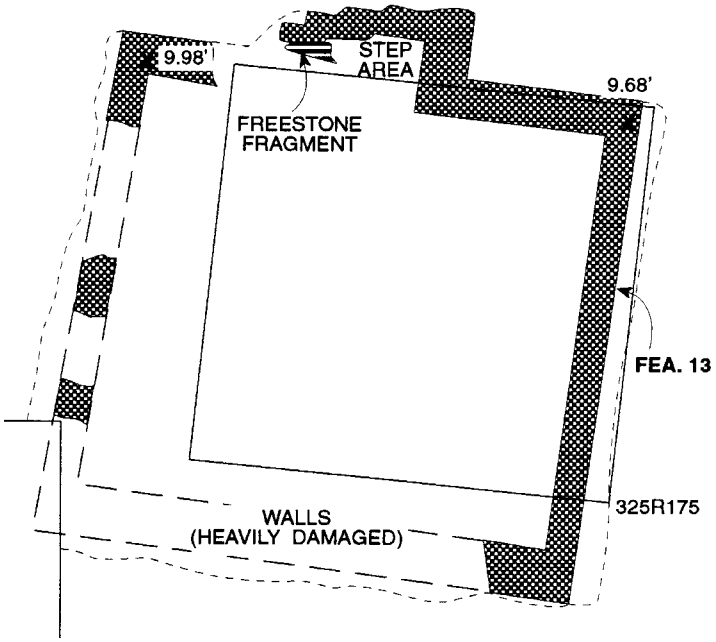
# YOUGHAL: EXAMINATION OF AN EIGHTEENTH AND NINETEENTH CENTURY PLANTATION, CHRIST CHURCH PARISH, CHARLESTON COUNTY, SOUTH CAROLINA




CHICORA FOUNDATION RESEARCH SERIES 65

# YOUGHAL: EXAMINATION OF AN EIGHTEENTH AND NINETEENTH CENTURY PLANTATION, CHRIST CHURCH PARISH, CHARLESTON COUNTY, SOUTH CAROLINA

**Research Series 65**

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In the fullness of time
All will be shown
The unknown will be known
In the fullness of time

-- Marshall Chapman, *In the Fullness of Time*

# ABSTRACT

This study provides the results of data recovery excavations at Youghal (38CH932), the remains of an eighteenth and nineteenth century plantation and twentieth century dairy farm. The site is situated on Porcher Bluff Road in what historically has been known as Christ Church Parish, northeast of Charleston, South Carolina. The investigations were conducted by Chicora Foundation during October and November of 2003 for The Sintra Corporation of Charleston, South Carolina. This work was proposed, and approved, under an October 2001 Memorandum of Agreement (MOA) with the Office of Ocean and Coastal Resources Management (OCRM).

This site was initially recorded in 1987 as part of an archaeological survey of a 1,000 acre development known then as the Charleston National Golf Course tract. A subsequent survey and testing program by Chicora Foundation for The Sintra Corporation expanded the site westward to include the 3-acre Auld house site, which was not previously covered by the MOA. As a result of this work the site was found eligible for inclusion on the National Register of Historic Places (Trinkley et al. 2003).

Additional historical research focused on the twentieth century dairying operations. A brief historical context, tracing the development of dairying operations in Charleston County has been developed and oral history – including both whites and blacks – has provided a far more detailed discussion of plantation dairying than has been available from secondary sources (which are often confusing and contradictory).

Close interval testing was conducted at three of the four areas being investigated by the data recovery activities – the area around and southwest of the Youghal house, the slave houses north the main dwelling, and the slave houses east of the main house. Subsequent hand excavations included 100 square feet at the Fuller/Auld House, 375 square feet in the area southwest of the Fuller/Auld House (termed the southern colonial area), 300 square feet to the north of the Fuller/Auld House, 150 square feet in a garden area (termed the northern colonial area), approximately 50 square feet in and just outside the ice house, 200 square feet in the western slave settlement, and 400 square feet in the eastern slave settlement. At the conclusion of the block excavations, an additional 2,670 square feet was stripped at the site, using a backhoe. As a result, the total excavation during the data recovery consisted of 4,245 square feet (1,575 square feet of hand excavation and 2,670 square feet of mechanized excavation).

This work revealed the main house, thought to have been constructed in the late antebellum and lost to fire in 1991. Although relatively little work was conducted in this area, the excavations did yield a mean ceramic date of 1865.

The slave settlement was more completely investigated, with the western settlement producing a mean ceramic date of about 1799 and the eastern one yielding a date of 1807. Although no clearly defined structural remains were identified, the artifact assemblage suggests ephemeral structures lasting into the antebellum when many plantation owners, in response to abolitionist pressures, were erecting more substantial dwellings.

Although the available mapping suggests house servant quarters near the main house, we were only partially successful in the effort to identify this area. Although no structures could be ascertained from the

excavations, the artifacts do indicate occupation with a mean ceramic date of 1828, although the artifacts are intermingled with later tenant deposits.

The work at the icehouse gave us significant insight in the construction and use of this specific type of plantation outbuilding. While this structure likely dates from the early twentieth century, it provides important information concerning the evolution of plantation architecture. In addition, it was constructed in the midst of sheet midden having late eighteenth and early nineteenth century dates – probably indicative of the "lost" house servants' quarters.

The area southwest of the main house produced a sizable eighteenth century assemblage, the burial of an African American child, and an eighteenth century outbuilding. The southern colonial area produces a mean ceramic date of 1755 – clearly dating the assemblage from the early development of the plantation. Artifacts from this assemblage are characteristic of a middling status plantation. The identified structure, probably representing a utility building, provides not only an interesting glimpse into poorly documented early plantation architecture, but also provides a large assemblage of early materials.

Of special importance, however, was the recovery of an isolated burial of an African American child. These remains were exhumed, analyzed, and have been provided to Sintra Homes for appropriate reburial. Not only do the remains provide a value addition to our still small assemblage of African American bioanthropological data, but the burial raises important anthropological questions concerning African mortuary customs and the role of this child in the plantation.

The northern colonial area, although exhibiting much later mean ceramic date of 1790, suggests at least some aspects of the original (pre-Fuller) plantation spread into this area. Discovered is what appears to be a garden folly or landscape feature of dry laid tabby bricks.

Ethnobotanical studies produced few food remains, although evidence of corn, peaches, and perhaps hickory nutshells was identified. The wood charcoal, probably reflecting primarily fuel, was dominated by pine, although small quantities of various hardwoods, such as oak, beech, and gum were present. Taken together these remains are suggestive of topography ranging from dry and sandy to low and wet. Similar findings are provided by both pollen and phytolith studies conducted on the site. Unfortunately no evidence of cultigens was encountered, although the studies do document the very disturbed climate around the plantation settlement.

The faunal remains, while a small collection, provide important preliminary information. The southern colonial area and structure resemble the rural pattern and contain not only a diverse assemblage, but also a range of species – all suggestive of an elite status. In contrast, the slave settlements exhibited poorer cuts of meat. There is also evidence at the slave settlement that deer were being processed on-site, suggestive of hunting as an additional procurement strategy. Another interesting finding was the identification of a range of fish and turtle species from the ice house, suggesting that this structure may have been used to store items other than milk.

The research at Youghal helps us better understand the activities taking place on this plantation, further supporting the contention that the plantation was in all respects the typical Christ Church working farm. It also raises areas requiring additional research, not the least of which are burial practices of African Americans during the colonial period.

# TABLE OF CONTENTS

# LIST OF FIGURES

# LIST OF TABLES

# INTRODUCTION

**Background**

The data recovery investigations were conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Mr. Ben Harrison of The Sintra Corporation/Hamlin Plantation, LLC of Charleston, South Carolina. The field studies were conducted from October 27 through November 21, 2003 with a crew of four archaeologists (Tom Covington, Virginia Moore, Doug Sain, and Nicole Southerland), plus the Principal Investigator (who was on-site throughout the project). A total of 751 person hours were spent on the project. The oral history and additional eighteenth century documentary research has been conducted by Charleston historian, Sarah Fick.

In 1987 Brockington and Associates (Brockington et al. 1987) had been retained to conduct an archaeological survey of a 1,000-acre development known then as the Charleston National Golf Course tract (this initial survey excluded the 3-acre Auld house site). This survey parcel, situated in Charleston County just north of Mount Pleasant, is in an area historically known as Christ Church Parish (Figure 1). The original archaeological survey identified or revisited 27 archaeological sites. Site 38CH932 – a large scatter of eighteenth and nineteenth century plantation remains on the north edge of the tract – was identified and determined potentially eligible and requiring additional testing. The State Historic Preservation Office (SHPO) concurred with this

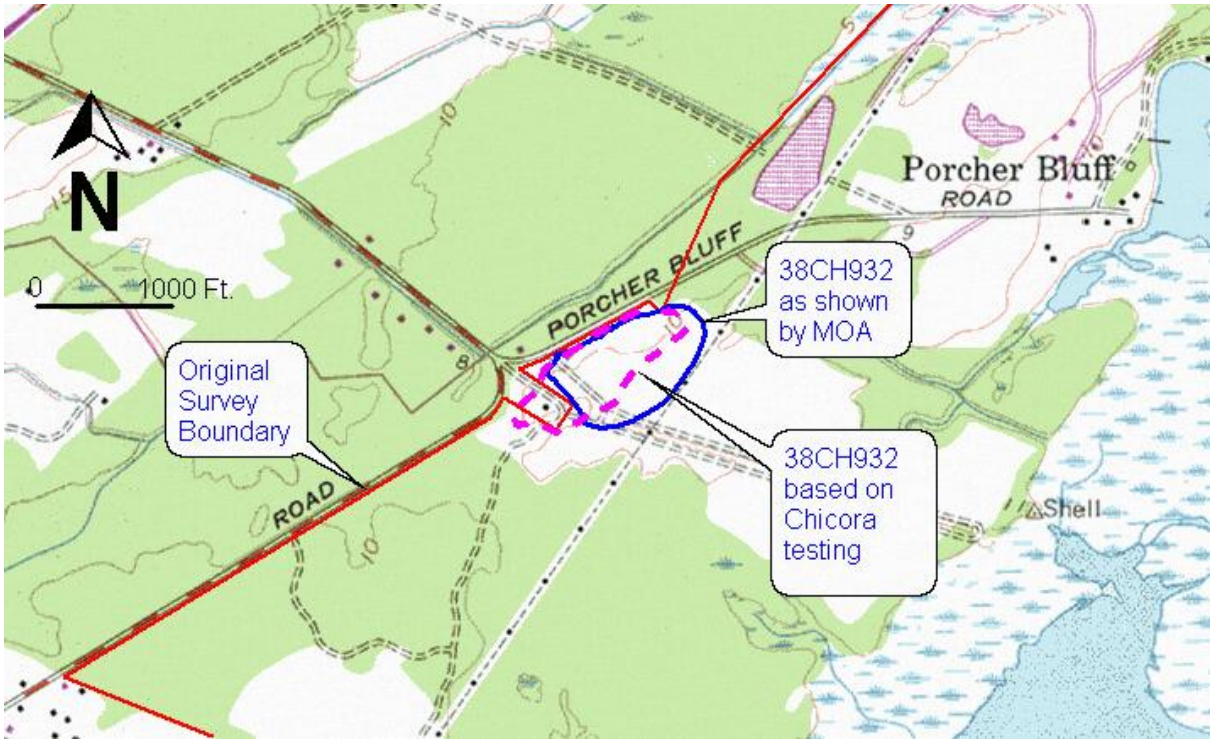


Figure 1. Portion of the Fort Moultrie 1959PR79 1:24,000 USGS topographic map showing the project area, original site boundaries and boundaries determined by the assessment survey.

finding but it was not until the tract was acquired by Hamlin Plantation in 1998 that it was incorporated into a Memorandum of Agreement (MOA), dated October 2001.

The Auld house site was acquired by Hamlin Plantation in 1998, although no survey was conducted prior to the 2003 Chicora assessment of 38CH932. Perhaps the most notable change since the original 1987 study is the loss of the Auld house to fire in 1991.

In April 2003 Hamlin Plantation, LLC retained Chicora Foundation to conduct a National Register assessment of 38CH932. Our work on the site was based on the level of investigations conducted in 1987. At that time, no shovel testing or sub-surface investigations were conducted; hence, our work involved the excavation of both close interval shovel tests and the placement of several more formal test units. The original investigations provided only a very basic historic overview for a tract encompassing several historic parcels; as a result, our work involved additional detailed historic research. And finally, the original study provided only broad research issues; the assessment sought to focus on research, looking at topics of concern today.

**Survey Assessment**

The assessment work (168 person hours of field investigation) resulted in the bush hogging of much of the site area, followed by shovel testing at 50-foot intervals on transects spaced every 50 feet (Figure 2; Trinkley et al 2003).

Combined with the extensive oral history conducted during the original survey (approximately 10 person hours), we were able to develop a far more complete picture of activities taking place on the site during the twentieth century. As previously mentioned, our historical research (approximately 40 person hours) focused on nineteenth century activities since the field investigations failed to identify any concentrations of eighteenth century material (although there was a thin smear across much of the site).

As the historical research progressed additional research topics became clear. In the late antebellum the plantation was owned by an individual who did not live there – but rather spent his time between a far larger plantation in the winter and a summer retreat in Charleston. Youghal, as a result, was a modest working plantation – lacking in the refinements that typified plantations where the owner was a regular resident. This would result in a slave settlement even more representative of how African Americans lived during the antebellum. Even the main house was not rebuilt until very late in the antebellum.

The historical research also revealed that the antebellum slave population was around 17 – the average holding in Christ Church Parish was 21.5, meaning that this plantation came very close to being an "average" small settlement. Figuring about four per structure, the map showing five slave houses seems typical for the area.

In terms of the site itself, the artifacts were found spread over an area measuring about 1,700 feet northeast-southwest by 600 feet northwest-southeast, although this includes a portion of the property which has been previously surveyed and released for development – apparently the dense remains west and southwest of the Youghal house were not noticed during the initial survey. Consequently, for the area currently under investigation, the site area is estimated to incorporate about 1,300 by 600 feet, or 17.9 acres.

Artifacts are not, however, spread evenly over this very large area. While the original survey identified six different loci, we found only two site areas – and even these blur together. The first area incorporated the site of the Fuller/Auld house, together with a distribution to the east. In terms of the historic documents, this would include the main house and the associated utility buildings and slave houses seen on the 1875 map of the property. The second area incorporates what was originally identified as Area C by

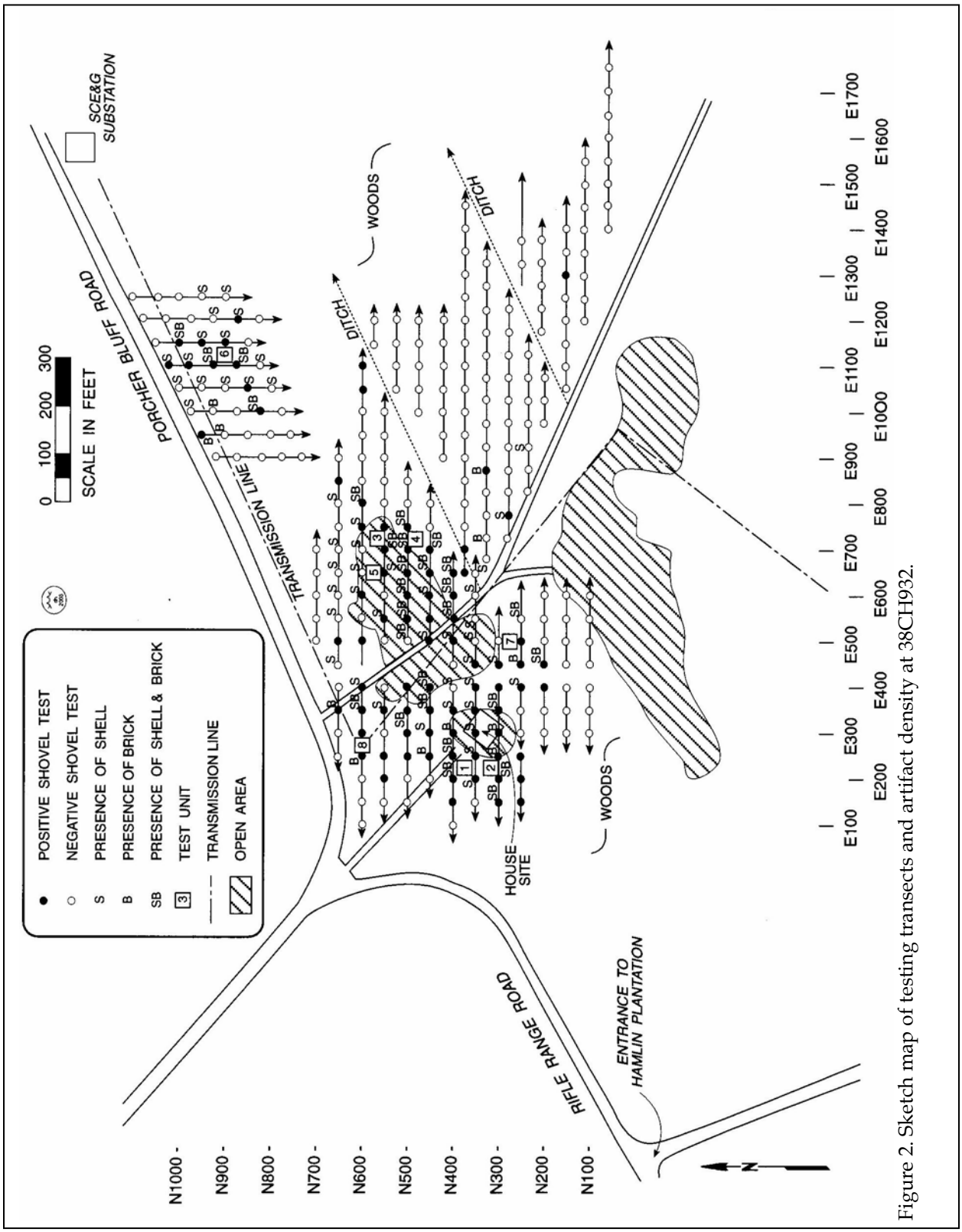


Figure 2. Sketch map of testing transects and artifact density at 38CH932.

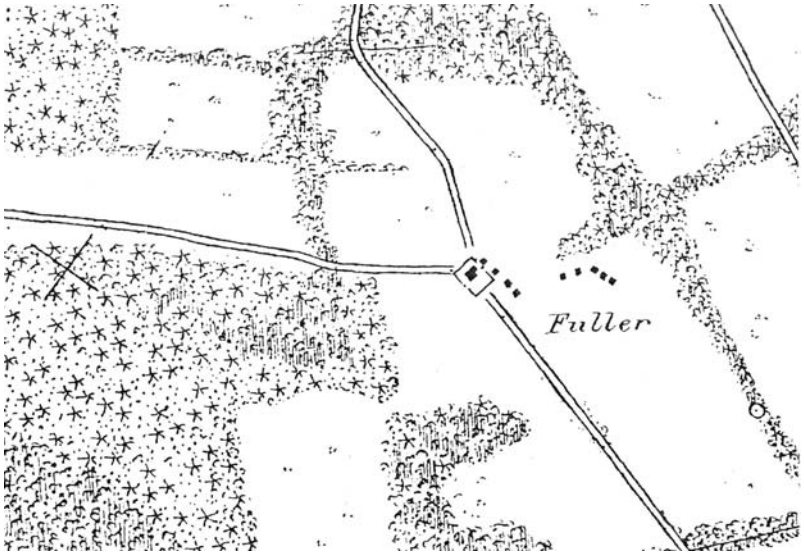


Figure 3. Portion of the 1875 U.S. Coast Survey *Bull's Bay to Breach Inlet* showing the Fuller settlement (original scale 1:20,000, reproduced here at a scale of 1:10,000).

Brockington and Associates and this appears to be a slave settlement, again shown on the 1875 map.

The remainder of the original loci was incorporated into the main site core since there are no clear distinctions from area to area. This is at least partially the result of plowing, although we believe that the compact nature of the plantation setting is also responsible. When the 1875 map is examined (Figure 3) it shows, in fact, only the two areas defined during this archaeological survey.

As a result of the survey we proposed research to focus on four main areas:

- The icehouse, where an examination might provide information on its origin and function, providing important comparative information for future studies.

- The slave row at the east edge of the site, where an examination would provide information on its date range and the life ways of those living there. Research there should also address why the site has such a low archaeological visibility.

- The slave row situated immediately east of the main house, where research might provide comparative data for the more eastern slave settlement.

- The area immediately southwest of the main house, where testing has revealed concentrations of artifacts, shell, and brick. Research in this area may provide information on additional, unrecorded structures.

Turning to historic documentation, including additional oral history, we recommended this research focus on two topics:

- The collection of additional oral history from the Auld family and neighbors. This information will provide the perspective of relatively wealthy white landowners during the first half of the twentieth century in Christ Church Parish.

- The collection of additional oral history from African Americans in the vicinity of the Hamlin community. Their perspective will provide a different dimension to the history of Youghal and will likely provide information not available from the owners and operators of the farms.

Both would focus on the dairying operations at Youghal – a topic that has received relatively little historical attention in the past. We hoped that the additional historical research would develop a context that might encourage not only further historical investigation, but perhaps also the archaeological exploration of twentieth century dairying operations in Charleston County.

**Proposed Data Recovery**

The archaeological investigations focused on four distinct plantation areas. Each is briefly discussed below, providing a broad overview of the research conducted at 38CH932.

### The Ice House

Research at the icehouse would include two 5-foot units, one on the interior of the structure and another on the outside, abutting the foundation at the doorway. These units would accomplish several goals. Most fundamentally, they would provide information on the brickwork and how the structure was built, including the depth and nature of the foundation, how the brick laid up, and what type of mortar is present. The excavations would also contribute an artifact assemblage from within the structure as well as from the immediate doorway (which may represent items tossed out of the building). These artifacts will help address questions regarding not only the structure's function, but also when it was constructed.

These excavations – and the resulting artifacts – can be readily compared to those recovered by Chicora excavations at a very similar structure on the Sanders Plantation, also in Christ Church Parish (see Trinkley 1985:37, 40-41, 59 for a discussion of the excavation of the interior and doorway of this structure). The investigations at Youghal would double our excavated sample and improve our understanding of this building style.

### Area Southwest of the Youghal House

Our shovel testing revealed a concentration of artifacts, shell, and brick southwest of the Fuller/Auld house. While the remains in this area do include specimens clearly relating to the twentieth century occupation of the structure, there are other items that appear to pre-date the house. We believe that this area may represent the location of an early antebellum structure, perhaps a kitchen or other, unrecognized outbuilding.

Investigations here were to include the excavation of up to three 10-foot units to expose a larger area in a search for recognizable features, as well as provide a larger sample of artifacts. These units would be placed based on additional shovel testing of an area measuring 150 by 150 feet, to be conducted at 25-foot intervals.

### Slave Houses Close to the Main Dwelling

The 1875 map reveals four structures 100 to 300 feet east and southeast of the main house. We believe that several of these (perhaps all) are slave structures based on the shovel testing. Photographs suggest that one survived into the twentieth century and that the structures were of the "Edisto style."

We doubted that archaeological investigations at this site would be able to address significant architectural issues because of the extensive damage caused by the removal of the burned Fuller/Auld house, but we did believe that additional study might provide a range of artifacts for comparison and contrast to the slave settlement further to the east, perhaps revealing a difference in status. To accomplish this we wanted to avoid a structure reported (by oral informants) to have been occupied into the twentieth century and, instead, explore one which was more quickly abandoned in the postbellum.

Investigations here would begin with shovel or auger testing at 20 foot intervals over an area measuring 100 by 200 feet – incorporating most of the slave settlement area. We hoped that these tests will better allow us to identify specific structure areas, thereby guiding the placement of two to three 10-foot units (placed based on artifact density that excludes twentieth century remains).

At the conclusion of this work, we proposed to mechanically strip at least one small area associated with the settlement to determine if architectural features could be identified.

### Slave Houses East of the Main House

The final phase of investigations would involve a combination of hand excavation and mechanical stripping in the area of the slave settlement shown on the 1875 map about 600 to 1,000 feet to the east.

A close interval grid (testing at 20-foot intervals) would be established over an area measuring 100 by 200 feet to encompass a high-density area previously identified in the 50-foot interval shovel testing.

The recovery of architectural remains would be a bonus, but the goal of these units was to collect larger assemblages of artifacts from several probable structure areas. Afterwards we anticipated mechanically stripping several areas to look for architectural evidence.

## The Natural Setting

### Physiography

Charleston County is located in the lower Atlantic Coastal Plain of South Carolina and is bounded to the east by the Atlantic Ocean and a series of marsh, barrier, and Sea Islands (Mathews et al. 1980:133). Elevations in the County range from sea level to about 70 feet above mean sea level (AMSL). The mainland topography, which consists of subtle ridge and bay undulations, is characteristic of beach ridge plains.

Seven major drainages are found in Charleston County. Four of these, the Wando, Ashley, Stono, and North Edisto, are dominated by tidal flows and are saline. The Wando forms a portion of the County's interior boundary northeast of Charleston, while the Ashley flows west of the peninsular city of Charleston. The three with significant freshwater flow are the Santee, which forms the northern boundary of the County; the South Edisto, which forms the southern boundary; and the Cooper, which bisects the County.

Because of the low topography, many broad, low gradient interior drains are present as either extensions of the tidal rivers or as flooded bays and swales. Extensions include Hobcaw, Rathall, Foster, Horlbeck, Boone Hall, Wagner, Toomer, and Allston creeks that flow west, north, or northeast into the Wando. Flooded bays and swales are equally common in the project area, typically being shown on historic plats as "galls" or "swamps." While these areas often exhibit productive soil, they must be drained and the drains kept open – both laborious and unhealthy tasks assigned to African American slaves.

The project area is situated just 10.5 miles from Charleston in what historically was known as Christ Church Parish. It is protected from the Atlantic Ocean by Dewees Island, the Isle of Palms, as well as a host of small marsh islands and large bays. Behind this marsh fringe is what historically has been called the "Sea Shore" – an area of mud and sand beaches that gradually rise to relatively poorly drained interior "high lands."

Elevations in the general area range from about 5 to 12 feet AMSL, with most of the property falling at or below 10 feet AMSL. There is a gradual slope toward the marsh on the southern edge of the property, while elsewhere the tract is nearly flat with numerous wetlands and low, swampy areas. Early twentieth century aerial photographs from when the project area was cultivated show a network of drainage ditches. Many of these are almost certainly in origin and provide evidence of efforts to drain and make productive the otherwise low, unhealthy "Sea Shore" lands.

Flooding, however, was not limited to ground and rainwater on the interior portions of the plantation. Coastal flooding was also a serious concern. Along much of the "Sea Shore" a dike is found along the marsh front. This dates from at least the late eighteenth century, based on its presence on early plats, and was almost certainly designed to protect the fields and buildings from excessively high tides and the occasional northeastern storm.

### Geology and Soils

Coastal Plain geological formations are unconsolidated sedimentary deposits of very recent age, primarily Pleistocene and Holocene. They are found lying unconformably on more ancient crystalline rocks that are rarely exposed by nature (Cooke 1936; Miller 1971:74).

The soils formed from these Holocene and Pleistocene soils were typically deposited in various stages of coastal submergence. Soil formation is affected by the parent material (primarily sands and clays), the temperate climate (discussed later), the various soil organisms, the flat topography of the area, and time.

Mainland soils are primarily Pleistocene in age and tend to have more distinct horizons and greater diversity than the younger soils found on the sea and barrier islands. Sandy to loamy soils predominate in the level to gently sloping mainland areas. The adjacent tidal marsh soils are Holocene in age and consist of fine sands, clay, and organic matter deposited over older Pleistocene sands. These soils are frequently covered by up to 2 feet of saltwater during high tides. Historically, marsh soils have been used as compost or fertilizer for a variety of crops, including cotton (Hammond 1884:510) and Allston mentions that the sandy soil of the coastal region "bears well the admixture of salt and marsh mud with the compost" (Allston 1854:13).

As the colony was being settled and promoted, the soils were described simply. John Norris told his readers in 1712:

> the Soil is generally Sandy, but of differing Colours, under which, Two or Three Foot Deep, is Clay of which good Bricks are made (Geene 1989:89).

In the last quarter of the eighteenth century, William DeBrahm's Report provided little more information, stating only that, "the Land near the Sea Coast is in general of a very sandy Soil" and noting that this soil "along the Coast has as yet not been able to invite the industrious to reap Benefit of its Capacity" (DeVorsey 1971:72).

By the nineteenth century, Robert Mills in his Statistics of South Carolina provided slightly more information concerning the current understanding of the soils:

> Lands here [in Charleston District] may be viewed under six divisions in respect to quality; 1st, Tide swamp; 2d, Inland swamp; 3d High river swamp (or low ground, commonly called second low grounds); 4th, Salt Marsh; 5th, Oak and hickory high lands; and 6th, Pine barren. The tide and inland swamps are peculiarly adapted to the culture of rice and hemp; they are very valuable, and will frequently sell for $100 an acre; in some instances for more. The high river swamps are well calculated for raising hemp, indigo, corn, and cotton; and where secured from freshets, are equally valuable with the tide lands. The oak and hickory highlands are well suited for corn and provisions, also for indigo and cotton. The value of these may be stated at from ten to twenty dollars per acre. The pine barrens are not worth more than one dollar an acre (Mills 1972:442-443[1826]).

Even the detail of this account, however, fails to provide a very clear picture of the soils in Christ Church where the sands were low and commonly interspersed with galls or small inland swamps. Here the property, even the supposedly good hickory and oak lands, were poorly drained.

A number of period accounts discuss the importance of soil drainage. Seabrook, for

example, explained in 1848:

> subsoil so close as to be impervious to water; so that the excess of the rains of winter cannot sink. Nor can it flow off, because of the level surface…The land thereby is kept thoroughly water-soaked until late in the spring. The long continued wetness is favorable only to growth of coarse and sour grasses and broom sedge…acid and antiseptic qualities of the soil…sponge-like power to absorb and retain water…is barren, (for useful crops) from two causes – excessive wetness and great acidity. The remedies required are also two; and neither alone will be of the least useful effect, with the other also. Draining must remove the wetness – calcareous manures the acidity (Seabrook 1848:37).

Hammond was still providing a somewhat similar account in the postbellum:

> drainage…has of necessity always been practiced to some extent. The remarkably high beds on which cotton is planted here, being from 18 inches to 2 feet high, subserve this purpose. The best planters have long had open drains through their fields. These were generally made by running tow furrows with a plow and afterward hauling out the loose dirt with a hoe, thus leaving an open ditch, if it be so termed, a foot or more in depth (Hammond 1884:509).

The number of drainages found in the vicinity offers mute testimony to the problems planters encountered on these soils and their efforts to make the land productive. These problems have also been briefly mentioned by Hilliard, who comments that soils in the region were, "seldom well enough drained for most crops" (Hilliard 1984:11).

If the soils from the immediate vicinity of the study area are examined, only four series are encountered: Rutlege, Scranton, Chipley, and Lakeland. Of these, only the Lakeland soils are well drained (excessively drained from a soil science perspective), with a seasonal high water table at least 5 feet below the surface. These soils have an A horizon of very dark grayish brown (10YR3/2) sand about 0.8 foot in depth over a C horizon of dark yellowish (10YR6/6) sand (Miller 1971:17). The Lakeland soils are limited to a small knoll or island surrounding the location of the Fuller/Auld house.

The Chipley soils range from moderately well drained to somewhat poorly drained. They are sandy throughout, having a very dark gray (10YR3/1) loamy fine sand surface layer about 0.5 foot in depth overlying a yellowish-brown (10YR5/4) loamy fine sand which gets lighter with depth. The inherent fertility of these soils is low and permeability may be impeded by the water table that may range from 2 to 5 feet below the surface (Miller 1971:10-11, 54).

The Rutlege soils are found in nearly level to depressional areas. They are poorly drained to very poorly drained and the seasonal high water table is frequently within a foot of the surface. The typical profile reveals a black (10YR2/1) to very dark brown (10YR2/2) loamy fine sand to about 1.8 feet, providing clear evidence of chemical reduction. Surface runoff is very slow and water is frequently ponded on these soils (Miller 1971:24, 56). Historically, they were associated with the galls or sloughs that ran through the tract and were perhaps used for the cultivation of interior swamp rice.

The Scranton soils are deep, somewhat poorly drained soils that are useful for cultivation only if drained. Like the Rutlege soils, the water

table may be within a foot of the surface, although they are not as prone to flooding and poor drainage is most notable during heavy rains. Regardless, the inherent fertility is low. Where cultivated, there is an Ap horizon of black (10YR2/1) loamy fine sand up to 0.8 foot in depth overlying a C horizon of dark grayish brown (10YR4/2) loamy fine sand – again providing evidence of chemical reduction (Miller 1971:26).

Taken together, the current information and the historical documentation reveal low, poorly drained soils with only limited agricultural productivity. The impact of this on the agriculture and wealth of the Youghal owners are an issue worthy of additional discussion.

**Climate**

The weather was all-important in Colonial society, affecting the crops that in turn affected trade and wealth. Just as importantly, the Carolina climate affected, usually for the worse, the planter's health. Greene notes that:

> the prospects of obtaining wealth with ease . . . meant little in a menacing environment, and both Nairne and Norris took pains to minimize the unpleasant and dangerous features that already had combined to give South Carolina an ambiguous reputation. They had to admit that throughout the summer temperatures were "indeed troublesome to Strangers." But they contended that settlers had quickly found satisfactory remedies in the form of "open airy Rooms, Arbours and Summer-houses" constructed in shady groves and frequent cool baths and insisted the discomfitures of the summers were more than offset by the agreeableness of the rest of the seasons. [They also suggested] that ill-heath was largely limited to newcomers before they were seasoned to the climate, to people who insisted in living in low marshy ground, and to those who were excessive and careless in their eating, drinking, and personal habits. "If temperate," they asserted, those who lived on "dry healthy Land," were "generally very healthful" (Greene 1989:16).

While making for good public relations, the reality was far different. Roy Merrens and George Terry (1989) found that in Christ Church Parish, 86% of all those whose births and deaths are recorded in the parish register, died before the age of twenty. Equally frightening statistics have been compiled by John Duffy (1952), who found that the average European could expect to live to the age of about 30 in South Carolina during the first quarter of the eighteenth century. Yellow fever, smallpox, diphtheria, scarlet fever, malaria, dysentery all were at home in Carolina. Using the Society for the Propagation of the Gospel (SPG) records, Duffy found that from 1700 to 1750, 38% of the missionaries either died or were compelled to resign because of serious illness within the first five years of their arrival. Within 10 years of their arrival, 52% had died or resigned because of their health. After 15 years in the colony, the combined death toll and resignations from sickness reached 68% — two out of every three missionaries.

African Americans fared no better. Frank Klingberg (1941:154), using SPG records found that in a single four-month period over 400 slaves died of "distemper." William Dusinberre, exploring rice plantations along the Carolina coast, entitled one of his chapters "The Charnel House" — a reference to the extraordinary morbidity of African Americans on rice plantations. He reports that on some plantations the child mortality rate (to age sixteen) was a horrific 90% (Dusinberre 1996:51), while the probable average for rice plantations was around

60% (Dusinberre 1996:239). Cotton plantations – that were probably most numerous in Christ Church -- were healthier, but even there fully a third of all slave children did not live to see their sixteenth birthday.

Beginning in the last third of the eighteenth century the life expectancy began to increase. Merrens and Terry suggest that this was the result of the occupants beginning to understand the cause of malaria:

> During the middle of the eighteenth century South Carolinian's perception of the wholesome environment of the lowcountry swamps began to change. People no longer preferred these areas on the score of health as a place of summer residence. Instead, residents began to view the lowcountry as fostering both mosquitoes and death (Merrens and Terry 1984:547).

Perhaps most importantly it is about this time when we also see the planter move his residence from the swamp edge (where he could easily oversee both slaves and crops) to higher, sandier locations. Slave settlements, too, appear to move to somewhat drier and healthier environs.

The Charleston climate, with its moderate winters and long, hot summers, affected not only the health of the population and the crops grown, it also influenced the politics of Carolina. The summer climate of Carolina, while causing the Barbadian immigrants to feel that they had resettled in the tropics, also convinced most that slavery was inevitable. Not only was slavery the accepted order to the planters from Barbados, Jamaica, Antique, and St. Kitts, it seemed impossible for white Englishmen to work in the torrid heat — making African American slaves that much more essential (Donnan 1928). Even in Christ Church parish, which in 1720 had a very low settlement compared to other parishes, slaves, comprised 85.6% of the population.

**Vegetation**

Just as the early explorers described the climate as healthful, the Carolina vegetation was usually described as bountiful and fruitful. Catesby described the swamplands, typical of many areas in Christ Church, in the first decade of the eighteenth century:

> before they are prepared for rice, are thick, over-grown with underwood and lofty trees of mighty bulk, which by excluding the sun's beams, and preventing the exhalation of these stagnating waters, occasions the lands to be always wet, but by cutting down the wood is partly evaporated, and the earth better adapted to the culture of rice (Catesby, quoted in Merrens 1977:93).

He also mentions that these swamps, filled with "a profusion of flagrant and beautiful plants give a most pleasing entertainment to the senses, therein excelling other parts of the country, and by their closeness and warmth in winder are a recess to many of the wading and water-fowls" (Catesby, quoted in Merrens 1977:93).

The Youghal plantation on the "Sea Shore" of Christ Church, while being low and generally unfavorable to agriculture, incorporated a number of distinctly different ecotones, many of which are actually very productive. Along the southern edge of the property, for example, would have been the salt marsh and its border zonation. The upper marsh would have been dominated by marsh elder, sea myrtle or groundsel, and marshhay cordgrass. Slightly lower marsh areas might be dominated by glasswort, smooth cordgrass, and sea oxeye. Regardless, these communities are almost entirely dependent on the duration of flooding and the salinity of the water.

Just behind the marsh, and only slightly further inland, would be the maritime forest,

where the salt spray is enough to influence the development of the climax vegetation (Barry 1980:178). Here live oaks, palmettos, and slash pines are most frequently found. Other species might include the loblolly pine, turkey oak, red bay, and wax myrtle. Principal vines, the curse of coastal archaeological surveys even today, might include yellow jessamine, greenbrier, Virginia creeper, and poison ivy.

Further inland there would likely be a mixture of different communities, many influenced by the action of humans — earlier by the Native Americans and later by the English planters. Areas of mesic mixed hardwood and pine might be found on the better drained soils (such as the Chipley soils and perhaps even around the main settlement). The dominant species would be white oak, often in combination with loblolly pine. Found as occasional overstory trees would be sweetgum, beech, southern red oak, post oak, maple, and hickory. Understory plants would include dogwood, redbud, and holly.

While classic cypress-tupelo swamps are found in some areas along the coast, the study tract does not exhibit areas of alluvial soil with an open circulation of water. Instead, what are called upland swamps are present. While still having acid conditions and wet soils, the vegetation is often very different. The upland swamps are dominated by pond cypress, pond pine, and slash pine (Barry 1980:150-151).

Also present would be old growth pine communities, created by disturbances such as fire or clear-cutting the hardwoods. In these areas longleaf pine culminates in a closed canopy with a very sparsely populated understory. Hardwood introductions are exceedingly uncommon, but where present may include sweetgum, persimmon, and hickory (Barry 1980:172-173). These areas presented the pine flat woods shown on many plats and mentioned by many early accounts as being unproductive (even along the coast being called "pine barrens"). These are closely related, biologically, to the pine savannahs that might best be described as longleaf pine pyric climax forests.

While Christ Church has historically presented a challenge to planters, it is clear from even this general account of it vegetation, that there is tremendous diversity. Unfortunately, it was that diversity, engendered by the soils and climate, which made the area seem so unproductive. Although planters could fathom draining huge acreage of river swamps for rice, there was little interest in draining the seemingly infertile pine barrens that dominated Christ Church. We suspect that it was one thing to drain large expanses where profit was assured; it was another to drain small galls and ponded plains when there was no clear profit in doing so. Consequently, the unique combination of physiography, soils, climate, and vegetation dramatically affected the development of the area.

### The Project Area Today

To understand the tract's vegetation today it is critical to understand at some fundamental level the history of the parcel. As will be discussed in more detail, the property likely didn't come under cultivation until the second quarter of the eighteenth century. Once cultivated, there seems to have been relatively little modification of field boundaries during the nineteenth century and much of the twentieth century.

Changes probably began as the property moved from cultivation to dairy farming ca. 1929, with many fields going into pasturage. This change, however, was probably minor as existing fields were probably sown and managed using forage crops. By ca. 1940 the property was no longer as actively used by the owners, although the fields were leased out and there seems to have been little change through perhaps ca. 1980. About this time, however, fields begin to shrink as second growth began to overtakes edges and reduce the size of the open areas.

By ca. 1987 the property was largely

abandoned to agriculture and rapidly grew up in second growth pine, scrub oak, and a tangle of vines. The dense vegetation found on the property today is the result of only 16 years neglect.

Land clearing activities since 1987 are limited to a very few events. In 1991 the Youghal house burned and shortly thereafter the rubble was bulldozed. This maintained an opening in the general vicinity of the main house. Use of the Youghal house road was discontinued after the house was no longer standing and the roadway was quickly overtaken by vegetation. An SCE&G powerline was rerouted from the central portion of the property, where it had crossed roughly east-west, northward to Porcher Bluff Road and thence along the road to a new substation. Other construction activities included the continued use of the secondary Youghal road to the east of the main access road (primarily for powerline maintenance and dumping of construction debris). This construction traffic, coupled with periodic grading, has kept open this road. Otherwise, ditches filled in and fields grew quickly up in second growth. Little remains to provide visual clues concerning the nature of the property when it was a working plantation.

**Curation**

An updated site form reflecting this work has already been filed with the South Carolina Institute of Archaeology and Anthropology (SCIAA). The field notes and artifacts from Chicora's data recovery at 38CH932 will be curated at SCIAA. The artifacts have been cleaned and have been cataloged following that institution's provenience system. All original records and duplicate records will be provided to the curatorial facility on pH neutral, alkaline buffered paper. Photographic materials include B/W negatives and color transparencies – both of which are being processed to archival standards.

# HISTORICAL SYNOPSIS

**Introduction**

For much of its early history, the subject property, now known as Youghal, and the adjacent Oakland plantation, formerly known as Youghal, were held by members of the Barksdale family.

The study tract was part of Youghal Plantation (called Youg Hall in the Toomer family's deeds), 876.5 acres belonging to Dr. Anthony Vanderhorst Toomer and his son Joshua from 1811 to 1856. The Toomer family seems never to have resided on this tract. Prior to their ownership, however, it was the plantation seat of several generations of the Barksdale family.

**The Dearsly Grant**

The original grantee of the subject property was George Dearsly, who received a Proprietary grant for a plantation of 1300 acres in May 1696 (SCDAH, Memorials of 17th and 18th Century South Carolina Land Titles, S11101, v. 3, p. 103). Ownership of Dearsly's 1300 acres passed to Thomas Hamlin, who conveyed part to William Capers, and in 1704 John Perry of Antigua, formerly of the parish of Youghal, County Cork, Ireland, acquired the remaining 982 acres of the Dearsly grant, described as bounding southeast on Seewee Sound, northeast on William Capers, and northwest on Mr. Paty (Charleston County RMC DB V, p. 384).

Perry had contracted with merchant John Abraham Motte, also residing in Antigua in 1704, for Perry to ship goods for an intended settlement in South Carolina, to be purchased by Motte in Perry's name. Motte would settle the plantations and remain 10 years in exchange for half the profits. Motte settled the 982-acre "Youghal" plantation and tracts at Winyah that became the city of Georgetown (Smith 1910: 85-87).

Settlement in order to establish land ownership did not require actual residency, and John Abraham Motte also received land in his own right. In 1706 the Lords Proprietors granted him a 500-acre plantation on the northwest side of Seewee Bay. It was on his own land that Motte died (Moore 1978:280-281) in 1711, survived by his widow Sarah Mary Hill, son Jacob (1700-1770), daughters Sarah Katherine and Ann, his brother-in-law Charles Hill (a merchant of Jamaica, see Moore and Simmons 1960: 42), and his brother Isaac Motte of Charles Towne, also a merchant. In 1712 Isaac Motte conveyed to Charles Hill the 500-acre plantation, bounded southeast by Seewee Bay (Moore 1978:280-281). We have not sought to determine the location of John Abraham Motte's 500-acre grant on Seewee Bay.

John Perry bequeathed his 982-acre portion of the Dearsly grant to his daughter Mary (Charleston County RMC DB V, p. 384). In about 1735 Mary Perry and her husband John Cleland immigrated to South Carolina (Gregorie 1920: 73). Then in March 1740, for £4910, "John Cleland of Charles Town, Esq., and Mary his wife, daughter and devisee of John Perry," conveyed to George Benison of Christ Church Parish, "called Capt. George Benison," the plantation "now called Youghall, being the remaining part of the said 1300 acres, containing by a late survey [not found] 982 acres; bounding southeast partly on a great marsh and partly on land of Capt. Benison; southwest partly on Mr. Hamlin's land and partly on Capt. Thomas Boone's land; northwest partly on Mr. Barton's land and partly on Capt. Thomas Boone's land" (Charleston County RMC DB V, p. 384).

George Benison was already a landowner in Christ Church Parish. In December 1723 he had acquired from Jacob Motte 262 acres of Dearsly's 1696 grant, a tract that was adjacent to the 982-acre Youghall tract (SCDAH, Memorials

of 17th and 18th Century South Carolina Land Titles, S11101, v. 3, p. 103).

George Benison divided Youghal in 1741, deeding 500 acres of it to his son George Benison Jr. (SCDAH, Court of Common Pleas, Renunciations of Dower, S136009, 1743 Part 2, p. 358). Both Gregorie (1920:75) and researcher Agnes Baldwin (Iseley and Baldwin 1985:43-44) thought it likely that the Oakland Plantation house was built by Benison, Jr. (1722-ca. 1750) shortly after 1741. The Barksdale family cemetery, often referred to as "Youghal," remains on the tract known today as Oakland. The elder George Benison died in 1748, bequeathing in his will the remaining 482 acres of Youghall to his son William Benison (Gregorie 1920: 73). We have not been able to determine the disposition of Benison's additional 262 acres.

**The Barksdale Ownership**

The Youghal tracts were recombined in the ownership of Charles Barksdale (1715-1757), son of Thomas and Sarah Legare Barksdale (Berry 1982). In 1750 George Benison [Jr.] and his wife Elizabeth Sarah released to Charles Barksdale "a Certain tract of land, 500 acres, commonly called Youghall Plantation. Bounding south on Copahee Sound, southwest on another part of the said plantation, northeast on lands [evidently the other portion of the Dearsly grant] formerly of Jacob Motte and since of George Benison deceased." The 500 acres was further explained as the "part of the said plantation given to the said George Benison by George Benison deceased by deed 12/9/1741" (SCDAH, Court of Common Pleas, Renunciations of Dower, S136009, 1743 Part 2, p. 358). Presumably the Benison [Oakland] house stood on this tract.

The 482-acre lower portion of Youghall, which had been devised by George Benison to William Benison (who died in March 1750/51, see Webber 1919), also came into Barksdale ownership, and was conveyed by Thomas Barksdale to his son Charles in 1755 for a consideration of £1000 current money of the Province. The tract was then described as "plantation or tract of land 482 acres, formerly belonged to Col. George Benison Deceased, lately sold by Rawlins Lowndes Esq. Butting Westerly on lands of John Boone, northerly on lands of Charles Barksdale aforesaid, southerly on Thomas Hamlin Sr. and Easterly on Copahee sound" (Charleston County RMC DB SS, p. 229).

Married since 1741 to Mary Sasseau Wingood, widow of Chervil Wingood and the mother of six Wingood children (Berry 1987), Charles Barksdale seems not to have lived in the Benison plantation house after purchasing the 500-acre Benison tract in 1750. When he wrote his will (Charleston County WPA Wills 13:873) in April 1756, he left to his wife Mary "the use and living with my Son Thomas (1746-1800) upon the plantation whereon I new reside." He then discussed three adjoining tracts in his possession. To "add to the 400 acres whereon I now live," which was being devised to his widow for life then to his son Thomas, he directed 50 acres to be taken from the 500 acres he had bought from George Benison. The 450 remaining acres of that tract he devised to his youngest son George Barksdale (1748-1793). To his eldest son Charles Barksdale (1742-1760), he left the "482 acres bought from my Father Thomas, bounding on Mr. Thomas Hamlin's land."

Whether the Benison house stood on 50 acres devised to Thomas together with the family's residence plantation, or on the 450 acres devised to George is not stated. Further, Barksdale made the provision that if any son died without children (as Charles did in 1760) his share would be divided between the others. We have not determined how the 482 acres devised to Charles was divided between Thomas and George Barksdale after 1760. Given the absence of plats, it is undetermined where Charles Barksdale's residence stood. However, by the late 1700s, Thomas Barksdale was living, not in his father's house, but at the Benison's Youghall (today's Oakland) (Gregorie 1920: 74). George Barksdale occupied the subject property.

George Barksdale (1748-1793), owner of the study tract, was married twice. After the death of his first wife (name unknown), in April 1778 he married Mary Daniel, a daughter of John Daniel the younger (1734-1757), an early owner of Egypt Plantation, and Ann Ash. Along with Mary, the daughter of his first wife, four of the Daniel-Barksdale children survived to adulthood: Thomas Jones (1779-1806), Elizabeth (1782-1859, married Ezekiel Pickens), Abigail, and George (ca. 1786/7-1816) of Greenwich (Mount Pleasant) (Berry 1983).

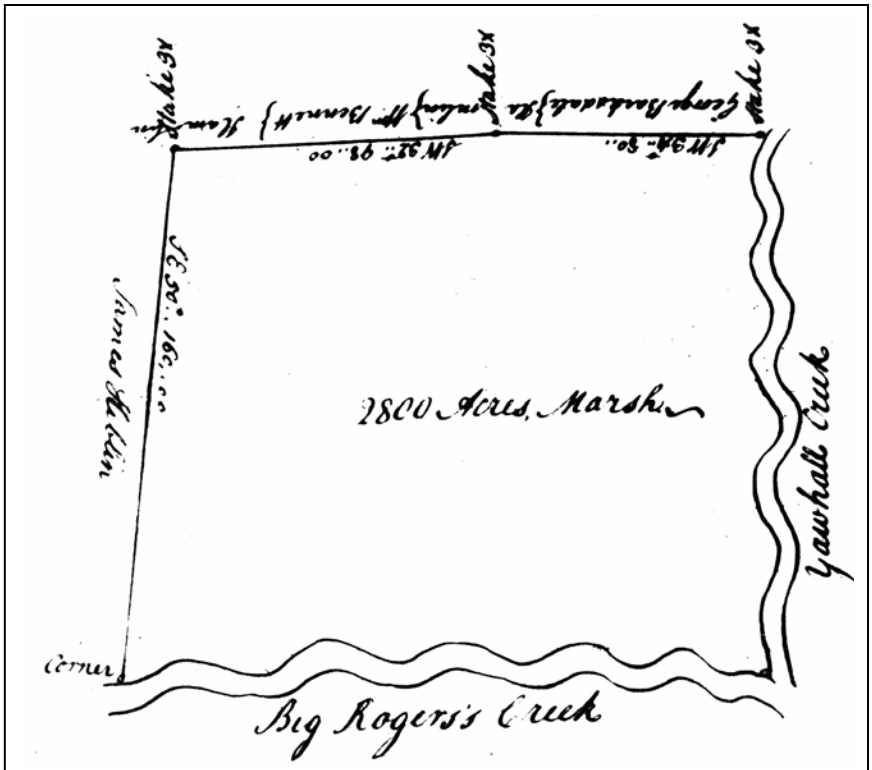


Figure 4. George Barksdale's 1786 plat for 2800 acres (SCDAH, SC State Plats, S213190, v. 1, p. 328).

In 1786 George Barksdale received a Surveyor General's plat for 2800 acres of marshland in Christ Church Parish, bounded by George Barksdale, Hamlin, Bennett, James Hibben, "Yawhall" Creek and Big Rogers Creek (SCDAH, SC State Plats, S213190, v. 1, p. 328). Unfortunately, this plat lacks sufficient topographic features to allow it to be used for platting the land. Moreover, the plat fails to show any structures or activities on the acreage (Figure 4). At his death in 1793, he owned 1578 acres total, a town lot in Charleston, and 86 slaves (Bailey and Cooper 1981:51) By his will written in December 1793, he bequeathed to his son Thomas Jones Barksdale (then about fourteen years old) "my plantation and all my tracts of land whereon I do now live" when he reached 21. Younger brother George would inherit property at Haddrell's Point, and slaves were bequeathed to Barksdale's three daughters (Charleston County WPA Wills 25:144).

The inventory of Barksdale's personal estate, taken in 1794, totaled £4540.10/6. Most of the value (£3855) was in his slaves, but his other effects shed more light on plantation activities. There were seven yoke (pairs) of oxen, 55 head of stock cattle, 20 sheep, 35 goats, a "stock" of hogs, 13 horses, a schooner and three flats; cart chains and yokes, plantation tools, and a carriage. Household goods were the typical furnishings of a well-off planter's residence: a pair of dining tables, desk, tea table, bedsteads and mattresses, table and bed linens, three "pieces of pavilion gauze" (thin silk or cotton used as a bed pavilion or tent), kitchen furniture, two lots of books, and a spyglass (Charleston County Inventories C:86).

Thomas Jones Barksdale was to inherit his father's plantation when he was of age. In 1800, the year he attained the age of 21, he married Anne Ashby, daughter of Thomas Ashby Esq. of St. Thomas Parish. (Holcomb 1981:78). They occupied his father's plantation, and Barksdale became fairly prominent in parish affairs. He was elected to the legislature while in

his mid-twenties, and in 1806 he was serving as captain in the 30th Militia Regiment (Bailey 1984:49). The terms of his will, written in August 1806, hint that Barksdale was in failing health. Married six years, he was without children, and made no provision for a posthumous child: he left to his "beloved Wife Anne Barksdale the Plantation whereon I now reside during her natural life, and so long as she continues my Widow . . . at her decease I bequeath the Plantation to my beloved Brother George Barksdale, but in case he should die first, then to my beloved Sister Elizabeth Barksdale." The rest of his estate he devised to his wife outright (Charleston County WPA Wills 30:1065).

Barksdale died in October 1806, and the Charleston Courier printed a long memorial (placed by a relative or family friend) paying tribute "to the memory of one whose many virtues will long live in the recollection of his much afflicted acquaintance, and whose whole life was so free from any act which could shame morality, that those who knew him, will say that his warmest admirers cannot say too much in his praise. . ." (*Charleston Courier* 10/15/1806).

Six months later an inventory was made of Thomas Jones Barksdale's household and plantation goods. Including the livestock and 29 slaves, his personal estate was valued at $13,187. The inventory indicates he had continued his father's comfortable way of life, with beds, featherbeds, sheets, quilts, blankets, and pavilions; carpets and window curtains; a secretary and books, sideboard, dining table, tea tables and china, a dozen large silver spoons, knife cases; candlesticks, clock, "baggammon [backgammon] box," thermometer, carriage, riding chair, and horses; a schooner; and stocks of cattle, hogs, and sheep. The only crop on hand was 250 bushels of corn (Charleston County Inventories D:482).

Less than a year after the death of Thomas Jones Barksdale, in July 1807 his widow Ann married John Spencer Man, a Charleston merchant (Holcomb 1981:78). Although the terms of Barksdale's will provided her with lifetime occupancy of his plantation unless she remarried, through a marriage settlement (SCDAH, Marriage Settlements 5:333-336), she conveyed the plantation in trust to Thomas Ashby (apparently her brother) and William Shackelford, along with slaves and other personal property bequeathed to her by her father Thomas Ashby. The terms of the trust would allow Man to hold and use the property during their joint lives, but reserved future ownership to the Ashby-Man children (if any).

Through this marriage, Spencer Man became, if briefly, a planter. Charleston city directories list him as a merchant in 1807, a planter at "12 Mile, Christ Church Parish," in 1809, and again a city resident in 1813 (Hagy 1995). He and his wife had lost their plantation in 1810 in a forced sale brought on by Thomas Jones Barksdale's unpaid debts.

Early in 1808 Nathaniel B. Mazyck and Isaac M. Weston, formerly co-partners in the firm Weston & Mazyck, had brought suit for payment of accounts Barksdale had incurred between 1805 and 1806, purchasing such things as cloth, hose, three beaver hats, a great coat, gloves, and a portmanteau trunk. A jury had found the estate liable for $141.82, including court costs (SCDAH, Judgment Roll, L10-108, Item 116A.) To settle the debt, the sheriff of Charleston District seized the tract and announced the public auction of the "plantation in Christ Church Parish, about eight miles from Hibben Ferry, now in the occupation of Spencer John Man, 986 acres." Before the auction was held, George Barksdale bought the tract for the cost of the judgments (Charleston County RMC DB O8, p. 276.) There might have been additional debts besides that to Mazyck and Weston, but we did not find other records.

After 1813, Spencer Man disappears from Charleston records. His family may have moved to Virginia - the 1830 census recorded Spencer A. Man there, between the ages of 20 and 30, in a household with several young children and a

woman between the ages of 50 and 60. She may have been Ann Ashby Barksdale Man.

While the historical accounts are not entirely clear, it appears that widow Barksdale attempted to entail the property of her late husband to her own heirs and not back to the Barksdale's – a move that flies in the face of Barksdale will. It isn't clear that Barksdale was living beyond his means, in spite of the suits brought against the Estate. It seems likely that the creditors could have been paid off, had Barksdale not died first. It seems likely that the insolvency of the estate came more from the management of the widow and her new husband – primarily from their failure to pay relatively small bills – than from the lifeway of Thomas Jones Barksdale.

The purchaser of the 986-acre tract in September 1810 was George Barksdale (ca. 1786/7-1816), the brother of Thomas Jones Barksdale. George was then at the Haddrell's Point plantation, Greenwich, which he had inherited from his father, living there and in Charleston with his wife Rebecca Bee Edwards (Holcomb 1981:7). In March 1811, only a few months after he bought the subject property, he sold it to Anthony Vanderhorst Toomer, also of Christ Church Parish, as a plantation "about eight miles from Hibben Ferry, containing about 986 acres." Toomer paid $15,156 for the land, (Charleston County RMC DB F7, p. 447 and G7, p. 219) and gave Barksdale a bond for the purchase price, to be paid over five years, securing it with a mortgage on the property. The mortgage description is slightly different from the deed of conveyance:

> plantation on the seashore, nine miles from the ferry, formerly property of Thomas J. Barksdale, 1000 acres more or less. Bounding northeast and east on Thomas Barksdale, west on Thomas Hamlin, southeast on the seashore (Charleston County RMC DB O8, pg. 278).

Like his brother, George Barksdale died without children. The inventory of his personal estate, taken in 1816, includes the balance of Toomer's bond, principal and interest totaling $10,762.65 (Charleston County Inventories, E:363). The bond was eventually satisfied and discharged from Barksdale's estate (Charleston County RMC DB I8, pg. 449).

**Youghal - The Toomer Plantation**

The subject property, 876.5 acres belonging to Dr. Anthony Vanderhorst Toomer and his son Joshua from 1811 to 1856, eventually took the name Youghal. It is unclear when the name was transferred from the Barksdale residence plantation southward to the study tract. The first references found to the Toomer tract as Youghall or Youg Hall are in deeds from 1853; the first references to the Benison/Barksdale tract as Oakland are in an advertisement and deed from 1859. It seems likely, therefore, that the name transfer took place in the late antebellum.

Born in Christ Church Parish, Anthony Vanderhorst Toomer (1775-1856) was the son of Joshua Toomer (d. 1796) and Mary Vanderhorst (d. 1783). A well-off planter, Joshua Toomer paid taxes on 1140 acres in Christ Church Parish in 1795 (Bailey and Cooper 1981:718). Anthony V. Toomer was a physician, and practiced medicine in Christ Church Parish, where he lived, as well as planting. When he bought the Barksdale tract in 1811, he was already an established landowner and public figure, serving several terms in the state house of representatives between 1800 and 1817 (Bailey 1984: 566-567).

Dr. Anthony V. Toomer inherited 450 acres in Christ Church Parish from his father (Bailey 1984: 566). In 1808 he paid Daniel Legare $500 for a fifty-acre tract, "part of a tract of 500 acres now in the occupation or possession of said Toomer." The conveyance seems to have been for the purpose of clearing up a property line (Charleston County RMC DB O8, pg. 279). Soon afterward, in 1809, Toomer bought a lot in downtown Charleston, where he built a frame

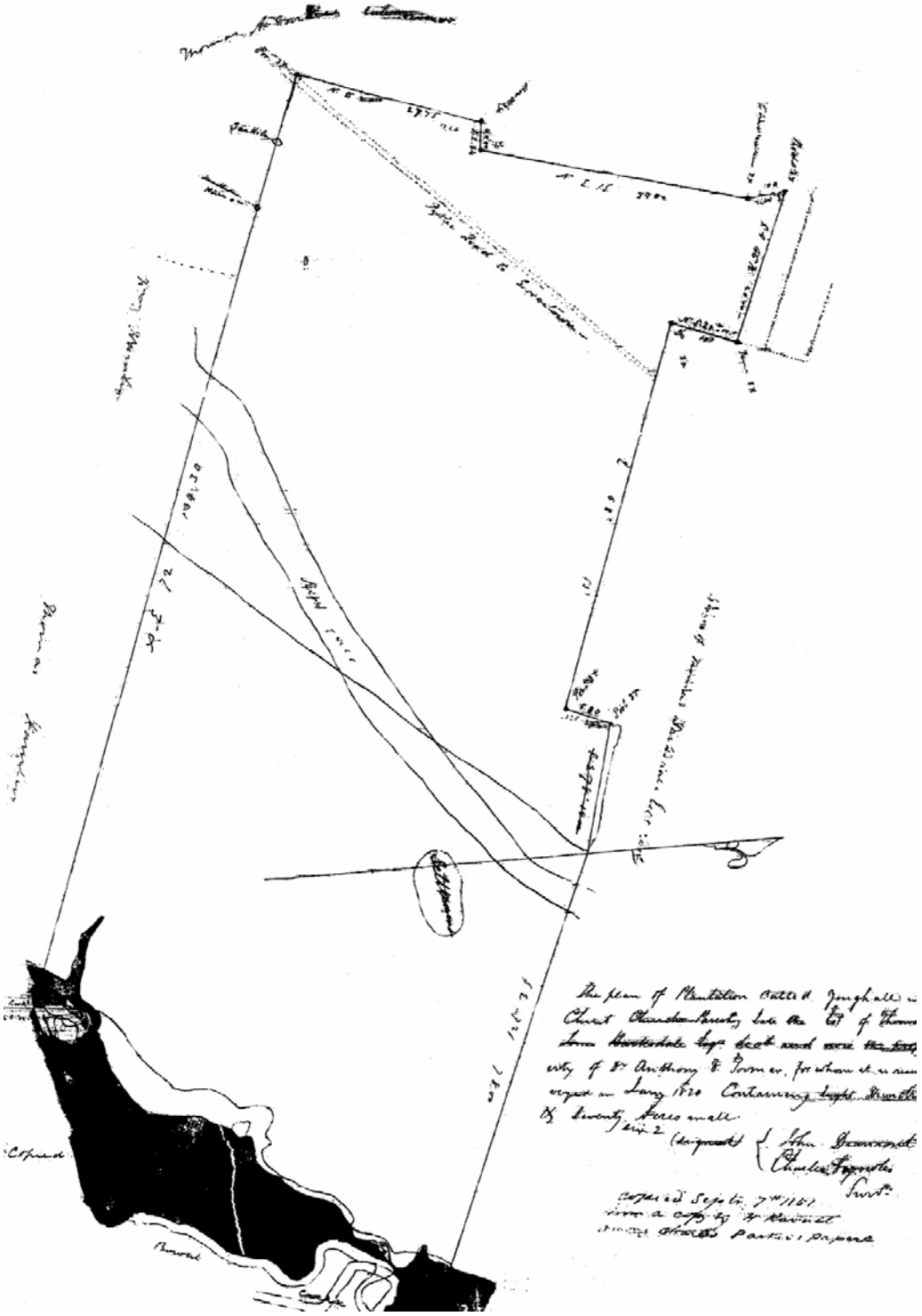

Figure 5. 1861 copy of the 1820 Youghal plat, showing the settlement absent on the original 1820 plat (McCrady Plat 6103).

townhouse (today's 36 Chapel Street). He owned this house until 1851, adding to his Chapel Street presence in the early 1830s with the construction of today's 34 Chapel Street. Like other planter/investors, Toomer often borrowed against his real estate, mortgaging the two Chapel Street houses for $3,000 in 1833 (Charleston, S.C. *News & Courier* October 32, 1968; September 29, 1975; July 2, 1984).

The only plat (Figure 5) we have been able to identify for the property is dated to January 1820. It identifies the property as "the Plantation called Youghall in Christ Church Parish, late the Est. of Thomas Jones Barkesdale Esqr. decd. and now the property of Dr. Anthony V. Toomer for whom it is resurveyed" (McCrady Plat 6103). The plat shows 876½ acres and was prepared by John Diamond and Charles Vognoles. A margin note indicates that it was "copied Sept. 7th 1861 from a copy by H. Ravenel among Charles Parker's papers." The plat reveals a rice field flowing through the middle of the parcel (this drainage, while today re-routed, is still plainly visible on the soil survey shown as Figure 2). To the south of this drainage is the "settlement." While no details are shown, this does at least indicate that a settlement was present by 1861 (see the discussion below concerning the date of the settlement). An earlier, but undated, version of this plat (McCrady Plat 5577) with the margin note fails to show the settlement (which is also absent on the 1820 plat).

In 1824 Toomer paid taxes on 2,158 acres and 122 slaves in Christ Church Parish (SCDAH Consolidated Index). He acquired additional lands in the parish throughout his life, sometimes in small parcels: 31.5 acres in 1836 (Charleston County RMC DB N10, pg. 129), another 50 acres the same year (Charleston County RMC DB N10, pg. 139), and 64 acres in 1845 (Charleston County RMC DB R11, pg. 41). Not all his real estate acquisitions, or the Toomer inheritances, have been completely traced, however. In 1821 Sabina Hall (apparently Toomer's stepmother, who had remarried and been widowed again after the death of Joshua Toomer) conveyed to him for $5,000 the "tract on which I now reside called White Hall," a 500-acre plantation, and also 100 acres "known as Cook's Tract" (Charleston County RMC DB H9, pg. 60).

White Hall became Anthony Vanderhorst Toomer's own residence, but when he and his wife Mary Daniel Legare (d. 1845) occupied it has not been learned. They had five known children: Dr. Henry V. Toomer (1813-1858), Nathan Legare Toomer, Eliza D. Toomer, Anthony Vanderhorst Toomer, Jr., and Dr. Joshua Toomer (1810-1893) (Bailey and Cooper 1981:718; supplemented by biographical files at Waring Historical Library of MUSC). By the end of Toomer's life, he had given or sold a great deal of real estate to his sons. The mansion at 34 Chapel Street was Henry Toomer's residence; in 1849 Joshua had been given a lot in the Village of Greenwood (Mount Pleasant) (Charleston County RMC DB H13, pg. 649).

By 1850 A. V. Toomer reported ownership of 1,300 acres (only 150 improved) in Christ Church Parish, on which he had produced 8,000 pounds of rice and seven bales of cotton. Only two of his sons reported planting in their own right: Joshua, with 700 acres (100 improved) had produced four bales of cotton; Nathan L. had produced 8,000 pounds of rice on his 700 acres (60 improved).

In 1853 Toomer conveyed plantations to two of his sons, Anthony Jr. (with whom he seems to have been living at White Hall), and Nathan Legare Toomer. Anthony V. Toomer Jr. paid his father $852.50 for five adjoining tracts totaling 407 acres, including the Cook's Tract, three small parcels acquired between 1836 and 1845, and a "tract known as James White's tract" (which was adjacent to White Hall) (Charleston County RMC DB R12, pg. 601). For $3,500, Nathan Legare was conveyed Richmond Plantation:

> about twelve miles from Mount Pleasant Ferry, bounded north and northeast by a navigable creek formerly called White's

> Creek, east by lands now of George White, southeast and south by lands of Miss Mary Barksdale, south and southwest on lands left by Thomas Barksdale to his daughter Sarah but now owned by Thomas T. H. White Esq., west and northwest on lands of Effingham Wagner, north on said creek formerly known as George White's Creek (Charleston County RMC DB X12, pg. 453).

Toomer's financial condition has not been researched in detail, but in July 1853 he also gave a mortgage on his plantation "commonly called Youghall, 876 acres," and on 20 slaves. The debt was eventually satisfied (Charleston County RMC DB B13, pg. 301), and the next month Toomer sold "Youg Hall" for $6,000 to Colin T. Hale of Charleston. Hale may not have taken possession of the tract: he gave Toomer back a mortgage on the property, and in January 1855 released it back to him (Charleston County RMC DB A13, pg. 359; DB B13, pg. 599).

Mortgages and debts were probably the reason that A. V. Toomer did not convey his 300-acre home plantation, White Hall, to his son Henry V. Toomer outright, placing it instead into trust,

> to apply the rents, issues, profits, and interests accruing from the lease or occupation of said plantation to the said A. V. Toomer, not liable to any of his debts during his life. At his death to be conveyed to Henry V. Toomer of the City of Charleston (Charleston County RMC DB E13, pg. 167).

Henry V. Toomer predeceased his father, and in May 1859 A. V. Toomer paid his widow Mary Priscilla $3,010 for White Hall, 327 acres "with the buildings thereon" (Charleston County RMC DB A14, pg. 229). In 1868 it was finally sold out of the family, being described as 395 acres (Charleston County RMC DB D15, pg. 197).

Youghal was still in the possession of Anthony Vanderhorst Toomer, MD when he wrote his will in May 1856 (Charleston County WPA Wills 47:869). He devised his "You Hall" tract of land to his son Joshua, then in July of the same year, sold the 876.5-acre plantation to Joshua for $850 (Charleston County RMC DB R13, pg. 267). There was land on Ashepoo, which had apparently not been settled by Toomer: he left to his son Henry "my Ashepoo lands, in trust nevertheless to locate, sue for and recover said lands, and in conjunction with my other executors to sell the same . . . ." The summer residence at Lavender Point (location unknown) stood on leased land, but the building and furniture were left to A. V. Toomer, Jr. Toomer's residuary estate, including "the bed, bedding and furniture in my bed chamber at my winter residence at White Hall and four large trunks in said chambers" was directed to be divided among his four sons.

Toomer made two additional legacies. To the Independent or Congregational Church of Wappetaw he devised $500. Then "in consideration of the fidelity with which my servant Judith alias Judy has served me and as it is inconsistent with the laws of the land and the division of my personal estate already made to manumit her, I bequeath to my youngest son Anthony V. Toomer $300 in trust for her use, which sum I enjoin upon him to invest in the State Stock of this State and to pay to Judy the interest during the term of her natural life, the principal to be part of my residuary estate."

Dr. A. V. Toomer's estate inventory taken in February 1857 sheds little light on his personal possessions. Most of his belongings had been devised to his sons and were therefore not appraised. Remaining in the estate were only 56.5 bushels of corn, one "very old Cow," 10 geese, 42 turkeys, and a shoat (young pig) (Charleston County Inventories Book D:586).

Because he had purchased Youghal from his father, Joshua Toomer did not need to wait for the will to be probated (which didn't occur until October 10, 1856) in order to sell the plantation. On August 6, 1856, Edward N. Fuller of Edisto Island paid Joshua Toomer of Christ Church Parish $6,000 for the plantation known as Youghal, containing 876.5 acres (Charleston County RMC DB T13, pg. 95).

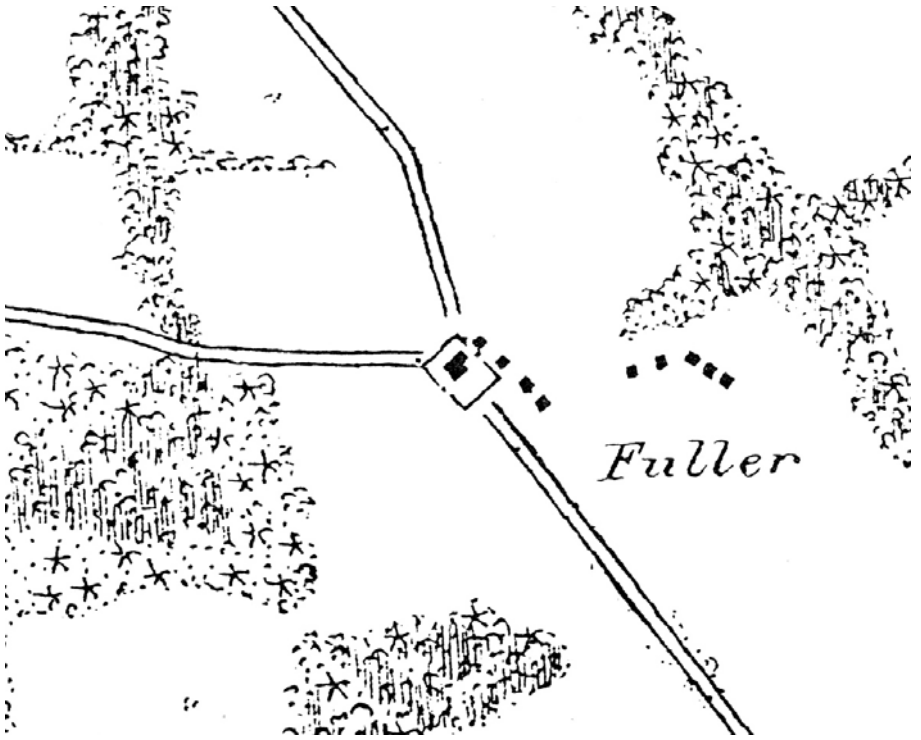


Figure 6. Portion of the U.S. Coast Survey *Bull's Bay to Breach Inlet* showing the Fuller settlement.

**Youghal - After the Toomer Ownership**

Edward N. Fuller (1820-1896) purchased Youghal Plantation in 1856, and probably built the house that became known as the Auld House. Fuller was a son of Sarah Green Porteous (d. 1850) and Benjamin Fuller (d. 1832) (Anonymous 1912:116). His father planted in St. Andrews Parish, apparently in the Pierpont section along the west side of Ashley River (Smith 1988:245). Edward Fuller attended Princeton, then began planting on Edisto Island. In 1839 he married Mary Ann Mikell, daughter of Ephraim Mikell (Holcomb 1980: 154), a prominent member of one of Edisto's Sea Island cotton planter families. His obituary commented,

> Although a younger man than most of his fellow planters, he soon outstripped them by the most scientific and systematic methods he employed in raising sea island cotton. He was the first of them to use manufactured fertilizers. This is long before the value of Carolina phosphate rock was known, but a commercial fertilizer known as Mape's superphosphate was somewhat used at the north, and Mr. Fuller introduced its use in this part of the world (Charleston, S.C. *News & Courier*, May 23, 1896).

He must have brought money to the marriage, and perhaps slaves as well, but Fuller seems to have been planting on land his wife had inherited from her father (see Will of Ephraim Mikell, Charleston County WPA Wills 41:717). In 1850 the family on Edisto included Edward Fuller (29), Mary (26), Edward (8), Catherine (6), Margaret (4), Sarah (2), William (6 months), and Edward's mother Sarah Fuller (71). A few years later Fuller had the opportunity to become an official of a new enterprise, the Southwestern Railroad Bank. Preparing to move to Charleston, in May 1856 he and his wife sold their plantation to her brother I. Jenkins Mikell of Peter's Point Plantation. Mikell paid $13,000 for Governor's Bluff, 170 acres of high land and 30 acres of marsh

(Charleston County RMC DB R13, pg. 255). Paying only $6,000 for Youghal's 876 acres, Fuller had ample funds with which to build a country house.

Table 1.
Ownership of the Study Tract Through the Nineteenth Century.

| Grantor | Grantee | Date | Notes |
|---|---|---|---|
| Lords Proprietors | George Dearsly | 5/1696 | 1,300a |
| George Dearsly | Thomas Hamlin | ? | 1,300a |
| Thomas Hamlin | John Perry | 1704 | 982a – settled by Motte |
| John Perry | Mary Perry | ? | 982a – by will |
| Merry Perry (& husband) | George Benison | 3/1740 | 982a |
| George Benison | George Benison, Jr. | 1741 | 500a |
| George Benison | William Benison | 1748 | 482a – by will |
| Benison | Charles Barksdale | ? | Combined 982a |
| Charles Barksdale | George Barksdale | 1757 | 450a – by will |
| George Barksdale | Thomas J. Barksdale | 1793 | 1,578a – by will |
| Thomas J. Barksdale | Wife, life trust | 10/1806 | Wife marries Man |
| Spencer J. Man | George Barksdale | 9/1810 | 986a |
| George Barksdale | Dr. A.V. Toomer | 3/1811 | 986a - $15,156 |
| Dr. A.V. Toomer | Colin T. Hale | 8/1853 | 876.5a - $6,000 |
| Colin T. Hale | Dr. A.V. Toomer | 1/1855 | 876.5a |
| Dr. A.V. Toomer | Joshua Toomer | 7/1856 | 876.5a - $850 |
| Joshua Toomer | Edward N. Fuller | 8/1856 | 876.5a - $6,000 |
| Edward N. Fuller | G.B. Lamb | 1/1858 | 876.5a - $12,000 |
| G.B. Lamb | Dr. Samuel Blackwell | 4/1863 | 876.5a |
| Dr. Samuel Blackwell | Daniel B. Wheelock | 1/1868 | 876.5a - $1,050 |

The residence Fuller constructed is very similar in appearance to other Sea Island cotton planters' dwellings. He is known to have brought some of his slaves from Edisto to Charleston; among them may have been carpenters and builders. Regardless of his satisfaction with the completed house, though, he did not hold it long. In January 1858 he sold Youghal Plantation to George Buist Lamb of Charleston for $12,000 (Charleston County RMC DB T13, pg. 241). The price of the property, its acreage unchanged, had increased by $6,000 - a reasonable value for a fine new house in the late 1850s. Edward Fuller settled in Charleston full-time, remaining there until his death in 1896.

Fuller held Youghal for less than two years. Whether he planted there at all in that brief time is unknown. Although he seems not to have lived there, it was owner G. B. Lamb who reported the farm's 1859 production to the census in 1860. Only 200 of the 876 acres were improved, and the value of the implements and equipment was very low at $50. There were no cattle or swine, and only 15 sheep, six horses, and three mules. Small amounts of corn and sweet potatoes, probably for farm consumption, had been produced, but the cotton yield was a respectable 20 bales. L. A. McCants, apparently an agent, reported Lamb as the owner of 31 slaves, housed in five structures (average family size of 6.2 individuals).

A native of Charleston, G. B. Lamb, son of merchant James Lamb, was about 25 years old when he bought Youghal. He was not living in Christ Church Parish at the time of the 1860 census, and indeed the trustee of his marriage settlement had already requested (in February 1860) that the property be sold to alter the trust estate (Charleston County RMC DB A14, pg. 553). In April 1863 the 876.5-acre plantation was sold to Dr. Samuel Blackwell (Charleston County RMC DB A14, pg. 553), husband of Anna C. Hamlin (Charleston County RMC DB Z13, pg. 53). Blackwell held the land until after the Civil War. In 1867 he leased it to Laurence P. Smith and Lewis A. Dodge, the annual rent totaling $600. Their rights to the wood on the property were limited; they could cut enough firewood for themselves and the plantation, and additional wood only for "substantial improvements and fences." Any additional wood, including any cut for sale, would be paid for (Charleston County RMC DB B15, pg. 451) The value of the property for production or rental was not enough to keep Blackwell solvent, and in January 1868 it was ordered sold to settle his debts. Daniel B. Wheelock paid $1,050 for Youghal Plantation, 876.5 acres with a dwelling house and outbuildings, at the sheriff's sale in December 1869 (Charleston County RMC DB N14, pg. 34).

**Youghal in the Late Nineteenth Century**

The use of Youghal Plantation during the late nineteenth century seems to have been generally similar to other large tracts in Christ Church Parish. Between 1870 and 1872, Daniel Wheelcock (or Wheelock) sold about 240 acres in as many as 25 separate transactions (Brockington et al. 1987: 17). Little, however, seems to have been happening on the tract. The 1870 Agricultural Census reveals that Wheelcock reported 200 acres of improved land and 500 acres of woodland, no animals and no production. His neighbors all seem to have been fairing better. Joshua Toomer on 114 improved acres reported two mules, eight cattle, 30 sheep, three swine, and production of 50 bushels of corn and one bale of cotton. Ferdinard Gregorie, with 200 improved acres, reported production of 20 bushels of sweet potatoes and one bale of cotton. At Boone Hall Frederick Horlbeck's 200 improved acres yielded eight bales of cotton. Philip Porcher, on neighboring Oakland Plantation, produced three bales of cotton on 200 improved acres.

Figure 7. View of a slave house still standing in 1938 (photo courtesy Ms. Judy Byrd, Mount Pleasant, S.C.)

In 1875 the U.S. Coast Survey published the map, *Bull's Bay to Breach Inlet* (Map 1400b) that includes the Youghal tract. It is shown as Fuller property since the survey, while published in 1875, was actually completed prior to the Civil War (Figure 6). The map shows the main house surrounded by a fenced yard area. To the northeast and east are a series of four structures, probably slave houses intended for house servants, although some may also represent utility buildings. At least one of these structures was still standing in 1938 (Figure 7). Further east are five structures laid out in an arc-shape, probably representing field slaves.

After the turn of the twentieth century, the remaining acreage eventually passed to the Auld family.

**Twentieth Century Activities**

The property was acquired in 1905 by Isaac Auld. The condition of the property and the activities that took place between 1905 and ca. 1920 aren't clear, but the plantation apparently continued to focus on cotton, perhaps using tenant labor.

The lure of cotton during the first decade and half of the twentieth century is clearly shown in Table 2. Cotton prices, in general, were high and stable, with a generally stable to slightly increasing production. When Sea Island cotton is considered, its favor is even easier to understand with prices two to three times that of upland cotton. The record high price in 1904 may have encouraged, or even allowed, the Auld family to move to Youghal and begin refurbishing the plantation. But this excitement was short-lived. In 1903 the sale of Sea Island cotton was banned in an effort to prevent its overseas exportation. Those planters not producing their own seed were forced to plant upland cotton – and the resulting cross-pollination began to cause significant deterioration of the Sea Island variety (Kovacik and Mason 1985:96). The economic outlook became so bad for Sea Island cotton that in 1914 the South Carolina Association of Sea

Table 2.
Selected Twentieth Century Cotton Production Statistics and Prices
for South Carolina and Charleston County

| Year | Charleston Cotton (bales) | Average Price (¢/lb.) | Average Price (¢) corrected to 2002 $ | S.C. Cotton (bales) | Charleston Sea Island Cotton (bales) | Average Price (¢/lb.) | Average Price (¢) corrected to 2002 $ |
|---|---|---|---|---|---|---|---|
| 1901 | 5,843 | 9.44 | 2.15 | 759,581 | 6,013 | | |
| 1902 | 10,340 | 7.77 | 1.60 | 948.200 | 10,300 | 25.00 | 5.00 |
| 1903 | 8,890 | 8.20 | 1.60 | 814,351 | 8,566 | 28.40 | 5.60 |
| 1904 | 10,650 | 12.16 | 2.40 | 1,192,925 | 10,092 | 27.12 | 5.40 |
| 1905 | 10,812 | 8.66 | 1.80 | 1,112,363 | 9,975 | 26.38 | 5.20 |
| 1906 | 7,636 | 10.94 | 2.20 | 912,602 | 6,826 | 36.70 | 7.60 |
| 1910 | 10,770 | 14.02 | 2.80 | 1,163,501 | | | |
| 1911 | 9,567 | 9.48 | 1.80 | 1,648,712 | | | |
| 1912 | 9,060 | 11.70 | 2.18 | 1,182,128 | | | |
| 1913 | 13,465 | 12.86 | 2.36 | 1,377,814 | | | |
| 1920 | 9,260 | 13.5 | 1.17 | 1,476,645 | | | |
| 1930 | 1,506 | 16.0 | 1.72 | 835,963 | | | |
| 1932 | | 4.6 | 0.66 | | | | |
| 1933 | | 6.0 | 0.83 | | | | |
| 1940 | 434 | 9.0 | 1.15 | 849,982 | | | |

Sources: Haney et al. 1996; Watson 1907, 1916; Twelfth Census of the United States (1900); Thirteenth Census of the United States (1910), Fourteenth Census of the United States (1920), Fifteenth Census of the United States (1930), and Sixteenth Census of the United States (1940).

Island Planters, at a meeting in Charleston perhaps attended by Isaac Auld, decided to disband their organization (Watson 1916:77). By 1917 the boll weevil was in South Carolina. Crop losses were significant by 1918, but in 1921 the entire Sea Island crop was lost, effectively wiping Sea Island cotton out as a commercial venture. In spit of these problems, cotton continued to provide a good living to low country farmers until the economic collapse of 1930.

As will be discussed in the following chapter, Seabrook Auld was lured away from cotton, for at least a brief while experimenting – as were many small operators – with dairying. Beginning about 1930, this operation lasted for a little over a decade, but by the 1940s Seabrook Auld left the dairy business and went to work at the Charleston Naval Yard. Rosen (1982:144) notes that between 1938 and 1945 employment in the naval yards swelled from 1,632 to over 25,000 as the facility expanded and became the newest industry in Charleston. The farm was leased out to various individuals who continued to maintain cattle on the property, well into the 1970s.

# A HISTORIC CONTEXT FOR DAIRYING IN CHRIST CHURCH

## Antebellum Dairy Activities

The 1850 and 1860 Agricultural Censuses for Christ Church Parish suggest that milk cows were commonplace on most plantations. In 1850 there were 608 "milch" cows on 58 farms. While a sizable number, this represented only about 20.6% of the cattle in the Parish. When all of Charleston County is examined, the milk cows comprised 33.5% of the total herd – so dairying appears to have slightly less important in Christ Church than elsewhere in the county. The average number of milk cows on Christ Church plantations was 10, while the median was 8 and the maximum number was 30. At this time 89% of all enumerated plantations reported milk cows.

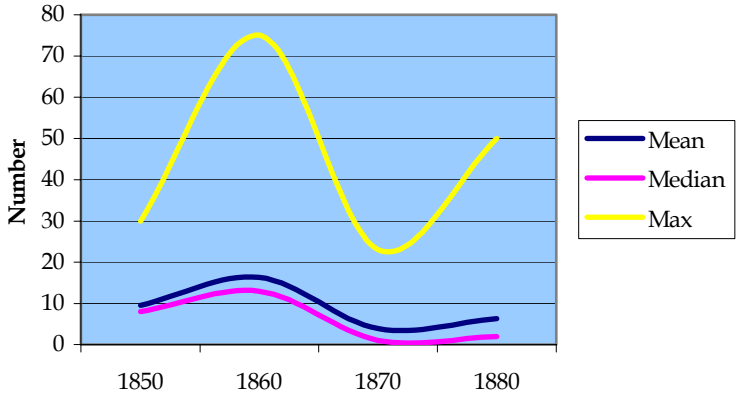


Figure 8. Milk cows in Christ Church Parish during the late antebellum and early postbellum.

By 1860 the number of dairy cattle increased by about 68% to 981 found on 51 farms, representing 84% of all reporting plantations. Not only did the number of cattle increase, but so too did the proportion of milk cattle – by 1860 comprising 36.8% of all cattle in the parish. In comparison, 35.4% of all cattle in Charleston County were dairy cows. In Christ Church Parish the mean number increased to 16, the median increased to 13, and the maximum dairy herd size increased to 75.

In the late antebellum there is a good suggestion that milk production in Christ Church Parish was increasing beyond that needed for family consumption. Scardaville (in Brockington et al. 1985) has previously suggested that the parish, faced with declining fortunes, turned to ranching as a means of taking advantage of the nearby urban market. Dairying would have been just another facet of this effort to identify a niche for the area's plantations.

## Postbellum Decline

In the immediate decades after the Civil War, Christ Church Parish exhibited an extraordinary agricultural decline – and dairying was no different. The number of dairy cattle had declined to 135 head by 1870. Recovery came very slowly, so that in 1880, the number increased to only 221. In 1870 the average number of dairy cattle was down to 4, with the median only one head. The largest dairy herd had only 23 head and only 11% of the plantations reported dairy cattle in that census year. By 1880 the number of farms reporting dairy cattle had recovered – 83% reported dairy cattle. Yet the average size was only 6 head and the median had increased to only two.

When all of Charleston County is considered, 1880 suggests considerable recovery, at least in terms of dairy cattle numbers, with 7,306 head reported compared to 2,565 in 1870. In fact, Charleston farmers seem to have taken a particular interest in dairy cattle – 44.2% of the cattle in the county were milk producers, compared to only 41.2% statewide. Curiously, the State Board of Agriculture seems to have had little interest in dairying – or at least the interest was relegated to a brief mention of early "cowpens" in the Piedmont during the antebellum, with no focus on the future of the industry (State Board of Agriculture 1883:147).

At first glance this recovery appears to have collapsed in 1890 – only 557 dairy cattle were reported for that census year and milk production, reported at 114,636 gallons in 1880, declined by over 25% to 85,790 gallons in 1890. During that same period milk production in South Carolina increased from a very modest 257,186 gallons to 23,833,631 gallons. One likely explanation for this is that in November 1882 Charleston lost 94% of its land to newly formed Berkeley County (being reduced from 2,140 square miles to only 130 square miles; see Long 1997:49-50). With this significant a loss it is a tribute to the emphasis on dairy farming in the remaining section of Christ Church Parish that production didn't fall far more.

## Twentieth Century Changes

Between 1890 and 1920 the number of dairy cattle in Charleston County increased from a low of 557 to 3,322 head. During this same period Charleston's political boundaries increased from 130 square miles to 910 square miles, or seven-fold – nearly identical to the increase in cattle.

In the first decade of the twentieth century the US Department of Agriculture, in conjunction with the State Department of Agriculture and Clemson Agricultural College, aggressively marketed dairying to farmers (Watson 1907:373). By improving breeds, refining technology, investing in marketing, achieving better labor conditions, and eradicating the cattle tick, the future would virtually be assured – at least according to the pundits of the day. Watson offers some indication of improvement – the per head value of dairy cattle had increased from $22.92 in 1902 to $28.00 in 1906 and there were herds in Aiken and Clemson that were making profits (Watson 1907). Between 1902 and 1916 the average value per head increased by 50.5% (Watson 1916:63).

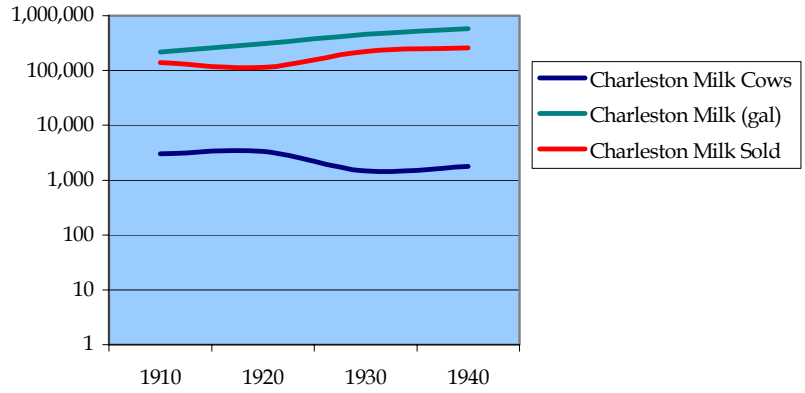


Figure 9. Charleston County dairying activities, 1910-1940.

While this suggests a booming recovery for dairies in the low country, other factors indicate that the boom was very short lived and began to crumble between 1910 and 1920. In 1910 40.9% of the cattle in Charleston County were milk producers and 63.8% of all milk produced was sold. By 1920, in spite of the

increased herd size, only 11.5% of the cattle were now milk producers and only 37.3% of the milk produced was sold – the rest was consumed on the producing farm. The US Department of Commerce admitted that by1927 dairying was of relatively little significance in the South. Where it was found prospering, it tended to be centered around large cities where there was a ready-made market (Hager 1927:66).

Charleston was one such ready-made market, and several dairies were established early in the twentieth century. Their proprietors occasionally chafed under the restrictions imposed by the city's active public health system, but the local regulations might have resulted in the consumer confidence that allowed commercial dairies to prosper. As early as 1901 Charleston's health officers were regularly inspecting milk for tuberculosis and other bacterial diseases (Waring 1971: 36). During the next quarter-century, the city's bacteriologists, including Dr. Leon Banov and Dr. George M. Mood, held positions on the Medical College faculty, fostered the Charleston County Tuberculosis Association and its Pinehaven Sanatorium, and promoted public health through preventive measures - in fact, Charleston is thought to have been among the first municipalities in the state to mandate pasteurization (Waring 1971: 36, Lesesne 1931: 214, 275).

The city health officers (this became a countywide office in 1920, Lesesne 1931: 275) were taken seriously by Charleston's dairy operators. Henry Rephan of Charleston began Rephan's Sanitary Dairy in 1910, milking two cows in his own yard. By 1931 his son Hyman Rephan had six motor trucks and a motorcycle to distribute his milk to a market that encompassed routes in the city, the Charleston Navy Yard, the beaches, and new subdivisions west of the Ashley River. Milk produced by Rephan's 400 cows was processed by "the latest type of apparatus for sterilizing," just one of his "modern methods that fully comply with the National Milk Ordinance adopted by the City of Charleston" (Lesesne 1931: 317).

West End Dairy was one of several small plants operating on the Charleston peninsula in 1914. In that year, the business was purchased by A. M. Gwynette, who had been trained in the dairies of New York, Pennsylvania, and Maryland. Under the "all modern methods" he implemented, business increased, and in 1929 he erected a model dairy plant on his downtown property. The 1930 edition of the Blue Book of Southern Progress (published by the Manufacturer's Record) was quoted as saying "The West End Dairy, completed in 1929 and described as one of the best in the Carolinas, has stimulated farmers in the lowcountry of South Carolina" (Lesesne 1931: 224, Bresee 1986: 135).

The Lawton farm on James Island, "situated one and a half miles across the Ashley River from Charleston, to which place milk is taken by launch twice a day," (Bresee 1986: 2) was associated with the Battery Dairy on Charleston's downtown waterfront. St. John Alison Lawton kept dairy cattle on his cotton and vegetable plantation for years, and after 1919, when he abandoned cotton, he concentrated on building up the dairy with a herd of Holstein cattle. By 1920, the year he employed a Pennsylvania-trained dairy manager, Lawton had milking barns, a pasteurizing building, a silo of tile block, a wharf, commissary, and other farm buildings on the island, and a bottling plant that delivered to households across the peninsula (Bresee 1986: 9, 29).

In the 1920s, a dairy operation could be managed with fewer laborers than a truck vegetable farm (Bresee 1986: 2), although a trained herdsman was required to manage the operation (Bresee 1986: 29). A successful dairy also provided a wholesale market to small farmers who wanted to keep a small herd without investing in processing equipment. "The sale of milk could provide a steady cash

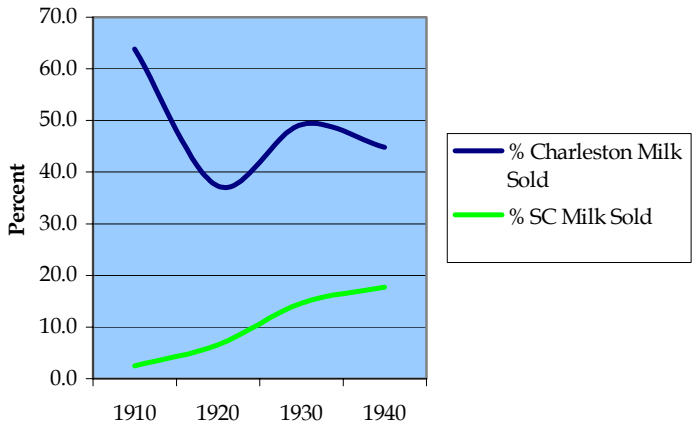


Figure 10. Comparison of Charleston and SC milk sold, 1910-1940.

flow in contrast to the seasonal and highly variable earnings from such crops as potatoes, cucumbers, and beans" (Bresee 1986: 157).

Francis S. Hanckel and I. D. Auld served together in World War I, then both enrolled in a one-year dairying program at Clemson. In 1921 they started Coburg Dairy Farms on Hanckel family farmland in St. Andrews Parish. The business relationship between Hanckel and "Ida" Auld was short, with Auld departing Coburg in July 1922. (interview, Mrs. Gordon Hay. Mrs. Hay is a daughter of Francis Hanckel, and wrote a regular column about the dairy business for *The State* newspaper during the 1940s).

Coburg advertised its pasteurized milk from Guernsey cattle, promising home delivery within 24 hours of milking (Charleston, SC *News and Courier*, 29 January 1921). The prices they advertised (24¢ quart, 13¢ pint) compared favorably with those cited in a letter from a Clinton, SC, dairyman (South Carolina Department of Agriculture, Commerce and Industries, and Clemson College 1927:174). In 1920 the Clinton farmer produced about 35 gallons a day, selling his mile for 20¢quart retail (15¢ wholesale).

The State of South Carolina Department of Agriculture, Commerce, and Industries considered dairying to hold great promise for family farms as well as larger operators, proclaiming in 1927 that "Dairying is the greatest agricultural opportunity in the South, and in South Carolina. . . . South Carolina ought to increase her milk cows by 100% at least," but implicitly supporting the US Commerce Department's finding that dairy producers preferred to rely upon a ready market. Indeed, the largest producers in South Carolina that year were the Lawton Dairy on James Island ("one of the largest Holstein herds in the state"), V. M. Montgomery of Spartanburg, the State Hospital at Columbia, and Clemson College (South Carolina Department of Agriculture, Commerce and Industries, and Clemson College 1927:164, 172) .

In 1930, tuberculosis was much less prevalent in Charleston County than it had been at the turn of the century, and credit was given to the strict controls placed on milk producers (Waring 1971: 32) These controls included the supervised slaughter of infected animals. Veterinarians tested cattle herds annually, marking those infected with tuberculosis for destruction. Although the state made a payment to the owner for each animal, the loss of producing cows could be significant (Bresee 1986: 104-105, 135, 232-233, 254-255).

By 1930 the Charleston dairy herd had decreased to 1,470 head and the number only gradually increased to 1,767 in 1940. The proportion of dairy cattle stabilized at 27.5% of the total heard in 1930 and 27.2% in 1940. In spite of the decline in total numbers, gallons of milk produced increased steadily from 1910 through 1940 – almost certainly reflecting increased sophistication and mechanization. And while the proportion of the Charleston

County milk sold fluctuated, it was always higher than the proportion of South Carolina milk sold – suggesting that Charleston County dairy farmers were far more consumer oriented while most other dairy farmers in South Carolina, well into mid-century, were still producing milk largely for on-farm consumption.

These preliminary data appear to be supported by the market analysis conducted Sturgis (1968). He notes that during the early twentieth century most farms maintained at least one dairy cow for home use, but over much of South Carolina the "scarcity of paved roads" limited distribution to just a few miles around the farm. Sturgis reports that by the mid-twenties there were sufficient market improvements to permit more milk to be sold by farmer-producer-distributors. By the mid-1930s the role of the wholesale-processor-distributor increased, so that the amount of milk farmers sold to consumers and these wholesale-processor-distributors was about equal (Sturgis 1968:8). By the 1940s farmers were beginning to realize that herds of 30 head or smaller were submarginal because of changing technology both on the farm and also in the distributor's plant. The role of the wholesale-processor-distributor continued to increase – by 1945, nearly two-thirds of all milk was sold through these channels and by 1965 over 98% of the fresh milk was sold to wholesale-distributors (Sturgis 1968:9).

Some aspects of Sturgis' market analysis are probably appropriate for Charleston County. He notes, for example, that selling milk during the 1920s and 1930s was viewed as a means of achieving supplemental income and that most farmers had herds of 20 to 30 cattle. Few farms during this period used milking machines, so the collection and processing of the milk was time consuming. Even more labor intensive, however, was the feeding of the herd:

> Human labor was cheap and there was little mechanization. Tractors did not begin to appear in appreciable numbers until the late thirties. The harvesting of ten acres of corn or sorghum silage required the labor of several workers for weeks. In the days before the side delivery rake and hay baler, the harvesting of hay was about as cumbersome as the harvesting of ensilage (Sturgis 1968:11).

While each cow might produce upwards of 966 gallons of milk per year, each head also required about 2 acres of permanent pasture – so dairying was a labor-intensive undertaking (Anonymous 1937:4, 7).

The situation in Clinton, South Carolina, during the 1920s reflects the general state of affairs. On an unnamed family farm in 1920, fifteen acres was dedicated to a 20-cow barn, milk house, two silos, and a "seven-room dwelling." With 18 head of cattle, the family was selling 15 gallons (60 quarts) a-day retail (at 20¢/quart) and 20 wholesale (at 15¢/quart). The higher "retail" price evidently reflects the need to have someone available to conduct on-farm transactions – there is no indication that this family's retail sales included delivery.

The silos were filled from the farm's own fields, six to ten acres supplying a 12 by 30-foot silo. In the early spring winter rye, oats, and vetch were harvested and packed as silage; from late summer through autumn the leaves and stalks of corn, millet, and sorghum provided the fodder. In addition to pasture and green silage, the herd also needed dry hay, which cowpeas and soybeans provided.

Alongside the responsibilities of planting, storing, and distributing feed, this family managed milk production well, and quickly expanded their operation. By 1925 they were milking 35 cows, which generally produced 70 gallons (280 quarts) daily at 18¢ retail and 15¢ wholesale. Although the

wholesale price had remained steady, and retail price even declined slightly, the correspondent was enthusiastic about the potential of his enterprise: "our little town [Clinton] of 5,000 will easily warrant a dairy with 50 producing cows" (South Carolina Department of Agriculture, Commerce and Industries, and Clemson College 1927:174-176).

The duties of milk producers were at least as constricting, if not more so, as those in any agricultural endeavor. Not only had the livestock to be fed and watered daily, but the farmer could not skip a day of milking and was obliged to manage his output promptly and safely. A small herd of cattle required the same regular feeding and milking as did a larger herd; a few gallons of milk had to be cooled and shipped as quickly as a larger quantity. It seems that many small dairymen, like the Auld family, tried the business only briefly. Unable to hire full-time managers, a small producer made do with a few laborers and his own efforts, and would rarely have had a day off. For such people, wage-earning jobs could understandably hold more attractions than ownership of a small-scale dairy.

After his departure from Coburg Dairy in the early 1920s, I. Dennis Auld returned to Christ Church Parish and continued farming near his father's Youghal. On 600 rented acres, he began a small dairy, a business that was emulated by his younger half-brother Seabrook Auld (who inherited Youghal). Seabrook Auld left the Citadel in 1929, worked a year at the new Gippy Dairy, and began his own small dairy in about 1931. The Grace Memorial Bridge had linked Mount Pleasant and Charleston in 1929, so using his own automobile, he could deliver milk in ten-gallon cans to a city dairy. His normal wholesale outlet was Rephan's Dairy, but like other suppliers, he was at the mercy of the market. It was not uncommon for him to return home with his milk, having been able only to sell cream (interview, Osgood D. Hamlin, retired farmer). Although he had built up the herd at Youghal to as many as 40 head and a bull, in the early 1940s he found a steady job at the Charleston Air Base and left the dairying business. He sold his cattle at auction, and leased his fields to others. For a few years his former laborers continued to work at Youghal, growing tomatoes or pulling and drying Spanish moss for mattress-making (interview, Frederick Horlback).

Across from Boone Hall, Snee Farm was leased to the Hamlin family until the 1970s. They kept a "pasture full of Herefords" [beef cattle] for market, and two or three milk cows for farm consumption, but concentrated on truck vegetables: snapbeans, cucumbers, and tomatoes. In the fall they put in a late crop of cowpeas for silage. (Interview, Osgood D. Hamlin).

During the 1920s, most cotton farmers on James Island accepted that efforts to eradicate the boll weevil were failing (Sass 1949: 237), and most of them began planting vegetable truck crops. Others, like the Lawton family, also established dairy herds on a larger or smaller scale. By 1931, the Lawton's Battery Dairy had ceased operation, but W. Hinson Mikell still kept 35 Ayrshire cattle on the Stiles Point Plantation he had inherited in 1918 (Lesesne 1931: 349). As with several other island farmers, he had found encouragement from the Lawtons and their willingness to purchase milk wholesale from their neighbors. (Bresee 1986: 157)

Dairies were begun on some lowcountry plantations purchased as winter retreats by northern sportsmen. One such "gentleman farmer" was Nicholas Roosevelt of Philadelphia, who purchased Gippy Plantation, a former rice plantation in Berkeley County, in 1927. He, like some other new plantation owners, believed that modern methods of agriculture could return antebellum prosperity to unproductive former cropland. Roosevelt created Gippy Dairy in 1929, importing a herd of all-Guernsey cattle. The enterprise was successful enough that Gippy milk was sold in the Lowcountry until

the Roosevelt heirs sold Gippy in 1972 (Preservation Consultants, Inc., and Stockton 1990:32-33).

Another newcomer who tried lowcountry agriculture was Thomas A. Stone, the Canadian diplomat who bought Boone Hall Plantation in 1935. Mainly interested in commercial pecan growing, Stone returned 200 acres of Boone Hall's mature trees to cultivation. He also promoted his cabbages and "Wando Wonder" brand tomatoes. According to Stone, WPA projects competed for wage labor in Christ Church Parish, and he lost interest in southern agriculture. He returned to Canada in 1939, and sold Boone Hall the next year. ("Boone Hall Plantation House and Historic Landscape" National Register nomination, 1993).

Although Thomas Stone's diaries make no mention of dairying, he did keep enough milk cows on Boone Hall to supply his family table and for sale to the farm laborers. This seems to have been the general pattern in Christ Church Parish (interview, D. Osgood Hamlin). Laborers who were trained to handle cows found jobs at the Aulds' Youghal dairy, and with smaller operations. "Shy" Manigault milked for the Aulds and at Palmetto Fort Farm (interview, Mrs. July Byrd). The only milking machines were three at Seaside Farms, thought to have been the last working dairy in the area; all the others milked by hand (interview, Frederick Horlback).

Born in 1925, Frederick Horlback began working for Seabrook Auld when he was ten years old, and became the lead milker. Despite this apparent promotion, milking was the only task he remembers having disliked. As a year-round employee making ten cents a day, he also plowed behind one of the two mules on Youghal, planting corn for feed and silage, and assisted with a variety of farm tasks. Horlback remembers 35-40 Jersey cows regularly coming in to be milked. Some were left enough to nurse their calves (bull calves were taken to meat market, Auld kept some of the heifers). Like other farmhands, including "Stoney" Campbell, Chris Johnson, William Gaillard, Lawrence Gaillard, and Nat Dan Ganes, who ran the dairy, Horlback was allowed to drink milk on the farm, and sometimes to take a pail home. This benefit supplemented his wages, which were paid on Saturday and spent at Gregorie's Store (part of Oakland Plantation). Milking and feeding went on seven days a week, and Auld drove his milk to Charleston daily except Saturday and Sunday. Weekend production was stored between blocks of ice until Monday (interview, Frederick Horlback).

Even as silos had increased the capabilities of dairymen to feed cattle year-round, pasteurization and refrigeration increased the time and distance over which milk could travel. During the 1930s and 1940s this coincided with the new demand, at least in urban areas, for processed butter. While accepting both whole milk and separated cream, consumers were unwilling to churn their own butter.

Pirtle, who comments that most creameries were located within 10-12 miles of supplying dairies, has provided another view of the early wholesale-processor-distributors. The dairies were encouraged to “raise” the cream by filling shallow pans, skimming it by hand, and holding the cream in cans. The cream would either be picked up by the wholesaler or delivered by the farmer. The cream would be dumped into 20 or 30 gallon, wood-jacketed cream-hauling cans, held in plain water-jacketed vats (Pirtle 1926:75). Significant improvements were found from the mid-1920s on – all tending to consolidate both producer and wholesaler.

Economic conditions in Charleston and the Lowcountry were volatile during the 1930s. From a low point in 1932, when the People's National Bank collapsed, the economy in both rural and urban areas improved at an accelerating rate as New Deal jobs became available. Toward the end of the decade, stepped-up spending at the Navy Yard led to

wartime prosperity a few years later (Fraser 1989: 377-382, 386-387).

Although city directories are imprecise measures, the listings for commercial dairies in the Charleston area seem to reflect the economic fluctuations of the 1930s (Charleston City Directory 1930, 1932, 1934, 1936, 1938, 1942). In 1930, four were listed: Barkerding's, off East Bay Street with a farm in St. Andrew's Parish; Battery Dairy [the Lawton enterprise]; Rephan's Sanitary Dairy on upper Meeting Street; and West End Dairy on Bee Street. For 1932, only Rephan's and West End were listed [the Lawton family had ceased operations]. It is unclear why Coburg Dairy, which has operated since 1921, was omitted from these publications. Coburg was included in the directory for 1934 and years afterward. The 1934 directory listed four dairies on the Charleston peninsula: Clover Farms, Crescent, Rephan's, and West End. By 1936 Cream Crest Dairy had replaced Clover Farms. The 1938 Directory is the only edition to include several dairies outside the city of Charleston: Huffman, St. Andrew's Parish; King's, James Island; and Sahman's, Meeting Street Road at 12-Mile. Coburg, Cream Crest, Rephan's, and West End all remained active at least until 1942. These businesses all operated creameries as well as supplying fresh milk, with their customers generally on regular delivery routes.

A number of factors came together by the late 1940s and early 1950s that changed dairy operations. Sturgis notes that the growing network of hard surface roads, the home refrigerator, the development of large glass-lined transport trucks, the development of no return containers, and the more efficient use of larger scale processing and bottling equipment all resulted in increasing the optimum sized processing plant – making it a far larger operation than ever before (Sturgis 1968:11). Combined with these technological changes were also political and legal modifications that no longer protected the local market and local farmer.

Writing in 1949, Herbert Ravenel Sass noted the concern among Charleston's leaders about the decline in agricultural production of all kinds. Acreage planted in cabbage, potatoes, and lettuce was decreasing, and meat and dairy herds had declined significantly. The Charleston County Livestock Association, organized in 1946, was attempting to reverse a trend that found local meat packers securing less than 10% of their meat within Charleston County, and 90% of the meat, milk and eggs used in the area being imported (Sass 1949: 150).

# EXCAVATIONS

**Methods**

A single vertical control point was used for the excavations at 38CH932. Established by the developer, this point was a railroad spike at the base of a 48-inch live oak on the 3-acre Auld tract. This point has an elevation of 12.38 feet above mean sea level (AMSL) and all excavations were tied into this datum.

Figure 11. Excavation in the 280-300R175 block, looking southwest.

Excavations at the site used the previously established grid. This was a modified Chicago-style grid based on an arbitrary 0R0 point located off the site tract. Units were designated by their southeast corner and 200R100 indicates a point 200 feet north of the arbitrary 0R0 point and 100 feet right (or east) of that point.

The minimal excavation unit was a 10 by 10 foot unit. Chicora has adopted engineering measurements (feet and tenths of feet) for consistency in its work, especially on European sites where structural measurements are most often in feet.

Our first efforts were to establish three close-interval grids for shovel testing that we hoped would direct additional excavations. In the area southwest of the main house, we established a grid using 25-foot intervals over an area measuring 100 feet east-west (from R150 to R250) by 150 feet north-south (from N250 to N400), for a total of 35 tests. This area was originally proposed at 100 by 200 feet, but we discovered that there was not adequate area outside the Fuller/Auld house footprint to allow this size grid. In the area of the eastern most slave settlement, we established a grid using 20-foot intervals. In this site locus the grid covered an area 200 feet east-west (from R490 to R690) and 100 feet north-south (from N450 to N550).

The third close-interval grid was to be established to explore the slave settlement near the Fuller/Auld house using a 100 by 200-foot grid with tests at 20-foot intervals. The greatest challenge was that in this area there had been extensive twentieth century activities. As we compared maps and sought to correlate the 1875 plan with what was on the ground, we found that both the icehouse and dairy were likely in the vicinity of two structures. The dense rubble from

Figure 12. Troweling units at the base of the plowzone in 570R260-270, view to the southeast.

bulldozing the main house seemed to have affected another area. And in the field, there was a dense pile of rubble from an earlier pole barn. Eventually we located the grid more northeast of the Fuller/Auld house than originally intended – running north-south from N400 to N600 (the soils in the vicinity of the N600 line were found to be very low and wet) and east-west from R250 to R350.

In these areas, shovel tests were approximately one foot square and, as during the initial survey, the excavations penetrated the subsoil (to verify that the artifact bearing strata terminated at the base of the plowzone or A horizon). All soil was screened through ¼-inch mesh and all remains were retained except for rubble and shell, which were characterized in the field as light, moderate, or dense and discarded.

Figure 13. Excavation of Feature 6 in 480R690, view to the east.

Formal excavations at the sites were conducted by hand, using mechanical sifters fitted with ¼-inch inserts for standardized recovery of artifacts. Excavation was conducted by natural soil zone. Much of the site area exhibited a plowzone, generally 0.8 to 1.1 foot in depth, overlying a subsoil with clearly defined plow scars and plow ridges. Based on previous testing and shovel testing, we identified that all cultural remains were found in this plowzone. Consequently, excavations were terminated at the subsoil. In the vicinity of the main house we found that plowing was less distinct, although even in that area we identified evidence of prior cultivation. Where appropriate the excavation proveniences also distinguished between structural interiors and exteriors. Munsell soil color notations were made during the course of excavations, typically on moist soils freshly exposed.

All materials except brick, mortar, and shell were retained by provenience. Rubble and shell were weighed and discarded on-site (except for small samples retained for analysis and curation). A one-quart soil sample was retained from each zone.

Units were troweled and photographed using black and white negative and color transparency film at the base of the excavations. Each unit was drawn at a scale of 1 inch to 2 feet. Features were designated by consecutive numbers (beginning with Feature 1). Postholes were consecutively numbered by specific unit. Features, depending on the evaluation of the field director, were either completely excavated, or bisected (i.e., partially excavated). Feature fill was screened through ¼-inch mesh and features, upon completion of their excavation, were also photographed using black and white negative film and color transparencies. One quart soil samples were obtained from all features. Features with dark, organic fill also had flotation samples (minimally 5 gallons in volume) collected for subsequent water flotation. Features with relatively light sandy fill rarely produce adequate ethnobotanical samples and their flotation was not considered cost-effective based on our experiences at other Charleston sites; nevertheless, samples were collected.

Flotation was conducted using a mechanical water system. The heavy fraction will be examined for artifacts such as beads and then

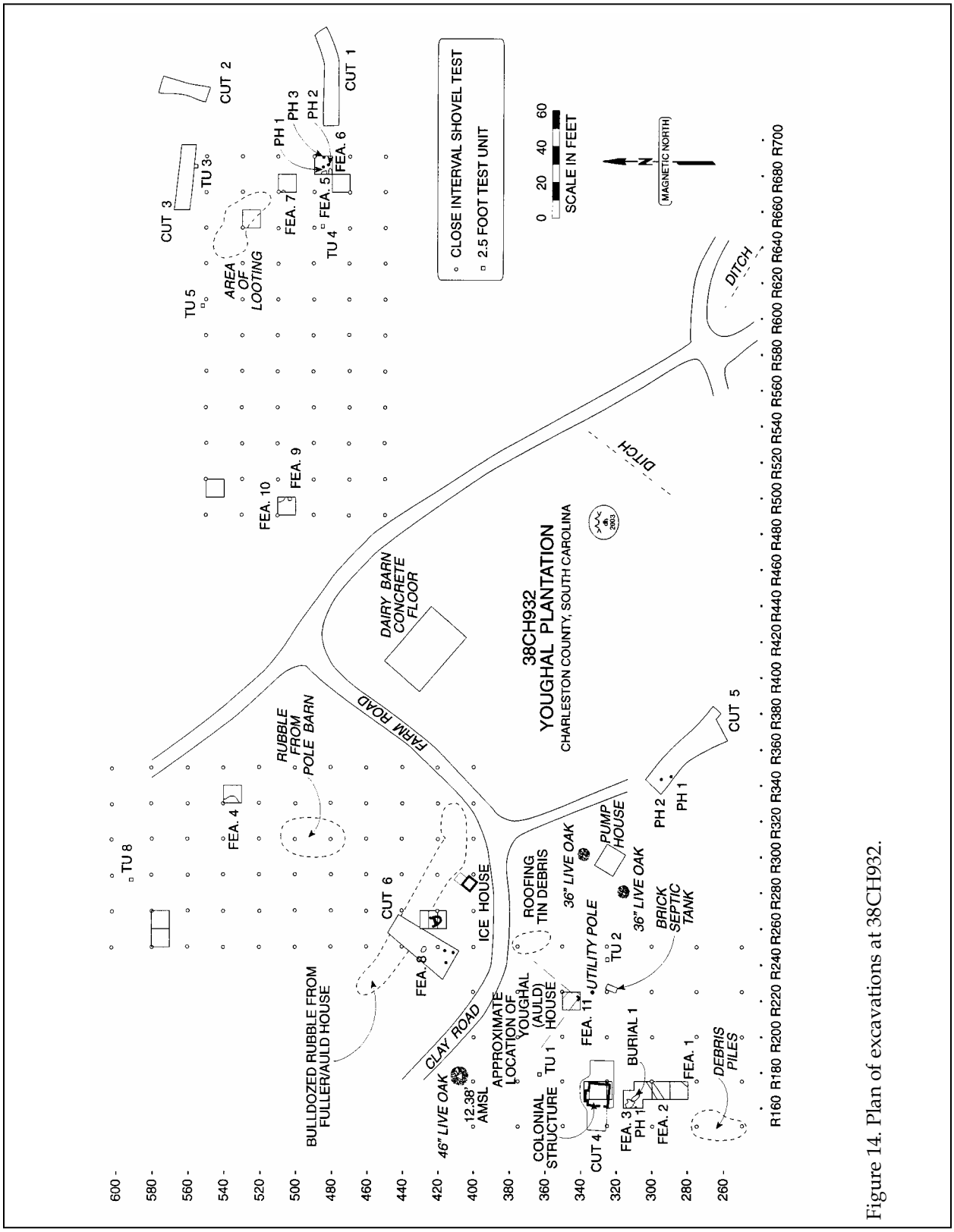


Figure 14. Plan of excavations at 38CH932.

discarded. The light fraction will be examined for flotation remains.

In some areas specialized samples were collected for future study. For example, in one site area we identified a heavy, boggy soil that exhibited a low concentration of artifacts. Samples were collected for pollen study. It may be possible to identify vegetation in the site vicinity during the time the plantation was active. We also found several different types of mortar present on-site and samples were collected should future studies be appropriate on mortar constituents. We also identified samples of plaster with what appears to be a blue pigment – these have also been retained for paint analysis (the only similar analyses of plaster from archaeological contexts are those at Broom Hall plantation in Goose Creek and Jervey Plantation in Christ Church).

As a result of this work, 475 square feet were opened in the area southwest of the main house (as will be discussed, one of these units was placed at the southern corner of the Fuller/Auld house). In the slave area east and north of the main house 450 square feet were opened by hand. At the icehouse two 5-foot units were excavated – one within the structure and one at the doorway. Finally, 600 square feet were opened at two loci in the eastern slave settlement area. Consequently, 1575 square feet (1,611 cubic feet) were opened in primary hand excavations.

The State Historic Preservation Office requested that at the conclusion of the hand excavations areas be mechanically stripped. As a result a series of six cuts, totaling 2,670 square feet (see Table 3), were opened. These cuts were made using a track hoe with a cutting bar welded to the bucket teeth. The equipment size allowed easy movement of the soil and roots and the cutting bar allowed a relatively smooth floor to be created, minimizing the need for shovel scraping afterwards.

These cuts were designed to explore each area for features as well as to provide coverage in areas where no hand excavated units had been placed. We were constrained by dense vegetation and the need to avoid damaging vegetation that was to be retained for the development.

Table 3.
Mechanical Cuts at 38CH932

| Cut # | Site Area | Size ($Ft^2$) |
|---|---|---|
| 1 | Slave area E of house | 472 |
| 2 | Slave area E of house | 193 |
| 3 | Slave area E of house | 270 |
| 4 | Burial area SW of house | 485 |
| 5 | Slave area adj. to house | 670 |
| 6 | Slave area adj. to house | 580 |

## Results of Close Interval Testing

### Southwest of the Main House

A total of 35 shovel tests were excavated in the close-interval grid southwest of the main house (250-400R150-250). As a result of this work we found a rather clear concentration in the northeast quadrant of the test grid, a single isolated spot at the southeast corner, and a broad and poorly defined area of low density remains along the southwestern edge (see Figure 15). As the remains from this testing were more carefully examined and the above ground features were correlated with the artifacts, we determined that the broad scatter of remains in the northeast quadrant represented the Fuller/Auld house demolition (unit 340R225 was excavated in this area). These artifacts were mid-nineteenth through mid-twentieth century and included machine cut and wire nails, clear glass, window glass, and whiteware. Much of the material was burned and/or melted – all providing clear evidence of the structure's 1991 fire and subsequent demolition.

The "hot spot" at the southwestern corner of the grid contained primarily twentieth century remains and we suspect that this area may be near one of several outbuildings or features reported by our oral informant.

While rather uninspiring, we chose to

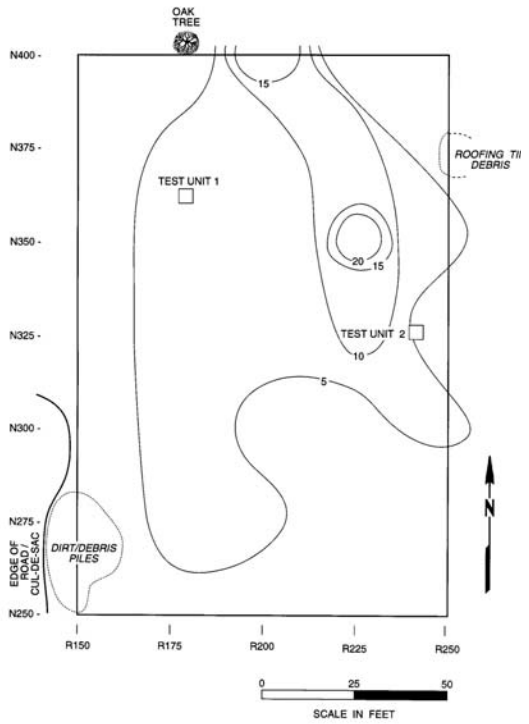


Figure 15. Testing results southwest of the Fuller/Auld house.

focus on the broad area of relatively low-density remains along the western edge of the property. At the southern edge there was much disturbance – piles of bulldozed road and construction debris, as well as earlier farm-related materials. Consequently, we laid in a series of three 10-foot units, 280-300R175, to explore this area.

**Area East and North of Fuller/Auld House**

As alluded to earlier, this was one of the most problematic areas to examine. We had difficulty determining the general locality of the structures shown on the 1875 map east of the main house. When we finally felt confident in a general location we discovered that much of the area had been damaged by the icehouse, dairy, and demolition of the Fuller/Auld house. Consequently, this close-interval grid provided relatively little assistance.

Nevertheless, we found that there were two distinct concentrations of remains. One was situated along the north edge of the test area; the other was found in the southwest corner, just north of the icehouse.

The northern concentration consisted of primarily late nineteenth and early twentieth century remains, such as whiteware, clear and manganese glass, window glass, and nails. Two units, 570R260-270, were placed in this area and, as a result, we determined this scatter to represent

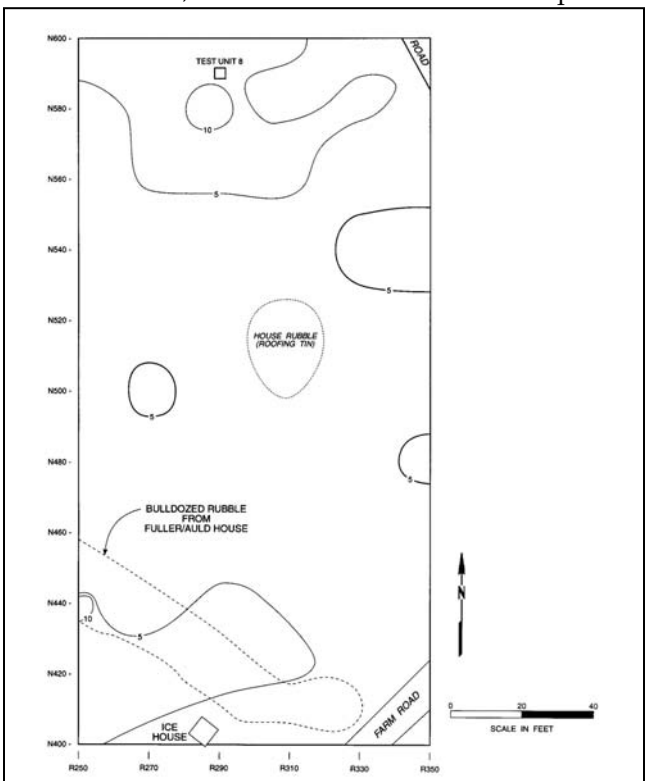


Figure 16. Testing results east of the Fuller/Auld house.

the tenant row shown on the 1919 map, but gone (with one exception) by 1943.

The southern concentration was initially dismissed, although Cut 6 was placed in that area. As a result of the early remains present in the cut, a series of three contiguous 5 by 10-foot units (415-425R270) were excavated in the area.

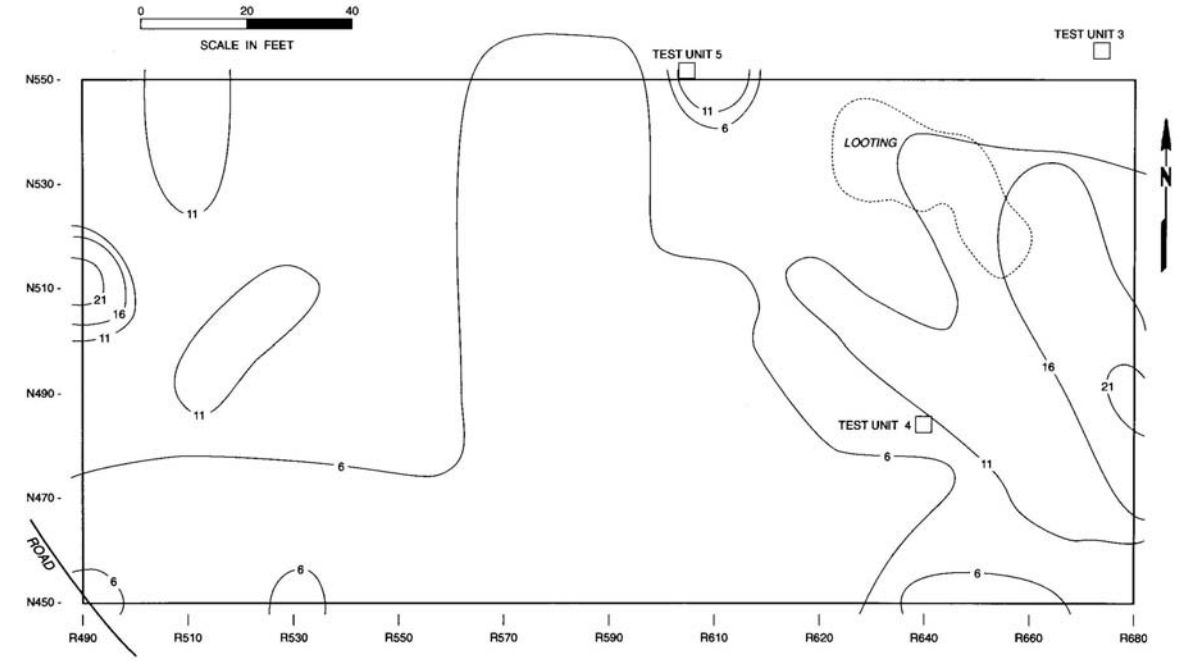


Figure 17. Testing results at the slave settlement east of the Fuller/Auld house.

**Eastern Slave Settlement**

This locus, encompassing the area from 450-500R490-680, was investigated by 66 shovel tests. The results revealed two concentrations – one covering the eastern fifth of the test area and the other vaguely found at the western edge. Remains in both area were similar, consisting of pearlware and whiteware, machine cut nails, and glass.

While the broad scatter of remains at the eastern edge may be the result of plowing, it seems likely that more than one structure was present. The area was ultimately examined by four units: 470R680, 480R690, 500R680, and 520R660. At the western edge of the test area we placed two units, 500R500 and 540R510.

It is likely that the concentration found along the central north edge is representative of another structure to the north of the test grid. This provides the arc-shape identified in the 1875 plan (see Figure 17). We believe that our work identified three of the five structures. A fourth structure is entirely out of the testing grid above the northwestern quadrant and the fifth structure was just indicated along the north central edge.

**Results of the Excavations**

**Southwest of the Main House**

As previously discussed, this area was examined through the excavation of 475 square feet of formal excavations.

Unit **340R225** was placed to investigate (and confirm) that the dense remains found in the testing represented the Fuller/Auld house. This 10-foot unit revealed a black (7.5YR2.5/1) sand with abundant brick and mortar rubble (855 pounds) mixed with house demolition debris (including rotted wood timbers, asbestos shingles, and other materials) about 0.7 foot in depth. The profile reveals pockets of burned debris, as well as lenses of plaster and mortar. At the base of the excavations was a heavily mottled dark brown

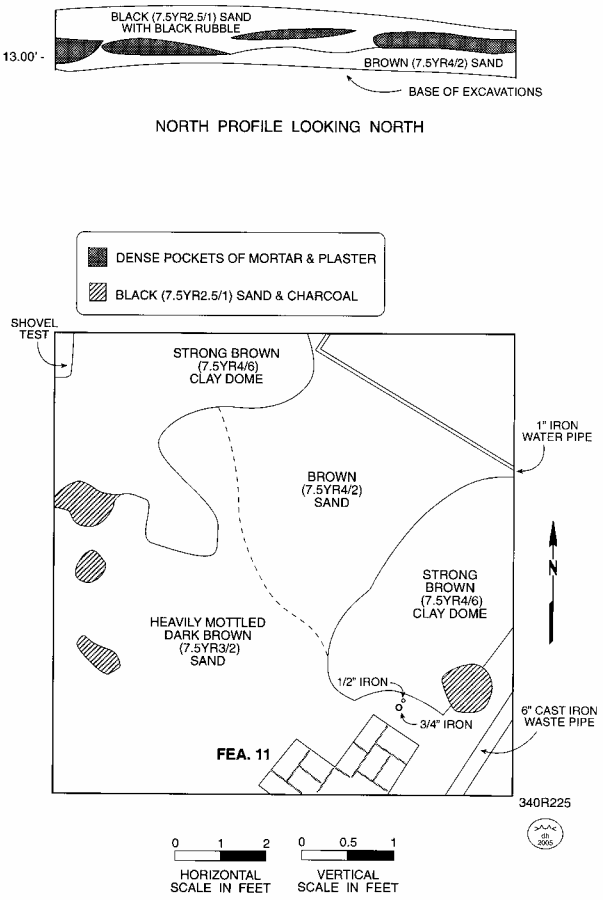


Figure 18. Plan and profile of 340R225.

(7.5YR3/2) sand mixed with brown (7.5YR4/2) sand. There were also several strong brown (7.5YR4/6) clay domes at the base of the excavation, as well as several pockets of black (7.5YR2.5/1) sand and dense charcoal.

Running northwest-southeast in the northeast corner of the unit was an in situ 1-inch galvanized iron water or gas pipeline. Running northeast to southwest in the southeast corner of the unit was a 6-inch cast iron waste pipe. Neither of these were assigned feature numbers and the trenches were contained entirely in the A horizon – with the pipes laid on the subsoil. Bisected by the south wall and centered at 340R221.2 we identified Feature 11 – a brick pier for the Fuller/Auld house. This feature represents the southern (or right front) corner of the structure and provides a clear indication of the structure's placement and orientation. The mortar associated with this feature was sandy and friable. While shell was not visible in the paste, the softness of the mortar suggests a high lime content.

Artifacts in this unit are primarily associated with the destroyed Fuller/Auld house and consist of very large quantities of window glass and nails (most of which are machine cut with a very few wire nails and no wrought nails). The materials encountered are consistent with a structure originally constructed in the late antebellum. The large quantity of glass is consistent with a unit placed on the corner edge of a structure.

Following the excavation of this unit a series of three units were placed to the west in order to examine what appeared to be earlier remains along the western edge of the testing grid. Units **280-300R175** were ultimately excavated, forming a north-south block.

These units exhibited an unconsolidated very dark grayish brown (10YR3/2) sand 0.4 to 0.5 foot in depth overlying a dark grayish brown (10YR4/2) sand 0.4 foot in depth. These were removed together as Level 1. The lower level appears to represent an old plowzone, while the upper layer appears to represent a more recent horticultural zone. These overlie a dark yellowish brown (10YR4/4) sand subsoil.

Excavations produced a range of primarily colonial artifacts, including delft and lead glazed slipware. Brick and rubble in the three units was light, contributing only 146 pounds. The two most noticeable features were large (3-feet in width) ditches running northeast-southwest through the units. Feature 1 was situated in the southeast corner of 280R175 and Feature 2 ran parallel to Feature 1 through units 290-300R175. Feature 1 was excavated in its entirety and about 50% of Feature 2 was excavated. Feature 1 exhibited relatively straight sides and a depth of 0.7-foot. Feature 2 had similarly straight sides

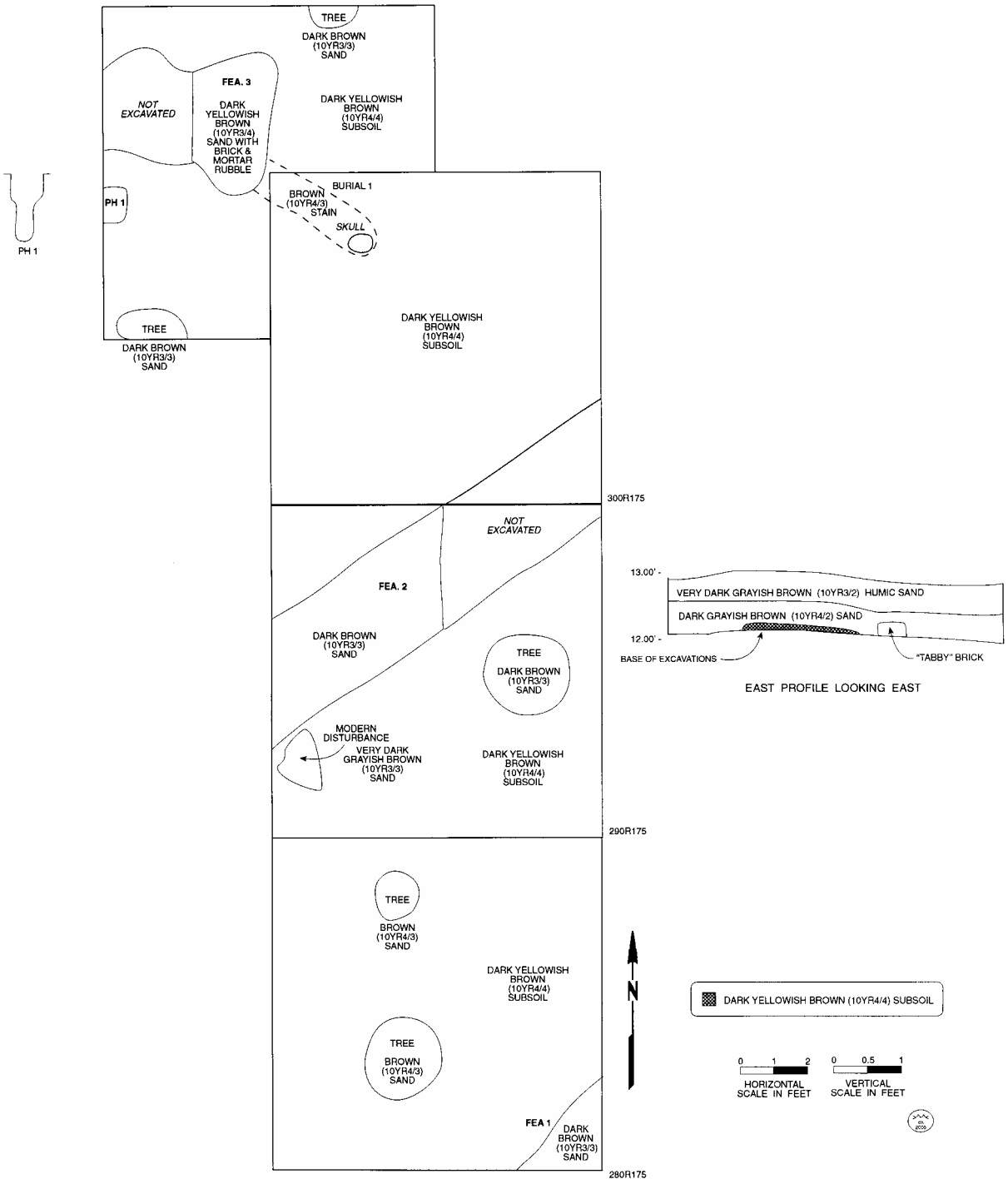


Figure 19. Plan and profile of 280-300R175 and insert 305R170.

Figure 20. Feature 2 excavated, looking west.

above a ledge close to the flat base of the feature and was 0.9-foot in depth. Artifact content was sparse and the fill – a dark brown (10YR3/3) sand with light shell – was homogenous, suggesting a rapid filling. These features are likely agricultural in origin. The absence of lensed fill – especially toward the base – indicates that they were most likely not drainage ditches. I have, however, seen similar features in a coastal context used for the planting of melon crops – large trenches filled with manure spaced about 10 feet apart. The use of manure would also explain the relatively low artifact content of the features.

As the units were being cleaned for final photographs we discovered human skeletal remains in the northwest quadrant of 300R175. Identified as Burial 1, these remains were not noticed earlier since the soils were very dry, powdery, and compact. In addition, no clearly defined pit was identified and the remains (skull) were found at the base of level 1, indicating a very shallow burial pit. The burial appeared to be that of a child placed in an extended position.

With the identification of human remains, an inset – designated **305R170** – was excavated to the northwest of the burial to fully expose the feature and determine if a pit could be identified. During the excavation of this insert we recovered human bone in Level 1 (we have subsequently gone back through the 300R175 unit and discovered similar material) – suggesting that the burial had been previously disturbed, with remains scattered through the plowzone. The inset, however, failed to reveal any clear pit. Instead, what is present in both 300R175 and 305R170 is a vague humic stain around the body, suggestive of organic decomposition, but not a distinct coffin outline.

The inset also revealed very dense brick and mortar rubble (699 pounds were recovered).

Figure 21. Burial 1 exposed, view to the south.

The significance of this density became clear only with the excavation of Cut 4 nearby (see discussion below).

The find was reported to the Charleston

Figure 22. Feature 3 from above, south at top.

Coroner's Office and Deputy Coroner Dottie Lindsay visited the site, examining the remains and releasing them as archaeological (not forensic) finds. We simultaneously notified the State Archaeologist and the State Historic Preservation Office. We were requested to make notification of relevant Native American groups, including the Catawba, Eastern Shawnee Tribe of Oklahoma, Muscogee (Creek) Nation, PeeDee Indian Nation, and the United South and Eastern Federation of Tribes. Only the Catawba responded (the letter to the PeeDee Indian Nation was returned as undeliverable).

With the face removed by plowing and additional damage caused by flat shoveling prior to discovery, the ethnic or racial association of the burial was initially uncertain. Nevertheless, the extended position and east-west orientation are both indicative of a Euro-American or African-American burial. In addition, historic artifacts (slivers of glass and small ceramics) were found in the fill around the body and fragments of mortar and plaster were found under long bones and the skull. Subsequent DNA analysis revealed the remains to be African American.

A Burial Treatment Plan was submitted to the State Historic Preservation Office on November 15 and approved on November 17, allowing the removal of the remains. These remains have undergone analysis in compliance with the Burial Treatment Plan and the remains have been returned to Sintra for reburial.

Also exposed by the inset was Feature 3, centered at 312.5R157.5 in the northwest quadrant of 305R170. The feature consisted of a dark yellowish brown (10YR3/4) sand with brick and mortar rubble. The exposed portion measured 5.1 feet east-west and 3.1 feet north-south. We chose to excavate the eastern half finding the pit was only 0.32-foot in depth with gradually sloping sides. This amorphous feature was filled with dense brick and mortar rubble (25 pounds). Ceramics and other artifacts were very sparse and the fill is only slightly darker than the subsoil, documenting its very low organic content – as a result the west half was not excavated.

We did find that this feature post-dates Burial 1, intruding on the feet of the human remains. The function of the pit is uncertain. While it contains building rubble, the shape does not support any structural purpose (i.e., the pit is not associated with a pier).

**Icehouse**

The icehouse is situated off the north-south site grid and, as a result, the units here were oriented with the building. Both are nominally 5-foot units and are designed as "interior," meaning inside the icehouse and "exterior," meaning immediately outside at the doorway.

The icehouse measures 7 by 7.2 feet (exterior) with walls that are 1.3-feet in thickness. As a result, the interior measurements (and hence the interior unit) are 4.4 by 4.6 feet. The walls were found to be hollow – a brick in width on the interior and exterior and a cavity in-between. This cavity was originally open, although it, at the time

Figure 23. Interior of icehouse excavated to subsoil. View to the southeast.

of the survey, was filled with rubble and soil. The door is on the northeast side and measures 2.4 feet in width. The icehouse exhibits a hard Portland cement mortar with clear evidence of sloppy pointing (resulting in "buttered" joints). We were able to piece some of the larger wall sections back together, revealing that the structure originally had a flat concrete roof with a pediment about a foot in height. The construction of the building appears to have provided maximum insulation. The airspace in the walls would have helped form a thermal break and the flat roof was apparently covered with soil, providing additional insulation from heat gain.

The **interior unit** was found to contain four distinct levels. Level 1 was about 0.7 foot in depth and consisted of dense rubble (197 pounds of brick were removed, not including large wall sections). Artifacts were primarily modern (i.e., twentieth century) and included a variety of farm trash, as well as a large number of flowerpots and a large quantity of window glass, including some plate glass. These artifacts support the oral history that the icehouse was adaptively reused as a potting shed with its roof being modified by the addition of windows (somehow these replaced the concrete roof).

At the base of the rubble was a concrete floor (designated Level 2) sloping from the east and northeast to the northwest. A 1-inch galvanized pipe drain was found in the north corner of the wall, providing drainage out of the icehouse (probably to a gravel drain field, although this was not examined). Below this concrete floor was Level 3 – a brick floor that also had an identical slope (although no drain was observed). Below this brick floor was another concrete floor, termed Level 4. Mixed with the concrete were a variety of artifacts, including ceramics and bottle glass, as well as brick bats. It appears that the artifacts were trash thrown either into the bottom of the structure or added to concrete mix as aggregate or fill. Regardless, these artifacts suggest that the structure was originally constructed in the last decade of the nineteenth century or first decade of the twentieth century.

We believe that the original icehouse floor failed and brick was laid on top of the concrete. This floor did not have a drain (and perhaps this lack of a drain caused the failure of the floors). The final floor (Level 2) was fitted with an outlet to drain off the melted ice water. Through time the floor of the icehouse was raised by 0.5 foot and most recently was about 2.8 feet below the door threshold.

Although dating from the early twentieth century rather than the antebellum, this icehouse still adds considerable information concerning a relatively unknown structure type. Combined with oral history, we believe that the Auld's purchased ice from either Charleston or Mount Pleasant, using the ice and the icehouse to store perishables. By the 1930s, when the dairy was operating, the icehouse was used to store milk on weekends, prior to the Monday morning delivery to the Coburg Dairy west of the Ashley.

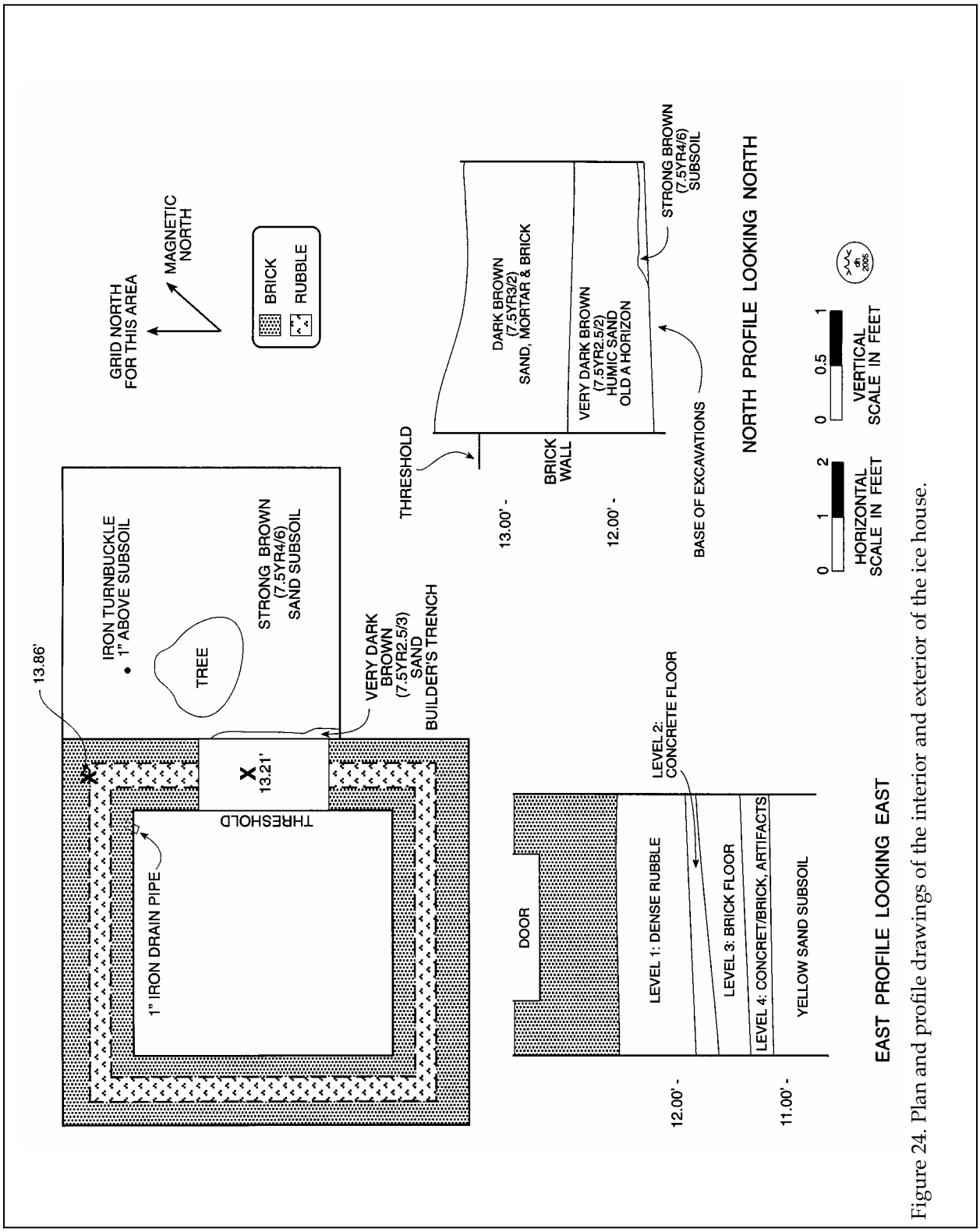


Figure 24. Plan and profile drawings of the interior and exterior of the ice house.

Ice was available in Charleston since the antebellum with Frederic Tudor of Boston exporting a vessel to Charleston in 1818. Waste was from 25% to 30% during shipment and upwards of an additional 25% once unloaded. This resulted in very high prices (Hall 1880:35). Even once ice machines were available, Hall reports that "northern ice still has the preference" (Hall 1880:36). By 1915 there were at least three facilities manufacturing ice in Charleston – Thomas W. Carroll's Ice Factory, Carolina Public Service Company (at their Junction Plant and Mutual Plant), and Consumers Ice Company (Watson 1915:123). Hager observed that:

> Ice manufacturing, now general, was first introduced in the South, where the original ice-making machine was invented, probably stimulated by year-round refrigerating needs and by the lack of natural ice. The rise in the standard of living, furnishing a greater stimulus to the production and consumption of diversified perishable food products, is increasing the market throughout the urban and rural localities for ice-making and refrigerating machinery of various types . . . . (Hager 1927:136).

The **exterior unit** was far less revealing, although it did identify two distinct levels. Level 1 consisted of dark brown (7.5YR3/2) sand mixed with dense mortar and brick rubble (134 pounds) about 2 feet in depth. Below was Level 2, a very dark brown (7.5YR2.5/2) humic sand about 0.8 foot in depth. While Level 1 produced primarily modern artifacts, Level 2 yielded a much wider variety of materials and is interpreted to represent the original A horizon soils. At the base of Level 2 was strong brown (7.5YR4/6) sand subsoil. An iron turnbuckle was found embedded in the soil about 1.2 feet from the structure corner. The function of the device is unknown.

This unit revealed that the original soil was 1.5 feet below the doorway threshold. This means that there were probably wooden steps going up to the doorway and then down into the icehouse from the door. This raised entryway would have helped prevent rainwater – as well as vermin -- from entering the icehouse.

**Area North and East of the Fuller/Auld House**

Three 10-foot units were initially opened at the north edge of the testing area. Subsequently three 5 by 10-foot units were opened further south, adjacent to Cut 6.

Units **570R260-270** were excavated to explore dense remains identified in the close interval tests. These two units revealed a plowzone of very dark gray (7.5YR3/1) loamy sand about 0.7 foot in depth overlying a subsoil of black (7.5YR2.5/1) loamy sand with some clay content. No features were encountered although both units revealed heavy plowscars running northwest-southeast through the subsoil.

Artifacts consisted almost entirely of late nineteenth and early twentieth century remains. Rubble was very light (only 19 pounds were found in the two units combined).

The remains from these units are almost certainly associated with the tenant structures identified on the 1919 map (but largely absent by 1943 (Trinkley et al. 2003). We know from the previous assessment survey that soils to the north become increasingly low and wet – suggesting that the early twentieth century settlement for cotton tenants was located in a plantation area that would have required extensive drainage to make suitable for cotton.

Unit **530R340** was placed to explore one of the dense artifact "pockets" found along the east edge of the testing area. We encountered a brown (10YR4/3) sandy plowzone about a foot in depth overlying a subsoil of yellowish brown (10YR5/4) grading into pale brown (10YR6/3) sand. The soils in this area were clearly far better drained than

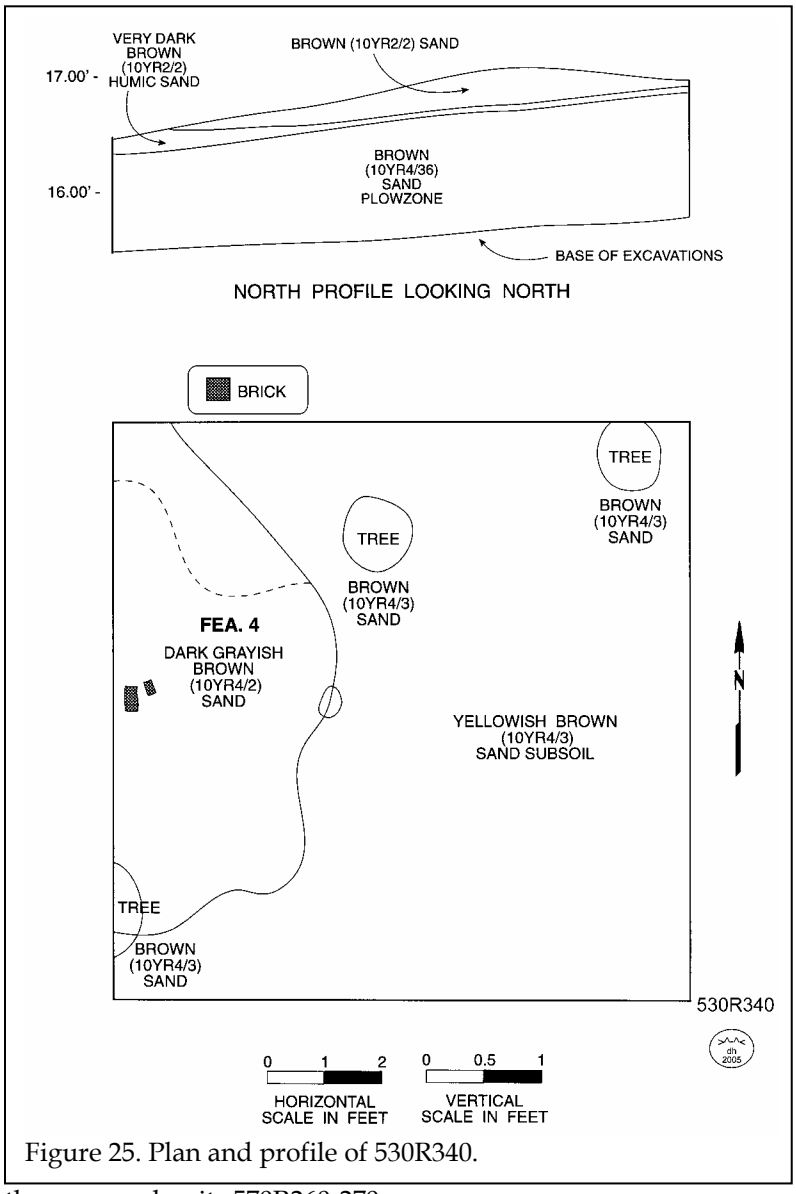


Figure 25. Plan and profile of 530R340.

those around units 570R260-270.

Remains encountered in this unit were not substantially denser than those found in 570R260-270 and brick rubble was very light. We did, however, encounter Feature 4 in the excavations. Bisected by the west wall (R340), Feature 4 measured 8.7 feet north-south and 4.8 feet east-west. The base of the pit was variable, but the depth was no greater than 0.8 foot and the sides gradually sloped in. The pit contained a small quantity of material, including nails, ceramics, glass, and a button. The function, however, is uncertain.

After the completion of Cut 6 (discussed below) we decided to excavate a 5 by 10-foot unit (415R270). Because of the finds, this single unit gradually expanded northward into three units, **415-425R270**. These units revealed a black (10YR2/1) loose sand about 0.4 foot in depth overlying a very dark grayish brown (10YR3/2) consolidated sand to a depth of 0.8 foot below the surface. Both were taken off as Level 1. The upper portion represents debris from the demolition of the Fuller/Auld house, while the lower portion represents the original A horizon. The subsoil is a dark yellowish brown (10YR4/4) sand.

Artifacts in the three units included a broad range of material, including mid- nineteenth century remains associated with the Fuller occupation, and a few late nineteenth to early twentieth century remains associated with the Auld occupation. Most noticeable, however, were a range of eighteenth century materials (similar to those identified in nearby Cut 6), including lead glazed slipware and delft.

A single feature was encountered spanning the three units. Feature 12 is an unusual tabby (i.e., lime mortar) brick object roughly in the shape of an "A," oriented north-northwest by south-southeast.

The feature consists of a single course of brick, originating only 0.05 foot above the subsoil. Mortar and fragmentary remains indicate at least one additional course above that encountered. The fill within the feature was identical in color, texture, and content to the lower portion of Level

Figure 26. Feature 4, view to the west.

1.

The shallow depth of the brick and the absence of a footer course suggest that this feature is not structural, or rather did not bear structural weight. This would then discount a stairway support or support for some type of agricultural device, perhaps associated with ginning or indigo production. Instead, we believe that the feature was possibly associated with a colonial garden at the plantation – perhaps a flower bed design or garden folly. Whatever its function, there seems to be no parallel for it in the scant literature of eighteenth century South Carolina plantations.

Given the amount of disturbance found throughout the main settlement area (either from twentieth century building activities or from the demolition episodes after the burning of the Fuller/Auld house), it is amazing that this rather ephemeral feature was spared. Unit 415R270 reveals several areas of bulldozer disturbance that missed the feature by only a foot.

**Eastern Slave Settlement**

As previously discussed, the close interval testing identified three probable structures – two that blur together at the eastern edge of the testing block and a third at the western edge. Units were placed in both areas.

At the western edge, two units were excavated. Unit **500R500** revealed a very dark brown (10YR2/2) sand plowzone about 0.8 foot in depth overlying a yellowish brown (10YR8/6) sand subsoil with many plowscars. Artifacts, while not exceedingly dense, are consistent with an early to mid-nineteenth century slave

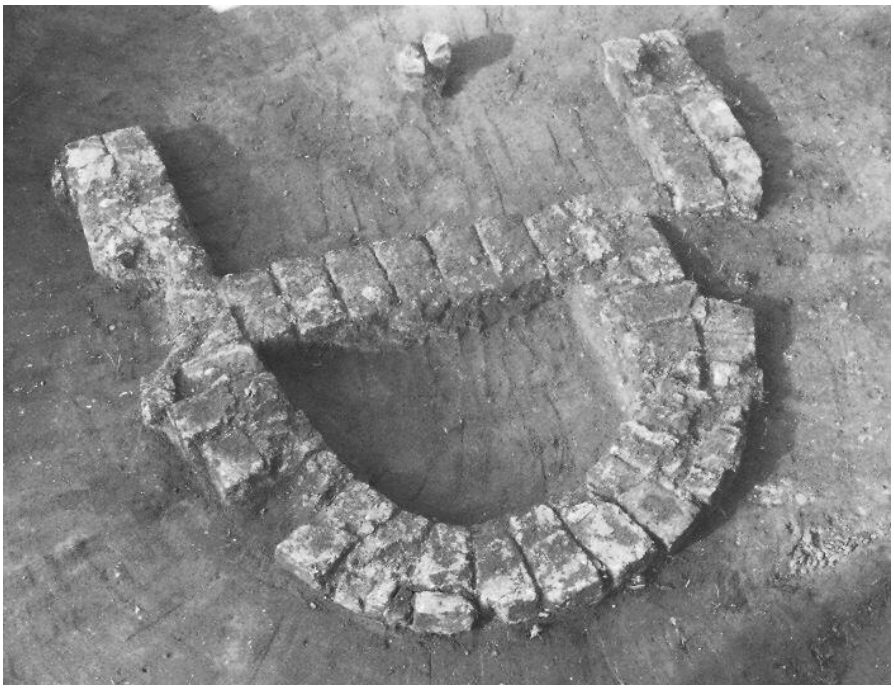

Figure 27. Feature 12 exposed in units 415-425R270, view to the north.

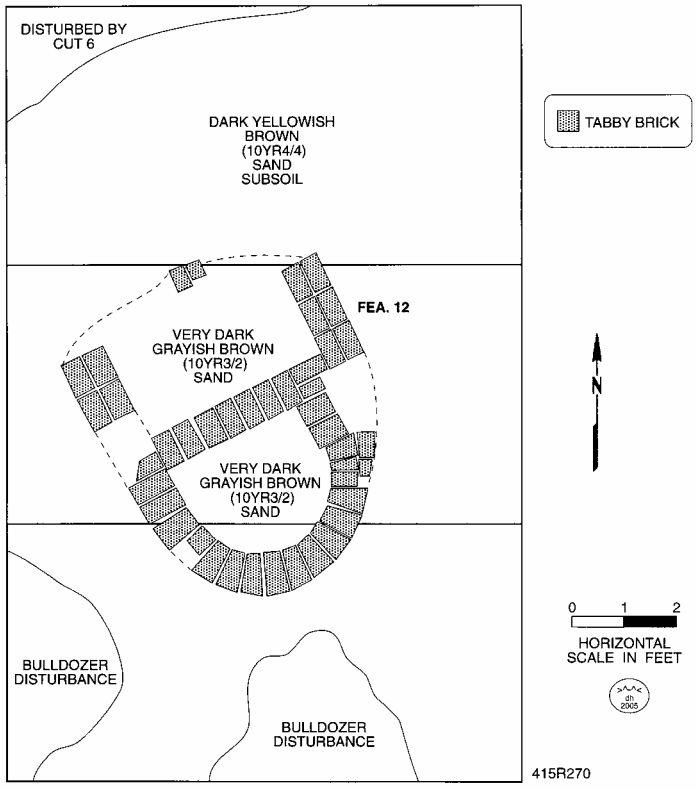


Figure 28. Plan of 415-425R270.

settlement and the quantity is sufficient to discount the idea that the remains may be plow smear. Two features were found at the base of the plowzone.

Feature 9 was found on the central east edge of the unit, with a center point of 503.4R499.5. The fill was a very dark grayish brown (10YR3/2) sand with mortar. The maximum length exposed was 1.9 feet east-west and the maximum width exposed north-south was 1.4 feet. Upon excavation the feature was found to be only 0.25 foot in depth and likely represents a robbed pier support. Artifacts consisted only of mortar (8 pounds). It is likely that upon demolition of the associated structure the piers were all robbed out to make plowing easier.

Feature 10 is situated at 508R499, in the northeast corner of 500R500 and the fill was a very dark brown (10YR2/2) sand. Upon excavation, the sides were found to be gradually sloping and the base was relatively flat. The depth of the feature was only 0.7 foot and the fill was homogenous, containing a very low density of early nineteenth century artifacts. No function is attributed to the pit, although the low density of remains suggests that it may have been under the nearby house and may represent only an animal "wallow."

Unit **540R510** exhibited soils identical to 500R500. Shell and brick rubble was slightly higher than 500R500, accounting for 21 pounds. Artifacts were small, consistent with the heavy plowing documented by the dense plowscars through the unit. Identified materials, however, include nineteenth century remains consistent with a slave settlement, as well as a Union Civil War button. No features were encountered.

At the eastern edge of the testing area four units were excavated. We believe that these probably represent two different structural areas, although there is no clear distinction in assemblages at present.

Unit **520R660** was placed in a site area that had been looted by metal detector enthusiasts. The plowzone was a very dark brown (10YR2/2) sand about a foot in depth overlying a subsoil of yellowish brown (10YR5/6) sand. Brick rubble was very dense in the unit, amounting to 263 pounds. While no features were encountered, artifacts were dense and included a broad range of items such as beads, utensil handles, and buttons.

Nearby unit **500R680** exhibited an identical plowzone and subsoil. Rubble density was only slightly greater at 271 pounds. Plowscars in this unit also document heavy plowing and artifacts were very similar.

This unit produced a single pit – Feature 7 – centered at 507.3R670 and bisected by the R670

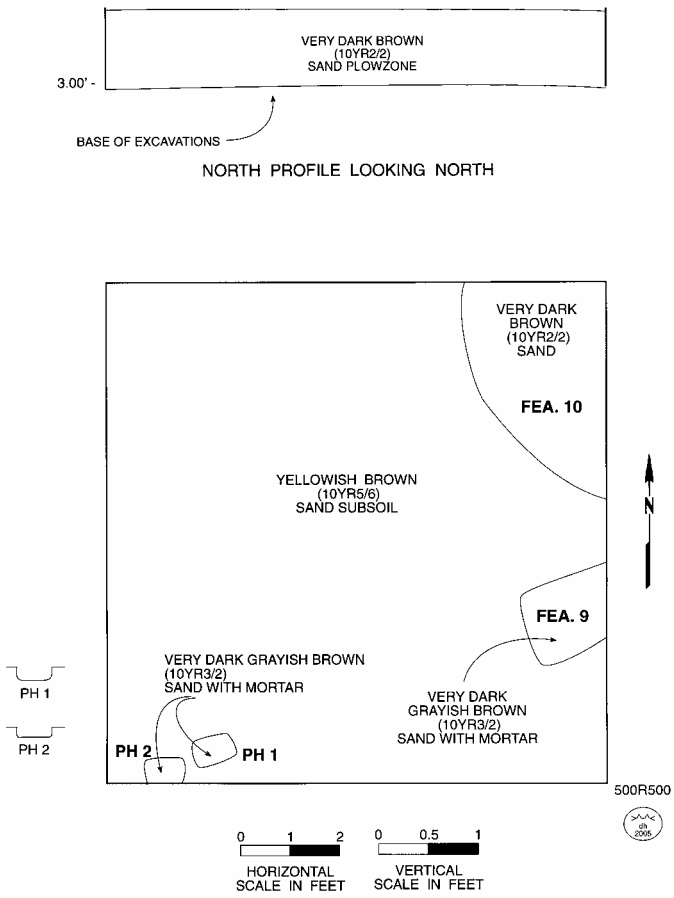

Figure 29. Plan and profile of 500R500.

wall. The exposed portion of the feature measures 3.1 by 1.3 feet and the fill was a dark grayish brown (10YR4/2) sand with dense oyster shell. The pit probably originated about 0.2 foot above the current subsoil (based on the density of shell in the profile). Upon excavation, the pit was found to have a dense lens of almost exclusively oyster (the feature produced 18 pounds of shell), steeply sloping sides, and a flat bottom. While historic materials were found from a plowscar running through the pit, clearly defined pit remains are entirely prehistoric Deptford Check Stamped pottery. This feature appears to represent a Middle Woodland trash pit.

Units 480R690 and 470R680 are both further to the south and are probably in the vicinity of a different structure. Unit **480R690** revealed a very deep plowzone about 1.3 foot in depth of very dark brown (10YR2/2) sand over a subsoil of yellowish brown (10YR5/6) sand. Plowscars are abundant and the unit produced 190 pounds of brick rubble.

Artifacts were very abundant in the unit (in fact, this is the densest unit in the eastern slave settlement area). Two features, both shallow pits, were identified at the base of the unit. Feature 5 is centered at 484.4R680.5 and measured 3 feet north-south by 1.7 feet east-west (although it is bisected by the units R680 wall). The fill was a very dark grayish brown (10YR3/2) sand with shell. Upon excavation the pit was found to have steeply sloping sides and a very flat base. The depth of the feature was 0.47 foot and this, combined with the shape of the pit, suggests that it may have been a pier or very large posthole. The feature produced 3 pounds of brick and 8 pounds of oyster shell. Artifacts included ceramics and nails.

Feature 6 was found in the southwest corner of 480R690, centered at 481R681 and was evidenced by a fill of very dark grayish brown (10YR3/2) sand and shell. The pit measured 2.4 feet north-south by 3.5 feet east-west and, upon excavation, was found to


Figure 30. Feature 10, view to the west.

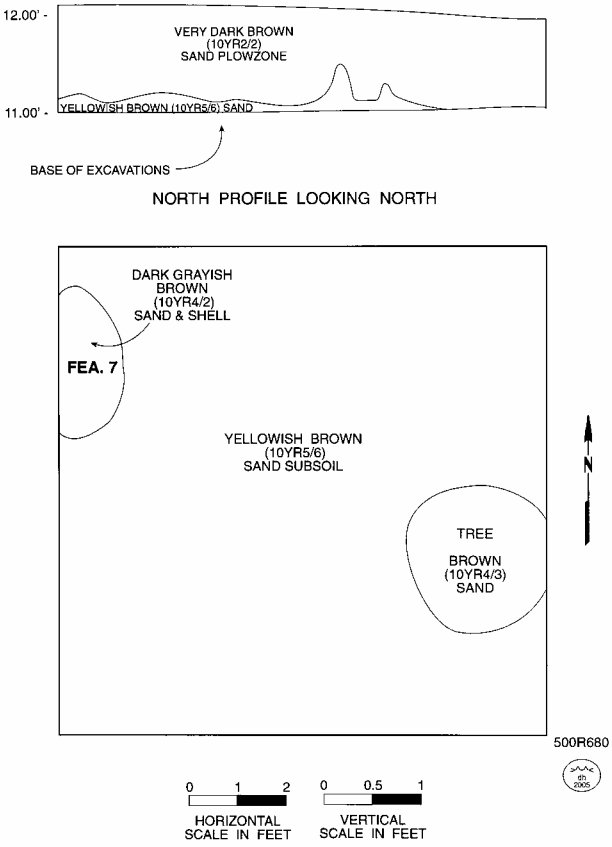


Figure 31. Plan and profile of 500R680.

be only 0.15 foot in depth with a flat base. Artifacts included animal bone and ceramics, but a function cannot be ascribed to the feature.

Figure 32. Feature 7, looking to the west.

Unit 480R690 also produced three post holes. They form no distinct pattern although all are similar in size (1.0 to 1.3 feet), depth (0.1 to 0.25 foot), and shape (all were square). Artifact content in each was minimal.

Because of the dense remains in 480R690, unit **470R680** was opened. While the soils are very similar, the plowzone was only 0.8 foot in depth. Shell and brick weight was 133 pounds and artifacts exhibited only a slightly lower density. One of the more unusual items recovered was a brass finger ring. No features were encountered in the unit.

**Results of Mechanical Cuts**

Cut 1 was placed immediately west of densely producing units in the eastern slave settlement. Cuts 2 and 3 were placed northeast of the slave settlement area in an effort to determine if the slave settlement extended in that direction. Cut 3 was also in the vicinity of Test Unit 3 (excavated during the survey phase) – a relatively dense site area that had not been examined by formal excavation units. These three cuts failed to produce any features.

Cut 4 was situated immediately north of formal excavation units where a human burial was identified; the cut was directed by Archives and History to determine if additional burials might be present. No additional human remains were found, although the cut did produce the foundation of a colonial structure (discussed below).

Cuts 5 and 6 were placed to explore the slave settlement immediately adjacent to the main Fuller/Auld house. Cut 5 was placed to the southeast of the main house in the hope that some evidence of the southernmost structure might be encountered. None was, although two postholes were identified. Much of the cut was unintentionally placed into a low boggy area. In retrospect, we believe that this was probably too far south to encounter any of the slave settlement

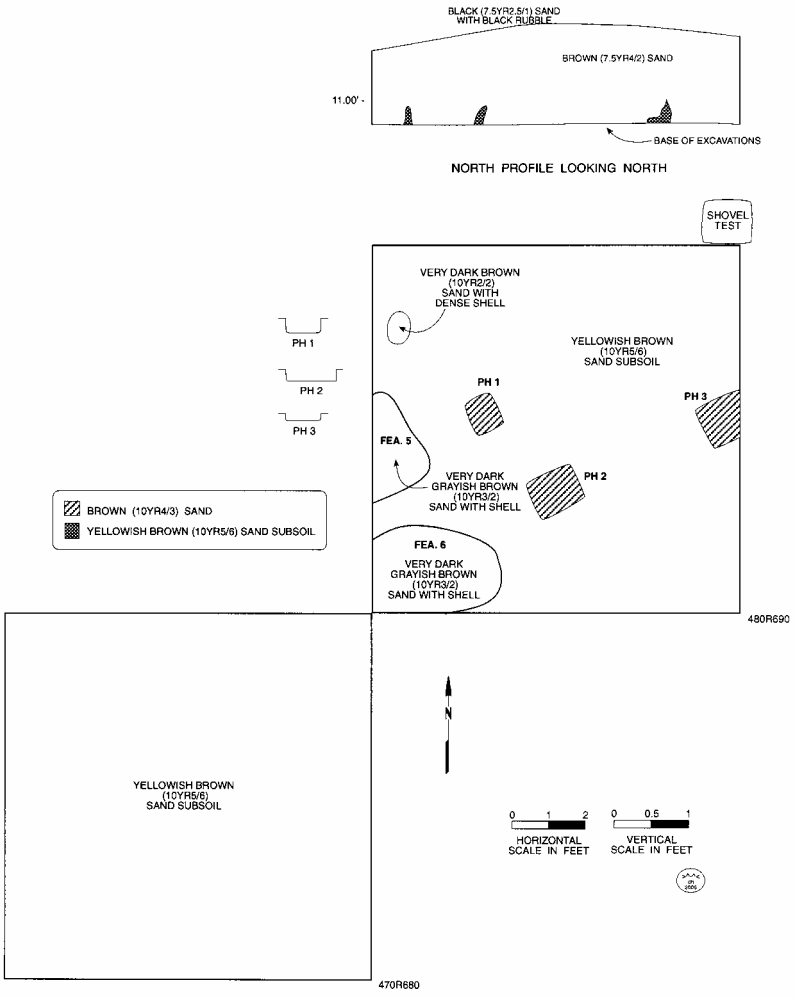


Figure 33. Plan and profile of 470-480R680-690.

(which probably terminated in the vicinity of the dairy barn). Cut 6 was placed in the area northeast of the Fuller/Auld house, in an area where shovel tests revealed dense remains. This area, however, was under the rubble of the burned Fuller/Auld house. The cut did produce one feature (Feature 8) and three postholes. The most notable finding was dispersed tabby brick remains – suggestive of an earlier structure or occupation (it was as a result of this cut that 150 square feet of formal excavations were opened nearby at 415-425R270, discussed above).

Feature 8 was a mortar and brick filled pit with brown (10YR4/5) sand situated in the middle of the cut. I estimate that about 0.3 foot of the pit had been removed by the track hoe, but at the exposed depth the feature still measured 3.3 feet northwest-southeast by 2.2 feet southwest-northeast. Upon excavation the pit was found to contain about 5 pounds of brick and 19 pounds of shell. The feature was basin shaped and was 0.8 foot in depth. No function can be ascribed to the pit, which contained a diverse collection of eighteenth century materials, including Colono ware pottery, delft, slipware, and white saltglazed stoneware.

### The Colonial Structure in Cut 4

Cut 4, as previously mentioned, was opened to ensure that additional human remains were not present to the north of Burial 1. While no additional graves were found, the cut did expose an intact tabby (i.e., lime mortar) brick structure. The upper 4 feet of the structure's foundation had been removed with the interior of the building receiving much of the demolition rubble. This structure – and its demise – accounts for the dense structural remains found in 305R170, as well as for the dense eighteenth century remains found in units280-300R175.

Upon initial expose the structure was recognizable by wall remnants primarily along the east and north edges. The interior of the structure was also clearly defined by the darker soil color, dense rubble remains, and large quantity of artifacts.

Figure 34. Feature 5 excavated, view to the west.

Excavation was conducted by laying in three units to cover the bulk of the structure: 315-335R175. The interior of the structure was excavated as two levels. Level 1, about 0.3 foot in depth, was a very dark grayish brown (10YR3/2) sand mixed with dense mortar, brick, and shell. Level 2 below was a dark yellowish brown (10YR4/6) lensed sand about 0.6 foot in depth. At the base of the lensed sand was a 0.1 foot thick packed mortar floor, consisting of burned shells and lime. This floor was still in excellent condition and the overlying sand represents flood or water laid deposits that probably accumulated after the structure's abandonment.

As the structure was cleaned, the foundation was found to measure 12.8 feet east-west by 12.4 feet north-south on the exterior, with interior measurements of 10.5 feet east-west by 10.9 feet north-south. The north and south walls were 0.8 foot in width (2 bricks in width), while the east and west walls were 1.1 feet in width (3 bricks). The walls were laid up in English common bond with a shell mortar. The vast majority of the bricks were tabby, although there were a few areas where soft red fired bricks had been incorporated, primarily as brick bats. The interior walls were all plastered with two coats – a grayish white base or scratch coat and a near white finish coat. There was no evidence of hair or other inclusions. The plaster stops 0.5 foot from the mortar floor and there is a 1¼-inch gap between the wall and the mortar floor. This indicates that a molding strip was placed on the wall prior to either plastering or the setting of floor. Wood grain impressions are visible on the base of the plaster, at its junction with this wood device.

The wall expanded outward on its north face and this was originally thought to represent a chimney. As excavations continued, however, we discovered that this area represented steps, allowing access to the structure basement. These steps were located 4.6 feet west of the northeast corner and measured 4.4 feet in width. A series of two steps are still preserved – each with a width of 0.75 foot and a height ranging from 0.5 to 0.7 foot. These steps were constructed of tabby brick, which is soft and holds us poorly to wear and tear. The center of each tread was therefore fired clay brick (all partial brick) and the wearing edge of the tread originally had a wood beam for strength (with the beam set into sockets on either side of the stairs). A large fragment of "freestone" – a type of siltstone – was found at the steps and may represent a portion of the threshold.

Figure 35. Feature 8, south half excavated. View to the north.

Figure 36. The colonial structure exposed at the base of stripping in Cut 4, view to the west.

The excavation revealed a large quantity of plaster in the rubble, many fragments exhibiting lathe impressions. These would have come from the superstructure and indicate that the building had an upper floor, probably raised off grade about a foot. This would have allowed the basement to have headroom of about 5-foot, with approximately 4-feet being below grade. The absence of any fireplace support suggests that this building was not domestic or even an office. Rather it was probably storage both above and below grade. The nearly square size suggests that it would have had a hip or pyramidal roof, probably of wood since no slate or tile was encountered anywhere on the site. Fragments of the plaster evidence a blue-gray whitewash. Also present are large quantities of window glass, indicating that the upper story had glassed openings.

Figure 37. The colonial structure exposed, prior to complete exposure of the mortar floor. View to the east showing the steps.

This represents a very well constructed colonial outbuilding, indicating that there was a relatively substantial colonial plantation development at 38CH932 prior to Fuller's construction of the structure that became known as the Fuller/Auld house. Additional colonial plantation components include the dense remains spread southward from the structure and found in units 280-300R175, Burial 1, and the dense colonial remains found in the vicinity of Cut 6 and units 415-425R270.

Figure 38. Close-up of the steps in the colonial structure, view to the north. A portion of the mortar floor is visible to the right (east) of the steps. Also visible is the interior plaster stucco and junction with the basal molding.

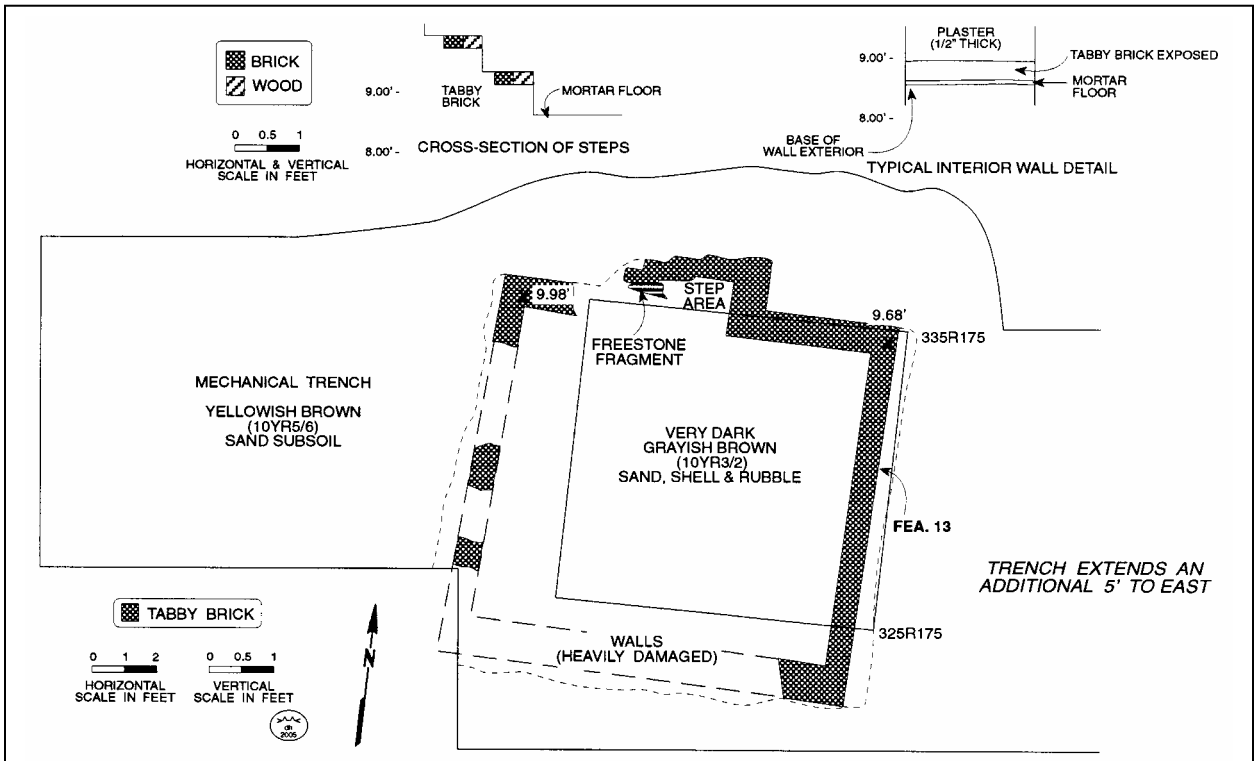


Figure 39. 325R175 at the colonial structure.

# ARTIFACTS

## Methodology

### Processing and Conservation

Processing was begun in the field, but was completed at Chicora's labs in Columbia. During the washing, artifacts were sorted by broad categories – pottery, lithics, bone, ceramics, glass, iron, and other materials. Upon drying, the artifacts were temporarily bagged by these categories, pending cataloging. Conservation treatments were conducted by Chicora personnel in Columbia from December 2003 through February 2004.

Brass items, if they exhibited active bronze disease, were subjected to electrolytic reduction in a sodium carbonate solution with up to 4.5 volts for periods of up to 72 hours. Hand cleaning with soft brass brushes or fine-grade bronze wool followed the electrolysis. Afterwards, the surface chlorides were removed with deionized water baths (until a chloride level of no greater than 1 ppm or 18 µmhos/cm was achieved using a conductivity meter) and the items were dried in an acetone bath. The conserved cuprous items were coated with a 20% solution (w/v) of acryloid B-72 in toluene.

Ferrous objects were subjected to electrolytic reduction in a bath of sodium carbonate solution in currents no greater than 5 volts for a period of 5 to 20 days (or in a few cases far longer). When all visible corrosion was removed, the artifacts were wire brushed and placed in a series of deionized water soaks for the removal of soluble chlorides. When the artifacts tested free of chlorides (at a level less than 0.1 ppm, or 2 µmhos/cm), they were dewatered in acetone baths and were air dried for 24 hours. Afterwards, a series of phosphoric (10% v/v) and tannic (20% w/v) acid solutions were applied and the specimens were again allowed to air dry for 24 hours. They were finally coated with a 10% solution (w/v) of acryloid B-72 in toluene.

The materials have been accepted for curation by the South Carolina Institute of Archaeology and Anthropology. The collection has been cataloged using this institution's accessioning practices. Specimens were packed in plastic bags and boxed. Field notes were prepared on pH neutral, alkaline-buffered paper and photographic materials were processed to archival standards. All original field notes, with archival copies, are also curated at this facility. All materials have been delivered to the curatorial facility.

### Analytical Methods

Analysis of the collections followed professionally accepted standards with a level of intensity suitable to the quantity and quality of the remains.

As previously discussed, the prehistoric remains were not a contributing resource in terms of eligibility and the data recovery plan did not incorporate research questions focused on these remains. Consequently, this study only briefly mentions the prehistoric material present, should other researchers care to further examine the collections.

The temporal, cultural, and typological classifications of the historic remains follow such authors as Cushion (1976), Godden (1964, 1985), Miller (1980, 1991), Noël Hume (1978), Norman-Wilcox (1965), Peirce (1988), Price (1970), South (1977), and Walton (1976). Glass artifacts were identified using sources such as Jones (1986), Jones and Sullivan (1985), McKearin and McKearin (1972), McNally (1982), Smith (1981), Vose (1975),

and Warren (1970). Additional references, where appropriate, will be discussed in the following sections.

The analysis system used South's (1977) functional groups as an effort to subdivide historic assemblages into groups that could reflect behavioral categories. Initially developed for eighteenth-century British colonial assemblages, this approach appears to be a reasonable choice for even nineteenth century materials since it allows ready comparison to other collections. The functional categories of Kitchen, Architecture, Furniture, Personal, Clothing, Arms, Tobacco, and Activities provide not only the range necessary for describing and characterizing most collections, but also allow typically consistent comparison with other collections.

Another important analytical technique used in this study is the minimum vessel count, as both an alternative to the more traditional count of ceramics[1] and also as a prerequisite to the application of Miller's cost indices. The most common approach for the calculation of minimum number of vessels (MNV) is to lay out all of the ceramics from a particular analytic unit (such as a feature), grouping the sherds by ware, type, and variety (e.g., floral motif vs. pastoral). All possible mends are then made. Body sherds are, from this point on, considered residual and not further considered. Remaining rim sherds, which fail to provide mends, are examined for matches in design, rim form, colors, and other attributes that would indicate matches with previously defined vessels. Those that fail to match either mended vessels or other rims are counted as additional vessels. Since there were no closed features, such as wells or privies, suitable for this level of analysis, the analytic unit used was all of the units from the excavations. These were combined for this analysis, using a minimum distinction method for the MNV, which tends to provide a relatively conservative count.

Although no cross mend analyses were conducted on the glass artifacts, these materials were examined in a similar fashion to the ceramics to define minimum number of vessel counts, with the number of vessel bases in a given assemblage being used to define the MNV. Attempts were made to mend and match vessel bases in order to ensure the accuracy of the count. If a glass artifact exhibited a different color and/or form not represented by the counted bases, then it was designated a separate vessel or container.

Mean dates rely on South's (1977) mean ceramic dating technique, using primarily the mean dates that he has developed. A very few of our colleagues occasionally use Carlson (1983) in addition to South. Carlson observes that a drawback to South's technique is that it gives the same weight to ceramics manufactured for long periods (say from 1700 to 1800, yielding a mean date of 1750) as it does to those produced for only short periods (say from 1740 to 1760, with the same mean date of 1750). While this is true – and is certainly an understandable issue – it seems that overall it results in only a few years error. Moreover, it seems that relatively few investigators have chosen to implement the changes proposed by Carlson.

[1] Although counts are used in this, and virtually every study of historic wares, we know that they are biased as measures of the proportions of types. Simply put, the proportion by number of sherds of a particular type reflects two things -- first, the proportion of that type in the population, and second, the average number of sherds into which vessels of that type have broken (known among some researchers are their brokenness) in comparison with the brokenness of other types. In general, however, brokenness will vary from one type to another and also from one size vessel of a particular type to another size vessel of the same type. Usually, types with a high brokenness will be over-represented in comparison to those with a low brokenness. More importantly, this bias not only affects the study of a single assemblage, but may also affect the study, or comparison, of different assemblages that may have a different level of brokenness.

We have also chosen not to provide tobacco stem dates for several reasons. One is that pipe stem bore diameters are frequently not consistent throughout their length. There are also lingering concerns over the adequacy of various sample sizes – Noël Hume (1963), for example, argues that a minimum sample of 900 to 1,000 stems w is necessary, while Hanson (1971) suggests that 30 stems are adequate. We are inclined to believe that a larger figure is likely more viable – and none of the Youghal samples comes even close. There are other questions concerning when the dating technique begins to break down, with dates ranging from 1744 through 1800 having been offered. **Since Youghal clearly dates from at least the mid-eighteenth century through mid-nineteenth century, the use of pipe stem dating becomes problematical.** Finally, there are actually a variety of dating techniques – at least six variations having been proposed in the past. Pfeiffer (1978) offers a review of the problems inherent in using pipe stems for dating. What we have done is to provide the raw data throughout our discussions, so that readers who may wish to compare more conventional dating techniques to pipe stem dating have the opportunity to do so.

Of greater importance to us at a site such as Youghal Plantation, where the property has perhaps been occupied by a number of different owners, is the occupation span reflected by the ceramics. Knowing the span represented might assist us to gauge the contribution of different owners. One method used to determine the occupation span of the excavations is South's (1977) bracketing technique. This method consists of creating a time line where the manufacturing spans of the various ceramics are placed. Determining where at least half of the ceramic type bars touch places the left bracket. The right bracket is placed the same way, however, it is placed far enough to the right to touch at least the beginning of the latest type present (South 1977:214). We have chosen to alter South's bracketing technique slightly by placing the left bar at the earliest ending date when that ending date does not overlap with the rest of the ceramic type bars.

Since South's method only uses ceramic types to determine approximate period of occupation, Salwen and Bridges (1977) argue that ceramic types that have high counts are poorly represented in the ceramic assemblage. Because of this valid complaint, a second method – a ceramic probability contribution chart – was used to determine occupation spans. Albert Bartovics (1981) advocates the calculation of probability distributions for ceramic types within an assemblage. Using this technique, an approximation of the probability of a ceramic type contribution to the site's occupation is derived. This formula is expressed:

$$Pj/yr. = \frac{fj}{F \times Dj} \quad \text{where}$$

Pj = partial probability contribution
fj = number of sherds in type j
F = number of sherds in sample
Dj = duration in range of years

**Analysis of Areas**

While the original data recovery of Youghal focused on four areas – the Ice House, the Area Southwest of the Youghal House, the Slave Houses Close to the Main Dwelling, and the Slave Houses East of the Main House – this report attempts to further distinguish these groups into the Area North of the Fuller/Auld House, the Auld House Yard Area, the Icehouse, the Slave Settlement (further categorized into east and west) and the Colonial Area (this area is further categorized in north and south).

**Area North of Fuller/Auld House, 530R340, 570R260-270**

Three ten-foot units were excavated in the area north of the Fuller/Auld house. We had originally thought that this area represented a late nineteenth to early twentieth century tenant occupation. While such remains may be present, these analyses clearly reveal much earlier

Table **4**.
Major Ceramics in the Area North of the Fuller/Auld House

| | | |
|---|---|---|
| Porcelain | 50 | 12.8% |
| Stoneware | 25 | 6.4% |
| Brown | 13 | |
| Blue/Gray | 6 | |
| White | 1 | |
| Other | 5 | |
| Earthenware | 317 | 80.9% |
| Slipware | 14 | |
| Redware | 1 | |
| Coarse | 9 | |
| Delft | 0 | |
| Creamware | 34 | |
| Pearlware | 93 | |
| Whiteware | 163 | |
| Other | 3 | |

occupational refuse in this area.

The three units produced a total of 1,494 artifacts. Feature 4 (found in 530R340) produced 29 of these artifacts.

### Prehistoric Remains

The collection consists of 80 prehistoric remains, 78 (99%) of which are sherds. Of these sherds, 63 (81%) are under 1-inch in diameter and unsuitable for additional analysis. The other prehistoric object is a chert flake.

### Historic Collections

The historic collection is represented by 1,494 items, 1,164 of which are Kitchen Group specimens (77.9%). The most abundant (63.5%) of these are glass fragments (n=739). The Architectural Group makes up the next largest proportion at 17.3% (n=259). This group is made up almost entirely of window glass (n=102) and unidentifiable nail fragments (n=150). Sparse amounts of Furniture (n=4), Arms (n=1), Tobacco (n=11), Clothing (n=5), Personal (n=3), and Activities Group (n=47) artifacts were also found.

### Kitchen Group

As previously mentioned, kitchen artifacts consist of 1,164 specimens or 78% of the total artifact assemblage. Glass dominates the collection with 739 specimens or 63% of the total Kitchen Group. European ceramics make up 34% of the assemblage (n=392). Colono ware accounts for 19 specimens or 2% of the Kitchen Group assemblage. Tableware (n=13) makes up 1% of the Kitchen Group and Kitchenware makes up less than 1% with just one specimen.

Of the ceramics found in the three units, earthenwares dominate with 80.9% (n=317) specimens (see Table 4). Whiteware was found most often accounting for 163 specimens, followed

Table 5.
Mean Ceramic Date for the Units North of the Fuller/Auld Main House

| Ceramic | Date Range | Mean Date (xi) | (fi) | fi x xi |
|---|---|---|---|---|
| Canton porcelain | 1800-1830 | 1815 | 7 | 12705 |
| Overglazed enamelled porc | 1660-1800 | 1730 | 3 | 5190 |
| Underglazed blue porc | 1660-1800 | 1730 | 3 | 5190 |
| Nottingham stoneware | 1700-1810 | 1755 | 1 | 1755 |
| Westerwald | 1700-1775 | 1738 | 2 | 3476 |
| White salt glazed stoneware | 1740-1775 | 1758 | 1 | 1758 |
| Black basalt | 1750-1820 | 1785 | 1 | 1785 |
| Lead glazed slipware | 1670-1795 | 1733 | 14 | 24262 |
| Creamware, hand painted | 1790-1820 | 1805 | 1 | 1805 |
| Creamware, undecorated | 1762-1820 | 1791 | 31 | 55521 |
| Pearlware, poly hand painted | 1795-1815 | 1805 | 2 | 3610 |
| Pearlware, blue hand painted | 1780-1820 | 1800 | 16 | 28800 |
| Pearlware, blue trans printed | 1795-1840 | 1818 | 11 | 19998 |
| Pearlware, edged | 1780-1830 | 1805 | 13 | 23465 |
| Pearlware, annular/cable | 1790-1820 | 1805 | 2 | 3610 |
| Pearlware, molded | 1800-1820 | 1810 | 1 | 1810 |
| Pearlware, undecorated | 1780-1830 | 1805 | 48 | 86640 |
| Whiteware, green edged | 1826-1830 | 1828 | 2 | 3656 |
| Whiteware, blue edged | 1826-1880 | 1853 | 1 | 1853 |
| Whiteware, poly hand painted | 1826-1870 | 1848 | 2 | 3696 |
| Whiteware, blue trans printed | 1831-1865 | 1848 | 7 | 12936 |
| Whiteware, non-blue trans printed | 1826-1875 | 1851 | 5 | 9255 |
| Whiteware, poly decalcomania | 1901-1950 | 1926 | 6 | 11556 |
| Whiteware, annular | 1831-1900 | 1866 | 6 | 11196 |
| Whiteware, sponge/splatter | 1836-1870 | 1853 | 1 | 1853 |
| Whiteware, tinted glaze | 1911-1970 | 1941 | 3 | 5823 |
| Whiteware, mocha | 1831-1900 | 1866 | 1 | 1866 |
| Whiteware, undecorated | 1813-1900 | 1860 | 129 | 239940 |
| Total | | | 320 | 585010 |
| Mean Ceramic Date | 1828.2 | | | |

Table 6.
Minimum Vessel Count for the Area North of Auld House

| | Cup | Saucer | Bowl | Plate | Serving |
|---|---|---|---|---|---|
| CW, undecorated | | 1 | | 4 | |
| CW, green edge | | | | 2 | |
| PW, undecorated | 1 | | | | |
| PW, blue hand painted | | | 1 | 2 | |
| PW, poly hand painted | | | 1 | | |
| PW, annular | | | 1 | | |
| PW, molded | | | | 1 | |
| PW, blue transfer printed | | | | 2 | |
| WW, undecorated | | 2 | 4 | 7 | 1 |
| WW, molded | | | | 5 | |
| WW, blue tint | | | 1 | | |
| WW, annular | | | 1 | 3 | |
| WW, edged | | | | 2 | |
| WW, transfer printed | | 1 | | | |
| WW, decal | | | | 1 | |
| Chinese porcelain, poly | | | | 2 | |
| Chinese porcelain, blue | | | | 1 | |
| White porcelain, undec | 2 | | | 3 | |
| Slipware | | | | 1 | |
| STW, Albany | | | 1 | | |
| ***Totals*** | ***3*** | ***4*** | ***10*** | ***36*** | ***1*** |

CW – creamware; PW – pearlware, WW – whiteware, STW – stoneware

by pearlware (n=93), and creamware (n=34). Other earthenwares include slipware (n=14), coarse earthenware (n=9), redware (n=1), and three burnt earthenware.

Porcelain, consisting of undecorated (n=37) and Chinese porcelain (n=13), was the next most common ceramic accounting for 12.8% of the datable pottery. Stoneware, which accounts for 6.4% of the ceramics, produced brown, blue/gray, white, Nottingham, Westerwald, black basalt, alkaline, and Bristol stonewares.

The Mean Ceramic Date (MCD) for this locus is 1828.2, somewhat later than the Eastern Slave Settlement (Table 5). While clearly antebellum, there are small quantities of later ceramics – such as the tinted glaze and decalcomania – that are clearly postbellum and likely associated with the tenant structures known to exist. Of course, there are also some relatively early wares, such as the lead glazed slipware. Nevertheless, when we examine Bartovics' data, we see that while occupation began perhaps as early as 1760, the vast majority of the wares were contributed between about 1810 and 1900, after which time occupation appears to ceased in this area (very similar results are seen in South's bracketing dates). One explanation is that these units were placed in an area of the early (pre-Fuller) slave settlement and occupation continued through Fuller's antebellum ownership and into the early postbellum.

Table 6 shows the Minimum Vessel Count for the three units. When all of the ceramics are combined, flatwares (plates and saucers) are the most common vessel form, accounting for 74% of the total. Even if we were to exclude the whitewares – thinking that they might represent primarily tenant contributions – the flatwares continue to dominate the collection, representing 75% of the combined creamwares and pearlwares. Consequently, this assemblage is anomalous when compared to other slave assemblages, where hollow wares tend to dominate because of African American foodways.

As previously mentioned, glass makes up the bulk of the Kitchen Group at 63% (n=739) of the collection. Black glass was common, contributing 257 specimens – representing at least eight bottles.

Other container glass includes 65 brown, 23 green, 19 light green, 3 bright green, 91 aqua, 3 blue, 1 amber, 31 milk, 77 manganese, and 169 clear fragments. Some of the vessels represented include crown cap bottles, a Dispensary bottle, a preserve jar, and a preserve jar lid. At least 228 fragments were found of brown, bright green, and clear, representing either a long occupation or modern dump site.

Other Kitchen Group artifacts include 13 tableware items and one kitchenware item. The

tableware items include four bowls, five tumblers, one goblet stem, and one decorative vase fragment. The kitchenware item is a zinc preserve jar lid.

**Architecture Group**

Architectural remains made up 17% of the total artifact assemblage (n=259). Of this total, 150 or 58% of the group consisted of unidentifiable nail fragments. None of the nails were identifiable. Window glass comprised 39% of the group (n=102).

The remaining seven items include two strap hinges, four asbestos tiles, and one thin brick tile.

**Furniture Group**

Furniture Group artifacts comprise 0.3% of the total artifact assemblage (n=4). These artifacts include two lamp glass fragments (one with a scalloped rim), one bisque porcelain molded base to a figurine, and one small brass hinge.

**Arms Group**

The only arms related item counted was a single honey color gunflint. Both Emory (1979:37-48) and Noël Hume (1978:220) agree that English flints tend to be gray or black, while French flints tend to be brown or honey-colored, with the majority of flints found on colonial sites coming from France because of their superior quality.

**Tobacco Group**

Tobacco Group artifacts account for 0.7% of the total artifact assemblage from this area. Six stems were recovered with five measuring 5/64-inch and one measuring 6/64-inch. One of the 5/64-inch stems also contained a plain bowl with no foot.

Five bowl fragments were found with three plain, one ribbed, and one with an unidentifiable design.

**Clothing Group**

The Clothing Group produced four artifacts or 0.3% of the total artifact assemblage. These include four buttons and one brass snap. Three of the buttons can be classified according to South's (1964) types. The size ranges follow generally accepted concepts of use, with those buttons 6 mm and under being associated with undergarments or delicate outer garments, those between 7 and 13 mm used on shirts and pants, and the larger buttons being used for coats. If this is the case, then we appear to have evidence of only coats at this area, although it is possible that two of the buttons (measuring just over 13 mm) could have been on shirts or pants.

Two of the buttons were brass, Type #7 (South 1964) with one measuring 25 mm and the other measuring 13.65 mm. Another brass button (Type #18) was found, measuring 19.62 mm and labeled Wellington and Waterloo. No additional information on this company was found. The final button was black glass measuring 13.62 mm in diameter. No type was found in connection with this button.

The brass snap is the female end.

**Personal Group**

The personal artifacts account for 0.2% of the artifact assemblage. These include one brass key fragment, one plain brass brooch, and one perfume bottle stopper made of manganese glass.

**Activities Group**

The Activities Group produced the third highest number of artifacts with 3% of the total assemblage (n=47). A total of eight of these artifacts were associated with toys including one bisque porcelain doll arm, five bisque porcelain doll fragments, one white porcelain doll bowl

Table 7.
Comparison of the artifact pattern at the area north of the Fuller/Auld House with other published patterns

| Artifact Group | Revised Carolina Artifact Group[1] | Carolina Slave Artifact Group[1] | Georgia Slave Artifact Group[2] | Area North of Fuller/Auld House |
|---|---|---|---|---|
| Kitchen | 51.8 – 65.0 | 70.9 – 84.2 | 20.0 – 25.0 | 77.9 |
| Architecture | 25.2 – 31.4 | 11.8 – 24.8 | 67.9 – 73.2 | 12.3 |
| Furniture | 0.2 – 0.6 | 0.1 | 0.0 – 0.1 | 0.3 |
| Arms | 0.1 – 0.3 | 0.1 – 0.3 | 0.0 – 0.2 | 0.1 |
| Tobacco | 1.9 – 13.9 | 2.4 – 5.4 | 0.3 – 9.7 | 0.7 |
| Clothing | 0.6 – 5.4 | 0.3 – 0.8 | 0.3 – 1.7 | 0.3 |
| Personal | 0.2 – 0.5 | 0.1 | 0.1 – 0.2 | 0.2 |
| Activities | 0.9 – 1.7 | 0.2 – 0.9 | 0.2 – 0.4 | 3.2 |

[1] Garrow 1992
[2] Singleton 1980

fragment, and one harmonica reed fragment. Not counted, but present in the area, was a modern plastic orange game piece.

One storage item was recovered – a strap fragment.

Of the miscellaneous hardware, eight items were found. These include four staples, three bolt fragments, and one brass, flat head screw (length measuring 1").

Other artifacts include 25 unidentifiable iron fragments, one brass fragment, one lead fragment, one crumpled lead sheet, and two slate fragments.

**Summary**

The area north of the Fuller/Auld House is known to have contained tenant structures in the first quarter of the twentieth century (see Trinkley et al. 2003:Figure 8). The assemblage from these three units certainly reflects this tenant occupation, with the zinc canning car lid, manganese glass, Dispensary bottle, and at least some whiteware motifs being typical of that time period. Nevertheless, there are materials, including the slipwares, creamwares and pearlwares that are clearly antebellum or earlier.

When the artifact pattern is examined (Table 7), the collection is generally consistent with the Carolina Slave Artifact Group, typical of antebellum slave settlements. It deviates in only four areas. Furniture, personal, and activity items are higher than anticipated, while tobacco is lower than would be expected. The categories of kitchen and architectural remains, generally identified as the most critical groups, are consistent with a slave assemblage.

While the presence of relatively large quantities of tenant related remains reduces the usefulness of this area since it is difficult to tease apart the collections, when we examine the creamware and pearlware ceramics, we still find that flatwares are far more common than hollow wares.

Likewise, if we examine only the creamwares and pearlwares we find that two-thirds of the decorated specimens (n=30) exhibit relatively expensive transfer printed or hand painted motifs. The remaining third of the collection exhibits annual or edged decorations – relatively inexpensive motifs.

Therefore, both the decorations and the vessel forms are atypical of slave settlements. One explanation, is that the slaves in this area, near the main house, were treated differently as house-servants. This different treatment may translate into different vessel forms (perhaps reflecting different foodways) and motifs (perhaps reflecting different status). The nature of the site area may also explain the increased proportions of furniture, personal, and activity items.

It was, in fact, to study these types of issues that an effort was made to identify slave structures in this part of the site. Although the data are compromised by the late occupation of

the area by tenants – evidenced by the admixture of tenant and postbellum artifacts, there still appear to be enough differences between what is typically expected of slaves and this area to suggest that some higher status may have been ascribed to these individuals.

**Fuller/Auld House Yard Area, 340R235**

The Fuller/Auld house yard area was investigated by a single 10-foot unit (340R235) that produced 992 artifacts and was placed to confirm the location of this late antebellum structure. As previously mentioned, the unit revealed much burned debris from the fire of 1992. The reader should recall that the remains of the structure had been not only salvaged (for brick), but had also been bulldozed off the immediate excavation area.

Table 8.
Major Ceramics in the Yard Area

| | | |
|---|---|---|
| Porcelain | 8 | 7.5% |
| Stoneware | 2 | 1.9% |
| White | 1 | |
| Other | 1 | |
| Earthenware | 74 | 69.8% |
| Slipware | 2 | |
| Refined | 4 | |
| Delft | 1 | |
| Creamware | 3 | |
| Whiteware | 64 | |

**Historic Collections**

The 992 specimens are all historic artifacts, dominated by kitchen group artifacts that account for over 45% of the assemblage. The largest contributor to this group is container glass, followed by ceramics. Architectural remains – largely nails, nail fragments, and window glass – are the next most common item from the unit, accounting for just over 43% of the collection.

**Kitchen Group**

The kitchen group accounts for 469 items or 45.2% of the total collection. As shown in Table 8 earthenwares are the most common ceramic, accounting for over 69% of the assemblage. Porcelains and stonewares are uncommon, together accounting for just fewer than 10%. Of the earthenwares, mid to late-eighteenth century ceramics, such as delft, slipware, and creamware are uncommon. Mid to late-nineteenth century whitewares are the most common, accounting for over 86% of the ceramics. When mean vessel counts are considered (Table 9), whitewares are again the most common, accounting for 57.1% of the recognizable vessels.

Table 9.
Minimum Vessel Count for the Yard Area

| | Cup | Bowl | Saucer | Plate |
|---|---|---|---|---|
| CW, undecorated | | 1 | | 1 |
| WW, undecorated | | 1 | | 5 |
| WW, molded | | | 1 | |
| WW, tinted pale yellow | 1 | | | |
| White porcelain, undec | | | | 2 |
| Slipware | | 2 | | |
| ***TOTALS*** | ***1*** | ***4*** | ***1*** | ***8*** |

CW – creamware, WW – whiteware

Overall, flatwares dominate, accounting for 64% of the collection. If only whitewares are examined, 80% of the collection consists of flatwares. This is expected for a high status assemblage such as a main house. The collection, however, is not sufficiently large to also examine vessel motifs.

A Mean Ceramic Date (MCD) for the Fuller/Auld house site is 1865.5. One piece of whiteware contained an identifiable mark from the W.S. George Pottery Company that dates from the late 1930s into the 1940s (Lehner 1988). Although South would propose a date range of about 141 years, from 1770 to 1911, Bartovics suggests little occupation during the eighteenth century. There is a strong occupation span from about 1810 to 1900, with a second, somewhat weaker span from about 1910 to 1970. This seems

generally consistent with the historic data and indicates that the Fuller/Auld house replaced an earlier structure.

Table **10.**
Mean Ceramic Date for the Fuller/Auld House Yard Collection

| Ceramic | Date Range | Mean Date (xi) | (fi) | fi x xi |
|---|---|---|---|---|
| White salt glazed stoneware | 1740-1775 | 1758 | 1 | 1758 |
| Lead glazed slipware | 1670-1795 | 1733 | 2 | 3466 |
| Clouded wares | 1740-1770 | 1755 | 1 | 1755 |
| Decorated delft | 1600-1802 | 1750 | 1 | 1750 |
| Creamware, undecorated | 1762-1820 | 1791 | 3 | 5373 |
| Whiteware, blue edged | 1826-1880 | 1853 | 1 | 1853 |
| Whiteware, blue trans printed | 1831-1865 | 1848 | 1 | 1848 |
| Whiteware, poly decalcomania | 1901-1950 | 1926 | 1 | 1926 |
| Whiteware, tinted glaze | 1911-1970 | 1941 | 14 | 27174 |
| Whiteware, undecorated | 1813-1900 | 1860 | 46 | 85560 |
| Yellow ware | 1826-1880 | 1853 | 1 | 1853 |
| Total | | | 72 | 134316 |
| Mean Ceramic Date | 1865.5 | | | |

Glass comprises 70% of the kitchen artifacts. While melted glass dominates the collection with 222 specimens, the remaining glass is clear (n=35), brown (n=20), milk (n=17), aqua (n=12), light green (n=12), black (n=9), manganese (n=2), and blue (n=1).

Several tableware items were recovered, identified by seven clear glass fragments representing one bowl, one rectangular vessel with lid, and three drinking vessels. These materials are certainly reflective of some status, although in a yard deposit they are difficult to interpret. Six pieces of milk glass were also found – one with a scallop rim and five poly hand-painted with one representing a 3″ mug with handle.

Kitchenware items include one stove foot, three stove body fragments, and ten kettle fragments. Also recovered were five coiled fragments of an iron handle which would have been used for stove or fire utensils.

There was one Colono ware handle fragment. Its greatest contribution may be to suggest that – based on the yard deposits -- the early occupation at the site had remarkably little dependence on African American ceramics.

**Architecture Group**

The Architecture Group accounts for 43.7% of the total artifact assemblage at the Fuller/Auld house. Nails make up the bulk of architectural artifacts with 344 specimens. A total of 40% of the nail collection is unidentifiable as to either type or length.

Very few hand wrought nails (n=7) were found in the unit. These nails were generally in use until 1800 (Howard 1989). This makes sense as the Fuller/Auld house is not thought to have been built until the mid-nineteenth century.

Machine cut nails (n=118 whole and n=40 fragments) were the most common from the unit. These nails were commonly in use for the bulk of the nineteenth century, generally 1820 to 1890 (Howard 1989). When the machine cut nails are examined by size (regardless of type), most (43%) were probably used for sheathing (6d-8d). The next most common was the 9d to 12d size range (40%) that were probably used for framing. Large framing nails (16d and larger) comprised 11% of the collection and lathe and shingles nails (2d-5d) comprised 6% of the collection.

A total of 40 whole wire cut nails were recovered, which were popular after 1880 (Howard 1989). Of these nails, most (45%) were used for sheathing with large framing comprising 28%, framing comprising 15%, and lathe and shingle nails comprising 13%. These likely represent either repair or expansion episodes.

Window glass makes up the next largest collection of architectural artifacts accounting for 26% of the group (n=120). Three door lock parts were recovered including one iron keyhole surround, one iron door handle, and one iron doorknob spindle. Other construction hardware includes one shutter dog, three butt hinges, four strap hinges, two door bell springs, and 14 asbestos tile fragments. This assemblage suggests that relatively little of the architectural hardware was salvaged (consistent with accounts that specify only bricks were salvaged).

**Furniture Group**

Fifty furniture artifacts, representing 4.8% of the total artifact assemblage, were recovered. Most (n=47) were beveled glass fragments, probably from a single large mirror. The remaining three consist of one brass escutcheon, one iron escutcheon, and one brass decorative piece.

**Tobacco Group**

Tobacco Group artifacts comprise 0.7% of the total artifact assemblage. Pipe stems were most common with one measuring 4/64-inch and four measuring 5/64-inch. Of the latter, one had an end tip and one had a bowl fragment.

Two bowls were found – one plain and one ribbed red clay.

**Clothing Group**

Clothing artifacts make up 0.4% of the total artifact assemblage. All four specimens are buttons. Two can be classified according to South's (1964) types. One is white porcelain, two hole (Type #23) measuring 10.5 mm, while the other is an iron back (Type #25) measuring 19.3 mm. The other two buttons consist of a red opaque glass measuring 15.2 mm and a milk glass with black paint on molded concentric circles (two hole) measuring 13.9 mm.

It appears, based on these sizes, that one button came from a shirt, while the other three, all larger, are possibly from coats.

**Personal Group**

Only one personal item, a brass brooch, was found.

**Activities Group**

The activities artifacts comprise 5.1% of the total artifact assemblage. The bulk of these are various hardware items that make up 57% of the group. Eleven "other" activities artifacts were found representing iron wire, brass wire, melted lead, and melted brass.

Other artifacts include six marbles, one file, and five strap fragments.

Table 11.
Comparison of the Revised Carolina Artifact Pattern and the Youghal Plantation yard area.

| | Revised Carolina Artifact Pattern[1] | Youghal Yard Area |
|---|---|---|
| Kitchen | 51.8 – 65.0 | 45.2 |
| Architecture | 25.2 – 31.4 | 43.7 |
| Furniture | 0.2 – 0.6 | 4.8 |
| Arms | 0.1 – 0.3 | 0 |
| Tobacco | 1.9 – 13.9 | .7 |
| Clothing | 0.6 – 5.4 | .4 |
| Personal | 0.2 – 0.5 | .1 |
| Activities | 0.9 – 1.7 | 5.1 |

[1] Garrow 1982

**Summary**

The materials from the yard area, being of an uncertain provenience and relatively sparse, are largely useful in comparison with the other collections from Youghal. If they are considered to be broadly representative of the assemblage – and there is no reason to doubt that they are – we can draw some initial conclusions from their analysis.

Looking at the assemblage's pattern, or proportion of materials in the various artifact groups, we find an assemblage similar to planters during much of the eighteenth and nineteenth centuries (Table 11). The relatively high architectural category is likely the result of structural demolition. The lower than anticipated kitchen group may be a result of this demolition or it may be the result of changing refuse disposal practices in the twentieth century. In fact, the other more modern discrepancies are likely the result of the long twentieth century occupation – the low incidence of tobacco remains probably suggests the usage of cigarette tobacco, the absence of arms-related items is probably associated with an increasing dependence on farm butchered or purchased meats and less reliance on hunting, and the low incidence of personal items may be the result of the structure reflecting the dwelling of an absentee owner during the antebellum and abandonment during the twentieth century, prior to loss through fire.

In addition, the seemingly low-status materials may be somewhat misleading, since the house was abandoned before the 1992 fire. The family would have removed any higher status items.

## Ice House

Two units were excavated in the icehouse area. The interior unit (inside the icehouse) measured 4.4 by 4.6 feet and contained four distinct levels, and the exterior unit (immediately outside at the doorway) measured 5 feet square and contained two distinct levels. The icehouse area produced a total of 1,967 artifacts.

### Prehistoric Remains

The collection includes eight small prehistoric sherds from the exterior unit, Level 1. The exterior unit, Level 2, produced nine large and five small prehistoric sherds. One chert flake was also found in the exterior unit, level 2.

### Historic Collections

Of the 1,967 artifacts in the icehouse assemblage, the majority of the specimens were architectural, accounting for 65.9% of the total (n=1,305). Kitchen Group artifacts had the second largest collection with 28.0% (n=554). The Activities Group produced 4.7% of the collection, while the Furniture, Arms, Tobacco, Clothing, and Personal Groups produced less than 1.0% of the total artifact assemblage.

### Kitchen Group

As mentioned, this group consists of 554 specimens or 27.99% of the total assemblage. Of all the kitchen related artifacts, glass dominates with 396 specimens or 71.48% of the total kitchen assemblage. The container glass collection is dominated by clear glass (248 fragments or 62.63% of all the glass), followed by brown glass (63 fragments or 15.91%) and aqua glass (51 fragments or 12.88%). The minimum vessel count includes two brown bottles with bases measuring 2 ½ to 3 ½-inches, one black bottle with a 3-inch base, one preserve jar liner of milk glass, one aqua bottle with a 3 ½-inch base, one clear jar with a 5-inch base, and two clear preserve jars. One of the clear jar bases bears the makers mark, "Owns-Illinois 1929-1954."

Table 12.
Major Ceramics in the Icehouse Area

| | | |
|---|---|---|
| Porcelain | 20 | 19.40% |
| Stoneware | 8 | 7.80% |
| Brown | 2 | |
| Blue/Gray | 5 | |
| White | 1 | |
| Earthenware | 75 | 72.80% |
| Slipware | 4 | |
| Refined | 3 | |
| Coarse | 3 | |
| Delft | 9 | |
| Pearlware | 7 | |
| Whiteware | 29 | |
| Other | 20 | |

Other items included "black" (n=18), green (n=1), light green (n=4), bright green (n=7), and milk (n=4) glass.

Table 13.
Minimum Vessel Count for the Icehouse Area

| | Cup | Bowl | Saucer | Plate | Pitcher |
|---|---|---|---|---|---|
| PW, blue hand painted | | | | 1 | |
| WW, blue edge | | | | 1 | |
| WW, molded | | | | | 1 |
| WW, sponge | | | | 1 | |
| WW, undecorated | | 2 | | 2 | |
| Porcelain, blue hand paint | 1 | | | | |
| Porcelain, decal and gilt | | | 1 | | |
| Porcelain, undecorated | | | | 1 | |
| ***Totals*** | ***1*** | ***2*** | ***1*** | ***6*** | ***1*** |

PW – pearlware, WW – whiteware

Ceramics account for 19.3% of the kitchen assemblage. Table 12 reveals the diversity in the types present. Earthenwares are the most common, accounting for 72.8%. Porcelains account for 19.4% of the assemblage and stonewares (largely utilitarian items) account for an additional 7.8%.

The earthenwares are dominated by mid to late nineteenth century whitewares. The types and frequencies of ceramics found in the icehouse area are very similar to those of the Auld House yard area. There is, however, more diversity in types and a higher percentage of porcelain in the icehouse area.

When we shift from simple count to the minimum vessel count (Table 13) the whiteware is still dominant with seven vessels. Porcelain is next most common with three, then pearlware with one vessel.

Like the main house area, flatwares dominate the collection, accounting for nearly 64% of the assemblage. The plates range in size from 6

Table 14.
Mean Ceramic Dates for the Ice House

| | | | All Interior & Exterior Levels | | Exterior, Level 1 | | Exterior, Level 2 | |
|---|---|---|---|---|---|---|---|---|
| Ceramic | Date Range | Mean Date (xi) | (fi) | fi x xi | (fi) | fi x xi | (fi) | fi x xi |
| Canton porcelain | 1800-1830 | 1815 | 9 | 16335 | 7 | 12705 | 1 | 1815 |
| Westerwald | 1700-1775 | 1738 | 4 | 6952 | 1 | 1738 | 3 | 5214 |
| White salt glazed stoneware | 1740-1775 | 1758 | 1 | 1758 | 0 | 0 | 1 | 1758 |
| Lead glazed slipware | 1670-1795 | 1733 | 4 | 6932 | 3 | 5199 | 1 | 1733 |
| Decorated delft | 1600-1802 | 1750 | 1 | 1750 | 0 | 0 | 0 | 0 |
| Plain delft | 1640-1800 | 1720 | 8 | 13760 | 4 | 6880 | 4 | 6880 |
| North Devon | 1650-1775 | 1713 | 1 | 1713 | 0 | 0 | 1 | 1713 |
| Pearlware, blue hand painted | 1780-1820 | 1800 | 2 | 3600 | 0 | 0 | 1 | 1800 |
| Pearlware, edged | 1780-1830 | 1805 | 1 | 1805 | 0 | 0 | 0 | 0 |
| Pearlware, undecorated | 1780-1830 | 1805 | 4 | 7220 | 0 | 0 | 1 | 1805 |
| Whiteware, blue edged | 1826-1880 | 1853 | 1 | 1853 | 0 | 0 | 1 | 1853 |
| Whiteware, sponge/splatter | 1836-1870 | 1853 | 2 | 3706 | 0 | 0 | 0 | 0 |
| Whiteware, undecorated | 1813-1900 | 1860 | 26 | 48360 | 15 | 27900 | 7 | 13020 |
| Yellow ware | 1826-1880 | 1853 | 1 | 1853 | 0 | 0 | 0 | 0 |
| Total | | | 65 | 117597 | 30 | 54422 | 21 | 37591 |
| Mean Ceramic Date | | | | 1809.2 | | 1814.1 | | 1790.0 |

to 9-inches in size while the lone saucer is 5½-inches in diameter. Four hollow wares were also identified. The cup is about 3-inches in diameter, the two bowls are 5 and 10-inches in diameter, and the pitcher is 4-inches in diameter.

The ceramics from the icehouse area can also help us date the deposit. Although the interior was excavated in four levels, only levels 1 and 4 produced ceramics and level 4 is limited to two items – an undecorated pearlware and an undecorated whiteware. Table 14 compares the mean dates for the entire assemblage with those based only on the exterior doorway area, levels 1 and 2.

Although based on the Portland cement mortar we expect the ice house to have been constructed in the late nineteenth century, the ceramics consistently point to an earlier date and there are no ceramics (such as decalcomania or tinted glaze) which provide a clearly late nineteenth century terminus post quem (date after which the structure must date).

This, however, should not be interpreted to suggest that the structure is somehow older than suggested by the mortar. Rather, we believe it suggests that the structure received little "modern" kitchen-related trash – so there was little opportunity for later ceramics to be incorporated into the assemblage.

Even Bartovics suggests that the assemblage dates almost exclusively from ca. 1800 to 1900 – spanning the antebellum and very early postbellum.

The collection also includes four Colono sherds – all from the exterior unit. Two are rim sherds and two are small fragments.

The tableware items included one utensil fragment representing an iron knife. The remaining items include ten clear glass bowls. Two of the bowl fragments have a molded diamonds and rays motif and a 2½-inch base, while the remaining eight are fragments of a bowl rim with a 6-inch diameter.

Kitchenware items are less elaborate, but are clearly indicative of a functioning icehouse setting. They include six pieces of thin iron from a container (or can), eight crown caps, 24 thin iron bowl or deep pan fragments with a rolled edge and 13" rim, and two paraffin wax fragments (for sealing canning jars).

**Architecture Group**

The architecture group includes 142 nails – 109 or 76.76% of which are unidentifiable as to either type or length, leaving us with only 33 nails suitable for a more detailed study. Of these 33 nails, 17 or 51% are fragments.

All of the nails found in the icehouse are machine cut. When the whole nails are examined by size, most (43.75% or n=7) were probably used for sheathing (6d-8d). Both framing nails (9d to 12d) and lathe and shingle nails (2d to 5d) are common, representing 37.5% or n=6 and 18.75% or n=3 of the collection respectively. No nails were found over 16d size range, which is common for framing.

Also found in the architectural collection are 1,161 fragments of flat window glass, including one textured fragment, which account for 88.96% of the total architectural artifact assemblage. Architectural hardware includes one L-strap hinge fragment, L-strap hinge, and one roofing tile fragment.

**Furniture Group**

This collection consists of 12 specimens and includes one support bracket for a table or chair, 10 light bulb fragments and 1 drawer pull.

**Arms Group**

The icehouse deposits contained only two arms-related materials, both of which were .32 caliber shell casings.

**Tobacco Group**

The icehouse area produced seven tobacco related artifacts - including three pipe stems, three plain bowl fragments, and one red clay stub pipe. Of the pipe stems, one has a bore diameter of 4/64-inch, another has a diameter of 6/64-inch, and the remaining stem (with an end tip) has a diameter of 7/64-inch.

**Clothing Group**

The icehouse area produced four (or 0.2% of the total artifact assemblage) buttons. The bulk of the buttons can be classified according to South's (1964) types and are briefly itemized in Table 15. The size ranges follow generally accepted concepts of use, with all of these specimens probably used on either shirts or pants.

Table 15.
Buttons Recovered from the Icehouse Area

| Type | No. | Description | Diameter (in mm) |
|---|---|---|---|
| 23 | 2 | Porcelain, white, 4 hole | 10.9, 11.3 |
| 23 | 1 | Porcelain, white, 4 hole, red stripe around edge | 13.6 mm |
| 23 | 1 | Porcelain, white, 4 hole, piecrust rim and red edge | 11.2 mm |

**Personal Group**

The personal group produced one wire wound translucent bead, measuring 11.21mm in diameter and 9.45 mm in length from the interior unit, Level 4. It is classified as Type W1b (Kidd and Kidd 1970) and is badly decomposed.

**Activities Group**

This final group contains a broad range of materials that do not easily fit elsewhere, however, consist of the third largest group of artifacts with 4.75% of the total assemblage. The toys consist of a porcelain toy teacup with handle. The storage items include seven fragments of strap iron. Items typically associated with the stable include three barbed wire fragments and one whiffletree hook.

Hardware items include four staples, one iron spring, one washer, 11 flat head screws, and one round head screw.

The last category, miscellaneous items, is something of a "catch-all," and includes six unidentifiable iron fragments, one smoothing stone, one porcelain electric insulator, and 56 fragments of "jardenierres" or fancy flower pots.

Smoothing stones have been previously discussed from collections at several sites (see, for example, Trinkley and Barile 2003) and are interpreted to represent stones used in the production of Colono wares. The relatively small number of these stones may be related to the infrequency of Colono wares at the site.

**Summary**

The materials from the icehouse area include a relatively large number of items that are not clearly icehouse related – for example the discarded carpentry tools, and the broad range of clothing and personal items. In many respects, the deposits seem far more representative of general plantation trash than kitchen debris. These remains, however, are almost exclusively from the nineteenth century, with very little twentieth century trash deposited in this area.

Oral history recounts that the ice house was converted into a green house or potting shed and this no doubt accounts for the flower pot fragments and the very large amount of window glass (representing glazed windows that replaced the roof). Even the bottles and bowls found in the collection may represent containers for rooting.

The artifacts present in these two units are not compared to the various patterns since the assemblage is so specialized that it is clearly atypical of eighteenth and nineteenth century assemblages. The prevalence of architectural

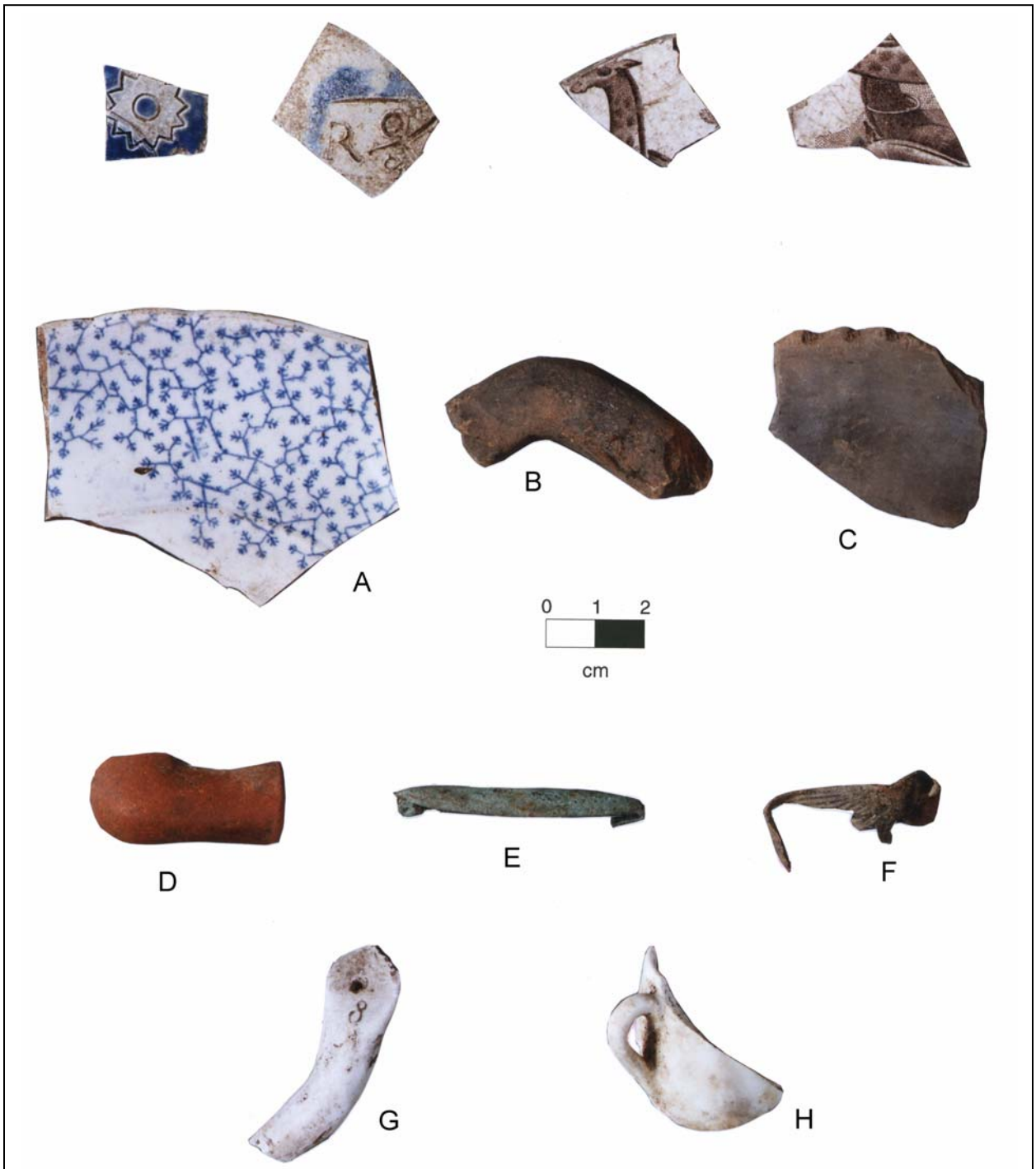


Figure 40. Artifacts from the yard areas. A-B, Westerwald; C-D, whiteware, brown transfer printed; E, whiteware, blue transfer printed; F, Colono ware, handle; G, Colono ware, scalloped rim; H, redware stub stem tobacco pipe; I, brass broach; J, brass broach in bird shape; K, doll's arm; L, toy tea cup.

remains (nearly 66%) followed by kitchen remains (nearly 28%) represent the construction features of the structure combined with plantation yard trash found scattered throughout the area.

**Slave Settlement, East, 470R680, 480R690, 500R680, 520R660**

This area was investigated by four ten-foot units. A total of 11,177 historic artifacts were collected. Within these units, three features and three postholes were identified.

### Prehistoric Remains

The prehistoric collection includes 279 sherds and one lithic. Most (233 or 83.5%) of the sherds are under 1-inch in diameter and not suitable for analysis. This proportion of small-sized prehistoric sherds is far greater than in the icehouse or main house areas most likely due to the intensive twentieth century cultivation.

### Historic Remains

The historic collection from the eastern edge of the slave settlement area, as previously mentioned, consists of 11,177 specimens. Most of the specimens (80.78% or N=9,029) are kitchen related. Architectural artifacts account for 16.48% or 1,842 specimens.

Table 16.
Major Ceramics in the Slave Settlement, East

| | | |
|---|---|---|
| Porcelain | 207 | 3.04% |
| Stoneware | 202 | 2.96% |
| Brown | 88 | |
| Blue/Gray | 65 | |
| White | 5 | |
| Other | 44 | |
| Earthenware | 6412 | 94% |
| Redware | 81 | |
| Slipware | 103 | |
| Refined | 29 | |
| Coarse | 330 | |
| Delft | 10 | |
| Creamware | 1600 | |
| Pearlware | 3207 | |
| Whiteware | 854 | |
| Other | 198 | |

### Kitchen Group

The kitchen group collection (n=9,029) consists largely of ceramics (6,821 specimens or 75.5% of the group total). Of these almost all (6,412 or 94%) are earthenwares, primarily creamwares and pearlwares (Table 16). The dominance of creamwares and pearlwares is also seen when the minimum vessel data are examined (Table 17). These two wares combined account for 76.5% of the vessels identified.

Tables 17 and 18 also reveal the importance of different vessel forms. There is no surprise that tablewares dominate all three wares. What is perhaps surprising is that throughout the assemblage plates or flatwares dominate hollow wares. The ratio does decline from 2.4:1 (flatware:hollow ware) in the creamware assemblage to 1.5:1 in the whiteware, but nevertheless, the strong showing of flatwares is uncommon at many slave settlements where hollow wares dominate and reflect foodways that focused on one-pot meals. Another unusual observation is that the proportion of teawares increases from 5.6% of the creamware assemblage to 10% of the whiteware assemblage. Since there were only 524 Colono ware sherds recovered in these units, it seems unlikely that these slave-made ceramics appreciably alter the proportions.

One means of explaining the dominance of flatwares is to speculate that the slaves were largely obtaining their ceramics as hand-me-downs from the planter's table. This scenario would also explain the small quantities of teawares, serving vessels, and chamber pots – arguably all vessel forms for which slaves would have little use.

If we then examine the motifs, separating them into inexpensive (annular, cable, edged) and expensive (hand painted and transfer printed), we

Table 17.
Minimum Vessel Count for the Slave Settlement, East

| | Cup or Mug | Bowl | Platter | Plate | Jar | Serving | Tea Pot/Lid | Chamber Pot | Other |
|---|---|---|---|---|---|---|---|---|---|
| CW, undecorated | 2 | 14 | | 29 | | | 2 | 4 | |
| CW, molded | | 1 | | 23 | | | | | |
| CW, annular | 1 | 6 | | | | | | | |
| CW, cable | | 1 | | | | | | | |
| CW, poly hand paint | | 2 | | | | | | | |
| CW, green edge | | | | 5 | | | | | |
| **Creamware, subtotals** | ***3*** | ***24*** | | ***57*** | | | ***2*** | ***4*** | |
| PW, undecorated | 3 | 2 | | 4 | | 1 | 1 | | |
| PW, blue hand painted | 3 | 16 | | 5 | | | | | |
| PW, poly hand painted | | 17 | | 1 | | | 1 | | |
| PW, annular | | 40 | | | | | | | |
| PW, edged | | | | 73 | | | | | |
| PW, cable | | 2 | | | | | | | |
| PW, blue transfer print | 9 | 9 | | 15 | 1 | | | | |
| **Pearlware, subtotals** | ***15*** | ***86*** | | ***98*** | ***1*** | ***1*** | ***2*** | | |
| WW, undecorated | 2 | 3 | 1 | 8 | | | | 3 | |
| WW, molded | | | | 2 | | | | | |
| WW, poly hand painted | 1 | 1 | | | | | | | |
| WW, annular | 1 | 21 | | | | | | | |
| WW, cable | | 1 | | | | | | | |
| WW, edged | | | | 13 | | | 1 | | |
| WW, transfer print | 4 | 4 | | 23 | | | | | |
| WW, splatter | | 1 | | | | | | | |
| **Whiteware, subtotal** | ***8*** | ***31*** | ***1*** | ***46*** | | | ***1*** | ***3*** | |
| SGSTW | | | | 1 | 3 | | | | 1 |
| Elers ware | | | | | | | 1 | | |
| Black basalt | | | | | | | 1 | | |
| Refined red earthenware | | 1 | | | | | 3 | | |
| Chinese porc, blue HP | 4 | 4 | | 2 | | 1 | | | |
| Chinese porc, undec | | | | 1 | | | | | |
| Chinese porc, HPOG | 3 | 1 | | 3 | | | | | |
| White porc, undec | 1 | | | 3 | | | | | 1 |
| White porc, blue HP | 1 | 1 | | 3 | | | | | |
| Westerwald | | | | | | | | 1 | |
| Slipware | 1 | 3 | | | | | | | 1 |
| Coarse red EW | | 1 | | | | | | | 4 |
| ***Totals*** | ***36*** | ***152*** | ***1*** | ***214*** | ***4*** | ***2*** | ***10*** | ***8*** | ***7*** |

CW – creamware; PW – pearlware, WW – whiteware, EW – earthenware, SGSTW – salt glaze stoneware

see that the collection is dominated by inexpensive wares, with expensive motifs never comprising more than about 47% of the assemblage.

In contrast to the vessel forms, the motifs then suggest ceramics were specifically purchased for the use of the use of the slaves (as opposed to them inheriting wares from the table of the planter).

We are confronted, it seems, by mutually exclusive evidence – or at least evidence that does not fit traditional explanations. It may be that the planters from whom slaves were inheriting their ceramics had inexpensive wares for their own table. This explanation, however, seems unlikely given the wealth of the principal owners – the Barksdales, Toomers, and eventually Fuller. On the other hand, it seems unlikely that either the Toomers or Fuller made Youghal their primary residence. Hence, there would not have been full-time table from which the slaves might inherit

Table 18.
Shape and Function of Ceramic Vessels from the Slave Settlement, East

| | Creamware | | Pearlware | | Whiteware | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Tablewares | | | | | | |
| Plates/saucers | 57 | 63.3 | 98 | 48.3 | 46 | 51.1 |
| Bowls | 24 | 26.7 | 86 | 42.3 | 31 | 34.5 |
| Serving | | | 1 | 0.5 | 1 | 1.1 |
| Tea & Coffeeware | 5 | 5.6 | 17 | 8.4 | 9 | 10.0 |
| Utilitarian | 4 | 4.4 | 1 | 0.5 | 3 | 3.3 |

ceramics.

In consequence, it seems most likely that the pottery we are seeing in the eastern slave settlement was being purchased – probably by Toomer – specifically for the use of his slaves. Thus, we are seeing inexpensive wares intentionally purchased with vessel forms emphasizing plate over bowls.

Table 19.
Motifs Found on Vessels from the Slave Settlement, East

| | Creamware | | Pearlware | | Whiteware | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Inexpensive | 8 | 80.0 | 115 | 59.9 | 38 | 53.5 |
| Expensive | 2 | 20.0 | 77 | 40.1 | 33 | 46.5 |

South's Mean Ceramic Date (Table 20) for this site area is 1807.2 – similar to those obtained around the ice house (which probably incorporated remains from earlier structures). South's bracketing technique reveals a date range of 55 years, from 1775 to 1830. According to Bartovics, there is a spike in ceramics in about 1760 and lasting to about 1830, which is similar to South's bracketing results.

These dates all suggest that the eastern slave settlement was primarily active in the late nineteenth and early nineteenth centuries – the period when the plantation was owned by the Barksdale and Toomer families and prior to the rebuilding efforts of Fuller. In addition, the collection, lacking tinted whitewares or decalcomania wares suggests no late nineteenth or early twentieth century tenant occupation – whatever was present in this area had been abandoned prior to the later historic periods.

As previously mentioned, colono ware is present at the site, although in very small quantities – probably associated with the generally late date of the settlement. The 524 fragments are represented primarily by small sherds (366 fragments or 69.8%). The remaining assemblage include 87 large body sherds, 66 rims (both large and small), three handles, one base with a foot ring, and 1 body sherd with a partial design engraved in the damp clay.

Other kitchen group artifacts include 1,600 glass fragments, which represent about 18% of the total Kitchen Group Assemblage. Present are 1,214 "black" glass fragments (or 76% of all the glass found) representing at least four case bottles, seven blown bottles, one molded bottle, and one jug). Also recovered were 11 brown glass fragments representing one bottle, 26 green glass fragments representing one bottle, 10 light green fragments representing one small bottle, 103 aqua glass fragments representing four bottles, 4 dark aqua fragments representing one bottle, and 224 clear glass fragments representing 2 bottles. Small numbers of manganese (n=2), blue (n=2), and melted (n=4) glass were also found. These wares are so uncommon that they likely are the result of accidental inclusions or dispersion through plowing.

Also present are 54 fragments of tableware glass representing four goblets, thirteen tumblers, and one glass bowl. These, perhaps like some of the ceramics, were likely scavenged from elsewhere on the plantation and used by the slaves for containers or drinking vessels. Other tableware items include three white metal utensil handle fragments, three fragmentary knives

Table 20.
Mean Ceramic Date for the Slave Settlement, East

| Ceramic | Date Range | Mean Date (xi) | (fi) | fi x xi |
|---|---|---|---|---|
| Canton porcelain | 1800-1830 | 1815 | 80 | 145200 |
| Overglazed enamelled porc | 1660-1800 | 1730 | 34 | 58820 |
| Underglazed blue porc | 1660-1800 | 1730 | 48 | 83040 |
| Westerwald | 1700-1775 | 1738 | 18 | 31284 |
| White salt glazed stoneware | 1740-1775 | 1758 | 5 | 8790 |
| Black basalt | 1750-1820 | 1785 | 24 | 42840 |
| Lead glazed slipware | 1670-1795 | 1733 | 104 | 180232 |
| Jackfield | 1740-1780 | 1760 | 7 | 12320 |
| Decorated delft | 1600-1802 | 1750 | 4 | 7000 |
| Plain delft | 1640-1800 | 1720 | 6 | 10320 |
| Creamware, cable | 1790-1820 | 1805 | 11 | 19855 |
| Creamware, annular | 1780-1815 | 1798 | 52 | 93496 |
| Creamware, hand painted | 1790-1820 | 1805 | 9 | 16245 |
| Creamware, undecorated | 1762-1820 | 1791 | 1496 | 2679336 |
| Pearlware, mocha | 1795-1890 | 1843 | 23 | 42389 |
| Pearlware, poly hand painted | 1795-1815 | 1805 | 122 | 220210 |
| Pearlware, blue hand painted | 1780-1820 | 1800 | 253 | 455400 |
| Pearlware, blue trans printed | 1795-1840 | 1818 | 329 | 598122 |
| Pearlware, edged | 1780-1830 | 1805 | 459 | 828495 |
| Pearlware, annular/cable | 1790-1820 | 1805 | 239 | 431395 |
| Pearlware, molded | 1800-1820 | 1810 | 3 | 5430 |
| Pearlware, undecorated | 1780-1830 | 1805 | 1776 | 3205680 |
| Whiteware, green edged | 1826-1830 | 1828 | 11 | 20108 |
| Whiteware, blue edged | 1826-1880 | 1853 | 31 | 57443 |
| Whiteware, poly hand painted | 1826-1870 | 1848 | 13 | 24024 |
| Whiteware, blue trans printed | 1831-1865 | 1848 | 108 | 199584 |
| Whiteware, non-blue trans printed | 1826-1875 | 1851 | 65 | 120315 |
| Whiteware, annular | 1831-1900 | 1866 | 120 | 223920 |
| Whiteware, sponge/splatter | 1836-1870 | 1853 | 5 | 9265 |
| Whiteware, mocha | 1831-1900 | 1866 | 3 | 5598 |
| Whiteware, undecorated | 1813-1900 | 1860 | 498 | 926280 |
| Yellow ware | 1826-1880 | 1853 | 31 | 57443 |
| Total | | | 5987 | 10819879 |
| Mean Ceramic Date | 1807.2 | | | |

(including one with a bone handle), three iron fork fragments, and one iron spoon bowl.

Nine kettle fragments and two thin iron fragments from one can were the only kitchenware items recovered from the excavation of these four units.

**Architecture Group**

Architectural remains include 295 fragments of window glass (16% of the architectural assemblage), one hand wrought shutter dog, one pentle, two pentle fragments, one

hand wrought hinge, one strap hinge fragment, one door latch fragment, 203 nails, and 1336 nail fragments.

Of the nails, 118 were hand wrought (with 148 fragments) and 85 were machine cut (with 328 fragments). Most (55.9%) of the nails and nail fragments are unidentifiable. Of the 203 nails that can be identified by size, only 57 or 28.08% are of a size indicative of framing (i.e., 9d or larger). By far most of the nails (147 or 72.41%) are intended for either small timbers such as shingles or lathe (2d-5d) or for sheathing (6d-8d).

The relatively low density of nails supports the idea that this structure was of wattle construction – material woven around the individual post and then perhaps plastered with clay or daub. Such construction techniques – documented from other sites – require few nails and are consistent with both the archaeological footprint and this artifact assemblage. Not only is this supported by the pattern analysis (where architectural remains account for only 16.5% of the assemblage, but the proportion of nails is similar to other wall trench structures, such as those found at the Broom Hall slave settlement (Trinkley et al. 2003). Structures 2 and 4 at that site, for example, produced a collection where 20.3% of the specimens represented architectural items. Structure 7 produced a collection where only 12.6% of the specimens were architectural.

The window glass (all small and heavily fragmented) in the collection does not appear sufficient to represent glazing from this structure. Instead, we are inclined to believe that these were items salvaged by the African Americans from elsewhere on the plantation.

**Furniture Group**

Two furniture related items were found within the four units (0.02% of the total artifact assemblage). Both items are small brass knobs, typical of drawer pulls.

**Arms Group**

The slave settlement's eastern edge contained several arms-related materials, including four gunflints, and two round shots (measuring 0.98 to 1.00-inch in diameter), representing 0.05% of the total artifact assemblage.

The gunflints include one brown, one dark brown, and two gray specimens. Both Emory (1979:37-48) and Noël Hume (1978:220) agree that English flints tend to be gray or black, while French flints tend to brown or honey-colored, with the majority of flints found on colonial sites coming from France because of their superior quality. The specimens from the eastern slave settlement appear to be equally split between the two varieties.

The two iron solid shot are characteristic of grape shot (Manucy 1949:69), commonly used as scatter projectiles during the seventeenth through nineteenth centuries. Their occurrence at this site seem unusual, but may reflect scavenged material from either the Revolution or a later sea coast battery.

While the presence of gunflints on this site may suggest that African American slaves had access to weapons, almost no other arms related artifacts were found elsewhere in the settlement. It is possible that the gunflints were used as general strike-a-lights.

**Tobacco Group**

A total of 186 tobacco related artifacts (or 1.66% of the total artifact assemblage) were found in the eastern slave settlement. The specimens include 12 - 4/64-inch pipe stems, 116 - 5/64-inch pipe stems, nine 6/64-inch pipe stems, 23 plain pipe bowl fragments, 18 pipe bowls with a ribbed design, four pipe bowl fragments with a leaf motif on the seam, and two red clay stub pipe fragments with a yellow lead glaze.

Table 21.
Buttons from the Slave Settlement, East

| Type | Description | # | Other (measurements in mm) |
|---|---|---|---|
| 7 | spun white metal/brass | 6 | 11.7, 12.2, 12.6 13.6, 20.9, 25.2 |
| 8 | cast pewter w/eye in place | 2 | 12.2, 26.2 |
| 9 | brass flat disc, hand stamped | 1 | 34.9 |
| 15 | 1-hole bone disc | 1 | 12.1 |
| 18 | stamped brass | 4 | 14.8, 18.9, 2-20.2 |
| 21 | 4-hole, two piece iron | 1 | 18.8 |
| 23 | 4-hole, porcelain | 3 | 10.1, 10.7, 10.8 |
| 25 | machine stamped brass | 1 | 16.2 |
| 27 | brass, domed | 1 | 13.1 |
| 32 | stamped brass w/sunken panel | 1 | 12.3 |

**Clothing Group**

A total of 27 clothing items were recovered from the excavations, accounting for 0.24% of the total artifact assemblage. Buttons account for 77.8% of the assemblage and are briefly described in Table 21. One of the Type 7 specimens is a military button with an eagle and cannon motif used very briefly between 1811 and 1813, and associated with the Third Regiment of Artillerists (Albert 1969:50). It would have been deposited as a result of the War of 1812 or brought back by one who served in that Regiment.

Most (57.14%) of the buttons are between 6 and 16 mm, suggesting that they were likely used on shirts and pants, although the three white porcelain buttons (in the 10 to 11 mm diameter range) may have been used on undergarments. Nine of the buttons are large enough to have been used on coats.

Other clothing items recovered include one brass shoe grommet, one iron buckle fragment, one brass buckle, one decorated brass buckle fragment, one brass buckle with iron teeth, and one decorative brass object.

**Personal Group**

Eight personal items were recovered from the eastern edge of the slave settlement (0.07% of the total artifact assemblage). These include four beads, one small slate fragment, one slate pencil, one brass ring with a floral border, and one iron cover-plate for a pocketknife.

The beads include one Type 1f faceted transparent aqua bead, one Type 1b translucent light blue bead with a red stripe, one Type 1f faceted translucent aqua bead, and one Type 11a opaque black round bead (Kidd and Kidd 1970). These are typical of African American sites. The slate and slate pencil need not imply literacy and may have been in simple counting.

**Activities Group**

Seventy-seven (0.70% of the total artifact assemblage) artifacts are placed in the activities group. Only one item, a clay marble without a glaze, was found in the toy category. Four tool items were recovered, all triangular file fragments. In the fishing category is one lead weight, probably a net sinker. Seven storage items were also found, including one brass padlock, one padlock hasp, and five strap iron fragments.

In the hardware category, there are two washers, one brass bolt fragment, one 1" long brass round-head screw, two 1¼" long flat-head screws, one 1¼" long staple, and one pulley ring.

The majority (71.43%) of the artifacts in the activities group are in the "other" category. These include three small slate fragments, one flowerpot fragment, one flint fragment, one worked architectural stone, one brass wire fragment, one piece of white metal, five brass fragments, five lead fragments, and thirty-four pieces of unidentifiable iron.

Table 22.
Artifact Pattern from the Slave Settlement, East

| | Carolina Slave Artifact Pattern[1] | Georgia Slave Artifact Pattern[2] | Eastern Slave Settlement |
|---|---|---|---|
| Kitchen | 70.9 – 84.2 | 20.0 – 25.8 | 80.8 |
| Architecture | 11.8 – 24.8 | 67.9 – 73.2 | 16.5 |
| Furniture | 0.1 | 0.0 – 0.1 | t |
| Arms | 0.1 – 0.3 | 0.0 – 0.2 | 0.1 |
| Tobacco | 2.4 – 5.4 | 0.3 – 9.7 | 1.7 |
| Clothing | 0.3 – 0.8 | 0.3 – 1.7 | 0.2 |
| Personal | 0.1 | 0.1 – 0.2 | 0.1 |
| Activities | 0.2 – 0.9 | 0.2 – 0.4 | 0.1 |

[1] Garrow 1982
[2] Singleton 1980
t = less than 0.1%

**Summary**

When the artifact pattern is examined (Table 22), there is a very good match with the Carolina Slave Artifact Pattern, typically associated with eighteenth century slaves and characterized by much more extensive collections of kitchen or food-related items than architectural remains. The only variations from the pattern are found in slightly lower than anticipated quantities of tobacco, clothing, and activity-related items – but these deviances do not seem particularly significant. Coupled with other lines of evidence there seems to be little doubt that this assemblage does reflect domestic refuse associated with enslaved African Americans.

The collection suggests a date range that certainly begins in the eighteenth century (probably the last quarter) and likely culminated in the mid-nineteenth century, prior to the Civil War. There is no indication that the settlement continued into the postbellum. The peak of the occupation probably spanned about 1780 through 1820 – much of the Barksdale and Toomer occupation and likely prior to the plantation's reorganization under Fuller. This would have been a period of generally successful planting. Although prices did fall precipitously around 1926 and again in 1837, prices tended to recover.

When the ceramics are examined it appears that relatively inexpensive wares were purchased by the owner of the plantation, but there was little effort to tailor the wares to any specific dietary or cultural needs of the enslaved African Americans. This stands in contrast to many slave settlements, where hollow ware forms tend to be more common than flatwares, providing evidence of the one-pot stews and other foodways that were distinct from the planter.

The architectural assemblage is suggestive of rather ephemeral structures. This is clearly seen in the spartan architectural assemblage. There is little evidence of glazed windows and the structures were likely ground-fast. Similar structures are found throughout the South Carolina low country and the presence in Christ Church is no surprise. What is interesting is the suggestion that this "old style" of housing existed this long into the period of reform brought on by abolitionists (see, for example, Adams 1990).

The other artifacts present in the assemblage are generally characteristic of enslaved African Americans during the period. The clothing items are largely salvaged or discards. The personal objects are dominated by glass beads. Although gun flints are present, there is little else to suggest the presence of fire arms (such as gun parts or shot), so these items were likely salvaged and used as flints for strike-a-lights. Tobacco artifacts are present and attest to smoking as one of the few "luxuries" of African American slaves.

**Slave Settlement, West, 500R500, 540R510**

Two ten-foot unites were excavated in the western portion of the slave settlement. These units revealed a total of 2,328 historic artifacts and two features.

**Prehistoric Remains**

The collection consists of 143 prehistoric sherds, of which 127 (88.8%) are under 1-inch in diameter. Just as in the eastern slave area, this

Table 23.
Major Ceramics in the Slave Settlement, West

| | | |
|---|---|---|
| Porcelain | 52 | 6.3% |
| Stoneware | 81 | 10.0% |
| Brown | 17 | |
| Blue/Gray | 49 | |
| White | 9 | |
| Other | 6 | |
| Earthenware | 683 | 83.7% |
| Redware | 9 | |
| Slipware | 24 | |
| Refined | 3 | |
| Coarse | 25 | |
| Delft | 15 | |
| Creamware | 306 | |
| Pearlware | 191 | |
| Whiteware | 49 | |

proportion of small prehistoric sherds is greater than in the icehouse or main house areas probably because the area was intensively cultivated during the twentieth century.

**Historic Remains**

The historic collection from the western edge of the slave settlement area consists of 2,328 specimens. Most (62.8%) of these are kitchen related. Architectural items account for the next highest group. The remaining groups, which include arms, tobacco, clothing, and activity, each account for around 1% or less of the total assemblage.

**Kitchen Group**

The kitchen group collection (n=1,461 specimens) consists largely of ceramics (n=859 specimens or 58.8% of the group total). Of these most (683 or 83.7%) are earthenwares, primarily creamwares and pearlwares (Table 23).

The dominance of creamwares and pearlwares is also seen when the minimum vessel data are examined (Table 24). These two wares combined account for 79.4% of the vessels identified.

These data also allow us to examine the prevalence of the various vessel forms by wares, as shown in Table 25. It is immediately obvious that both creamwares and pearlwares (the two wares with the largest samples) contain rather large quantities of tea and coffeewares. The combined proportion of 16.1% is nearly twice what was observed in the eastern slave settlement.

Table 25 also reveals that the proportion of flatwares and hollow wares varies. In the

Table 24.
Minimum Vessel Count for the Slave Settlement, West

| | Cup/ Mug | Bowl | Plate | Tea Pot/ Lid | Chamber Pot | Pan |
|---|---|---|---|---|---|---|
| CW, undecorated | 3 | 8 | 8 | | | |
| CW, molded | | | 1 | 1 | | |
| CW, annular | | 3 | | | | |
| CW, red HPOG | | | 1 | | | |
| CW, poly HPOG | 1 | | | | | |
| ***Creamware, subtotals*** | ***4*** | ***11*** | ***10*** | ***1*** | | |
| PW, undecorated | | | 3 | | | |
| PW, blue hand paint | | 1 | 3 | | | |
| PW, annular | | 4 | | | | |
| PW, green edge | 1 | 1 | 2 | 1 | | |
| PW, blue edge | | | 3 | | | |
| PW, blue transfer print | 2 | 2 | 1 | | | |
| ***Pearlware, subtotals*** | ***3*** | ***8*** | ***12*** | ***1*** | | |
| WW, undecorated | | 1 | | | 2 | |
| WW, blue transfer print | | 1 | 1 | | | |
| WW, red transfer print | | | 1 | | | |
| ***Whiteware, subtotal*** | | ***2*** | ***2*** | | ***2*** | |
| White SGSTW | | 1 | | | | |
| Nottingham | 1 | | | | | |
| Coarse red EW, green lead glaze | | | | | | 1 |
| Red EW, black lead glaze | | 2 | | | | |
| Red EW, clear lead glaze | | | | 1 | | |
| Chinese porcelain, blue hand paint | 1 | | | | | |
| ***Totals*** | ***9*** | ***24*** | ***24*** | ***3*** | ***2*** | ***1*** |

CW – creamware; PW – pearlware, WW – whiteware, EW – earthenware, SGSTW – salt glaze stoneware

Table 25.
Shape and Function of Ceramic Vessels from the Slave Settlement, West

| | Creamware | | Pearlware | | Whiteware | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Tablewares | | | | | | |
| Plates/saucers | 10 | 38.5 | 12 | 50.0 | 2 | 33.3 |
| Bowls | 11 | 42.3 | 8 | 33.3 | 2 | 33.3 |
| Tea & Coffeeware | 5 | 19.2 | 4 | 16.7 | | |
| Utilitarian | | | | | 2 | 33.3 |

creamware collection the ratio is 0.9:1. For the pearlwares the ratio of flatware to hollow ware is 1.5:1. The whiteware collection is very small, calling into question its validity, but it reveals a ratio of 1:1. These results are also in contrast to the eastern slave settlement, where throughout its occupation plates were more abundant. The western settlement collection lacks serving vessels and utilitarian wares are exceptionally uncommon.

Table 26.
Motifs Found on Vessels from the Slave Settlement, West

| | Creamware | | Pearlware | | Whiteware | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Inexpensive | 3 | 60.0 | 12 | 57.1 | | |
| Expensive | 2 | 40.0 | 9 | 42.9 | 3 | 100.0 |

Turning to the various motifs, Table 26 reveals that, excepting the very small whiteware collection, the motifs are dominated by those of relatively low cost. This is consistent with the findings from the eastern slave settlement.

We are left with some distinct differences between the two settlements. While both contain primarily inexpensive wares – probably purchased by the owner for the use of the enslaved African Americans – the western settlement contains a lower proportion of flatware forms and, in this small detail, may suggest somewhat less control by the owner – in spite of the western settlement being significantly closer to the owner's house than the settlement to the east.

The MCD for the site is 1798.7, about ten years earlier than the eastern slave settlement and not a decade later than the mean date for the exterior Level 2 of the ice house. This mean date would place this particular portion of the settlement in use during the height of the Barksdale settlement. In spite of the early mean date, South's Bracketing Technique suggests a rather long span of occupation, from about 1775 to 1900. The very late date, however, is based on a single decalcomania ceramic. If this one specimen is excluded as intrusive (not unreasonable considering the heavy plowing and the low incidence of other later tenant artifacts), then the terminal bracket date would be 1825, accounting for only a 50 year occupation span. Bartovics' technique suggests a similar spread, from about 1760 to perhaps as late as 1830. These dates – in spite of the earlier mean date – are completely consistent with those obtained from the eastern settlement. The earlier mean date may result from a larger proportion of heirloom pieces, or even as error from the smaller sample.

In spite of the relatively early beginning date, only 43 Colono ware ceramics were recovered from the western settlement (with 37 or 86% representing small sherds).

Other kitchen group artifacts include 584 glass fragments, including "black" (n=312), brown (n=8), green (n=19), light green (n=28), aqua (n=25), manganese (n=15), and clear glass (n=86).

The minimum vessel count consists of three "black" glass bottles -- one with a blown base, one with a hand-applied lip and one case bottle. Two brown bottles were also recorded – one with a molded base and one with a crown cap lip. One manganese glass bottle was also found.

Table 27.
Mean Ceramic Date for the Slave Settlement, West

| Ceramic | Date Range | Mean Date (xi) | (fi) | fi x xi |
|---|---|---|---|---|
| Canton porcelain | 1800-1830 | 1815 | 36 | 65340 |
| Nottingham stoneware | 1700-1810 | 1755 | 1 | 1755 |
| Westerwald | 1700-1775 | 1738 | 2 | 3476 |
| White salt glazed stoneware | 1740-1775 | 1758 | 7 | 12306 |
| White sg sw, scratch blue | 1744-1775 | 1760 | 2 | 3520 |
| Black basalt | 1750-1820 | 1785 | 4 | 7140 |
| Lead glazed slipware | 1670-1795 | 1733 | 24 | 41592 |
| Jackfield | 1740-1780 | 1760 | 2 | 3520 |
| Decorated delft | 1600-1802 | 1750 | 6 | 10500 |
| Plain delft | 1640-1800 | 1720 | 9 | 15480 |
| Creamware, annular | 1780-1815 | 1798 | 8 | 14384 |
| Creamware, hand painted | 1790-1820 | 1805 | 3 | 5415 |
| Creamware, undecorated | 1762-1820 | 1791 | 294 | 526554 |
| Pearlware, mocha | 1795-1890 | 1843 | 1 | 1843 |
| Pearlware, poly hand painted | 1795-1815 | 1805 | 1 | 1805 |
| Pearlware, blue hand painted | 1780-1820 | 1800 | 28 | 50400 |
| Pearlware, blue trans printed | 1795-1840 | 1818 | 28 | 50904 |
| Pearlware, edged | 1780-1830 | 1805 | 23 | 41515 |
| Pearlware, annular/cable | 1790-1820 | 1805 | 15 | 27075 |
| Pearlware, undecorated | 1780-1830 | 1805 | 96 | 173280 |
| Whiteware, blue trans printed | 1831-1865 | 1848 | 7 | 12936 |
| Whiteware, non-blue trans printed | 1826-1875 | 1851 | 10 | 18510 |
| Whiteware, poly decalcomania | 1901-1950 | 1926 | 1 | 1926 |
| Whiteware, annular | 1831-1900 | 1866 | 4 | 7464 |
| Whiteware, undecorated | 1813-1900 | 1860 | 27 | 50220 |
| Yellow ware | 1826-1880 | 1853 | 9 | 16677 |
| Total | | | 648 | 1165537 |
| Mean Ceramic Date | 1798.7 | | | |

Tablewares include 18 clear glass fragments representing one goblet, five plain tumblers (ranging in rim size from 2½ to 3½-inches) , and two etched tumblers (with rim sizes of 2 to 3½-inches).

**Architecture Group**

Architectural group artifacts account for 34.6% of the total items recovered from the western edge of the slave settlement. The majority (66% or n=532) of these remains are window glass fragments.

As was the case in the eastern edge of the slave settlement, the western side exhibited a relatively low density of nails, supporting the idea that this structure was also of wattle construction. Of the 135 nails identifiable by type, seventy-eight (57.78%) are machine cut and fifty-seven (42.22%) are hand wrought. Only six of these are large nails suitable for framing (9d or larger). The remaining 32 are of a size intended for either small timbers such as shingles or lathe (2d-5d) or for sheathing (6d-8d). As mentioned previously, wattle construction techniques require few nails. They are consistent with both the archaeological footprint and this artifact assemblage.

**Furniture Group**

The furniture group, accounting of 0.2% of the total artifact assemblage, consists of two iron tacks and two brass tacks.

**Arms Group**

One black gunflint and four lead shots were found in this area, consisting of 0.2% of the total artifact assemblage. The lead shots range from 7.1 to 8.1 mm in diameter and these are consistent with No. 2 (.27-inch) and No. 1 (.30-inch) buckshot – generally used for deer or larger animals (Hamilton 1980:135).

Table 28.
Artifact Pattern from the Slave Settlement, West

| | Carolina Slave Artifact Pattern[1] | Georgia Slave Artifact Pattern[2] | Slave Settlement, West |
|---|---|---|---|
| Kitchen | 70.9 – 84.2 | 20.0 – 25.8 | 62.8% |
| Architecture | 11.8 – 24.8 | 67.9 – 73.2 | 34.6% |
| Furniture | 0.1 | 0.0 – 0.1 | 0.2% |
| Arms | 0.1 – 0.3 | 0.0 – 0.2 | 0.2% |
| Tobacco | 2.4 – 5.4 | 0.3 – 9.7 | 1.1% |
| Clothing | 0.3 – 0.8 | 0.3 – 1.7 | 0.3% |
| Personal | 0.1 | 0.1 – 0.2 | 0 |
| Activities | 0.2 – 0.9 | 0.2 – 0.4 | 0.8% |

[1] Garrow 1982
[2] Singleton 1980

**Tobacco Group**

A total of 26 (1.1% of the total artifact assemblage) tobacco related artifacts were found at the western slave settlement. The assemblage includes five 4/64-inch pipe stems, fifteen 5/64-inch pipe stems, three 6/64-inch pipe stems, and three plain pipe bowl fragments.

**Clothing Group**

The western slave settlement also produced a much smaller collection of clothing items consisting of eight specimens or 0.3% of the total artifact assemblage. Five of these were buttons, including one brass Type 28 Federal Artillery button, in use between about 1821 to the 1830s. One Type 23 white porcelain four-hole button, one Type 27 brass button with a floral face, one Type 30 white metal button, and one faceted black glass button with an inserted eye were also identified.

Although not a research domain for this study, the presence of artillery buttons at both slave settlements suggests that additional investigation should be conducted to determine if there was a coastal battery in the general area prior to the Civil War, perhaps dating to the War of 1812. Alternatively, there may some connection between an owner, overseer, or visitor and nearby Fort Moultrie, which was garrisoned throughout this period.

Other clothing items in the assemblage include one brass hook, one iron buckle fragment, and one brass decorative object.

**Activities Group**

Nineteen items are in the activities group. These include one tool (a triangular file), four hardware items – one staple, one iron chain link, one flat head screw, one flat head screw fragment, and thirteen items that fall in the category of "other." These "other" items include two slate fragments, one lead puddle, one brass ring, two brass fragments, three smoothing stones, and four unidentifiable pieces of iron.

An artifact found in both slave settlements is the triangular file. Also known as a three-square file, this tool was traditionally used by carpenters to sharpen saw teeth. Although rarely mentioned by name, files are frequently listed among the tools being sent to various plantations by Henry Laurens, who mentions them often in the context of "whip saw files" (see for example, Rogers et al. 1976:7, 161). Their presence at both slave settlements suggests the presence of carpenters and some degree of timber preparation.

**Summary**

When the artifact pattern is examined (Table 28), it provides a relatively poor match to the Carolina Slave Artifact Pattern – the Kitchen items are lower than anticipated and the Architecture remains are higher than might be expected. These critical categories seem to sit midway between the eighteenth century Carolina Slave pattern and the nineteenth century Georgia Slave pattern. One reasonable interpretation is that the structures to the west were somewhat more substantial. A slight bit more "modern" and therefore closer in their artifact pattern to the structures typifying the nineteenth century reform movement. Another explanation, however, is that


Figure 41. Artifacts from the eastern slave settlement. A, slipware; B, Chinese porcelain, hand painted overglaze; C, Westerwald; D, creamware, green edged; E-F, pearlware, polychrome hand painted; G, pearlware, blue hand painted; H, pearlware, green edged; I, pearlware, blue transfer printed; J-K, whiteware, non-blue transfer printed; L, Colono handle; M, Colono body sherd with engraving; N, Colono sherd with basal ring; O, stemware fragment; P, brass finger ring; Q, brass lock; R, ribbed white clay tobacco pipe bowl fragment; S, earthenware pipe bowl fragment with glaze; T-U, beads.

the small sample is skewed and is failing to provide a clear view of the structures.

We do, however, see other differences between the eastern and western settlements. As previously mentioned, for example, the ceramics in the western settlement have a greater proportion of hollow ware forms, perhaps suggesting less control by the owner over the occupant's foodways.

In spite of these differences, the period of occupation is nearly identical – spanning the Barksdale and Toomer years.

**Colonial Area South, 280-300R175, 305R170, 315-335R175**

A total of seven units, representing 375 square feet, were excavated in this area, west of the Auld House and at the edge of the undeveloped tract (but almost certainly extending even further westward into an area already under development at the time of this study). These units produced four features, one posthole, and one burial (which will be discussed in a following section).

### Prehistoric Remains

The colonial areas produced more prehistoric remains than the other areas of the site. The southern Colonial area produced 310 prehistoric artifacts. Of the 307 sherds, 255 or 83.1% were under 1-inch in diameter. The remaining items include a chert flake, one chert shatter, and one unidentifiable chert projectile point fragment.

### Historic Collections

The historic collection consists of 3,607 artifacts. The architectural group makes up the largest proportion at 48.0% or 1,732 specimens. This group is made up largely of window glass and nail fragments. The kitchen group comprises 44.77% (n=1,615) of the historic collection. European ceramics dominate the kitchen collection. Very sparse tobacco, clothing, personal, and activities group artifacts were also found.

**Kitchen Group**

The kitchen group accounts for 1,615 items or 44.77% of the total collection. As shown in Table 29, earthenwares are the most common ceramic, accounting for 72% of the assemblage. Porcelains and stonewares are less common, together accounting for 28%. Of the earthenwares, mid-eighteenth century ceramics, such as delft and slipware are the most common. When minimum vessel counts are considered (Table 30), blue hand painted Chinese porcelain is the most common, accounting for 23.1% of the recognizable vessels. Delft follows closely behind with 15 vessels or 19.2% of the assemblage. Slipware and white salt glazed stoneware together account for an additional 28.2% of the collection.

The mean ceramic date for these excavations is 1754.9 (Table 31), placing the occupation in the early period of Barksdale's acquisition.

South's Bracketing Technique, because of the range of wares present, reveals a much later

Table 29.
Major Ceramics in the Colonial Area South

| | | |
|---|---|---|
| Porcelain | 110 | 12.4% |
| Stoneware | 138 | 15.6% |
| Brown | 17 | |
| Blue/Gray | 17 | |
| White | 97 | |
| Other | 7 | |
| Earthenware | 639 | 72.0% |
| Slipware | 276 | |
| Refined | 29 | |
| Coarse | 32 | |
| Delft | 131 | |
| Creamware | 49 | |
| Pearlware | 56 | |
| Whiteware | 53 | |
| Other | 13 | |

Table 30.
Minimum Vessel Count for the Colonial Area South

| | Cup/ Mug | Saucer | Bowl | Plate | Teapot | Lidded Jar | Pan | Crock | Jug |
|---|---|---|---|---|---|---|---|---|---|
| Delft, undec. | 1 | | 2 | 1 | | | | | |
| Delft, blue HP | 1 | | 6 | 2 | | | | | |
| Delft, poly HP | | | 1 | | | | | | |
| Delft, manganese sponge | | | 1 | | | | | | |
| ***Delft , subtotals*** | ***2*** | | ***10*** | ***3*** | | | | | |
| White SGSTW | 2 | 2 | 2 | 3 | | | | | |
| White SGSTW, scratch blue | | | 1 | | | | | | |
| ***White SGSTW, subtotals*** | ***2*** | ***2*** | ***3*** | ***3*** | | | | | |
| Chinese porcelain, undec. | | 1 | | 1 | 1 | | | | |
| Chinese porcelain, blue HP | 6 | 1 | 5 | 2 | | | | | |
| Chinese porcelain, poly HP | | | | 1 | | | | | |
| ***Chinese porcelain, subtotals*** | ***6*** | ***2*** | ***5*** | ***4*** | ***1*** | | | | |
| White porcelain, undec. | | | | | | 1 | | | |
| CW, undec. | 1 | | 3 | 1 | | | | | |
| CW, annular | 1 | | | | | | | | |
| ***Creamware, subtotals*** | ***2*** | | ***3*** | ***1*** | | | | | |
| PW, annular | | | 3 | | | | | | |
| PW, blue edge | | | | 1 | | | | | |
| PW, green edge | | | | 1 | | | | | |
| ***Pearlware, subtotals*** | | | ***3*** | ***2*** | | | | | |
| WW, undecorated | 2 | | | 1 | | | | | |
| WW, molded | | | | 1 | | | | | |
| WW, blue transfer printed | | | | 1 | | | | | |
| ***Whiteware, subtotals*** | ***2*** | | | ***3*** | | | | | |
| Lead glazed slipware | | | 8 | 1 | | | 3 | | |
| Brown STW | | | | | | | | 1 | |
| Brown SGSTW | | | | | | | | | 1 |
| El Morro | | | | | | 1 | | | |
| Refined red EW | | | | | 1 | | | | |
| Coarse red EW | | | 1 | 1 | | | | | |
| ***Totals*** | ***14*** | ***4*** | ***33*** | ***18*** | ***2*** | ***2*** | ***3*** | ***1*** | ***1*** |

CW – creamware; EW – earthenware; HP – hand painted; PW – pearlware; SG – salt glazed; STW – stoneware; WW whiteware

beginning date of about 1775, with occupation continuing to 1911, based on four tinted whitewares. If these are ignored as intrusive, then the terminal date would be about 1825. The problem, even with this terminal date, is that it fails to adequately distinguish between ceramics that were part of this occupation and those that were contributed by later occupations in proximity to this site area. In addition, the 1775 beginning date seems far too late considering the range of early ceramics present.

Bartovics, in contrast, suggests two distinct occupational peaks. The first is from 1670 to 1790. There is a decade of reduced activity, then a second peak between 1800 and 1830. This suggests that this southern colonial occupation spanned the early settlement of Youghal, with much of the activity probably reflected in the ca. 1750 to 1806 ownership by the Barksdale family. The brief hiatus may be reflective of the Spencer Man ownership, followed by a brief return to the Barksdale family and the initial ownership by Toomer. It seems that it was during the Toomer ownership that this particular site area was abandoned.

Returning to the ceramics, Table 32 illustrates vessel forms for the various wares. In addition to looking at each of the major wares, the table also lumps together the early eighteenth century and late eighteenth century wares. The

Table 31.
Mean Ceramic Date for the Colonial Area South

| Ceramic | Date Range | Mean Date (xi) | (fi) | fi x xi |
|---|---|---|---|---|
| Underglazed blue porc | 1660-1800 | 1730 | 102 | 176460 |
| Nottingham stoneware | 1700-1810 | 1755 | 2 | 3510 |
| Westerwald | 1700-1775 | 1738 | 10 | 17380 |
| White salt glazed stoneware | 1740-1775 | 1758 | 86 | 151188 |
| White sg sw, scratch blue | 1744-1775 | 1760 | 11 | 19360 |
| Lead glazed slipware | 1670-1795 | 1733 | 276 | 478308 |
| Jackfield | 1740-1780 | 1760 | 5 | 8800 |
| Decorated delft | 1600-1802 | 1750 | 89 | 155750 |
| Plain delft | 1640-1800 | 1720 | 42 | 72240 |
| North Devon | 1650-1775 | 1713 | 4 | 6852 |
| Creamware, annular | 1780-1815 | 1798 | 2 | 3596 |
| Creamware, undecorated | 1762-1820 | 1791 | 46 | 82386 |
| Pearlware, poly hand painted | 1795-1815 | 1805 | 4 | 7220 |
| Pearlware, blue hand painted | 1780-1820 | 1800 | 8 | 14400 |
| Pearlware, blue trans printed | 1795-1840 | 1818 | 4 | 7272 |
| Pearlware, edged | 1780-1830 | 1805 | 3 | 5415 |
| Pearlware, annular/cable | 1790-1820 | 1805 | 8 | 14440 |
| Pearlware, undecorated | 1780-1830 | 1805 | 29 | 52345 |
| Whiteware, blue trans printed | 1831-1865 | 1848 | 2 | 3696 |
| Whiteware, non-blue trans printed | 1826-1875 | 1851 | 2 | 3702 |
| Whiteware, annular | 1831-1900 | 1866 | 8 | 14928 |
| Whiteware, tinted glaze | 1911-1970 | 1941 | 4 | 7764 |
| Whiteware, undecorated | 1813-1900 | 1860 | 37 | 68820 |
| Total | | | 784 | 1375832 |
| Mean Ceramic Date | 1754.9 | | | |

pattern that results reveals that during the early settlement the ceramics – while including very costly styles such as porcelains and white salt glazed stones – are suggestive of rather simple dietary patterns with hollow wares somewhat more common that plates. This trend seems to be reversing later in the century, as plate and bowl forms become equal.

What stays constant – even slightly increasing – is the importance of teawares. Although the plantation owner's table may have included a large number of "spoon meals," there was still a strong desire to emulate the British and partake of the tea ceremony – and as a result teawares are common in both collections.

Some of these juxtapositions have been previously discussed for the Whitesides plantation, another eighteenth century Christ Church Parish settlement (Trinkley and Hacker 1996). There a planter of very modest means was examined and we found that his table consisted of a very large proportion of bowls – 61.8% -- clearly indicating his rather low status diet. Nevertheless, Whitesides' ceramic assemblage included a small collection of teawares (5.2% of the assemblage), providing testimony to his efforts to emulate the higher status planters around him (Trinkley and Hacker 1996:54, 63-65).

This collection from Youghal is suggestive of a status above John Whitesides, but certainly below the Carolina elite. It provides further evidence that Youghal, for much of its history, was representative of a middling status plantation – almost the archetypical Christ Church plantation.

Glass fragments account for 34.37% of the kitchen assemblage. Most (49% or 272) of the collection consists of black glass. Brown (n=27), green (n=1), light green (n=37), bright green (n=1), aqua (n=11), blue (n=26), milk (n=4), clear (n=108), and manganese (n=7) are also represented. The minimum vessel count for glass includes four "black" glass bottles – three with blown bases and one case bottle – one brown bottle with a molded base, one aqua bottle with a blown base, and two

Table 32.
Shape and Function of Ceramic Vessels from the Colonial Area, South

| | | Tablewares | | Tea & Coffeeware | Utilitarian |
|---|---|---|---|---|---|
| | | Plates/ Saucers | Bowls | | |
| Porcelain | | | | | |
| | # | 6 | 5 | 7 | |
| | % | 33.3 | 27.8 | 38.9 | |
| Delft | | | | | |
| | # | 3 | 10 | 2 | |
| | % | 20.0 | 66.7 | 13.3 | |
| Slipware | | | | | |
| | # | 1 | 8 | | 3 |
| | % | 8.3 | 66.7 | | 25.0 |
| WSGSW | | | | | |
| | # | 5 | 3 | 2 | |
| | % | 50.0 | 30.0 | 20.0 | |
| ***Combined Early 18th century wares*** | | | | | |
| | **#** | ***15*** | ***26*** | ***11*** | ***3*** |
| | **%** | ***27.3*** | ***47.3*** | ***20.0*** | ***5.4*** |
| Creamware | | | | | |
| | # | 1 | 3 | 2 | |
| | % | 16.7 | 56.0 | 33.3 | |
| Pearlware | | | | | |
| | # | 2 | 3 | | |
| | % | 40.0 | 60.0 | | |
| Whiteware | | | | | |
| | # | 3 | | 2 | |
| | % | 60.00 | | 40.00 | |
| ***Combined Late 18th century wares*** | | | | | |
| | **#** | ***6*** | ***6*** | ***4*** | |
| | **%** | ***37.5*** | ***37.5*** | ***25.0*** | |

WSGSW – white salt glazed stoneware

clear bottles represented by one Dispensary bottle body and one panel bottle.

Twelve items of tableware were recovered, representing 0.74% of the kitchen assemblage. The glass wares include one handle, four tumbler fragments, a fragment of a glass bowl with an etched rim, and a fragment of a footed bowl.

Also included in the assemblage are three white metal handles and one iron knife blade and tang. Two of the white metal utensil handles had the initials "IM" molded in the top. With more than one specimen recovered these were likely part of an expensive set, made with the owner's monogram cast in the metal. Unfortunately, we have been unsuccessful in identifying an owner with these initials.

A total of four kitchenware items were also recovered including two kettle fragments and two iron handles, which appear to belong to cooking vessels.

A much larger concentration of Colono ware fragments were recovered from the colonial area than other areas of the site. Colono ware fragments from the southern colonial area numbered 158 or 9.8% of the kitchen assemblage. These include 91 small sherds, 31 large sherds, 35 rim sherds, and one handle.

**Architecture Group**

The architecture group consists of 1,732 artifacts (48.02% of the total artifact assemblage), 709 of which are window glass fragments. Nine items of construction hardware were also recovered. These include two buff paste with clear lead glaze ceramic tile fragments (which mend to 5 by 3-inches by 3/16-inch in thickness), four fragments of painted plaster, two pintles, one door latch hook, and one ornate butt hinge. Two spikes were also recovered. The remaining artifacts in the architecture group are nails and nail fragments.

Of the 1,011 nails and nail fragments, 453 are unidentifiable by type or size. Hand wrought nails and nail fragments make up 60% of the identifiable portion of the collection. Most of the nails identifiable by size (206 of 385 or 53.51%) are intended for either small timbers such as shingles or lathe (2d-5d), and 103 are of a size indicative for sheathing (6d-8d). Only 76 nails are large enough to be suitable for framing (9d or larger). This is suggestive of a structure pre-dating the nineteenth century and characterized by mortise and tendon construction. When these small nails are examined we find that most of the earlier wrought

nails were of a size used for lathe or shingles, while most of the cut nails are suggestive of sheathing. This may suggest an assemblage containing original nails, as well as later examples used for repairs – documenting the continuity of the structure.

**Furniture Group**

Two furniture artifacts were recovered – both brass tacks typically found as furniture or trunk decorations.

**Tobacco Group**

Ninety-three tobacco-related items were found, accounting for 2.6% of the assemblage. These include fifteen 4/64-inch diameter pipe stems, thirty-eight 5/64-inch diameter pipe stems, nine 6/64-inch pipe stems, and thirty pipe bowl fragments. Twenty-seven of the pipe bowls are plain; two of those have feet. Two pipe bowls are ribbed. One pipe bowl has a design with arrows, which is probably part of an eagle design.

**Clothing Group**

The clothing group consists of eleven items (0.3% of the total artifact assemblage), nine of which are buttons. Five buttons are brass Type # 7, one is white metal Type # 11, one is plastic like a Type # 22, one is white porcelain Type # 23, and one is brass Type # 26. One sewn leather fragment with a grommet (probably from a shoe) and one brass buckle, measuring 1½ by 1¼-inches complete the clothing group.

**Personal Group**

Sixteen personal items (0.4% of the total artifact assemblage) were recovered from the southern colonial area. These include ten slate fragments (one with two beveled edges), one piece of worked clear glass (interpreted to be an African American ritual object), one piece of clear quartz crystal (also likely have importance as a spiritual or ritual object), one brass key, one iron key, one small round lidded metal container (for cosmetics or pharmaceuticals), and one silver coin (a 1902 U.S. quarter).

**Activities Group**

Most of the 138 activities group artifacts are hardware items and miscellaneous items that do not fit neatly into any other categories. Sixty-one hardware items – including a flat-head screw, a brass washer, three iron tacks, a brass split ring, and forty-six staples – were recovered. Sixty-two "other" items were found. These include thirty-eight smoothing stones, one iron rod, two unidentifiable brass fragments, two lead fragments, one piece of brass wire, two iron wire fragments, two brass fragments, one brass strip, eight thin iron fragments, five unidentifiable iron fragments, and one human tooth.

The remaining items in the activities group include three tools (one file fragment, one iron hoe, and one tool handle), two toys (one clear blue marble and one bisque porcelain doll foot), seven storage artifacts (one brass body of a padlock and six strap fragments), and three stable items (one plow fragment and two barbed wire fragments). The Activity Group artifacts account for 3.83% of the total artifact assemblage.

Table 33.
Artifact Pattern from the Colonial Area, South

| | Revised Carolina Artifact Pattern[1] | Colonial Area, South |
|---|---|---|
| Kitchen | 51.8 – 65.0 | 44.8% |
| Architecture | 25.2 – 31.4 | 48.0% |
| Furniture | 0.2 – 0.6 | 0.1% |
| Arms | 0.1 – 0.3 | - |
| Tobacco | 1. 9 – 13.9 | 2.6% |
| Clothing | 0.6 – 5.4 | 0.3% |
| Personal | 0.2 – 0.5 | 0.4% |
| Activities | 0.9 – 1.7 | 3.8% |

[1] Garrow 1982

**Summary**

The artifacts are strongly suggestive of a structure, identified in the mechanical stripping and subsequent excavations in Cut 4. The remains are clearly domestic and seemingly of a relatively

high status, although there are items of probable African American origin.

When the pattern analysis is examined (Table 33), the assemblage closely resembles the Revised Carolina Artifact Pattern – generally attributed to British colonial sites – although it is not an exact match. At this settlement the kitchen items tend to be low and the architectural and activity remains tend to be over-represented. One possible reason for this is that the structure contains dense demolition debris that would skew the pattern in favor of architectural remains.

The Revised Carolina Artifact Pattern, however, tends to reflect relatively high wealth and status. For example, the Charleston Townhouse Profile, developed by Martha Zierden and her colleagues (Zierden and Grimes 1989) to reflect the wealth and prosperity of townhouse owners in the late eighteenth and early nineteenth centuries, is very similar to the Revised Carolina Pattern. In fact, the only real difference is that the Townhouse Pattern has an even higher quantity of architectural items than the Carolina Pattern, reflecting the former's elaboration of the building as a reflection of wealth and power.

Table 34.
Major Ceramics in the Colonial Area North

| | | |
|---|---|---|
| Porcelain | 52 | 9.9% |
| Stoneware | 58 | 11% |
| Brown | 13 | |
| Blue/Gray | 17 | |
| White | 18 | |
| Other | 10 | |
| Earthenware | 417 | 79.1% |
| Redware | 4 | |
| Slipware | 80 | |
| Refined | 12 | |
| Coarse | 20 | |
| Delft | 32 | |
| Creamware | 62 | |
| Pearlware | 46 | |
| Whiteware | 115 | |
| Yellow ware | 2 | |
| Other | 44 | |

It may be, therefore, that the Youghal pattern is also not a precise match because of the nature of the plantation setting. Perhaps Youghal was not a showplace the owners did not feel the need to have a fancy table. Perhaps in the early eighteenth century Christ Church Parish was not a place to conspicuously display wealth.

## Colonial Area North, 415-425R270

Three units were excavated, revealing two features. The dominate finding in these excavations was the tabby garden planter or folly identified as Feature 12, although dense colonial remains were also identified from an adjacent mechanical cut (Cut 6).

### Prehistoric Remains

The colonial area north produced 162 prehistoric artifacts. These include 158 sherds (118 or 74.7% were under 1-inch in diameter) and four chert flakes.

### Historic Collections

The historic collection consists of 3,147 artifacts. The architectural group makes up the largest proportion at 55.58%. Unidentifiable nail fragments make up the largest proportion of architectural artifacts. The kitchen group comprises 39.31% of the historic collection, with European ceramics and glass fragments dominating the collection. Furniture, arms, tobacco, clothing, personal, and activities group artifacts were also represented, but in relatively small numbers.

### Kitchen Group

The Kitchen Group consists of 1,237 items or 39.31% of the total artifact assemblage. European ceramics account for 42.6% of the kitchen collection. As shown in Table 34, earthenwares are the most common ceramic, accounting for 79.1% of the assemblage. Of the earthenwares, mid-nineteenth century whitewares

Table 35.
Mean Ceramic Date for the Colonial Area, North

| Ceramic | Date Range | Mean Date (xi) | (fi) | fi x xi |
|---|---|---|---|---|
| Underglazed blue porc | 1660-1800 | 1730 | 26 | 44980 |
| Westerwald | 1700-1775 | 1738 | 14 | 24332 |
| White salt glazed stoneware | 1740-1775 | 1758 | 16 | 28128 |
| White sg sw, scratch blue | 1744-1775 | 1760 | 4 | 7040 |
| Lead glazed slipware | 1670-1795 | 1733 | 80 | 138640 |
| Jackfield | 1740-1780 | 1760 | 2 | 3520 |
| Decorated delft | 1600-1802 | 1750 | 18 | 31500 |
| Plain delft | 1640-1800 | 1720 | 14 | 24080 |
| Creamware, hand painted | 1790-1820 | 1805 | 2 | 3610 |
| Creamware, undecorated | 1762-1820 | 1791 | 60 | 107460 |
| Pearlware, poly hand painted | 1795-1815 | 1805 | 2 | 3610 |
| Pearlware, blue hand painted | 1780-1820 | 1800 | 3 | 5400 |
| Pearlware, blue trans printed | 1795-1840 | 1818 | 6 | 10908 |
| Pearlware, edged | 1780-1830 | 1805 | 4 | 7220 |
| Pearlware, annular/cable | 1790-1820 | 1805 | 7 | 12635 |
| Pearlware, undecorated | 1780-1830 | 1805 | 26 | 46930 |
| Whiteware, blue edged | 1826-1880 | 1853 | 1 | 1853 |
| Whiteware, poly hand painted | 1826-1870 | 1848 | 3 | 5544 |
| Whiteware, blue trans printed | 1831-1865 | 1848 | 1 | 1848 |
| Whiteware, non-blue trans printed | 1826-1875 | 1851 | 1 | 1851 |
| Whiteware, poly decalcomania | 1901-1950 | 1926 | 1 | 1926 |
| Whiteware, annular | 1831-1900 | 1866 | 7 | 13062 |
| Whiteware, sponge/splatter | 1836-1870 | 1853 | 1 | 1853 |
| Whiteware, undecorated | 1813-1900 | 1860 | 100 | 186000 |
| Yellow ware | 1826-1880 | 1853 | 3 | 5559 |
| Total | | | 402 | 719489 |
| Mean Ceramic Date | 1789.8 | | | |

are the most common. Mid-eighteenth century ceramics, such as delft and slipware are present, but far less common than in the southern excavation area previously discussed. This assemblage is clearly different, appearing to contain a much larger proportion of later ceramics.

This is reflected in the mean ceramic date of 1789.9 – 35 years later than the excavation area to the south. The bracket dates are similar to the southern area, extending to 1901 because of the one decalcomania specimen. If this is ignored, the terminal date becomes about 1830. Nevertheless, as discussed below, there are other nineteenth century materials in the fill of this structure. Bartovics' dating suggests a rather long period of approximately equal use – from 1670 to 1900. We believe that the ranges seen are the result of the excavations being placed in the "heart" of the site and identifying remains found with a variety of structures spanning a very long period of time.

Table 36 lists the minimum vessel counts for the excavations and even a brief examination reveals a number of differences between this area and the midden and structure area to the south. Perhaps most immediately obvious, this area does not contain the Chinese porcelain found to the south – in fact, the only porcelains identified are English porcelains. Other early eighteenth century wares, such as North Devon, delft, and slipware, are either far less common or entirely absent. Table 37 compares the vessel forms of the early eighteenth century wares, such as the delft, white salt glazes stoneware and porcelains with the later creamwares, pearlwares, and whitewares. Although this assemblage is clearly different from that found in the midden and structure to the south, one similarity is the change of foodways reflected in the ceramics. During the earlier period we see a nearly equal proportion of plate and bowl forms but a very high tea and coffeeware contribution. Through time, plates come to dominate the collection and the importance of the teawares declines. As previously discussed, we

Table 36.
Minimum Vessel Count for the Colonial Area, North

| | Cup/ Mug | Saucer | Bowl | Plate | Utilitarian |
|---|---|---|---|---|---|
| Delft, undec. | | | 1 | 1 | |
| Tortoiseshell | 1 | | | | |
| Lead glazed slipware | | | 1 | 1 | |
| STW, Bristol interior | | | 1 | | |
| Coarse red EW, green lead glaze | | | | | 1 |
| White SGSTW, scratch blue | | | 1 | 3 | |
| White porcelain, undec. | 1 | | 1 | | 1 |
| White porcelain, blue transfer print | 1 | | | | |
| White porcelain, gilt | 1 | 1 | 1 | | |
| Yellow ware | | | | | 1 |
| CW, undecorated | 1 | | | 4 | |
| CW, molded | | | | 1 | |
| CW, poly HPOG | | | | 1 | |
| PW, blue edge | | | | 1 | |
| PW, green edge | | | | 2 | |
| PW, blue transfer print | | | | 1 | |
| WW, undecorated | | | 2 | 9 | |
| WW, blue edge | | | | 1 | |
| WW, poly stamp | | | | 1 | |
| WW, black transfer print | | | | 1 | |
| WW, molded | | | 1 | 2 | |
| **Totals** | **4** | **1** | **8** | **30** | **3** |

believe this reflects the changing diet of the plantation owner.

Table 37.
Vessel forms from the Colonial Area, North

| | Early 18th c. wares combined | | Late 18th c. to mid-19th c. wares combined | |
|---|---|---|---|---|
| | # | % | # | % |
| Tablewares | | | | |
| Plates/saucers | 6 | 37.5 | 24 | 82.7 |
| Bowls | 5 | 31.3 | 3 | 10.3 |
| Tea & Coffeewares | 4 | 25.0 | 1 | 3.5 |
| Utilitarian | 1 | 6.2 | 1 | 3.5 |

If the motifs are examined, about two-thirds of the creamwares, pearlwares, and whitewares are relatively inexpensive motifs. Thus, while we may be looking at dietary refinement, we are not looking at a particularly refined table. On the other hand, this ratio closely resembles what was seen in the midden and structure to the south and we believe reflects the middling status of this particular plantation setting (not necessarily the owners).

The kitchen assemblage includes 142 Colono ware sherds. A total of 10 large sherds were collected, 111 small sherds, 20 rims, and one rim with paint.

Glass fragments account for 43.2% of the kitchen assemblage (n=535). Most (36.8%) of the glass assemblage consists of clear glass, followed closely by black glass (29.9%). Brown (n=59), blue (n=4), light green (n=18), dark aqua (n=1), amber (n=1), milk (n=1), and manganese (n=11) are also represented. The minimum vessel count for glass includes two black bottles with blown bases, two black case bottles, two brown bottles with molded square bases, two aqua bottles, one manganese bottle, and two clear bottles.

Six items of tableware were recovered, representing 0.5% of the kitchen artifacts. These include four molded clear glass bowl fragments and two bright blue molded glass fragments from a vase or bowl. Twenty-seven kitchenware artifacts (2.2% of the kitchen artifacts) were found in the northern colonial area. These include eight kettle fragments, fifteen thin iron fragments from a can, two stove body fragments, and two fragments of a zinc canning jar lid.

**Architecture Group**

The architecture group is the largest collection with 1,749 artifacts or 55.6% of the total artifact assemblage. Flat window glass makes up nearly 20% of the group (n=345). One door lock part and two roofing tile fragments were also

recovered. The remainder of the group (80%) consists of nails and nail fragments.

Of the 1,401 nails and nail fragments, 570 (40.7%) are unidentifiable by type or size. In contrast to the southern colonial area, hand wrought nails and nail fragments make up only 10% of the identifiable portion of the collection from the northern colonial area. Most of the nails identifiable by size (252 of 570 or 44.2%) are intended for either small timbers such as shingles or lathe (2d-5d), and 187 or 32.8% of the nails are of a size indicative for sheathing (6d-8d). Only 131 or 23% of the nails are large enough to be suitable for framing (9d or larger). This is consistent with the southern colonial area and is suggestive of a structure pre-dating the nineteenth century and characterized by mortise and tendon construction. When these small nails are examined, we find that most of the earlier wrought nails were of a size used for lathe or shingles, while most of the cut nails are suggestive of sheathing. This may suggest an assemblage containing original nails, as well as later examples used for repairs – documenting the continuity of the structure.

Table 38.
Buttons from the Colonial Area, North

| Type | Description | # | Other (measurements in mm) |
|---|---|---|---|
| 7 | spun white metal/brass | 1 | 23.0 |
| 18 | stamped brass | 1 | 18.4 |
| 20 | 4-hole bone disc | 1 | 16.5 |
| 21 | 4-hole, two piece iron | 2 | 14.4, 17.4 |
| 23 | 4-hole, porcelain | 8 | 10.1, 10.9, 11.0, 11.1, 11.3, 11.8, 13.0, fragment |
| 27 | brass, domed | 1 | 22.9 (SC Militia, 1840s-1860s) |
| 35 | glass insert | 1 | 11.7 |

**Furniture Group**

As in the southern colonial area, only two furniture items – one brass tack and one oval brass escutcheon – were recovered in the northern colonial area. These artifacts represent 0.1% of the total artifact assemblage.

**Arms Group**

Sixteen arms-related artifacts were recovered from the colonial area north, accounting for 0.5% of the total artifact assemblage. Recovered items include one lead bullet, nine .22-calibre shell casings, two .32-calibre shell casings, one .38-calibre shell casing, one gray gunflint, one light gray gunflint, and one honey-colored gunflint fragment.

The only eighteenth or early nineteenth century remains are the three flints – two English and one French (Emory 1979:37-48, Noël Hume 1978:220). The remaining items are all likely from the later nineteenth or even early twentieth century.

**Tobacco Group**

Forty-eight tobacco-related items were recovered from the northern colonial area, representing 1.5% of the total artifact assemblage. These include two 4/64-inch diameter pipe stems, twenty-six 5/64-inch diameter pipe stems, four 6/64-inch pipe stems, twelve plain pipe bowl fragments, two pipe bowl fragments with stars, and two ribbed pipe bowl fragments. Two of the pipe stems have end tips and one has chew marks.

**Clothing Group**

Fifteen buttons and four "other" items make up the clothing group, which represents 0.6% of the total artifact assemblage. Table 38 describes the buttons recovered. One of the buttons identified is a S.C. Militia coat button with the state seal on a lined field that was in use between ca. 1840 and 1860 (Albert1969:242; Tice 1997:445).

The "other" items include one iron snap,


Figure 42. Artifacts from the colonial area. A, Chinese porcelain tea spout; B, slipware; C-D, delft; E, creamware, polychrome hand painted; F, refined earthenware teapot lid; G, whiteware, sponge decorated; H, Colono rim sherd; I-J, monogrammed white metal utensil handles; K, architectural tile fragment; L, 4-hole bone button; M, S.C. Militia button; N, bisque doll's face (nose and teeth); O, doll's foot; P, quartz crystal fragment; Q, 1902 silver dime; R, white clay tobacco pipe stem and bowl.

one shoe grommet and hook, one iron buckle (measuring 1-inch by 5/8-inch), and one belt buckle base. The belt buckle base is round and used for a fabric belt (1½-inch diameter). It is marked "PAT. APR. 15 1932," revealing a use date in the first half of the twentieth century.

**Personal Group**

Six personal items were recovered from the north colonial area (0.2% of the total artifact assemblage). Two of these items are datable and include one five-cent coin from 1899 and one one-cent coin from 1894. One faceted, dark aqua glass bead (Type # 1f, length = 7.8 mm, diameter = 5.6 mm) was also recovered. One slate fragment, one automatic pencil tip and interior, and one knife blade to a pocketknife complete the assemblage.

**Activities Group**

The activities group consists of seventy artifacts (2.2% of the total artifact assemblage), primarily storage and miscellaneous hardware items. The storage items include sixteen thin iron bucket fragments and five iron strap fragments. Twenty-seven miscellaneous hardware items (such as washers and bolts) were found during the excavations.

Among the other items recovered are three toys (one harmonica reed fragment and two bisque doll head fragments), three tools (one iron awl body, one brass saw screw, and one iron garden hand fork), one stable item (a barbed wire fragment), and fifteen "other" items (nine iron fragments, two smoothing stones, one melted lead fragment, and three slate fragments).

Of these, the only datable items are the bisque doll head fragments that appear to date ca. 1895 (Fox 1973:45, 89). This date is consistent with the two coins found in the excavations.

**Summary**

Both the southern and northern Colonial Areas produced a similar number of artifacts and the mean ceramic dates are only 35 years apart. Nevertheless, there are distinct differences. As shown in Table 39, the pattern analysis of the northern area is even less characteristic of British Colonial sites than that found to the south. The density of architectural remains is very high, while Activity items are slightly more common than would be expected. Kitchen items are far less common than should be found (probably as a result of the high architectural content).

Much of this skewed pattern, however, can be explained by the nature of the deposits in the northern area. We believe that this northern assemblage represents multiple structures and occupations well mixed, not only as a result of intensive occupation, but also by the demolition of the Fuller/Auld house. As a result, we see a variety of materials, clearly dating into the first decade of the twentieth century. This correlates almost perfectly with the acquisition of the property by Isaac Auld in 1905. It may be that trash disposal practices changed after this period.

This explains the very prolonged dates determined by both South's bracketing technique and Bartovics. It also explains the early twentieth coins, late nineteenth century doll parts, the late antebellum militia button, as well as the colonial ceramics. This also explains the skewed artifact pattern – a pattern that does not reflect any specific temporal or cultural behavior, but rather reflects a long period of trash disposal from a variety of plantation settings.

Where the artifacts in the northern area resemble those to the south, is in the ceramics. There we see a similar dietary or foodways shift from a simple yeoman farmer using one-pot meals to the more refined gentility of meat on plates. However, the motifs continue to be rather simple, providing additional testimony that Youghal was not a plantation of conspicuous display, but was a working farm.

# PLASTER ANALYSIS

A plaster sample with a pigmented surface recovered from the colonial structure (320R175) was submitted to Crawford Conservation, Inc. for analysis. The plaster was found to contain five distinct layers (Craig Crawford, personal communication 2004).

At the base was a light beige pigment that was water soluble and which exhibited a brush-like texture with fine drying cracks. On top of this is a second coat that is light gray, but which also exhibits a brush-like texture. The third layer was dark gray to almost black, with a smooth surface. Over this was a dark gray surface with a brush-like texture. This layer, however, was not readily soluble in water. At the surface was found a water soluble white wash with a relatively smooth texture.

We believe that these various layers are all representative of coatings, though often incorporating soot, possibly through the use of open lamps or candles. The most notable difference in the various layers was their solubility in water. Those layers most readily removed are suggestive of a soft distemper – a water-based paint that primarily comprises a white base pigment (generally water-soaked whiting, i.e. pulverized chalk, although sometimes lime) bound with glue size (glue made from animal parts). Such a finish was commonly used for interior painting since it does not react (or saponify) on new lime plaster; it does not, however, survive well in damp locations and is readily removed with water.

In contrast lime wash, while removable with water, requires more scrubbing. Moreover, the whitewashed finish does not usually show the brush marks as readily as a distemper painted surface. Like distemper, however, lime wash can be used on newly plastered walls.

Whitewashing is often seen on storage and work spaces at late eighteenth and early nineteenth century plantation settings, while distemper paints were generally limited to occupied spaces (Fore 1995:325). It seems that we are primarily seeing distemper on the Youghal samples, suggesting that the space was considered "occupied" not simply storage. The soot also suggests use. It is possible, however, that the lighter gray colors were intentional – pearl gray was one color specifically noted in some colonial settings (Storm 1982).

This is only the third analysis of plaster from a plantation context. One, from a garden structure at Broom Hall in Goose Creek (Fore 1995), produced plaster with six to nine coats of cream, light gray, and dark gray colors. The other, from a nineteenth century kitchen structure, yielded a single, thin layer of dark gray to black pigment which was not readily water soluble – probably sooting that accumulated on the whitewashed plaster.

While painted plaster does not seem to be commonly found in archaeological studies, where present it should be studied to help provide better data on a broad range of plantation structures.

# ANALYSIS OF THE YOUGHAL BURIAL

Burial 1 at 38CH932 was discovered during the excavation of unit 300R175 at the base of the A horizon, and was oriented magnetic west-northwest by east-southeast. This was a typical extended burial, with the skull facing up and arms loosely laid at the sides. No other burials were present. The skeletal remains were fragmentary and in crumbling condition, with no coffin outline, coffin hardware, or coffin nails. Nor were any clothing remains, such as porcelain, bone, or metal buttons, identified.

Figure 43. Cranium, superior view showing open sutures.

These findings suggest that the body may have been placed in a wrapped shroud. During excavation it was noted that the anterior portion of the skull, the ribs, vertebrae and phalanges were missing, and although no plow scars were found in this area, are possibly lost due to horticultural and plowing activities in the 20th century (Haglund et al. 2002). During excavation, a soil sample (943.9 g) was taken from the chest area.

The remains were taken to Chicora's lab in Columbia, South Carolina for examination. Cleaning consisted of brushing away loose dry soil from the bones with a soft brush. This soil was retained (225.9 g), as was the soil removed from the interior of the skull (602.6 g). The teeth were wiped with cotton swabs moistened with tap water, to reveal caries, hypoplasia, and other anomalies. While the teeth were in good condition, all other bone fragments were extremely fragile, and exhibited erosion from the soil and plant activity.

The skeletal remains consist of fragments of the cranium, mandible, right and left humerus, three sacrum bones, right and left ilium, right and left pubis, right ischium, right and left femur, right and left tibia, right and left fibula, right and left calcaneous, and right talus.

The superior portion of the cranium provided no measurements, but showed all sutures open (Figure 43).

The remains also include 15 erupted teeth in occlusion, three unerupted molars with no root development not in occlusion post-mortem, and visual evidence of encrypted permanent teeth in the bone of the maxilla and mandible. The erupted teeth include two permanent mandibular incisors, four permanent maxillary incisors, one deciduous

Figure 44. Maxillary incisor, permanent, right, labial view. Note trilobed cingulum.

maxillary canine, one deciduous mandibular canine, four deciduous maxillary molars, one deciduous mandibular molar, and two permanent maxillary molars.

All incisors are permanent teeth, with marked trilobed incisal edges. The maxillary incisors are beginning to show some wear on the edge, but the mandibular incisors appear to have just recently erupted ($I^1$) or almost erupted ($I^2$) (Figure 44). The permanent mandibular molar has a Caribelli's cusp on the mesiolingual surface. There is no evidence of calculus on any of the teeth; however, there is marked wear on the buccal surface of the canines and one deciduous molar, and caries on all canines and molars (Figure 45).

Given the eruption of permanent teeth, and development of encrypted teeth, especially the three molars with no root development, this individual is estimated to be between 5 and 9 years of age at death (Ubelaker 1989; Schwartz 1995). Linear enamel hypoplasia is evident on the six complete permanent incisors and the two permanent molars, indicating some sort of systemic stress during tooth formation, such as malnutrition or an infectious disease (White 2000).

The innominate was present only as the separate, unfused portions of pubis, ilium and ischium, too fragile and fragmentary to measure (Figure 46). The pubis and the ischium tend to join between the ages of 6 to 9 years (Schwartz 1995). Three sacral segments were recovered, each with fused arches and bodies; this fusing generally occurs at approximately 6 to 9 years of age (Schwartz 1995). These approximate ages again coincide with the age indicated by the

Figure 45. Mandible, superior view. Note wear and caries on teeth.

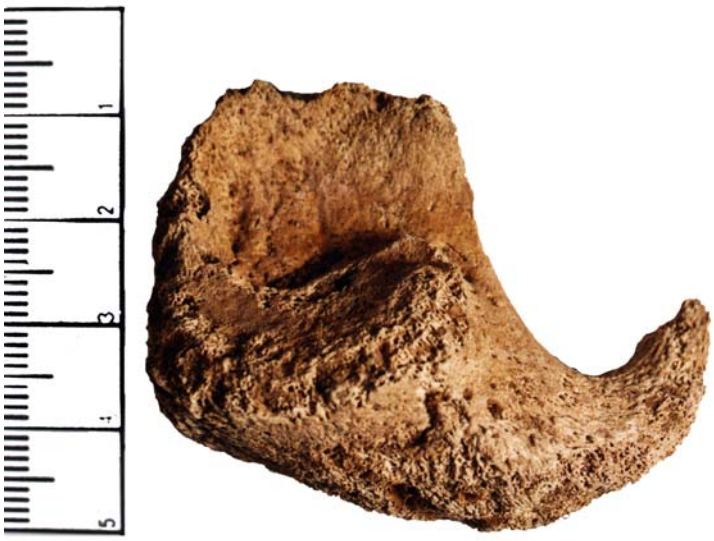

Figure 46. Right ischium, unfused. Note auricular surfaces.

dental eruptions. No vertebrae were present.

The diaphysis lengths of the femurs, tibia, and fibula indicate an age of approximately 5.5 to 7.5 years at death (Ubelaker 1989; Table 39).

Figure 47. Right femur, anterior view.

Both left and right femurs were recovered, with no fusing of femur head, greater trochanter, or distal epiphyses (Figures 47 and 48). Samples were taken from both femurs for DNA testing. Fragments of the right and left tibia, and right and left fibula were recovered. Only the right tibia retained its distal end, with no fusion of the epiphysis. Samples were taken from the left tibia for DNA testing.

While fragments of the right talus and right and left calcaneous were recovered, no other foot bones were present.

Although the preservation of DNA can be adversely effected by temperature, moisture levels, and soil pH, its presence in skeletal material can be used for kinship analysis, as well as adding to the research data base (Cox and Mays 2000). DNA samples were taken from the right femur, left femur, and left tibia by the Department of Biological Sciences, University of South Carolina, under the direction of Dr. Bert Ely. Their initial attempt to amplify the mitochondrial DNA from these samples was unsuccessful, leading them to hypothesize that the DNA in the bones was partially degraded.

As a result, the decision was made to amplify the overlapping base pair segments, and the lab was able to reconstruct the DNA sequence of each sample. These data were then successfully assembled to develop a sequence from the entire region. When compared to a standard reference sequence, the sampled DNA sequence matched at all positions except 16223, 16278, and 16390, indicating that the sample belonged to the L3b haplogroup. The mitochondrial DNA sequence matched at all positions with the reference except 16124, indicating that the sample belongs to the L3b1 sub-group of L3b.

According to DNA population references, L3b and L3b1 are frequent haplogroups of sub-Saharan Africa. The

conclusion is that this child's direct maternal line was of sub-Saharan African origin.

In conclusion, based on the development and eruption of the teeth and the DNA analysis, the skeletal remains of Burial 1 appear to represent those of a child of African descent, between approximately 5 and 9 years of age at time of death. Because these are the remains of a child, no determination of sex, stature, or body build could be made. There are no indications of cause or manner of death. There is, however, evidence of systemic stress, possibly related to diet, during the child's life.

Figure 48. Right femur, superior view of shaft, not fused to head.

The remains will be returned to Sintra Homes for reburial. A coffin for the remains has been provided without cost by Dunbar Funeral Home in Columbia, SC. The three soil samples will be curated with the artifacts of 38CH932 at the South Carolina Institute of Archaeology and Anthropology (SCIAA), and will be available for any future analysis. The recordation forms (Buikstra, J.E and Ubelaker 1994) will be curated with other records from this project at SCIAA, with pertinent data provided in the tables reproduced as part of this study.

Table 39.
Post Cranial Measurements

| **Humerus** | L | R |
|---|---|---|
| Length | >110mm* | >420mm* |
| Width | | |
| Diameter | | |
| **Femur** | L | R |
| Length | 257mm | 256mm |
| Width | 215.9mm | 220.3mm |
| Diameter | 45.0mm* | 40.0mm* |
| Weight | 68.8g | 62.8g |
| **Tibia** | L | R |
| Length | >217mm* | >220.5mm |
| Diameter | 20.0mm | 20.5mm |
| Weight | 59.8g | 48.4g |
| **Fibula** | L | R |
| Length | >178mm* | 215.0mm* |
| Diameter | | 10.1* |

* = broken

Table 40.
Dental Measurements (in mm) and morphology

**Maxilla**

| Tooth | Right #9 Perm. $I^1$ | #8 Perm. $I^1$ | Dec. C | Dec. $M^1$ | Dec. $M^2$ | Perm. $M^1$ | Perm. $M^2$ | Perm. $M^3$ |
|---|---|---|---|---|---|---|---|---|
| Mesiodistal diameter | 8.7 | 8.6 | 7.2 | 7.6 | 9.6 | 11 | | |
| Buccolingual diameter | 8.2 | 7.8 | 6 | 8.1 | 10.1 | 12.2 | | |
| Crown height | 12.9 | 12.4 | 6.4 | 5.2 | 6.4 | 9.1 | | |

**Notes:**

$I^1$ = fragmented

$I^1$ = trilobed cingulum

PM1= Carabelli's cusp, mesiolingual surface, plus 4 well developed cusps

All teeth from left side unless otherwise noted

**Mandible**

| Tooth | Perm. $M_3$ | Perm. $M_2$ | Perm. $M_1$ | Dec. $M_2$ | Dec. $M_1$ | Dec. C | Perm. $I_2$ | Perm. $I_1$ |
|---|---|---|---|---|---|---|---|---|
| Mesiodistal diameter | | | | | 8.6 | 6.2 | ~6.2 | 5.1 |
| Buccolingual diameter | | | | | 7.5 | 5.6 | 7 | 6.6 |
| Crown height | | | | | 5.8 | 6.8 | ~9.9 | 10.7 |

**Notes:**

Both mandible $I_1$ and $I_2$ have trilobed incisal edges, secure in bone

All teeth from left side unless otherwise noted

**Other**

| Tooth | Uninterrupted molar from burial fill | Uninterruped molar, loose | Uninterruped molar, loose |
|---|---|---|---|
| Mesiodistal diameter | 12.3 | 12.7 | 9.1 |
| Buccolingual diameter | 11.2 | 10.9 | 8.1 |
| Crown height | 7.9 | 7.3 | 7.4 |

**Notes:**

No root development on uninterrupted molars

Table 41.
Epiphyseal Fusion

| Bone | Epiphysis | Stage of Union L | Stage of Union R |
|---|---|---|---|
| femur | head | open | open |
| | greater trochanter | | open |
| | distal | open | open |
| tibia | proximal | open | open |
| fibula | proximal | | open |

Table 42.
Primary Ossification Centers

| Bone | Area of Union | Extent |
|---|---|---|
| Os Coxae | ilium-pubis | open |
| | ischium-pubis | open |
| | ischium-ilium | open |
| Sacral Segments | 1-2 | open |
| | 2-3 | open |

Table 43.
Cranial Sutures

| | |
|---|---|
| Sagital Suture | open |
| Lambda | open |
| Lamdoid Suture | open |
| Squamos Suture | open |

# BEEF A PLENTY: THE FAUNAL REMAINS FROM YOUGHAL PLANTATION

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## Introduction

Analysis of the vertebrate faunal remains recovered from Youghal Plantation provides an opportunity to further examine subsistence patterns associated with South Carolina plantation owners and slaves as well as late 19th century subsistence patterns. Research questions which focus on animal domestication and exploitation practices aid in identifying differences in subsistence patterns and wealth and status in the greater Antebellum South. Likewise, comparisons of the faunal assemblages recovered from the identified seven activity areas and nine associated features at Youghal Plantation can provide important information on differential access to animal food by the plantation and later inhabitants.

Specific research questions addressed in this study include:

1. What species are associated with each of the activity areas? Are faunal category patterns associated with the Youghal activity areas similar to other collections recovered from South Carolina plantation sites?

2. Are there major differences in subsistence patterns between the Main House and identified Slave quarters at the site? It is expected that more and better cuts of meat, especially from domestic cattle and swine, would be associated with the Main House. Likewise, less quality meats are expected to be present at the slave areas.

3. What modifications are present on the faunal elements?

An estimated 1,160 elements were identified in the collection weighing 1,981.06 grams. The seven activity areas used in this analysis were the area southwest of the Main House (Fuller/Auld house); the area east of the Fuller/Auld house representing a mix of house slaves and possible post bellum deposits; the landscape and garden feature; the two spatially distinct field slave quarters; the ice house; and the colonial structure. Features 2, 3, 5, 6, 7, 8, 12, 13, and posthole 2 also contained animal bone.

By analyzing the faunal materials according to the specific activity areas identified archaeologically at Youghal Plantation, differential access to and use of animal foods can be examined. Most important are the differences observed in identified fauna for the plantation house areas and the two slave areas. Studies on eighteenth and nineteenth century upper-class urban households document a more variable diet for this social class, including both

wild and domestic species coupled with a higher frequency of fish (Reitz 1987). In a related study Reitz (1987) compares urban and rural faunal assemblages. Here Reitz maintains that urban residents used more domestic species, particularly birds, with fewer wild species being present when compared to rural diets (Reitz 1987).

Although identified taxa can provide invaluable insight into diet variability and animal availability, cuts of meat, corresponding to identified bone elements, have been used to assess social prestige. According to Weinand and Reitz (1996) upper and middle class antebellum households in Charleston, S.C. characteristically had access to better meat cuts, evidenced by a higher frequency of forequarter and hindquarter skeletal elements. Other cuts of meat, specifically elements of the cranium, axial skeleton, and lower legs and feet, are often associated with individuals or businesses of lower prestige (Weinand and Reitz 1996).

**Analytical Techniques**

Faunal collections from 38CH932 were recovered archaeologically using ¼-inch mesh. Analysis by the authors employed standard zooarchaeological procedures and methods. The comparative collection at Cobb Institute of Archaeology, Mississippi State University, was used to aid in element identification. The recovered faunal materials were sorted to class, suborder, or species, and individual bone elements were identified. The side (right or left), specific bone section (diaphysis, epiphysis, distal, proximal, etc.), and level of maturity (immature, adult, old adult), were recorded where preservation permitted. Bones of all taxa and other analytical categories were weighed in grams and counted. The Minimum Number of Individuals (MNI) was computed for each animal category using paired bone elements and age (mature/immature) as criteria. Grayson' s (1973) method using stratigraphic divisions was employed to determine MNI. For the collections analyzed in this study, this meant treating identical stratigraphic layers (i.e., Level 1 or Level 2) as a single unit before combining the MNI for the area. Features and postholes were also treated as individual data sets and kept separate at all levels of interpretations.

Using stratigraphic divisions by activity area provides a MNI count that is less conservative than the minimum distinction method where the entire site is treated as a single unit. Conversely, using stratigraphic divisions to determine MNI is more conservative than the maximum distinction method where both horizontal and vertical strata are treated as single units (Grayson 1973: 438). Data from the different proveniences (levels and features) are combined together in considering cuts of meat for the seven activity areas. In this case information from levels and features was added together by activity area. MNI was not a consideration for this part of the study.

As a measure of zooarchaeological quantification, using MNI is problematical (Casteel 1977; Grayson 1973; 1984). Depending on the method used (minimum distinction, maximum distinction, or stratigraphic layers), the MNI calculated for a faunal assemblage may be under or over representative. Likewise, use of MNI emphasizes small mammals over large ones.

For example, a bird species may be represented five times for every large mamal, but the large mammal contributes more to the diet. Additionally, representation of an animal does not presume its use in entirety at the site (Reitz and Weinand 1995). Certain cuts may have been sold or traded elsewhere (Scott 1981: Thomas 1971: Welch 1991), or been more readily available to one segment of the population over another (Reitz 1987). In either case, the representation of certain bone elements at a site can be biased. Because of the problems discussed above, it is important that research questions consider the limitations inherent in using MNI.

Given the problems associated with using MNI as a zooarchaeological measure, estimates of biomass of each taxon used by the inhabitants is calculated. The method used by the authors to determine biomass is based on allometry—the biological relationship between bone mass and soft tissue. It is determined using a least squares analysis of logarithmic data where bone weight is used to estimate soft tissue amounts that would have been supported by the bone (Casteel 1978; Reitz 1982; Reitz and Cordier 1983; Reitz and Scarry 1985; Reitz et. al. 1987; Reitz and Wing 1999; Wing and Brown 1979). The relationship between skeletal weight and body weight is expressed by the allometric equation $Y= aX^b$, which can be written as log Y= log a + b(log X) (Simpson et. al. 1960:397). The variables represented in this equation are the following: Y is the biomass (in kilograms), X is the weight of bone (in kilograms), "a" is the Y-intercept for a log-log plot using a method of least squares regression and the best fit line, and "b" is the constant of allometry—the slope of the line defined by the least squares regression and the best fit line.

A useful method for comparing similarities and differences in faunal assemblages is to observe the percentages of MNI for specific faunal categories. Reitz (1987) developed this model for urban, rural, and slave settlements located along the South Carolina and Georgia coast. For this study, MNI percentages were combined in configuring the faunal category patterns for domestic mammal, wild mammal, domestic bird, wild bird, reptiles, fish, and commensals.

Recording the presence or absence of bone elements in a faunal assemblage provides useful information on butchery patterns and animal husbandry. Elements identified for cattle, pig, and deer were classified as "head" (cranial fragments and teeth), "axial" (vertebra and ribs), "forequarter (scapula, humerus, ulna, and radius), "hindquarter" (innominate, femur, tibia, fibula), "hindfoot" (tarsals and metatarsals), "forefoot" (carpals and metacarpals), and "foot" (phalanges). Using log difference scale models for cattle (Reitz and Zierden 1991), pig, and deer (Reitz and Wing 1999) bone representation can be observed for the different activity areas at Youghal Plantation. Using cuts of meat in these models provides another means for examining bone representation in a faunal assemblage (see Reitz and Zierden 1991 for discussion).

In addition to determination of MNI, biomass weight, and meat cuts, observations of bone modifications classified as sawed, clean-cut, burned, chopped/hacked, gnawed, and worked are also included in the analysis. Sawing is distinguished where parallel striations are observed on the outer layer of bone. Clean-cut marks are generally produced by sawing but striations are not present. Burned bone is modified by exposure to fire during preparation or after discard. Cuts are defined as shallow incisions on the bone surface generally associated with cutting meat around the joint area. Chop/hack marks are created using a cleaver or ax. Gnawed bone indicates bone was not buried immediately following disposal and consequently was exposed to animals. Human modification of bone not associated with butchering is identified as worked bone (Reitz and Weinand 1995).

The next section presents a short description of identified taxa from 38CH932 followed by the results of the analysis.

**Identified Fauna**

The general use and habitat preference will now be considered for 38CH932. Tables 44-60 list the animal species identified in the collection recovered from Youghal. A short description of the plantation's animal use will examine both native and domestic mammals and birds followed by native reptiles, fish, and commensal species.

### Domestic Mammals

Three domestic mammal species that could have been food sources are present in the faunal collection: cow (*Bos taurus*); pig (*Sus scrofa*); and domestic Caprine, most likely sheep (*Ovis aries*). Pigs were one of the most important domestic mammal food sources used in the Southeastern United States. (see Hilliard 1972:92-111). They require little care because they roam free or can be penned. Robert Beverly, an early eighteenth century historian from Virginia, states that "hogs swarm like Vermine upon the Earth" and "run where the list, and find their own Support in the Woods, without any Care of the Owner" (Carson 1985:2). In addition to their ease of care, their diet consists of various food resources including seeds, nuts, mushrooms, larvae, snakes, roots, fruits, worms, carrion, eggs, small mammals, mice, kitchen refuse, grain, and feces.

They store about 35% of the calories they consume, and can gain about 2 pounds from every 15-25 pounds of feed (Towne and Wentworth 1950:7-8). A pig can gain up to 200 pounds within 18 months, of which about 120 pounds can be consumed. A dressed pig carcass can yield 65-80% meat. Pork lends itself well as a food source because it preserves well, is a good source of thiamine, and is satisfying in taste due in part to its high fat content (Towne and Wentworth 1950:249).

Popular methods of preserving pork were salting and smoking, but Harriott Pinckney Horry also includes information on how to pickle hams (Horry 1984:90-91, 120,130 [1770]). Ethnohistoric data promotes pork as a very important food item along the coastal plain from Maryland to Louisiana, however Reitz (1995) challenges this perception. Her analysis of historic fauna materials from the east coast indicates a greater frequency of cattle in the collections. She suggests that pork may have been reserved for special occasions in wealthy homes with poorer cuts provided to strangers traveling though the area (Reitz 1995). Reitz (1995) also suggests that cattle fairs better than pigs in the hot humid coastal environments.

Cattle are typically described as difficult and burdensome animals to raise, but served as an extremely important food source in the Southeastern United States (see Hilliard 1972:112-140; Rouse 1973; Towne and Wentworth 1950,1955). One major deficit with raising cattle is the energy output and cost of raising them (Towne and Wentworth 1950:7-8). Typically cattle rely on grain and grasses and if both of these resources are not the right quality or quantity, meat yield will be affected. Cattle only store about 11% of their consumed calories and only yield about 50-60% meat when dressed. Even though beef is more labor intensive to raise and do not preserve as well as pork (Tomhave 1925:275), the demand for hides, fresh beef, and other products obtained from cattle was great (milk, cheese, buttermilk, and butter) (see Hilliard 1972:119-135; Rouse 1973; Towne and Wentworth 1955).

The third domesticated mammal found at the Youghal Plantation was the sheep. Carson (1985:2) suggests that they were never very popular in America because people quickly acquired the taste for venison instead. Mutton was a minor food source during the eighteenth century and its popularity declined further in the nineteenth century (Hilliard 1972:141-144). Sheep was, however, a source of wool for clothing, mostly for use in the home (Hilliard 1972:141-142).

### Domestic Birds

The only domestic bird species identified in the Youghal faunal remains was the chicken (*Gallus gallus*). Chicken are relatively easy to keep, because, like pigs, they can feed themselves scavenging for available foods or they can be kept in pens and cared for by humans. Chicken was a popular food resource for both slave and plantation owners in the eighteenth and nineteenth centuries. In addition to meat, they provided eggs for food, cooking

ingredients (Hilliard 1972:46-47), and possibly feathers which would have been useful for bedding.

### Wild Mammals

Several wild mammals presumably used for food were identified in the Youghal faunal collections. These include deer (*Odocoileus virginianus*), black bear (*Ursus americanus*), raccoon (*Procyon lotor*), rabbit (*Sylvilagus floridanus)*, and mink (*Mustela vison*). All of these mammals can be found in forest habitats but several are more likely to occupy specific areas of the forest. Deer prefer the edge of deciduous forests and open forests as well as farmlands and bushy areas while bear inhabit forests and swamps (Whitaker 1997). Raccoons are quite adaptable to all types of forested environments, but prefer bottomland forests along marshes, streams, and rivers as well as agricultural and wooded urban sites. The eastern cottontail also occupies a variety of habitats especially deciduous forests, overgrown fields, and forest edge and has become commensal with humans around farms and in some urban areas. The mink is a semi-aquatic mammal seldom found far from permanent water sources. They are considered nocturnal carnivores, but may be seen during the day. The mink has a long history of being one of the most valuable North American furbearers (Choate et al. 1994), and for this reason, was probably hunted for its pelt rather than as a food source.

### Wild Birds

The American Coot (*Fulica americanus*) and unidentified duck species (*Anatidae* spp.) were the wild bird species identified in the Youghal Plantation collection. American coot prefer aquatic environments and are excellent swimmers and divers. Interestingly, they often feed on land and can become tame when fed scraps of food (Bull and Farrand 1994).

### Reptiles

Three reptile species were identified in the Youghal Plantation collection. These species consisted of cooter (*Chrysemys floridana*), box turtle (*Terrapene carolina*), and soft shell turtle species (*Trionychidae* spp.). Associated with all types of freshwater sources, these turtle species are often seen on land sunning themselves or looking for areas to nest (Behler and King 1979). The cooter was used as a food resource in the South during the eighteenth and nineteenth centuries (Hilliard 1972:89).

### Pisces and Crab

The fish species identified include two fresh water species, bowfin (*Amia calva*) and brown bullhead catfish (*Ictalurus nebulosus*); in addition to several marine species, sea catfish (*Ariidae* sp.) specifically hardhead catfish (*Arius felis*), and drum species (*Sciaenidae* spp). The bowfin is commonly found in sluggish clear waters off the Carolina Coastal Plain and averages between 45 and 87 centimeters in length (Lee et al. 1980:53). The Brown Bullhead is robust and located in clear water with submerged vegetation (Boschung et al. 1983). Drum and young catfish are commonly found in bays and estuarine environments, as well as tidal shores (Boschung et al. 1983). Of the drum species, black drum is the largest weighing up to 109 pounds followed closely by red drum at aaproximately 92 pounds. The two sea catfish species, gafftopsail and hardhead, are both used for food. Hardhead catfish is the larger of the two species weighing around 12 pounds while gafftopsail catfish average about 5-6 pounds (Robbins et al. 1986).

The blue crab (*Callinectus* sp.) was observed in the faunal assemblage. This species can be found in many coastal habitats.

Table 44.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for the Southern Colonial Area

| Species | MNI | | # of Bones | Weight (gm) | Biomass | |
|---|---|---|---|---|---|---|
| | # | % | | | Kg | % |
| Cow, *Bos taurus* | 1 | 6.67 | 4 | 44.86 | 0.806 | 37.65 |
| Pig, *Sus scrofa* | 1 | 6.67 | 9 | 12.56 | 0.256 | 11.96 |
| Sheep, *Ovis aries* | 1 | 6.67 | 2 | 21.77 | 0.421 | 19.66 |
| Deer, *Odocoileus virginianus* | 1 | 6.67 | 12 | 15.41 | 0.308 | 14.39 |
| Eastern Cottontail, *Sylvilagus floridanas* | 1 | 6.67 | 3 | 1.2 | 0.031 | 1.45 |
| Mink, *Mustela vison* | 1 | 6.67 | 7 | 3.45 | 0.08 | 3.74 |
| Hispid Cotton Rat, *Sigmodon hispidus* | 1 | 6.67 | 1 | 0.31 | 0.009 | 0.42 |
| Rice Rat, *Oryzomys palustris* | 2 | 13.33 | 3 | 0.71 | 0.019 | 0.89 |
| Eastern Woodrat, *Neotoma floridana* | 1 | 6.67 | 1 | 0.44 | 0.013 | 0.61 |
| *Rattus* spp. | 1 | 6.67 | 5 | 0.6 | 0.017 | 0.79 |
| Unidentified Large Mammal | - | - | 35 | 28.12 | - | - |
| Unidentified Small Mammal | - | - | 11 | 2.17 | - | - |
| Chicken, *Gallus gallus* | 1 | 6.67 | 6 | 4.42 | 0.079 | 3.69 |
| American Coot, *Fulica americana* | 1 | 6.67 | 1 | 0.17 | 0.004 | 0.19 |
| Unidentified Bird | - | - | 12 | 1.68 | - | - |
| Box Turtle, *Terrapene carolina* | 1 | 6.67 | 16 | 5.13 | 0.095 | 4.44 |
| Catfish, *Ictalurus* sp. | 1 | 6.67 | 1 | 0.13 | 0.003 | 0.14 |
| Total | 15 | 100.04 | 129 | 143.13 | 2.141 | 100.02 |

### Commensal Species

Commensal species include animals found near or around human habitations but are not generally consumed by humans. These animals include pets, pest, vermin and animals that feed on them. Canis species, snakes, amphibians, rats and mice are common examples of commensal species. The only canis species identified in the collection was coyote (*Canis latrans*). This animal prefers bushy areas (Whitaker 1997) but also occupies upland and bottomland forest areas (Choate et al. 1994). Rodents made up the majority of the commensal species with hispid cotton rat (*Sigmodon hispidus*), marsh rice rat (*Oryzomys palustris*), and eastern woodrat (*Neotoma floridana*) present. All the rodent species generally prefer forested areas with convenient cover but can also be observed in other habitats including forest edge, disturbed landscapes, clearings, and overgrown clearings (Choate et al. 1994).

### Results

Four levels of inquiry are used in this investigation of the Youghal Plantation faunal assemblage. The first involves an inventory of the animal remains associated with each of the activity areas and the determination of each species contribution to the

Table 45.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Feature 2

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Unidentified Large Mammal | - | - | 1 | 2.79 | - | - |
| Box Turtle, *Terrapene carolina* | 1 | 100 | 1 | 0.36 | 0.016 | 100 |
| Totals | 1 | 100 | 2 | 3.15 | 0.016 | 100 |

Table 46.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Feature 3

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Box Turtle, *Terrapene carolina* | 1 | 33.33 | 1 | 0.84 | 0.028 | 31.11 |
| Cooter, *Chrysemys floridana* | 1 | 33.33 | 1 | 2.39 | 0.057 | 63.33 |
| Catfish, *Ictalurus* sp. | 1 | 33.33 | 1 | 0.25 | 0.005 | 5.56 |
| Totals | 3 | 99.99 | 3 | 3.48 | 0.09 | 100 |

diet. This study includes the assessment of MNI and biomass weight percentages for each species and animal group. Comparisons are then made among the Youghal Plantation activity areas and other collections to identify subsistence patterns. This second study uses MNI percentages for seven different faunal categories. A third study compares the number and weight of bone elements representing different cuts of meat in the large mammals (cow, pig, and deer). Using

Table 47.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Area North of the Fuller/Auld House

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Mink, *Mustela vison* | 1 | 100 | 1 | 0.32 | 0.009 | 100 |
| Unidentified Large Mammal | - | - | 2 | 1.2 | - | - |
| Totals | 1 | 100 | 3 | 1.52 | 0.009 | 100 |

the log difference scale (Reitz and Wing 1999) comparisons are made among the different activity areas to assess differential access to foods by plantation owners and slaves. Similar information is used from other plantation sites in the area to establish possible status differences among the sites. Finally, modifications of the bone elements, such as cut marks and rodent gnawing, are considered in a fourth study to distinguish butchering techniques and processing of animal bone at the site.

Before discussing the results of the analysis of the faunal assemblages from Youghal Plantation, a few comments concerning the bone sample size need to be offered. It is recommended that faunal samples contain at least 200 individuals (MNI) or 1400 identifiable bones (NISP number of identified specimens), in order to provide reliable interpretations (Grayson 1973; 1984; Wing and Brown 1979). For this study this would be the number of bones identified to species. An examination of Tables 44-60 indicates that none of the faunal samples fit this criterion. In every case the MNI and NISP identified for each faunal sample are well below the minimum suggested. Since there are clear possibilities for bias and under-representation of the faunal species identified at the site, the inferences and interpretations presented in this study are considered preliminary at best. However, it is reasoned that such interpretations are necessary in order to answer existing questions and develop further questions concerning dietary patterns at Youghal Plantation and for plantation sites in general.

**Southern Colonial Area**

Excavation of this area consisted of units 280-300R175, 305R170, and 35 shovel tests. In addition to the faunal materials recovered from these units, Features 2 and 3 were associated with this area. The discard is thought to be associated with a late antebellum occupation (Trinkley personal communication). The majority of animal bone was recovered from the excavated 10 square foot units, which yielded 129 animal bones representing 13 species (Table

Table 48.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Landscape Garden Area

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Cow, *Bos taurus* | 1 | 12.5 | 15 | 214.88 | 3.303 | 69.13 |
| Pig, *Sus scrofa* | 1 | 12.5 | 15 | 37,74 | 0.69 | 14.44 |
| Deer, *Odocoileus virginianus* | 1 | 12.5 | 7 | 31.17 | 0.581 | 12.16 |
| Unidentified Large Mammal | - | - | 102 | 187.5 | - | - |
| Unidentified Small Mammal | - | - | 4 | 0.71 | - | - |
| Chicken, *Gallus gallus* | 1 | 12.5 | 2 | 0.6 | 0.013 | 0.27 |
| Duck, Anatidae | 1 | 12.5 | 1 | 0.38 | 0.008 | 0.17 |
| Box Turtle, *Terrapene carolina* | 1 | 12.5 | 4 | 3.16 | 0.068 | 1.42 |
| Drum, Sciaenidae | 1 | 12.5 | 1 | 0.81 | 0.033 | 0.69 |
| Unidentified Fish | - | - | 4 | 5.82 | - | - |
| Crab, *Callinectes sapides* | 1 | 12.5 | 4 | 2.94 | 0.082 | 1.72 |
| Totals | 8 | 100 | 159 | 447.97 | 4.778 | 100 |

44). Most of the materials identified were domestic mammals that represented 69.27% of the total biomass. Cattle dominated the collection (37.65% of the total biomass weight) followed by sheep (19.66% biomass ) and pig (11.96% biomass). Deer was also well represented (14.29% of the total biomass). In addition to mammals, other important food sources included chicken (3.69% biomass) and box turtle (4.44% biomass). Fish species were sparse representing only 0.14% biomass. Interestingly, this area was the only area where sheep was identified and no blue crab was recovered. Another interesting find was the presence of mink in the sample. Seven elements were identified as mink including portions of the right and left humerus, vertebrae, and mandible. Although the possibility of mink as a food source exists, its presence is likely the result of hunting for pelts.

Features 2 and 3 (Tables 45 and 46) are associated with agricultural ditches cut through this area. Few faunal elements, a total of five for both features, were identified.

### Area North of the Fuller /Auld House

Three ten foot units, 570R260-270 and 530R340 were excavated. Originally thought to be associated with the tenant structures identified on the 1919 map, further analysis revealed these remains to date from the early antebellum. Few faunal elements were recovered from these excavation units (Table 47). The one identified bone was a right distal mink humerus. This fragment cross-mended with a right proximal mink humerus identified in the 305R170 unit excavated southwest of the Main House. This finding indicates that level 1 was extremely disturbed by plowing and other activities at the site.

### Landscape Garden Area

Table 48 presents the faunal summary for the area associated with the landscape/garden (elsewhere this area has been referred to as the "Colonial Area, North" or simply the northern colonial area). Feature 8 (Table 49) and Feature 12 (Table 50) are also associated with this area of the site. This locale was northeast of the Fuller/Auld house and was further examined since shovel tests showed evidence for numerous artifacts. The area was under the rubble of the burned Fuller/Auld house and was uncovered using mechanical stripping (labeled Cut 6). A tabby brick structure was identified in the area. Eight species were represented in the sample that contained 159 fragments weighing 447.97 grams.

Table 49.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Feature 8

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Cow, *Bos taurus* | 1 | 50 | 1 | 1.72 | 0.043 | 43.43 |
| Unidentified Large Mammal | - | - | 5 | 12.22 | - | - |
| Crab, *Callinectes sapidus* | 1 | 50 | 1 | 1.84 | 0.056 | 56.57 |
| Totals | 2 | 100 | 7 | 15.78 | 0.099 | 100 |

Table 50.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Feature 12

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Unidentified Large Mammal | - | - | 2 | 2.07 | - | - |
| Unidentified Small Mammal | - | - | 1 | 0.62 | - | - |
| Totals | 0 | 0 | 3 | 2.69 | 0 | 0 |

Table 51.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for the Western Slave Settlement

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Cow, *Bos taurus* | 1 | 25 | 4 | 4.68 | 0.105 | 46.26 |
| Pig, *Sus scrofa* | 1 | 25 | 3 | 2.3 | 0.056 | 24.67 |
| Deer, *Odocoileus virginianus* | 1 | 25 | 1 | 1.57 | 0.039 | 17.18 |
| Unidentified Large Mammal | - | - | 37 | 19.56 | - | - |
| Unidentified Small Mammal | - | - | 1 | 0.59 | - | - |
| Crab, *Callinectes sapides* | 1 | 25 | 1 | 0.76 | 0.027 | 11.89 |
| Totals | 4 | 100 | 47 | 29.46 | 0.227 | 100 |

Table 52.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for the Eastern Slave Settlement

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Cow, *Bos taurus* | 1 | 7.14 | 54 | 244.56 | 3.711 | 48.24 |
| Pig, *Sus scrofa* | 3 | 21.43 | 79 | 146.56 | 2.341 | 30.43 |
| Deer, *Odocoileus virginianus* | 2 | 14.29 | 9 | 28.34 | 0.533 | 6.93 |
| Black Bear, *Ursus americanus* | 1 | 7.14 | 1 | 4.62 | 0.104 | 1.35 |
| Unidentified Large Mammal | - | - | 338 | 430.58 | - | - |
| Unidentified Small Mammal | - | - | 6 | 1.07 | - | - |
| Chicken, *Gallus gallus* | 1 | 7.14 | 11 | 5.13 | 0.09 | 1.17 |
| Unidentified Bird | - | - | 8 | 3.5 | - | - |
| Box Turtle, *Terrapene carolina* | 1 | 7.14 | 15 | 10.06 | 0.149 | 1.94 |
| Softshell Turtle, *Trionychedae* spp. | 1 | 7.14 | 2 | 0.69 | 0.025 | 0.33 |
| Cooter, *Chrysemys floridana* | 1 | 7.14 | 5 | 7.4 | 0.121 | 1.57 |
| Unidentified Turtle | - | - | 3 | 3.23 | - | - |
| Hardhead Catfish, *Arius felis* | 1 | 7.14 | 1 | 0.53 | 0.011 | 0.14 |
| Bowfin, *Amia calva* | 1 | 7.14 | 4 | 2.11 | 0.041 | 0.53 |
| Unidentified Fish | - | - | 1 | 0.21 | - | - |
| Crab, *Callinectes sapides* | 1 | 7.14 | 33 | 30.96 | 0.566 | 7.36 |
| Totals | 14 | 99.98 | 570 | 919.55 | 7.692 | 99.99 |

Table 53.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Feature 5

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Cow, *Bos taurus* | 1 | 50 | 1 | 1.13 | 0.029 | 64.44 |
| Pig, *Sus scrofa* | 1 | 50 | 1 | 0.59 | 0.016 | 35.56 |
| Unidentified Large Mammal | - | - | 3 | 3.61 | - | - |
| Unidentified Small Mammal | - | - | 2 | 0.91 | - | - |
| Totals | 2 | 100 | 7 | 6.24 | 0.045 | 100 |

Table 54.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Feature 6

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Cow, *Bos taurus* | 1 | 25 | 2 | 5.75 | 0.127 | 36.49 |
| Pig, *Sus scrofa* | 1 | 25 | 2 | 7.67 | 0.165 | 47.41 |
| Unidentified Large Mammal | - | - | 10 | 5 | - | - |
| Unidentified Small Mammal | - | - | 6 | 0.51 | - | - |
| Chicken, *Gallus gallus* | 1 | 25 | 1 | 2.18 | 0.041 | 11.78 |
| Cooter, *Chrysemys floridana* | 1 | 25 | 1 | 0.32 | 0.015 | 4.31 |
| Totals | 4 | 100 | 22 | 21.43 | 0.348 | 99.99 |

Table 55.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Feature 7

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Deer, *Odocoileus virginianus* | 1 | 100 | 2 | 1.63 | 0.041 | 100 |
| Unidentified Large Mammal | - | - | 1 | 0.54 | - | - |
| Totals | 1 | 100 | 3 | 2.17 | 0.041 | 100 |

Table 56.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Post Hole 2, Eastern Slave Settlement

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Unidentified Large Mammal | - | - | 3 | 2.39 | - | - |
| Total | 0 | 0 | 3 | 2.39 | 0 | 0 |

Table 57.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for the Ice House

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Cow, *Bos taurus* | 1 | 10 | 1 | 3.01 | 0.071 | 16.17 |
| Pig, *Sus scrofa* | 1 | 10 | 4 | 7.95 | 0.17 | 38.72 |
| Deer, *Odocoileus virginianus* | 1 | 10 | 1 | 1.17 | 0.03 | 6.83 |
| Raccoon, *Procyon lotor* | 1 | 10 | 1 | 0.23 | 0.007 | 1.59 |
| Hispid Cotton Rat, *Sigmodon hispidus* | 1 | 10 | 1 | 0.37 | 0.011 | 2.51 |
| Unidentified Large Mammal | - | - | 5 | 3.67 | - | - |
| Unidentified Small Mammal | - | - | 2 | 0.33 | - | - |
| Unidentified Bird | - | - | 2 | 0.45 | - | - |
| Box Turtle, *Terrapene carolina* | 1 | 10 | 5 | 5.09 | 0.094 | 21.41 |
| Catfish, *Ictalurus spp.* | 1 | 10 | 3 | 1.56 | 0.03 | 6.83 |
| Hardhead Catfish, *Arius felis* | 1 | 10 | 1 | 0.33 | 0.007 | 1.59 |
| Sea Catfish, Ariidae | 1 | 10 | 1 | 0.24 | 0.005 | 1.14 |
| Drum, Sciaenidae | 1 | 10 | 1 | 0.25 | 0.014 | 3.19 |
| Unidentified Fish | - | - | 1 | 2.82 | - | - |
| Totals | 10 | 100 | 29 | 27.47 | 0.439 | 99.98 |

As expected, domestic mammals – cattle (68.13% biomass) and pig (14.44% biomass) – were well represented followed by deer (12.16% biomass). Mammals made up over 95% of the total biomass percentage for this sample. Chicken, duck, box turtle, drum, and blue crab were also present in much smaller quantities.

Feature 8 (Table 49) was a mortar, brick, and shell-filled pit (Trinkley 2003). Cow and blue crab were the only animals identified in the pit. Feature 12 (Table 50) contained three unidentified mammal bones. This feature, constructed of brick and mortar, may have served as a flower-bed or some other landscaping feature.

**Slave Settlements**

Two spatially distinct field slave settlements were discovered at Youghal Plantation. Units 540R510 and 500R500 were associated with the western settlement and yielded very few faunal remains (Table 51). Most of the remains were large mammal, consisting of cow (46.26% biomass), pig (24.67% biomass) and deer (17.18% biomass). Blue crab was well represented at 11.89% of the total biomass.

The second, or eastern, slave settlement (Table 52) was associated with 530R660, 500R660, 470R660, and 480R670 excavation units. Eleven species were identified for 570 fragments totaling 919.55 grams. Cattle (48.24% biomass) and pig (30.43% biomass) dominated followed by blue crab (7.36% biomass) and deer (6.93% biomass). One unusual find was the presence of black bear identified by a left maxillary canine. The tooth showed extensive attrition and may well represent an older specimen.

Turtle was well represented totaling 3.84% of the biomass. Box turtle was found in the greatest frequency but two other species, cooter (1.57% biomass) and softshell turtle (.33% biomass), were also present.

Features associated with this section of the site include Features 5, 6, 7 and posthole 2. Features 5 and 6 were both shallow pits containing sand and shell fill (Trinkley 2003). Feature 5 (Table 53) contained little animal bone; seven fragments total. Of these fragments one was identified as cow and the other pig. Twenty fragments weighing 21.43 grams were

Table 58.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Cut 4 Colonial Structure

| Species | MNI # | MNI % | # of Bones | Weight (gm) | Biomass Kg | Biomass % |
|---|---|---|---|---|---|---|
| Cow, *Bos taurus* | 1 | 5.26 | 22 | 215.55 | 3.312 | 40.49 |
| Pig, *Sus scrofa* | 2 | 10.53 | 15 | 162/26 | 2.565 | 31.36 |
| Deer, *Odocoileus virginianus* | 1 | 5.26 | 4 | 59/78 | 1.044 | 12.76 |
| Coyote, *Canis latrans* | 1 | 5.26 | 1 | 6.27 | 0.137 | 1.67 |
| Eastern Cottontail, *Sylvilagus floridanas.* | 1 | 5.26 | 2 | 1.46 | 0.037 | 0.45 |
| Hispid Cotton Rat, *Sigmodon hispidus* | 1 | 5.26 | 2 | 0.67 | 0.018 | 0.22 |
| Rice Rat, *Oryzomys palustris* | 1 | 5.26 | 3 | 1 | 0.026 | 0.32 |
| *Rattus* spp. | 1 | 5.26 | 2 | 0.48 | 0.014 | 0.17 |
| Unidentified Large Mammal | - | - | 36 | 58.97 | - | - |
| Unidentified Small Mammal | - | - | 11 | 4.95 | - | - |
| Chicken, *Gallus gallus* | 2 | 10.53 | 12 | 3.67 | 0.067 | 0.82 |
| Duck, Anatidae | 1 | 5.26 | 1 | 2.11 | 0.04 | 0.49 |
| Unidentified Bird | - | - | 9 | 1.96 | - | - |
| Box Turtle, *Terrapene carolina* | 1 | 5.26 | 12 | 5.81 | 0.103 | 1.26 |
| Unidentified Turtle | - | - | 3 | 0.8 | - | - |
| Channel Catfish, *Ictalurus punctatus* | 1 | 5.26 | 2 | 0.7 | 0.014 | 0.17 |
| Hardhead Catfish, *Arius felis* | 1 | 5.26 | 1 | 0.49 | 0.01 | 0.12 |
| Drum, Sciaenidae spp. | 1 | 5.26 | 7 | 9.01 | 0.198 | 2.42 |
| Unidentified Fish | - | - | 5 | 1.77 | - | - |
| Snake, Nerodia | 1 | 5.26 | 1 | 0.17 | 0.002 | 0.02 |
| Crab, *Callinectes sapides* | 2 | 10.53 | 14 | 32.83 | 0.593 | 7.25 |
| Totals | 19 | 99.97 | 165 | 348.67 | 8.18 | 99.99 |

recovered from Feature 6 (Table 54). Pig was the most prevalent species identified (47.49% biomass) followed by cow (36.49% biomass), chicken (11.78% biomass), and blue crab (4.31% biomass). Little bone, only three fragments, was recovered for Feature 7 (Table 55). Two fragments were identified as deer. Likewise, post hole 2 (Table 56) contained three unidentified large mammal fragments.

**Ice House**

The ice house (Table 57) was excavated using exterior and interior divisions. Only two bones, a right distal humerus of a hispid cotton rat and a cow fragment were associated with the interior level 1. Since only two animal bones were associated with this provenience, the faunal assemblage was treated as one. Pig dominated the exterior collection representing 38.72% of the biomass, followed by box turtle (21.41% biomass) cow (16.17% biomass), fish (12.75% biomass), and raccoon (1.59% biomass).

**Colonial Structure**

Additional testing by mechanical stripping led to the discovery of an 18th century structure located north of the main house. Fifteen animal species were identified from the recovered 165 fragments weighing 348.67 grams (Table 58). Domestic mammals totaled 71.85% of the biomass weight. Deer (12.76% biomass), crab (7.25% biomass), and fish (2.71% biomass) dominated the wild species groups. Compared with the other areas, less chicken (.82% of the biomass) was present in this area. Other identified species included coyote, rabbit, hispid cotton rat, marsh rice rat, box turtle, and water snake.

### Feature 13

Feature 13 was a builder's trench (associated with the colonial structure) that contained very few artifacts and bone. Faunal material recovered from the Feature are provided in Table 59.

### Faunal Category Patterns

Figure 49 presents an inventory of faunal categories for each of the Youghal Plantation activity areas. These are compared with patterns obtained for slave, urban, and rural historic settlements located in coastal South Carolina and Georgia (Reitz 1987). Faunal assemblages from Broomhall Plantation (Hogue et al. 1995; Trinkley et al. 1995) and Seabrook Plantation (Campo et al. 1998; Hogue 1998) are also included for comparative purposes.

Table 59.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Feature 13

| Species | MNI | | # of Bones | Weight (gm) | Biomass | |
|---|---|---|---|---|---|---|
| | # | % | | | Kg | % |
| Raccoon, *Procyon lotor* | 1 | 50 | 1 | 0.45 | 0.013 | 9.56 |
| Unidentified Small Mammal | - | - | 2 | 0.13 | - | - |
| Unidentified Bird | - | - | 1 | 0.1 | - | - |
| Unidentified Fish | - | - | 2 | 0.46 | - | - |
| Crab, *Callinectes sapides* | 2 | 50 | 2 | 4.82 | 0.123 | 90.44 |
| Totals | 3 | 100 | 8 | 5.96 | 0.136 | 100 |

For this study, the categories used are domestic mammal, wild mammal, domestic bird, wild bird, reptiles, fish, and commensals. This latter category included snakes, coyote, and the rodent species identified at the Youghal Plantation site. Percentages are calculated using MNI. For each activity area, MNIs were summed for all of the excavation units and associated features.

One obvious discrepancy observed among the collections is the greater frequency of domestic mammal in the Youghal Plantation activity areas. Specifically the Youghal Slave area has more than twice the expected frequency of domestic mammals and considerably less birds and fish than Reitz's (1987) model derived from similar sites. This is especially significant since over half of the Youghal Plantation faunal materials were recovered from the eastern slave settlement. The lack of fish and birds could be due to screening bias as only ¼-inch screen was used during excavation recovery. However, this screen size was also used in the excavation of sites included in Reitz's model (Reitz 1987: 47). Another argument against screen size biasing the sample is the greater frequency of fish associated with the ice house area. Sample size could be considered a factor in biasing the sample towards mammals. Another pattern worthy of mention is that two loci, the Colonial area located in Cut 4 and the southern colonial area excavated west of the Fuller/Auld house, appear most similar to the rural model although the sample sizes are considerably smaller. For now no clear subsistence pattern can be assigned to any of the Youghal activity areas. A variety of wild and domestic foods were used, with the greatest diversity of animals present in the eastern slave settlement area (n = 11 species), the area west of the Main House (n = 13 species) and Colonial area (n = 15 species)

### Differential Meat Portions

Only the areas with at least 150 bone elements were investigated for segment usage patterns. The skeletons of deer, pig, and cattle are subdivided into seven categories: head, axial, forequarter, hindquarter, forefoot, hindfoot, and foot. Meatier cuts are associated with the fore and hind quarters and to a lesser

degree the axial skeleton. Less desirable cuts are elements associated with the cranium, fore/hind foot and foot bones. The NISP (number of identified specimens) of each segment category was counted and each category's percentage of the total NISP for cattle, pig, or deer was calculated. The next step was to calculate $\log_e X$ (X being the percentage of each category) and subtract the $\log_e Y$ (the log of the animal's expected percentage for each category) from $\log_e X$ (Reitz and Zierden 1991; Reitz and Wing 1999). This value was plotted so that the deviation from the center line (the expected percentage) could be investigated. By looking at the difference between the expected and the observed, differential use of segments in separate areas can be examined.

As shown in Figure 50, cattle were most prevalent in the southern colonial area, the landscape/garden area, the eastern slave settlement, and the colonial structure. There appears to be greater use of quality hindquarter and forequarter segments than forefoot and hindfoot in the southern colonial area. The log-difference scale graph also shows the foot bones present in much higher amounts than in all of the other categories. This finding is unexpected but may suggest on-site butchering where the best cuts of meat were kept and the poorer quality fore/hindfoot were used elsewhere. The eastern slave settlement had a lower presence of forequarter and forefoot than hindquarter and hindfoot sections possibly indicating an export of front limbs away from the slave settlement. Because many of the values for this area are close to the expected standard for cattle, the slave settlement may represent a butchering area. The colonial structure results hint at increased use of the axial, forequarter, and hindfoot. Because the hindquarter is present in such low quantities, it is likely that the elements that are present were brought in and there was no processing on site. The low representation of head and foot bones supports the hypothesis that processing did not happen in this area. The landscape/garden area has high levels of hindquarter and moderate amounts of axial, forequarter, and hindfoot. It may also represent a butchering area because of the high amount of cranial bones present, but the low amount of forefoot and foot bones seems to indicate cuts were brought in or poorer parts sent elsewhere. This area can probably be linked to the area southwest of the Main House because the values are very similar and the better cuts of meat are present in both areas.

Pig bones are present in numbers sufficient for analysis in the same areas as for cattle. Figure 51 is a composite of these amounts. All four areas show a high amount of head bones and all but the colonial structure similarly drop to a low amount of axial bones, indicating that butchering might have occurred at all of the sites. The poorest cuts of pork appear at the southern colonial area southwest of the Fuller/Auld house, indicating a dumping site or butchering site (high head and foot elements). The landscape/garden area may represent a butchering and dumping site as it has high levels of foot and hindfoot. In both cattle and pig, this area has higher levels of hindfoot than forefoot and has high levels of a better cut of meat (hindquarter or forequarter) indicating that the forefoot was taken away from this area (if butchering took place here) or that mostly hindfoot was dumped here. The colonial area shows only the use of the forequarter and hindquarter, though it too is likely a butchering site (high amount of head bones). Interestingly, the severe lack of axial cuts and the high level of the best cuts may indicate curing of the best pork parts with the poorer pieces discarded elsewhere.

Figure 52 presents the segments of deer seen in the southern colonial area, eastern slave settlement, and landscape/garden. As with cattle and pig, there is a much higher representation of hindfoot than forefoot in the landscape/garden area, though it has the highest levels of forequarter and hindquarter. The eastern slave settlement appears to have better cuts of deer than cattle or pig, suggesting the slaves in that area might have been allowed

Table 60.
Bone Modifications for Youghal Plantation

**Modified Bones from the Southern Colonial Area**

| | Sawed | Clean Cut | Burned | Chopped/Hacked | Gnawed |
|---|---|---|---|---|---|
| Cow | 1 | 1 | - | 1 | - |
| Pig | - | - | 1 | - | - |
| Sheep | - | - | - | - | 1 |
| Unidentified Large Mammal | - | - | - | 4 | - |
| Box Turtle | - | - | 1 | - | - |
| Totals | 1 | 1 | 2 | 5 | 1 |
| % of NISP (129 total) | 0.78% | 0.78% | 1.55% | 3.88% | 0.78% |

**Modified Bones from Landscape/Garden Area**

| | Sawed | Clean Cut | Burned | Chopped/Hacked | Gnawed |
|---|---|---|---|---|---|
| Cow | 4 | - | - | 1 | 1 |
| Deer | - | - | 2 | - | - |
| Unidentified Large Mammal | 5 | - | 10 | - | - |
| Unidentified Small Mammal | - | - | 1 | - | - |
| Box Turtle | - | - | 1 | - | - |
| Totals | 9 | 0 | 14 | 1 | 1 |
| % of NISP (159 total) | 5.66% | 0.00% | 8.81% | 0.63% | 0.63% |

**Modified Bones from Eastern Slave Settlement**

| | Sawed | Clean Cut | Burned | Chopped/Hacked | Gnawed |
|---|---|---|---|---|---|
| Cow | 1 | - | - | 1 | - |
| Unidentified Large Mammal | 1 | - | 27 | - | - |
| Totals | 2 | 0 | 27 | 1 | 0 |
| % of NISP (570 total) | 0.35% | 0.00% | 4.74% | 0.18% | 0.00% |

**Modified Bones from the Ice House**

| | Sawed | Clean Cut | Burned | Chopped/Hacked | Gnawed |
|---|---|---|---|---|---|
| Cow | 1 | - | - | - | - |
| Unidentified Large Mammal | - | - | - | - | 1 |
| Totals | 1 | 0 | 0 | 0 | 1 |
| % of NISP (29 total) | 3.45% | 0.00% | 0.00% | 0.00% | 3.45% |

**Modified Bones from Cut 4 Colonial Area**

| | Sawed | Clean Cut | Burned | Chopped/Hacked | Gnawed |
|---|---|---|---|---|---|
| Cow | 1 | - | - | - | - |
| Unidentified Large Mammal | - | - | 2 | - | - |
| Totals | 1 | 0 | 2 | 0 | 0 |
| % of NISP (165 total) | 0.61% | 0.00% | 1.21% | 0.00% | 0.00% |

| | | | | | |
|---|---|---|---|---|---|
| **Site Total** | **14** | **1** | **45** | **7** | **3** |
| **Site Percentage** | **1.2** | **0.08** | **3.8** | **0.6** | **0.25** |

to procure their own deer. The southern colonial area may be a dumping place since the head, forefoot, and hindfoot are present in high amounts. It is likely that the lower part of the leg was sawn or cut off and discarded with the head while the parts with the most meat were taken to another area and consumed.

### Bone Modifications

A summary of the modified bone elements is presented in Table 60. Each specimen was examined with modifications classified as sawed, clean-cut, burned, chopped/hacked, gnawed and worked into tools or artifacts such as awls or buttons. No worked bone was observed in the collection. Only 5.93% of the total faunal collection had modifications and of these, most (3.8%) were burned. Sawed bone was limited to cattle and large mammals and was concentrated mainly in the landscape/garden area where 5.66% of the bone from the area had been modified. Most of the burned bone was located in this area as well where 8.81% of the recovered bones had been burned. The eastern slave settlement faunal sample also showed a high percentage of burned bone at 4.74%. The high frequency of burned and sawed bones in the landscape/garden area may indicate this area's use for discarding or composting refuse. The greatest frequency of chopped/hacked bone was found in the area

southwest of the Main House where 3.88% of the sample had been altered.

## Conclusions

The faunal remains recovered from the various activity areas and features at Youghal Plantation provided an opportunity to examine faunal use patterns and access at the site. A total of 1,160 bone fragments were recovered weighing 1,981.06 grams. Sample size for the site and the associated activity areas are relatively small and present possibilities for bias and under-representation of the faunal species identified at the site. Despite the small sample size several identified patterns are discussed, but any inferences and explanations presented here are considered preliminary at best. It is logical that such interpretations are crucial in order to answer existing questions and develop further questions concerning dietary patterns at Youghal Plantation and for plantation sites in general.

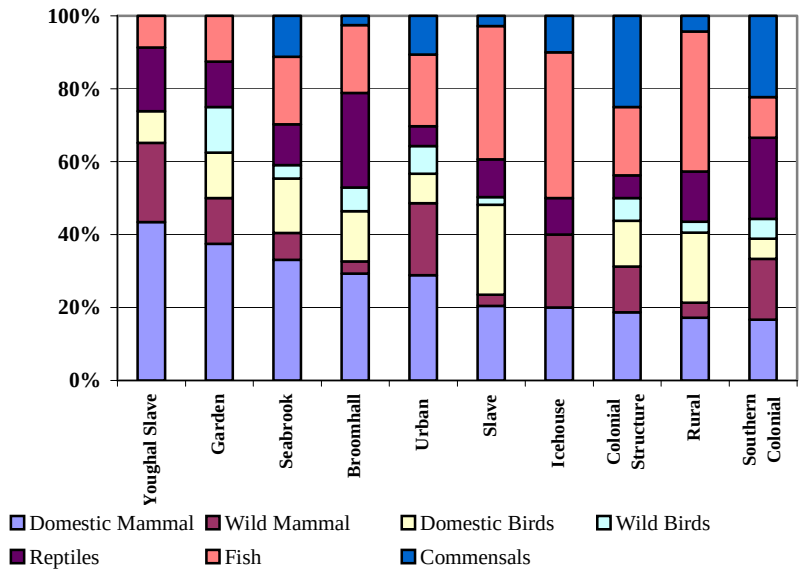


Figure 49. Comparisons of Youghal Plantation faunal remains with rural, slave, and urban collections (information on slave, rural, and urban collections from Reitz 1986; Seabrook data from Hogue 1998; Broomhall data from Hogue at al. 1995).

Domestic mammals, specifically cattle and swine, dominated the assemblage. Cattle were present in the highest frequency among most of the activity areas including the southern colonial area, the landscape/garden area, both slave settlements, and the colonial structure. The ice house was the only area where the majority of the biomass weight was swine. This finding supports Reitz's proposition that cattle faired very well on the Carolina coast and may have been preferred over pork (Reitz 1995).

The most diverse faunal assemblage was associated with the colonial structure itself. Here fifteen different species were identified in the collection. Reitz's study on eighteenth and nineteenth century upper-class urban households documents a more variable diet for this social class, including both wild and domestic species (Reitz 1987) coupled with a higher frequency of fish (Reitz 1987). The colonial area, with its diversity of wild and domestic game, may represent possible elite status. Better cuts of beef and pork were also identified for this area. Processing of large mammals appears to have occurred elsewhere based on the log-difference scale model (Figures 50 and 51). Based on faunal categories (Figure 49) the colonial area appears quite similar to the pattern observed for Reitz's (1987) rural model. Very few bones from this area had been modified.

The southern colonial area, located west of the Main House, showed the next highest species diversity and was the only area where sheep was identified. Like the colonial

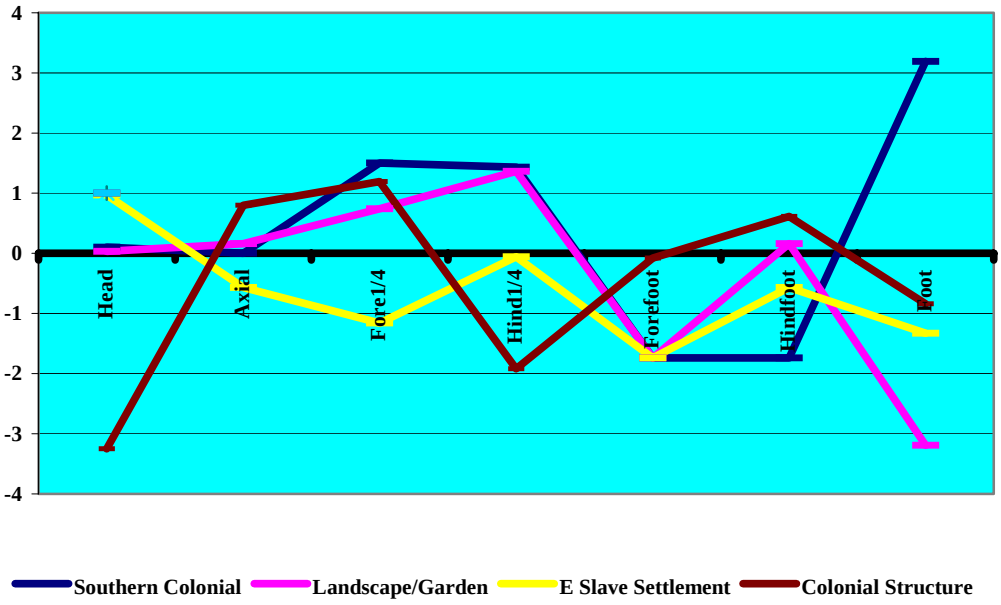


Figure 50. Log graph of cattle segments by locations. Center line is based on the standard percentage of elements for each category.

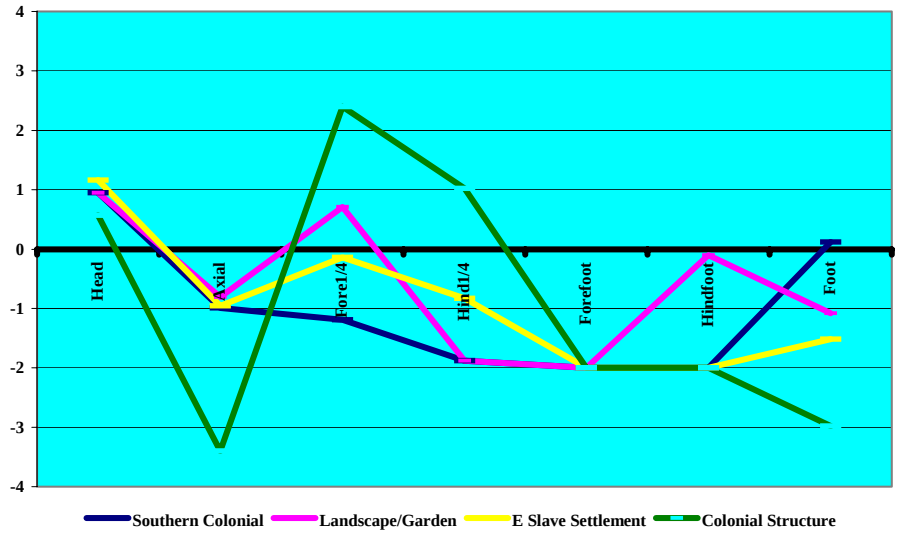


Figure 51. Log graph of pig segments by locations. Center line is based on the standard percentage of elements for each category.

structure, this activity area was most similar to Reitz's (1987) rural model when faunal categories are considered. The log-difference scale model suggests on-site butchering of cattle with a high frequency of the best and meatiest portions present.

the other areas, suggesting the increased use of the two areas for processing refuse. Furthermore, the highest percentage of sawed bone was associated with the landscape/garden area supporting its use for composting animal discard.

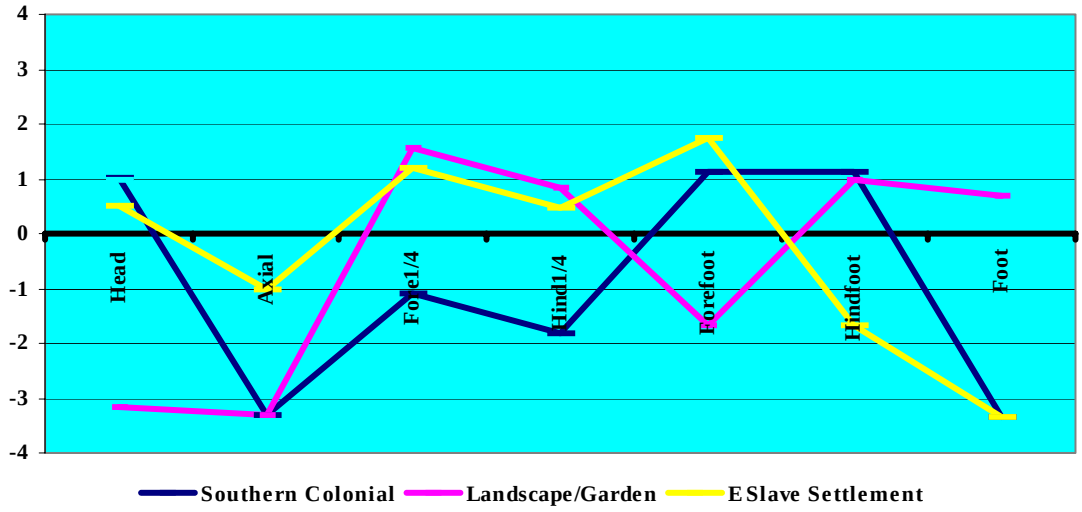


Figure 52. Log graph of deer segments by locations. Center line is based on the standard percentage of elements for each category.

As expected poorer cuts of domestic mammals were identified for the second eastern slave settlement where cattle and swine cranial elements dominate the collection. The highest frequency of domestic mammal was associated with this area, but is dominated by poorer cuts of cattle and swine. On-site processing is likely to have occurred at the slave settlement as deer and cattle segment frequencies were close to the standard. This is especially true for deer where more quality cuts are present suggesting that slaves were allowed to supplement their diet by procuring deer. For faunal categories, the pattern observed for the slave settlements is similar to the landscape/garden area in MNI frequency of species groups. Both activity areas are very dissimilar to the rural, urban, and slave patterns devised by Reitz (1987). Another similarity between these two areas is the greater frequency of burned bone when compared to

The last activity area worthy of discussion is the ice house. Although the sample was small (only 29 bones) there is an unusually high biomass percentage of box turtle and fish species. This probably reflects the late nineteenth and early twentieth century use of the structure to store more perishable animal remains.

Comparisons of other plantations located in the general area may elucidate the differences observed in the Youghal faunal assemblages. With additional research one may be able to document specific and different subsistence patterns in separate areas of a state or region. Although the faunal collection recovered from the site may be considered too small to make conclusive statements about Youghal Plantation it is important to investigate individual plantations and other historic sites

and not expect the data to fit tidily into formulated models.

# POLLEN AND PHYTOLITH ANALYSIS FOR YOUGHAL PLANTATION

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## Introduction

Four combination pollen and phytolith samples were examined from features at Youghal Plantation to identify crops that might have been grown at the site. Historic studies of plantations in this area focus on recovery of indigo and upland swamp rice for early occupations and cotton for nineteenth century occupations. Various features, including a shell pit, a possible pier, a builder's trench, and a possible historic garden or planter were examined from Youghal Plantation.

Table 61.
Provenience Data for Pollen and Phytolith Samples

| Feature No. | Depth | Provenience/Description |
|---|---|---|
| 7 | 1.8' below grade | Fill from prehistoric shell pit, ca. A.D. 500 |
| 8 | | Historic pier |
| 12 | | Garden folly or planter |
| 13 | | Builder's trench of colonial structure |

## Methods

### Pollen

A chemical extraction technique based on flotation is the standard preparation technique used in this laboratory for the removal of the pollen from the large volume of sand, silt, and clay with which they are mixed. This particular process was developed for extraction of pollen from soils where preservation has been less than ideal and pollen density is low.

Hydrochloric acid (10%) was used to remove calcium carbonates present in the soil, after which the samples were screened through 150 micron mesh. The samples were rinsed until neutral by adding water, letting the samples stand for 2 hours, and then pouring off the supernatant. A small quantity of sodium hexametaphosphate was added to each sample once it reached neutrality, then the beaker was again filled with water and allowed to stand for 2 hours. The samples were again rinsed until neutral, filling the beakers only with water. This step was added to remove clay prior to heavy liquid separation. At this time the samples are dried then gently pulverized. Sodium polytungstate (density 2.1) was used for the flotation process. The samples were mixed with sodium polytungstate and centrifuged at 2000 rpm for 5 minutes to separate organic from inorganic remains. The supernatant containing pollen and organic remains is decanted. Sodium polytungstate is again added to the inorganic fraction to repeat the separation process. The supernatant is decanted into the same tube as the supernatant from the first separation. This supernatant is then centrifuged at 2000 rpm for 5 minutes to allow any silica remaining to be separated from the organics. Following this, the supernatant is decanted into a 50 ml conical tube and diluted with distilled water. These samples

are centrifuged at 3000 rpm to concentrate the organic fraction in the bottom of the tube. After rinsing the pollen-rich organic fraction obtained by this separation, all samples received a short (10-15 minute) treatment in hot hydrofluoric acid to remove any remaining inorganic particles. The samples were then acetolated for 3 minutes to remove any extraneous organic matter.

A light microscope was used to count the pollen to a total of 50 to 100 pollen grains at a magnification of 500x. Pollen preservation in these samples varied from good to poor. Comparative reference material collected at the Intermountain Herbarium at Utah State University and the University of Colorado Herbarium was used to identify the pollen to the family, genus, and species level, where possible.

Pollen aggregates were recorded during identification of the pollen. Aggregates are clumps of a single type of pollen, and may be interpreted to represent pollen dispersal over short distances, or the introduction of portions of the plant represented into an archaeological setting. Aggregates were included in the pollen counts as single grains, as is customary. The presence of aggregates is noted by an "A" next to the pollen frequency on the pollen diagram. Pollen diagrams are produced using Tilia, which was developed by Dr. Eric Grimm of the Illinois State Museum. Pollen concentrations are calculated in Tilia using the quantity of sample processed (cc), the quantity of exotics (spores) added to the sample, the quantity of exotics counted, and the total pollen counted.

Indeterminate pollen includes pollen grains that are folded, mutilated, and otherwise distorted beyond recognition. These grains are included in the total pollen count, as they are part of the pollen record. The pollen slides were scanned in search of cotton or other large cultigen pollen.

**Phytoliths**

Extraction of phytoliths from these sediments also was based on heavy liquid floatation. Sodium hypochlorite (bleach) was first used to destroy the organic fraction from 50 ml of sediment. Once this reaction was complete, sodium hexametaphosphate was added to the mixture to suspend the clays. The sample was rinsed thoroughly with distilled water to remove the clays, allowing the samples to settle by gravity. Once most of the clays were removed, the silt and sand size fraction was dried.

The dried silts and sands were then mixed with sodium polytungstate (density 2.3) and centrifuged to separate the phytoliths, which will float, from the other silica, which will not. Phytoliths, in the broader sense, may include opal phytoliths and calcium oxalate crystals. Calcium oxalate crystals are formed by *Opuntia* (prickly pear cactus) and other plants including *Yucca*, and are separated, rather than destroyed, using this extraction technique, if these forms have survived in the sediments.

Any remaining clay is floated with the phytoliths, and is further removed by mixing with sodium hexametaphosphate and distilled water. The samples are then rinsed with distilled water, then alcohols to remove the water. After several alcohol rinses, the samples are mounted in cinnamaldehyde for counting with a light microscope at a magnification of 500x. Phytolith diagrams are produced using Tilia, which was developed by Dr. Eric Grimm of the Illinois State Museum for diagramming pollen.

**Phytolith Review**

Phytoliths are silica bodies produced by plants when soluble silica in the ground water is absorbed by the roots and carried up to the plant via the vascular system. Evaporation and metabolism of this water result in precipitation of the silica in and around the cellular walls.

Opal phytoliths, which are distinct and decay-resistant plant remains, are deposited in the soil as the plant or plant parts die and break down. They are, however, subject to mechanical breakage and erosion and deterioration in high pH soils. Phytoliths are usually introduced directly into the soils in which the plants decay. Transportation of phytoliths occurs primarily by animal consumption, man's gathering of plants, or by erosion or transportation of the soil by wind, water, or ice.

The three major types of grass short-cell phytoliths include festucoid, chloridoid, and panicoid. Smooth elongate phytoliths are of no aid in interpreting either paleoenvironmental conditions or the subsistence record because they are produced by all grasses. Phytoliths tabulated to represent "total phytoliths" include the grass short-cells, buliform, trichome, elongate, and dicot forms. Frequencies for all other bodies recovered are calculated by dividing the number of each type recovered by the "total phytoliths".

The festucoid class of phytoliths is ascribed primarily to the Subfamily Pooideae and occur most abundantly in cool, moist climates. However, Brown (1984) notes that festucoid phytoliths are produced in small quantity by nearly all grasses. Therefore, while they are typical phytoliths produced by the Subfamily Pooideae, they are not exclusive to this subfamily. Chloridoid phytoliths are found primarily in the Subfamily Chloridoideae, a warm-season grass that grows in arid to semi-arid areas and require less available soil moisture. Chloridoid grasses are the most abundant in the American Southwest (Gould and Shaw 1983:120). Bilobates and polylobates are produced mainly by panicoid grasses, although a few of the festucoid grasses also produce these forms. Panicoid phytoliths occur in warm-season or tall grasses that frequently thrive in humid conditions. Twiss (1987:181) also notes that some members of the Subfamily Chloridoideae produce both bilobate (Panicoid) and Festucoid phytoliths. "According to (Gould and Shaw 1983:110) more than 97% of the native US grass species (1,026 or 1,053) are divided equally among three subfamilies Pooideae, Chloridoideae, and Panicoideae" (Twiss 1987:181).

Buliform phytoliths are produced by grasses in response to wet conditions (Irwin Rovner, personal communication 1991), and are to be expected in wet habitats of floodplains and other places. Trichomes represent silicified hairs, which may occur on the stems, leaves, and the glumes or bran surrounding grass seeds.

Diatoms and sponge spicules also were noted. Diatoms indicate wet conditions. Sponge spicules represent fresh water sponges. Their presence in these samples probably indicates wind transport of lacustrine deposits. Their recovery in upland soils is noted to accompany loess deposits derived from floodplains in Illinois (Jones and Beavers 1963).

## Discussion

Pollen and phytolith analyses were undertaken in an effort to identify possible crops grown at Youghal Plantation in Charleston County, South Carolina. Soils are sandy loams and tend toward being acidic, which should provide better conditions for preservation of both pollen and phytoliths than highly alkaline soils. Historically, plantations in this area grew indigo and upland swamp rice early in their use, switching to cotton during the very late eighteenth and early nineteenth century.

### Feature 7

This plantation is represented by four samples. The shell pit (Feature 7) was bisected by a plow scar and a trench wall. Oyster shell accounted for the majority of shell present. The pollen present in this feature represents a variety of trees growing on or near the plantation including *Carya* (hickory), *Castanea* (chestnut), *Pinus*, *Populus*, and *Salix*. This documents highland trees such as hickory,

chestnut, and pines, and trees that usually grow associated with water including cottonwood and willow. Once again (see Cummings 2004), pollen representing members of the sunflower family was noted. Recovery of a small quantity of *Artemisia* pollen indicates growth of wormwood in the area. The quantity of Low-spine Asteraceae pollen is reduced, while quantities of High-spine Asteraceae and Liguliflorae pollen are similar to those noted at the Jervey Plantation (Cummings 2004). Cheno-am pollen was present, but in a small quantity. Fabaceae pollen was noted, suggesting local growth of members of the legume family. Poaceae pollen was abundant, indicating local growth of grasses. *Polygonum* pollen represents local knotweed or smartweed, both of which are weedy plants. Rosaceae pollen was present in a small quantity and documents the presence of a member of the rose family. Since this pollen was not striate, it does not represent cultivated roses, so it probably represents native members of the rose family. Indeterminate pollen was abundant in this sample, indicating that conditions for preservation were not as good as those previously noted for the Jervey Plantation (Cummings 2004). Recovery of charred Asteraceae fragments indicates that vegetation, including members of the sunflower family, was burned. Recovery of monolete smooth spores indicates the presence of ferns growing in the vicinity of this shell pit.

The phytolith record was abundant for this pit, indicating that this record probably represents grasses growing in the area into which the pit was dug. Short cells from all three groups of grasses (cool season, short, and tall grasses) were present. Panicoid cells were more abundant here than at Jervey Plantation. Buliforms were very abundant, indicating that grasses growing here were very well watered. Palmae phytoliths were noted and distinguished from dicot spiny spheroid forms, suggesting local growth of palmetto or perhaps use of palm products across this site. Dicot spiny spheroid forms also were recovered in this sample. Sponge spicules were moderately abundant, but no diatoms were observed. It is likely that at least some of the sponge spicules were introduced with the oysters.

**Feature 8**

Feature 8 is a historic pit that probably represents a pier. The material within this pit is consistent with eighteenth or nineteenth century deposits. Trees represented in this sample are similar to those noted in Feature 7 and include *Carya* (hickory), *Castanea* (chestnut), *Pinus* (pine), *Quercus* (oak), and *Salix* (willow). Both Low-spine Asteraceae and High-spine Asteraceae are represented in small quantities, indicating that various members of the sunflower family, probably including weedy marsh elder, grew in the vicinity. The pollen record is dominated by Cheno-am pollen, which probably represents weedy goosefoot. These plants are common garden weeds. In addition, Brassicaceae pollen was observed, which might represent weedy members of the mustard family, or perhaps cultivated members of this family, some of which are grown for their flowers and many of which are foods (Trinkley, personal communication 2004 reports that mustard family seeds have been found at a number of historic sites in downtown Charleston). A small quantity of Cyperaceae pollen was observed, indicating the presence of sedges, many of which are considered weedy. Poaceae pollen is not particularly abundant, which, when coupled with the large quantity of Cheno-am pollen, suggests a reduction in grasses in favor of more competitive weeds. Pollen preservation is adequate and charred Asteraceae plant tissue fragments are abundant, indicating burning local vegetation, including members of the sunflower family. Recovery of trilete spores indicates the local presence of ferns. A scolecodont was noted, representing a jaw part from a worm. The pollen record indicates a disturbed habitat.

The phytolith record from this sample exhibits short cells from festucoid, chloridoid, and panicoid-type grasses, indicating that cool

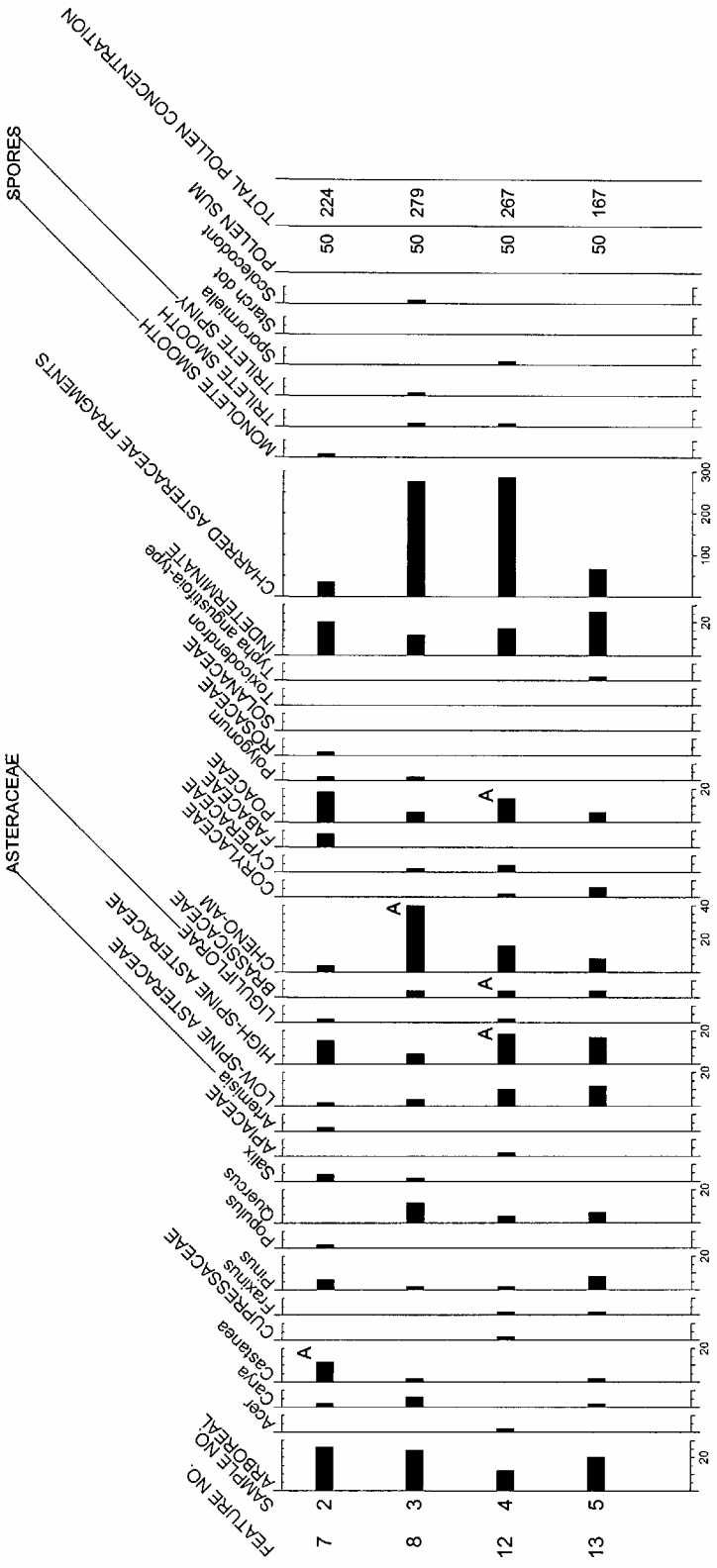


Figure 53. Pollen diagram for the Youghal samples.

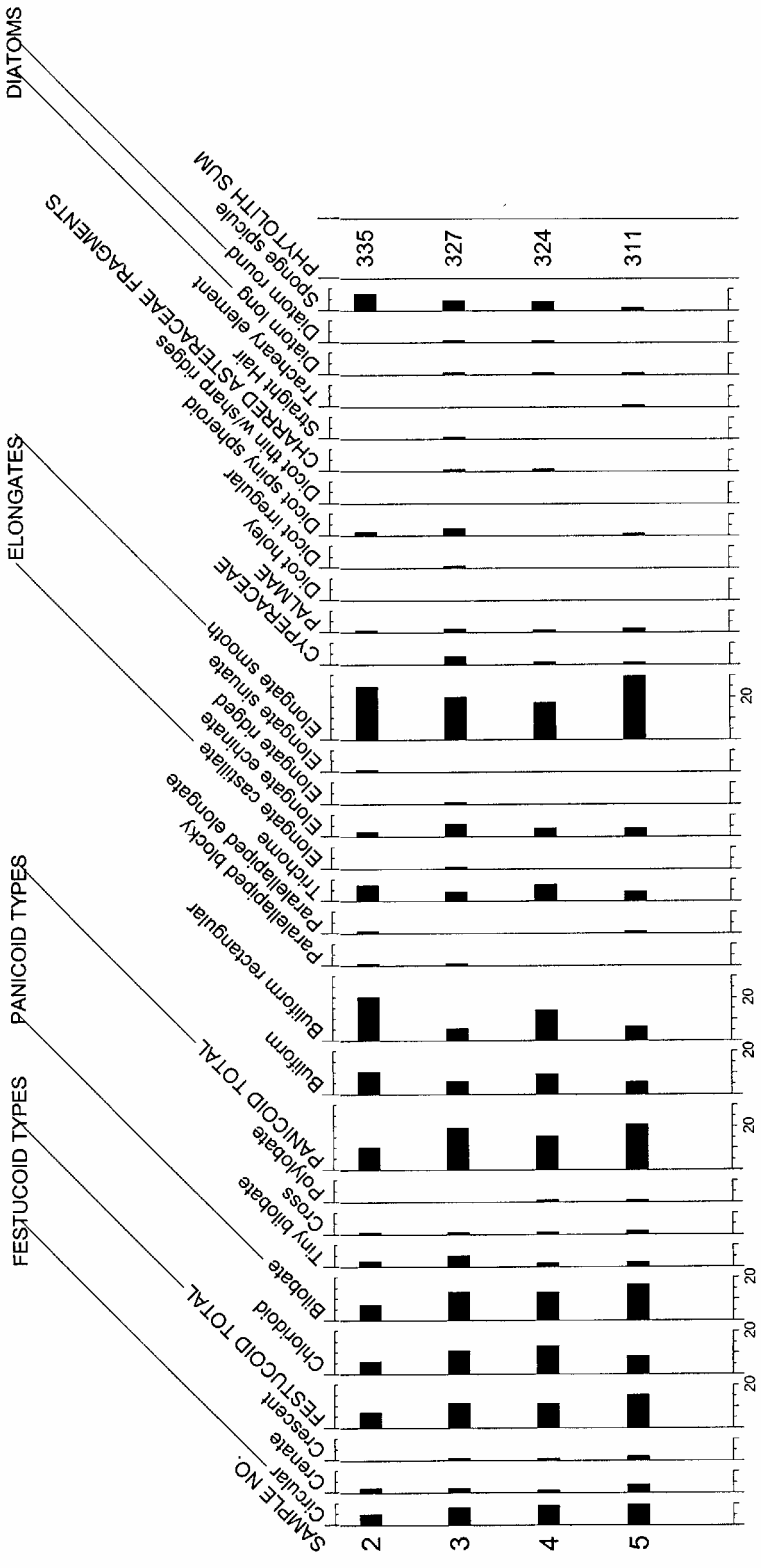


Figure 54. Phytolith record for the Youghal samples.

season, short, and tall grasses all were present. Buliforms were not as abundant in this area, suggesting that it might have been drier than other areas. Cyperaceae forms were present, representing local sedges. Both dicot spiny spheroids and Palmae phytoliths were present, indicating the presence of various dicots, as well as palmetto, as part of the local vegetation. Charred Asteraceae plant tissue fragments were noted but were not as abundant in the pollen record because the destruction of organics that is part of the phytolith processing removes these remains from the record. A straight hair represents a silicified dicot plant hair, rather than an animal hair. Small quantities of diatoms and sponge spicules were observed, suggesting local moisture.

**Feature 12**

Feature 12 represents a garden folly or planter, probably dating to the eighteenth century. It is located close to Feature 8. Similarities in the pollen record with Feature 8 are primarily quantities of indeterminate pollen and charred Asteraceae plant tissue fragments. The record of trees in this sample includes *Acer* (maple), *Fraxinus* (ash), Cupressaceae (juniper family), *Pinus* (pine), and *Quercus* (oak). Quantities of Low-spine Asteraceae and High-spine Asteraceae pollen are larger in this sample, suggesting the possibility for weeds in the sunflower family. Liguliflorae pollen is present and might indicate the presence of dandelions. This is the only sample in the project to exhibit Apiaceae pollen, reflecting the presence of a member of the umbel family. Many of these plants are weedy, such as Queen Anne's lace and poison hemlock. Brassicaceae pollen is present and Cheno-am pollen is noted in a moderate frequency, both of which might well represent weedy plants. Corylaceae pollen is present, reflecting either trees or shrubs in the hazel family. Cyperaceae pollen also is present, probably as part of the weedy plant complex. Poaceae pollen is moderately abundant. The pollen record from this feature is consistent with a signature of disturbance. No evidence of cultigens was noted.

The phytolith record from this sample is very similar to that in Feature 8, with the exception that it yielded more buliforms, indicating that grasses growing in this area were relatively well watered. This sample substantiates growth of a variety of grasses in the area.

**Feature 13**

Feature 13 is a builder's trench associated with an eighteenth century structure. It probably would have been open only for a limited time during construction. Unfortunately, the pollen record in the trench represents a much longer time period over many years, since it is not possible to identify and sample only the pollen and organics that accumulated while the trench was open. The pollen signature from this feature is very similar to that from Feature 12. Small differences are noted in the types of trees represented, which include *Carya* (hickory), *Castanea* (chestnut), *Fraxinus* (ash), Cupressaceae (juniper family), *Pinus* (pine), and *Quercus* (oak). Moderately large quantities of Low-spine Asteraceae and High-spine Asteraceae pollen reflect local growth of members of the sunflower family, many of which are weedy. Corylaceae pollen indicates local presence of members of the hazel family. Poaceae pollen is not particularly abundant, and *Typha* pollen was observed, indicating cattail growing in the wetlands. The quantity of charred Asteraceae pollen was reduced in this sample but still represents burning local vegetation that included members of the sunflower family. This pollen record is consistent with at least moderate ground disturbance.

The phytolith record from this feature is fairly similar to that noted in Features 8 and 12, which variations in frequencies of phytoliths observed. Recovery of a tracheary element in this sample indicates decay of woody tissues.

Table 62.
Pollen Types Observed in Samples at Youghal Plantation

| Scientific Name | Common Name | Scientific Name | Common Name |
|---|---|---|---|
| ARBOREAL POLLEN: | | Cyperaceae | Sedge family |
| *Acer* | Maple | Fabaceae | Bean or legume family |
| *Carya* | Hickory, Pecan | Poaceae | Grass family |
| *Castanea* | Chestnut | *Polygonum* | Knotweed, Smartweed |
| Cupressanceae | Juniper Family | Rosaceae | Rose family |
| *Fraxinus* | Ash | Solanaceae | Potato/Tomato family |
| *Pinus* | Pine | *Toxicodendron* | Poison ivy |
| *Populus* | Poplar | *Typha angustifolia* | Cattail |
| *Quercus* | Oak | Indeterminate | Too badly deteriorated to identify |
| *Salix* | Willow | SPORES: | |
| NON-ARBOREAL POLLEN | | Monolete | Fern |
| Apiaceae | Carrott family | Trilete | Fern |
| Asteraceae | Sunflower family | *Sporormiella* | Dung fungus |
| *Artemisia* | Sagebrush | STARCHES: | |
| Low-Spine | Includes ragweed, cocklebur, sumpweed | Starch Dot | Typical of grasses at cattails |
| High-Spine | Includes aster, ribbitbrush, snakeweed, sunflower | OTHER: | |
| Liguliflorae | Chickory tribe, including dandelion and chickory | Charred Asteraceae fragments | Charred fragments of plant tissue from a member or members of the sunflower family |
| Cheno-am | Includes goosefoot family and amaranth | Scolecodont | Worm jar |
| Corylaceae | Hazel family | | |

**Summary and Conclusions**

The pollen and phytolith samples examined from Youghal Plantation point to disturbed sediments that supported a variety of grasses that grow in shade and sun, a variety of weedy plants, and also trees in the greater vicinity. No evidence for cultivation was recorded, in spite of the fact that nearly a complete slide was examined for each of the pollen samples. Rice pollen is relatively small and difficult to separate from other grass pollen with certainty. No cotton pollen was observed in any of the samples examined. Although cotton pollen is carried by the wind, it is possible that it is present in such small quantities that it was not recovered on single pollen slides. Alternatively, it is possible that small fragments of cotton pollen were not observed while scanning the pollen slides in search of this very large pollen. No rice buliforms were observed in this study. Since these diagnostic buliforms are formed in the leaves of the rice, the most likely place for

recovery is in suspected rice fields and any place that rice leaves might be used or discarded.

Charred particles accounted for approximately 50-60% of the organics in each of the pollen samples, which is consistent with burning local vegetation. This is corroborated in all samples by recovery of charred Asteraceae plant tissue fragments. These fragments were particularly abundant in comparison with pollen in samples from Features 8 and 12.

# ANALYSIS OF FLORAL REMAINS

**Introduction**

Ethnobotanical remains were recovered from both feature contexts (as both flotation samples and hand picked materials) and unit proveniences (as hand picked materials only) at Youghal.

Features 1 and 2 are agricultural ditches in the southern colonial area but post-dating this colonial occupation. Feature 3 is of unknown function, but was found intruding into Burial 1, indicating an antebellum to postbellum origin. Features 5-7 were found in the eastern slave settlement. Feature 5 may represent a robbed pier, Feature 6 has an unknown function, and Feature 7 is a Deptford Period shell pit (and is the only prehistoric feature encountered in these excavations). Feature 8 is situated in the northern colonial area and its function is unknown. Features 9 and 10 are found in the western slave settlement and are thought to represent, respectively, a robbed pier and an animal wallow under a structure. Feature 13 is a builder's trench around the colonial structure in the southern colonial area.

Flotation samples, offering the best potential to recover very small seeds and other food remains, are expected to provide the most reliable and sensitive subsistence information. Samples of 10 to 20 grams are usually considered adequate, if no bias was introduced in the field. Popper (1988) explores the "cumulative stages" of patterning, or potential bias, in ethnobotanical data. She notes that the first potential source of bias includes the world view and patterned behavior of the site occupants — how were the plants used, processed, and discarded, for example. Added to this are the preservation potentials of both the plant itself and the site's depositional history. Of the materials used and actually preserved, additional potential biases are introduced in the collection and processing of the samples. For example, there may be differences between deposits sampled and not sampled, between the materials recovered through flotation and those lost or broken, and even between those which are considered identifiable and those which are not. In the case of Youghal the soil samples were each 5 gallons in volume and were water floated (using a machine assisted system) at the completion of the field investigations.

Only features that evidenced dark, organic soils were sampled, since these are the most likely to produce adequate sized samples of floral materials. From Youghal four features were examined – Features 2, 6, 7, and 8. Only one of these samples (from Feature 8) meets the weight requirement of 10 to 20 grams, although one additional sample (from Feature 2) comes close to the minimum requirement. The features from Youghal contained rather sparse carbonized material, probably the result of the very sandy soils and excessive leaching. All samples were further compromised by the large quantity of trash they contained – the result of extensive vegetation and dense root mats.

Handpicked samples may produce little information on subsistence since they often represent primarily wood charcoal large enough to be readily collected during either excavation or screening. In addition, since many of the samples from Youghal came from plowzone contexts, they may represent a recent addition to the record.

## Procedures

The four flotation samples were prepared in a manner similar to that described by Yarnell (1974:113-114) and were examined under low magnification (7 to 30x) to identify carbonized plant foods and food remains. Remains were identified on the basis of gross morphological features and seed identification relied on Schopmeyer (1974), United States Department of Agriculture (1971), Martin and Barkley (1961), and Montgomery (1977). All float samples consisted of the charcoal obtained from 5 gallons of soil (by volume). The entire sample from this floated amount was examined for each feature.

The handpicked sample was also examined under low magnification with a sample of the wood charcoal identified to the genus level, using comparative samples, Panshin and de Zeeuw (1970), and Koehler (1917).

## Results

The results of the flotation analysis are provided in Table 63. In only one case did the floated material achieve the 10 gram "threshold" typically proposed as adequate.

Only two of the samples produced plant food remains. Feature 3, which intrudes into the burial in the southern colonial area, contains several fragmentary corn cupules and a fragmentary grape seed. Feature 6 in the eastern slave settlement also produced several small corn cupule fragments (the cupule is the small cup-like structure of the cob from which the kernel forms). Otherwise, all of the samples are dominated by wood charcoal, often with substantial amounts of roots and other noncarbonized trash.

Table 63.
Flotation Analysis

| | Total Weight | charcoal | | small bone | | uncarb. organics | | corn cupule frags | | mortar | | shell | | large seeds | | other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Provenience | (g) | wt. | % | wt. | % | wt. | % | wt. | % | wt. | % | wt. | % | wt. | % | |
| Feature 2 | 9.49 | 4.60 | 48.47 | 0.07 | 0.74 | 4.78 | 50.37 | 0.02 | 0.21 | | | | | 0.02 | 0.21 | 1 grape seed |
| Feature 6 | 3.31 | 2.44 | 73.84 | 0.10 | 2.91 | 0.71 | 21.51 | 0.04 | 1.16 | 0.02 | 0.58 | | | | | |
| Feature 7 | 4.76 | 2.40 | 50.50 | 0.12 | 2.50 | 2.17 | 45.50 | | | | | 0.07 | 1.50 | | | |
| Feature 8, N½ | 13.08 | 9.84 | 75.21 | 0.02 | 0.17 | 2.77 | 21.16 | | | 0.45 | 3.47 | | | | | |

The wood charcoal present in the flotation samples was not further examined because of the small fragment size. However, hand picked samples from these (and other) samples are reported below.

Samples of up to 10 fragments in the hand-picked collections were examined and Table 64 shows the results as percents. Pine (*Pinus* spp.) is clearly the most common wood present; although other species identified include oak (*Quercus* spp.), gum (*Nyssa* sp.), and beech (*Fagus* sp.). Also identified from the slave settlement collection was a single fragmentary peach pit (*Prunus persica*) and a fragment of hickory nutshell (*Carya* sp.).

## Discussion

The flotation sample produced a small quantity of corn (*Zea mays*). All of the cupules were too fragmentary to allow measurements and no kernels were identified to provide information on denting. Plantation accounts are replete with accounts of corn – often planted for animal fodder or for grinding into cornmeal for the use of slaves. Corn remains, therefore, are entirely consistent with what might be expected in a Christ Church plantation. It is not found more commonly since there are relatively few opportunities for its preservation through burning (although Gardner [1866:F17]

Table 64.
Analysis of Handpicked Charcoal Samples
(percent of fragments examined)

| Provenience | Pinus | Quercus | Nyssa | Fagus | UID | Peach Pit | Hickory Nutshell |
|---|---|---|---|---|---|---|---|
| Fuller/Auld House | | | | | | | |
| 340R235, lv. 1 | 100 | | | | | | |
| Slave Settlement, West | | | | | | | |
| Feature 10 | 100 | | | | | | |
| Slave Settlement, East | | | | | | | |
| 480R690, lv. 1 | 100 | | | | | | |
| 500R680, lv. 1 | 100 | | | | | | |
| 520R660, lv. 1 | 60 | | | | | 20 | 20 |
| Feature 5 | 75 | 25 | | | | | |
| Feature 6 | 50 | 50 | | | | | |
| Feature 7 | 50 | 50 | | | | | |
| Colonial South | | | | | | | |
| 280R275, lv. 1 | 100 | | | | | | |
| 315R125, lv. 1 | 80 | 10 | | | 10 | | |
| 315R175, lv. 2 | 100 | | | | | | |
| 325R175, lv. 1 | 40 | 20 | 20 | | 20 | | |
| 325R175, lv. 2 | 80 | | | 20 | | | |
| 325R175, trow. | 100 | | | | | | |
| 335R175, lv. 1 | 80 | 10 | | | | | |
| Feature 1 | 100 | | | | | | |
| Feature 2 | 34 | 33 | | | 33 | | |
| Feature 3, W½ | 50 | 50 | | | | | |
| Feature 13 | 50 | | | | 50 | | |
| Colonial North | | | | | | | |
| 415R270, lv. 1 | 100 | | | | | | |
| 425R270, lv. 1 | 50 | 50 | | | | | |
| Feature 8, N½ | 67 | 33 | | | | | |

discovered that, of the cultigens, corn was the most common carbonized seed recovered from the Lesesne Plantation in Berkeley County).

Grape (*Vitis* sp.) is represented by a single fragment. The size suggests that it was smaller than either the European (*Vitis vinifera*) or native scuppernong (*Vitis rotundifolia*), and was most probably a native species common to the woods edges. It would have fruited from September to October (Radford et al. 1968).

Gardner found grape of similar size rather commonly in the Lesesne collection, noting that among the native edible fruits it was second only to blackberry (Gardner 1986:F7).

The charcoal represents woods which could reasonably be associated with a rather broad area of moderately to poorly drained soils – entirely characteristic with the Youghal location and consistent with the findings of both the pollen and phytolith studies.

The gum was likely water gum or tupelo gum (*Nyssa aquatica*), commonly found in swamp forests of the low country (Radford et al. 1968:790; Fowells 1965:284-285). Gum has a variety of uses, being traditionally used for wagon box boards, weatherboards, and even moldings (Anonymous 1909:34-39). Gum has a heat value of 71 (as a percentage of a short ton of coal), making it a relatively good firewood (Graves 1919:29).

The beech was most likely *Fagus grandifolia* or the American beech. This species prefers rich, damp woods often found as a minor species with hickory and oak (Radford et

al. 1968:370; Fowells 1965:172-177). It is recognized as a lumber hardwood (Anonymous 1909:68-70), as well as an excellent firewood, with a heat index of 80 (Graves 1919:28).

There are at least 13 species of oaks in the Charleston area and they occur in areas that range from low sandy soils to high dry woods (Radford et al. 1968). Red and white oaks were the most common varieties used in lumber, with the timber well known for its strength (Anonymous 1909:19-26). Oak is also a favored firewood, with heat indices of 82 to 92 depending on the species (Graves 1919:29).

Pines, however, were the most common genus in Christ Church. Commenting on the prevalence of pines, found usually with "only a very few black-jack oaks," Edmund Ruffin observed that they were found on "the dryest [sic] land" whose surface is "sandy & dry" (Mathew 1992:74).

Well known for their naval stores and often used for building materials, pines – like oak – might be found in a variety of settings. Unlike the oak, however, pine was not a particularly good firewood. Depending on the species, the heat index might range from about 77 to 85, but the wood burns quickly and was smoky.

Although the function of these woods at Youghal is uncertain, their presence widely dispersed and carbonized suggests that for the most part we are looking at the remains of fuel.[1] If so it seems likely that the prevalence of the different species, at least in a general sense, reflects their natural availability. Those collecting the woods were using what was most available – regardless of its characteristics – and pine was undoubtedly the most available. The presence of beech and gum also suggest that the lowlands were being exploited for fire wood. Given their differing characteristics, the woods present were a near perfect combination to maximize heat production, ease of ignition, and splitting, while minimizing smoke and sparks.[2]

Peach is a common fruit on protohistoric and historic sites in the Carolinas. Hilliard comments that it was not only eaten, but was often so heavily produced that peaches were feed to the hogs (Hilliard 1972:180-181). Its popularity is attested to by the number of named species. In 1629 there were 21, by 1768 there were at least 31, and by 1850 there were over 250 named peach varieties (Leighton 1976:237). All belonged to one of two groups, generally described as freestones or melting-peaches in which the pulp or flesh separates easily from the stone and the clingstone in which the flesh clings or adhere to the stone.

The peach fruits in the lower coastal plain from April through June. But, it is likely that peaches, a fruit of the temperate zone, were on the edge of their natural range in the Charleston area. Though they prefer relatively warm areas, they also require a resting period of winter cold for at least two months, during which time they gather strength for producing leaves and flowers in the spring.

[1] The varying quality of fire wood has long been recognized. For example, Reese notes: "The heavy and dense woods give the greatest heat, burn the longest, and have the densest charcoal. To the dense woods belong the oak, beech, alder, hazel, birch, and elm: to the soft, the fir, the pine of different sorts, larch, linden, willow, and poplar" (Reese 1847:116).

[2] Elisabeth Donaghy Garrett goes to great lengths, however, to illustrate that even the perfect combination of fire woods, blazing in the perfectly constructed fireplace, often did little to warm, or light, plantation rooms. Even with fires, water, foods, ink, and even wines, froze overnight in deep winter. Thomas Chaplin, writing from his St. Helena, Beaufort County plantation in January 1857 that his thermometer was down to 20 degrees in the house at eight in the morning and that everything was frozen hard, including eggs, milk, and ink (Garrett 1990:189).

Finally, the hickory nutshell may represent any one of several varieties occurring on soils ranging from dry woods to rich or low woods to swamp lands. In South Carolina they fruit in October, although seeds are dispersed from October through December (Radford et al. 1968:363-366). Good crops of all species are produced at intervals of up to three years when up to about 16,000 nuts may be produced per tree (Bonner and Maisenhelder 1974:271). Complicating this simple seasonality is the ability of the nuts to be stored for up to six months.

The Youghal collection, when compared to other plantation assemblages, is rather barren. Gardner (1983) found the eighteenth century slave assemblages at Yaughan and Curriboo dominated by wood charcoal (almost exclusively pine), although a variety of food materials were also represented, such as corn, rice, hickory and walnut, peach, hawthorn, bramble, and beans. A number of weed seeds, such as *Polygonum*, goosegrass, and possibly *Setaria, Paspalum, Panicum,* and *Digitaria* were also recovered, although they were found in small quantities and were often very eroded.

At the early antebellum Lesesne and Fairbank plantations, Gardner remarked finding, "an impressive variety of plant remains" (Gardner 1986:F-9). These included corn, rice, peach, watermelon, peanuts, cotton, chinaberry, spurge, *Iva*, hickory, acorn, pecan, blackberry, grape, blueberry, hackberry, plum or cherry, persimmon, and maypops. While few were present as more than one or two examples, the variety is, indeed, impressive. Contributing to this variety, however, was the excavation of a well, which produced a number of species not found elsewhere on the plantation, such as watermelon, peanuts, cotton, pecan, plum or cherry, and maypops.

The sparseness of remains at Youghal may reflect the plowing present at the site, although the feature contexts should reflect preserved remains. A more significant factor is likely the small sample size available for selection. Even within the sample present, many of the features were floated in spite of their rather barren appearance based on soil color and texture. Finally, it is also likely that the lack of plant food remains indicates a diet that included few plants and that those present were almost certainly boiled or otherwise processed in a manner that works against their preservation.

# SUMMARY AND CONCLUSIONS

**Introduction**

As this research began we identified four areas deserving of additional research. One was the ice house, where we felt further work might help resolve issues on its origin and function. A second area was the slave settlement to the east of the main house. There we wished to address general questions regarding lifeways, but we also noted that the research might help resolve the question of why this slave settlement seemed to have such a low archaeological visibility. A third research topic was the slave settlement near the main house, identified in the available map as a row of structures suggestive of house servants. We hoped that research there would provide the data necessary to allow comparisons with the more eastern settlement – comparing and contrasting status in the slave population. The final area, southwest of the main house, was recognized through high densities of ceramics, brick, and shell – but the area was not known to have structures based on the historic research. Consequently, research in that area was explorative with a goal of possibly identifying earlier plantation assemblages.

Turning to the historic documentation, we envisioned two additional research topics. We wished to obtain oral history from both whites and blacks in the community to document the plantation activities. This research was motivated by our realization that the community had changed dramatically since the senior author began research in Christ Church only 30 years ago. With the passing of another decade it seemed likely that much of oral history would be lost.

Data recovery plans were developed to allow the investigation of these topics. For the ice house we proposed interior and exterior excavations. For the slave settlement we desired block excavations; but with the low visibility, we thought it appropriate to begin with even more intensive testing than was used during the testing stage (Trinkley et al. 2003). A similar strategy was proposed for the area of the house servants. To investigate the area southwest of the main house we again proposed very close interval testing followed by block excavations.

The historical research would focus on dairying – a farming strategy about which there was little information. Secondary sources were generally vague and often contradictory. No thorough historical study had been done, and very few who participated in these dairying activities were still alive.

In addition to these broad research interests, other avenues opened as the work progressed. For example, the discovery of a burial dating from the colonial period posed a range of questions. What was the ethnicity? Why was this individual buried in the midst of the settlement? When DNA study revealed the child to be an African American, the topics were clarified, but still perplexing. Why was this child buried here, rather than with other African American slaves?

We examined pollen and phytoliths in an effort to better identify cultigens on the plantation, as well as the property's environmental setting. These data sets also offer an opportunity to compare and contrast results with the ethnobotanical study. The recovery of plaster provided another opportunity to

document often overlooked architectural information.

This summary will briefly address each of these research topics, providing a brief analysis of findings and the need for future research.

**The Ice House**

The architectural details – most fundamentally the very hard Portland cement mortar – suggest that the structure was constructed in the late nineteenth century. This is generally consistent with the oral history and is consistent with the rise of dairying activities that would have required the cooling of milk. Artifacts from the building predate the structure, yielding mean dates in the first and second decades of the nineteenth century. When the assemblage is examined, there is little indication of materials deposited during the building's actual use. There are no decalcomania or tinted whitewares. There is no manganese glass. Yet concrete is found all the way into Level 4 and we were unable to find any evidence that this structure pre-dates ca. 1900.

Although a late addition on the plantation, the ice house documents a structure type for which we have few postbellum or antebellum examples. It seems easy for archaeologists to overlook such small and unimpressive structures in favor of studying the underclass or those wielding power. Nevertheless, the ice house represented an important component of the plantation landscape, tying into not only the farm's late history as a major dairying operation but also the aspirations of many in state government to encourage this diversification.

The excavations revealed thick, hollow walls, partial below grade construction, a flat roof that was probably covered soil – all providing good insulating characteristics. The interior floors were sloped to provide drainage, probably to an underground French drain. In addition to these construction details, the faunal study found an unusually high incidence of turtle and fish bones – possibly suggesting that the building was used to cool foods as well as milk.

Thus, this research has addressed both the origin and function of this structure. It would, however, be useful to have other late nineteenth century structures available for comparison.

**The Slave Settlement**

Our research identified two distinct areas – the western slave settlement with a mean date of about 1799 and the eastern settlement with a mean date of about 1807.

The research did confirm the testing conclusion that the settlement had a low archaeological visibility. After excavation and the failure to identify any in situ architectural features (such as chimneys or piers), combined with the recovered artifacts, we believe that the structures were ephemeral. This would explain the low archaeological visibility and is interesting since the settlement, based on the artifacts, dates into the late antebellum. This is a period when reformers placed pressure on slave owners to improve housing – and when we see far more substantial dwellings for African American slaves. The findings from Youghal suggest that at least some settlements either did not participate in these reforms or did so very late. The use of these ephemeral dwellings seems at odds with the historic evidence of other improvements on the plantation and the tract's economic history.

At most slave settlements we find ceramics dominated by hollow wares – consistent with one-pot meals. At the Youghal settlement, however, we find that the ratio of plates to bowls shifts from 0.9:1 with creamware to 1.5:1 with pearlware to 1:1 for whitewares. This seems to place an unexpected reliance on flatwares, especially through time. The

importance of flatwares is even clearer at the eastern slave settlement, where the ratio range from 2.4:1 for creamwares to 1.1:1 for pearlwares to 1.5:1 for whitewares.

We suggest that the difference between the two may be associated with the closer proximity of the main house to the western settlement – and so we may be seeing a difference in status between the two settlements.

Neither of the settlements, however, has a particularly high proportion of expensive wares, suggestive of receiving cast-offs from the planter's table. In fact, high cost wares are less common at the western settlement than at the eastern settlement more distant from the main house.

All this leads us to suggest that the owner – for reasons not entirely clear at this point – purchased wares for the slave settlement, but chose to emphasize flatwares over hollow wares. One explanation, of course, is that this was an issue of control (either tacit or explicit). Or it may be as simple as the owner being out of touch with the needs (or desires) of his slave population. Alternatively, it may be an issue of economics, with these wares less expensive or more readily available in the Charleston market.

Although the faunal assemblage from the slave excavations is dominated by poorer head cuts, the overall collection is distinct from what has been proposed as typical of nineteenth century slave settlements. Domestic species, primarily beef with some swine, dominate the collections. The next most important contributor to the slave diet was deer. This not only indicates the importance of hunting as a procurement strategy, but also means that the slaves were in possession of both fire arms and the time to engage in hunting. It may also suggest that the owner chose to minimize his contribution as a means of reducing his investment in their maintenance (consistent with the minimal structures present).

**The House Servants' Quarters**

Our study of the slave settlement nearest the house was perhaps the least successful of the various research activities. Most fundamentally we had a very difficult time determining where these structures might be located. A very large area was examined by testing, with extensive bush hogging to allow access to densely overgrown areas of the property. These tests produced very sparse remains and the collections were often dominated by rather recent materials. We concluded, after much effort, that the structures we hoped to identify had been heavily impacted by construction of the dairy barn and probably the ice house, as well as by the bulldozing of the burned Fuller/Auld House. With all of the various activities, we were unable to identify any deposits that were not in some way affected by more recent materials.

Thus our excavations were confined to two areas and this work produced a mixture of materials dating to the early nineteenth century (mean date of about 1828) but with ceramics such as tinted whiteware and decalcomania as well as solarized (manganese) glass – indicative of occupation continuing into the first quarter of the twentieth century.

With the mixture identified from these areas little can be said regarding the antebellum occupation. However, like the slave settlement areas, flatwares dominate the collection and there is a mixture of both expensive and inexpensive wares. Consequently, there are no obvious – or seemingly significant – differences between this settlement area and the slave row to the east.

It has been suggested that privileged slaves – the "aristocracy" of skilled artisans, drivers, conjurors, and house servants – formed a special elite set off from the mass of field hands. The privileges might involve either special items, such as food, clothing, or housing,

or might be reflected in preferred jobs, such as driver or mason.

We could certainly interpret the findings from Youghal as suggesting that status and position among the slave population was based on intangibles. Dusinberre (1996), for example, notes that while some privileges might be detectable, such as better clothing or food, other privileges such as better medical care might not be. Moreover, there seemed to be a strong effort to ensure that all privileges remained as privilege and did not migrate into a "right" – and this required that the privileges be frequently removed. It may therefore be far more difficult than we anticipated to observe privilege in the archaeological record.

**The Colonial Area Southwest of the Main House**

It was in this area that early testing revealed dense remains, including brick and shell, but our documentary research provided no clues of structures. The archaeological excavations identified dense remains dating to the early colonial period – exhibiting a mean ceramic date of about 1756. This date suggests deposition by the earliest Barksdale owners or perhaps even earlier. The study also identified the source of the remains – a nearly square tabby brick structure measuring roughly 13 by 12 feet. Stairs on the north face provided access to a semi-subterranean plastered basement. The archaeological remains suggest a superstructure of frame construction and glazed windows, although there is no evidence of a chimney.

This building is very similar to the north and south pavilions found at the Edwards House on Spring Island (Trinkley 1990). These pavilions measure about 15 feet square and also contained flood-prone basements. Based on architectural and archaeological evidence, one may have served as a plantation office, while the other was probably little more than storage.

Since the structure at Youghal was filled with trash, deposited as the structure was abandoned, it is impossible to determine the date of construction. The builder's trench, however, suggests that little was present in the immediate area when the structure was built – suggesting a date in the first half of the eighteenth century and consistent with the mean ceramic date. A similar office or storage function is also consistent with our findings.

This building, however, is isolated – we have found no other evidence of early eighteenth century structures. On the other hand, we discovered that early colonial artifacts extended off the survey tract to the west – into an area already developed by the time of our work and cleared as a result of the original survey (Brockington et al. 1987). Therefore, it may be that additional colonial structures were present beyond the current study area.

Nevertheless, we were fortunate to document this very early plantation building since it may be the earliest Christ Church structure identified archaeologically. It certainly reveals that there was a sophisticated architectural tradition present during the first half of the eighteenth century. It also adds to our catalog another type of plantation structure other than the typical main house and slave house.

It also opens up an interesting and previously unexplored research topic. Wayne (1992:53) notes that by the 1740s, when Charleston's building code required the use of fireproof materials, there were a number of brick makers in and around Charleston. With bricks plentiful why would a Christ Church planter rely on "tabby" or shell and lime bricks? Were such bricks significantly less costly than fired clay? Were they used only when burned brick were unavailable? And how prevalent were these clay alternatives?

At first glance it seems that the cost of collecting shell, combined with the cost of

producing lime, would closely equal the cost of burning bricks – but this is a topic that has not been adequately explored. Similarly, we have no good data for the commonness of "tabby" bricks. Might they have been used only where they could not be seen or would be parged? Clearly, additional documentary research is necessary, combined with a more careful accounting of brick materials recovered through archaeological studies.

**Dairy Farming in Christ Church**

This work provides a brief economic and social context for dairying in Christ Church Parish. From its origins in the antebellum, dairying activity – like other farming activities – declined in the postbellum. There was a brief recovery in the early twentieth century, but this collapsed, again with much of South Carolina's agricultural economy, in the 1920s. Nevertheless, interest grew and the number of dairies gradually increased. Dairying, however, was in many respects even more labor intensive as other agricultural pursuits. As a result, the small producers found the undertaking onerous and – like the Auld family – left dairying quickly as wage-earning jobs became available as a result of World War II.

The only feature associated with dairying investigated at Youghal was the ice house. In retrospect, it might have been useful to also explore the dairy barn. The historical research reveals inconsistencies in the importance of dairying and how fully the effort was supported by the State Department of Agriculture and Clemson College. It might be useful to examine surviving dairy barns from the period and determine if they follow a pattern and, if so, how closely. Our documentary study has failed to reveal sources of information that might address this topic without recourse to archaeological studies. Additional consideration should be given to archaeological research should further evidence of twentieth century low country dairying come to light.

**The African American Burial**

A single African American burial was identified in the colonial area, about 15 feet south of the colonial structure's southern wall. The burial was of a child between the ages of 5 and 9. The individual was laid out as an extended burial, oriented west-northwest by east-southeast, with the head oriented to the east-southeast. The absence of clothing items suggests burial in a shroud and no coffin remains were present. While there is evidence of systemic stress, possibly related to diet, there are no indications of the cause or manner of death.

We are left a number of unanswered questions. Why was this child buried only feet from a utility building – and not with other African American slaves elsewhere on the plantation? Was the child in some way special? Or perhaps for some reason excluded from burial with other enslaved African Americans? Why would the plantation owner accept the burial of a slave in his yard area?

While archaeologists have done a reasonably good job at discovering the locations of plantations and even slave settlements (often with the assistance of plentiful maps and plats showing their locations), relatively few African American burial grounds (which are rarely shown on plats) have been identified in the plantation setting. Often those found can be affiliated with antebellum mortuary practices only through proximity, the presence of postbellum burials, a recognition of the importance of place in African American culture, and perhaps oral history.

Consequently, we presume that the burial grounds found on Spring Island only 300 feet from the slave settlement (Trinkley 1990:90-93) or the burial grounds on Jehossee Island only 350 feet from the slave settlement (Trinkley et al. 2002:138-142) represent use into the antebellum. However, in our studies we could identify only one historic account – Roupelmond Plantation – where the antebellum

plantation was identified and in that case it was about 1,000 feet from the slave settlement (Trinkley and Hacker 1999).

At Youghal, in spite of an intensive archaeological investigation conducted in 1987, no slave cemetery – in fact no African American burial ground of any description – was ever identified. It seems unlikely that a plantation the size of Youghal would not have had a location for the burial of its enslaved population. Yet such a location has not been found. In fact, the location of most plantation cemeteries consistently remains unidentified.

The point of this discussion is that we have relatively little data on pre-Civil War African American mortuary practices. Thus we cannot with any certainty comment on the uniqueness of the isolated burial at Youghal. Nevertheless, this finding should be a caution to other researchers and regulatory agencies.

**Other Research**

These investigations also identified what appears to be a garden folly or planter in an area of the site that was being stripped in an effort to identify servants' quarters. The artifacts from this site area provide a mean ceramic date of about 1790, consistent with the Barksdale settlement.

The item found consisted of dry-laid "tabby" bricks, identical to those in the foundation of the colonial structure about 130 feet to the southwest. The artifacts, while heavily mixed with debris bulldozed from the burned Fuller/Auld House, seem consistent. There is little doubt that the colonial structure and this feature date from the same occupation.

If our interpretation of it as a garden feature is correct, then this suggests a more elaborate plantation development than might otherwise have been expected for this time period.

**Conclusions**

This research successfully addressed three of the four major research topics – exploring the ice house, reconstructing the slave settlement, and expanding our understanding of early colonial settlement on the plantation. Only our efforts to investigate the house servants' quarters were thwarted by modern construction and demolition.

This research provides valuable data on plantation architecture – allowing us to better understand colonial development as well as very late construction specific to twentieth century dairying activities. It also allowed us to examine slave lifeways at a "typical" Christ Church Parish plantation. This has expanded our understanding of what should be considered characteristic of both diet and ceramic use – as well as providing some indications of very late improvements to slave architecture.

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