. This is a tried, tested, and non-invasive method of successfully recording rock art in other regions as well. The

addition of talc powder or substances such as aloe sap to highlight glyph lines during day-time are not necessary, however, particularly considering that trace amounts of calcium and organics left behind within micro-cavities may jeopardize likely future attempts at cation-ratio dating (the ratio between immobile titanium and mobile calcium and potassium) or accelerator mass spectrometry (AMS) dating of radioactive carbon. A proven alternative and less invasive way to record glyphs is by carefully tracing the outlines onto a transparent plastic drop-cloth sheet.

Charles laments that because the pictographs were made with non-organic ocher, radiocarbon dating of them is not possible. Although it is true that ocher and other earth-based pigments are inorganic, we know that organic materials were often added to pigments as a binding medium and also that pictographs can be dated through non-destructive techniques, such as plasma extraction AMS (e.g., Hyman and Rowe 1997). A red and yellow pictograph on an exposed cliff that overlooks the French Broad River on the North Carolina-Tennessee line that has been analyzed by AMS and Energy Dispersive Spectrometry (EDS) not only showed that the amount of carbon within the pigment and surrounding rock was far higher than is expected but that the painting could be 5,000-year old and comparatively high levels of sulfur occurred in the yellow pigment (Loubser et al. 2008). Through careful sampling by an experienced physical scientist, such as Marvin Rowe or Karen Steelman, Charles may yet determine that the pictographs and/or encapsulating micro-layers in the sites he found do indeed contain sufficient carbon for AMS dating. Moreover, Charles may strike it lucky and find charcoal and/or diagnostic artifacts closely associated, such as wedged in cracks, with the buried petroglyph surfaces that he may again have to excavate at some future date.

Charles raises the question why rock art designs that he found in South Carolina do not appear to occur in neighboring states. However, a closer look at rock art in North Carolina, for example, suggests that at least some designs cross-cut current state boundaries. The circle petroglyphs on the rock outcrops of the mountains in Pickens County (Figures 9 and 29) have been found by John Carney and his team within the nearby DuPont State Forest of North Carolina. Although two of the DuPont sites face west, similar to the Pickens County ones, a third faces east. A quadruped-like petroglyph in Laurens County (Figures 24 and 43) also occurs at the confluence of Brasstown Creek and the Hiwassee River in North Carolina (Hansen 2009:24). A petroglyph fragment found on the shore of Lake Jocassee (Figure 59) shares many designs with Chatuge Rock in Cherokee County of North Carolina (Hansen 2009:28). The layout of the pictograph against the ceiling of the rock shelter in Kershaw County (Plates 15 and 16) bears a striking resemblance to that of the Brinkley Rock petroglyph in North Carolina (Hansen 2000:32). And finally, the pictographs in Pickens County (Plate 12) are reminiscent of those recorded by Cambron and Waters (1959:169) at Paint Rock in Tennessee. Like ceramic styles, rock art styles have spatial boundaries, some being comparatively localized while others are quite widespread.

An example of a widespread design in the southeastern United States is the circle-in-line petroglyph. Found in the foothills on both sides of the Appalachian Mountains from Alabama to Pennsylvania, circle-in-line incisions have been convincingly linked to historic period pine-tar extraction and lye leaching activities (Hockensmith 1986). Charles' suggestion that these forms may derive from earlier Native American Indian petroglyph shapes in the region is a tantalizing one, knowing that the Indian ways of doing things, ranging from the preparation of herbal decoctions to the processing of raw materials, were often adopted and modified by the newly settled Euro-American for their own needs.

Now that Charles has obtained an impressive sample of rock art sites in South Carolina, he can begin to study the sites at different scales; starting at the individual panel level by recording mineral crusts, salts, biological, and zoological activities, moving through a detailed mapping of the sites and their surrounding terrain and archaeological sites, to ultimately doing a multi-dimensional comparison with sites farther away. A careful look at Indian beliefs and practices concerning rock art sites and their placement on the landscape in relation to old trails, settlements, and natural features may also yield unexpected insights.

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Johannes (Jannie) Loubser, Stratum Unlimited, LLC

Jannie Loubser (Ph.D., Witwatersrand, South Africa; Post-Graduate Diploma in Rock Art Conservation, Getty Conservation Institute, Canberra University, Australia) has been working in the southeastern United States as an archaeologist and rock art specialist since late 1993. Since 2006, he has been conducting CRM-related archaeology and rock art work through his company, Stratum Unlimited, LLC, Alpharetta, Georgia. Loubser is an Honorary Research Associate at the Rock Art Research Institute, South Africa.

Edward J. Cashin. *Guardians of the Valley: Chickasaws in Colonial South Carolina and Georgia***. 2009. University of South Carolina Press, Columbia. ISBN: 978-1-57003-821-1**

Edward J. Cashin (1927-2007) was uniquely qualified to write this book. A native of Augusta, Georgia and professor at Augusta State University from 1969 to 1996, Dr. Cashin was a preeminent scholar of the colonial history of Georgia and the founder and director of the Center for the Study of Georgia History. The majority of Cashin's work either focused on his home town or on notable historical figures associated with it such as William Bartram and Lachlan McGillivray. It is against this immense background of local historical knowledge that Cashin endeavored to address the forgotten and neglected story of the native peoples who were so integral to southern colonial life, the Savannah River Chickasaws.

In *Guardians of the Valley*, historian Edward J. Cashin chronicles the history of the Lower Chickasaws who settled on the Savannah River near Augusta, Georgia from A.D. 1723 until the American Revolution. Cashin follows a unique cast of characters such as the Squirrel King and Mingo Stoby, leaders of the Savannah River Chickasaws, as they act as diplomats, trading partners, and brothers in arms, with the big names of southern colonial American history like Georgia's James Oglethorpe and the colonial Governors of South Carolina.

Cashin recounts how in 1723, at the request of the Carolina General Assembly, Squirrel King, with about 40 men and 40 women and children, settled at Savannah Town (around present day Augusta), an area that had previously seen the Westos, Savannahs, and Apalaches all come and go because of their relationship with the English. South Carolina saw the Chickasaw settlement on the Savannah River in terms of security. They acted as a buffer between the English colony and the Spanish, French, and Indian threats that surrounded it. The Chickasaws saw themselves as protectors of both the English colony and the interests of the Chickasaw nation that still resided in Mississippi. The partnership would last for more than half a century.

During their time on the Savannah River, the Chickasaws saw the establishment and growth of the towns of Augusta and New Windsor on what had been their hunting lands and took on the role of protector to the newcomers. They protected the trade routes between the English and the western tribes. The Chickasaws fought the Yamasee for Carolina, fought the Spanish and the Yamasee with Oglethorpe, and maintained positive relationships with, and respect from, both William Bull and James Oglethorpe during their tenures. They tolerated the tenure of Carolina's Governor James Glenn as he

consistently devalued the friendship and protection of the Chickasaws by trading arms with their enemies, the Choctaws, who would ultimately threaten the existence of the Chickasaws in Mississippi. Except for Glenn, all the "great men" of the colonial period spoke highly of the Chickasaws for their bravery in protecting the people of the Savannah River valley and their hospitality towards those passing through it. Unfortunately, for the Chickasaws, the colonial period came to a close, and with it came the end of the Chickasaws tenure on the Savannah River. The new Americans, having no loyalty toward the Chickasaws who had not joined them during the revolution, dismissed all claims by the Chickasaws to lands on the Savannah River, lands that the local whites had already been dividing up for themselves.

So why should South Carolina archaeologists need to read a book by a Georgia historian about a group of Native Americans most commonly associated with Mississippi? Because the Chickasaws, who are relatively unknown to South Carolina archaeologists, were living and interacting on several archeological sites that are currently being studied by South Carolina archaeologists.

Recently, there has been a flurry of archaeological activity, conducted by professors, graduate students, and private companies, around Savannah River colonial frontier period sites, all of which are in some way connected with the Savannah River Chickasaws discussed in Cashin's work. Fort Moore, South Carolina's most important Savannah River frontier military and trading establishment, has long been examined by University of South Carolina archaeologists (e.g., Groover et al. 2003; Joseph 1971; Sapp 2009; South 1971). The fort was the primary locus of South Carolina English and Chickasaw contact. The Chickasaws established two primary encampments on the Savannah River: one on the South Carolina side and one on the Georgia side, both in proximity to Fort Moore with whom they dealt regularly. Evidence of English/Chickasaw interaction could probably be found in the collections excavated from the Fort Moore.

Palachocolas, a Native American settlement downstream of the Chickasaws has been the recent site of University of South's archaeological field schools. In 1723, the Chickasaws visited Palachocolas at the request of Colonel John Barnwell, who was constructing a fort there, so that the Chickasaws could escort him to Fort Moore. It would stand to reason that if the Chickasaws were documented as having been to Palachocolas once, and they regularly traveled along the Savannah River on their way to Charleston and Savannah, then they may have stayed at Palachocolas on multiple occasions and evidence for Chickasaw interaction could be found in the Palachocolas collections also.

Finally, the Savannah River Chickasaws settled on the South Carolina side of the river directly across from Augusta, an area that has seen a lot of development in recent years including the building of riverfront neighborhoods. While some quality archaeological work has been conducted in preparation for this development, including the identification and excavation of a contact period native settlement which appears to slightly predate the Chickasaw occupation, future researchers need to be aware of, and keep an eye out for, evidence of this extremely important group of Indians that were so instrumental in American colonial history.

Among the many accomplishments of Dr. Cashin was an honor presented to him by the Chickasaws and retold in the preface of this book. Upon presenting his research to the legislature of the Chickasaw Nation in Ada, Oklahoma, the members conferred the name of Imanoli Afahena on Dr. Cashin. The name is translated as "One Who Tells an Important Story" and whether your interests lie in colonial, southern, or native histories, Edward J. Cashin has told an important and fascinating story.

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Chris Thornock, Savannah River Archaeological Research Program

Chris Thornock (M.A. Anthropology, USC) is an archaeologist working on his Ph.D. in Anthropology with a focus on Mississippian Archaeology and Iconography. He is also Field Director at the Savannah River Archaeological Research Program.

Margaret Belser Hollis and Allen H. Stokes, Editors. ***Twilight on the South Carolina Rice Fields: Letters of the Heyward Family 1862-1871.*** **2010. University of South Carolina Press, Columbia. ISBN: 978-1-57003-894-5.**

In July 1866, Edward Barnwell "Barney" Heyward wrote an uncle about his plans to renew his rice planting on the Combahee River after the Civil War: "I felt pretty badly beaten, but am not scared one bit. I intend to commence all over again, and perhaps get up something more substantial . . . which my poor Father lived to see go all to smash." So Barney Heyward began his rice planting again; through the correspondence and documents contained in this volume, the reader gains new perspective on Civil War and Reconstruction era plantation life in South Carolina. The book is a collection of 204 letters exchanged by members of South Carolina's Heyward family. A preponderance of the letters, 126 of the 204 in the book, are from Barney Heyward to his wife, Catherine "Tat" Maria Clinch. Conspicuously absent are any letters from Tat to Barney. The collection also contains letters from Tat Heyward to her mother and sister, from Edward Boineau to Charles Heyward (Barney Heyward's father) as well as letters from friends and acquaintances writing to Barney Heyward.

The editors' primary purpose in compiling this volume is to give public access to this rich private collection of writings. Most of the letters were contributed by Heyward family members for the publication. The letters reveal the events of everyday life in one of the rice field regions of the South Carolina Lowcountry during the Civil War and early Reconstruction Era. Through the letters, the reader gains a perspective on the experiences of a family witnessing the gradual degeneration of the southern rice plantations system as war comes increasingly closer and how that family then attempts to reestablish itself in its wake.

Most of the letters written by Barney Heyward reveal a racially biased, paternalistic, elitist perception, yet at times they also reveal a compassionate man often pitying of his slaves' lot in life. They are full of interesting details such as hunting incidents, Barney's rationale for the goods he sold in his postbellum commissary, his attempts to motivate his work force in the postbellum period, and, most interestingly, his effort to revive older inland swamp rice field planting. The early letters disclose his difficult relationship with his father, Charles Heyward. The work includes two cartoon-like drawings, typical of ones that Barney included with his letters to his wife.

The book opens with a table of contents, a list of illustrations, a brief discussion of editorial methods, and a helpful explanation of the correspondents. An introduction by Peter A. Coclanis provides a summary of the growth and development of the South Carolina rice and slave culture and its intimate intertwining with the Heyward family. Coclanis also places South Carolina rice production into the world-wide development of the product from sources in the 17th century in Southern Europe to the 18th and 19th century American South and in then finally in the the later 19th century from Southern and Southeast Asia. The book ends with an index and brief biographies of the authors.

The letters begin with a brief thank you note from General Robert E. Lee to Tat Clinch in February 1862. The connection is interesting but it has little to do with the general themes in the book. The bulk of the correspondence takes place between 1863 and 1864 and then picks up again in earnest between 1867 and 1868. Letters from the other years are relatively few.

The bulk of Barney's letters during the Civil War were written between February 1863 and December 1864. During this time, Heyward enlists as an officer in the Confederate Engineer Corps in Virginia but is transferred back to South Carolina to service along the Combahee River, near his family's plantations. For the most part, his writings are addressed to Tat who is managing their Goodwill Plantation along the Wateree River near Columbia. Meanwhile, Tat writes to her mother and sister who have sequestered themselves in their north Georgia retreat home.

The most active correspondence picks up again in early 1867 and continues until the end of the following year. These letters are full of information about Barney's attempt to replant his rice fields along the Combahee. He expresses ideas about better management of the plantations and suggests one idea of forming a business entity with the freedmen that would include joint ownership. He also discusses his expansion plans for the coming years, the day to day affairs of the plantation, his commissary sales as well as other trading opportunities and family matters in general. His notes of this period are full of both his inner doubts and self encouragement regarding his rice planting efforts.

An account of the Combahee Riot of 1868 is included. Subsequent to the riot, Barney made public comments that were construed by a family member to express sympathy and even agency with the rioters. This led to a series of letters to the editors of the *Charleston Mercury*, one of which accused Heyward of complicity in the riot. Most of the remaining letters from 1868 and 1869 involve efforts by Heyward to clear his name with the press, friends, and family members.

An additional period of interest is early 1865 when the narrative records a number of letters written from Edward Boineau to Charles Heyward. Boineau was Charles Heyward's overseer on his Combahee River plantations. In the correspondence, Boineau explained to Charles his plans

to evacuate the plantations. These letters provide a rare perspective on the collapsing plantation system as Federal General W. T. Sherman took Savannah and then moved through South Carolina. They furnish the reader with a feel for the desperation of rice planters along the Combahee as they second guess Sherman's moves and prepare accordingly. The years 1870 and 1871 are simply notices about the death of Tat Heyward in January 1870 and Barney Heyward the following year. They also include two letters to Barney's son, Walter Izard Heyward, one sadly marked, "last he ever wrote to me—Izard."

Though the editors are clearly not presenting any agenda but making the letters available to the general public there are some deficiencies. One problem is the complete lack of an explanation for the absence of letters from Tat to Barney. Whether this was by design or destruction of the letters, the editors fail to explain. This is particularly hard to understand since in nearly every letter to his wife, Barney Heyward references her latest communication.

The editors do a fine job of interpolating names of persons and places and footnoting explanations of incidents, such as Barney's attempts to be commissioned as an officer. However, one cannot help but sense that the work is not complete. Many comments and events go unexplained, and the reader often wishes for clarification or greater insight. The editors explain this stating that they were aiming at a *verbatium et literatim* transcription. They leave all interpretation for future work. Thus, as a work publicizing a rich collection of an important family letters, it is wonderful. But a historical narrative it is not, and the reader is left to draw his or her own conclusions.

Another editorial flaw is an absence of two crucial maps, given that many readers are not familiar with the area. The first would be a map of the Combahee River area where most of the action of the narrative takes place. It would have been particularly helpful to see the location of Lewisburg, Middle House, Rose Hill, Amsterdam, Board House, the Swamp, and Pleasant Hill plantations along with the local roads and small communities such as Green Pond, Walterboro, Pocataligo, Honey Hill, and Combahee Ferry. The second map that would be helpful is that of the southeast region of the state. Its inclusion would help the reader understand the general location of the plantations to the coast, to Columbia, Charleston, Savannah the rail lines, and the other rivers in the region such as the Ashepoo and Savannah.

The book is an invaluable and very personal record of a wealthy planter's family as they deal with war, invasion, destruction, death, a rapidly changing labor environment, new racial relations, and efforts by the planters to rebuild a world they once new. The transcriptions are an excellent source of primary material on an often overlooked topic and will certainly make easier future investigations of this traumatic period in South Carolina's history.

Charles F. Philips, Jr., Brockington Cultural Resource Consultants, Inc.

Charles Philips is the Senior Historian at Brockington Cultural Resource Consultants at the Mt. Pleasant, South Carolina Office.

W. Eric Emerson and Karen Stokes, Editors. *Faith, Valor and Devotion: The Civil War Letters of William Porcher DuBose*. **2010. University of South Carolina Press, Columbia. ISBN: 978-1-57003-9-126.**

I was attracted to this book for three major reasons. First, I have a long interest in Civil War history going back to my early childhood when I first heard the stories of my great-grandfather and his moral conflict of pacifism versus patriotism. In his case, "patriotism won out." I was in grade school during the Civil War Centennial. All of the newspaper coverage of the war events combined with stories of my ancestors told by my father and other, older family members about these same events made the Civil War come alive. The stories of deaths, anguish, and the house described as "a sad place" made the war real to me. I had direct connections to the events in the newspapers and the textbooks in the classroom. Second, the author of the letter was in the unusual position of first serving as an infantry officer in the Confederate army before transferring to a position as a brigade chaplain. I have read many letters and memoires of Confederate officers, but never from the perspective of an infantryman and chaplain. Perhaps the writer of these letters would offer insight of the same moral conflict my great-grandfather wrestled with.

William Porcher DuBose was a member of the elite upper class in South Carolina. He was related to a number of famous and influential South Carolinians including general officers in the Confederate army. He was born in a rented house in Winnsboro to French Huguenot parents who moved from Charleston to first one and then another of his family's plantations in Fairfield County. DuBose graduated as captain of cadets at the Citadel in the class of 1855. He continued his education at the University of Virginia where he studied Latin, Greek, French, moral sciences, mathematics, and physics, while receiving the Master of Arts degree. The outbreak of the war found him taking seminary classes at Camden in preparation for life as an Episcopal priest. The letters he wrote were to his fiancée, Anne Barnwell "Nannie" Peronneau, of Charleston. They were engaged on October 4, 1861, apparently on his trip to her home in Charleston. His plan was to complete his seminary studies, get married, and begin his career as a minister.

The Civil War, however, interrupted his plans and reordered his priorities. His earlier letters reveal his continued adherence to his plan. During the fall of 1861 he begins to waver on the issue of enlistment. His letter of December, 17, 1861 is headed "Holcombe Legion." He had apparently been appointed adjutant of the Holcombe Legion, a South Carolina unit consisting of a regiment of infantry, a battalion of cavalry, and a battalion of artillery under on unified command. DuBose's Citadel training played an important role in the training and organization of the Holcombe Legion. The Holcombe Legion became part of the famous "Tramp Brigade" in 1862. The name was bestowed because it was sent over much of the Confederacy and incorporated into different armies under different army commanders in South Carolina, North Carolina, Virginia, Mississippi, Alabama, and Georgia. DuBose participated in numerous campaigns and battles and was wounded three times. He was captured at the Battle of Turner's Gap on South Mountain in Maryland and imprisoned at Fort Delaware. After about one month in captivity he was transported to the Richmond area to be exchanged. Wounded a third time after his return to the Holcombe Legion, DuBose endured a slow recuperation at home.

During his recuperation and after his return to the Holcombe Legion, DuBose seems to focus more on two goals. The first goal is to marry his fiancée as soon as possible. In this goal, he is opposed by his future mother-in-law. She is eventually persuaded by others, not at the urging of DuBose, if his letters are to be believed. The wedding takes place on April 30, 1863. The second goal is to become a chaplain in the Confederate army. This goal is realized in the fall of 1863 when he receives an appointment as chaplain of the General Joseph B. Kershaw's Brigade. DuBose and Kershaw were cousins. DuBose joins the brigade in February 1864 in East Tennessee. The brigade, part of Lt. General James P. Longstreet's Corps is transferred back to the Army of Northern Virginia. They fought in the hard pitched campaign against Lt. General U. S. Grant at the Wilderness, Spotsylvania, Cold Harbor, and Petersburg. They were transferred back to South Carolina in the winter of 1865 as Lt. General William T. Sherman approached. DuBose writes his last letter on April 3, 1865 near Smithfield, North Carolina.

With the War over, DuBose returns home to his beloved Nannie. He embarks on a rather remarkable and noted career as an Episcopal minister, professor, and theologian of international reputation. For many years he served as chaplain and faculty member at the University of the South. In the epilogue, we learn that unfortunately his wife died in 1873. DuBose was later elected dean of the university. He died in 1918. His theological publications continued to be published for several decades after his death.

I enjoyed this book very much. It was rather difficult to get into the cadence of the writing style of the 1860s. Once this was accomplished, I found that the reading flowed much faster. I would recommend this book to anyone interested in Civil War history or moral and theological issues. It is also a great love story, though quite for-

mal from a 21st century perspective. For those interested in Civil War history, it offers great insight into camp life, in general, and that of the commanding officers in particular. We learn a great deal about the sleeping conditions (mostly in tents, sometimes outdoors), mess arrangements of officers, afterhours time, problems with lighting (DuBose was constantly trying to secure candles), living conditions (DuBose was shocked to discover his first louse while in prison), and the efficiency of Confederate mail service.

This book certainly deserved to be published. The editors did a very good job of editing and footnoting the letters. They provide an adequate introduction and biography of DuBose and his family. The editors do an excellent job of providing footnotes with references to nearly all of the people, publications, and quotes mentioned in the text of the letters. Not surprisingly, many of the quotes from this theologian-to-be are scriptural references.

What I did not like about the book is that the letters are not titled. Certainly not every letter needs to have a title. However, to my surprise, there are other letters included in the book that are not written by DuBose. The editors could have provided more notice of this fact than a footnote at the end of the letter. I found this very vexing with the very first letter in the book. It is not from DuBose, but from a cousin of Nannie's. A simple title at the beginning of this letter, and other letters not written by DuBose, would have prevented a lot of confusion on the part of the reader. While I found the introduction adequate, it could have been longer than just 14 pages. With all of the historical information at the fingertips of the editors, it would have been so easy to provide a little more biographical information. That should include mention of DuBose's rank. They tell us his position, adjutant, but never his rank. I believe this is crucial information. Much of his correspondence involves discussion of the rank of others, promotions of others, and attempts by others to get him promoted. And yet one does not know if he is a second lieutenant or a major. One fault DuBose seems to have is too much modesty. He persistently refuses opportunities for advancement of rank. His background as the top cadet at the Citadel and his handling of the brigade on the battlefield seem to confirm he has the capabilities for promotion. He certainly had the social and political connections for a promotion. Again, knowledge of his rank is critical in the evaluation of his modesty and refusals for promotion. It could be that DuBose is a little passive-aggressive in his dilemma between service to his country and his call to the ministry.

In closing, I would strongly recommend this book. The letters speak for themselves and provide unique insight into Civil War history and South Carolina society in a time of upheaval. William Porcher DuBose was a remarkable scholar. It is interesting to gain the insight into his personality as he struggles with his own decision. It is also interesting as he faces of a worsening war situation and continues to profess optimism to others as he tries to meet the religious needs of his troops.

Wayne Roberts, SC Department of Transportation

Wayne Roberts is senior archaeologist with the South Carolina Department of Transportation in Columbia.

Ashton, Susanna. Ed. *I Belong to South Carolina: South Carolina Slave Narratives*. 2010. University of South Carolina Press, Columbia. ISBN 978-1-57003-9-010.

I Belong to South Carolina: South Carolina Slave Narratives, a collection edited by Susanna Ashton, anthologizes seven slave narratives that describe the South Carolina experience from the Revolutionary War to the Reconstruction Era as well as different geographical locations around the state. Ashton, along with a number of collaborators, provides an introduction and afterword to the collection as well as introductions to each narrative.

In the introduction, Ashton explains the purpose and criteria for selecting the slave narratives she includes. She points out that the number of slave narratives describing the South Carolina experience is very small and that this collection doubles that number in size. In this case, she notes that the narrative is a story that has been told by a slave and published. Thus, these are written works, not interviews. Even though these stories are told in the slaves' voices, they are still influenced by the time and place of publication. To this extent, Ashton provides the context of the publication and commentary on how that might influence the content in the introduction to each narrative.

The first two narratives provide an understanding of life during the Revolutionary War period. Boston King's narrative, often viewed as trans-Atlantic, has its beginning in South Carolina and offers a perspective of the slave's role during the war. Clarinda's story offers the reader the insight "that the line between free and enslaved black people was often hazy" and "the bondage experienced by Clarinda speaks to the opportunities and limitations imposed on all women as well as black people in the eighteenth- and nineteeth-century South Carolina" (43).

The next narrative, "Recollections of Slavery by a Runaway Slave," provides a detailed and brutal picture of slave life pre-Civil War as well as the more traditional escape story. In particular, this narrative offers specific insight into the Sugar House, the slave jail in Charleston. The following two narratives also offer insight into the harsh life of a slave before the Civil War, but narrators become free with the Emancipation Proclamation and end of the war. Thus, they provide details on life immediately after emancipation.

The last two narratives were written during the Reconstruction Era and offer nostalgic views of slavery and the relationship between slave and master. The contrast between the description between the treatment of slaves in the first five narratives and these final two is drastic. Ashton explains the political climate during the time these narratives are written as a way of understanding why the narrators might have taken a more nostalgic viewpoint.

Ashton's Afterword discusses other insights into the South Carolina slave experience that can be found in letters, newspaper articles, interviews, and other sources. She also provides brief summaries of other South Carolina slave narratives that have been published. These materials along with extensive citations for further reference offer the reader a starting point for further research into the South Carolina slave experience.

The collection offers a compelling look into the experience of enslaved South Carolinians from a variety of locations and time periods. Ashton's introductory material is thoughtful and provides important contextual material while not drawing conclusions about authorial intention or motivation. This work is documented extensively in the footnotes. The Afterword in particular offers a number of starting points for further research in the footnotes. Although the documentation is extensive, the book does not contain a final bibliography, so the reader needs to locate references in the context of the book itself.

I Belong to South Carolina offers material for a variety of scholars. Ashton, a professor of English at Clemson University, brings to the book a background in narrative structure and literary form. While this is not the focus of the book, the impact of this background can be seen in the selection of narratives and the introductions to them. In addition, Ashton provides historical context and documentation for these narratives. Several of her collaborators are historical scholars. The combination of primary and secondary source material in addition to the references provide a human face to a population that is not well known. Furthermore, archaeologists can benefit from this insight as well. The details provided as well as some of the differences highlighted in different time periods and geographical locations can only serve to enhance the understanding of slave life in South Carolina.

The importance of this work lies in the narratives themselves. Doubling the number of South Carolina slave narratives, the book provides important work to a field that needs more research. The compelling nature of the book inspires and asks for more research on the life of the slave in South Carolina.

Emily Ligon, Clemson University

Emily Ligon received her B.A. in history and anthropology from the University of South Carolina and her M.A. in English from North Carolina State University. She is currently enrolled in the Rhetorics, Communication, and Information Design doctoral program at Clemson University. She is currently researching communication practices in public archaeology and how those practices work both face to face and virtually.

Thompson, Edgar Tristram. *The Plantation*. Edited by Sidney W. Mintz, and George Baca. 2010. University of South Carolina Press, Columbia. ISBN 978-1-57003-940-9. Originally published 1932, University of Chicago Press.

Published as part of the Southern Classics series, which returns important books about the history and culture of the American South to circulation, *The Plantation* offers a very early examination of the effect of global networks on the antebellum South. Edgar T. Thompson, trained as a sociologist at the University of Chicago, completed his pioneering dissertation in 1932, but the work has never been published in its entirety until now. In editing this volume, Sidney Mintz and George Baca provide a poignant introduction to orient the reader to Thompson's life and the historical and academic context in which he wrote his dissertation. Thompson's analysis of the economic and social power of the plantation as an institution remains useful for people interested in the study of plantations.

Thompson details what he terms the "natural history" of the plantation. He argues that plantations were political institutions that framed social, economic, and racial relations where they were established. He maintains that the frameworks established in plantation contexts were so powerful because the formation of plantations was often a colonization strategy. As such, the geographic and social relationships that they helped create lasted long beyond the plantation system itself. Thompson provides a number of international examples, but focuses on Virginia as a typical plantation frontier.

By the end of the 16th century, English writers were writing about America as a continent ripe for planting both crops and people. Before they existed, plantations were intimately connected with England through the immense amounts of capital investment required. Once they arrived, companies had no problem taking the "free" land from natives, justifying it as unused and so rightfully theirs. However, they made an effort to maintain friendly relationships to protect trade with native groups. When emphasis turned from trade to large plantation estates, planters' ideas about treatment of natives and who should be doing manual labor changed.

In Virginia, indentured servants and apprentices were the main source of labor for decades. During this time, three main features related to the social and political control of labor developed: formal contracts, lengthening of periods of servitude, and corporal punishment. These precedents helped establish the form slavery took on the Virginia plantation. As white servants and black slaves began working together, concern about racial mixing and social hierarchy grew. Initially, planters justified enslaving non-Christians, but the complexity of the argument led the Virginia Assembly to declare that conversion would not bring freedom. It was only after this that race became the prevailing justification for slavery.

Plantations were used not only to establish control over new populations, but also over those outside their borders. As the need for new land grew, plantations were used to establish order on the frontier. In this way, the plantation, as a social institution, played an important role, in changing the ecology of an area through major population shifts.

For scholars interested in race, Thompson discusses the role the plantation played in "race-making." By examining the early systems of labor in Virginia and the transition to slavery, he demonstrates the process of cultural syncretism and briefly discusses how the "cultural order" of the plantation continued to define relationships in the 1930s. In short, he contends that the New South, despite a few economic and social changes, was not so "new" after all.

Although this monograph is not specifically archaeological, there is no question that plantation contexts are important in the historical archaeology of the Southeast. Thompson clearly emphasizes just how important plantations were on an international scale, a fact that can become easily forgotten when considering the local context of a specific plantation. Readers who are unfamiliar with Atlantic Studies will find this work as a useful place to start and those who are well-entrenched in the field will likely discover aspects of Thompson's argument that surprise them.

Jennifer Betsworth, University of South Carolina

Jennifer Betsworth is currently pursuing her MA in Public History/Historic Preservation and Certificate in Historical Archaeology from the University of South Carolina.

James R. Cothran. *Charleston Gardens and the Landscape Legacy of Loutrel Briggs*. 2010. University of South Carolina Press, Columbia. ISBN 978157003891.

A fundamental aspect of Charleston's allure is indisputably its walled gardens. In *Charleston Gardens and the Landscape Legacy of Loutrel Briggs*, garden historian James R. Cothran documents the impact of landscape architect Loutrel Briggs on the Charleston garden, convincingly arguing that what today is referred to as Charleston's Garden Style can be attributed to Briggs.

This abundantly illustrated book combines biography, garden documentation, and such vivid descriptions of Briggs-designed landscapes that readers feel as though they are peeking into the "outdoor rooms" that provide sanctuary behind many of Charleston's homes. The first half of this eight- chaptered book is dedicated to outlining Briggs' life, tracing his professional ascension, and detailing his role in the Charleston Renaissance and the early preservation movement within the city. Briggs established his Charleston firm in 1929, and quickly befriended Charleston artists and intellectuals. He also was a founding trustee of the Historic Charleston Foundation, undertook the first mixed-use preservation project in Catfish Row in 1928, and was one of the first American landscape architects to document 18th and 19th century gardens.

The remaining chapters are dedicated to describing Briggs' gardens, his design philosophy and documenting the plants and hardscaping materials he utilized. Cothran selects both representational and exceptional designs to show how Briggs responded to the needs and desires of his clients as well as the challenges inherent within the gardens. The final chapter, "Ornamental Plants for Charleston Gardens," lists ground covers, vines, shrubs, trees, annuals and perennials preferred by Briggs, making this chapter particularly useful for those who own Briggs-designed landscapes or those who want to replicate Charleston's Garden Style.

Fundamentally, this is a practical book. Fully half is surrendered to appendices which are dedicated to promoting the preservation of Briggs-designed gardens within South Carolina. The first appendix outlines the minutiae of garden easement programs, while others provide other resources on garden easements, information on work undertaken to document Briggs' gardens, and a definitive inventory of Briggs archives held at the South Carolina Historical Society and Historic Charleston Foundation. Indeed, aside from its merits as a coffee table book due to its lovely illustrations, this book is most useful for landscape architects, landscape historians, and those who own or aspire to own gardens designed by Briggs.

However, if one is seeking information on the broader context of the development of Charleston gardens, look elsewhere. The first chapter is entitled "Charleston's Garden History," but in actuality it is a superficial treatment of the oft-recited arc of Charleston's history. Cothran does not adequately situate Briggs' gardens into the broader legacy of Charleston landscapes, only briefly describing the appearance of Charleston gardens prior to the arrival of Briggs. As a result, it is difficult to ascertain how Briggs' designs were a departure from what had come before. In addition to this gripe, there are several notable editorial errors, including duplicated sentences, which appear throughout the work. Nonetheless, the merit of this book is its substantive documentation of Briggs' legacy, ensuring its utility as a resource for landscape architects and preservationists in South Carolina.

Anjuli Grantham, Baranov Museum, Kodiak, Alaska

Anjuli Grantham received her MA in Public History from the University of South Carolina in 2011. During her time at USC, she worked as a graduate assistant at the South Carolina State Historic Preservation Office and participated in a public history field school in England, where she documented and researched a Victorian garden conservatory. She is currently curator at the Baranov Museum in Kodiak, Alaska.

ABOUT THE CONTRIBUTORS

Roxanne Ayers is a student in the History Department at Winthrop University in Rock Hill, South Carolina.

Christina Brooks is an archaeologist with a research interest in the archaeology of the African Diaspora and mortuary studies. She is lecturer in the Department of Sociology and Anthropology at Winthrop University in Rock Hill, South Carolina.

George Calfas is a doctoral student in historical and African diaspora archaeology at the University of Illinois in Urbana-Champaign. In addition to Pottersville, his research focuses on the use of non-intrusive rsearch methods in archaeology and the National Landmark of New Philadelphia Illinois, the first town in America established by an Africa American. Prior to attending the University of Illinois, Calfas served as an Airborne Ranger in the United States Army and finished his career as the Chief Military Instructor at Fort Bragg, North Carolina.

Robert C. Costello is an avocational archaeologist and Professor of Chemistry at University of South Carolina in Sumter. His primary area of study is the shore of the Hickory Top Wildlife Management Area in Clarendon County, which he conducts research under the auspices of a Hobby Diver License issued by the South Carolina Institute of Archaeology and Anthropology.

Rebekah Dobrasko is a supervisor and historian with the State Historic Preservation Office in the South Carolina Department of Archives and History. Her research interests include race relations in the South with a focus on the massive resistance to the Civil Rights Movement. She maintains a website on South Carolina's school equalization program that can be accessed here: http://scequalizationschools.org

Christopher C. Fennell is Associate Professor and Director of Graduate Studies at the Department of Anthropology, University of Illinois in Urbana-Champaign. His research projects address aspects of African diaspora heritage and the dynamics of social group affiliations among African Americans and European Americans in the 18h and 19th centuries.

Andrew Harris is a student at Winthrop University. He is a seeking a double major in Political Science and History.

Brooke Kenline graduated from Ohio State University with B.A. in Anthropology. She was a Peace Corps Volunteer in Ecuador from 2007 through 2009 and she is currently a M.A. student at the University of South Carolina. Kenline's research interests include the historical archaeology of the African Diaspora in the Americas with an emphasis on the formation of group identities, the cultural construction of race, and the politics of the production of history.

Brent Lansdell is a staff archaeologist with the Illinois State Archaeology Survey in Champaign, Illinois. He is currently supervising excavations in Illinois at the East St. Louis site, a Mississippian-period community that was contemporaneous with the well-known site of Cahokia.

Jon Bernard Marcoux is an assistant professor of anthropology at Auburn University in Montgomery, Alabama. His current research focus is the archaeology of late prehistoric and protohistoric communities along the central South Carolina coast.

Eric C. Poplin is a senior archaeologist with Brockington and Associates in Charleston, South Carolina. Dr. Poplin has conducted numerous field projects at Contact and early Colonial period sites in coastal South Carolina including the Daniel Island site and the site of Altamaha Town, an early 18th-century Yamasee community.

Carl Steen is a native of the South Carolina Lowcountry. He received a Bachelors Degree in Anthropology at the University of South Carolina, and a Masters Degree in Anthropology at the College of William and Mary. He is President of the Diachronic Research Foundation, a non-profit corporation dedicated to research and historic preservation.

Ally Temple is a recent graduate from Winthrop University. She received her degree in Business Administration with a minor in Anthropology.

2011 ARCHAEOLOGICAL SOCIETY OF SOUTH CAROLINA AWARDS

Mr. Tariq Ghaffar received the **Outstanding Service Award** for Exceptional Volunteer Service to South Carolina Archaeology for work at the Johannes Kolb Site and metal conservation of the Kolb artifacts.

Ms. Nena Rice received the **Outstanding Service Award** for Exceptional Volunteer Service to South Carolina Archaeology as ASSC Treasurer.

Ms. Ashley Stepp received the **Outstanding Service Award** for Exceptional Volunteer Service to South Carolina Archaeology for work at the Johannes Kolb Site & in the laboratory cataloging Kolb artifacts.

Mr. Christopher Young received the **Article of the Year Award** for his article, "A Study of the Availability and Selection of Stone Tool Raw Materials in Relation to the Johannes Kolb Archaeological Site (38DA75)".

Ms. Brooke Kenline received a **Graduate Student Grant-In-Aid Award** to conduct research on African cultural influences on the development of alkaline-glazed stoneware in Edgefield, South Carolina.

Ms. Kimberly Pyska received a **Graduate Student Grant-In-Aid Award** to conduct research on the role of the Anglican Church in the development of colonial South Carolina, focusing on landscape and frontier studies.

Ms. Lisa Randle received a **Graduate Student Grant-In-Aid Award** to conduct historical documentary research on Cooper River rice plantations to understand the lives of enslaved Africans and African Americans.

Mr. James Stewart received a **Graduate Student Grant-In-Aid Award** to conduct research on indigenous ceramics assemblage from Fort Congaree to address issues of colonialism and capitalism in 18th century South Carolina.

Figure 4. A: Topper blade-like flakes, B: complete blades.

2010 corrections. Sain, pp. 20.

and produces longer, thinner, parallel-sided blades, leaving straight scars on the core face that serve as guides for further blade detachments (Crabtree 1972: 31; Whitaker 1994: 106).

At Topper, 11 crested blades were identified. These blades have flaking patterns that are usually bi-directional to multi-directional in form, with removals often perpendicular to the longitudinal axis of the blade. Moreover, removal scars often terminate in hinges or steps below the center ridgeline. All crested blades have triangular cross sections, and diffuse or no bulbs of force. Furthermore, crested blades generally have parallel lateral margins, are rarely irregular, and end in feather terminations. Morphologically, crested blades are long, and are strongly curved in profile when compared to other blade classes. The high curvature present for crested blades may reflect attempts to prepare an artificial ridge on chert nodules.

Post Detachment Modification

All blades were examined for the presence of post detachment modification. Eight blades have evidence of retouch. Blade modification consists of retouch resulting from the systematic detachment of flakes from either the lateral margin or end. Modified blades include six complete blades, one crested blade, and one blade distal. Modified blades are typically long, have four or more scars of previous blade removals, parallel lateral margins, and feathered distal terminations. Although modified blades are mostly interior, the average index of curvature is relatively high (6.2) compared to the unmodified class. Four blades exhibit systematic retouch along a single margin. One blade has retouch along both lateral margins, and two blades exhibit retouch along an end.

Core Analysis

There are three blade core types represented in the Topper assemblage. These include conical (2), cylindrical (1), and wedge (19) forms. The single cylindrical core has two opposing platforms. One serves as the primary platform from which blades were detached. The opposite platform appears to have only been used for core maintenance; to rejuvenate the core, straighten the core face, or to correct errors. There is flaking along the distal end of the core, yet there is no evidence for attempted blade removals from this surface. According to Collins (1999), such flaking may have been conducted as a means to "straighten the core", allowing for the future detachment of blades that are flat as opposed to those that are increasingly stronger in curvature.

The conical cores have a single platform from which multiple uni-directional blades were struck at approximate right angles to the plane of the platform. A single coni

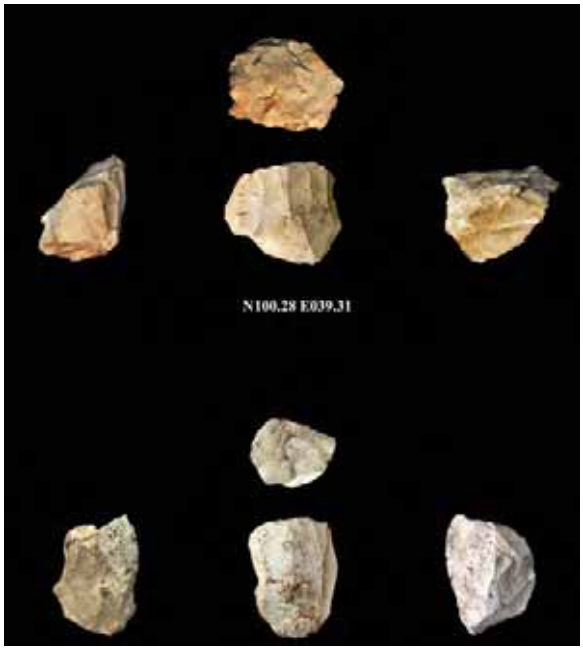

Figure 6. Topper wedge shaped cores. Photograph by the author.

Figure 7. South Carolina Modified blades. A: 38LX283, B: Island Site, Calhoun County, C: 38BK1766 (U/W), D: Barnwell County, E: 38AL163. Photo couresty of Daryl P. Miller.

2010 corrections. Sain, pp. 22.

field equipment was his invention of the aluminum tripod. From design, to manufacture, to revisions, to use -- we will ever be indebted to him and think of him and smile as we sift away in the field. Kevin, you were too cool, and yes, you should have patented it!

The following section contains remembrances from a number of Kevin's friends and colleagues from the South Carolina Institute of Archaeology and Anthropology and the Savannah River Archaeological Research Program.

Figure 1. Kevin Eberhard shovel-schnitting at Frierson Bay.

Kevin was the draftsman for the SRARP when I joined the program in 1984. He helped with my dissertation fieldwork from 1984 to 1986, during which time we spent many weekends camping out on Rose Island in the Broad River estuary while coring in the marsh and testing shell middens. He was a great companion, always ready to help, and could be counted on for relevant observations and insights. Later, in the early 1990s, shortly after the light bulb went on in my mind that Carolina bays figured prominently in early hunter-gatherer adaptations on the Coastal Plain, Kevin brought Crosby Bay to the attention of Ken Sassaman and myself. Kevin had amassed a large surface collection of Paleoindian and Archaic artifacts from this bay located near New Ellenton, South Carolina. His efforts contributed to a growing body of evidence for the early, often intensive use of Carolina bays, led to an article in *South Carolina Antiquities* co-authored by Eberhard, Sassaman, and Brooks in 1994 (26[1-2]:33-46), and spurred continued research and publications. Kevin was a good colleague, and I will miss him greatly.

Mark J. Brooks, Director, SRARP

Kevin was an amazing volunteer -- generous with his time, as well as being an incredible archaeologist. I first met Kevin in the early 1990s when I became an employee of the SRARP. I really got to know Kevin; however, when I was excavating the Bush Hill Plantation (38AK660) located on the SRS in the mid- to late-1990s. Kevin never quit working when he was at the site. For example, while the field crew was enjoying lunch, Kevin would disappear into the woods and walk firebreaks. More often than not, he would return with something new to show me. This was how we (a.k.a. Kevin) located the probable slave cabins associated with Bush Hill Plantation. In actuality, Kevin probably personally excavated half of the site.

Figure 2. (L) Chimney fall excavated by Kevin Eberhard. (R) Kevin weighing brick at the Bush Hill Plantation.

Aside from being helpful with the excavation of the site, Kevin also assisted with other important jobs. The most memorable of these being his removal of the copperhead snakes that made their home in the brick mound at Bush Hill. Kevin did all sorts of other tasks that helped make the excavation of 38AK660 run smoothly, including sharpening tools, repairing screens, removing tarps from the excavation blocks, and ridding the site of obnoxious weeds. He often performed all these tasks before anyone else even showed up at the site in the morning, and he was not even on the payroll.

Off the site, Kevin was just as helpful. He studied historical records, maps, and genealogies related to Bush Hill Plantation in an effort to find any information that we might have missed. Regarding historical artifacts, Kevin knew them just as well as, if not better than, we did. All said -- I know the SRARP staff will greatly miss Kevin's generous spirit.

Melanie A. Cabak, Historical Archaeologist, former SRARP staff member

2010 corrections. Herron, pp. 59.

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