

10.1 Subconsultant Reports

10.1.1 Analysis of American Indian Ceramics, Gray Farm Site (7K-F-11 and 7K-F-169) by Daniel R. Griffith

The Gray Farm Site 7K-F-11 and 7K-F-169 Analysis of American Indian Ceramics



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DRAFT

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Analysis of American Indian Ceramics
Gray Farm Site (7K-F-11 and 7K-F-169)
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Introduction

Ceramic container technology appeared at American Indian sites in the Middle Atlantic around 3300 B.P. American Indian ceramic ware types as defined in the Middle Atlantic are primarily temporal types. These types are defined by attributes that change predictably through time and are well suited to address questions about the periods of site occupation. The analysis identified those types from the site. This analysis of ceramics is a multi-staged approach to identify ceramic series and types at the level of individual vessel, or vessel groups from well-controlled contexts. A more detailed level of description of each vessel or vessel group addresses questions of locus of manufacture, variability within and between ware types and vessels within ware types, vessel use, and dates of manufacture and disposal. The data derived from these analyses, along with other data from the site, addresses broader questions about group stability and movement, implications for individual variability in vessel manufacture within and between ceramic series, use of vessels, implications for regional ceramic chronology, and interpretation of group identity.

The research focuses on obtaining comparable data from all vessels and vessel groups in a manner that allows comparison with other sites in Delaware and the region. Where possible, the focus of analysis was at the level of individual vessels. Four hundred and twenty nine sherds were recovered during the Phase III data recovery, while the Phase II investigations by A.D. Marble and Company (Emory et.al. 2007) recovered 103 sherds. A total of 532 sherds were examined. In some contexts, there were multiple sherds in the same bag of the same type that were analyzed together, which bring the total number of sherds closer to six hundred.

Analysis Protocol

The first step in the analysis was to examine all sherds to identify a comparable range of attributes. In other words, in order to determine ware types, the sherds must exhibit interior and exterior surfaces and be sufficiently large to identify tempering agents and/or paste characteristics. Sherds that were badly weathered, damaged or too small to determine these attributes were counted and weighed by context, the attributes recorded and then the sherds set aside. These sherds were list as “unidentifiable”. The remaining sherds were the focus of detailed analysis. The sherds were sub-divided by context into two categories: 1) surface collection, test units and trenches and, 2) features. Within the category of features, the ceramics contained in clearly defined cultural features were the subject of the most in-depth level of analysis in most cases. The purpose of this process is to insure the highest quality data, including radiocarbon, thin-section and residue analysis, came from the contexts that were more clearly the result of American Indian behavior at the site. In some cases, carbon samples were not available from the cultural features containing identified ceramic types. Where this

occurred ceramics from other contexts were dated from carbon residues adhering to the sherd or from bulk sherd organics. In several cases, vessels were defined from non-cultural features as they represented the best examples of a type.

Ceramics are particularly suited to answering several basic questions about the American Indian people at the site during periods of ceramic use. Ceramic series are defined and the vessels or vessel groups described. Type definitions consist of those attributes that must be present for a sherd, vessel or vessel group inclusion in the series. The types are defined by nominal scale attributes such as surface treatment and temper. Priority is given to those attributes which regional research shows change more frequently through time and are discernable by visual inspection. Within a series, the analysis recorded a range of attributes that describe variation and suggest alternate ways of defining a series and its types.

Sherds that exhibited a comparable range of attributes were classified by surface treatment and temper. The results were matched against ceramic series defined in the regional literature and assigned to types. The ceramic types identified by the A.D. Marble Phase II analysis were verified or modified (Table A-1). The sherds and types that did not match published types were assigned provisional type descriptions and arranged for further analysis. To be useful for local and regional comparison, the data on ceramics must be comparable to other analyses conducted in the area. The model used here is adapted from the ceramic analysis at the Hickory Bluff Site in central Kent County, Delaware (Petraglia, Bupp, Fitzell and Cunningham 2002).

Sherds were grouped by vessel or vessel lot based on visual inspection and low powered magnification. Vessels were identified by sherds that mend or have identical temper, paste, surface treatment, form and decoration. The individual vessel definitions with the highest reliability are those from mends and/or the same context. Vessel lots were identified from sherds that had similar paste, surface treatment, form and decoration, where present. For each sherd, vessel or vessel lot, the following attributes were recorded.

Catalog number

The artifact number assigned by Archaeological and Historical Consultants, Inc. (A&HC).

Bag number

The bag number assigned by A&HC

Inventory Number

The analysis number assigned to each sherd by A&HC

Test Unit/Feature

The field numbers for context assigned by A&HC

Coordinates

The North and East grid coordinates for the context

Stratum and Level

The vertical position of the sample within the context

Vessel part

Count – rim, body, base. Rim sherds were further described by describing the rim profile as everted, inverted or direct. A direct rim is one where the

wall of the vessel continues directly to the lip without any change in direction. Everted rims are those that angle away from the vessel opening and inverted rims are those where that angle in towards the vessel opening.

Metrics

Weight (grams) – by sherd and vessel or vessel group recorded by context.

Thickness (mm) - by sherd in each vessel or vessel group recorded by context. As many of the sherds were slightly irregular in thickness, three measurements were taken of each sherd and the thickness of the middle range measurement was recorded.

Paste

Temper identification and paste inclusions – temper identification was recorded using visual inspection and a 16X hand lens. Shell temper was identified by the thin, lenticular or flat voids in the paste, as in all cases the shell was leached out. In some instances, the temper is listed as “grit” or “fine grit”, which is defined as very small, sub-angular to rounded grains of quartz and/or other mineral types. Paste inclusions were identified as secondary inclusions in the paste, which was either intentionally added to the clay or were included in the clay in its natural state. Eighteen sherds from a range of ware types were submitted for thin section analysis. The results of this analysis are recorded in the description of each of these vessels in Appendix B.

Texture

Texture was recorded based on the surface feel of the sherds

Color

Interior, exterior and core – color was recorded based on Munsell Soil Color charts (Munsell Color 1992). Very few of the sherds had a defined core. Interior and exterior color did vary, likely due to a combination of firing atmosphere and vessel use. The range of color variation on a sherd was recorded where present.

Surface Treatment

Exterior – a description of the exterior surface of the vessel including cord twist where possible

Interior – a description of the interior surface of the vessel including cord twist where possible

Decoration

Decorative technique – the manner in which a decoration was applied; if cord marked, cord twist was recorded where possible

Decorative motif – the motif was described using the convention of fields of decoration where Field 1 is the first decorative motif below the lip of the vessel, Field 2 is a change in motif below Field 1 and so on.

Vessel form/shape

The intent of the analysis was to record the attributes of Vessel form or shape. In order to record this attribute reliably, it is necessary to have substantially complete vessels. Unfortunately, for this analysis, no

substantially complete vessels were recovered. In some cases, however, the curvature of rim and body sherds suggests that the vessels were conoidal and this is noted in the vessel analysis.

Vessel volume

Substantially complete vessels are required to record this attribute. Unfortunately, substantially complete vessels were not recovered from this site.

Use trace

Burned areas, scratches, organic residue and/or breakage patterns were recorded. Included in the use trace analysis is an analysis of starch grains, phytoliths and protein residues.

Manufacture

Whether a vessel was slab, coiled, or modelled was recorded where possible. Otherwise, the method of manufacture was listed as unidentifiable, which was typically the case.

Mends

Listed by vessel or vessel group, provenience and context

Photos

Each vessel or group was photographed by ware type (Appendix B).

Maps

The location of each vessel or vessel group was recorded on a site map.

Summary of Analysis

Phase II analysis by A.D. Marble (Emory, et. al. 2007) and preliminary Phase III inventories by A&HC, Inc. of 7K-F-11AND 7K-F-169 identified almost the entire range of ceramics from the Woodland Period in Delaware. The ceramics identified are outlined in Table 1 below.

Ceramic Series	Temper	Surface Treatment	References
Marcey Creek	Steatite	Smooth; plain	Manson 1948
Dames Quarter	Black stone; hornblende/gneiss	Smooth or Cord Marked	Lewis 1972; Wise 1975
Selden Island	Steatite	Cord marked	Slattery 1946
Accokeek	Sand and/or fine crushed quartz	Cord marked	Stephenson and Ferguson 1963
Coulbourn	Clay nodules/grog	Cord marked or net impressed	Wise 1974
Mockley	Shell	Cord marked, net impressed and fabric impressed (minor)	Wright 1973; Robinson and Bulhack 2005
Hell Island	Crushed quartz and mica	Cord marked or fabric impressed	Wright 1962; Thomas 1966; Custer 1989
Killens	Fine shell and grit	Smooth or fabric impressed	Wise 1984; Custer et. al. 1994
Townsend	Shell	Fabric impressed or smoothed	Blaker 1963; Lopez 1961; Griffith 1977
Minguannan	Crushed quartz and/or sand with a micaceous paste in some vessels	Cord marked or smoothed	Custer 1984

Table 1 – Ceramics identified at the Gray Farm site

The raw ceramic data analysis for this study is presented in a series of Tables in Appendix A as follows:

Table A-1 – The A.D. Marble Phase II, Area 1 (7K-F-11) controlled surface collection and test units. The data in Table 1 represents a re-analysis of the ceramics recovered during the Phase II investigation in order to insure the results were comparable with the data recovery investigation and analysis for this study. The sherd attributes are the same attributes recorded for the data recovery analysis, except that the individual sherds were not weighed. Table A-1 is sorted by the State catalog number assigned to each context.

Table A-2 – The A&HC Phase II surface and test unit ceramic data for site 7K-F-169, an area of investigation on the east side of State Route 1. Table A-2 is sorted by A&HC test unit number.

Table A-3 – The A&HC Phase III test units and trenches investigated at the Gray Farm Site (7K-F-11). Table A-3 is sorted by A&HC test unit number.

Table A-4 – The A&HC Phase III excavation of non-cultural features at the Gray Farm Site (7K-F-11). Table A-4 is sorted by feature number.

Table A-5 – The A&HC excavation of cultural features at the Gary Farm Site (7K-F-11). Table A-5 is sorted by feature number.

In addition to the raw data presented in Appendix A, the analysis includes individual vessel descriptions organized by ceramic series in Appendix B and

summarized in the discussion of site chronology, ceramic function, settlement, locus of manufacture and regional development. Appendix B is divided into two parts. The first section contains the vessels by ceramic series recovered from cultural features. The second section describes only those vessels from non-cultural features that were subject to in-depth analysis, such as radiocarbon dating, protein or starch grain residue analysis. Individual vessels from non-cultural features were defined where they were either the only examples of a type (e.g. Marcey Creek) or the best examples of a type (e.g. Coulbourn). The data used to define the individual vessels is included in the raw data Tables A-2, A-4 and A-5 in Appendix A. No individual vessels were defined from the A.D. Marble Phase II testing (Table A-1) or the Phase III Test Units and Trenches (Table A-3).

The majority of the American Indian ceramics recovered were from surface and plow zone contexts (Tables A-1, A-2 and A-3). The ceramic samples from the surface and plow zone contexts were generally small, with a few exceptions, and exhibited evidence of prolonged mechanical and chemical weathering. Nevertheless, a fair percentage of the sherds could be assigned to defined ceramic series, the exception being where either key attributes were missing (e.g. the exterior surface was missing) or the sherds were so small and weathered that type assignment was not reliable. Small and weathered sherds are listed as “unidentifiable”. Due to the mechanical and chemical weathering of the surface and plow zone ceramics, none of the sherds could be mended to other sherds in the plow zone context or with sherds from features. Accordingly, the plow zone sherds were not included in the vessel definitions and descriptions except for some of the sherds listed in Table A-2, but did contribute to the ceramic distribution analysis.

Another factor considered was sample bias. The Gray Farm site has been heavily collected by artifact collectors over many years. While assuming that such collecting activity only reduces the number and not the kind of ceramics recovered, it is possible that types occurring in low frequencies have been totally removed from the site and the frequencies of the types present have been randomly modified. Consequently, the frequency of types in the surface collection and plow zone is a less reliable measure than simply the presence of the types. In order to mitigate for that effect, I also included in the distribution analysis sherds from features in the total ceramic weight of each ceramic series.

The raw data tables list sixteen sherds as unidentified. The classification of “unidentified” differs from “unidentifiable” in that sherds classified as “unidentifiable” were so recorded because the condition of the sherd made identification unreliable. On the other hand, “unidentified” sherds exhibit interior and exterior surfaces and a clearly visible paste, but do not strictly match the defining criteria of known types or exhibit sufficient frequency or concentrated distribution to suspect they may represent an undefined ceramic series or an example of a series defined elsewhere. A close look at those sherds reveals that fifteen exhibit fine grit or crushed quartz and very fine grit in the paste and have either cord marked or smooth exterior surfaces. The remaining sherd has “small voids”, which may indicate a blocky shell temper or leached stone temper. Those described as containing sub-rounded to rounded quartz grains, grit or

very fine grit likely represent a clay source characteristic and not true temper, while those with crushed quartz and grit may represent crushed quartz tempered vessels produced from a clay source containing very fine grit.

Two other issues affect the accuracy of type identification for small sherds where paste and surface treatments are clear. First, very small vessels of some types may not exhibit the temper of the parent type and, in fact, appear to be un-tempered. For example, very small vessels with an opening diameter of two inches or less associated with Townsend ceramics sometimes do not contain shell temper, as if the clay was used in its natural state. Second, small sherds may not accurately represent the range of paste characteristics in the parent vessels. Tempering materials vary in their size, density and distribution within the paste of any given vessel. It is likely, for example, that an otherwise shell tempered vessel would not exhibit shell as temper in every sherd from that vessel. Unidentified sherds from the surface and plow zone contexts remain unidentified. Their frequency is low and distribution sufficiently random that they offer no measureable value to this analysis. These sherds are not included in the type descriptions or surface distributions.

With these caveats in mind, the surface and plow zone ceramics were quite useful in describing the ceramics present and in mapping the distribution of occupations that manufactured and used the ceramics. All but five ceramics types identified from surface collections and plow zone test units occurred in good association in cultural features. The five exceptions are Accokeek, Dames Quarter Plain, Minguannan, Mockley and Potomac Creek. As Tables A-1 and A-3 illustrate, there was a very low frequency of these types and, with the exception of Minguannan and Mockley ceramics, the identification of the types was not highly reliable due to the small and weathered nature of the sherds. Ceramics identified with a high degree of certainty were Marcey Creek, Dames Quarter Cord Marked, Selden Island, Wolfe Neck, Coulbourn, Hell Island, Killens and Townsend. The Dames Quarter Cord Marked is discussed further in the analysis and a provisional new type definition offered.

Research Objectives

The analysis is designed to answer several, specific research questions. A number of additional research questions were raised during the course of analysis. The following discussion focuses on the primary research questions and offers analytical approaches to other questions.

Ceramic Identification

Are there un-defined ceramic types in the Gray Farm collection and, if so, what are their definitions, descriptions, chronological placement and geographic distribution?

Most ceramic series recovered at the Gray Farm site were identified. In a number of cases, the sherds were so small or damaged that identification was not certain. However, the Gray Farm data does provide information to refine existing ceramic series definitions and suggests that further research may lead to a new series definition.

Dames Quarter ceramics are defined as black stone tempered (hornblende or gneiss) with plain or occasionally cord-marked exterior surfaces and either formed by modelling or coiling (Wise 1975:23; Artusy 1976). No plain or smoothed surface sherds with black stone temper were identified from the site. There are a number of sherds, however, that exhibit black stone temper with cord-marked exterior surfaces and evidence of coil construction. The black stone temper has been identified as hornblende or gneiss (Petraglia et.al. 2002:14-63). A single radiocarbon date from the Gray Farm site produced a 2 sigma calibrated calendar date range of cal BC 1259 to cal BC 1024 (Beta-307655). During the preliminary analysis, I gave thought to defining a new type based on this data. Given that the defining attributes and the date range are within the range of attributes for Dames Quarter, it is likely a type within the Dames Quarter series. With this in mind, the Dames Quarter series is here defined as black stone tempered consisting of two types, Dames Quarter Plain and Dames Quarter Cord-Marked. Dames Quarter has been described as either slab or coil constructed with either plain or cord marked exterior surfaces (Artusy 1976). Whether Dames Quarter Plain is associated with modelled construction and Dames Quarter Cord-Marked is associated with coil construction is not clear from the data at hand and is a subject for future comparative research.

It is also possible that what is defined here as Dames Quarter Cord-Marked is a new ceramic series. As ceramic series are defined as separate technological traditions, it seems that Dames Quarter Plain, if solely slab or modelled in construction, is a different series than one with coil construction and cord-marked exterior surfaces. The first step to sort this out would be comparative analysis of all radiocarbon dated Dames Quarter ceramics to clarify the differences, if any. Additional recovery and dating of Dames Quarter and Dames Quarter-like ceramics may be needed to fully explore the observed variability in technology and to supplement the existing radiocarbon date framework.

Townsend and Killens series ceramics are well defined in the literature (Blaker 1963:14-29; Lopez 1971:1-38; Griffith 1977:15). Traditionally, the Townsend Series contains four types, 1) Rappahannock Fabric Impressed, 2) Rappahannock Incised, 3) Townsend Corded and 4) Townsend Herringbone. The types are defined by differences in decorative technique and motif, on a shell-tempered, coiled, conoidal vessels with a fabric impressed or smooth body. Rappahannock Fabric Impressed is defined by fabric impressed exterior surfaces continuing to the rim of a vessel, while the remaining types exhibit decorative motifs in bands parallel to the rim executed by incised lines (Rappahannock Incised), cord impressed lines (Townsend Corded) or a combination of incised and cord impressed motifs (Townsend Herringbone). Research on Townsend Series ceramics demonstrates a trend from complex incised motifs early in the period of the series to more simplified incised and simple corded motifs at the more recent end of the series (Griffith 1977:141; Griffith 1980:30).

The data from the Gray Farm site suggests a fifth type for the Townsend Series, Townsend Plain. Townsend Plain is shell-tempered, coil constructed, conoidal vessel type with totally smooth or smooth and scraped exterior surfaces extending from the body of the vessel to the rim. The rims are plain, direct and rounded with no decorative

motif. Radiocarbon dates from Feature 10 place Townsend Plain in the 16th century AD (Beta-307300; Beta-307301) and it likely continues to the period of European exploration and settlement. Townsend Plain continues the trend of increasing simplicity in decorative embellishment through time in the Townsend Series.

The trend in the Townsend Series is exhibited elsewhere within its geographic distribution along the Middle Atlantic Coastal Plain. In Virginia, Egloff and Potter defined Yeocomico Ware as a shell-tempered, plain surface ware dated to the early Contact period from AD 1510 to AD 1690 (Egloff and Potter 1982:114; Potter 1993:87). Likewise, on the North Carolina coast, Herbert describes the White Oak type of the Townsend Series as plain, with no incised designs or simple stamping, though it is sometimes burnished (Herbert 2009:142). The White Oak type continues into the Contact Period.

Killens ceramics are well-defined in the literature (Wise 1984:23; Custer 1994:232). The defining attributes are identical to Townsend ceramics except that the shell temper tends to be finer and the paste more gritty. Its temporal range is within the range of Townsend ceramics and its co-occurrence with Townsend Plain in Feature 10 reinforces this association. The Killens series has a similar range of types in the incised, corded and plain traditions. Killens ceramics are distributed largely along the central and upper Delaware Bay drainages in Delaware. The temporal and geographic distribution of Killens suggests it is related to the Townsend series with a more geographically restricted range. The difference between the two may simply be a clay source difference in the manufacture of the vessels. If true, this may reflect the locus of manufacture more than a truly different technological tradition. The alternative is to identify these sherds as Townsend. However, recognizing this variability has a higher potential to reveal fine-grained cultural processes. The Killens and Townsend technological traditions seem to differ only in the selection of the raw clay and the processing of the shell temper. If true, they are likely manufactured by the same people perhaps at different locations. Further comparative research is needed to clarify the relationship between the two ceramic series.

Chronology

What were the periods of American Indian occupation of the site? Alternatively and more precisely, what were the periods of ceramic series use and discard?

The Gray Farm site ceramics indicate occupations from approximately cal BC 1500 to cal AD 1560. The site is multi-component, though the intensity of occupation or site use varied considerably. In the area of investigation, occupation was moderate during the Early Woodland and early Middle Woodland (Woodland I) as exhibited by the presence of Marcey Creek, Dames Quarter, Selden Island and Wolfe Neck ceramics. The Middle Woodland occupation, represented by Mockley and Hell Island ceramics, was very light. The majority of Middle Woodland ceramics were from plow zone contexts and the site contained only one small feature containing Hell Island ceramics. The Late Woodland (Woodland II) exhibited two periods of moderate occupation and use based on the presence of Townsend and Killens ceramics in cultural features.

Sixteen radiocarbon dates were obtained on wood charcoal or marine shell associated with ceramics (Table 2). Two factors need to be considered in evaluating the usefulness of the radiocarbon dates, 1) accuracy and 2) precision. Accurate radiocarbon dates are those with low standard deviations and are based on carbon sample sizes of sufficient size for the laboratory method employed. Accuracy simply means that the resulting date has a high probability of representing the true age of the sample (Higham 1999). Precise dates are those where there is a high probability that an accurate date is actually associated with the artifact or feature that is the target for the date. While all of the radiocarbon dates are considered accurate, twelve dates are considered precise. Twelve of the radiocarbon dates were from samples clearly associated with the target ceramics, or the ceramic sherds were directly dated by the bulk sherd organic method. The resulting dates are reasonably consistent with the temporal range of the types in Delaware or the Middle Atlantic region (Table 3). The calibrated 2 sigma calendar date ranges and mid-point calculations discussed below were produced using the calibration program CALIB 6.0.1 (Stuiver and Reimer 1986-2010).

Lab Code	Sample	Material	Analysis	CRA	Isotope fraction	Calibration	2 Sigma range (CALIB 6.0.1)	Target Ceramics
Beta-304997	Fea. 180	Charcoal	AMS	3100±30	-27.1	Intcal09	BC 1435 – BC 1298	Marcey Creek
Beta-307658	T.U.38	Bulk sherd	AMS	3260±30	-25.6	Intcal09	BC 1615 – BC 1454	Marcey Creek
Beta-307655	Fea. 12	Bulk sherd	AMS	2930±30	-27.8	Intcal09	BC 1259 – BC 1024	Dames Quarter
Beta-309417	Fea. 5	Charcoal	AMS	3760±30	-27.0	Intcal09	BC 2286 – BC 2044	Multiple
Beta-304998	Fea. 185	Charcoal	AMS	4120±40	-25.5	Intcal09	BC 2872 – BC 2577	Selden Island
Beta-307657	Fea. 195	Bulk sherd	AMS	2890±30	-27.3	Intcal09	BC 1195 – BC 977	Selden Island
Beta-307656	Fea. 185	Bulk sherd	AMS	2710±30	-25.5	Intcal09	BC 918 – BC 811	Selden Island
Beta-304999	Fea. 195	Charcoal	AMS	2790±40	-25.3	Intcal09	BC 1029 – BC 835	Selden Island
Beta-309419	Fea. 197	Charcoal	AMS	2160±30	-26.6	Intcal09	BC 358 – BC 107	Wolfe Neck
Beta-309416	Fea. 3	Charcoal	AMS	1140±30	-26.3	Intcal09	AD 782 – AD 982	Mockley
Beta-305001	Fea. 295	Charcoal	AMS	1170±30	-25.8	Intcal09	AD 776 – AD 966	Hell Island
Beta-307304	Fea. 233	Charcoal	AMS	3270±30	-25.6	Intcal09	BC 1622 – BC 1458	Killens
Beta-307300	Fea. 10	Charcoal	AMS	330±30	-24.7	Intcal09	AD 1477 – AD 1642	Townsend and Killens
Beta-307301	Fea. 10	Shell (oyster)	AMS	790±30	-1.8	Marine09	AD 1457 – AD 1617	Townsend and Killens
Beta-309420	Fea. 236	Charcoal	AMS	850±30	-25.7	Intcal09	AD 1052 – AD 1261	Townsend
Beta-309422	Fea. 348	Charcoal	AMS	140±30	-26.1	Intcal09	AD 1669 – AD 1944	Townsend

Table 2 – All radiocarbon dates associated with ceramics from the Gray Farm site

Four sherds were dated by the bulk sherd organic method. The bulk sherd organic method produces a date from the total carbon in the sample, including residues adhering to vessel surfaces as well as organic material in the clay body of the sherd. This method directly dates the sherd and is useful where either charcoal or shell are not present in sufficient quantities in the associated feature or the association between the sample to be dated and the ceramics is not certain. This method produces an accurate and reliable date with two caveats. First, the sherd may be contaminated by soil humic acids, which would tend to produce a date slightly more recent than the true date (Hatfield 2011). Second, there is a risk that “old” organics from the raw clay used to construct the vessel influenced the resulting date by producing a date that is older than the “true” date (Hatfield 2011). The bulk sherd organics dates from the Gray Farm site compare favorably with dates for the types with the possible exception of one Marcey Creek date (Beta-307658). The Conventional Radiocarbon Age (CRA) for this date is 3260 ± 30 B.P. with a calibrated calendar date range of cal BC 1615 to cal BC 1454 and a mid-point of cal BC 1534.

Lab Code	Sample	Material	Analysis	CRA	Isotope fraction	Calibration	2 Sigma range (CALIB 6.0.1)	Target Ceramics
Beta-304997	Fea.180	Charcoal	AMS	3100±30	-27.1	Intcal09	BC 1435 – BC 1298	Marcey Creek
Beta-307658	T.U.38	Bulk sherd	AMS	3260±30	-25.6	Intcal09	BC 1615 – BC 1454	Marcey Creek
Beta-307655	Fea. 12	Bulk sherd	AMS	2930±30	-27.8	Intcal09	BC 1259 – BC 1024	Dames Quarter
Beta-307657	Fea. 195	Bulk sherd	AMS	2890±30	-27.3	Intcal09	BC 1195 – BC 977	Selden Island
Beta-307656	Fea. 185	Bulk sherd	AMS	2710±30	-25.5	Intcal09	BC 918 – BC 811	Selden Island
Beta-304999	Fea. 195	Charcoal	AMS	2790±40	-25.3	Intcal09	BC 1029 – BC 835	Selden Island
Beta-309419	Fea. 197	Charcoal	AMS	2160±30	-26.6	Intcal09	BC 358 – BC 107	Wolfe Neck
Beta-309416	Fea. 3	charcoal	AMS	1140±30	-26.3	Intcal09	AD 782 – AD 982	Mockley
Beta-305001	Fea. 295	Charcoal	AMS	1170±30	-25.8	Intcal09	AD 776 – AD 966	Hell Island
Beta-307300	Fea. 10	Charcoal	AMS	330±30	-24.7	Intcal09	AD 1477 – AD 1642	Townsend and Killens
Beta-307301	Fea. 10	Shell (oyster)	AMS	790±30	-1.8	Marine09	AD 1457 – AD 1617	Townsend and Killens
Beta-309420	Fea. 236	Charcoal	AMS	850±30	-25.7	Intcal09	AD 1052 – AD 1261	Townsend

Table 3 – Precise radiocarbon dates associated with ceramics from the Gary Farm site.

In order to obtain a clear picture of the chronology of site occupation or use based on ceramics, the analysis focused on radiocarbon dates that are both accurate and precise. Four radiocarbon dates, while accurate, do not appear to be precise. One date for Dames Quarter Cord-Marked (Beta-309417) was obtained from a wood charcoal sample from non-cultural Feature 5. The CRA is 3760 ± 30 B.P. producing a calibrated calendar date range of cal BC 2286 to cal BC 2044 and a mid-point of cal BC 2165. Feature 5 contains a mix of ceramics and it is likely that “old” charcoal from an

Archaic period occupation was mixed in the sample submitted for radiocarbon dating. It is equally likely that the date is precise for an Archaic period occupation and the ceramics were a later intrusion by cultural or non-cultural processes.

A wood charcoal sample from Feature 185 containing Selden Island ceramics was submitted for a radiocarbon date. The resulting CRA is 4120 ± 40 B.P. producing a calibrated calendar date range of cal BC 2872 to cal BC 2577 with a mid-point of cal BC 2724 (Beta-304998). Even though Feature 185 is considered a cultural feature, this is not a precise date for Selden Island ceramics. Feature 185 contained five sherds of Selden Island ceramics defining Selden Island Vessel #1. As a test of the wood charcoal date, a Selden Island sherd from the feature was submitted for a bulk sherd organics date, which produced a CRA of 2710 ± 30 B.P. This result produced a calibrated calendar date range of cal BC 910 to cal BC 808 with a mid-point of cal BC 859 (Beta-307656). The Selden Island bulk sherd organics date is considered precise. Clearly, the wood charcoal from Feature 185 included "old" charcoal from either an Archaic Period occupation or a natural burning event. It is conceivable that Feature 185 was a Selden Island component feature that intruded into an Archaic period feature, thus incorporating wood charcoal from the earlier component into the fill.

A wood charcoal sample from Feature 233, containing Killens ceramics, was submitted for a radiocarbon date. The resulting CRA was 3270 ± 30 B.P. producing a calibrated calendar date range of cal BC 1622 to cal BC 1458 with a mid-point of cal BC 1540 (Beta-307304). While Feature 233 is considered cultural, it contained only one sherd of Killens ceramics and the sherd was in the upper level of the feature. The radiocarbon date is much too early for Late Woodland Killens ceramics. It is likely that the Killens sherd was intrusive into an otherwise earlier feature.

A wood charcoal sample from Feature 348 containing Late Woodland Townsend ceramics was submitted for a radiocarbon date. Only one sherd of Townsend ceramics, or any ceramics, was recovered from this non-cultural feature. The resulting CRA was 140 ± 30 B.P. with a calibrated calendar date range of cal AD 1669 to cal AD 1944 with a mid-point of cal AD 1807. Clearly, the charcoal sample included charcoal from some historic period activity.

The four dates above are not considered precise and are not included in further discussion of site chronology based on American Indian ceramics. The periods of site occupation and use is based on the twelve precise radiocarbon dates. Where radiocarbon dates were not obtained from the Gray Farm site for a given type, probable date ranges are determined by reference to the date range for the type in Delaware (Griffith 2012).

Marcey Creek

There are two dates for Marcey Creek ceramics from the Gray Farm site. One is from a non-cultural feature (Feature 180) and is derived from wood charcoal (Beta-304997). The CRA is 3100 ± 30 B.P. which produces a calibrated calendar date range of cal BC 1435 to cal BC 1298 with a mid-point of cal BC 1366. This date compares favorably with dates for Marcey Creek ceramics in Delaware and the region. It is

possible that Feature 180 is a Marcey Creek period cultural feature, but later disturbance of part of this feature made it appear non-cultural in the field. The second date is from a non-cultural feature in Test Unit 38 at site 7K-F-169. It is a bulk sherd organics date (Beta-307658). The resulting CRA is 3260 ± 30 B.P. with a calibrated calendar date range of cal BC 1615 to cal BC 1454 with a mid-point of cal BC 1534. This Marcey Creek date, if precise, is contemporary with some radiocarbon dates in the region for steatite vessels (Shaffer 2008:16). While this date is earlier than the traditionally accepted temporal range for Marcey Creek, it is plausible that the beginning of Marcey Creek production overlapped the production of steatite vessels. It has been argued that Marcey Creek ceramics were clay copies of steatite vessels and developed from that source (Custer 1984:86). At some point in time, both steatite vessels and Marcey Creek ceramics were likely in production at the same time and this date from the Gray Farm site may mark the transition.

Dames Quarter Cord-Marked

One precise date for Dames Quarter Cord-Marked ceramics was obtained from the site. The date is from a bulk sherd organics assay yielding a CRA of 2930 ± 30 B.P. The calibrated calendar date range is cal BC 1259 to cal BC 1024 with a mid-point of cal BC 1141. While at the more recent end of the temporal range for Dames Quarter in Delaware, it is consistent with dates from the Blackbird Creek site in New Castle County, Delaware (Versar 2011).

Selden Island

Two precise dates for Selden Island ceramics were obtained from the Gray Farm site. The calendar date range for the group is cal BC 1195 to cal BC 808 with a mid-point of cal BC 1001. Two dates were derived from the bulk sherd organics method (Beta-307656 from Feature 185 and Beta-307657 from Feature 195). A third date (Beta-304998) is from wood charcoal in cultural Feature 185 with a CRA of 4120 ± 40 yielding a calibrated calendar date range of cal BC 2872 to cal BC 2577. It is important to note that the two bulk sherd organics dates, while statistically different, produce calibrated age ranges within the known range of Selden Island ceramics. For Feature 185, the wood charcoal date is much too early for the ceramic type. It is possible that a Selden Island ceramics intruded into an Archaic feature, or old charcoal from a natural burning event was included in the sample submitted for dating. The wood charcoal date is an outlier and not considered precise.

Wolfe Neck

One radiocarbon date from cultural feature 197 is associated with Wolfe Neck ceramics (Beta-309419). The CRA is 2160 ± 30 B.P. with a calibrated calendar date range of cal BC 358 to cal BC 107 and a mid-point date of cal BC 232. This date is well within the date range for the type in Delaware. While Feature 197 also contained some Selden Island ceramics, it is likely the earlier ceramics were re-deposited in the feature during the Wolfe Neck occupation as both occupations were in the same area of the site. A supporting line of evidence is that the date is too recent for Selden Island ceramics based on the two dates from this site.

Coulbourn

No dates for Coulbourn ceramics were obtained from the site. In Delaware, the calibrated 2 sigma calendar date range for Coulbourn is cal BC 168 to cal AD 349. It is probable that what little Coulbourn ceramics were found were deposited sometime during this five hundred year interval.

Mockley

One date was obtained that appears to represent the Mockley occupation (Beta-309416). The CRA is 1140 ± 30 B.P. with a calibrated calendar date range of cal AD 809 to cal AD 966 with a mid-point of cal AD 895. The date was obtained on wood charcoal from non-cultural Feature 3. The feature also contained Coulbourn and Townsend ceramics and appears to be a mixed context. While the radiocarbon date is accurate, its ceramic association is not clear. The date falls within the known range of late Mockley ceramics and it is possible the date is precise for the type and the other ceramics are intrusions into this otherwise Mockley period feature. The earlier Coulbourn ceramics could easily have been re-deposited when the feature was filled during the Mockley occupation, though Coulbourn ceramics significantly outnumber the Mockley sherds in the feature. The one Townsend sherd was found in Level 2 of the feature, but could be a later intrusion. I have a low level of confidence in this radiocarbon date, as an average wood charcoal date from the Coulbourn, Mockley and Townsend occupations could produce a date in this range. Nevertheless, there was a light occupation at the site when Mockley ceramics were produced.

Hell Island

One date was obtained from cultural feature 295 (Beta-305001). The resulting CRA is 1170 ± 30 B.P. with a calibrated calendar date range of cal AD 776 to cal AD 966 with a mid-point date of cal AD 871. This date is consistent with the middle of the range of Hell Island dates in Delaware.

Killens

Two accurate and precise dates for Killens ceramics were obtained. A wood charcoal sample from Feature 10 produced a CRA of 330 ± 30 B.P., yielding a calibrated calendar date range of cal AD 1477 to cal AD 1642 and a mid-point date of cal AD 1559 (Beta-307300). A marine shell (*crassostrea virginica*) sample from Feature 10 produced a CRA of 790 ± 30 B.P., yielding a marine calibration calendar date range of cal AD 1457 to cal AD 1617 with a mid-point of cal AD 1537 (Beta-307301). The dates are statistically the same. Feature 10 also contained Townsend Plain ceramics, which are contemporary with Killens ceramics. These dates are at the more recent end of the age range for Killens ceramics in Delaware.

Townsend

Three radiocarbon dates associated with Townsend ceramics were obtained. Two of the dates are from Feature 10, as discussed above for Killens ceramics. The Killens and Townsend period occupation from Feature 10 represents a late 15th century

AD to early 17th century AD occupation. The third date was obtained on wood charcoal from non-cultural Feature 236 (Beta-309420). The feature also contained one Killens rim sherd. The CRA from Feature 236 is 850±30 B.P. producing a calibrated calendar date range of cal AD 1052 to cal AD 1261 with a mid-point date of cal AD 1157. Feature 236 contained two rim sherds with direct cord impressed decorative motifs. These motifs generally post-date AD 1360 (Griffith 1980:37). It is possible that some earlier wood charcoal was included in the sample submitted for dating. Nevertheless, the motif does pre-date the introduction of Townsend Plain ceramics found in Feature 10. This leads to the conclusion that two separate occupations producing Townsend and Killens ceramics occurred at this site, one centered on the mid-12th century AD and one centered on the mid 16th century AD.

Minguannan

No dates were obtained for Minguannan ceramics. Minguannan-like ceramics occurred in one, isolated, plow zone context at site 7K-F-169. This concentration may represent a single vessel brought into a community otherwise producing and using Townsend and Killens ceramics. The Gray Farm site is located south of the boundary in Delaware where late Minguannan ceramics are regularly found in pure contexts. The identification of the sherds as Minguannan is not certain. The sherds could also be from a thin-walled Hell Island vessel, a type that occurs in low frequencies at the site. There are no radiocarbon dates in Delaware for Minguannan ceramics, but they appear to be contemporary with Townsend and Killens ceramics.

Ceramic Chronology Summary

Based on the preceding analysis, the calendar date ranges of site occupation based on Gray Farm radiocarbon dates and known date ranges for ceramics not dated at the site, the periods of site occupation are illustrated in Figure 1. The data for Figure 1 is outlined below in Table 4:

Ceramic Type	2 Sigma Calendar Date Range	Mid-Point of Range
Marcey Creek	cal BC 1615 to cal BC 1298	cal BC 1457
Dames Quarter	cal BC 1259 to cal BC 1024	cal BC 1142
Selden Island	cal BC 1195 to cal BC 835	cal BC 1015
Wolfe Neck	cal BC 358 to cal BC 107	cal BC 232
Coulbourn	cal BC 55 to cal AD 349	cal AD 147
Mockley	cal AD 809 to cal AD 982	cal AD 896
Hell Island	cal AD 776 to cal AD 966	cal AD 871
Townsend/Killens 1 st occupation	cal AD 1052 to cal AD 1261	cal AD 1157
Townsend/Killens 2 nd occupation	cal AD 1457 to cal AD 1642	cal AD 1550

Table 4 – Periods of Gray Farm site occupation based on radiocarbon dates. (Note: Coulbourn calendar date range is based on statewide radiocarbon dates for the type. The remaining ranges are based on radiocarbon dates from the Gray Farm site).

Another useful way to examine the precise periods of occupation is to perform what I refer to as “gap analysis”. Investigations at the site recovered the entire range of known types in Delaware, except Nassawongo and Wilgus ceramics. As discussed elsewhere, these types fall within the date range of other ceramic types in Delaware. Assuming a continuous occupation of the site by ceramic using people from the first Marcey Creek ceramics to the last Townsend/Killens ceramics, the calibrated calendar date ranges based on radiocarbon dates from the site should overlap. On the other hand, if there are sizable breaks in the occupation, then there should be gaps between the calibrated calendar date ranges. There are two factors to consider first. The analysis assumes the data contains a sufficient number of accurate and precise dates for the types at the site. The analysis must also take into account areas of the site beyond the area of investigation and assume those areas do not contain additional components. The first factor is controlled by the quantity, accuracy and precision of the radiocarbon dates obtained from the site. This factor can be fairly evaluated. The second factor, whether additional components exist beyond the area of investigation, is an unknown. All that can be said precisely is that a certain ceramic producing occupation did or did not occur at a specific time only as it relates to the specific area of site landscape where the investigation occurred. As there is a low level of confidence in the radiocarbon date for Mockley ceramics from the site, the gap between Coulbourn and Mockley may be larger or smaller than shown. Nevertheless, there are very few Mockley ceramics from the site, indicating a light and intermittent occupation during that period.

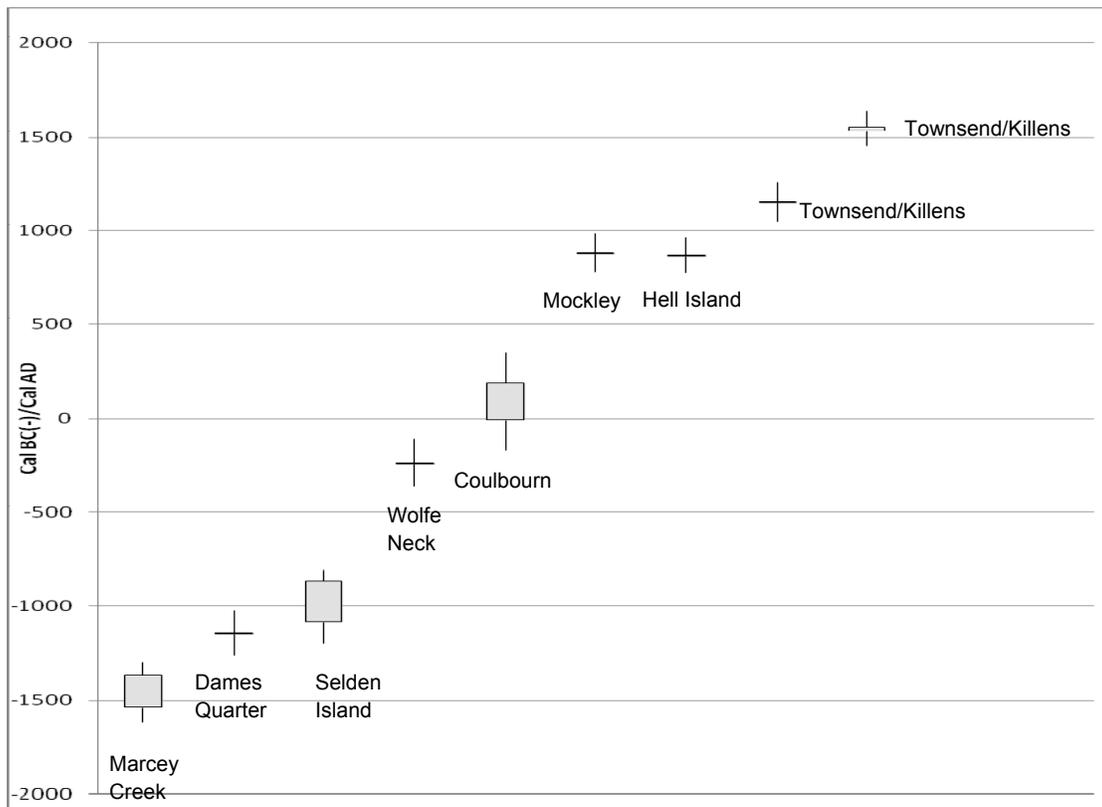


Figure 1 – Gray Farm periods of occupation based on radiocarbon dates associated with ceramics. Shaded areas are radiocarbon date mid-point ranges where there is more than one

date. Vertical lines are 2 sigma ranges for the radiocarbon dates. Coulbourn ranges are from statewide radiocarbon dates, not dates from the Gray Farm.

With these factors in mind, the data suggests that the Gray Farm site was occupied intermittently. The gaps in the occupation were determined by comparing the most recent end of the 2 sigma calibrated calendar date range of a series with the oldest end of the range of the succeeding series. Conducting this analysis produced the results in Table 5.

Transitions	Calendar Date Gap	Length of Gap (years)
Marcey Creek to Dames Quarter	cal BC 1298 to cal BC 1259	39
Dames Quarter to Selden Island	no gap – ranges overlap	0
Selden Island to Wolfe Neck	cal BC 835 to cal BC 358	477
Wolfe Neck to Coulbourn	cal BC 107 to cal BC 55	52
Coulbourn to Mockley	cal AD 349 to cal AD 809	460
Mockley to Hell Island	no gap – ranges overlap	0
Hell Island to 1 st Townsend occupation	cal AD 966 to cal AD 1052	86
1 st Townsend to 2 nd Townsend occupation	cal AD 1261 to cal AD 1457	196

Table 5 – Gaps in Gray Farm site occupation based on ceramics

The point of this exercise is not the specific length of the gap, but to suggest that use of the area investigated requiring ceramic vessels did not occur during certain periods. This analysis shows that while most of the American Indian ceramic types known in Delaware were recovered from the site, the actual periods of site use were limited. Such a pattern suggests that there were many settlement choices on the broader landscape. The Gray Farm site landform and location in the Murderkill watershed was not particularly favored over any other similar location, a pattern expected in a social environment of mobile populations with broad social boundaries and a relatively low population density.

Alternatively, large gaps in the period of occupation could represent de-population of a region due to socio-political conflicts, disease, migration or a combination of these and other factors. This type of explanation cannot be adequately explored from a single site. Research along these lines would require comparable data sets over a large geographic area to determine whether the gaps in occupation at the Gray Farm site are specific to the site or representative of a larger pattern. Examining ceramic type date ranges in Delaware do not show any large periods of de-population (Griffith 2012). This argues for the explanation that for any given place on the landscape, the occupations that do occur are simply matters of choice among many choices that meet the needs of a particular people at a particular time. Small gaps in the periods of occupation likely fall below the threshold of detection given the 2 sigma ranges of radiocarbon dates.

Ceramic Function

What function did the ceramic containers serve and what are the implications for interpreting subsistence and site seasonality?

Ceramic vessels are containers. They can be used for collecting, serving, storage, cooking and/or dry heating of dry materials or liquids. All of the ceramic types from the site are from vessel types with open forms. There are no highly constricted forms (i.e. bottles) or flat forms (i.e. plates or dishes). While Townsend and Killens vessels occasionally exhibit slightly inverted or everted rims, the form is likely aesthetic or symbolic as the modification does not appear to impart a functional advantage. All of the rims recovered from the Gray Farm site are direct, indicating a simple, open form.

While all ceramic vessels were containers, there is a difference between their function as containers and their specific use. The use may be determined by an analysis of interior finish, vessel form, wall thickness, breakage patterns and organic residues. Any given vessel can be used for multiple purposes, even after breaking (cf. Deal 1998). This analysis of function and use is confined to the vessels defined in Appendix B.

The interior of all vessels recovered is smooth, while there are multiple exterior surface treatments ranging from cord-marked, fabric-impressed and smooth or plain. Smooth interiors facilitate the removal of vessel contents and cleaning vessel surfaces. This is particularly the case for vessels used in cooking by direct or indirect heating. Smooth interiors function equally well for the collection, serving, processing or storage of dry materials.

The open form provides unrestricted access to the vessel contents. Unlike highly constricted American Indian seed jars and water bottles found elsewhere in North America, the open form is the simplest way to construct a container. This is also true of basketry and vessels made of wood. All of the ceramic types in Delaware exhibit this open form, though in slightly different ways. Marcey Creek vessels, and perhaps some Dames Quarter ceramics, have flat bases, while the remaining types have conoidal forms. Vessel wall thickness effects thermal retention after heating, with thicker walls retaining heat longer than thinner walls (Sassman1993:141). However, vessel wall thickness also varies with vessel size, with larger vessels of a type generally exhibiting thicker walls than smaller vessels. The only significant trend in the Gray Farm data set is that there is a slight tendency for earlier ceramic series to be thicker than later series. This trend however is not absolute as thicker vessels also occur in later types on vessels that appear to be larger based sherd curvature. For this study, vessel wall thickness was not particularly useful in contributing to an understanding of vessel use. In a more complete sample, an index of vessel volume correlated with vessel wall thickness of a given ceramic type could clarify this relationship.

Due to the incomplete nature of the vessels from the site, the analysis of breakage patterns was not informative. Evidence of use wear was slight. In general, body sherds tended to be larger in overall dimension and weight than rim sherds. This pattern is not likely the result of vessel use. In many cases, vessel body walls are

thicker than the vessel wall at the rim. The thinner rims, even those with a slight taper, favor a higher probability of mechanical breakage than the thicker body walls. In cases where the rims of a type are the same thickness as the body sherds of the same type, there is little or no difference in sherd breakage patterns. Use wear (e.g. scratches or scrape marks) occurred on the interior of one vessel (Coulbourn Vessel #1; Appendix B). There are two, discontinuous, arc-shaped grooves in the same area of the sherd. Under 16 X magnification, the grooves penetrate the interior surface less than 1 mm with an open, U-shaped cross section. The edges of the grooves are worn indicating it is not recent damage to the sherd. The object that produced the grooves was likely harder than the clay body. The cause of such wear is uncertain. It is not likely the result of vessel manufacture as the color within the grooves is darker than the surrounding surface. Uneven burning on vessels is a type of use wear that provides evidence for cooking and heating. Due to the fragmentary nature of the vessels in this sample, no pattern of uneven heating was determined.

Numerous sherds show fine scratches on the interior and exterior. The scratches appear as fine to very fine channels or grooves with very fine mineral particles or fine, leached out shell voids at the terminus of many of the scratches. On closer examination, these scratches are mostly likely the result of vessel manufacture during the smoothing or scraping of soft or leather hard clay (e.g. Townsend Vessel #5).

Traces of organic residues are the most significant evidence of vessel use at the site (Yost 2011). The analysis examined the presence of residues as well as the contents of residues. Some residues are encrusted on the surface, while others appear as dark organic stains embedded in the vessel fabric. The encrusted residues vary from heavily encrusted to lightly encrusted. Most of the encrusted residues are discontinuous on the surface of the vessels. The residues appear to be the result of heating the contents of the vessels. The starch grain analysis confirmed the heating/cooking of vessel contents in some cases. The presence of residues is outlined in chronological order of ceramic types (Table 6).

All the ceramic types, with the exception of the small sample of Hell Island and Mockley, exhibited some organic residue or staining. The majority of the organic residues or stains are on body sherds. Two rim sherds exhibited residues. As body sherds dominated the collection, it is not surprising that they exhibited more residues than rim sherds. This alone does not tell us much about vessel use. The fact that the majority of the residues are on the interior of vessels supports their use as cooking or dry heating of vessel contents. In four examples, organic residues or stains occurred on the exterior of the vessel. This can occur from the fuel used in an open fire adhering to or being absorbed into the exterior or from the vessel contents spilling out onto the exterior where it is charred by heating. At least in the case of Townsend Vessel #7, a grass seed phytolith was identified on the exterior, but no starch grains were present (Yost 2011). In this case, it is uncertain whether the seed phytolith was evidence of cooking or processing seeds, was from the fuel used in heating the vessel, or from the general environment of the settlement.

Ceramic Type	Vessel #	Type of Residue	Vessel Part	Location of Residue
Marcey Creek	2	encrusted organics	body	interior
Dames Quarter	1	encrusted organics	body	interior
Dames Quarter	2	organic stain	body	interior
Dames Quarter	3	light organic stain	body	interior
Selden Island	1	light organic stain	body	interior
Selden Island	3	encrusted organics	body	interior
Selden Island	5	encrusted organics	body	interior
Selden Island	6	encrusted organics	body	interior
Selden Island	7	encrusted organics	body	interior
Wolfe Neck	3	encrusted organics	rim	interior
Coulbourn	3	encrusted organics	body	interior
Killens	1	encrusted organics	body	interior
Townsend	2	organic stain	rim	interior and exterior
Townsend	6	encrusted organics	body	interior
Townsend	7	encrusted organics	body	exterior
Townsend	8	encrusted organics	body	interior
Townsend	9	encrusted organics	body	interior
Townsend	10	encrusted organics	body	interior
Townsend	11	organic stain	body	interior and exterior
Townsend	12	encrusted organics	near base	interior
Townsend	14	encrusted organics	body	interior
Townsend	15	light encrusted organics	near rim	interior

Table 6 – Organic residues on ceramics

The starch grain and phytolith analysis identified a range of wild grass seed, roots or tubers, and possibly maize plant foods in use at the site. The evidence of plant food remains was identified on Marcey Creek, Selden Island, Killens and Townsend ceramics, though different species are represented on some of the ceramic samples. This does not mean that makers of the other ceramics types did not use plant foods. Only the types listed above were submitted for analysis. The one Dames Quarter Cord-Marked vessel (Vessel #3) did not show any starch grains or phytoliths. Bristlegrass (*Setaria*) occurred on the Marcey Creek, Selden Island and some Townsend vessels. Little barley grass (*Hordeum*) occurred on the Marcey Creek, Killens and some Townsend vessels. Indian potato (*Sagittaria*) and sedge root (*Scirpus*) occurred only on the Marcey Creek vessel. Wild rye (*Elymus*) may be present on the Killens vessel. Possible maize starch grains were found on Townsend vessels # 6 and #9. The starch grains from these vessels may also be from bristle grass. It is apparent that a wide range of plant foods were part of the diet and that ceramic vessels played a role in

processing and/or cooking those plants. This data can be used along with other data from the site to infer site seasonality. However, all the plant species identified could be dried and stored and organic residues on vessels can remain for many seasons if not removed by cleaning.

Four sherds were submitted for protein residue analysis (Selden Island vessel #1, Townsend vessel #9, Marcey Creek vessel #2 and Dames Quarter vessel # 3). All results were negative for protein.

Many of the ceramic vessels from the Gary Farm site were used for cooking or heating. The result is not surprising as the samples chosen for starch grain and phytolith analysis exhibited encrusted organic residues. It is likely that other vessels were used for collecting, serving and storage of dry and liquid materials.

Settlement

How did the American Indian occupants use the site landscape and how is that expressed?

There are several trends in site use exhibited by the ceramic type distributions at the Gray Farm (7K-F-11 and 7K-F-169). In order to determine the distribution of ceramic types and associated cultural components, two approaches are used. First, the location of types in cultural and non-cultural features was mapped. For a feature to represent a specific component, a ceramic type need only be present or absent, the quantity of the type by either count or weight is not considered. The rationale for also mapping non-cultural features, which are largely natural disturbances or heavily disturbed cultural features, is that the ceramics they contain likely originated from the general area of the disturbance. The site did not show evidence of large-scale horizontal relocation of soils. That is, the ceramics are likely at or near the location where they were lost, broken or deposited. Likewise, ceramics in cultural features are either primary deposits (i.e. intentional disposal) or secondary deposits of sherds re-deposited from soils near the feature.

The second method is to create contour maps of each type based on the total weight (grams) of each type. For some types, the frequency was too low to create a meaningful contour map. In those cases, the location of individual sherds, or clusters of sherds, is discussed. This analysis favors the use of ceramic type weights over counts for two reasons. Counts data reveals the degree of breakage into individual, identifiable sherds. For older the ceramic types the time for mechanical breakage is greater. Older types may be over-represented by count and recent types under-represented. If this occurs, there is a false appearance of more early ceramics than later ceramics. Additionally, the Gray Farm site contained non-cultural features (i.e. tree falls, animal burrows, etc.) and evidence of more recent cultural activity (i.e. land clearing, cultivation and other historic period activity). This type of activity increases the probability of mechanical breakage of ceramics in those areas thereby skewing ceramic count distributions toward those disturbances. Ceramic type weight would not be as affected. The only way that weight would be affected is in cases where breakage and subsequent weathering was so severe that sherds could not be identified by type. The degree of

breakage is also determined by vessel hardness and use, but for the purposes of the distribution study these factors are held constant. Ceramic weight by type characterizes the distribution better than count. The surface distribution contour maps are based on the total weight of the type for all contexts for any given provenience.

The use of the site landscape by American Indian people is presented by ceramic type as a proxy for discrete component occupations. Where there are known temporal differences within a type, these differences are described. The ceramic-using occupations are presented in chronological order from earliest to most recent.

Marcey Creek

Marcey Creek ceramics occur in two, isolated features, one at site 7K-F-11 (Feature 180) and one in a non-cultural feature (Test Unit 38) at site 7K-F-169 (Figures 2 and 3). The frequency of Marcey Creek ceramics in plow zone and surface contexts is too low to produce a meaningful contour map. However, the location of individual sherds indicates a very light and scattered distribution. Only one sherd occurred in the surface collection or test units (AD Marble Phase II, Block B-17, N660/E519 Test Unit) and its identification is not certain due to the condition of the sherd. This area is north of the Phase III data recovery. The clearest association is in two widely separated non-cultural features, a pattern that suggests a limited use of the type perhaps for specialized functions. Its use for domestic food processing and serving or storage should produce a more widely spread distribution both in feature and plow zone contexts.

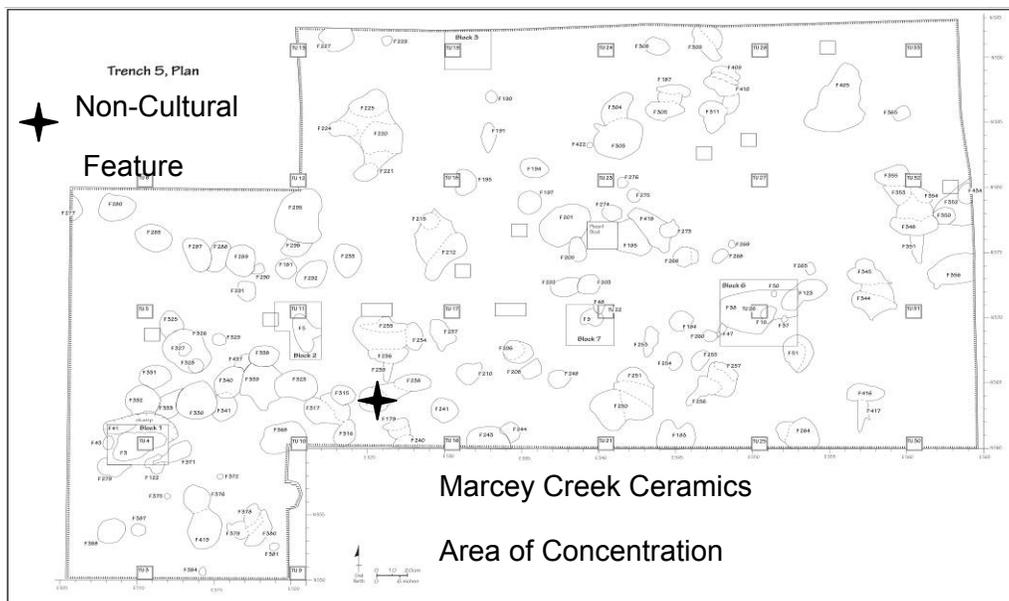


Figure 2

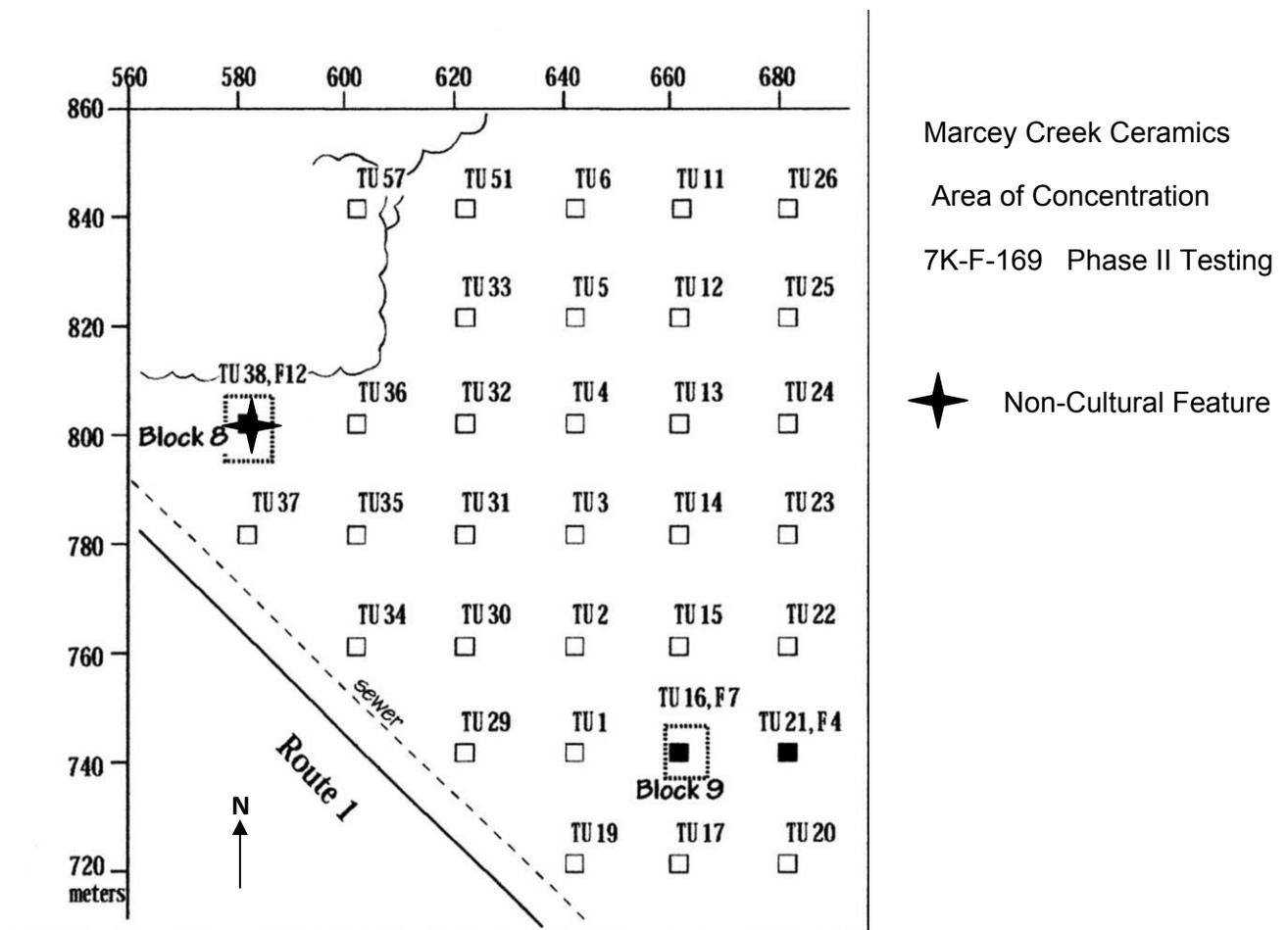


Figure 3

Dames Quarter Cord Marked

Dames Quarter Cord-Marked ceramics occur in three non-cultural features (Features 12, 100, and 166) and as isolated finds in other non-cultural features (Figures 4, 5, and 6). Adjacent features 12 and 166 define Cluster 1, while the second largest concentration, Cluster 2, is from Feature 100. The type occurs in plow zone contexts in small quantities in five other areas. Cluster 3 sherds are solely in the plow zone while isolated sherds occur to the southwest of Cluster 1 and in Test Unit 21 at site 7K-F-169. The focus of occupation is in the area of Clusters 1, 2, and 3. This area may represent a single occupation or re-occupation of the same general area during the period when this type was in use. The widely spread distribution of the type suggests use in domestic functions. The fact that none of the sherds were in clearly cultural features may indicate an occupation of relatively short duration. The sherds in non-cultural features were likely in surface contexts, like Cluster 3, and were buried by the filling of the non-cultural features.

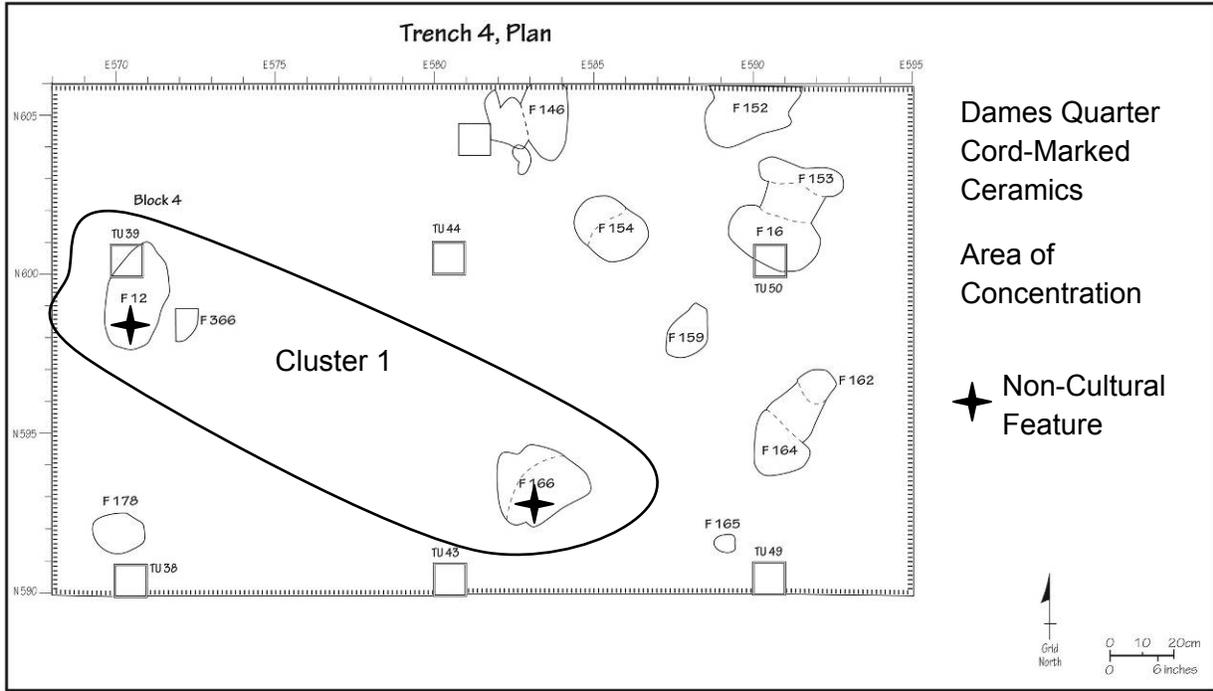


Figure 4

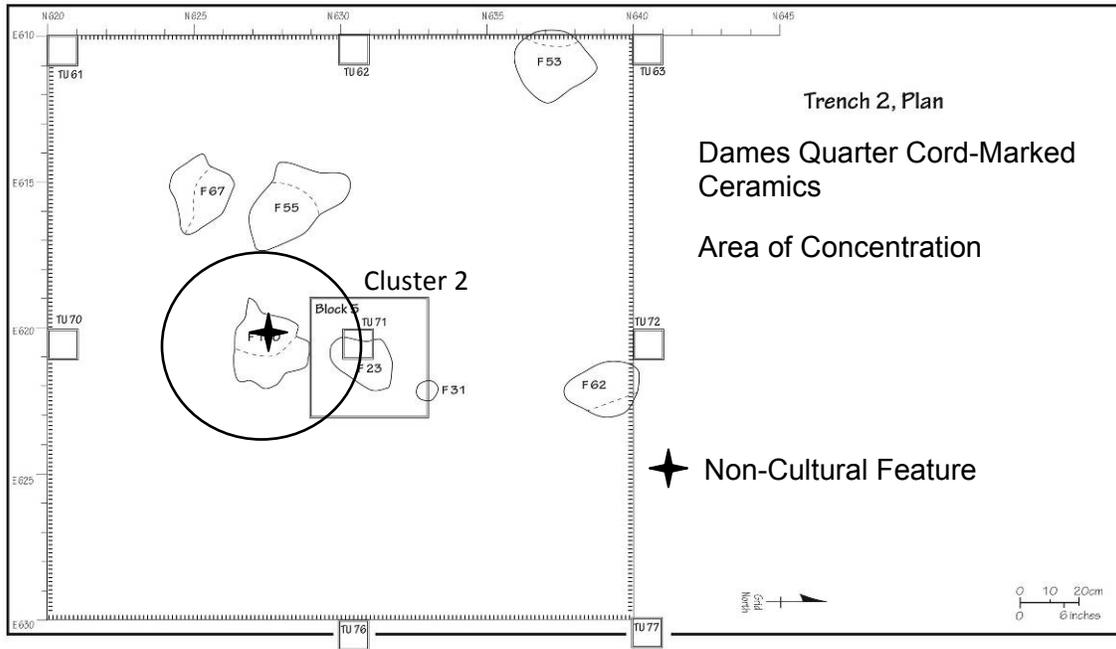


Figure 5

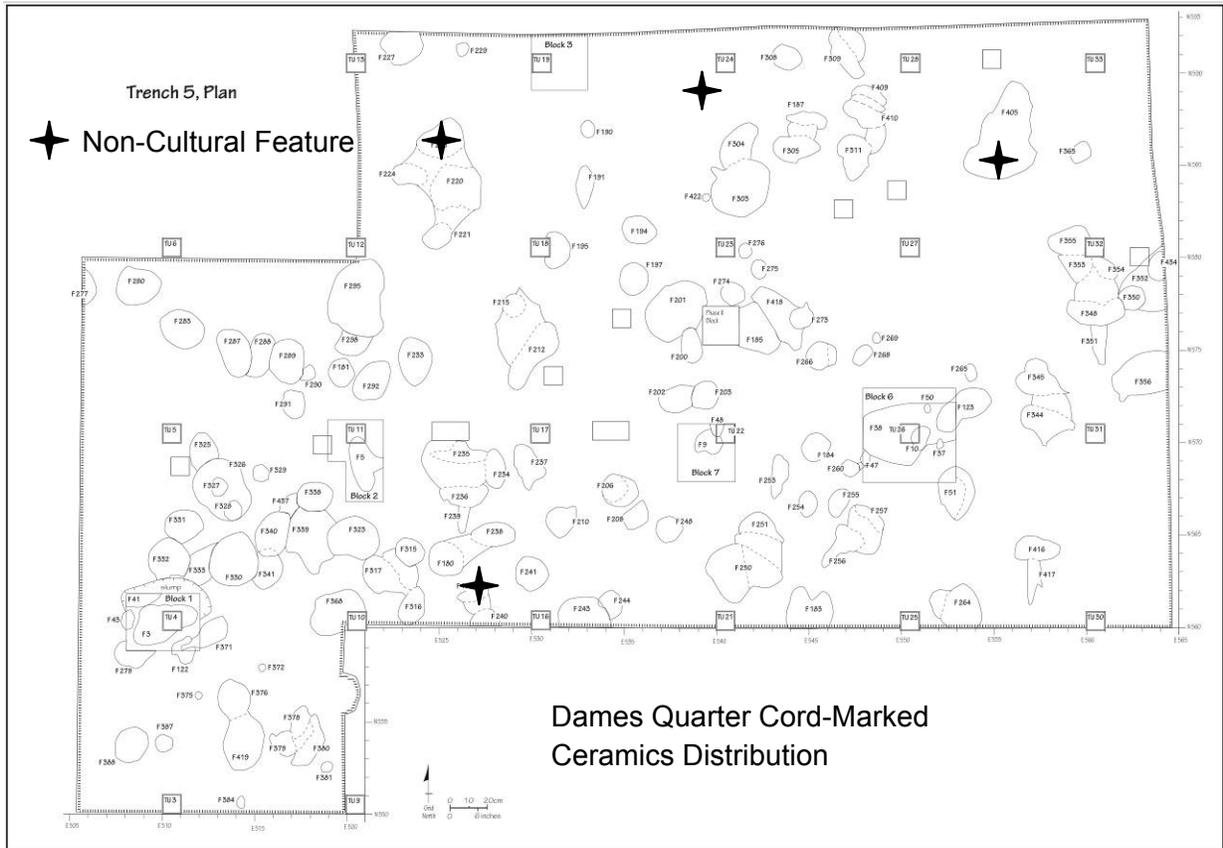


Figure 6

The contour distribution of Dames Quarter ceramics is illustrated on Figure 7. The contour map places the clusters and isolated finds into the larger site context.

Gray Farm (Site 7K-F-11)
Dames Quarter Cord Marked Ceramics, by weight (gr) from all contexts

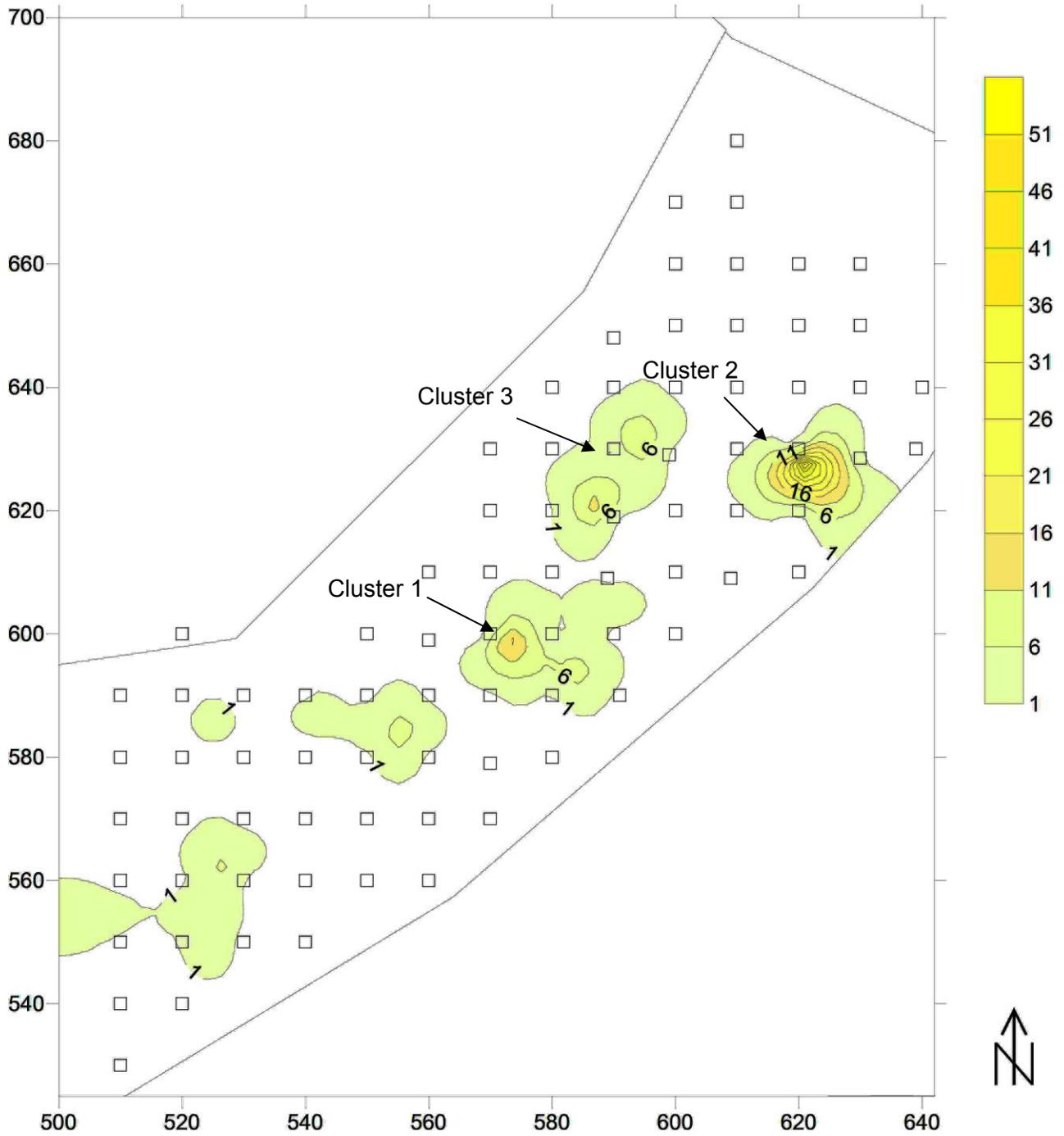


Figure 7

Selden Island

Selden Island ceramics occur in five cultural features (Features 185, 190, 195, 197 and 308) defined as Cluster 1. The type also occurs in one isolated feature (Feature 366) which defines Cluster 2 thirty meters east of Cluster 1 (Figures 8, 9 and 10). Cluster 1 is approximately forty meters west of the Dames Quarter Cord-Marked clusters and clearly represents a different location of use on the landscape. Cluster 1 consists of sherds from cultural features as well as sherds from plow zone contexts, indicating a more intense and, perhaps, more permanent occupation than that exhibited by the Dames Quarter Cord Marked occupation. The multiple cultural features in a tightly defined area may represent two contemporary household clusters or re-occupation of the same area by the same population over several years.

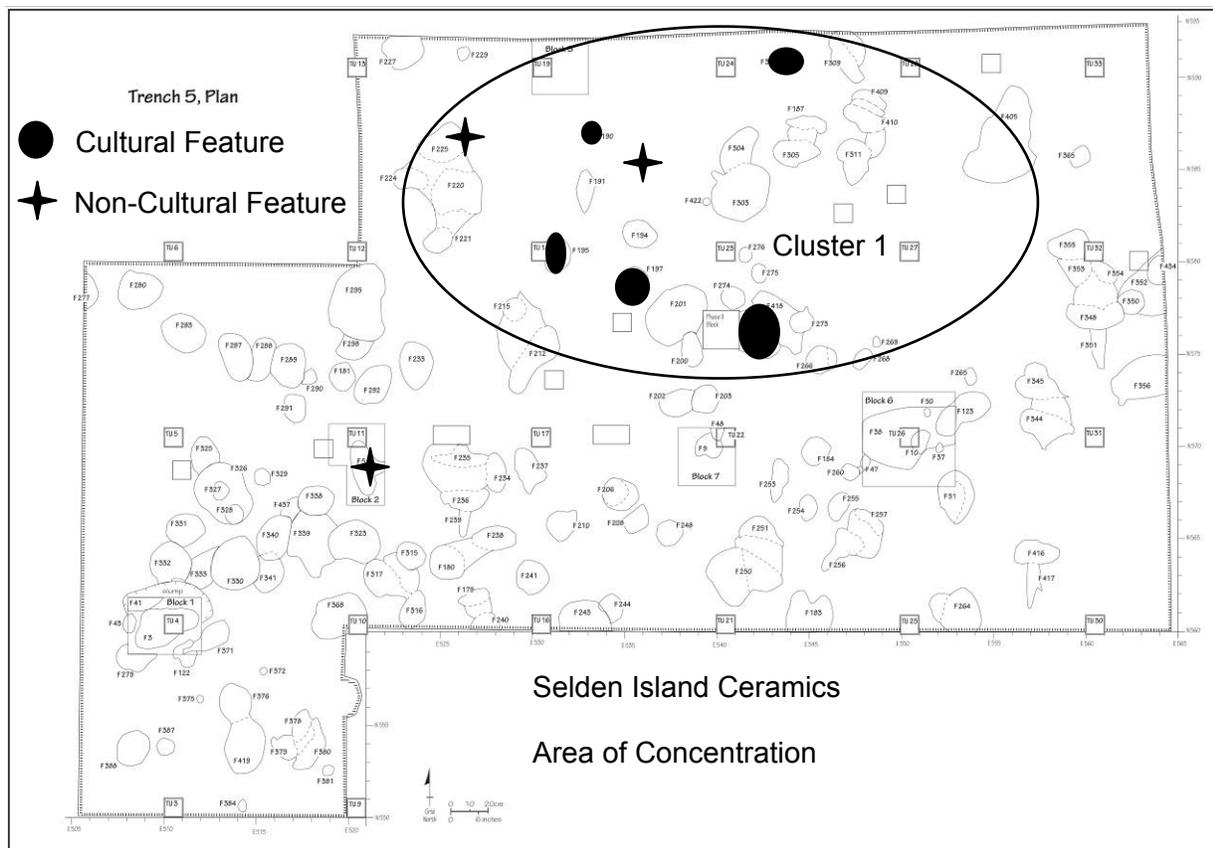


Figure 8

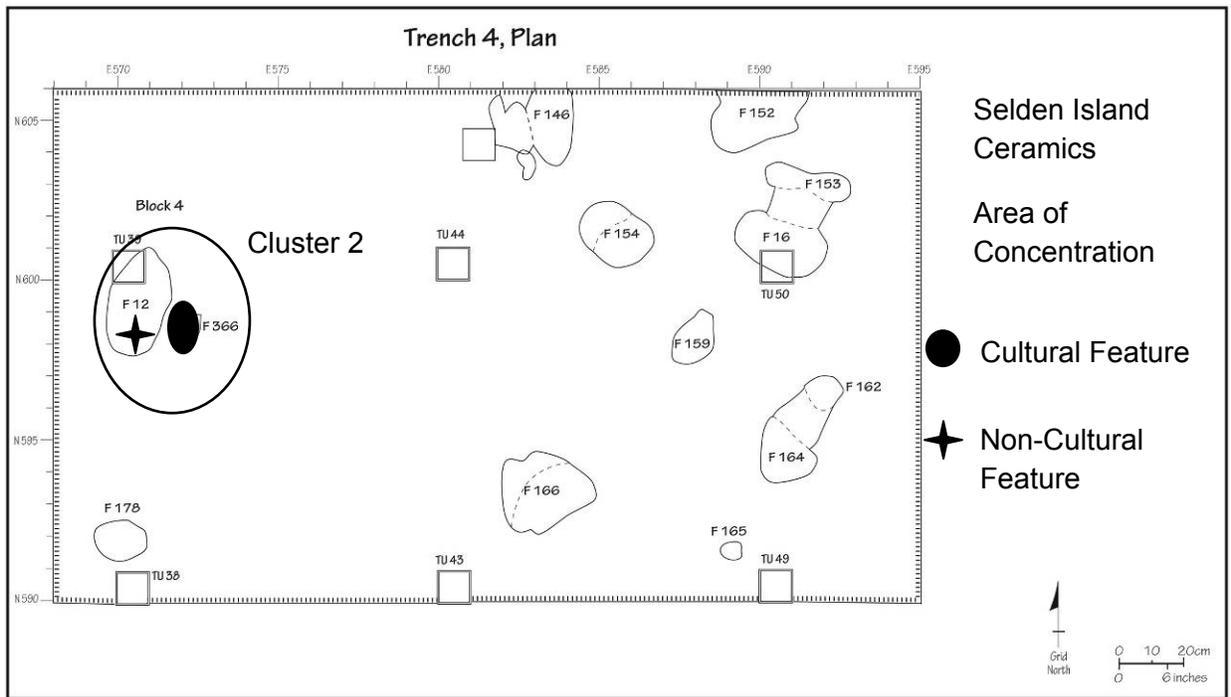


Figure 9

Gray Farm (Site 7K-F-11)
Selden Island Ceramics, by weight (gr) from all contexts

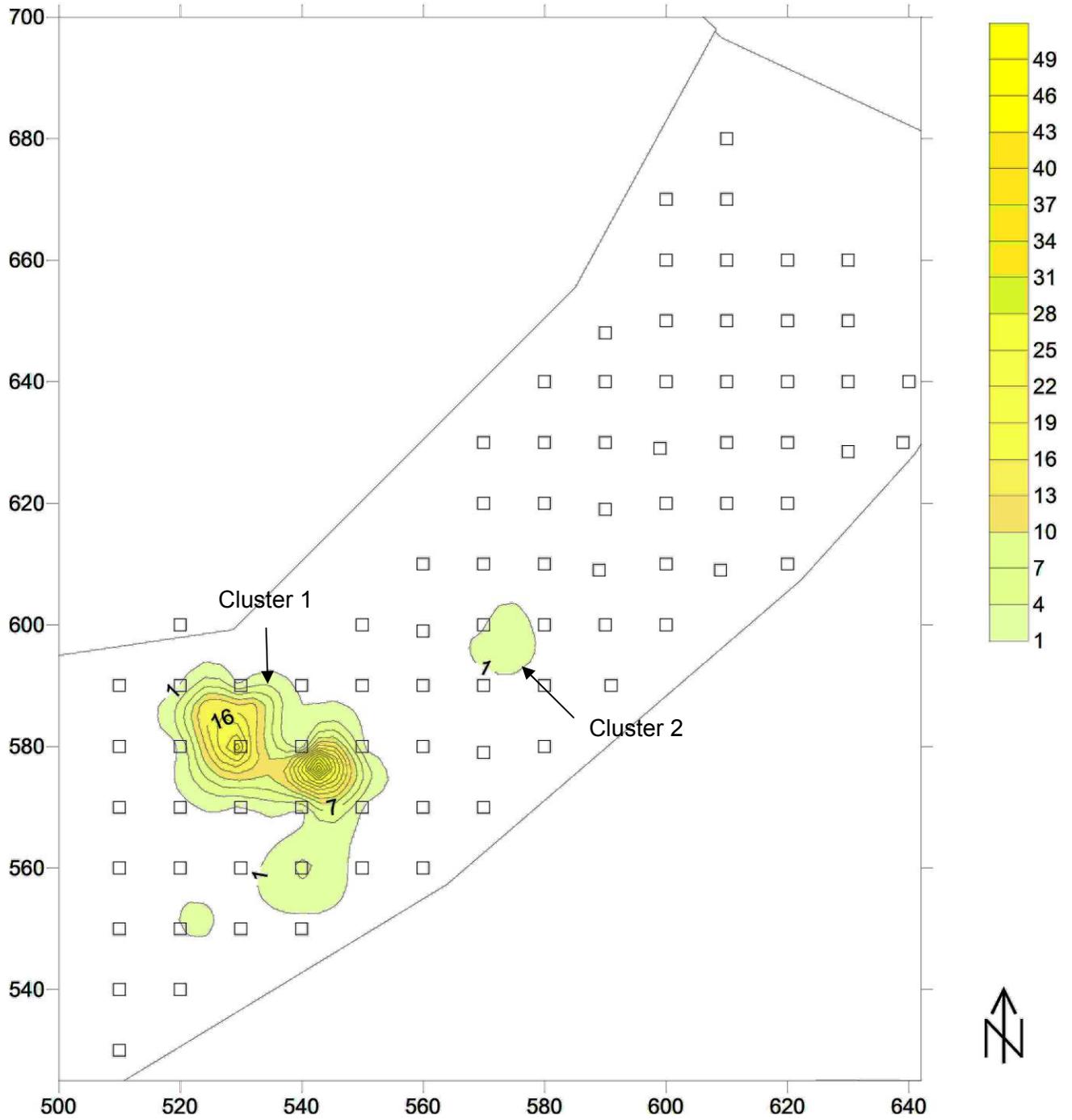


Figure 10

Wolfe Neck

Wolfe Neck ceramics occur in two cultural features (Features 195 and 197) that define Cluster 1 and in two non-cultural features defined as Cluster 2 (Features 12 and 166) approximately fifty meters east of Cluster 1 (Figures 11, 12 and 13). The plow zone occurrence of Wolfe Neck ceramics is in the areas of both clusters with only isolated sherds beyond the feature clusters. It is unclear whether Cluster 1, which contains two cultural features, is a single occupation or two consecutive occupations. It is also unclear whether Cluster 2 represents an occupation area contemporary with Cluster 1 or a third re-occupation. The fact that the ceramics in Cluster 2 are either from the plow zone or non-cultural features suggests a light occupation of limited duration there or an activity that did not require the excavation of sub-surface features.

It is interesting that both Wolfe Neck clusters mirror the cluster distribution of Selden Island ceramics. Selden Island ceramics were also recovered from cultural features 195 and 197. There are two possible explanations. It is conceivable the Wolfe Neck and Selden Island ceramics were briefly contemporary. While there is some logic to this argument, Wolfe Neck ceramics generally follow Selden Island ceramics in time. However, the 2 sigma radiocarbon ages from the Gray Farm for Selden Island and Wolfe Neck do not overlap and are statistically different. It is more likely that the earlier Selden Island ceramics were incorporated into the fill of Features 195 and 197 when the features were filled during the Wolfe Neck producing occupation. This explanation is supported by the fact that the charcoal radiocarbon date for Feature 197 has a calibrated 2 sigma range of cal BC 358 to cal BC 107, while the combined radiocarbon dates for Selden Island ceramics at the site range from cal BC 1195 to cal BC 808. Apparently, both the Selden Island and Wolfe Neck occupations used the same area of the site. This could occur by chance or by choice where certain landscape characteristics (e.g. topography, access to water, vegetation patterns) were favored in that location during the first millennium BC.

Gray Farm (Site 7K-F-11)
Wolfe Neck Ceramics, by weight (gr) from all contexts

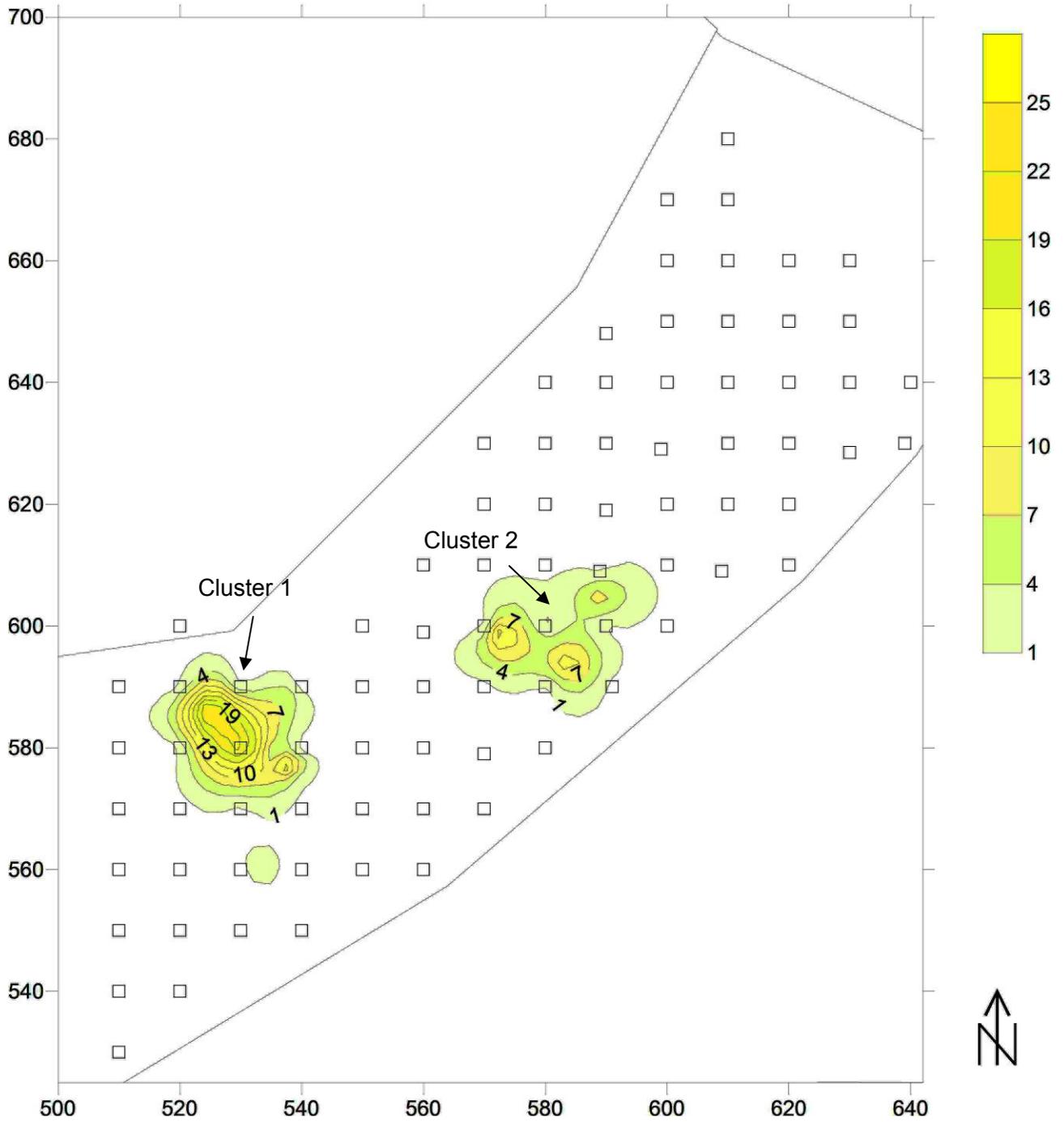


Figure 13

Coulbourn

Coulbourn ceramics were relatively rare at the site with only fifteen sherds identified. Occupation in the area investigated was very light and scattered during this period. Coulbourn ceramics occur in one cultural feature (Feature 195; one sherd) and one non-cultural feature (Feature 3; five sherds). Cluster 1 is represented by three sherds. The sherd in Feature 195 is likely intrusive into the feature. Cluster 1 may represent part of a dropped vessel lost along a trail to and from a larger occupation beyond the study area. Likewise, the five sherds representing two vessels in non-cultural Feature 3 (Cluster 2) is an isolated find perhaps representing dropped vessels at a processing area or canoe landing in the southwest corner of the area of investigation closest to Spring Creek (Figure 14). The frequency of Coulbourn ceramics was too low to produce a meaningful contour map of the distribution.

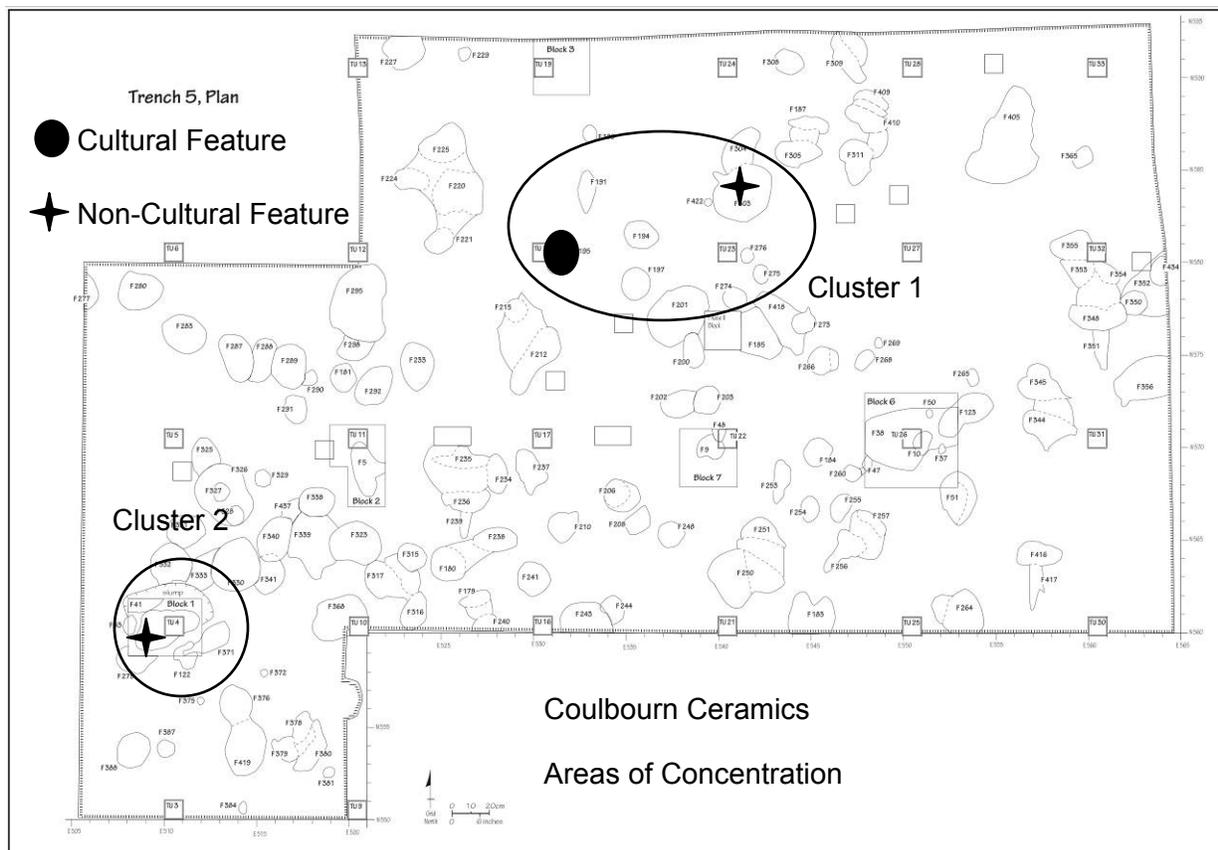


Figure 14

Accokeek?

Only a single sherd of Accokeek ceramics was recovered from the site and its identification is uncertain. The one body sherd is cord-marked with a fine crushed quartz temper. It was recovered from the surface during the AD Marble Phase II survey at N620/E590 in an area where later investigations identified minor concentrations of Townsend and Killens ceramics. It is equally likely that this sherd is Minguannan, as the defining attributes are consistent with the type and its locus of recovery is in the area of

contemporary types. Due to the low frequency and uncertainty of identification, there are no distribution maps of Accokeek ceramics.

Mockley

Only four Mockley sherds were recovered and they are widely scattered with over thirty meters separating each sherd. Three sherds were from surface or plow zone contexts while one sherd was recovered from non-cultural Feature 3. The isolated nature of the sherds indicates a very light use of the study area by Mockley producing people and no meaningful pattern of landscape use can be determined. Additional comparative research at other sites in the watershed is necessary to place this Mockley pattern in a larger context. Due to the low frequency of the type, there are no distribution maps.

Hell Island

Hell Island ceramics were recovered from one non-cultural features (Features 30) and one cultural feature (Feature 295). These two occurrences define Hell Island Cluster 1 (Figure 15). The presence of one, small cultural feature suggests as single, short-term occupation. Cluster 2 consists of Hell Island ceramics from plow zone contexts with no associated features of the period. Cluster 2 is located nearly 100 meters northeast of Cluster 1 (Figure 16). Not unlike the Mockley producing component, the Hell Island component exhibits a very light use of the landscape during this period. The radiocarbon date for Hell Island ceramics was from Feature 30 in Cluster 1. Comparative research at other sites in the watershed is necessary to place this Hell Island pattern in a larger context.

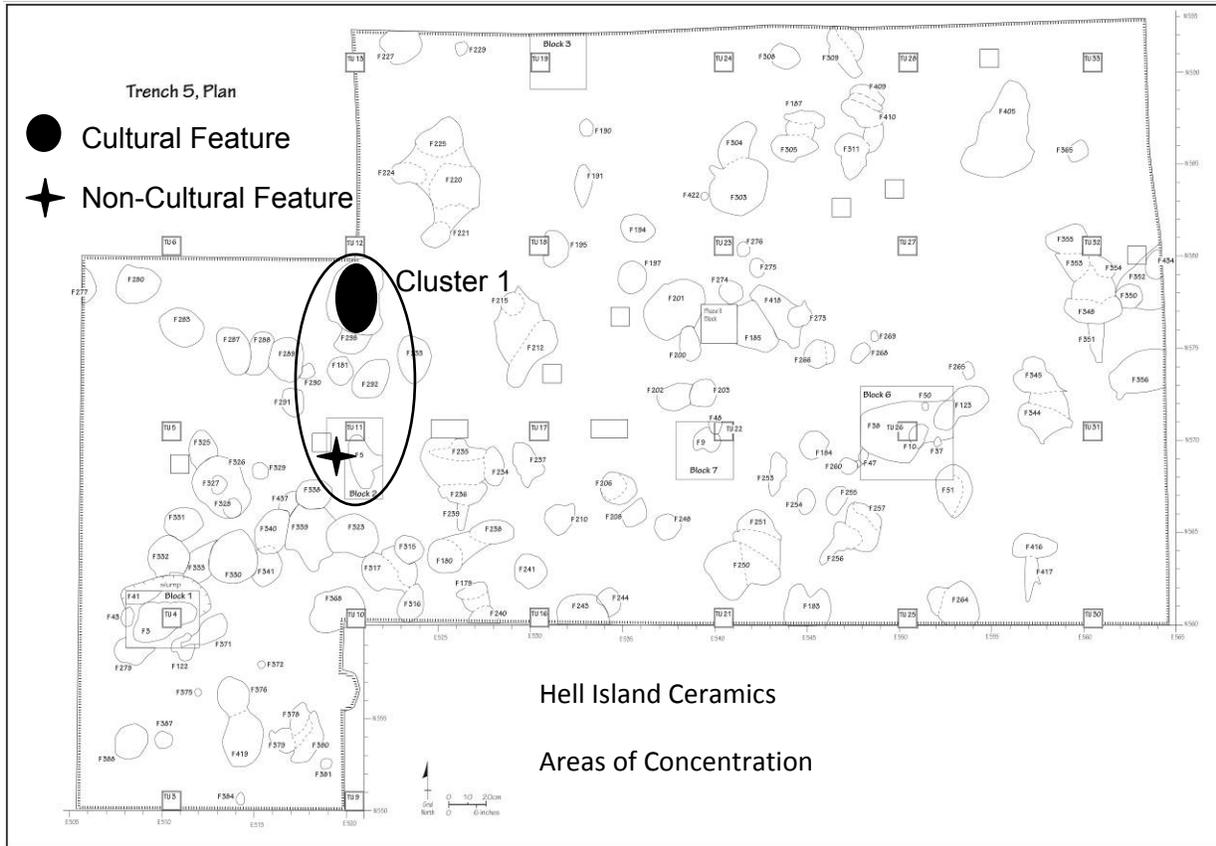


Figure 15

Gray Farm (Site 7K-F-11)
Hell Island Ceramics, by weight (gr) from all contexts

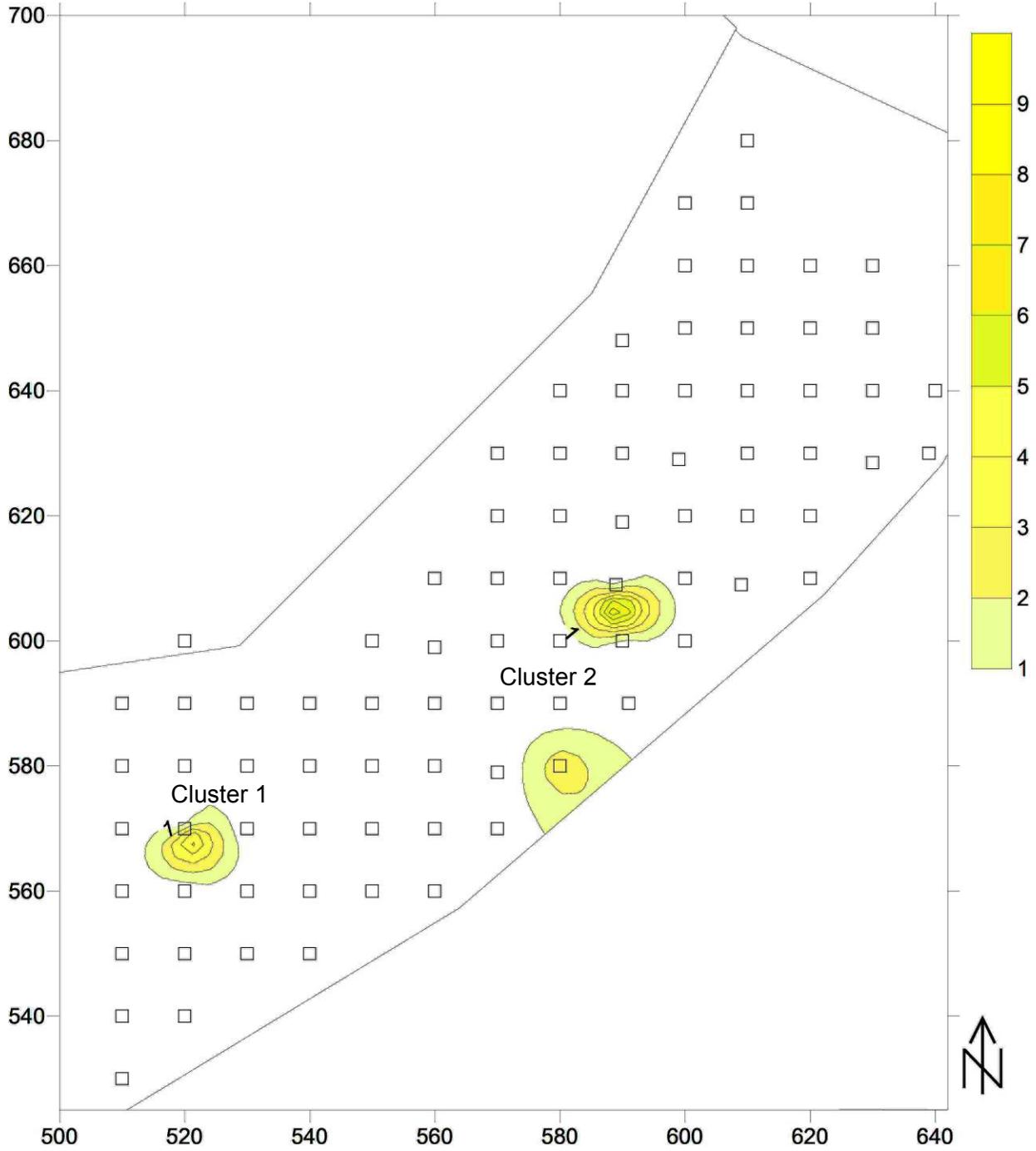


Figure 16

Townsend

Townsend ceramics are concentrated in two clusters of cultural features. Cluster 1, centered at N570/E523, consists of two cultural features (Features 233 and 338) and two non-cultural features (Features 5 and 236). Cluster 2, centered at N570/E550, consists of four cultural features (Features 9, 10, 253 and 273) and two non-cultural features containing the type (Features 208 and 256). A third general area, where the Townsend ceramics were recovered in non-cultural features (e.g. Feature 405), is located northeast of Cluster 2. This area likely represents locations where Townsend ceramics were on the surface and later incorporated into non-cultural feature fill. The clusters are illustrated on Figure 17.

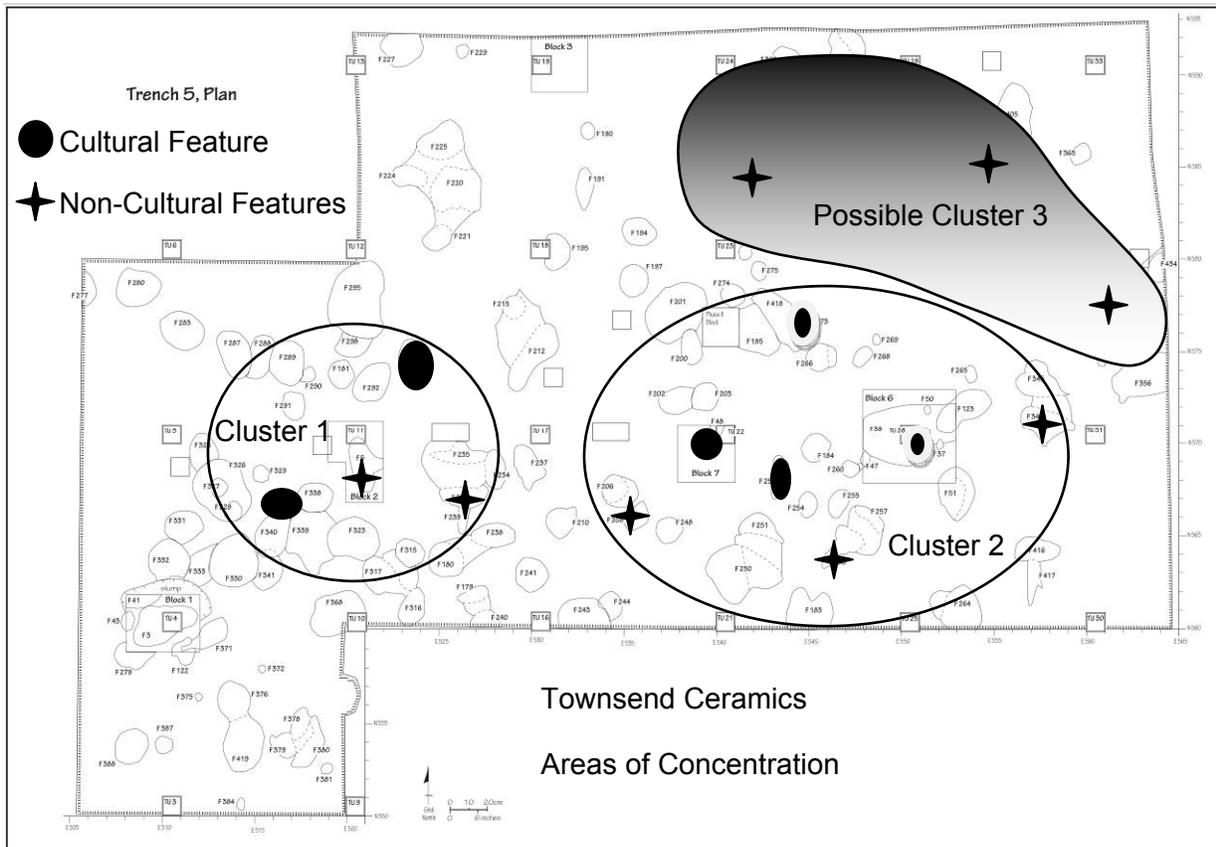


Figure 17

Cluster 1 and 2 appear to represent two different Townsend occupations. Cluster 1 contained a Townsend Series type known as Rappahannock Fabric Impressed (Feature 338) and one rim with a direct cord impressed decorative motif (Feature 236). A Killens direct cord impressed motif rim sherd was also recovered from Feature 236. Cluster 1 contained the only decorated Townsend or Killens rim sherds recovered from the site with the exception of one rim sherd recovered south of the area of data recovery during the Phase II investigations by AD Marble. The radiocarbon date for Feature 236 (Beta-309420) in Cluster 1 has a calibrated 2 sigma calendar date range of cal AD 1153

to cal AD 1261. While this date is somewhat earlier than expected for the direct cord decorative technique, the date is much earlier than the date for the Townsend Plain rims in Feature 10 (Griffith 1980:37). It is possible that some “old” wood charcoal was incorporated in the sample submitted from non-cultural Feature 236. Cluster 2 contained only the Townsend Series types Townsend Plain and Rappahannock Fabric Impressed. Notably, all of the rim sherds were plain with no sign of fabric impression or decorative elements. The Phase II investigations by AD Marble in the area of Cluster 2 recovered four Townsend Plain sherds, one Rappahannock Impressed body sherd and one pebble jasper triangular point. The radiocarbon dates for Feature 10 in Cluster 2 have a calibrated 2 sigma calendar date range of cal AD 1477 to cal AD 1642 (Beta-307300) and cal AD 1457 to cal AD 1617 (Beta-307301).

Cluster 1 may be a small, early 13th century AD occupation while Cluster 2 is a mid-16th century AD occupation. Cluster 1 is roughly in the area of the Hell Island Cluster 1, while Townsend/Killens Cluster 2 is located away from the clusters of earlier ceramics. In the area northeast of Cluster 2, all of the Townsend sherds were either Townsend Plain or Rappahannock Fabric Impressed, a pattern consistent with Cluster 2. Non-cultural Feature 405, which contained the majority of the Townsend sherds in this area, may represent a badly disturbed cultural feature which otherwise would have been incorporated into Cluster 2 or the center of a possible Cluster 3. Townsend and Killens occupation represents a shift in landscape use and a more intense occupation than earlier components.

The surface contour distribution generally covers both areas, exhibiting the densest concentration near Feature 10 in Cluster 2 where the majority of Townsend and Killens ceramics were recovered (Figure 18). The contour map does not show a strong signature for Cluster 1. The Townsend and Killens sherds in Cluster 1 were small, while those from Feature 10 in Cluster 2 were much larger. As the contour map is based on sherd weight, the contour interval for Figure 18 is skewed towards Cluster 2. There is no doubt that Cluster 1 exists and the radiocarbon date from Feature 236 is associated with that occupation.

Gray Farm (Site 7K-F-11)
Townsend Ceramics, by weight (gr) from all contexts

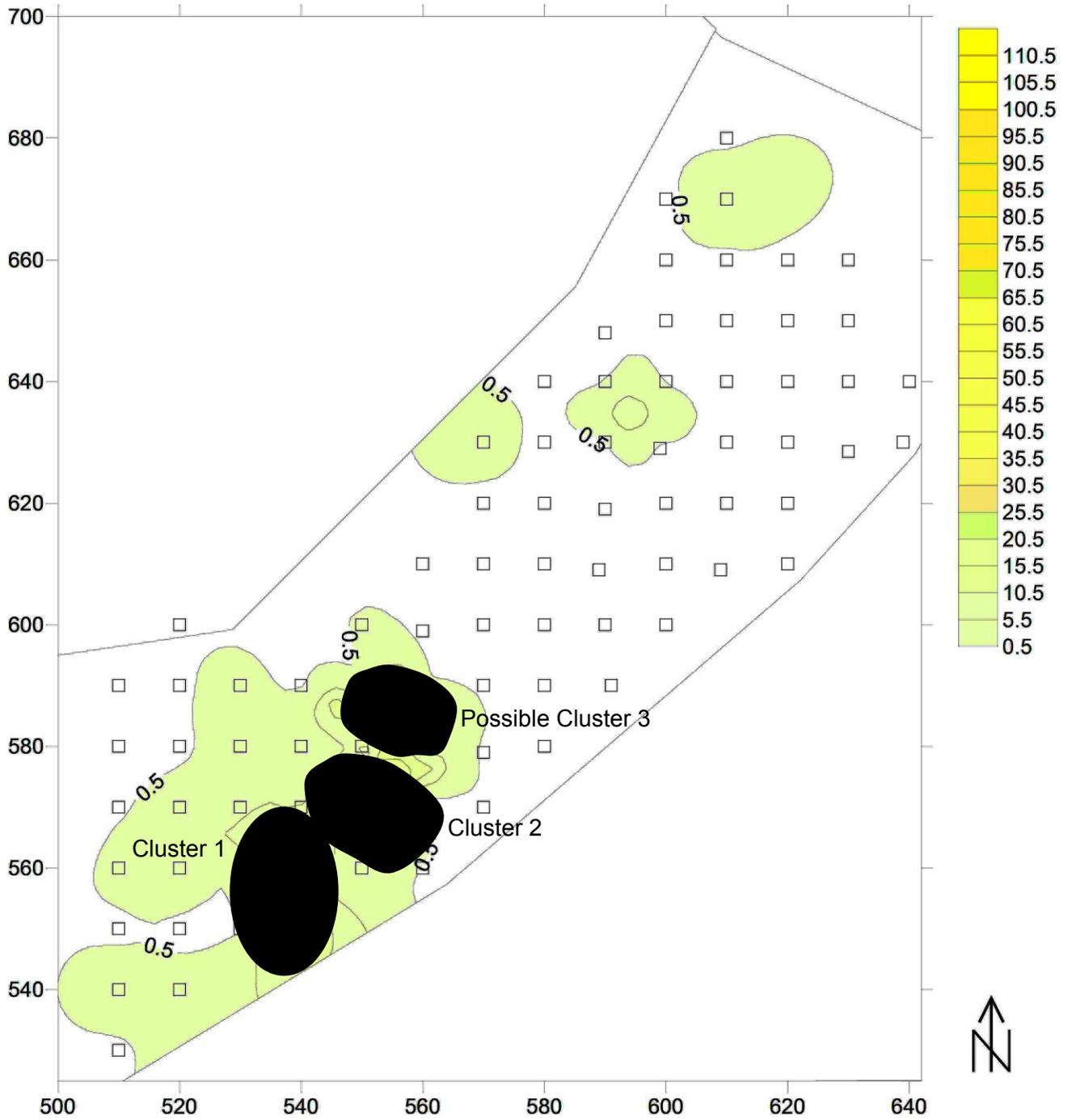


Figure 18

Killens

The Townsend and Killens ceramic distributions are almost identical, which is not surprising as the types are contemporary in this area. The largest concentration of Killens ceramics (Killens Cluster 2) is in Feature 10 within Townsend Cluster 2. Killens is also present in Townsend Cluster 1 and is defined as Killens Cluster 1. A third area of Killens ceramics is centered at N640/E590 and appears to represent the loss of a single vessel and not a distinct occupation. There are also a few Townsend sherds in the same area. As Killens and Townsend ceramics are not only contemporary and were likely manufactured and used by the same people, the analysis of landscape use is the same as that for Townsend ceramics.

Minguannan

The occurrence of Minguannan ceramics is very isolated. The type occurs primarily in one plow zone context east of State Route 1 (7K-F-169) near the head of a small, unnamed tributary or springhead and centered at N790/E580. It should be stated that it is sometimes difficult to distinguish Minguannan ceramics from very thin Hell Island ceramics, particularly with weathered sherds. It is possible these sherds are from a thin-walled Hell Island vessel. As the site contains a Hell Island component, it is possible these sherds represent that occupation. In any event, this ceramic cluster is well away from any other cluster of ceramics and may represent a vessel dropped while collecting water at the springhead.

Landscape Use Summary

The occurrence and distribution of Marcey Creek ceramics suggests a specialized, non-domestic use for these vessels. Ceramic containers used in household contexts would be widely scattered in both feature and plow zone clusters associated with household activities. This is exactly the pattern observed for all other ceramics types of comparable frequency at the site except for Marcey Creek. This does not mean that there was a low intensity of site use during the time Marcey Creek ceramics were used, but that the ceramics were relatively rare and used only for specialized purposes. The use of Marcey Creek ceramics for specialized purposes is consistent with research in the region, though the rationale from the Gray Farm site is a different argument (Klein 1997:147).

There is a slight tendency for Dames Quarter, Selden Island and Wolfe Neck producing components to be concentrated on the north side of area investigated, between N580 to North 620. The Hell Island, Townsend and Killens components are slightly further south between N 570 to North 600. The southern zone of the site containing the more recent ceramics is slightly closer to the present interface between tidal marsh bordering Spring Creek and the Holocene uplands. The difference in distribution is so slight in the larger context of the landform that the pattern is likely the result of chance in the selection of household settlement. There are no marked physical differences between the two areas today.

Regional Context

What is the nature of American Indian cultural influences beyond the local area that effected local ceramic production and use?

The Gray Farm site is located on the Middle Atlantic Coastal Plain approximately fifty miles southeast of the Fall Line and roughly centered between the southern New England coastal areas of Long Island and the central and northern Coastal Plain of North Carolina. Within this area, ceramic technological traditions from the north, west, south and perhaps east influenced local potting traditions. In addition, local technological traditions indigenous to the Delmarva Coastal Plain developed. The analysis that follows is a view from Delaware of cultural developments and influences in the region.

The discussion is organized by the generally accepted temporal divisions of Early, Middle and Late Woodland. These divisions are arbitrary and the divisions into periods can be made in a number of places depending on the research questions such a classification is intended to address. Gray Farm ceramic research tends to argue for the division as outlined below. For example, Early Woodland Selden Island and Wolfe Neck ceramics appear at the same locations at the site suggesting a similar settlement pattern, while Middle Woodland Coulbourn, Mockley and Hell Island have significantly different distributions. Still, an argument based on technological tradition would place Wolfe Neck, Coulbourn and Mockley together as the primary difference between the three series is type of temper; they share the same repertoire of surface treatments. For the present discussion, what is important is the nature of each ceramic series, it's regional distribution and what that tells us about cultural development and external influences on local ceramic traditions.

Michael Klein offers a systematic method of exploring ceramic style and social implications for the Middle Atlantic (Klein 2003:19). Certain attributes on ceramics are ideally suited to explore cultural influences. Isochrestic style represents those attributes acquired by rote learning and imitation that are employed automatically in the construction of a vessel (Klein 2003:23). Decisions by potters such as raw clay selection, choice of temper, processing of temper, construction technique (i.e. slab, modelled or coiled) and vessel form, produce attributes archaeologist's record. Such attributes are invaluable for the study of learning networks of potters and define a technological tradition through time and space.

Symbolic style transmits information about personal or social identity and these choices of symbols fluctuate through time and space as social relations shift (Klein 2003:23). The choice of symbols is expressed by the attributes of decorative technique (e.g. incised, cord-marked, stamped, or plain), decorative motif (e.g. zoned incised, complex incised, simple incised, simple direct cord-marked, simples pseudo cord-marked, complex incised and corded, plain, etc.), the vessel surface treatment (e.g. cord-marked, net-impressed, fabric-impressed or smooth) and, in some cases, vessel form.

Iconic style is recognized by a redundancy of attributes with clear and purposeful messages aimed at a specific target population (Klein 2003:24). Objects, including ceramic vessel decorations or forms, representing core symbols should be expressed through varied media and occur in a wide range of sacred and mundane contexts expressing a range of local behaviors and ideologies (Klein 2003:24). Iconic style is difficult to recognize with a small data set from one site. Comparative research is necessary to identify whether a style or motif is sufficiently redundant and unique to hold special meaning to the people for whom it was created. Iconic style is embedded in symbolic style as it expresses both social identity and a specific core meaning. I consider iconic style a special case of symbolic style. For the purposes of this research question, I will focus on isochrestic style and the ceramic technological traditions it reveals and symbolic style to address the question of social implications of the local American Indian ceramic traditions.

Early Woodland ceramics in Delaware that occur at the Gray Farm site are Marcey Creek, Dames Quarter Cord-Marked, Selden Island and Wolfe Neck. Marcey Creek ceramics are distributed from the upper Delaware Valley in New Jersey, southwest to include most of eastern Pennsylvania, Maryland, all of Delaware, Virginia from the Shenandoah Valley east to the coast and the northern Coastal Plain of North Carolina (cf. Herbert 2009; Egloff and Potter 1982; Dent 1995; Custer 1984; Custer 1996; Egloff 1991 and Stewart 1998). The general regional distribution of Marcey Creek ceramics is illustrated on Figure 19. This soapstone-tempered ware on the Coastal Plain is a clear indication of communication with the cultures of the Piedmont where soapstone occurs in primary formations (Herbert 2009:151). The range of radiocarbon dates in Delaware show that Marcey Creek ceramics overlap in time with the production of steatite vessels. Though widespread in Delaware, Marcey Creek ceramics occur in isolated contexts, a pattern consistent with their use in ritualized contexts (cf. Klein 1997:147). There is evidence that Marcey Creek ceramics, like soapstone vessels, were traded into Delaware, indicating long-distance communication networks that extended from coastal cultures to cultures to the north and west beyond the Fall Line (Petraglia et.al. 2002:14-57).

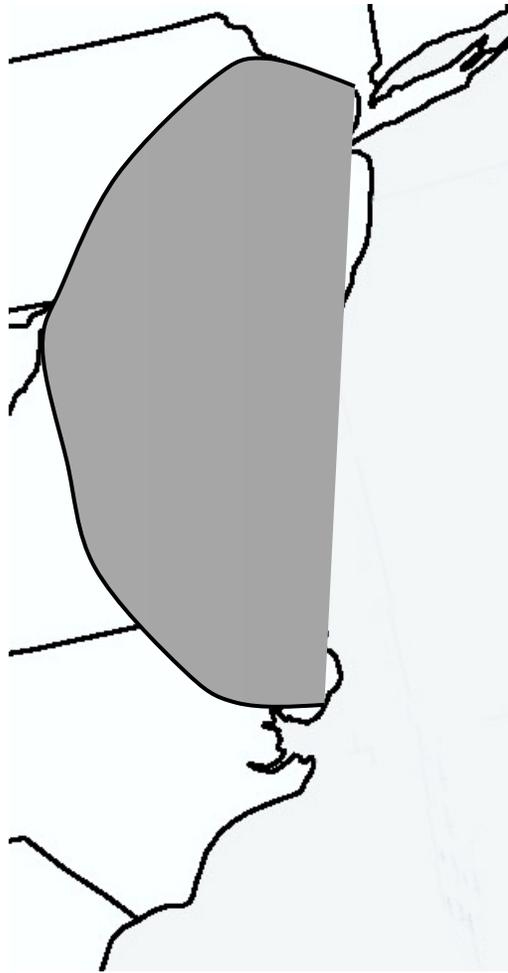


Figure 19 – Marcey Creek distribution in the Middle Atlantic

Contemporary with the later end of Marcey Creek ceramics in Delaware are Dames Quarter ceramics (Bowen and Crowell 2003:6-35). Dames Quarter represents a different technological tradition on Delaware's Coastal Plain. While Marcey Creek is sub-rectangular in form and frequently slab constructed, Dames Quarter ceramics also exhibit coil construction, cord-marked exteriors and a conoidal form. All of the Dames Quarter Cord Marked ceramics from the Gray Farm site exhibit final "S" twist cord marking. Dames Quarter Cord-Marked ceramics are the earliest coiled, conoidal vessels in Delaware, a forming technique that continues throughout the remainder of the American Indian ceramic series up to the period of European exploration and settlement. Dames Quarter is distributed in Delaware and adjacent Eastern Shore of Maryland (Figure 20). It is the earliest example in Delaware of developing sub-regional ceramic traditions.



Figure 20 – Dames Quarter distribution in the Middle Atlantic

Selden Island ceramics in the Middle Atlantic occur in a similar, though more restricted area than Marcey Creek ceramics (Figure 21). These coiled, cord-marked, steatite tempered ceramics are similar to Dames Quarter Cord-Marked, except for temper. All the Selden Island ceramics from the Gray Farm site exhibit final “S” twist cord marking. Delaware radiocarbon dates suggest that Selden Island follows Dames Quarter but overlaps in time with the more recent end of Marcey Creek ceramics. This pattern suggests that Marcey Creek continued in use as a specialized vessel form and technological tradition contemporary with the coiled, cord-marked Dames Quarter and Selden Island traditions used for domestic purposes until about cal BC 790.

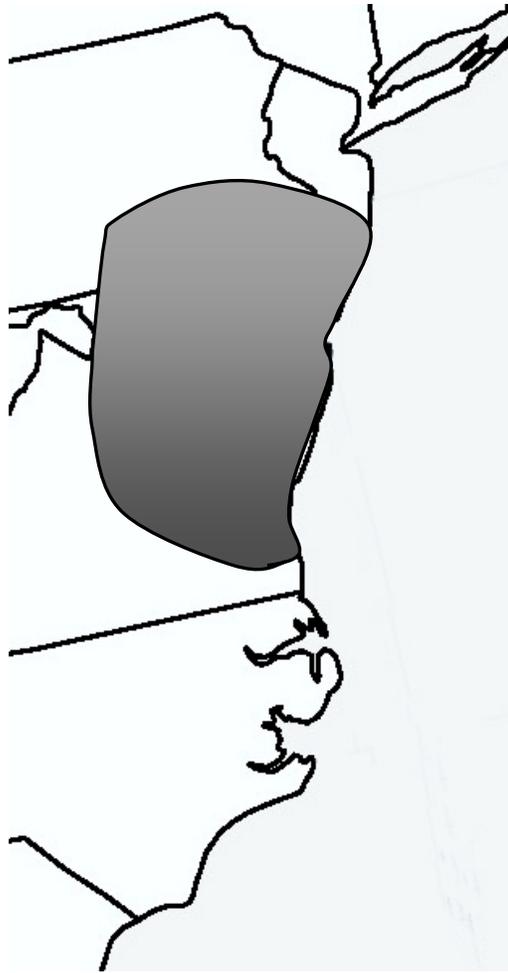


Figure 21 – Selden Island distribution in the Middle Atlantic

Wolfe Neck ceramics are similar in construction, form and surface treatment to the preceding Selden Island ceramics. They differ in that the temper is crushed quartz and net impressed exteriors are added to the repertoire along with cord-marked exteriors. The distribution of Wolfe Neck is restricted to the Delmarva Coastal Plain north into the southern New Jersey Coastal Plain where similar types have been identified (Stewart 1998:159). Wolfe Neck is wholly a Coastal Plain tradition, though similar crushed rock temper traditions occur to the west and north, a pattern suggesting continued links to those traditions (Custer 1996:221). The distribution of Wolfe Neck implies an area of close interaction between coastal populations centered on the Delaware River and Bay watersheds and adjacent Atlantic Coast drainages (Figure 22). The Gray Farm site is roughly centered in this area. It represents one example of this tradition and the radiocarbon date producing a calibrated mid-point calendar date of cal BC 232 places it near the center of the chronological range of the type.



Figure 22 – Wolfe Neck distribution in the Middle Atlantic

During the Early Woodland in Delaware, ceramic traditions were part of a larger area of learning and communication networks extending west to the Appalachians, south to coastal North Carolina and north through New Jersey. The widespread but light distribution of Marcey Creek ceramics, made of non-local clays, suggests exchange of vessels from the Piedmont into Delaware and elsewhere on the Coastal Plain where local ceramic traditions like Dames Quarter in Delaware, Ware Plain in New Jersey and Croaker Landing in Virginia were established as indigenous ceramic traditions (cf. Egloff and Potter 1982:97; McCann 1950).

Middle Woodland ceramics at the Gray Farm site include the Coulbourn, Mockley and Hell Island series. Grog and clay nodule tempered Coulbourn ceramics have cord-marked and net-impressed exterior surfaces. All the cord-marked Coulbourn ceramics from the Gray Farm site exhibited final “S” twist cord marking. The Coulbourn ceramics distribution overlaps that of the Wolfe Neck technological tradition, but appears to be more restricted. Coulbourn and Coulbourn-like wares occur in the Delaware Bay and Atlantic Coast watersheds of Delaware, nearby Maryland and southern New Jersey (cf.

Stewart 1998:88; Griffith and Artusy1977:22) The Gray Farm site is again roughly in the center of Coulbourn distribution (Figure 23). The more restricted distribution, as compared to Wolfe Neck ceramics, indicates a smaller learning network and area of interaction during the production of this series. Like Dames Quarter and Wolfe Neck, Coulbourn is an expression of a sub-regional technological tradition. Other sub-regional traditions appear on the Middle Atlantic Coastal Plain as this time.

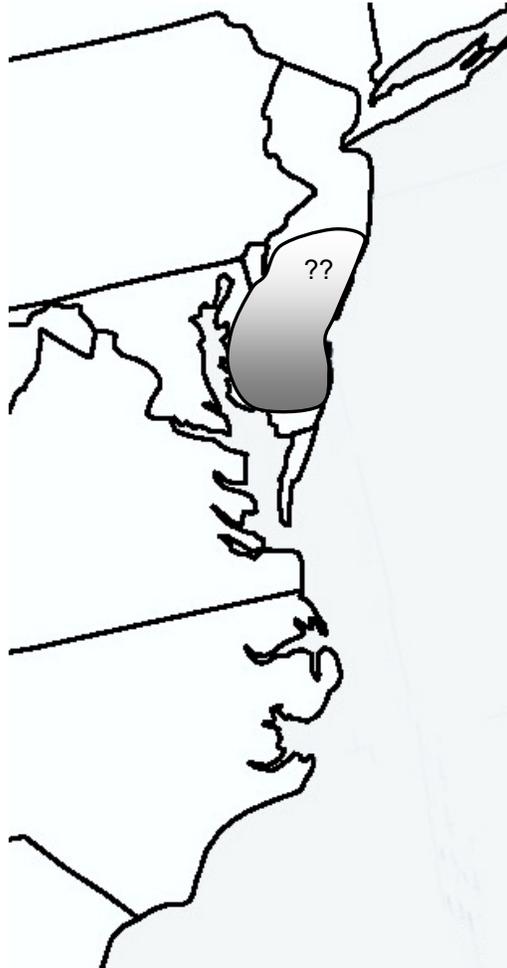


Figure 23 – Coulbourn distribution in the Middle Atlantic

Based on calibrated radiocarbon dates from Delaware, Coulbourn ceramics continue in use until approximately cal AD 350. It is interesting to note that in coastal North Carolina the clay and grog tempered Hanover Series ceramics of the Hanover I Phase are widely distributed along coastal estuaries beginning from approximately cal AD 400 and continuing into the early Late Woodland (Herbert 2009:140). A link between the disappearance of Coulbourn ceramics in Delaware and the appearance of Coulbourn-like ceramics on the North Carolina coast around AD 400 is a matter for future research.

Mockley ceramics, defined as shell-tempered with net-impressed and cord-marked surfaces, first appears in the region approximately cal AD 100 (Dent

1995:238). Mockley is a pan-regional, Coastal Plain ceramic series distributed from coastal northern New Jersey in the north, through Albemarle and Pamlico Sounds in the south and inland to the Piedmont in the central and northern areas of its distribution (Figure 24). There is very little penetration above the Fall Line in any area of its distribution. The Mockley technological tradition was a widely adopted and long-lasting phenomenon, with a 2 sigma radiocarbon date range in Delaware from cal AD 72 to cal AD 993. When first introduced it was technologically unlike any contemporary tradition north, west or south of its area of distribution. While the use of cord-marked and net-impressed exterior surfaces is identical to Wolfe Neck and Coulbourn ceramics, the use of marine shell as temper sets it apart from the earlier series. There were very few Mockley ceramics at the Gray Farm site. The one Mockley cord-marked sherd had a final "S" twist cord. Based on cord twist, Mockley is part of the technological tradition beginning with Selden Island ceramics and continuing with Wolfe Neck and Coulbourn ceramics.

Mockley appears to have spread quickly throughout its geographic distribution. It is possible that the origin of the Mockley ceramic tradition is from the east. There is geological evidence in Delaware of accelerated sea level rise at 2000 B.P. in the Delaware Bay (Suku and Pizzuto 1995). This date roughly corresponds with the appearance of Mockley ceramics. It is conceivable that cultures producing shell tempered Mockley ceramics inhabited coastal estuaries along portions of the now submerged Coastal Plain. With the rapidly rising sea level, they were forced inland over time to new settlement locations as the coastal environments moved west. Rapidly increasing sea level rise at this time, if a widespread phenomena along the Atlantic Coast, is correlated with the widespread appearance of Mockley producing cultures from coastal North Carolina through central and southern New Jersey. Widespread communication and overlapping learning networks within the area of Mockley distribution offers an alternative explanation for its pan-regional distribution. Such a pan-Coastal Plain phenomenon in the Middle Atlantic suggests a high level of social integration at some scale. The reason for the appearance and distribution of Mockley is likely the result of both factors.

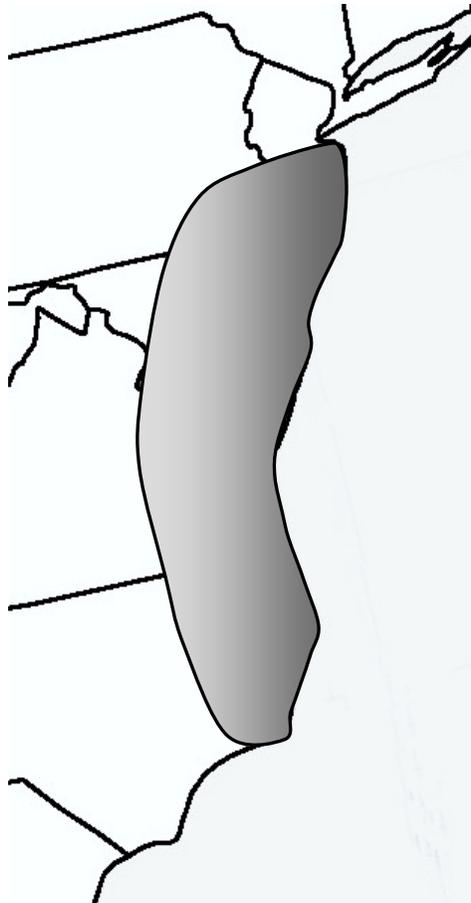


Figure 24 – Mockley distribution in the Middle Atlantic

Hell Island ceramics are finely crushed quartz and mica tempered with cord-marked or fabric-impressed exterior surfaces. Delaware calibrated radiocarbon dates at the 2 sigma range place Hell Island from cal AD 526 to cal AD 1230. There are a few Hell Island sherds from the Gray Farm site and the final twist on the cord-marked sherds is “Z”. The distribution of Hell Island and Hell Island-like ceramics extends from coastal Delmarva drainages north to southern and central New Jersey (cf. Stewart 1998:69; Ware Group VII) and southeastern Pennsylvania (Custer 1996:226). Its distribution roughly covers the northern one-third of the distribution of Mockley ceramics (Figure 25).

In terms of chronology and geographic distribution, Hell Island ceramics exhibit considerable overlap with Mockley ceramics in Delaware. This pattern suggests a northerly direction of influence from the Delaware Valley into Delaware and southern New Jersey. There appears to have been contemporary occupation of both Mockley and Hell Island ceramic traditions in Delaware from cal AD 526 until the early Late Woodland period. Hell Island ceramics from the Gray Farm site have “Z” twist cord marking, while Mockley and its cord-marked predecessors at the site exhibit cord with an “S” twist. Another line of evidence supporting a northerly direction of influence for

Hell Island ceramics is that the series is closely associated with the Webb Phase cemetery at the Island Field site in Kent County, Delaware (Custer 1984:135). The Webb Phase has been compared to the Kipp Island phase in central New York (Thomas and Warren 1970:24).

Radiocarbon dates in Delaware show contemporary Hell Island and Mockley occupations after approximately AD 500, though Hell Island and Mockley ceramics are rarely found in clear association in the same archaeological contexts. If there is a link between technological traditions, learning networks and broader cultural traditions, this geographic and chronological pattern leads to the conclusion that two different cultural traditions were in Delaware at the same time, interacting and negotiating their use of the landscape creating a cultural mosaic of ceramic traditions. It is equally possible that there were short-term fluctuations in geographic boundaries between groups producing these ceramics at a scale that falls below the threshold of detection given the 2 sigma range of calibrated radiocarbon dates. Additional comparative research and new, accurate and precise radiocarbon dates from a wider range of sites will provide information to test or refine this interpretation.



Figure 25 – Hell Island distribution in the Middle Atlantic

Townsend and Killens ceramics are discussed together. Based on the Delaware calibrated radiocarbon dates, Townsend ceramics first appeared around cal AD 1021,

Killens somewhat later, and continued in use to the 17th century AD. The Townsend Series is distributed from the central Delmarva Peninsula south through Albemarle and Pamlico Sounds in North Carolina and west to the Fall Line in Maryland and Virginia (Figure 26). In North Carolina, the westward boundary is generally to the head of tidewater (Herbert 2009:182). Killens ceramics are largely confined to the Delaware Bay drainages in Delaware (Figures 27).

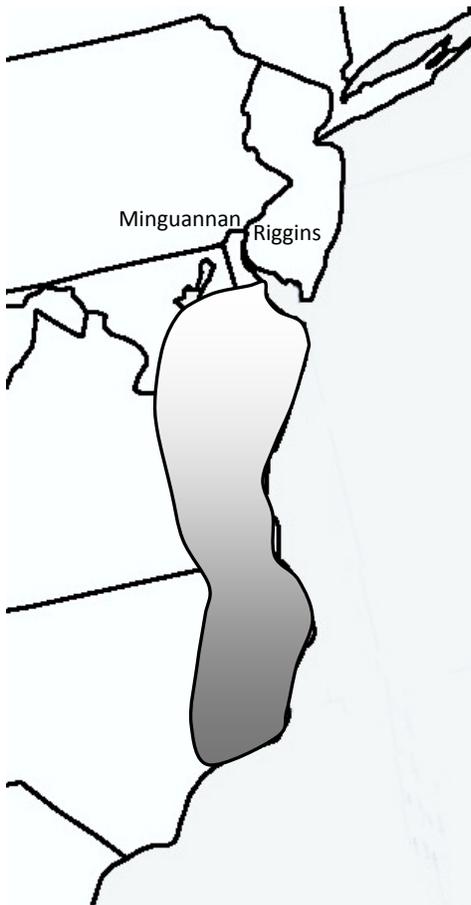


Figure 26 – Townsend distribution in the Middle Atlantic



Figure 27 Killens distribution in the Middle Atlantic

There are two interesting patterns to note in the distribution of Townsend ceramics. First, its distribution mirrors the southern two-thirds of the Mockley ceramic distribution. Second, there is a sharp northern boundary in central Delaware and the Delaware Bay. To the north, Late Woodland Minguannan, Riggins and other ceramics occupy part of the area formerly covered by the distribution of Mockley ceramics (Brett and Custer 2011; Griffith and Custer 1985). Later in the Late Woodland period, the Townsend distribution in the west contracts eastward with the appearance of Potomac

Creek and Mayaone ceramics on the western shore of Maryland (Dent 1995:245), while in southeastern Virginia the southern boundary contracts slightly with the appearance of Roanoke Simple Stamped ceramics (Turner 1992:104).

Townsend ceramics share the shell tempering tradition with Mockley, while sharing the fabric-impressed exterior surface treatment with Hell Island. It should be noted that a small percentage of Mockley ceramics have fabric-impressed exterior surfaces (Robinson and Bulhack 2005:4). Although Townsend ceramics do not have cord-marked exterior surfaces, cord impressing was used as a decorative technique. All Townsend and Killens rim sherds with decorations from the site (n=8) were direct cord impressed with a final "Z" twist to the cord. This is the same cord twist direction observed on the Hell Island cord-marked sherds from the Gary Farm. From the defining attributes alone, Townsend and Killens ceramics appear to have been influenced by both the Mockley and Hell Island technological traditions. This interaction likely occurred during the period when Mockley and Hell Island producing groups were contemporary in Delaware. The nature of this interaction is a subject for further research.

The majority of the preceding synthesis is focused on isochrestic style and focuses on attributes that describe the mode of production. The Gray Farm ceramics have limited expressions of symbolic style in vessel form and/or decorative motifs. There are however, two patterns to explore. Wolfe Neck, Coulbourn and Mockley ceramics have a co-tradition of two exterior surface treatments, cord-marked and net-impressed. Hell Island ceramics have a co-tradition of fabric-impressed or cord-marked exterior surfaces. There are at least four possible explanations for the co-traditions of surface treatment, 1) functional differences between vessels were expressed by surface treatment, 2) surface treatments were markers of separate social groups within the community (i.e. symbolic style), 3) personal choice by the potter or 4) availability of net or cord materials at the time the vessel was produced. Functional differences could be examined through residue analysis of vessels with strict context control. Social differences should exhibit patterning, while an individual potter's choice or the availability of materials should produce a more random pattern. There are a range of factors to consider. Research can be designed to examine each of these explanations.

The Gray Farm Townsend ceramics are consistent with what is known about changes in symbolic style in the series (cf. Griffith 1980). Complex incised motifs, dated elsewhere, are early in the series; more simplified incised and corded motifs are later (Griffith 1977). The range of complex incised motifs early in the Townsend Series varies from site to site (Griffith 1977). Townsend Plain and related types (e.g. Yeocomico) continue in use into the early European exploration and settlement period of the 17th century AD (Egloff and Potter 1982:112). If ceramic decorative motif is an expression of symbolic style, then the trend expressed changes from a desire to express difference to a desire to express sameness or unity. This pattern may reflect social trends in Delaware from individual community based identity to identity with a larger, sub-regional social group. One could propose the pattern reflects a shift from smaller lineage based communities to incipient chiefdoms. The Townsend and Killens ceramics at the Gray Farm site represent the more recent end of this continuum.

Conclusion

The ceramic analysis produced a data set for local and regional research. The report proposes an analysis protocol to address specific research questions and suggests avenues for future research. The synthesis also discusses research topics for future investigations. The differences in ceramic technologies reflect differences in their origins and histories at different scales. The analysis protocol enhances the variability within and between ceramics series to permit the examination of fine-grained processes in American Indian history.

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APPENDIX A
CERAMIC ANALYSIS DATA TABLES

AD Marble Phase II
7K-F-11, Area 1 Controlled Surface Collection and Test Units
Table A-1

AD Marble Bag #	State Catalog #	Block	Test Unit	Vessel Part	Exterior Surface	Decoration	Temper	Ceramic Type	Notes
119	2004.49.26	2-L	surface	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small
119	2004.49.26	2-L	surface	body	smooth	none	fine shell	Townsend	
119	2004.49.26	2-L	surface	body	smooth	none	fine shell	Townsend	
67	2004.49.101	7-H	surface	rim	smooth	direct cord impressed	shell	Townsend	small vessel
67	2004.49.101	7-H	surface	body	surface missing	none	shell	unidentifiable	surface missing; likely Townsend
482	2004.49.104	7-L	surface	body	net impressed	none	grog/clay nodules	Coulbourn Net	
172	2004.49.180	11-R	surface	body	smooth	none	fine shell?	unidentifiable	perhaps Townsend or Killens
104	2004.49.201	13-B	surface	body	smooth	none	fine shell	Townsend	perhaps Killens
203	2004.49.249	16-B	surface	body	surface missing	none	fine crushed quartz	unidentifiable	perhaps Hell Island or Minguannan
215	2004.49.265	17-E	surface	body	surface missing	none	grit	Dames Quarter Cord	similar to AD Marble Feature 5 ceramics
221	2004.49.276	18-D	surface	body	fabric impressed	none	fine shell	Townsend	fabric smoothed over
227	2004.49.286	19-C	surface	body	net impressed	none	shell	Mockley Net	net smoothed over
228	2004.49.287	19-D	surface	body	cord marked	none	grog/clay nodules	Coulbourn Cord	
229	2004.49.288	19-E	surface	body	cord marked	none	crushed quartz and mica	Hell Island Cord	coil break
275	2004.49.289	19-F	surface	body	cord marked	none	grog/clay nodules	Coulbourn Cord	fine crushed quartz also in paste - Nassawongo?
295	2004.49.317	23-D	surface	body	surface missing	none	fine steatite	Selden Island	could be Marcey Creek
384	2004.49.327	7-B	N569/E518	body	smooth	none	shell	Townsend	could be Killens
384	2004.49.327	7-B	N569/E518	body	smooth	none	shell	Townsend	could be Killens
406	2004.49.345	8-D	N570/E534	body	fabric impressed	none	fine crushed quartz	Hell Island Fabric	small sherd; Minguannan-like paste
403	2004.49.339	8-D	N573/E530	rim	smooth	punctate and incised	fine shell	Townsend	rim rolled; punctate is above 2 hor. Bands parallel to rim
387	2004.49.350	8-D	N576/E534	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small
387	2004.49.350	8-D	N576/E534	body	net impressed	none	grog/clay nodules	Coulbourn Net	
388	2004.49.359	9-E	N580/E543	body	smooth	none	fine crushed quartz	unidentified	fine grit in paste along with crushed quartz
388	2004.49.359	9-E	N580/E543	body	smooth	none	fine shell	Townsend	
388	2004.49.359	9-E	N580/E543	body	surface missing	none	fine shell	unidentifiable	sherd too small
390	2004.49.361	9-E	N583/E549	body	smooth	none	fine shell	Townsend	
394	2004.49.369	11-G	N609/E565	body	smooth	none	fine black stone	Dames Quarter Cord	
394	2004.49.369	11-G	N609/E565	body	cord marked	none	grog/clay nodules	Coulbourn Cord	
395	2004.49.373	12-G	N619/E568	body	smooth	none	black stone	Dames Quarter	
469	2004.49.379	13-K	N629/E600	body	surface missing	none	fine shell	unidentifiable	sherd too small
433	2004.49.382	15-L	N643/E580	body	surface missing	none	fine shell	unidentifiable	sherd too small
700	2004.49.444	I-1	N500/E589	body	smooth	none	mica	unidentifiable	may be Hell Island; too small to type
700	2004.49.444	I-1	N500/E589	body	smooth	none	fine crushed quartz	Minguannan?	
701	2004.49.445	I-1	N500/E589	body	surface missing	none	fine crushed quartz	Hell Island?	some fine mica flecks in paste, but surface missing
702	2004.49.546	I-4	N530/E589	body	cord marked	none	crushed quartz and mica	Hell Island	
678	?	E-6	N558/E545	body	net impressed	none	shell	Mockley Net	Feature 4
678	?	E-6	N558/E545	body	cord marked	none	fine crushed quartz	Minguannan?	small sherd; Minguannan-like paste; Feature 4
699	2004.49.553	I-7	N560/E589	body	surface missing	none	unidentifiable	unidentifiable	sherd too small; Feature 8
905	2004.49.588	C-7	N568/E526	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small; Feature 3 and 3A
905	2004.49.588	C-7	N568/E526	body	net impressed	none	fine grit	unidentified	similar to Popes Creek; very gritty paste; Feature 3 and 3A
905	2004.49.588	C-7	N568/E526	body	fabric impressed	none	shell	Townsend	Feature 3 and 3A
905	2004.49.588	C-7	N568/E526	body	fabric impressed	none	shell	Townsend	Feature 3 and 3A
905	2004.49.588	C-7	N568/E526	body	fabric impressed	none	shell	Townsend	Feature 3 and 3A
905	2004.49.588	C-7	N568/E526	body	fabric impressed	none	shell	Townsend	Feature 3 and 3A
739	2004.49.415	C-8	N570/E524	body	net impressed	none	grog/clay nodules	Coulbourn Net	
739	2004.49.415	C-8	N570/E524	body	surface missing	none	unidentifiable	unidentifiable	
906	2004.49.420	C-8	N571/E524	body	smooth	none	shell	Townsend	
906	2004.49.420	C-8	N571/E524	body	smooth	none	shell	Townsend	
906	2004.49.420	C-8	N571/E524	body	smooth	none	shell	Townsend	
906	2004.49.420	C-8	N571/E524	body	smooth	none	shell	Townsend	

AD Marble Phase II
7K-F-11, Area 1 Controlled Surface Collection and Test Units
Table A-1

AD Marble Bag #	State Catalog #	Block	Test Unit	Vessel Part	Exterior Surface	Decoration	Temper	Ceramic Type	Notes
878	2004.49.421	D-8	N575/E539	body	smooth	none	shell	Townsend	
878	2004.49.421	D-8	N575/E539	body	smooth	none	shell	Townsend	
742	2004.49.427	D-8	N576/E540	body	smooth	none	shell	Townsend	
742	2004.49.427	D-8	N576/E540	body	fabric impressed	none	shell	Townsend	Triangle pebble jasper point in unit
726	2004.49.574	M-9	N589/E620	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small
688	2004.49.449	I-10	N590/E589	body	smooth	none	crushed quartz	unidentifiable	sherd too small
688	2004.49.449	I-10	N590/E589	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small
692	2004.49.452	I-10	N591/E589	unidentifiable	surface missing	none	fine crushed quartz	unidentifiable	sherd too small
392	2004.49.364.1	F-10	N594/E559	body	fabric impressed	none	fine crushed quartz	Hell Island Fabric	
694	2004.49.455	I-13	N620/E589	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small
709	2004.49.488	I-13	N620/E589	body	cord marked	none	black stone and crushed quartz	Dames Quarter	large sherd; Feature 5
695	2004.49.464	I-13	N620/E588	body	cord marked	none	black stone and crushed quartz	Dames Quarter	Feature 5
695	2004.49.464	I-13	N620/E588	body	cord marked	none	black stone and crushed quartz	Dames Quarter	Feature 5
695	2004.49.464	I-13	N620/E588	body	cord marked	none	black stone and crushed quartz	Dames Quarter	Feature 5
695	2004.49.464	I-13	N620/E588	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small; Feature 5
883	2004.49.467	I-13	N620.5/E588	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small; Feature 5
883	2004.49.467	I-13	N620.5/E588	body	smooth	none	black stone	Dames Quarter ?	Feature 5
884	2004.49.471	I-13	N620.5/E588	unidentifiable	surface missing	none	unidentifiable	unidentifiable	Feature 5
813	2004.49.531	I-13	N620.5/E588	body	smooth	none	black stone	Dames Quarter	Feature 5
816	2004.49.472	I-13	N620.5/E588	body	smooth	none	black stone and crushed quartz	Dames Quarter?	Feature 5
823	2004.49.482	I-13	N620.5/E588	body	cord marked	none	black stone and crushed quartz	Dames Quarter?	Feature 5
893	2004.49.572	J-13	N620.5/E588	body	cord marked	none	fine steatite	Selden Island	Feature 5A; fine black grit in paste
893	2004.49.572	J-13	N620.5/E588	body	cord marked	none	fine steatite	Selden Island	Feature 5A; fine black grit in paste
885	2004.49.560	J-13	N620.5/E590	body	cord marked	none	fine crushed quartz	Accokeek?	fine hematite inclusions in paste
885	2004.49.560	J-13	N620.5/E590	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small
781	2004.49.497	I-13	N621/E589	body	cord marked	none	black stone	Dames Quarter Cord	Feature 5
944	2004.49.494	I-13	N621/E589	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small; Feature 5
832	2004.49.507	I-13	N621/E589	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small; Feature 5
933	2004.49.500	I-13	N621/E589	body	cord marked	none	crushed quartz	Wolfe Neck Cord	Feature 5A
943	2004.49.532	I-13	N621/E589	body	cord marked	none	black stone	Dames Quarter Cord	
698	2004.49.520	I-13	N621.5/E588	unidentifiable	surface missing	none	unidentifiable	unidentifiable	
698	2004.49.520	I-13	N621.5/E588	unidentifiable	surface missing	none	unidentifiable	unidentifiable	
889	2004.49.522	I-13	N621.5/E588	body	smooth	none	black stone	Dames Quarter?	sherd very small; Feature 5 and 5A
889	2004.49.522	I-13	N621.5/E588	unidentifiable	surface missing	none	unidentifiable	unidentifiable	
927	2004.49.523	I-13	N621.5/E588	body	cord marked	none	grog/clay nodules	Coulbourn Cord	Feature 5A
894	2004.49.530	I-13	N621.5/E588	body	cord marked	none	black stone and crushed quartz	Dames Quarter Cord	Feature 5A
711	2004.49.409	B-17	N660/E519	body	smooth	none	steatite	Marcey Creek?	very small sherd
711	2004.49.409	B-17	N660/E519	body	fabric impressed	none	crushed quartz and mica	Hell Island Fabric	
712	2004.49.410	B-17	N660/E519	body	cord marked	none	fine crushed quartz	Hell Island Cord	could be Minguannan ?
794	2004.49.535	I-17	N661/E584	body	surface missing	none	crushed quartz	unidentifiable	sherd too small
715	2004.49.429	D-20	N690/E530	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small
717	2004.49.431	D-20	N690/E530	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small
485	2004.49.396	H-9	N580/E570	body	smooth	none	shell	Townsend	
485	2004.49.396	H-9	N580/E570	body	cord marked	none	black stone and crushed quartz	Dames Quarter ?	
485	2004.49.396	H-9	N580/E570	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small
485	2004.49.396	H-9	N580/E570	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small
485	2004.49.396	H-9	N580/E570	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small
485	2004.49.396	H-9	N580/E570	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small
485	2004.49.396	H-9	N580/E570	body	net impressed	none	shell	Mockley Net	sherd damaged; identification not certain
485	2004.49.396	H-9	N580/E570	body	fabric impressed	none	crushed quartz	Hell Island Fabric	fabric smoothed over; very small sherd

AD Marble Phase II
7K-F-11, Area 1 Controlled Surface Collection and Test Units

Table A-1

AD Marble Bag #	State Catalog #	Block	Test Unit	Vessel Part	Exterior Surface	Decoration	Temper	Ceramic Type	Notes
488	2004.49.399	J-11	N609/E590	unidentifiable	surface missing	none	unidentifiable	unidentifiable	sherd too small
488	2004.49.399	J-11	N609/E590	body	fabric impressed	none	shell	Townsend	
811	?	J-13	N620.5/E588	body	cord marked	none	fine crushed quartz	Minguannan?	Feature 5

Frederica North (7K-F-169)

Phase II Ceramic Data
Surface and Test Units

Table A-2

Catalog number	Bag #	Inven. #	Test Unit	N Coord	E Coord	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.68-5.M	na	na	3	N780	E640	1	1	-	-	-	-	-	-	-	-	not ceramic; bog iron?	
2009.68.124	126	na	na	na	na	na	na	body	6.1	8.93	net impressed?	smooth	fine grit	none	unidentifiable	GP 4; net smoothed?; sherd damaged	1
2009.68-121.A	128	na	na	na	na	na	na	body	6.6	9.14	net impressed?	smooth	fine grit	none	unidentifiable	GP; net smoothed?; sherd damaged	1
2009.68-121.A	128	na	na	na	na	na	na	body	3.7	8.01	smooth	smooth	shell	none	Townsend		1
2009.68-121.A	128	na	na	na	na	na	na	body	3.0	7.62	smooth	smooth	fine grit and shell	none	Killens		1
2009.68-37.A	127	na	na	N740	E680	na	na	body	14.0	9.47	cord marked	smooth	fine grit and clay nodules	none	Coulbourn Cord	Fea. 5; 95 cmbs within matix	1
2009.68-34.A	35	na	21	N740	E680	2	2	body	35.1	12.53	cord marked	smooth	crushed black rock	none	Dames Quarter Vessel #3	fine grit in paste	1
2009.86-35.B	38	na	21	N740	E680	3	3	body	6.9	9.76	cord marked	smooth	crushed black rock	none	Dames Quarter Vessel #3	fine grit in paste	1
2009.68-36.B	39	na	21	N740	E680	3	5	body	8.9	9.08	cord marked	smooth	crushed black rock	none	Dames Quarter Vessel #3	fine grit in paste; stem or grass impression	1
2009.68-36.B	39	na	21	N740	E680	3	5	body	0.8	surface missing	surface missing	smooth	grit	none	Dames Quarter Vessel #3	likely same as 2009.68-36.B	1
2009.68-49.A	52	na	29	N739	E619	5	4	body	3.5	7.87	cord marked	smooth	fine grit	none	unidentified		1
2009.68-64.B	82	na	38	N800	E580	2	3	body	18.5	10.25	smooth	smooth	fine steatite	none	Marcey Creek Vessel #2	appears to be slab construction	1
2009.68-64.B	82	na	38	N800	E580	2	3	body	5.5	10.88	smooth	smooth	fine steatite	none	Marcey Creek Vessel #2		1
2009.68-64.B	82	na	38	N800	E580	2	3	body	3.9	12.54	smooth	smooth	grit	none	unidentified		1
2009.68-64.B	82	na	38	N800	E580	2	3	body	7.3	surface missing	surface missing	surface missing	fine steatite	none	Marcey Creek Vessel #2	3 small sherds combined in weight	3
2009.68-67.A	92	na	38	N800	E580	1	2	body	2.7	surface missing	surface missing	smooth	fine steatite	none	Marcey Creek Vessel #2		1
2009.68-69.A	96	na	38	N800	E580	1	4	body	1.9	surface missing	surface missing	smooth	fine steatite	none	Marcey Creek Vessel #2		1
2009.68-68.A	95	na	38	N800	E580	1	3	body	18.8	10.30	smooth	smooth	steatite	none	Marcey Creek Vessel #2	appears to be slab construction	1
2009.68-65.A	83	na	38	N800	E580	2	4	body	19.3	10.29	smooth	smooth	steatite	none	Marcey Creek Vessel #2	thickness uneven	1
2009.68-63.A	80	na	38	N800	E580	2	2	body	11.4	10.30	smooth	smooth	steatite	none	Marcey Creek Vessel #2		1
2009.68-63.A	80	na	38	N800	E580	2	2	body	8.3	surface missing	surface missing	smooth	steatite	none	Marcey Creek Vessel #2		1
2009.68-63.A	80	na	38	N800	E580	2	2	body	4.6	surface missing	surface missing	smooth	steatite	none	Marcey Creek Vessel #2		1
2009.68-66.A	86	na	38	N800	E580	1	1	body	7.2	10.11	smooth	smooth	steatite	none	Marcey Creek Vessel #2		1
2009.68-91.Q	90	na	52	N859	E620	1	1	body	2.0	surface missing	surface missing	smooth	black grit	none	Dames Quarter?	similar paste to 2009.68-34.A,35.B	1

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Catalog number	Bag #	Inven. #	Test Unit	N Coord	E Coord	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-4.A	6	10	2	N540	E510	2	2	body	2.6	6.13	smooth	smooth	fine shell	none	Killens?	carbonized seed in paste; shell temper very sporadic	1
2009.67-11.B	17	31	4	N560	E510	1	1	near rim	1.3	6.70	smooth	smooth	fine quartz pebbles and shell	direct cord impressed	Killens	oxidized paste; cord twist "Z" decorative element	1
2009.67-11.A	17	30	4	N560	E510	1	1	body	1.4	7.74	smooth	smooth	quartz pebbles	none	unidentifiable	sherd too damaged to identify	1
2009.67-11.A	17	30	4	N560	E510	1	1	body	1.0	surface missing	smooth	surface missing	fine shell	none	Townsend		1
2009.67-28.A	14	33	8	N540	E520	1	1	body	1.4	6.58	fabric impressed	smooth	shell	none	Townsend		1
2009.67-28.A	14	33	8	N540	E520	1	1	body	0.8	5.88	smooth	smooth	shell	none	Townsend	small quartz grains in paste	1
2009.67-33.A	32	38	10	N560	E520	1	1	body	2.4	5.91	fabric impressed	smooth	shell	none	Townsend		1
2009.67-33.B	32	34	10	N560	E520	1	1	body	1.6	surface missing	surface missing	smooth	quartz pebbles	none	unidentifiable	oxidized paste like bag #17, T.U. 4; sherd damaged	1
2009.67-52.A	27	30	11	N570	E520	1	1	body	1.9	7.94	smooth	smooth	shell	none	Townsend		1
2009.67-64.A	43	17	13	N590	E520	2	3	body	2.4	surface missing	surface missing	surface missing	crushed quartz	none	unidentifiable	very eroded	1
2009.67-67.A	57	18	14	N600	E250	1	1	body	1.1	6.35	surface missing	smooth	quartz pebbles	none	unidentifiable	sherd too damaged to identify	1
2009.67-71.A	63	28	16	N560	E530	1	1	rim	2.1	5.41	fabric impressed	smooth	fine quartz pebbles and shell	none	Killens	rim direct and flattened	1
2009.67-73.A	65	26	17	N570	E530	1	1	body	1.1	5.61	smooth	smooth	shell	none	Townsend		1
2009.67-75.B	67	31	18	N580	E530	1	1	rim	2.2	5.10	smooth	smooth	shell	direct cord impressed	Townsend	Field 1 hor. band Field 2 oblique; "Z" twist elements	1
2009.67-75.A	67	26	18	N580	E530	1	1	-	-	-	-	-	-	-	-	not ceramic; iron scale	
2009.67-75.F	67	33	18	N580	E530	1	1	body	8.4	9.64	net impressed	smooth	grog	none	Coulbourn Net		1
2009.67-75.C	67	32	18	N580	E530	1	1	body	6.9	9.91	surface missing	smooth	steatite	none	Selden Island ?	conoidal form; exterior surface missing	1
2009.67-75.E	67	30	18	N580	E530	1	1	body	18.2	10.65	cord marked	smooth	steatite	none	Selden Island		1
2009.67-75.D	67	29	18	N580	E530	1	1	body	11.3	10.34	cord marked	smooth	crushed quartz	none	Wolfe Neck Cord	fine grit in paste	1
2009.67-75.D	67	29	18	N580	E530	1	1	body	8.5	10.47	cord marked	smooth	crushed quartz	none	Wolfe Neck Cord	cord smoothed	1
2009.67-75.D	67	29	18	N580	E530	1	1	body	3.8	9.65	surface missing	smooth	crushed quartz	none	Wolfe Neck Cord	same vessel as 2009.76-75.D	1
2009.67-76.A	76	10	18	N580	E530	2	2	body	3.2	surface missing	surface missing	smooth	steatite	none	Selden Island ?	Marcey Creek?; 4 small sherd fragments	1
2009.67-78.A	75	41	19	N590	E530	1	1	rim	2.1	5.29	smooth	smooth	fine shell	direct cord impressed	Townsend	Field 1 hor. band, Field 2 missing; "Z" twist; rim direct and corded	1
2009.67-88.B	84	28	20	N550	E540	1	1	body	5.8	6.99	smooth	smooth	shell	none	Townsend	exterior fabric smoothed	1
2009.67-88.A	84	27	20	N550	E540	1	1	body	10.9	8.08	smooth	smooth	shell	none	Townsend	exterior fabric smoothed	1
2009.67-90.B	92	31	21	N560	E540	1	1	body	5.2	8.67	cord marked	smooth	steatite	none	Selden Island	exterior cord smoothed	1
2009.67-90.A	92	30	21	N560	E540	1	1	body	3.6	7.36	smooth	smooth	shell	none	Townsend		1
2009.67-90.A	92	30	21	N560	E540	1	1	body	1.0	6.92	smooth	smooth	shell	none	Townsend		1
2009.67-92.A	83	24	22	N570	E540	1	1	body	8.1	9.75	smooth	smooth	shell	none	Townsend		1
2009.67-92.A	83	24	22	N570	E540	1	1	body	1.1	4.35	smooth	smooth	shell	none	Townsend		1
2009.67-96.A	104	-	23	N580	E540	1	1	body	1.5	6.27	smooth	smooth	shell	none	Townsend		1
2009.67-96.B	104	-	23	N580	E540	1	1	body	1.3	5.21	smooth	smooth	shell	none	Townsend		1
2009.67-98.A	103	2	24	N590	E540	2	2	body	2.1	surface missing	surface missing	smooth	crushed quartz	none	unidentifiable	2 small sherds weighed together; sherd damaged	2
2009.67-100.B	101	-	25	N560	E550	1	1	body	1.5	5.77	smooth	smooth	quartz grains and shell	none	Killens	may be Townsend with little shell	1
2009.67-100.A	101	-	25	N560	E550	1	1	rim	1.3	5.62	smooth	smooth	fine grit and shell	direct cord impressed	Killens	Field 1 hor. bands; Field 2 missing; "Z" twist	1

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Catalog number	Bag #	Inven. #	Test Unit	N Coord	E Coord	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-100.C	101	-	25	N560	E550	1	1	body	0.9	5.68	smooth	smooth	fine shell	none	Townsend		1
2009.67-102.D	107	-	26	N570	E550	1	1	body	3.5	9.14	smooth	smooth	shell	none	Townsend		1
2009.67-102.C	107	-	26	N570	E550	1	1	body	1.1	6.48	surface missing	smooth	quartz grains	none	unidentifiable	very small quartz grains in paste; sherd damaged	1
2009.67-102.A	107	-	26	N570	E550	1	1	body	0.8	4.41	smooth	smooth	shell	none	Townsend		1
2009.67-102.B	107	-	26	N570	E550	1	1	body	2.4	6.89	smooth	smooth	shell	none	Townsend		1
2009.67-106.A	113	8	26	N570	E550	1	1	body	0.6	surface missing	smooth	surface missing	shell	none	Townsend?	ID not certain; very small sherd	1
2009.67-106.G	113	-	26	N570	E550	1	1	body	0.5	3.89	smooth	smooth	fine shell	none	Townsend?	ID not certain; very small sherd	1
2009.67-106.C	113	3	26	N570	E550	1	1	body	4.7	8.11	smooth	smooth	shell	none	Townsend	may be smoothed over fabric impressed	1
2009.67-106.H	113	-	26	N570	E550	1	1	body	18.6	10.05	fabric impressed	smooth	shell	none	Townsend	fabric smoothed over	1
2009.67-106.E	113	-	26	N570	E550	1	1	body	1.0	7.39	smooth	smooth	shell	none	Townsend		1
2009.67-106.D	113	-	26	N570	E550	1	1	body	2.7	8.05	smooth	smooth	shell	none	Townsend	Feature 10	1
2009.67-106.F	113	6	26	N570	E550	1	1	body	0.5	4.65	smooth	smooth	shell	none	Townsend		1
2009.67-106.B	113	2	26	N570	E550	1	1	body	7.3	7.80	smooth	smooth	shell	none	Townsend		1
2009.67-104.A	128	-	26	N570	E550	2	3	body	1.2	6.41	smooth	smooth	shell	none	Townsend		1
2009.67-110.A	109	-	27	N580	E550	1	1	body	4.0	7.24	fabric impressed	smooth	fine shell	none	Townsend	exterior fabric smoothed	1
2009.67-110.F	109	3	27	N580	E550	1	1	body	2.9	7.09	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-110.E	109	2	27	N580	E550	1	1	body	1.0	5.58	surface missing	smooth	shell	none	Townsend?	too fine for Mockley; ID not certain; sherd damaged	1
2009.67-110.C	109		27	N580	E550	1	1	body	2.2	7.25	smooth	smooth	fine grit	none	unidentified		1
2009.67-110.B	109		27	N580	E550	1	1	body	1.6	5.00	fabric impressed	smooth	fine grit and shell	none	Killens	fabric impression smoothed over	1
2009.67-110.D	109	1	27	N580	E550	1	1	body	15.7	8.43	smooth	smooth	fine grit	none	Killens?	interior and exterior uneven; ID uncertain	1
2009.67-115.A	117	-	29	N600	E550	1	1	body	0.7	4.68	smooth	smooth	quartz grains	none	unidentified	small vessels often untempered	1
2009.67-115.B	117	-	29	N600	E550	1	1	near rim	1.1	4.72	smooth	smooth	none	direct cord impressed	Townsend	Field 1: Hor. Bands, Field 2 missing - Z Twist; rim direct	1
2009.67-118.A	116	-	30	N560	E560	1	1	body	1.0	5.08	smooth	smooth	none	none	unidentified	small vessels often untempered; fine grit in paste	1
2009.67-124.A	130	-	33	N590	E560	1	1	body	1.7	5.22	smooth	smooth	shell	none	Townsend		1
2009.67-129.A	144	-	36	N570	E570	2	2	body	5.0	9.57	smooth	smooth	grit	none	unidentifiable	possibly Killens based on paste	1
2009.67-131.A	138	-	37	N579	E570	1	1	body	2.6	7.65	surface missing	smooth	grit	none	unidentifiable	sherd too damaged to identify	1
2009.67-140.B	149	-	40	N610	E570	1	1	body	4.6	6.87	smooth	smooth	grit	none	unidentified	Identification not certain	1
2009.67-140.A	149	-	40	N610	E570	1	1	body	2.6	7.32	smooth	smooth	grit	none	unidentified	similar to 2009.67-140.B	1
2009.67-145.A	151	-	42	N580	E580	1	1	body	1.4	surface missing	surface missing	smooth	crushed quartz	none	unidentifiable	sherd too damaged to identify	1
2009.67-145.B	151	-	42	N580	E580	1	1	body	2.8	7.40	smooth	smooth	crushed quartz	none	Hell Island?	ID not certain; small sherd	1
2009.67-148.B	153	-	43	N590	E580	1	1	body	1.2	surface missing	surface missing	smooth	crushed quartz	none	unidentifiable	sherd too damaged to identify	1
2009.67-148.A	153	-	43	N590	E580	1	1	body	0.6	surface missing	smooth	surface missing	shell	none	unidentifiable	sherd too damaged to identify	1
2009.67-155.A	162	-	47	N630	E580	1	1	body	1.1	4.60	smooth	smooth	fine shell	none	Killens		1
2009.67-155.C	162	-	47	N630	E580	1	1	body	1.9	surface missing	surface missing	smooth	grit	none	unidentifiable	sherd too damaged to identify	1
2009.67-155.B	162	-	47	N630	E580	1	1	body	1.5	7.27	smooth	smooth	fine grit and shell	none	Killens		1

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Catalog number	Bag #	Inven. #	Test Unit	N Coord	E Coord	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-159.A	175	21	49	N590	E591	1	1	body	2.2	4.71	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-161.A	173	-	50	N600	E590	1	1	body	2.8	6.86	fabric impressed	smooth	fine grit and shell	none	Killens		1
2009.67-169.A	176	-	53	N630	E590	1	1	body	5.2	6.73	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-169.B	176	-	53	N630	E590	1	1	body	4.1	10.37	cord marked	smooth	grit	none	unidentified	cord smoothed	1
2009.67-169.C	176	-	53	N630	E590	1	1	body	1.5	surface missing	surface missing	smooth	fine grit and shell	none	Killens?	ID not certain; sherd damaged	1
2009.67-176.1	193	-	58	N600	E600	1	1	body	0.9	surface missing	surface missing	smooth	fine grit and shell	none	Killens?	ID not certain; sherd damaged	1
2009.67-180.A	197	-	60	N660	E600	1	1	body	5.2	surface missing	surface missing	smooth	grit	none	unidentified	sherd damaged	1
2009.67-184.A	195	34	62	N630	E610	1	1	body	1.3	6.28	fabric impressed	smooth	fine grit and shell	none	Killens		1
2009.67-184.A	195	34	62	N630	E610	1	1	body	0.7	4.35	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-200.A	199	-	64	N650	E610	1	1	near rim	0.8	6.27	smooth	smooth	fine grit and shell	direct cord impressed	Killens	cord twist not discernable; Field 1 hor. Bands parallel to rim	1
2009.67-200.A	199	-	64	N650	E610	1	1	eroded	0.3	surface missing	surface missing	surface missing	none	none	unidentifiable	sherd too damaged to identify	1
2009.67-200.1.B	206	20	66	N670	E610	1	1	body	3.0	6.18	fabric impressed	smooth	none	none	Townsend	Killens?; grass blade or stem impressions in paste	1
2009.67-202.A	212	3	66	N670	E610	2	2	body	1.7	surface missing	surface missing	smooth	fine grit	none	unidentifiable	interior uneven; sherd too damaged to identify	1
2009.67-212.A	228	2	70	N620	E620	2	2	near rim	0.4	5.09	smooth	smooth	fine grit	tickmarks below rim	Potomac Creek?	not Townsend or Killens; very compact paste	1
2009.67-224.B	235	14	73	N629	E599	1	1	eroded	0.6	surface missing	surface missing	surface missing	fine grit	none	unidentifiable	sherd too damaged to identify	1
2009.67-224.A	235	17	73	N629	E599	1	1	body	3.1	6.19	smooth	smooth	none	none	Killens?	exterior may be smoothed fabric; ID not certain	1
2009.67-228.A	242	32	76	N628.5	E630	1	1	body	0.7	5.70	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-238.A	254	37	80	N630	E639	1	1	body	1.9	surface missing	surface missing	smooth	fine grit and shell	none	Killens?	ID not certain; sherd damaged	1
2009.67-242.A	264	19	82	N648.5	E590	1	1	body	7.1	6.85	smooth	smooth	fine grit and shell	none	Killens	5 sherds the same and weighed together	5
2009.67-249.A	251	27	84	N630	E570	1	1	body	1.6	5.64	smooth	smooth	shell	none	Townsend		1
2009.67-267.A	272	44	87	N559	E511	1	1	rim	1.6	6.64	cord marked	smooth	crushed quartz and mica	none	Hell Island	lip flattened with cord marking; rim slightly everted	1
2009.67-267.C	272	43	87	N559	E511	1	1	body	2.1	6.73	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-267.B	272	42	87	N559	E511	1	1	body	2.8	6.54	smooth	smooth	fine grit and shell	none	Killens	exterior may be smoothed over fabric impressed	1
2009.67-272.A	273	41	88	N560	E509	1	1	body	1.0	surface missing	surface missing	smooth	shell	none	Townsend?	Likely Townsend; not certain without exterior surface	1
2009.67-280.A	274	46	89	N560	E511	1	1	body	1.7	5.95	smooth	smooth	fine grit and shell	none	Killens	surface worn	1
2009.67-280.A	274	46	89	N560	E511	1	1	body	0.8	5.86	smooth	smooth	fine grit and shell	none	Killens	exterior may be smoothed over fabric impressed	1

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Catalog number	Bag #	Inven. #	Test Unit	N Coord	E Coord	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-280.A	274	46	89	N560	E511	1	1	eroded	0.5	surface missing	surface missing	surface missing	none	none	unidentifiable	sherd too damaged to identify	1
2009.67-297.B	276	49	91	N561	E510	1	1	body	0.4	3.89	smooth	smooth	fine grit and shell	none	Killens?	ID not certain; very small sherd	1
2009.67-297.A	276	48	91	N561	E510	1	1	body	0.9	surface missing	surface missing	smooth	fine grit and shell	none	unidentifiable	may be Killens; not certain without exterior surface	1
2009.67-297.A	276	48	91	N561	E510	1	1	body	0.5	4.41	smooth	smooth	shell	none	Townsend		1
2009.67-316.A	480	39	93	N561	E508	1	1	near rim	3.3	7.08	smooth	smooth	fine shell	direct cord impressed	Townsend	Field 1:2 hor. Bands parallel to rim; cord twist not discernable	1
2009.67-328.A	481	39	94	N560	E508	1	1	body	4.5	6.77	smooth	smooth	none	none	unidentified	small voids in paste; may be Townsend without much shell	1
2009.67-335.A	645	12	95	N559	E508	2	2	body	0.8	surface missing	surface missing	smooth	grit	none	unidentifiable	small voids in paste; too small to identify	1
2009.67-335.B	645	13	95	N559	E508	2	2	body	1.7	6.37	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-342.A	290	37	96	N570	E521	1	1	body	1.0	6.69	smooth	smooth	shell	none	Townsend		1
2009.67-345.A	291	39	97	N569	E520	1	1	body	3.5	8.54	smooth	smooth	shell	none	Townsend	exterior may be smoothed over fabric impressed	1
2009.67-345.A	291	39	97	N569	E520	1	1	body	2.0	6.18	smooth	smooth	fine shell	none	Townsend	two sherds with same catalog number	1
2009.67-348.A	296	9	98	N569	E521	1	1	body	2.4	8.02	cord marked	smooth	crushed black stone	none	Dames Quarter	temper may be crushed granite	1
2009.67-351.A	293	49	99	N570	E519	1	1	near rim	1.5	4.95	smooth	smooth	shell	direct cord impressed	Townsend	Fea. 12: Field 1 hor. Bands parallel to rim; Z twist	1
2009.67-353.A	674	3	99	N570	E519	2	3	damaged	0.3	surface missing	surface missing	surface missing	fine grit	none	unidentifiable	sherd too damaged to identify	1
2009.67-358.A	305	7	101	N568	E520	1	2	-	-	-	-	-	-	-	-	Not ceramic	
2009.67-361.C	302	46	102	N568	E521	1	1	near rim	1.9	7.76	smooth	smooth	shell	direct cord impressed	Townsend	Field 1: hor. Bands parallel to rim; Z twist cord	1
2009.67-361.A	302	44	102	N568	E521	1	1	body	0.5	4.72	smooth	smooth	shell	none	Townsend		1
2009.67-361.B	302	45	102	N568	E521	1	1	body	3.4	6.74	smooth	smooth	very fine grit and shell	none	Killens	very compact fine grit in paste	1
2009.67-362.A	304	21	102	N568	E521	1	2	rim	3.2	7.25	cord marked	smooth	steatite	none	Selden Island	lip flattened with cord marking; fine black grit in paste	1
2009.67-372.B	557	23	103	N567	E520	1	1	-	-	-	-	-	-	-	-	small brick fragment	1
2009.67-372.A	557	37	103	N567	E520	1	1	body	1.1	5.60	smooth	smooth	shell	none	Townsend		1
2009.67-378.B	310	33	110	N589	E530	1	1	body	1.1	6.50	smooth	smooth	shell	none	Townsend		1
2009.67-378.A	310	32	110	N589	E530	1	1	body	1.9	6.29	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-378.D	310	34	110	N589	E530	1	1	body	3.1	8.26	cord marked	smooth	grog and crushed red rock	none	Nassawongo?	ID not certain	1
2009.67-378.C	310	31	110	N589	E530	1	1	body	6.5	8.79	cord marked	scraped	clay nodules	none	Coulbourn Cord		1
2009.67-385.a	312	28	112	N590	E531	1	1	body	1.4	surface missing	cord marked	surface missing	crushed quartz	none	unidentifiable	possibly Wolfe Neck or Hell Island; too damaged to be certain	1
2009.67-385.B	312	29	112	N590	E531	1	1	body	0.7	5.73	smooth	smooth	shell	none	Townsend		1
2009.67-396.A	324	5	115	N591	E532	2	2	body	3.9	9.25	cord marked	smooth	crushed quartz	none	Wolfe Neck	coil break	1
2009.67-397.A	414	2	115	N591	E532	2	3	body	4.3	9.53	cord marked	smooth	crushed quartz	none	Wolfe Neck Cord	could be Hell Island-like too, but no mica in paste; ID not certain	1
2009.67-421.A	331	21	119	N599	E571	1	1	body	2.6	8.41	cord marked?	smooth	steatite	none	Selden Island	Exterior appears to be smoothed over cord	1
2009.67-421.B	331	22	119	N599	E571	1	1	body	3.3	8.68	smooth	smooth	crushed quartz	none	unidentified	gritty paste; heavily oxidized	1

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Catalog number	Bag #	Inven. #	Test Unit	N Coord	E Coord	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-434.D	332	24	121	N601	E570	1	1	body	0.7	surface missing	surface missing	smooth	none	none	unidentifiable	too small to identify	1
2009.67-434.C	332	22	121	N601	E570	1	1	body	0.8	5.80	smooth	smooth	fine grit and shell	none	Killens	identification not certain due to size	1
2009.67-434.B	332	23	121	N601	E570	1	1	body	2.3	6.89	smooth	smooth	shell	none	Townsend		1
2009.67-434.A	332	21	121	N601	E570	1	1	body	1.2	7.57	cord marked?	smooth	steatite	none	Selden Island	Exterior appears to be smoothed over cord	1
2009.67-436.A	333	8	122	N601	E571	1	1	rim	0.9	5.36	cord marked	smooth	grit	none	unidentified	lip cord marked	1
2009.67-440.A	336	25	124	N600	E572	1	1	body	2.4	9.04	cord marked	smooth	steatite	none	Selden Island	cord smoothed	1
2009.67-440.A	336	25	124	N600	E572	1	1	body	1.3	surface missing	surface missing	surface missing	crushed quartz	none	unidentifiable	too small to identify	1
2009.67-441.B	342	7	124	N600	E572	2	2	body	1.3	surface missing	cord marked	surface missing	steatite	none	Selden Island	cord smoothed	1
2009.67-441.A	342	6	124	N600	E572	2	2	body	1.4	surface missing	cord marked	surface missing	steatite	none	Selden Island	cord smoothed	1
2009.67-442.A	345	8	124	N600	E572	2	3	body	0.8	surface missing	surface missing	smooth	steatite	none	Selden Island ?	coil break; likely Selden Island. Not likely Marcey Creek.	1
2009.67-442.A	345	8	124	N600	E572	2	3	body	1.9	9.59	surface missing	smooth	crushed quartz	none	unidentifiable	2 sherds; too small to identify	2
2009.67-562.A	352	30	128	N630	E621	1	1	body	1.3	6.39	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-570.A	353	4	129	N629	E621	1	1	body	0.8	5.73	fabric impressed?	smooth	fine grit and shell	none	Killens	fabric smoothed over	1
2009.67-597.A	570	4	135	N629	E622	2	3	body	0.4	surface missing	surface missing	smooth	fine grit	none	unidentifiable	sherd too small to identify	1
2009.67-598.A	360	34	136	N632	E622	1	1	body	0.9	5.22	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-598.B	360	35	136	N632	E622	1	1	body	0.8	5.95	smooth	smooth	fine grit	none	Killens?	compact paste	1
2009.67-603.A	361	27	137	N632	E619	1	1	body	1.5	surface missing	smooth	surface missing	fine grit	none	Killens?	2 sherds same type combined weight	2
2009.67-606.A	362	30	138	N631	E619	1	1	body	1.7	surface missing	surface missing	smooth	fine grit	none	Killens?	some voids in paste	1
2009.67-606.A	362	30	138	N631	E619	1	1	body	1.0	5.23	smooth	smooth	fine grit	short diagonal tick marks	Potomac Creek?	may be Killens	1
2009.67-612.A	364	34	140	N629	E619	1	1	body	2.6	8.95	cord marked	smooth	fine grit and crushed quartz	none	Hell Island?	no mica in paste; may be Potomac Creek?	1
2009.67-615.A	374	27	141	N572	E548	1	1	body	2.4	7.05	smooth	smooth	shell	none	Townsend		1
2009.67-616.B	811	3	141	N572	E548	2	2	body	1.8	surface missing	smooth	surface missing	shell	none	Townsend		1
2009.67-620.B	383	26	143	N572	E550	1	1	body	2.2	7.11	cord marked	smooth	crushed quartz and mica	none	Hell Island	paste very micaceous	1
2009.67-620.A	383	27	143	N572	E550	1	1	near rim	8.0	8.69	smooth	smooth	fine grit and shell	pseudo cord	Killens	Field 1 Hor. Bands (2); Field 2 Oblique lines (2)	1
2009.67-622.A	384	39	144	N572	E551	1	1	near rim?	3.3	7.83	smooth	smooth	fine grit and shell	incised	Killens	single incised line	1
2009.67-622.B	384	41	144	N572	E551	1	1	near rim?	1.1	7.31	smooth	smooth	fine grit and shell	incised	Killens	single incised line	1
2009.67-622.C	384	40	144	N572	E551	1	1	body	1.1	5.40	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-624.A	393	10	145	N572	E552	1	1	body	2.0	6.88	smooth	smooth	fine quartz	none	Minguannan?	ID not certain	1

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Catalog number	Bag #	Inven. #	Test Unit	N Coord	E Coord	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-627.B	373	19	146	N571	E548	1	1	body	0.6	surface missing	cord marked?	surface missing	none	none	unidentifiable	too small to identify	1
2009.67-627.B	373	18	146	N571	E548	1	1	body	1.2	surface missing	smooth	surface missing	fine grit	incised?	Killens?	very damaged; too small to identify with certainty	1
2009.67-630.A	376	33	147	N571	E549	1	1	body	2.1	7.21	damaged	smooth	shell	none	Townsend?	likely Townsend based on paste	1
2009.67-630.B	376	32	147	N571	E549	1	1	body	0.4	surface missing	surface missing	smooth	fine grit	none	unidentifiable	voids in paste; may be Killens?	1
2009.67-633.A	825	2	147	N571	E549	3	4	body	1.4	surface missing	smooth	surface missing	shell	none	Townsend		1
2009.67-635.A	382	26	148	N571	E550	1	1	body	2.0	6.25	smooth	smooth	fine grit and shell	none	Killens	exterior worn	1
2009.67-640.C	385	27	149	N571	E551	1	1	near rim	5.2	8.60	smooth	smooth	very fine grit	direct cord impressed	Killens?	Field 1 - 2 hor. Bands; Z twist cord; could be Townsend as well	1
2009.67-640.B	385	26	149	N571	E551	1	1	body	1.8	surface missing	smooth	surface missing	fine grit and shell	none	Killens		1
2009.67-640.A	385	25	149	N571	E551	1	1	body	1.4	4.31	smooth	smooth	shell	none	Townsend		1
2009.67-645.A	760	3	150	N571	E552	3	3	body	8.3	9.52	cord marked	smooth	grog	none	Coulbourn Cord		1
2009.67-647.A	372	26	151	N570	E548	1	1	body	2.7	6.98	surface missing	smooth	fine grit and shell	none	Killens?	likely Killens based on paste; not certain without exterior	1
2009.67-547.B	372	27	151	N570	E548	1	1	body	0.6	5.48	smooth	smooth	shell	none	Townsend		1
2009.67-650.A	377	33	152	N570	E549	1	1	body	0.8	surface missing	surface missing	smooth	none	none	unidentifiable	voids in paste; may be Killens?	1
2009.67-650.A	377	33	152	N570	E549	1	1	body	0.5	surface missing	surface missing	smooth	none	none	unidentifiable	voids in paste; may be Killens?	1
2009.67-654.C	386	29	153	N570	E551	1	1	body	3.1	8.57	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-654.A	386	30	153	N570	E551	1	1	rim	2.0	7.15	smooth	smooth	shell	none	Townsend	rim direct and rounded smooth at lip	1
2009.67-654.B	386	28	153	N570	E551	1	1	body	3.9	7.44	smooth	smooth	shell	none	Townsend		1
2009.67-654.B	386	28	153	N570	E551	1	1	body	3.8	4.50	smooth	smooth	shell	none	Townsend		1
2009.67-654.B	386	28	153	N570	E551	1	1	body	4.7	6.19	smooth	smooth	shell	none	Townsend		1
2009.67-654.B	386	28	153	N570	E551	1	1	body	0.9	4.08	smooth	smooth	shell	none	Townsend		1
2009.67-654.B	386	28	153	N570	E551	1	1	body	0.5	4.18	smooth	smooth	shell	none	Townsend		1
2009.67-654.B	386	28	153	N570	E551	1	1	body	0.5	4.08	smooth	smooth	shell	none	Townsend		1
2009.67-654.B	386	28	153	N570	E551	1	1	body	0.9	5.81	smooth	smooth	shell	none	Townsend		1
2009.67-654.B	386	28	153	N570	E551	1	1	body	1.1	surface missing	surface missing	smooth	fine grit	none	unidentifiable	oxidized exterior; may be Killens?	1
2009.67-658.A	391	27	154	N570	E548	1	1	body	0.9	surface missing	surface missing	surface missing	fine grit	none	unidentifiable	sherd too small and damaged to identify	1
2009.67-660.A	371	31	155	N569	E548	1	1	body	4.4	6.52	fabric impressed?	smooth	fine grit and shell	none	Killens	fabric may be smoothed over	1
2009.67-660.B	371	29	155	N569	E548	1	1	body	4.6	8.58	cord marked	smooth	fine grit and crushed quartz	none	unidentified	5 sherds the same and weighed together	5
2009.67-660.C	371	30	155	N569	E548	1	1	body	4.0	8.69	cord marked	smooth	fine grit	none	unidentified		1
2009.67-668.B	381	39	157	N569	E550	1	1	rim	0.4	3.89	smooth	smooth	fine grit and shell	pseudo cord	Killens?	pseudo cord oblique to rim; rim flat	1
2009.67-668.A	381	38	157	N569	E550	1	1	body	0.7	5.20	smooth	smooth	fine grit and shell	none	Killens	exterior worn	1
2009.67-673.A	387	34	158	N569	E551	1	1	body	1.4	surface missing	surface missing	smooth	fine grit	none	unidentifiable	sherd too damaged to identify	1
2009.67-673.B	387	35	158	N569	E551	1	1	body	2.9	4.60	smooth	smooth	shell	none	Townsend		1

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Catalog number	Bag #	Inven. #	Test Unit	N Coord	E Coord	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-675.A	390	16	159	N569	E552	1	1	body	2.6	7.79	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-678.A	370	29	160	N568	E548	1	1	body	4.4	8.41	smooth	smooth	fine shell	none	Townsend	compact paste with small voids	1
2009.67-678.B	370	28	160	N568	E548	1	1	body	10.4	8.43	fabric impressed	eroded	fine grit and shell	none	Killens	fabric smoothed over	1
2009.67-678.C	370	30	160	N568	E548	1	1	near base	5.3	12.91	roughened	smooth	shell	none	Townsend		1
2009.67-679.1.A	379	38	161	N568	E549	1	1	near base	6.3	11.42	smooth	smooth	shell	none	Townsend	paste sandy	1
2009.67-679.1.C	379	40	161	N568	E549	1	1	body	2.3	surface missing	cord marked	surface missing	fine crushed quartz	none	unidentifiable	possibly Hell Island; sherd too damaged for identification	1
2009.67-679.1.B	379	39	161	N568	E549	1	1	body	3.0	7.92	smooth	smooth	fine grit	none	unidentified	Killens-like paste without shell	1
2009.67-679.1.D	379	37	161	N568	E549	1	1	body	2.5	6.41	smooth	smooth	shell	none	Townsend	5 sherds the same and weighed together	5
2009.67-685.A	388	35	163	N568	E551	1	1	body	5.1	7.71	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-689.A	389	30	164	N568	E552	1	1	body	0.8	5.43	cord marked?	smooth	fine crushed quartz	none	Minguannan?	cord smoothed; small sherd	1
2009.67-696.A	456	14	165	N598	E570	1	1	body	1.4	surface missing	smooth	surface missing	grit	none	unidentifiable	sherd too damaged to identify	1
2009.67-697.A	458	3	165	N598	E570	2	2	body	0.3	surface missing	surface missing	surface missing	grit and shell	none	unidentifiable	possibly Killens base on paste	1
2009.67-713.A	582	35	167	N570	E539	1	1	body	3.0	7.08	smooth	smooth	shell	none	Townsend		1
2009.67-713.A	582	35	167	N570	E539	1	1	body	0.9	surface missing	surface missing	smooth	shell	none	Townsend?	ID not certain due to size	1
2009.67-713.B	582	36	167	N570	E539	1	1	body	1.5	5.54	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-715.A	732	1	167	N570	E539	2	3	body	2.6	6.94	smooth	smooth	shell	none	Townsend		1
2009.67-727.A	580	25	169	N569	E540	1	1	body	0.9	6.60	smooth	smooth	shell	none	Townsend?	ID not certain due to size	1
2009.67-731.A	583	29	170	N570	E538	1	1	body	1.3	6.41	smooth	smooth	fine grit and shell	none	Killens?	sherd damaged	1
2009.67-736.B	585	24	171	N569	E538	1	1	body	2.9	7.04	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-736.A	585	23	171	N569	E538	1	1	rim	7.7	7.92	smooth	smooth	fine grit and shell	direct cord impressed	Killens	Field 1:3 bands parallel to rim; Z cord twist	1
2009.67-781.A	586	30	172	N568	E538	1	1	body	0.9	4.98	smooth	smooth	shell	none	Townsend		1
2009.67-781.B	586	31	172	N568	E538	1	1	body	1.7	8.25	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-783.A	587	25	173	N568	E539	1	1	body	4.0	6.88	fabric impressed	smooth	fine grit and shell	none	Killens	fabric smoothed over	1
2009.67-786.B	588	4	174	N568	E540	1	1	body	0.9	surface missing	surface missing	smooth	fine grit and shell	none	Killens?	ID not certain due to size and damage to sherd	1
2009.67-786.B	588	4	174	N568	E540	1	1	body	0.4	surface missing	surface missing	surface missing	none	none	unidentifiable	sherd too small to identify	1
2009.67-786.A	588	3	174	N568	E540	1	1	body	0.8	surface missing	surface missing	surface missing	none	none	unidentifiable	sherd too damaged to identify	1
2009.67-786.A	588	3	174	N568	E540	1	1	body	0.8	4.57	smooth	smooth	fine grit	none	Killens?	ID not certain due to size	1
2009.67-786.A	588	3	174	N568	E540	1	1	body	1.7	6.32	smooth	smooth	fine grit and shell	none	Killens		1
2009.67-786.A	588	3	174	N568	E540	1	1	body	1.8	5.32	smooth	smooth	shell	none	Townsend		1
2009.67-1853.A	691	15	175	N800	E581	1	1	body	1.7	6.36	smooth	smooth	fine crushed quartz and mica	none	Minguannan		1

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Catalog number	Bag #	Inven. #	Test Unit	N Coord	E Coord	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-1857.C	692	4	176	N799	E581	1	1	body	2.1	4.83	smooth	smooth	fine grit and mica	none	Minguannan?	ID uncertain due to size and condition of sherd	1
2009.67-1857.A	692	2	176	N799	E581	1	1	body	1.0	5.98	smooth	smooth	fine grit and mica	none	Minguannan		1
2009.67-1857.B	692	3	176	N799	E581	1	1	body	1.9	5.58	smooth	smooth	fine grit and mica	none	Minguannan		1
2009.67-1857.B	692	3	176	N799	E581	1	1	body	2.0	5.27	smooth	smooth	fine grit and mica	none	Minguannan		1
2009.67-1859.B	693	22	177	N799	E580	1	1	body	0.9	4.59	smooth	smooth	fine grit and mica	none	Minguannan		1
2009.67-1859.A	693	21	177	N799	E580	1	1	body	1.6	6.24	smooth	smooth	fine grit and mica	none	Minguannan		1
2009.67-1860.E	694	20	178	N799	E579	1	2	body	1.7	6.12	smooth	smooth	fine grit and mica	none	Minguannan		1
2009.67-1860.E	694	20	178	N799	E579	1	2	body	0.9	surface missing	surface missing	smooth	fine grit and mica	none	Minguannan?	ID not certain without exterior surface	1
2009.67-1860.D	694	19	178	N799	E579	1	2	damaged	2.5	surface missing	surface missing	surface missing	steatite	none	unidentified	could be either Selden Island or Marcey Creek; damaged	1
2009.67-1861.A	695	15	179	N800	E579	1	1	body	2.0	5.91	smooth	smooth	fine grit and mica	none	Minguannan		1
2009.67-1863.A	697	13	181	N801	E580	1	1	body	0.7	surface missing	smooth	surface missing	fine grit	none	unidentifiable	paste similar to Hell Island, but no mica	1
2009.67-1864.A	698	15	182	N801	E581	1	1	body	2.7	7.51	smooth	smooth	fine grit and mica	none	Minguannan		1
2009.67-1864.B	698	2	182	N801	E581	1	1	damaged	0.8	surface missing	surface missing	surface missing	fine grit and mica	none	unidentifiable	3 small sherds weighed together; same paste as Hell Island	3
2009.67-1870.A	654	12	186	N741	E661	1	1	body	1.0	surface missing	smooth	surface missing	fine grit	none	unidentifiable	sherd too small and damaged to identify	1
2009.67-1872.A	655	13	187	N741	E660	1	1	body	1.3	6.37	smooth	smooth	fine grit	none	unidentifiable	sherd too small to identify	1
2009.67-1877.A	704	12	188	N799	E582	1	1	body	1.6	6.15	smooth	smooth	fine grit and crushed quartz	none	unidentified	paste similar to Minguannan, but no mica visible	1
2009.67-1877.A	704	12	188	N799	E582	1	1	body	1.4	4.79	smooth	smooth	fine grit and mica	none	Minguannan		1
2009.67-1877.1.A	705	2	189	N800	E582	1	1	body	1.7	5.22	smooth	smooth	fine grit and mica	none	Minguannan		1
2009.67-1877.1.A	705	2	189	N800	E582	1	1	body	1.3	4.65	smooth	smooth	fine grit and mica	none	Minguannan		1
	940	2	N/S Trench	N587	E556	E-horizon		body	1.4	surface missing	surface missing	smooth	shell	none	Townsend?	identification not certain due to damage	1
2009.67-1832.A	1824	1	P.P.	N622.7	E592.7	-	-	body	9.1	7.35	cord marked	smooth	grit	none	unidentified		1
2009.67-1827.A	1840	13	G.P. Trench 5	-	-	-	-	body	6.0	7.82	fabric impressed	smooth	shell	none	Townsend	fabric impression smoothed	1
2009.67-1827.C	1840	15	G.P. Trench 5	-	-	-	-	body	1.0	8.76	smooth	smooth	fine grit	none	unidentified		1
2009.67-1827.B	1840	14	G.P. Trench 5	-	-	-	-	body	3.2	8.10	smooth	smooth	fine grit and grog	none	unidentified		1
2009.67-1846.A	1822	14	G.P. Trench 5	-	-	-	-	body	6.7	8.95	cord marked	smooth	crushed black stone	none	Dames Quarter		1
2009.67-1840.B	1822	15	G.P. Trench 5	-	-	-	-	body	3.4	9.46	cord marked	smooth	crushed quartz	none	Wolfe Neck Cord		1

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Catalog number	Bag #	Inven. #	Test Unit	N Coord	E Coord	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-1838.A	1288	4	Fea. ComplexB			surface		body	4.2	7.62	smooth	smooth	shell	none	Townsend		1

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Non-Cultural Features

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Catalog number	Bag#	Inv#	Feature	N Coord	E Coord	Add' Prov.	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-13.A	29	6	3	N560	E510	TU4	3	2	body	44.6	10.57	cord marked	smooth-scraped	grog/clay nodules	none	Coulbourn Cord Vessel #3	cord criss-crossed; cord twist "S"	1
2009.67-313.B	476	2	3	N561	E511	TU92	1	2	body	16.3	10.91	cord marked	scraped - uneven	grog/clay nodules	none	Coulbourn Cord Vessel #2	cord criss-crossed; cord twist "S"	1
2009.67-313.A	476	1	3	N561	E511	TU92	1	2	body	15.2	10.01	cord marked	scraped	grog/clay nodules	none	Coulbourn Cord Vessel #2	cord criss-crossed; cord twist not discernable	1
2009.67-295.A	487	4	3	N561	E509	TU90	2	3	body	2.3	7.61	smooth	smooth	shell?	none	Killens?	voids and quartz grains in paste; ID not certain	1
2009.67-284.A	599	1	3	N560	E511	TU89	1	2	body	14.1	7.31	cord marked - scraped	smooth	shell	none	Mockley Cord	slightly gritty paste; cord twist "S"	1
2009.67-286.A	600	2	3	N560	E511	TU89	2	2	body	15.5	10.62	cord marked	scraped	grog/clay nodules	none	Coulbourn Cord Vessel #2	cord criss-crossed; cord twist "S"	1
2009.67-254.A	649	4	3	N559	E509	TU85	2	1	body	0.6	surface missing	surface missing	smooth-wiped	shell?	none	unidentifiable	too small and damaged to identify	1
2009.67-261.A	778	1	3	N559	E510	TU86	1	1	body	15.0	10.42	cord marked	smooth-uneven	grog/clay nodules	none	Coulbourn Cord Vessel #3	gritty quartz grains in paste; cord twist "S"	1
2009.67-262.A	779	9	3	N559	E510	TU86	2	1	body	1.3	6.52	smooth	smooth	shell	none	Townsend	2 sherds of same type weighed together	2
2009.67-39.A	44	11	4	N560	E520	TU10	1	1	body	3.0	surface missing	surface missing	smooth	none	none	unidentifiable	fine quartz grains in paste	1
2009.67-40.A	59	10	4	N560	E520	TU10	1	2	body	4.1	6.20	smooth	smooth	shell	none	Townsend		1
2009.67-52.B	48	4	5	N570	E520	TU11	2	4	body	7.1	7.86	cord marked	smooth-uneven	crushed black rock	none	Dames Quarter	cord twist "S"	1
2009.67-797.A	307	1	5	N569	E521	NE Quad	1	1	rim	1.1	4.81	fabric impressed	smooth	fine quartz grains and shell	none	Killens		1
2009.67-802.A	309	6	5	N569	E521	NE Quad	1	3	body	2.2	7.42	cord marked?	smooth	steatite & crushed black stone	none	Selden Island	cord twist not discernable	1
2009.67-813.A	508	6	5	N569	E520	NW Quad	2	3	unidentifiable	0.1	surface missing	surface missing	surface missing	unidentifiable	none	unidentifiable	too small to identify	1
2009.67-383.A	416	1	8	N589	E530	TU110	1	9	body	3.5	7.72	cord marked	smooth-scraped	fine quartz grains	none	unidentified	cord twist "S"	1
2009.67-423.C	349	5	12	N599	E571	TU119	1	1	body	1.0	surface missing	surface missing	smooth	fine steatite	none	unidentifiable	either Marcey Creek or Selden Island	1
2009.67-423.A	349	3	12	N599	E571	TU119	1	1	body	10.7	11.19	cord marked-smoothed	smooth-wiped	crushed quartz	none	Wolfe Neck	fine quartz pebbles in paste; cord twist not discernable	1
2009.67-423.B	349	4	12	N599	E571	TU119	1	1	body	5.8	surface missing	surface missing	smooth - 2 cords	crushed quartz	none	Wolfe Neck	fine quartz pebbles in paste; cord twist not discernable	1
2009.67-419.A	468	3	12	N599	E570	TU118	8	8	body	2.3	7.68	smooth	smooth	fine steatite	none	Selden Island	ID not certain	1
2009.67-424.A	450	4	12	N599	E571	TU119	1	2	body	1.7	surface missing	cord marked - smoothed	surface missing	fine steatite	none	Selden Island	cord twist not discernable	1
2009.67-413.A	464	1	12	N599	E570	TU118	5	5	body	8.8	9.90	cord marked	smooth-uneven	crushed black rock	none	Dames Quarter Vessel #1	fine quartz grains in paste; cord twist "S"	1
2009.67-708.A	546	1	12	N598	E570	TU165	6	8	body	6.8	9.55	cord marked	smooth	crushed black rock	none	Dames Quarter Vessel #1	2 sherds of same type weighed together; cord twist unclear	2
2009.67-843.A	795	3	12	N598	E571	SE Quad	1	7	body	5.0	10.11	cord marked	smooth-uneven	crushed black rock	none	Dames Quarter Vessel #1		1
2009.67-359.A	303	1	30	N568.8	E520.5		1	1	body	6.5	7.65	cord marked	smooth	quartz grains and mica	none	Hell Island Vessel #1	cord twist "Z"	1

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Catalog number	Bag#	Inv#	Feature	N Coord	E Coord	Add' Prov.	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-911.A	896	28	100	N627.5	E621		1	1	body	20.2	10.13	cord marked - smoothed	smooth-uneven	crushed black rock	none	Dames Quarter	coil break; mends to 2009.67-915.A; cord twist unclear	1
2009.67-915.A	1322	8	100	N627.5	E621	N 1/2	1	3	body	32.4	11.26	cord marked-smoothed	smooth-uneven	crushed black rock	none	Dames Quarter	mends to 2009.67-911.A; cord twist unclear	1
2009.67-939.A	1016	-	107	N631.5	E593.5		1	1	body	13.3	11.05	smooth-uneven	smooth-uneven	crushed black rock	none	Dames Quarter	0	1
2009.67-944.A	1856	1	108	N634.7	E593.8	P.P.	surface		body	10.4	7.45	smooth-uneven	smooth	shell	none	Townsend	Townsend Smooth sub-type	1
2009.67-964.A	1023	1	121	N620.5	E587.9		1	2	body	2.6	10.76	unidentifiable	smooth	crushed black rock	none	Dames Quarter	quartz grains in paste	1
2009.67-966.A	1025	1	121	N620.5	E587.9		3	10	body	13.0	10.22	smooth-uneven	smooth	crushed black rock	none	Dames Quarter	similar to sherds in Feature 100	1
2009.67-984.A	1265	1	146	N605.5	E583.6		2	2	body	2.8	9.71	unidentifiable	smooth	crushed quartz and mica	none	Hell Island		1
2009.67-985.A	1187	6	152	N605.1	E589.3	S 1/2	1	1	body	3.8	8.64	cord marked	smooth	crushed quartz	none	Wolfe Neck Cord	cord twist not discernable	1
2009.67-986.A	1188	5	152	N605.1	E589.3	S 1/2	1	2	body	6.6	9.77	cord marked	smooth-uneven	crushed quartz	none	Wolfe Neck Cord	cord criss-crossed; cord twist "S"	1
2009.67-992.A	1312	1	152	N605.1	E589.3	S 1/2	2	4	body	4.8	9.23	cord marked-smoothed	smooth	crushed black rock and quartz	none	Dames Quarter	quartz grains in paste; cord twist unclear	1
2009.67-990.A	1314	1	152	N605.1	E589.3	S 1/2	1	6	body	9.6	10.18	smooth-uneven	smooth	crushed quartz and mica	none	Hell Island	may be smoothed over cord	1
2009.67-1004.A	1168	9	166	N593.8	E584		1	1	body	13.9	10.47	cord marked-smoothed	smooth	crushed quartz	none	Wolfe Neck Cord	fine black grains in paste; cord twist not discernable	1
2009.67-1004.B	1274	9	166	N593.8	E584		1	2	rim	3.4	7.51	cord marked-smoothed	smooth	crushed black rock	none	Dames Quarter Vessel #2	fine quartz grains in paste; cord twist unclear	1
2009.67-1004.C	1274	8	166	N593.8	E584		1	2	body	5.8	9.49	cord marked-smoothed	smooth	crushed black rock	none	Dames Quarter Vessel #2	fine quartz grains in paste; cord twist unclear	1
2009.67-1028.A	1863	-	179	N562.2	E527.4	P.P.	surface	-	body	8.1	surface missing	surface missing	smooth	crushed black rock	none	Dames Quarter	fine quartz grains in paste; not assigned to vessel	1
2009.67-1033.A	1848	-	180	N564.25	E525.95	P.P.	surface	-	body	5.5	10.87	smooth	smooth	steatite	none	Marcey Creek Vessel #1		1
2009.67-1033.B	1862	-	180	N564.3	E525.7	P.P.	surface	-	body	20.0	surface missing	surface missing	smooth	steatite	none	Marcey Creek Vessel #1		1
2009.67-1042.A	875	2	184	N570	E545.6		1	2	body	1.2	8.53	unidentifiable	smooth	fine shell	none	unidentifiable	damaged sherd	1
2009.67-1058.A	879	3	187	N587.5	E545		surface	-	unidentifiable	0.3	surface missing	surface missing	smooth	fine shell?	none	unidentifiable		1
2009.67-1057.A	1852	1	187	N587.5	E544.3	P.P.	surface	-	body	8.0	7.27	fabric impressed	smooth	fine shell	none	Townsend	Rappahannock Fabric Impressed	1
2009.67-1055.A	1858	1	187	N587	E545	P.P.	surface	-	body	6.2	6.95	smooth	smooth	shell	none	Townsend	coil break	1
2009.67-1055.B	1858	2	187	N587	E545	P.P.	surface	-	body	8.4	7.33	fabric impressed	smooth	fine shell	none	Townsend	RFI; same vessel as 2009.67-1057.A	1
2009.67-1058.B	1423	8	188	N588.5	E537.5		1	1	body	6.9	10.30	smooth-uneven	smooth	crushed quartz and grit	none	Wolfe Neck	abundant fine quartz grains in paste	1
2009.67-1062.A	1309	3	189	N585	E536.2	W 1/2	1	1	body	3.9	10.79	cord marked	smooth	fine steatite	none	Selden Island	2 sherds of same type weighed together; cord twist "S"	2
2009.67-1069.A	1197	8	194	N581.7	E535.7	S 1/2	1	1	body	2.0	7.67	Fabric impressed?	smooth	shell	none	Townsend	identification not certain; fabric may be smoothed over	1
2009.67-1095.A	1154	11	201	N577.1	E537.8		2	1	rim	15.8	11.55	cord marked	smooth	crushed quartz	none	Wolfe Neck Cord Vessel #3	cord twist unclear	1

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Catalog number	Bag#	Inv#	Feature	N Coord	E Coord	Add' Prov.	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-1096.A	1165	8	201	N577.1	E537.8		2	1	body	3.7	10.48	cord marked	smooth	crushed quartz	none	Wolfe Neck Cord Vessle #3	cord twist unclear	1
2009.67-1108.A	1441	4	208	N566	E535.5	W 1/2	1	1	body	3.3	7.38	smooth	smooth	shell	none	Townsend	Townsend Smooth sub-type	1
2009.67-1108.C	1441	6	208	N566	E535.5	W 1/2	1	1	body	2.3	7.89	smooth	smooth	shell	tick marks	Townsend	Townsend Smooth sub-type; 5 sherds weighed together	1
2009.67-1108.B	1441	5	208	N566	E535.5	W 1/2	1	1	body	14.8	9.63	smooth;scraped	smooth	fine shell	none	Townsend	Townsend Smooth sub-type	1
2009.67-1156.A	1077	6	225	N586.3	E525	W 1/2	1	1	-	-	-	-	-	-	-	-	not ceramic	1
2009.67-1156.B	1077	5	225	N586.3	E525	W 1/2	1	1	body	15.2	8.56	cord marked	smooth and cord	crushed quartz	none	Wolfe Neck	cord twist "S"	1
2009.67-1158.A	1078	23	225	N586.3	E525	W 1/2	1	2	body	8.0	8.22	cord marked-smoothed	smooth	fine steatite	none	Selden Island	2 sherds of same type weighed together	2
2009.67-1158.C	1078	24	225	N586.3	E525	W 1/2	1	2	-	-	-	-	-	-	-	-	not ceramic; bog iron	
2009.67-1158.B	1078	22	225	N586.3	E525	W 1/2	1	2	body	10.1	9.27	cord marked-smoothed	smooth	fine steatite	none	Selden Island	fine black grains in paste; cord twist not discernable	1
2009.67-1162.A	1082	7	225	N586.3	E525	W 1/2	1	6	body	5.9	8.63	cord marked	smooth-gritty	fine crushed quartz	none	Wolfe Neck	cord twist not discernable	1
2009.67-1175.A	1089	5	225	N586.3	E525	W 1/2	1	13	body	3.9	8.83	cord marked-smoothed	smooth	fine crushed quartz	none	Wolfe Neck	fine black grains in paste; cord twist not discernable	1
2009.67-1180.A	1332	3	225	N586.3	E525	E 1/2	1a	4	body	1.5	8.84	cord marked ?	smooth	fine crushed quartz	none	Wolfe Neck	cord twist not discernable	1
2009.67-1180.1.A	1333	10	225	N586.3	E525	E 1/2	1b	4	body	2.9	10.02	unidentifiable	smooth	fine crushed quartz	none	Wolfe Neck	ID not certain; surface treatment unclear	1
2009.67-1167.1.A	1792	7	225	N586.3	E525	E 1/2	1	8	body	2.3	7.08	cord marked	smooth	crushed black stone	none	Dames Quarter	cord twist not discernable	1
2009.67-1167.1.B	1792	6	225	N586.3	E525	E 1/2	1	8	unidentifiable	0.5	surface missing	surface missing	surface missing	crushed black stone	none	unidentifiable	too small to identify	1
2009.67-1171.1.A	1802	4	225	N586.3	E525	E 1/2	1	11	unidentifiable	1.1	surface missing	surface missing	smooth-gritty	fine steatite	none	Selden Island	ID not certain; surface treatment unclear	1
2009.67-1226.B	1554	16	236	N567.3	E526.4	W 1/2	1	1	unidentifiable	0.2	surface missing	surface missing	smooth	shell?	none	unidentifiable	too small to identify	1
2009.67-1226.A	1554	14	236	N567.3	E526.4	W 1/2	1	1	near rim	1.4	4.75	smooth	smooth	fine shell and grit	direct cord impressed	Killens	Field 1 - 4 horizontal bands parallel to rim; Z twist cord	1
2009.67-1226.A.1	1554	15	236	N567.3	E526.4	W 1/2	1	1	near rim	5.7	7.26	smooth	smooth	fine shell	direct cord impressed	Townsend	Horizontal and oblique crossing bands; Z twist cord	1
2009.67-1254.1.A	1174	11	243	N560.8	E532.4	N 1/2	1	1	body	2.4	8.01	cord marked	smooth	fine crushed quartz	none	Wolfe Neck Cord?	fine quartz grains in paste; cord twist "S"	1
2009.67-1256.A	1176	2	243	N560.8	E532.4	N 1/2	1	3	unidentifiable	0.2	surface missing	surface missing	smooth	unidentifiable	none	unidentifiable	too small to identify	1
2009.67-1277.A	1041	10	256	N564.9	E547.2	SE 1/2	1	1	body	0.9	surface missing	surface missing	smooth	shell	none	Townsend?	ID not certain; surface treatment unclear	1
2009.67-1277.B	1041	11	256	N564.9	E547.2	SE 1/2	1	1	body	0.2	surface missing	surface missing	smooth	shell	none	Townsend?	ID not certain; surface treatment unclear	1
2009.67-1348.A	1289	4	303	N584	E541.5		1	1	body	4.0	5.52	fabric impressed-smoothed	smooth	shell	none	Townsend	Rappahannock Fabric Impressed	1
2009.67-1348.A	1289	4	303	N584	E541.5		1	1	body	16.9	8.83	cord marked	smooth	grog/clay nodules	none	Coulbourn Cord	cord twist not discernable	1
2009.67-1353.A	1411	3	304	N586.4	E541.4		1	1	body	3.5	7.08	smooth	smooth	shell	none	Townsend	Townsend Smooth sub-type	1
2009.67-1366.B	1419	2	307	N588.7	E540.9	NE Quad	2	1	body	1.5	6.64	smooth	unidentifiable	fine crushed quartz	none	unidentifiable	3 small sherds of same type weighed together	3

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Catalog number	Bag#	Inv#	Feature	N Coord	E Coord	Add' Prov.	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-1366.A	1419	1	307	N588.7	E540.9	NE Quad	2	1	body	2.8	surface missing	cord marked-smoothed	surface missing	crushed black stone	none	Dames Quarter	cord twist not discernable	1
2009.67-1374.A	1172	4	314	N578	E551.4		1	2	body	2.3	7.83	smooth	smooth	shell	none	Townsend	Townsend Smooth sub-type	1
2009.67-1586.A	845	5	344	N571.5	E558	E 1/2	2	1	body	0.5	4.14	smooth	smooth	shell	none	Townsend	Townsend Smooth sub-type	1
2009.67-1597.A	1270	1	348	N576.8	E560.7		1	3	body	14.7	7.47	smooth	smooth	shell	none	Townsend	Townsend Smooth sub-type; 5 sherds weighed together	1
2009.67-1615.A	1298	1	357	N570.5	E563.7	E 1/2	1	1	body	6.8	8.13	smooth	smooth	fine shell and grit	none	Killens		1
2009.67-1724.A	1854	1	400	N586	E555.4	P.P.	surface	-	body	2.4	6.38	smooth	smooth	fine shell and grit	none	Killens	grit from clay source?	1
2009.67-1815.A	1111	2	403	N581.6	E554.9		1	1	unidentifiable	1.9	surface missing	surface missing	smooth	none	none	unidentifiable	also listed as Feature 406	1
2009.67-1730.A	938	10	405	N587	E556.5	N/S trench	1	1	body	13.3	6.81	smooth	smooth	fine shell	none	Townsend	Townsend Smooth sub-type; 4 sherds weighed together	4
2009.67-1735.A	939	4	405	N584	E556.5	N/S trench	2	1	body	3.0	6.80	smooth	smooth	fine shell	none	Townsend	Townsend Smooth sub-type; fine quartz grains in paste	1
2009.67-1746.A	946	3	405	N584	E556.5	N/S trench	2	4	body	7.4	7.66	cord marked-smoothed	smooth-uneven	crushed black stone	none	Dames Quarter	fine quartz grains in paste; cord twist not discernable	1
2009.67-1727.A	1114	5	405	N586	E555	E/W sect.2	1	1	body	12.0	6.75	smooth-uneven	smooth	shell	none	Townsend	Townsend Smooth sub-type; 2 sherds weighed together	2
2009.67-1727.A	1114	5	405	N586	E555	E/W sect.2	1	1	body	5.3	7.18	smooth	smooth	shell	none	Townsend	Townsend Smooth sub-type	1
2009.67-1728.A	1115	5	405	N586	E556	E/w sect.3	1	1	body	4.7	6.47	smooth	smooth	shell	none	Townsend	Townsend Smooth sub-type	1
2009.67-1728.A	1115	5	405	N586	E556	E/w sect.3	1	1	body	3.6	5.27	smooth	smooth	shell	none	Townsend	Townsend Smooth sub-type	1
2009.67-1728.A	1115	5	405	N586	E556	E/w sect.3	1	1	body	1.9	5.43	smooth	smooth	shell	none	Townsend	gritty paste	1
2009.67-1731.A	1117	1	405	N586	E555	E/W sect.2	1	2	body	5.0	7.83	smooth-scraped	smooth	shell	none	Townsend		1
2009.67-1752.A	1855	1	405	N582.72	E555.02	P.P.	surface	-	rim	8.0	6.23	cord marked	smooth-uneven	crushed black stone	none	Dames Quarter	Rim direct with cord marking on lip; cord twist unclear	1

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Table A-5

Catalog number	Bag #	Inv#	Feature	N Coord	E Coord	Add' Prov.	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-95.A	94	2	9	N570.2	E539.6	TU 22	1	1	near rim?	0.4	surface missing	smooth	surface missing	shell	incised?	Townsend Vessel #1	ID uncertain due to size	1
2009.67-735.A	715	3	9	N570.2	E539.6	TU 170	1	1	body	2.2	8.58	roughened	roughened	shell and quartz grains	none	Killens?	ID uncertain; exterior unusual	1
2009.67-107.A	119	-	10	N571.4	E551	NW	2	3	body	25.6	9.28	smooth	smooth	shell and quartz grains	none	Killens Vessel #1		1
2009.67-743.A	401	1	10	N571.4	E551	SE 1/2	1	1	rim	9.7	5.79	fabric impressed	smooth-wiped	shell	none	Townsend Vessel #3	rim direct, rounded	1
2009.67-793.C	401	4	10	N571.4	E551	SE 1/2	1	1	body	3.9	7.16	fabric impressed	smooth	shell	none	Townsend Vessel #6	mends to Bag401,Inven.5	1
2009.67-793.D	401	5	10	N571.4	E551	SE 1/2	1	1	body	1.5	7.29	smooth	smooth-wiped	shell	none	Townsend Vessel #6	mends to 2009.67-793.C	1
2009.67-793.B	401	3	10	N571.4	E551	SE 1/2	1	1	body	6.6	9.65	smooth	smooth	shell	none	Townsend Vessel #10	mends to 2009.67-793.A	1
2009.67-793.A	401	2	10	N571.4	E551	SE 1/2	1	1	body	9.0	9.39	smooth	smooth	shell	none	Townsend Vessel #10	mends to 2009.67-793.B	1
2009.67-793.E	401	6	10	N571.4	E551	SE 1/2	1	1	body	0.5	3.69	smooth	smooth	fine shell	none	Townsend Vessel #11	very small vessel	1
2009.67-791.A	402	8	10	N571.4	E551	SE 1/2	2	2	rim	3.9	5.58	smooth	smooth-wiped	shell	none	Townsend Vessel #4	rim direct, rounded	1
2009.67-791.C	402	7	10	N571.4	E551	SE 1/2	2	2	body	5.6	7.45	smooth	smooth	shell	none	Townsend Vessel #7	mends to Bag402,Inven.6	1
2009.67-791.B	402	6	10	N571.4	E551	SE 1/2	2	2	body	15.1	8.22	smooth	smooth	shell	none	Townsend Vessel #7	mends to Bag402,Inven.7	1
2009.67-791.D	402	9	10	N571.4	E551	SE 1/2	2	2	body	3.1	9.68	smooth	smooth	shell	none	Townsend Vessel #9		1
2009.67-791.H	402	13	10	N571.4	E551	SE 1/2	2	2	body	1.9	8.79	smooth	smooth	shell	none	Townsend Vessel #9	mends to 2009.67-791.B	1
2009.67-791.F	402	11	10	N571.4	E551	SE 1/2	2	2	body	2.5	9.51	smooth	smooth	shell	none	Townsend Vessel #9		1
2009.67-791.G	402	12	10	N571.4	E551	SE 1/2	2	2	body	1.7	9.41	smooth	smooth	shell	none	Townsend Vessel #9	mends to Bag402, Inven.10	1
2009.67-791.E	402	10	10	N571.4	E551	SE 1/2	2	2	body	2.1	9.02	smooth	smooth	shell	none	Townsend Vessel #9	mends to 2009.67-791.B	1
2009.67-791.K	402	14	10	N571.4	E551	SE 1/2	2	2	body	0.5	8.98	smooth	smooth	shell	none	Townsend Vessel #9		1
2009.67-794.A	403	6	10	N571.4	E551	SE 1/2	3	3	body	6.0	7.96	smooth	smooth	shell and quartz grains	none	Killens Vessel #1	mends to Bag403, Inven.7	1
2009.67-794.B	403	7	10	N571.4	E551	SE 1/2	3	3	body	2.2	7.75	smooth	smooth	shell and quartz grains	none	Killens Vessel #1	mends to 2009.67-794.A	1
2009.67-836.A	408	4	10	N571.4	E551	NE quad	1	1	rim	3.9	6.99	smooth	smooth	shell	none	Townsend Vessel #2	rim direct, rounded	1
2009.67-836.B	408	5	10	N571.4	E551	NE quad	1	1	body	2.5	4.98	smooth	smooth	shell	none	Townsend Vessel #3		1
2009.67-836.C	408	6	10	N571.4	E551	NE quad	1	1	body	1.2	4.78	smooth	smooth	shell	none	Townsend Vessel #8		1
2009.67-836.D	408	7	10	N571.4	E551	NE quad	1	1	body	0.3	4.1	smooth	smooth	fine shell	none	Townsend Vessel #11	very small vessel	1
2009.67-837.A	409	1	10	N571.4	E551	NE quad	2	2	body	35.6	8.22	smooth-scraped	smooth-wiped	shell	none	Townsend Vessel #5	striations on exterior	1
2009.67-838.A	610	3	10	N571.4	E551	NE quad	3	3	body	2.4	4.66	smooth	smooth	shell	none	Townsend Vessel #8		1
2009.67-1048.B	851	10	185	N576.5	E542.2	S 1/2	1	1	body	22.8	9.59	cord marked	smooth	steatite	none	Selden Island Vessel #1	cord twist unclear	1
2009.67-1048.E	851	13	185	N576.5	E542.2	S 1/2	1	1	unclear	0.9	surface missing	surface missing	smooth	steatite	none	Selden Island Vessel #1 (?)	ID not certain without exterior	1
1048.67-1048.C	851	11	185	N576.5	E542.2	S 1/2	1	1	body	2.3	surface missing	cord marked	surface missing	steatite	none	Selden Island Vessel #1	cord twist unclear	1
2009.67-1048.A	851	9	185	N576.5	E542.2	S 1/2	1	1	body	24.1	9.25	cord marked	smooth	steatite	none	Selden Island Vessel #1	cord twist "S"	1
2009.67-1048.D	851	12	185	N576.5	E542.2	S 1/2	1	1	body	2.2	9.82	smooth	smooth	steatite	none	Selden Island Vessel #1 (?)	exterior smooth; coiled	1
2009.67-1047.A	855	6	185	N576.5	E542.2	N 1/2	1	1	body	3.3	6.03	smooth	smooth	fine shell	none	Townsend	sherd not assigned to vessel	1
2009.67-1049.A	856	4	185	N576.5	E542.2	N 1/2	1	2	unclear	0.2	surface missing	surface missing	surface missing	fine shell	none	unidentifiable	sherd damaged	1
2009.67-1052.A	1849	-	185	N576	E542	PP	surface	-	body	36.6	9.5	cord marked	smooth	steatite	none	Selden Island Vessel #1	cord twist "S"	1
2009.67-1065.A	1028	6	190	N587	E533	E 1/2	1	1	body	14.4	10.66	cord marked	smooth	steatite	none	Selden Island Vessel #2	cord twist "S"	1
2009.67-1076.B	1433	7	195	N580.4	E531.2	S 1/2	1	1	body	3.6	10.06	cord marked	smooth	steatite	none	Selden Island Vessel #4	cord twist unclear	1
2009.67-1076.A	1433	8	195	N580.4	E531.2		1	1	body	0.5	surface missing	surface missing	smooth	none	none	unidentifiable	sherd damaged	1
2009.67-1075.B	1434	4	195	N580.4	E531.2		1	2	body	5.0	11.19	cord marked	smooth	crushed quartz	none	Wolfe Neck Cord Vessel #1	cord twist "S"	1
2009.67-1075.A	1434	3	195	N580.4	E531.2		1	2	body	4.1	8.94	cord marked	smooth	steatite	none	Selden Island Vessel #3	cord twist unclear	1

Frederica North (7K-F-11) Phase III Ceramic Data

Cultural Features

Table A-5

Catalog number	Bag #	Inv#	Feature	N Coord	E Coord	Add' Prov.	Stratum	Level	Vessel Part	Weight (g)	Thickness (mm)	Exterior surface	Interior surface	Temper	Decoration	Type Identification	Notes	Count
2009.67-1072.A	1435	20	195	N580.4	E531.2	N 1/2	1	1	body	16.6	10.37	cord marked	smooth	crushed quartz	none	Wolfe Neck Cord Vessel #1	cord twist "S"	1
2009.67-1072.B	1435	19	195	N580.4	E531.2	N 1/2	1	1	body	5.0	8.74	cord marked	smooth	steatite	none	Selden Island Vessel #4	cord twist unclear	1
2009.67-1072.A	1435	20	195	N580.4	E531.2	N 1/2	1	1	body	11.6	9.66	cord marked	smooth	clay nodules/grog	none	Coulbourn Cord Vessel #1	cord twist unclear	1
2009.67-1072.A	1435	20	195	N580.4	E531.2	N 1/2	1	1	body	2.4	9.76	cord marked (?)	smooth	fine steatite	none	Selden Island (?)	cord twist unclear; cord smoothed	1
2009.67-1076.A	831	4	197	N578.8	E535.6	N 1/2	1	1	body	1.9	10.59	cord marked (?)	smooth	crushed quartz	none	Wolfe Neck (?)	surface treatment unclear	1
2009.67-1076.A	831	4	197	N578.8	E535.6	N 1/2	1	1	body	2.4	8.72	cord marked (?)	smooth	steatite	none	Selden Island (?)	surface treatment unclear	1
2009.67-1080.A	832	4	197	N578.8	E535.6	S 1/2	1	1	body	5.8	10.03	cord marked	smooth	steatite	none	Selden Island Vessel #5	cord twist unclear	1
2009.67-1080.B	832	5	197	N578.8	E535.6	S 1/2	1	1	unclear	0.6	surface missing	surface missing	smooth	none	none	unidentifiable	sherd damaged	1
2009.67-1081.A	1861	-	197	N578.8	E535.6	PP	surface	-	body	10.1	10.69	cord marked	smooth	crushed quartz	none	Wolfe Neck Cord Vessel #2	cord twist "S"	1
2009.67-1089.A	1155	6	200	N575.25	E538.9	E 1/2	3	2	body	4.1	9.45	smooth - uneven	smooth	fine steatite	none	Marcey Creek (?)	could be Selden Island (?)	1
2009.67-1087.A	1162	7	200	N575.25	E538.9	W 1/2	2	1	body	2.9	surface missing	smooth	surface missing	crushed quartz	none	Wolfe Neck (?)	ID not certain without exterior	1
2009.67-1113.A	1101	6	210	N565.8	E531.7	W 1/2	1	1	unclear	0.6	surface missing	surface missing	smooth	fine shell	none	unidentifiable	sherd damaged	1
2009.67-1209.A	932	10	227	N591.12	E522.7	S 1/2	1	2	body	0.3	surface missing	surface missing	smooth	none	none	unidentifiable	sherd damaged	1
2009.67-1215.A	1129	24	233	N574.4	E523.7	E 1/2	1	1	body	2.1	6.91	fabric impressed	smooth	shell and quartz grains	none	Killens Vessel #2		1
2009.67-1272.A	1751	1	253	N568.4	E543.6	Root	1	3	near base	3.3	9.51	smooth	smooth	fine shell	none	Townsend Vessel #12		1
2009.67-1298.A	1847	-	273	N577	E545	PP	surface	-	body	4.0	6.66	smooth	smooth	shell	none	Townsend Vessel #13		1
2209.67-1307.A	884	16	279	N558.5	E508	S 1/2	1	3	unclear	0.4	surface missing	surface missing	surface missing	none	none	unidentifiable	sherd damaged	1
2009.67-1342.A	837	49	295	N577.75	E520.5	N 1/2	1	1	body	1.0	surface missing	surface missing	smooth	quartz grains and mica	none	Hell Island (?)	ID not certain without exterior	1
2009.67-1371.A	1853	1	308	N569.1	E543.7	PP	surface	-	body	6.8	8.62	cord marked	smooth	fine steatite	none	Selden Island Vessel #7	cord twist unclear	1
2009.67-1491.A	1623	19	338	N567	E518.4	E 1/2	1	3	body	3.9	6.53	fabric impressed	smooth	shell	none	Townsend Vessel #14		1
2009.67-1491.A	1623	19	338	N567	E518.4	E 1/2	1	3	body	2.9	8.7	surface missing	smooth	shell	none	Townsend (?)	ID not certain without exterior	1
2009.67-1080.A	1850	-	366	N598.7	E572.2	PP	surface	-	body	5.1	11.14	cord marked	smooth	steatite	none	Selden Island Vessel #6	cord twist unclear	1
2009.67-1665.A	978	18	376	N556	E514	W 1/2	1	4	unclear	0.5	surface missing	surface missing	surface missing	none	none	unidentifiable	sherd damaged	1
2009.67-1707.A	1606	18	388	N553.7	E508.7	S 1/2	1	1	body	3.2	surface missing	surface missing	smooth	crushed black rock	none	Dames Quarter (?)	ID not certain without exterior	1
2209.67-1757.A	863	2	418	N577	E543.5	mid 1/2	1	4	unclear	0.5	surface missing	surface missing	surface missing	shell and quartz grains	none	unidentifiable	perhaps Killens based on paste	1
2009.67-1758.A	864	3	418	N577	E543.5	mid 1/2	1	5	unclear	0.4	surface missing	surface missing	surface missing	fine grit	none	unidentifiable	sherd damaged	1

APPENDIX B

CERAMIC VESSEL DESCRIPTIONS

Appendix B

American Indian Ceramic Vessels at Frederica North (7K-F-11) Vessels From Cultural Features

Coulbourn Ware

Coulbourn Vessel #1 – this vessel is defined based on a single, large body sherd (Plate 1).

Feature 195

Sherd 1 – 2009.67-1072.A, Bag # 1435, Inventory # 20, Stratum 1, Level 1

Vessel part – body

Thickness – 9.66 mm Weight – 11.6 grams

Exterior surface – cord marked; smoothed over. The cord twist is unclear due to smoothing.

Interior surface - smooth

Temper – clay nodules/grog; some nodules oxidized to 2.5YR 6/8 (red)

Paste Inclusions – fine, sub-angular black grains and one small quartzite fragment

Texture – clayey

Exterior color – 7.5YR 5.5/4 (light brown)

Interior color – 10YR 6/3 (pale brown)

Core color – no defined core

Decorations - none

Vessel form – conoidal; curved sherd

Vessel volume – unidentifiable

Use trace – two arc-shaped grooves on the interior surface worn through the surface approximately 0.5 mm. (Plate 2)

Manufacture – unidentifiable; likely coiled

Mends – none

Associated Radiocarbon Date –

Beta – 307657 (charcoal) CRA = 2890±30 B.P.

Discussion - This sherd is a very clear example of Coulbourn Ware in terms of temper, paste characteristics and surface treatment. However, the radiocarbon date is much too early for the type. As the sherd was recovered near the top of the feature, it is likely it represents a later intrusion caused by cultural and natural processes.



Plate 1



Plate 2

Killens Ware

Killens Vessel #1 – this vessel is defined from three body sherds (Plate 3).

Feature 10

Sherd 1 – 2009.67-107.A; Bag # 119, Stratum 2, Level 3

Sherd 2 – 2009.67-794.A; Bag # 403, Inventory # 6, Stratum 3, Level 3

Sherd 3 – Bag # 403, Inventory # 7, Stratum 3, Level 3

Vessel Part – three body sherds

Thickness – 7.75 mm – 9.28 mm Combined Weight – 33.8 grams

Exterior surface – smooth; wiped

Interior surface – smooth

Temper – shell; leached

Paste Inclusions – fine, sub-rounded quartz grains

Texture – clayey; slightly gritty due to quartz grains

Exterior color – Sherd 1 – 10YR 6.5/3 (pale brown). Some slightly darker patches that may have resulted from differences in the firing atmosphere.

Sherd 2 – 10 YR 5.5/2 (grayish brown).

Sherd 3 – 7.5 YR 4/1 (dark gray)

Interior color – 7.5 YR 6.5/3 (light brown) and 7.5 YR 6.5/4 (light brown)

Core color – no clear core

Decoration – none

Vessel form – conoidal; sherds curved

Vessel volume – unidentifiable

Use trace – organic residue on the interior of sherd # 3; grass seed starch grains abundant (Yost 2012; ceramic sample #8).

Manufacture – coiled; coil breaks occur on all sherds

Mends – sherds # 2 and #3 mend

Associated Radiocarbon dates –

Beta – 307300 (charcoal) CRA = 330±30 B.P.

Beat – 307301 (shell) CRA = 790±30 B.P.

Discussion – The exterior color of the two body sherds that mend is noticeably different. The darker of the two (sherd # 3) appears to have a very thin organic residue on the exterior surface.

It is possible that the residue was deposited on the sherd after vessel breakage or whatever residue may have been on sherd #2 was weathered away after vessel breakage. Sherd # 1 is thicker than the other two and may represent an area on the vessel closer to the base. Base sherds are typically thicker than middle and upper body sherds in coiled, conoidal vessels. The radiocarbon date is consistent with other dates of the type in Delaware.



Plate 3

Killens Vessel #2 – this vessel consists of one body sherd (Plate 4).

Feature 233

Sherd 1 – Bag # 1129, Inventory # 24, Stratum 1, Level 1

Vessel part – body

Thickness – 6.91 mm Weight – 2.1 grams

Exterior surface – fabric impressed; uneven surface

Interior surface – smooth

Temper – fine shell

Paste inclusions – fine, sub-angular to sub-rounded quartz grains

Texture – clayey and slightly gritty

Exterior color – 10 YR 6/4 (light yellowish brown)

Interior color – 10 YR 6.5/4 (very pale brown to light yellowish brown)

Core color – no clear core

Decoration – none

Vessel form – unidentifiable

Vessel volume – unidentifiable

Use trace – none observed

Manufacture – unidentifiable

Mends – none

Associated radiocarbon dates –

Beta – 307304 (charcoal) CRA = 3270±30 B.P.

Discussion – The radiocarbon date is much too early for Killens ceramics. As the sherd was recovered from the upper level of Feature 233 and was the only ceramic sherd from the feature, it is likely a later intrusion into and otherwise earlier feature.



Plate 4

Killens Vessel #3 – this vessel is defined based on a single near rim sherd (Plate 5).

Feature 236

Sherd 1 – Bag # 1554, Inventory # 14, Stratum 1, Level 1

Vessel part – near rim

Thickness – 4.75 mm Weight – 1.4 grams

Exterior surface – smooth

Interior surface – smooth

Temper – fine shell and grit

Paste Inclusions – very fine, sub-rounded quartz grains

Texture – slightly gritty

Exterior color – 5YR 6/4 (light reddish brown)

Interior color – 7.5YR 6/2 (pinkish gray)

Core color – no defined core

Decorations – direct cord impressed; Field 1 Horizontal bands parallel to rim; “Z” twist cord

Vessel form – conoidal; curved sherd

Vessel volume – unidentifiable

Use trace – none

Manufacture – coiled; coil break on one side parallel to rim

Mends – none

Associated Radiocarbon Date –

Beta – 309420 (charcoal) CRA = 850±30 B.P.

Discussion - This near rim sherd is a classic two-ply, direct cord impressed decorative technique forming a motif of four horizontal bands parallel to the rim. The body below the motif is missing, so it is not possible to determine whether there was a second motif in Field 2.



Plate 5

Selden Island Ware

Selden Island Vessel # 1 – this vessel is defined from six body sherds (Plate 6).

Feature 185

Sherd # 1 – 2009.67.1041.A, Bag # 851, Inventory # 10, Stratum 1, Level 1

Sherd # 2 – Bag # 851, Inventory # 13, Stratum 1, Level 1

Sherd #3 – Bag # 851, Inventory # 11, Stratum 1, Level 1

Sherd #4 – 2009.67-1048.A, Bag # 851, Inventory # 9, Stratum 1, Level 1

Sherd # 5 – 2009.67-1052.A, Bag # 1849, surface of feature

Sherd # 6 – Bag # 851, Inventory # 12, Stratum 1, Level 1

Vessel part – six body sherds

Thickness – 9.25 mm – 9.82 mm Combined weight – 88.9 grams

Exterior surface – cord marked. The cord twist is “S” on two sherds while in the remaining sherds the cord wiped smooth so cord twist was not identifiable.

Interior surface – smooth; wiped and somewhat uneven

Paste Inclusions – fine, black sub-angular grains. One sherd exhibits a small piece of biotite mica.

Texture – soapy/silky

Exterior color – 2.5 YR 5/6 to 5.5/6 (red)

Interior color – 7.5 YR 6/5/3 (light brown to pink) and

10 YR 6.5/3 (pale brown to very pale brown)

Core color – no clear core

Decoration – none

Vessel form – conoidal; sherds are curved

Vessel volume – unidentifiable

Use trace – light organic stain on interior of sherd #1. Grass seed starch grain identified (Yost 2011). Protein residue analysis was negative.

Manufacture – coiled; four sherds exhibit coil breaks

Mends – none

Associated radiocarbon dates

Beta – 304998 (charcoal)

CRA = 4120±40 B.P.

Discussion – The radiocarbon date for feature 185 is much too early for Selden Island ceramics. As all the sherds from this vessel were from either the surface of the feature or in stratum 1, level 1, it is possible a shallow Selden Island component feature intruded into an earlier feature

and the charcoal sample and associated radiocarbon date represent an earlier component. Sherd #1 submitted for starch grain and phytolith analysis. The three smallest sherds from Vessel #1 are not shown in Plate 6.



Plate 6

Selden Island Vessel # 2 – this vessel is defined from one body sherd (Plate 7).

Feature 190

Sherd # 1 – 2009.67-1065.A; Bag # 1028, Inventory # 6, Stratum 1, Level 1

Vessel part – body

Thickness – 10.66 mm Weight – 14.4 grams

Exterior surface – cord marked; criss-crossed and slightly smoothed over. The cord twist is “S”.

Interior surface – smooth

Temper – very fine steatite; temper particles are thinly spread

Paste inclusions – fine, sub-angular black grains

Texture – silty

Exterior color – 2.5 YR 5.5/4 (weak red)

Interior color – 2.5 YR 5.5/6 (red)

Core color – no clear core

Decorations – none

Vessel form – conoidal; sherd curved

Vessel volume – unidentifiable

Use trace – none visible

Manufacture – coiled; coil break

Mends – none

Associated radiocarbon dates – none

Discussion – The criss-crossed exterior cord marking is unlike any of the other Selden Island vessels. The fineness and dispersed nature of the steatite temper is also unlike the other vessels of this type, but the fine, sub-angular black grains in the paste are similar to the other Selden Island vessels.



Plate 7

Selden Island Vessel # 3 – this vessel is defined from one body sherd (Plate 8).

Feature 195

Sherd #1 – Bag # 1434, Inventory # 3, Stratum 1, Level 2

Vessel part – body

Thickness – 8.94 mm

Weight – 4.1 grams

Exterior surface – cord marked; smoothed over. The cord twist is not clear due to smoothing of the cord after its application.

Interior surface – smooth; uneven

Temper – steatite

Paste inclusions – fine, sub-rounded quartz grains and one piece of biotite mica

Texture – soapy/silky

Exterior color – 2.5 YR 5.5/6 (weak red)

Interior color – 2.5 YR 3/1 (reddish brown)

Core color – no clear core

Decoration – none

Vessel form – unidentifiable

Vessel volume – unidentifiable

Use trace – the exterior appears to have a thin organic residue

Manufacture – unidentifiable

Mends – none

Associated radiocarbon dates

Beta – 304999

CRA = 2790±40 B.P.

Discussion – biotite mica fragments in the paste are also present in one sherd of the Selden Island vessel # 1 in feature 185. The radiocarbon date is within the expected range for Selden Island ceramics.



Plate 8

Selden Island Vessel # 4 – this vessel is defined from seven body sherds (Plate 9).

Feature 195

Sherd # 1 – Bag # 1435, Inventory # 19, Stratum 1, Level 1 (consists of five small sherds).

Sherd # 2 – Bag # 1433, Inventory # 7, Stratum 1, Level 1

Remainder of sherds were too small to include in this analysis.

Vessel part – seven body sherds

Thickness – 8.74 mm – 10.06 mm Combined weight – 8.6 grams

Exterior surface – cord marked; smoothed over. The cord twist is not clear due to smoothing.

Interior surface – smooth

Temper – fine, sub-rounded steatite

Paste inclusions – fine, sub-angular black grains. One sherd exhibits a small, rounded piece of hematite.

Texture – soapy/silky and somewhat gritty

Exterior color – 2.5YR 5.5/8 (red)

Interior color – Sherd #1 – 10YR 5.5/3 (brown to pale brown)

Sherd #2 – 2.5YR 5.5/2 (weak red)

Core color – no clear core

Decoration – none

Vessel form – conoidal; sherd # 2 is curved

Vessel volume – unidentifiable

Use trace – none visible

Manufacture – coiled; coil break on one sherd

Mends – none

Associated radiocarbon dates – none

Discussion – This vessel is in the same context as Selden Island vessel #3 and is distinguished from that vessel based on paste inclusions.



Plate 9

Selden Island Vessel # 5 – this vessel is defined from one body sherd (Plate 10)

Feature 197

Sherd #1 – 2009.67-1080.A, Bag # 832, Inventory # 4, Stratum 1, Level 1

Vessel part – body

Thickness – 10.30 mm Weight – 5.8 grams

Exterior surface – cord marked; smoothed over. The cord twist is unclear due to smoothing.

Interior surface – smooth

Temper – steatite

Paste inclusions – fine, sub-angular black grains and fine, oxidized nodules

Texture – soapy/ silky

Exterior color – 2.5 YR 5.5/4 (weak red)

Interior color - 7/5 YR 6.5/3 (light brown to pink)

Core color – no clear core

Decorations – none

Vessel form – conoidal; curved sherd

Vessel volume – unidentifiable

Use trace – possible light organic residue on interior

Manufacture – unidentified

Mends – none

Associated radiocarbon dates –

Beta – 309419 CRA= 2160±30 B.P.

Discussion – It is common for Selden Island vessels to exhibit a red to weak red exterior color.

This may be the result of a chemical reaction with the steatite in an oxidizing atmosphere during firing or during use over an intense heat source.



Plate 10

Selden Island Vessel # 6 – this vessel is defined from a single body sherd (Plate 11).

Feature 366

Sherd # 1 – 2009.67-1080.A, Bag # 1850, surface of feature

Vessel part – body

Thickness – 11.14 mm Weight – 5.1 grams

Exterior surface – cord marked; smoothed over. The cord twist is unclear due to smoothing.

Interior surface – smooth; uneven

Temper – steatite

Paste inclusions – fine, black angular grains and very fine rounded quartz grains with fine hematite inclusions.

Texture – soapy; slightly gritty

Exterior color – 2.5YR 6.5/5 (weak red to red)

Interior color - 2.5YR 4.5/1 (dark reddish gray)

Core color – no clear core

Decorations – none

Vessel form – conoidal; sherd curved

Use trace – possible light organic residue on interior

Manufacture – coiled; coil break

Mends – none

Associated radiocarbon dates – none

Discussion – the fine black, angular grains and very fine sub-angular paste inclusions are a common characteristic of Selden Island ceramics from this site.



Plate 11

Selden Island Vessel # 7 – this vessel is defined from two body sherds (Plate 12).

Feature 308

Sherd # 1 – 2009.67-1371.A, Bag # 1853, Inventory #1, surface of feature

The second sherd is too small to include in this analysis.

Vessel part – body

Thickness – 8.62 mm Weight – 6.8 grams

Exterior surface – cord marked; smoothed over. The cord twist is unclear due to smoothing.

Interior surface – smooth; uneven

Temper – fine steatite

Paste inclusions – fine, sub-angular black grains

Texture – soapy/silky

Exterior color – 2.5YR 6.5/6 (red to light red)

Interior color - 2.5YR 5.5/1 (dark reddish gray to reddish gray)

Core color – no clear core

Decorations – none

Vessel form – unidentifiable

Vessel volume – unidentifiable

Use trace – possible light organic residue on interior

Manufacture – coiled; coil break

Mends – two sherds in same bag mend; fresh breaks

Associated radiocarbon dates – none

Discussion – the darker interior surface color extends approximately 4-5 mm into the body. It does not appear to represent an organic residue and may be a result of the atmosphere of firing the vessel.



Plate 12

Townsend Ware

Townsend Vessel # 1 – this vessel is defined from one near-rim sherd and one body sherd (Plate 13).

Feature 9

Sherd # 1 – Bag # 94, Inventory # 2, Stratum 1, Level 1

The body sherd is not included in this analysis.

Vessel part – near rim

Thickness – not measurable as the sherd is damaged. Weight – 0.4 grams

Exterior surface – smooth

Interior surface – missing

Temper – shell

Paste inclusions – very fine, sub-rounded quartz and perhaps flint grains.

Texture – clayey

Exterior color – 7.5YR 6/5 (light brown to reddish yellow)

Interior color - 7.5YR 6/5 (light brown to reddish yellow)

Core color – no clear core

Decorations – fine incised/ punctate jabs. The sherd is too small to describe the motif.

Vessel form – unidentifiable

Vessel volume – unidentifiable

Use trace – none observed

Manufacture – unidentifiable

Mends – none

Associated radiocarbon dates – none

Discussion – this small vessel is identified from temper, paste characteristics and decoration. No similar rim sherd was recovered from the site.



Plate 13

Townsend Vessel # 2 – this vessel is defined from one rim sherd (Plate 14).

Feature 10

Sherd # 1 – 2009.67-836.A; Bag # 408, Inventory # 4, Stratum 1, Level 1

Vessel part – rim; the rim is rounded and direct with a slight taper on the interior extending to the lip.

Thickness – 6.99 mm

Weight – 3.9 grams

Exterior surface – smooth

Interior surface – smooth

Temper – shell

Paste inclusions – none visible

Texture – clayey

Exterior color – 10YR 5.5/1.5 (gray)

Interior color - 10YR 4.5/1 (dark gray to gray)

Core color – no clear core

Decorations – none

Vessel form - unidentifiable

Vessel volume – unidentifiable

Use trace – possible organic stain on interior and exterior

Manufacture – likely coiled; there is a crack on the exterior surface parallel to the rim that likely represents the boundary between two coils.

Mends – none

Associated radiocarbon dates –

Beta – 307300 (charcoal)

CRA = 330±30 B.P.

Beta - 307301 (shell)

CRA = 790±30 B.P.

Discussion – The plain and smooth exterior rim treatment is consistent with the terminal Late Woodland radiocarbon date. This vessel is a good example of the Townsend variety here defined as Townsend Plain.



Plate 14

Townsend Vessel # 3 – this vessel is defined from one rim and one body sherd (Plate 15).

Feature 10

Sherd # 1 – 2009.67-743.A; Bag # 401, Inventory # 1, Stratum 1, Level 1

Sherd # 2 - 2009.67-836.B; Bag #408, Inventory #5, Stratum 1, Level 1

Vessel parts – Sherd #1 – rim; rounded and direct

Sherd #2 – body

Thickness- Sherd #1 – 5.79mm; Sherd # 2 – 4.98mm

Combined weight – 11.7 grams

Exterior surface – Sherd # 1 – fabric impressed perpendicular to the rim and smoothed

Sherd # 2 – smooth; uneven

Interior surface – smooth; wiped with striations parallel to the rim

Temper – shell

Paste inclusions – none visible

Texture – clayey

Exterior color Sherd # 1 – 10YR 5.5/2 (grayish brown to light brownish gray)

Sherd # 2 – 10YR 4/1 (dark gray)

Interior color Sherd # 1 – 10YR 5.5/2 (grayish brown to light brownish gray)

Sherd # 2 - 10YR 6/2 (light brownish gray)

Core color – no clear core

Vessel form – conoidal; rim clearly curved producing an opening radius of nine centimeters.

Vessel volume – unidentifiable

Use trace – none visible

Manufacture – coiled; rim sherd has a coil break.

Mends – none

Associated radiocarbon dates –

Beta – 307300 (charcoal) CRA = 330±30 B.P.

Beta - 307301 (shell) CRA = 790± 30 B.P.

Discussion – the exterior dark color of the body sherd (sherd # 2) continues into the body paste approximately 3.5 mm. It does not appear to be organic residue, but the result of the atmosphere during firing the vessel. The associated radiocarbon dates are consistent with the simple rim form and lack of decoration.



Plate 15

Townsend Vessel # 4 – this vessel is defined from one rim sherd (Plate 16).

Feature 10

Sherd # 1 – 2009.67-791.A; Bag # 402, Inventory # 8, Stratum 2, Level 2

Vessel part – rim; the rim is rounded and direct

Thickness – 5.58 mm Weight – 3.9 grams

Exterior surface – smooth and wiped creating fine lines that smear the surface

Interior surface – smooth; wiped

Temper – shell

Paste inclusions – none visible

Texture – clayey/silty

Exterior color – 7.5YR 5.5/2 (brown to pinkish gray)

Interior color – 7.5YR 5.5/2 (brown to pinkish gray)

Core color – no clear core; the sherd color is uniform through the body of the sherd

Decorations – none

Vessel form – conoidal; the rim is curved. The vessel-opening radius is approximately 12.5 cm.

Vessel volume – unidentifiable

Use trace – none visible

Manufacture – coiled; coil break on the sherd

Mends – none

Associated radiocarbon dates

Beta – 307300 (charcoal) CRA = 330±30 B.P.

Beta – 307301 (shell) CRA = 790±30 B.P.

Discussion – The associated radiocarbon dates are consistent with Townsend Plain as exhibited by the simple rim form, lack of decoration and plain exterior surface.



Plate 16

Townsend Vessel # 5 – this vessel is defined from one large body sherd (Plate 17).

Feature 10

Sherd #1 – 2009.67-837.A; Bag # 409, Inventory # 1, Stratum 2, Level 2

Vessel part – body

Thickness – 8.22 mm Weight – 35.6 grams

Exterior surface – smooth; scraped and wiped. The exterior surface exhibits numerous striations of various lengths and angles.

Interior surface – smooth; wiped. Fine striations are visible on the interior surface.

Temper – shell

Paste inclusions – occasional very fine, sub-rounded quartz grains

Texture – clayey/silty

Exterior color – 10YR5.5/1.5 (gray to grayish brown)

Interior color – 10YR5.5/2 (grayish brown to light brownish gray)

Core color – no clear core

Decorations – none

Vessel form – conoidal; the sherd is curved

Vessel volume – unidentifiable

Use trace – none visible

Manufacture – unclear; the paste is very hard and the breaks run across any coils that may be present.

Mends – none

Associated radiocarbon dates

Beta – 307300 (charcoal) CRA = 330±30 B.P.

Beta – 307301 (shell) CRA = 790±30 B.P.

Discussion – Vessel #5 is distinguished from the other Townsend vessels by the interior and exterior surface treatments. The associated radiocarbon dates are consistent with Townsend Plain, a type of Townsend Series ceramics that appears in the terminal Late Woodland of southern Delaware and adjacent areas.



Plate 17

Townsend Vessel #6 – this vessel is defined from two body sherds (Plate 18).

Feature 10

Sherd #1 – 2009.67-793.C; Bag # 401, Inventory #4, Stratum 1, Level 1

Sherd #2 – Bag # 401, Inventory # 5, Stratum 1, Level 1

Vessel part – two body sherds

Thickness – Sherd #1 – 7.29 Mm; Sherd #2 – 7.45 mm Combined weight – 7.1 grams

Exterior surface – Sherd 1 – fabric impressed; twined fabric. Sherd #2 – smooth; wiped

Interior surface – smooth; wiped

Temper – fine shell

Paste inclusions – occasional fine, sub-rounded quartz grains

Texture – clayey

Exterior color Sherd #1 – 7.5YR 6.5/6 (reddish yellow)

Sherd #2 – 5YR 6/4 (reddish yellow)

Interior color Sherd #1 – 7.5YR 3/1 (very dark gray)

Sherd #2 – 5YR 4/1 (dark gray)

Core color – no clear core

Decorations – none

Vessel form – conoidal; sherds slightly curved

Vessel volume – unidentifiable

Use trace – organic residue on the interior of both sherds; grass seed and/or maize in residue (Yost 2011; sample #9).

Manufacture – coiled; coil breaks present on sherd #1

Mends – the two body sherds mend

Associated Radiocarbon Dates

Beta – 307300 (charcoal)

CRA = 330±30 B.P.

Beta – 307301 (shell)

CRA = 790±30 B.P.

Discussion – The slight variation in exterior and interior vessel color may be due to differences in the post-breakage environment of the sherds. However, the two sherds do clearly mend and are from the same vessel. The interior organic residue indicates that the vessel was used for heating organic substances as is expected for a cooking vessel.



Plate 18

Townsend Vessel #7 – this vessel is defined from two body sherds that mend (Plate 19).

Feature 10

Sherd #1 – 2009.67-791.B; Bag #402, Inventory #7, Stratum 2, Level 2

Sherd #2 – 2009.67-791.B; Bag #402, Inventory #6, Stratum 2, Level 2

Vessel part – two body sherds

Thickness – Sherd #1 – 7.45 mm. Sherd #2 – 8.22 mm. Combined weight – 20.7 grams

Exterior surface – smooth; wiped

Interior surface – smooth; wiped

Temper – shell

Paste inclusions – none visible

Texture – clayey

Exterior color Sherd # 1 – 10YR 3/1 (very dark gray). Sherd exhibits 7.5YR 5/3 patches (brown)

Sherd #2 – 10YR 3/1 (very dark gray)

Interior color Sherd #1 – 10YR 6.5/3 (pale brown to very pale brown)

Sherd # 2 – 10YR 6.5/3 (pale brown to very pale brown)

Core color – no clear core

Decorations – none

Vessel form – conoidal; both sherds are slightly curved

Vessel volume – unidentifiable

Use trace – thin organic residue; grass seed phytoliths recovered (Yost 2011; sample 10)

Manufacture – coiled; sherd #2 exhibits a coil break

Mends – the two sherds mend together

Associated Radiocarbon Dates

Beta – 307300 (charcoal)

CRA = 330±30 B.P.

Beta – 307301 (shell)

CRA = 790±30 B.P.

Discussion – the interior color is uniformly lighter than the exterior. It appears as if the interior has been thinly slipped with a different clay. The exterior darker color may be due to a thin organic residue.



Plate 19

Townsend Vessel # 8 – this vessel is defined from two body sherds from the same feature (Plate 20).

Feature 10

Sherd #1 – 2009.67-838.A; Bag #610, Inventory #3, Stratum 3, Level 3

Sherd #2 – Bag #408, Inventory #6, Stratum 1, Level 1

Vessel part – two body sherds

Thickness – Sherd #1 – 4.66 mm. Sherd #2 – 4.78 mm. Combined weight – 3.6 grams.

Exterior surface – smooth; wiped

Interior surface – smooth

Temper – shell

Paste inclusions – occasional fine, sub-rounded quartz grains.

Texture – clayey

Exterior color – Sherd #1 – 7.5YR 5.5/4 (brown to light brown)

Sherd #2 – 7.5YR 5.5/3 (brown to light brown)

Interior color – Sherd #1 – 7.5YR 3.5/1 (very dark gray to dark gray)

Sherd #2 – 7.5YR 5.5/4 (brown to light brown)

Core color – no clear core

Decorations – none

Vessel form – unidentifiable

Vessel volume – unidentifiable

Use trace – possible organic residue on the interior of sherd #1.

Manufacture – unidentifiable

Mends – none

Associated Radiocarbon Dates

Beta – 307300 (charcoal) CRA = 330±30 B.P.

Beta – 307301 (shell) CRA = 790±30 B.P.

Discussion – Townsend vessel #8 is a very small vessel. The possible organic residue on the interior of sherd #1 may indicate its use in heating organic substances.



Plate 20

Townsend Vessel # 9 – this vessel is defined from six body sherds from the same context (Plate 21).

One small sherd is not illustrated in Plate 20.

Feature 10

Sherd # 1 – 2009.67-791.B; Bag #402, Inventory #9, Stratum 2, Level 2

Sherd #2 – Bag #402, Inventory #13, Stratum 2, Level 2

Sherd #3 – Bag # 402, Inventory #11, Stratum 2, Level 2

Sherd #4 – Bag #402, Inventory #12, Stratum 2, Level 2

Sherd #5 – Bag #402, Inventory #10, Stratum 2, Level 2

Sherd #6 – Bag #402, Inventory #14, Stratum 2, Level 2

Vessel part – six body sherds

Thickness range – 8.79 mm to 9.68 mm.

Combined weight – 11.8 grams.

Exterior surface – smooth

Interior surface – smooth; one sherd exhibits striations from smoothing.

Temper – fine shell; not densely packed

Paste inclusions – occasional fine, sub-rounded quartz grains in some sherds.

Texture – clayey

Exterior color – 7.5YR 6/4.5 (light brown to reddish yellow) and 5YR 5/6 (yellowish red)

Interior color – 10YR 5.5/2 (grayish brown to light brownish gray) and 5YR 6/2 (pinkish gray)

Core color – no clear core

Decorations – none

Vessel form – unidentifiable

Vessel volume – unidentifiable

Use trace – organic residue on interior of sherd #3; evidence of maize and/or grass seed starch grains (Yost 2011; sample #11). Protein residue analysis was negative.

Manufacture – coiled; sherds # 2, 3 and 6 exhibit coil breaks.

Mends – Sherd #2 mends to sherd #1; sherd #4 mends sherd #5 and sherd #5 mends to sherd #1.

Associated Radiocarbon Dates

Beta – 307300 (charcoal) CRA = 330±30 B.P.

Beta – 307301 (shell) CRA = 790±30 B.P.

Discussion – The smooth exterior surface on this vessel is consistent with the terminal Late Woodland radiocarbon dates. Sherd #3 was submitted for starch grain, phytolith and protein residue analysis.



Plate 21

Townsend Vessel #10 – this vessel is defined from two body sherds from the same context (Plate 22).

Feature 10

Sherd #1 – 2009.67-793.B; Bag #401, Inventory #3, Stratum 1, Level 1

Sherd #2 – 2009.67-793.A; Bag #401, Inventory #2, Stratum 1, Level 1

Vessel parts – two body sherds

Thickness – Sherd #1 – 9.65mm. Sherd #2 – 9.39 mm. Combined weight – 15.6 grams.

Exterior surface – smooth; fine striations indicate the surface was wiped.

Interior surface – smooth; wiped

Temper – shell

Paste inclusions – occasional very fine, sub-rounded quartz grains

Texture – clayey

Exterior color Sherd #1 – 5YR 5.5/4 (reddish brown to light reddish brown)

Sherd #2 – 7.5YR 5.5/4 (brown to light brown)

Interior color Sherd #1 – 5YR 5/1 (gray)

Sherd #2 – 7.5YR 5.5/2 (brown to pinkish gray)

Core color – no clear core

Decorations – none

Vessel form – unidentifiable

Vessel volume – unidentifiable

Use trace – sherd #1 has organic residue. Grass seed phytolith identified (Yost 2011; sample #12)

Manufacture – coiled; both sherds exhibit coil breaks

Associate Radiocarbon Dates

Beta – 307300 (charcoal) CRA = 330±30 B.P.

Beta – 307301 (shell) CRA = 790±30 B.P.

Discussion – the darker color of the interior of the sherds continues into the body approximately 2.5 mm. The color does not appear to be the result of organic residue, but a function of the firing atmosphere of the vessel. However, sherd #1 does have a light organic residue on the interior surface. The smooth and wiped exterior surface is consistent with the terminal Late Woodland radiocarbon dates of Townsend Plain.



Plate 22

Townsend Vessel # 11 – this vessel is defined from two, small body sherds (Plate 23) .

Feature 10

Sherd #1 – Bag #401, Inventory #6, Stratum 1, Level 1

Sherd #2 – Bag #408, Inventory #7, Stratum 1, Level 1

Vessel parts – two body sherds

Thickness – Sherd #1 – 3.69 mm. Sherd #2 – 4.10 mm. Combined weight – 0.8 grams

Exterior surface – smooth; wiped

Interior surface – smooth; wiped

Temper – fine shell

Paste inclusions – occasional very fine, sub-rounded quartz grains

Texture – clayey

Exterior color – 7.5YR 4.5/1 (dark gray to gray)

Interior color – 7.5YR 4.5/1 (dark gray to gray)

Core color – no clear core

Decoration – none

Vessel form – unidentifiable

Vessel volume – unidentifiable

Use trace – possible light organic stain on interior and exterior

Manufacture – unidentifiable

Mends – none

Associated Radiocarbon Dates

Beta – 307300 (charcoal) CRA = 330±30 B.P.

Beta – 307301 (shell) CRA = 790±30 B.P.

Discussion – Townsend vessel #11 is a very small or miniature vessel of the Townsend Plain type. While some shell was recorded as temper, it is very fine and not abundant.



Plate 23

Townsend Vessel #12 – this vessel is defined from one body sherd (Plate 24).

Feature 253

Sherd #1 – Bag #1751, Inventory #1, Stratum 1, Level 3

Vessel part – near base

Thickness – 9.51 mm

Weight – 3.3 grams

Exterior surface – smooth

Interior surface – smooth

Temper – fine shell

Paste inclusions – none visible

Texture – clayey

Exterior color – 7.5YR 5.5/3 (brown to light brown)

Interior color – 7.5YR 4.5/1 (dark gray to gray)

Core color – no clear core

Decorations – none

Vessel form – conoidal; this near base sherd is curved both horizontally and vertically

Vessel volume – unidentifiable

Use trace – possible very faint organic residue on the interior

Manufacture – unidentifiable

Mends – none

Associated Radiocarbon Dates – none

Discussion – this near base sherds was identified by the curvature of the sherd and the thickness of the vessel wall.



Plate 24

Townsend Vessel # 13 – this vessel is defined from a single body sherd (Plate 25).

Feature 273

Sherd #1 – 2009.67-1298.A; Bag # 1847, surface of feature

Vessel part – body

Thickness – 6.66 mm Weight – 4.0 grams

Exterior surface – smooth/ wiped and uneven. The surface may be smoothed over fabric impressed.

Interior surface – smooth

Temper – shell

Paste Inclusions – a few very fine, sub-rounded quartz grains

Texture – clayey

Exterior Color – 5YR 6/4 (light reddish brown)

Interior Color – 5YR 6.5/3 (light reddish brown to pink)

Core Color – no clear core

Decorations – none

Vessel form – unidentifiable

Vessel volume – unidentifiable

Use trace – none observed

Manufacture – unidentifiable

Associated Radiocarbon Dates – none

Discussion – Townsend Vessel # 13 is similar to Townsend Vessel # 6 in Feature 10 in paste inclusions and exterior surface treatment, but has a noticeably redder paste.



Plate 25

Townsend Vessel #14 – this vessel is defined from two body sherds (Plate 26).

Feature 338

Sherd #1 – 2009.67-1491.A; Bag #1623, Inventory #19, Stratum 1, Level 3

Second sherd is included in the description as the attributes are the same.

Vessel part – body

Thickness – 6.53 mm Weight – 3.9 grams

Exterior surface – fabric impressed; smoothed over

Interior surface – smooth

Temper – shell

Paste inclusions – a few very fine, sub-rounded quartz grains

Texture – clayey

Exterior color – 7.5YR 6.5/4 (light brown to pink)

Interior color – 7.5YR 7.5/4 (pink)

Core color – no clear core

Decorations – none

Vessel form – conoidal; sherd is curved

Vessel volume – unidentifiable

Use trace – possible light organic residue on interior

Manufacture – unidentifiable

Mends – none

Associated Radiocarbon Dates – none

Discussion – Townsend vessel #14 is an example of the Townsend Series type known as Rappahannock Fabric Impressed. This variety spans the entire length of Townsend ceramics from approximately cal AD 1000 to the 17th century AD.



Plate 26

Townsend Vessel # 15 – this vessel is defined from a single near rim sherd (Plate 27).

Feature 236

Sherd 1 – 2009.67-1226.B; Bag#1554; Inventory #15

Vessel part – near rim

Thickness – 7.26 mm Weight – 5.7 grams

Exterior surface – smooth

Interior surface – smooth

Temper – fine shell

Paste Inclusions – widely scattered, very fine, rounded quartz grains

Texture – clayey

Exterior color – 10YR 5/2 (grayish brown)

Interior color – 10YR 5/1 (gray)

Core color – no defined core

Decorations – direct cord impressed; Field 1 Horizontal and oblique crossing bands; “Z” twist cord. Body not visible below the cord; Field 2 missing.

Vessel form – conoidal; slightly curved sherd

Vessel volume – unidentifiable

Use trace – light organic encrustation on interior.

Manufacture – no clear coil break ; undetermined

Mends – none

Associated Radiocarbon Date

Beta – 309420 (charcoal) CRA = 850±30 B.P.

Discussion - This near rim sherd is a classic two-ply, direct cord impressed decorative technique forming a motif of criss-crossed bands. One set of bands is parallel to the rim. The body below the motif is missing, so it is not possible to determine whether there was a second motif in Field 2.



Plate 27

Wolfe Neck Ware

Wolfe Neck Vessel #1 – this vessel is defined from two body sherds (Plate 28).

Feature 195

Sherd #1 – 2009.67-1075.B; Bag # 1434, Inventory # 4, Stratum 1, Level 2

Sherd #2 – 2009.67-1072.A; Bag # 1435, Inventory # 20, Stratum 1, Level 1

Vessel part – two body sherds

Thickness – Sherd #1 – 10.37 mm. Sherd #2 – 8.94 mm. Combined weight – 20.7 grams

Exterior surface Sherd #1 – cord marked; overlapped. The cord is “S” twist.

Sherd #2 – cord marked; overlapped. The cord is “S” twist.

Interior surface Sherd #1 – smooth; uneven

Sherd #2 – smooth; uneven with temper grains protruding through the surface

Temper – fine crushed quartz

Paste inclusions – very fine, sub-angular black grains and fine sub-rounded quartz grains

Texture – gritty

Exterior color Sherd #1 – 7.5YR 6.5/6 (reddish yellow)

Sherd #2 – 10YR 5/3 (brown)

Interior color Sherd #1 – 7.5YR 6.5/6 (reddish yellow)

Sherd #2 – 7.5YR 6.5/4 (light brown to pink)

Core color – no clear core

Decorations – none

Vessel form – conoidal (?); sherds slightly curved

Vessel volume – unidentifiable

Use trace – none observed

Manufacture – coiled; both sherds exhibit coil breaks

Mends – the two sherds mend together

Associated Radiocarbon Dates – none

However, a sherd from Selden Island vessel #3 from Feature 195 was submitted for a bulk sherd organics date as reported with that vessel. This is not necessarily the date associated with Feature 195, as the resulting date was specific to the Selden Island sherd and vessel.

Discussion -The exterior color of sherd #2 is darker than sherd #1 to which it mends. This is likely the result of post-breakage differences in the environment of the sherd prior to burial in Feature 195.



Plate 28

Wolfe Neck Vessel # 2 - this vessel is defined from one body sherd (Plate 29).

Feature 197

Sherd #1 – 2009.67-1081.A; Bag # 1861, surface of feature

Vessel part – body

Thickness – 10.69 mm Weight – 10.1 grams

Exterior surface – cord marked; criss-crossed. The cord twist is “S”.

Interior surface – smooth with crushed quartz grains protruding through the surface

Temper – crushed quartz

Paste inclusions – very fine, sub-angular to angular quartz grains.

Texture – gritty

Exterior color – 5YR 5.5/4 (reddish brown to light reddish brown)

Interior color – 5YR 5/5 (reddish brown to yellowish red)

Core color – no clear core

Decorations – none

Vessel form – conoidal; sherd is curved

Vessel volume – unidentifiable

Use trace – none observed

Manufacture – coiled; the sherd exhibits coil breaks

Mends – none

Associated Radiocarbon Dates –

Beta – 309419

CRA= 2160±30 B.P.

Discussion – this body sherd, while similar in exterior surface treatment, thickness and weight to Wolfe Neck Vessel #1 in Feature 195, it is more curved than the sherds in Vessel #1 and was accordingly assigned a different vessel number.



Plate 29

Vessels From Non - Cultural Features

Coulbourn Ware

Coulbourn Vessel #2 – this vessel is defined from three body sherds. Only the two largest body sherds are illustrated (Plate 30).

Feature 3

Sherd #1 – 2009.67-313.B; Bag # 476, Inventory #2, Stratum 1, Level 2

Sherd #2 – 2009.67-313.A; Bag # 476, Inventory # 1, Stratum 1, Level 2

Sherd #3 – 2009.67-286.A; Bag # 600, Inventory # 2, Stratum 2, Level 2

Vessel parts – three body sherds

Thickness Range – 10.53mm to 10.64 mm. Combined weight – 47.1 grams

Exterior surface – cord marked; criss-crossed. The cord twist is “S” on all three sherds.

Interior surface – wiped, scraped parallel to the coil break, which is likely parallel to the rim.

Temper – clay nodules/grog

Paste inclusions – occasional very fine, sub-rounded quartz grains

Texture – clayey to slightly gritty

Exterior color – 10YR 5/3 to 10YR 6/3 (brown to pale brown)

Interior color – Sherd #1 – 10YR 4/1.5 (dark gray to dark grayish brown)

Sherd #2 and #3 – 10YR 6/2 (light brownish gray)

Core color – no clear core

Decorations – none

Vessel form – conoidal (?); sherds are curved

Vessel volume – unidentifiable

Use trace – none observed

Manufacture – coiled; all three sherds exhibit coil breaks

Mends – sherds #1 and #3 mend.

Associated Radiocarbon Dates – none

Discussion – the differences in interior color between mended sherds #1 and #3 likely is the result of the post-breakage environment of the sherds prior to deposit in Feature 3.



Plate30

Coulbourn Vessel #3 – this vessel is defined by two body sherds resulting from a recent break and is described as one sherd (Plate 31).

Feature 3

Sherd #1 – 2009.67-13.A; Inventory #6, Bag #29, Stratum 3, Level 2

Vessel part – body

Thickness – 11.22 mm. Weight – 44.7 grams.

Exterior surface – cord marked; criss-crossed. The cord twist is “S”.

Interior surface – smoothed and uneven; faintly wiped

Temper – clay nodules/grog

Paste inclusions – fine, sub-rounded to rounded quartz grains

Texture – slightly gritty

Exterior color – 5YR 5/6 (yellowish red)

Interior color – 5YR 5/4 (reddish brown)

Core color – no clear core

Decoration – none

Vessel form – sherd slightly curved; conoidal (?)

Vessel volume – unidentifiable

Use trace – possible light organic residue on interior

Manufacture – no clear coil breaks; undetermined

Mends – two sherds in the bag mend; recent break

Associated Radiocarbon Dates – none

Discussion – the paste is very dense and slightly gritty. The sherd break appears to be across coils, if any were present.



Plate 31

Hell Island Ware

Hell Island Vessel # 1 – this vessel is defined from one body sherd (Plate 32).

Feature 30

Sherd #1 – 2009.67-359.A; Bag #303, Inventory #1, Stratum 1, Level 1

Vessel part – body

Thickness – 7.65 mm. Weight – 6.5 grams

Exterior surface – cord marked. The cord twist is “Z”.

Interior surface – smooth

Temper – sub-rounded quartz grains and muscovite mica

Paste inclusions – very fine, sub-rounded quartz grains and sand

Texture – gritty

Exterior color – 7.5YR 6/5 (light brown to reddish yellow)

Interior color – 10YR 6.5/3 (pale brown to very pale brown)

Core color – no clear core

Decorations – none

Vessel form – conoidal (?); the sherd is curved

Vessel volume – unidentifiable

Use trace – none observed

Manufacture – coiled; sherd exhibits a coil break

Mends – none

Associated Radiocarbon Dates – none

Discussion – the exterior of the vessel is more heavily oxidized than the interior, likely the result of a more oxidizing atmosphere in contact with the exterior of the vessel during firing.



Plate 32

Marcey Creek Ware

Marcey Creek Vessel # 1 – this vessel is defined from two body sherds (Plate 33).

Feature 180

Sherd #1 – 2009.67-1033.A; Bag # 1848, surface of feature

Sherd #2 – 2009.67-1033.B; Bag # 1862, surface of feature

Vessel part – body

Thickness – sherd #1 – 10.87 mm, sherd #2 – surface missing. Combined weight – 25.5 grams

Exterior surface – smooth; uneven

Interior surface – smooth

Temper – steatite

Paste inclusions – low density of very fine, sub-angular black grains

Texture – soapy/silky

Exterior color – 7.5YR 6.5/4 (light brown to pink)

Interior color – 7.5YR 6.5/3 (light brown to pink)

Core color – no clear core

Decorations – none

Vessel form – sherds are straight and flat

Vessel volume – unidentifiable

Use trace – none observed; Sherd # 2 has one surface missing

Manufacture – slab or file; no coil breaks present

Mends – none

Associated Radiocarbon Dates

Beta – 304997 (charcoal) CRA = 3100±30 B.P.

Discussion – The interior surface of sherd #1 is darker than the exterior and the darker color penetrates into the body approximately 3 mm. The darker color does not appear to be organic residue and may be the product of the atmosphere of firing the vessel. The associated radiocarbon date for feature 180 is earlier than most dates in the region for Marcey Creek.



Plate 33

Marcey Creek Vessel #2 – this vessel is defined from eleven body sherds from Phase II test excavations at site 7K-F-169 on the east side of State Route 1 (cf. Appendix A, Table A-2). Four of the larger sherds are illustrated (Plate 34).

Test Unit 38

Sherd #1 – 2009.68-64.B; Test Unit 38, Stratum 2, Level 3 (2 sherds with same catalog #)

Sherd #2 – 2009.68-63.A; Test Unit 38, Stratum 2, Level 2 (3 sherds with same catalog #)

Sherd #3 – 2009.68-65.A; Test Unit 38, Stratum 2, Level 4

Sherd #4 – 2009.68-63.A; Test Unit 38, Stratum 2, Level 2

Sherd #5 – 2009.68-67.A; Test Unit 38, Stratum 2, Level 2

Sherd #6 – 2009.68-66.A; Test Unit 38, Stratum 1, Level 1

The remaining two sherds are quite small.

Vessel parts – eleven body sherds

Thickness range – 10.11 mm to 10.88 mm. Combined weight – 105.5 grams

Exterior surface – smooth

Interior surface – smooth

Temper – fine steatite

Paste inclusions – very fine, sub-angular to sub-rounded black grains

Texture – soapy to slightly gritty

Exterior color – 5YR 5/6 (yellowish red)

Interior color – 10YR 3/1 (very dark gray)

Core color – 10YR 6/3 (pale brown)

Decorations – none

Vessel form – unidentifiable; while there were eleven sherds, most are quite small and damaged

Vessel volume – unidentifiable

Use trace – sherd #3 has organic residue on interior; multiple grass seed, root and tuber starch grains and phytoliths. One possible corn starch grain ruled out (Yost 2011). Protein residue analysis was negative.

Manufacture – one sherd exhibits a coil break while the remainder have no coil breaks.

Associated Radiocarbon Dates -

Beta-307658 CRA= 3260±30 B.P.

Discussion – Sherd #3 was submitted for starch grain and phytolith analysis. Sherd #4 was submitted for thin section analysis. Sherd #5 was submitted for an organic residue radiocarbon date. The exterior of the vessel is more oxidized than the interior surface. The pale brown core may indicate an incomplete firing of the vessel.

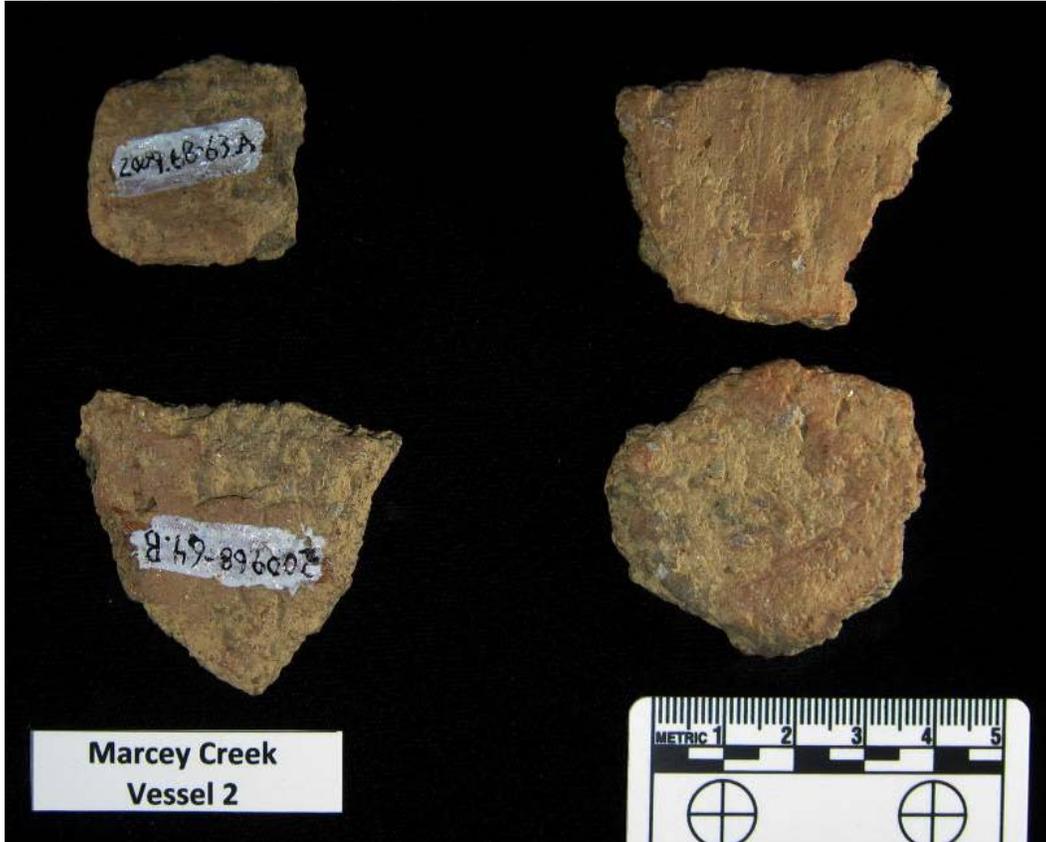


Plate 34

Dames Quarter Cord Marked

Dames Quarter Cord Marked Vessel # 1 – this vessel is defined from four body sherds from the same context. Eight other sherds of the same ware type were recovered from the same context, but were not assigned to this vessel. The data for all the sherds is located in Appendix A, Table A-4. Four of the larger sherds are illustrated (Plate 35).

Feature 12

Sherd #1 – 2009.67-843.A; Bag #795, Inventory #3, Stratum 1, Level 7

Sherd #2 – 2009.67-413.A; Bag # 464, Inventory #1, Stratum 5, Level 5

Sherd #3 – Bag #546, Inventory #1, Stratum 6, Level 8

Vessel parts – three body sherds

Thickness – Sherd # 1 -10.41 mm, sherd #2 – 10.83 mm, sherd #3 – 9.52 mm

Combined weight – 20.5 grams

Exterior surface – cord marked; criss-crossed, smoothed over. The cord twist of sherd #2 is “S”.

Interior surface – smooth and uneven

Temper – fine, sub-angular crushed black rock

Paste inclusions – very fine angular black grains and few very fine angular white grains

Texture – slightly gritty

Exterior color Sherd #1 – 10YR 6/4 (light yellowish brown)

Sherd #2 – 5YR 5/7 (yellowish red)

Sherd #3 – 5YR 5/6 (yellowish red)

Interior color Sherd #1 – 7.5YR 6/6 (reddish yellow)

Sherd #2 – 5YR 5/6 (yellowish red)

Sherd #3 – 5YR 2.5/1 (black)

Core color – no clear core

Decorations – none

Vessel form – unidentifiable

Vessel volume – unidentifiable

Use trace – sherd #3 exhibits a dark, organic residue on the interior surface

Manufacture – coiled; sherds #1 and #2 exhibit coil breaks.

Associated Radiocarbon Dates

Beta – 307655(charcoal)

CRA = 2930±30 B.P.

Discussion – Sherd #3 with the interior surface organic residue was submitted for a radiocarbon date. As there was insufficient carbon in the residue, a bulk sherd organics date was produced, which resulted in the date above. The fact that only one sherd exhibited interior organic residue may be the result of post-breakage weathering of the remaining sherds or the residue only occurred on a portion of the interior of the vessel not represented by the other sherds.



Plate 35

Dames Quarter Cord Marked Vessel #2 – this vessel is defined from two body sherds from the same context (Plate 36).

Feature 166

Sherd #1 – 2009.67-1004.C; Bag #1274, Inventory #8, Stratum1, Level 2

Sherd #2 – 2009.67-1004.B; Bag #1274, Inventory #9, Stratum 1, Level 2

Vessel part – two body sherds
 Thickness – Sherd #1 – 9.61 mm. Sherd #2 – 8.02 mm. Combined weight – 9.2 grams
 Exterior surface – cord marked; smoothed over. The cord twist is not clear due to smoothing.
 Interior surface – smooth
 Temper – fine, angular crushed black rock
 Paste inclusions – very fine, sub-rounded quartz grains
 Texture – slightly gritty
 Exterior color – 10YR 5.5/6 (dark yellowish brown)
 Interior color - Sherd #1 – 10YR 3/1 (very dark gray)
 Sherd #2 – 10YR 7/4 (very pale brown)
 Core color – no clear core
 Decorations – none
 Vessel form – unidentifiable
 Vessel volume – unidentifiable
 Use trace – sherd #1 exhibits some dark interior staining that may represent organic residue.
 Manufacture – coiled; both sherds exhibit coil breaks
 Mends – none
 Associated Radiocarbon Dates – none
 Discussion – The fact that only one sherd exhibited an organic residue on the interior may be due to post-breakage weathering of the other sherds or the residue only occurred on a portion of the vessel not represented by the other sherds.



Plate 36

Dames Quarter Cord Marked Vessel #3 – this vessel is defined from four body sherds from the Phase II testing at site 7K-F-169 on the east side of State Route #1 (cf. Appendix A, Table A-2). The largest two sherds are illustrated (Plate 37).

Test Unit #21

- Sherd #1 – Test unit 21, Stratum 3, Level 5
- Sherd #2 – 2009.68-35-B; Test Unit 21, Stratum 3, Level 3
- Sherd #3 – 2009.68-34.A; Test Unit 21, Stratum 2, Level 2
- Sherd #4 – 2009.68-36.B; Test Unit 21, Stratum 3, Level 5

Vessel parts – four body sherds

Thickness range – 9.08 mm to 12.53 mm. Combined weight – 51.7 grams
 Exterior surface – cord marked; smoothed over. Cord twist unclear due to smoothing.

Interior surface – smooth
 Temper – fine crushed black rock and grit
 Paste inclusions – very fine, sub-rounded black grit and quartz grains
 Texture – slightly gritty
 Exterior color – 2.5YR 5/4 (weak red)
 Interior color – 5YR 6/6 (reddish yellow)
 Core color – 2.5YR (dark gray)
 Decorations – none
 Vessel form – conoidal (?); sherds are curved
 Vessel volume – unidentifiable
 Use trace – possible light organic staining; no starch grains or phytoliths reported (Yost 2011).
 Protein residue analysis was negative.
 Manufacture – coiled; coil breaks
 Mends – none
 Associated Radiocarbon Dates – none
 Discussion – Sherd #2 was submitted for starch grain and phytolith residue analysis. The exterior of the vessel is much more highly oxidized than the interior surface. The core of the vessel is dark gray, which may indicate an incomplete firing of this vessel. The vessel is friable.



Plate 37

Wolfe Neck Ware

Wolfe Neck Vessel #3 – this vessel is defined from one rim sherd and one body sherd from the same context. Only the rim sherd is illustrated (Plate 38).

Feature 201

Sherd #1 – 2009.67-1095.A; Bag #1154, Inventory #11, Stratum 2, Level 1

Sherd #2 – Bag #1165, Inventory #8, Stratum 2, Level 1

Vessel part – Sherd #1 – rim; sherd #2 – body

Thickness – Sherd #1 – 11.55 mm. Sherd #2 – 10.48 Combined weight – 19.5 grams

Exterior surface – cord-marked; uneven. The cord marking on the rim is perpendicular to the rim. The rim is direct with a flattened, cord-impressed lip. The cord twist is not clear on either sherd.

