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The search for architectural remains at the planter's house and the slave settlement, Richmond Hill Plantation, Georgetown County, South Carolina

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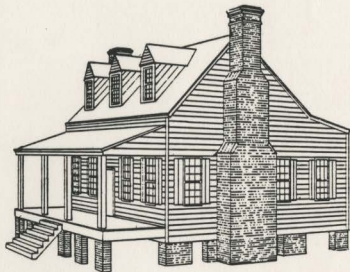
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THE SEARCH FOR ARCHITECTURAL REMAINS AT THE
PLANTER'S HOUSE AND THE SLAVE SETTLEMENT,
RICHMOND HILL PLANTATION, GEORGETOWN
COUNTY, SOUTH CAROLINA

RESEARCH MANUSCRIPT SERIES 205
BY JAMES MICHIE AND JAY MILLS



Edited By

James L. Michie
South Carolina Institute of Archaeology and Anthropology
University of South Carolina
Columbia

July 1988

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PART I

INTRODUCTION

ACKNOWLEDGEMENTS

Wachesaw Plantation has always expressed a deep commitment for the preservation of its cultural resources. This preservation, marked by an unsurpassed attitude in contemporary resort development, was fostered by a group of partners dedicated to the enhancement of the past. Always central to this posture and position have been Mr. Olan Mills and Mr. A.H. "Doc" Lachicotte; people who have strived to ensure the visibility of Wachesaw's rich cultural heritage. Without their leadership and keen perception, the members of Wachesaw and the future generations of South Carolinians would not be witness to such an impressive inheritance.

Our continued research at Wachesaw is a direct result of both Olan Mills and Doc Lachicotte, and we gratefully acknowledge their continued interest and support. The general manager of Wachesaw, Mr. Arthur Jeffords, coordinated all of our interests and provided us with assistance throughout the project. Individuals immediately associated with his staff, Mr. Steve Puthoff, Ms. Ann Bruce Faircloth, Mr. Jerry Davis, Ms. Susan Ledbetter, Ms. Diana Carbonelle, and Mr. Mike Conner, contributed their time and energy in terms of coordination, consultation, and housing. Mr. Mike Purvis graciously provided us with equipment whenever it was needed.

Many of Wachesaw's residents visited both of the sites, some almost daily, and the continuous appearance of curious golfers was a constant reminder that our projects were a focus of interest. These large numbers of spectators and their flow of questions demonstrated, time after time, that people relish the resurrection of the past and cherish the visibility of that heritage.

INTRODUCTION

Plantation archaeology emerged little more than ten years ago, but as Orser (1984) and Singleton (1985) have pointed out, it has grown rapidly to include many aspects of the human past in terms of lifeways and culture process. Immediate to these are the spatial arrangements of plantation structures, settlement systems, social and economic status within and among plantations, basic subsistence patterns, slave acculturation and demography, and the study of plantation architecture (see Singleton 1985). While various degrees of attention have been paid to the different aspects of the plantation through archaeological research, the question of architectural form has been sorely neglected, and this is especially true in South Carolina.

Not only do we find this neglected in archaeological studies, but the architectural literature is relatively silent in regards to antebellum structures. To be sure, there are several books that depict plantation houses, especially the stately Georgian and Colonial mansions. But slave cabins and overseer's houses are generally exempted. More often than not, the houses that find their way into the literature are the grand mansions with broad facades and towering columns, and those associated with social and political leaders. Beyond the immediate need to preserve politically significant structures, the continued presence of other houses is probably related to the very fact that they were constructed from durable building materials, that they are embellished in attractive architectural styles and exhibit design uniqueness, that they have remained in the same family for many generations, that there was a financial background which allowed for preservation, and an interest in preservation. The small wooden houses with vernacular design, those associated with small plantations, or those in the path of progress were not always selected for preservation. Given these considerations, there is an apparent inherent bias in the representation of planter's houses.

Such partialities are commonly seen in the architectural literature of America. The colonial houses that find their way into magazines and books are often referred to as architectural treasures (Miner 1977), notable buildings (Smith 1981), or forms of art (Ball 1980). This is not to say that America's architectural past is always seen in terms of Palladian windows, Corinthian columns, and pedimented porticos. Recent literature is beginning to remind us that vernacular design was typical of most houses during the eighteenth and nineteenth centuries, and that such houses existed in both rural and urban areas (see Upton and Vlach 1986); McAlester and McAlester 1984; Glassie 1975).

A similar bias also exists with slave cabins, overseer's houses, and service buildings. While these structures were in service they seldom were drawn or painted by artists or property owners, and during the postbellum period they were seldom photographed. The reasons behind this are related to any number of variables, some of which are not currently realized. Foremost is the consideration that such houses and structures were related to laborers and managers, those whose lifeways were less important than the owners. Furthermore, the architecture was not especially attractive, and during the twentieth century many of these houses were removed to increase farm acreage and crop production.

The extant cabins and structures available for photography were those that survived the social and economic conditions of emancipation and especially the land acquisitions and subsequent divisions of property. In addition to the benefits of large, intact estates with a continuity of ownership, those surviving structures were built from materials which survived the elements.

Antebellum structures, then, have largely disappeared from the Southern landscape, and those that remain are only a partial reflection of architectural styles and tradition. Yet, despite the fragmented record, those remaining do provide some knowledge about the past and afford a datum point for a graphic, and sometimes physical, reconstruction of plantation buildings.

The broad patterns presently obtainable from the literature show that geographic areas of America reflect specific forms of architectural designs (e.g., McAlester and McAlester 1984; Glassie 1975), and that within specific areas there are common themes with general variations. For example, then plantation survey conducted by Iseley et al. (1985) in the lowcountry of South Carolina demonstrates a broad range of design variation while it establishes some predictable patterns for specific areas of the state. Brick houses, and wooden houses with continuous brick foundations, are more commonly seen in the vicinity of Charleston and in areas associated with the Ashley and Cooper Rivers. In areas increasingly distant from Charleston there is a significant decrease in the utilization of brick and a significant rise in clapboard structures with brick pier foundations. Furthermore, there seems to be a rapid departure from traditional design with increasing distance from Charleston. In the area of the Sampit, Black, Pee Dee, and Waccamaw Rivers where clapboard houses predominate, there are distinct design elements of Georgian, Early Classical Revival, Greek Revival, and occasional French Colonial. But for the most part, the design elements may only occur in reference to the entry porch, the portico, gabled pediments, or occasional dentated cornices. Palladian and pedimented windows, Corinthian columns, balustrades, and elaborate door surrounds are not recorded in these areas. Although there are partial forms of traditional architecture, many of the plantation houses exhibit typical vernacular designs such as hall and parlor with exposed end chimneys. Typically, these houses display a full width porch, occasionally seen on all three sides of the house (see Lachicotte 1955, Iseley et al. 1985).

The architectural literature has shown general patterns, and in a limited way it has presented some general expectations. Archaeology has a potential for making additional contributions to the recognition and understanding of architectural form, and confirming extant patterns. Through the discovery of foundation footings and related construction materials that have survived the archaeological record, it is possible to reconstruct the general form of a structure. The presence and absence of shutter dogs, pintles, strap hinges, door lock parts, nails, window glass, etc., etc., and the general distribution of such materials, tells us a great deal about the former structure. Additionally, the frequency relationships between construction materials has an excellent potential for making statements about the differentiation of socioeconomic status, either within or among plantations (see Michie 1987a).

The opportunity to learn more about such architecture was given recently to the South Carolina Institute of Archaeology and Anthropology by Wachesaw Plantation, a resort development located on the Waccamaw River in Georgetown County. For the past four years the Institute has been closely involved with the development of this resort in terms of advisement, archaeological preservation, and research oriented programs. We were first employed in 1983 to conduct a reconnaissance survey of the property (Michie 1984), and prior to any development we were asked to investigate a number of historic and prehistoric sites (Michie 1987a; 1987b; Pekrul 1986). The prehistoric sites included multi-component assemblages representative of the Archaic, Woodland, and Mississippian, and the historic included an early contact-period Indian site, an eighteenth century colonial occupation, and portions of two antebellum rice plantation, Wachesaw and Richmond Hill. Both of the plantations developed in the early part of the nineteenth century and continued to operate until emancipation. The plantations, which utilized the bottomland environments of the Waccamaw River, were relatively large and produced nearly a half million pounds of rice yearly with the assistance of about 150-200 slaves.

After emancipation, both plantations suffered economic collapse even though there was a concerted effort to continue rice production with paid labor. Richmond Hill was abandoned in 1872 and a large portion of the plantation was virtually ignored. As a result, it reverted into a mixed hardwood forest. A small portion of the property in the area of the slave cabins was converted into cultivation with the subsequent loss of houses. Wachesaw suffered considerable damage through continuous land alteration in the form of cultivation, the development of the river bluff, and the removal of structures throughout the nineteenth century. By 1883, virtually all of the antebellum sites had been destroyed except for portions of the planter's and overseer's house. Richmond Hill, on the other hand, had remained relatively intact and provided us with a great deal of information.

Intensive excavations were conducted in the Fall of 1984, and the Winter of 1985. Attending this work was a multifaceted research design oriented towards settlement and subsistence patterns and the differentiation of socioeconomic status through the analysis of food remains, firearms, ceramics, and architectural materials. The plantation excavations were first directed towards a systematic, stratified, unaligned sample, which represented 11% of each site, and the excavation of larger block units to expose cultural features and disturbances, in addition to foundation footings (Michie 1987a). This approach clearly showed that Wachesaw plantation was badly disturbed, but Richmond Hill provided us with a great deal of information through the excavation of several houses and service buildings, which included the planter, overseer, driver, slave cabin, rice barn, and the planter's privy. The remains of either chimney and/or foundation footings were found at all of the locations, excepting the slave cabin.

At many sites portions of the brick footings had been partially scavenged during the twentieth century. Although the amount of damage varied from site to site, the foundations at the planter's house were relatively intact. These foundations were originally constructed from a combination of ship ballast and locally obtained coquina, cemented together with a lime-based mortar made from calcined mollusk shells. Damage was noted in the collapse of several footings and especially in the west chimney foundation which was severely cracked. Both the sampling and block units clearly demonstrated that foundations were present, and there were strong indications the remaining ones were present. If this was true, then it could add significantly to our architectural knowledge of the house.

In a continuing tradition of preservation, Wachesaw Plantation set aside the long avenue of live oaks that lead to the planter's house, in addition to the house and its immediate area. Given the high probability that all of the footings existed, and that these footings could be used to reconstruct the piers and portions of the chimneys, we were asked to completely excavate the site and determine the location of the footings. In addition to spatial arrangements, we were also asked to determine the former pattern of brick, i.e., courses and bonds, and the general characteristic of architecture. Finally, Wachesaw wanted us to work closely with the brick masons in obtaining antebellum brick similar to the original, to duplicate the old lime-based mortar, and overseeing the reconstruction of the piers and chimneys.

Concomitant with this research, the developers also wanted to determine, if possible, the spatial organization of the slave cabins, in addition to the number of cabins and their architectural form. The location of the slave community had been determined in 1983, and during 1984-1985, we had an opportunity to investigate one of the cabins. The excavations clearly showed the site had suffered some damage through cultivation; there were no indications of subsurface footings or disturbances created by footings. However, there was a light scatter of mortar and brick fragments, and construction materials were present in the form of nails, pintles, strap hinges, and small amounts of window glass. Given that the depth of the plow zone fluctuated, and that there were mottled disturbances below cultivation, there was a potential of finding intact, or partially intact, footings at other localities within the former sites.

THE ARCHITECTURE OF THE PLANTER'S HOUSE

The two essays within this manuscript address the question of plantation architecture at Richmond Hill and each shows the accomplishments of the project. All of the questions were not answered, and indeed, we seem to end on a note of generating more questions than answers. We have demonstrated the substantive value of plow zones through a set of specific methods, and we have shown that relatively accurate reconstructions are possible through the discovery of building materials. It is still difficult to make any accurate statements about the size and form of the slave cabins, but we were able to locate most, if not all, of the house sites and we have learned a great deal about spatial organization.

By utilizing density interpolations generated from the sampling design, in addition to ethnographic data, we are able to make additional statements regarding slave architecture. Paired and contrasted with the previous data sets from the 1984-1985 excavations, the new data and its interpolations allow us to establish some general information about the slave houses in terms of architecture. Yet, despite all the efforts of field archaeology and analysis, there is a great deal to be learned about the cabins. In regard to the planter's house, we learned much more.

Introduction

Prior to 1800, the area of Richmond Hill plantation was owned by Captain John Murrell (sic) who had acquired the property from Landgrave, Anthony Matthews. The original tract of land was purchased during the early part of the 1730s and with the death of Murrell in 1771, it was inherited by his children, Daniel, Perry, and Elizabeth. The property, extending from the Waxamaw River to the north of Murrell's later, was divided into three equal segments, each extending the full distance to the north. The southern part, owned by Elizabeth, was bordered on the south by Laurel Hill plantation. By at least 1791, John Lescaze, the husband of Elizabeth, had acquired this parcel, and a small section on the western edge was sold to Ann Vane. At about the same time, Flockner Weston (Laurel Hill) also purchased a narrow strip which was relatively minor (Michie 1987:43-45) (see Figure 1 for location).

Shortly after the beginning of the nineteenth century an unknown Allison apparently purchased Lescaze's tract and the small section owned by Ann Vane. The presence of an Allison is shown on Mill's Atlas of 1825 (the map was made in 1820 by Hintonway). No doubt, the Allison acquired the property after 1791, but prior to 1820. The records fail to provide us with a first name, but given the knowledge of Allison genealogy, the number of potential owners is limited to only a few (see Rogers 1970:250-251). If we consider the date and death dates of Allisons which coincide with the establishment of Richmond Hill, then Benjamin Allison, Sr. (1767-1847) and Washington Allison (1779-1843) are the only possible candidates for ownership. The other Allisons were either born too late, or died too early.

Although the name Allison appears on Mill's map, there are no real indications that he lived there. With the knowledge that a planter could own several plantations (Rogers 1970:250-251) and have both summer and winter residences, there is a possibility that an owner lived at Richmond Hill and assumed the responsibility of the plantation. Rogers (1970:250-251) alerts us to the fact that many plantations were bought and sold by a number of planters, especially the Allisons and Aisons, and that Benjamin and Washington were among the contemporaries. The records regarding the transfer of plantations on the Waxamaw Neck is fragmentary, and even though Rogers (1970) has made a concerted effort towards unraveling all of this, there are many omissions.

In 1825, Dr. John D. Mathill acquired the land and it remained in his ownership until his death in 1864. His son, John D. Mathill, inherited the property, but in 1868, it went bankrupt. It was acquired again in 1878, by John D. Mathill through a purchase, and after two

THE ARCHITECTURE OF THE PLANTER'S HOUSE,
RICHMOND HILL PLANTATION, GEORGETOWN COUNTY,
SOUTH CAROLINA

by

James L. Michie

Introduction

Prior to 1800, the area of Richmond Hill plantation was owned by Captain John Murrell (sic), who had acquired the property from Landgrave, Anthony Mathews. The original tract of land was purchased during the early part of the 1730s, and with the death of Murrell in 1771, it was subdivided between his children, Danial, Betsy, and Elizabeth. This property, extending from the Waccamaw River to the marsh of Murrells Inlet, was divided into three equal segments, each extending the full distance to the marsh. The southern part, owned by Elizabeth, was bordered on the south by Laurel Hill plantation. By at least 1791, John Lesesene, the husband of Elizabeth, had acquired this parcel, and a small section on the western edge was sold to Ann Vaux. At about the same time, Plowden Weston (Laurel Hill) also purchased a narrow strip which was relatively minor (Michie 1987a:33-43) (see Figure 1 for location).

Shortly after the beginning of the nineteenth century an unknown Allston apparently purchased Lesesene's tract and the small section owned by Ann Vaux. The presence of an Allston is shown on Mill's Atlas of 1825 (the map was made in 1820 by Hemmingway). No doubt, the Allston acquired the property after 1791, but prior to 1820. The records fail to provide us with a first name, but given the knowledge of Allston genealogy the number of potential owners is limited to only a few (see Rogers 1970:520-521). If we consider the birth and death dates of Allstons which coincide with the establishment of Richmond Hill, then Benjamin Allston, Sr. (1765-1847) and Washington Allston (1779-1843) are the only possible candidates for ownership. The other Allstons were either born too late, or died too early.

Although the name Allston appears on Mill's map, there are no real indications that he lived there. With the knowledge that a planter could own several plantations (Rogers 1970:259-260) and have both summer and winter residences, there is a possibility that an overseer lived at Richmond Hill and assumed the responsibility of the plantation. Rogers (1970:259-260) alerts us to the fact that many plantations were bought and sold by a number of planters, especially the Allstons and Alstons, and that Benjamin and Washington were among the entrepreneurs. The records of ownership regarding the transfer of plantations on the Waccamaw Neck is fragmentary, and even though Rogers (1970) has made a concerted effort towards unraveling all of this, there are many obscurities.

In 1825, Dr. John D. Magill acquired the land and it remained in his ownership until his death in 1864. His son, John D. Magill, inherited the property, but in 1868, it went bankrupt. It was acquired again in 1870, by John D. Magill through a purchase, and after two

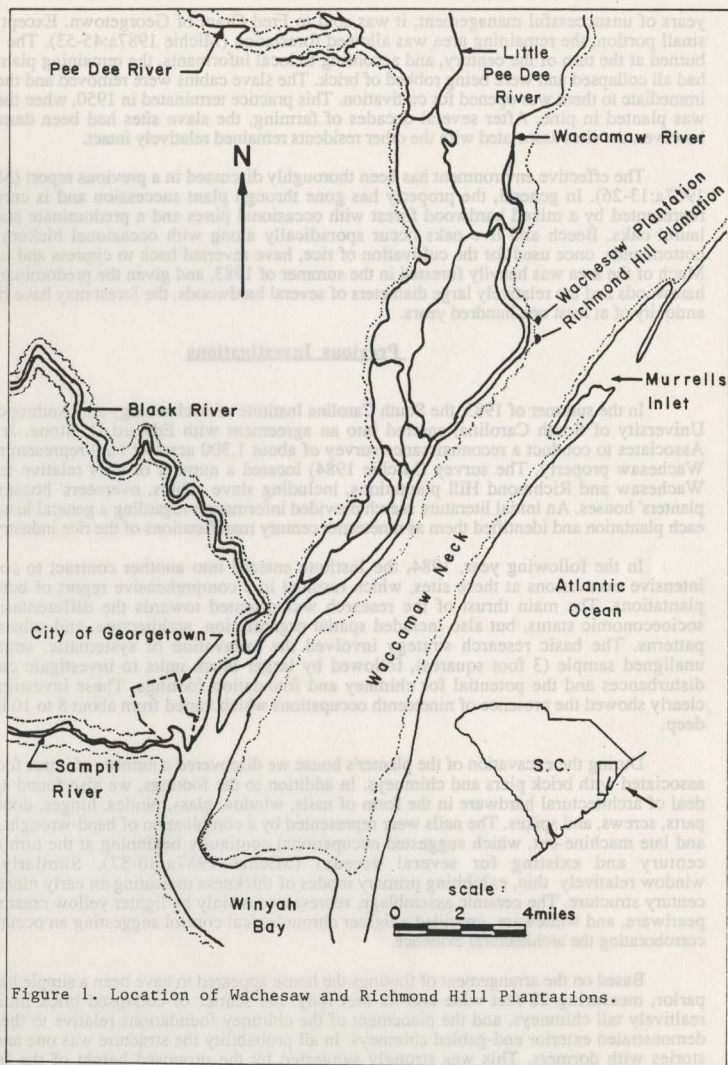


Figure 1. Location of Wachesaw and Richmond Hill Plantations.

years of unsuccessful management, it was sold to Fred Grant of Georgetown. Except for a small portion, the remaining area was allowed forestation (Michie 1987a:45-53). The home burned at the turn of the century, and according to local informants, the remaining plantation had all collapsed and were being robbed of brick. The slave cabins were removed and the area immediate to them was opened for cultivation. This practice terminated in 1950, when the area was planted in pine. After several decades of farming, the slave sites had been damaged, however, the sites associated with the other residents remained relatively intact.

The effective environment has been thoroughly discussed in a previous report (Michie 1987a:13-26). In general, the property has gone through plant succession and is currently represented by a mixed hardwood forest with occasional pines and a predominate stand of laurel oaks. Beech and live oaks occur sporadically along with occasional hickory. The bottomlands, once used for the cultivation of rice, have reverted back to cypress and tupelo. Much of the area was heavily forested in the summer of 1983, and given the predominance of hardwoods and the relatively large diameters of several hardwoods, the forest may have had an antiquity of at least one hundred years.

Previous Investigations

In the summer of 1983, the South Carolina Institute of Archaeology and Anthropology, University of South Carolina, entered into an agreement with Edward D. Stone, Jr., and Associates to conduct a reconnaissance survey of about 1,300 acres of land representing the Wachesaw property. The survey (Michie 1984) located a number of sites relative to both Wachesaw and Richmond Hill plantations, including slave cabins, overseers' houses, and planters' houses. An initial literature search provided information regarding a general history of each plantation and identified them as nineteenth century manifestations of the rice industry.

In the following year, 1984, the Institute entered into another contract to conduct intensive excavations at these sites, which resulted in a comprehensive report of both rice plantations. The main thrust of the research was oriented towards the differentiation of socioeconomic status, but also included spatial organization, architecture, and subsistence patterns. The basic research strategy involved the excavation of systematic, stratified, unaligned sample (3 foot squares), followed by larger block units to investigate cultural disturbances and the potential for chimney and foundation footings. These investigations clearly showed the presence of nineteenth occupations which varied from about 8 to 10 inches deep.

During the excavation of the planter's house we discovered a number of intact footings associated with brick piers and chimneys. In addition to the footings, we also found a great deal of architectural hardware in the form of nails, window glass, pintles, hinges, door lock parts, screws, and spikes. The nails were represented by a combination of hand-wrought, early and late machine-cut, which suggested occupational continuity beginning at the turn of the century and existing for several decades (Michie 1987a:80-87). Similarly, the window relatively thin, exhibiting primary modes of thickness indicating an early nineteenth century structure. The ceramic assemblage, represented mainly by lighter yellow creamware, pearlware, and whiteware, provided a tighter chronological control suggesting an occupation corroborating the architectural evidence.

Based on the arrangement of footings the house appeared to have been a simple hall and parlor, measuring 28 feet wide and 32 feet long. the scatter of collapsed brick indicated relatively tall chimneys, and the placement of the chimney foundations relative to the piers demonstrated exterior end-gabled chimneys. In all probability the structure was one and half stories with dormers. This was strongly suggested by the proposed height of the former

chimneys and a moderate scatter of window glass in the immediate vicinity of the front yard. At a distance of some eight to nine feet from the edge of the main structure there were partial indications of smaller pier foundations that once supported a porch, approximately the width of the house. Considering the high incidence of nails and the time of construction, the house was probably framed with heavy timbers (post and girt) and covered with clapboard siding. Fragments of lathing plaster found throughout the site indicate the house had a plastered interior (Michie 1987a:80-87).

The foundations, which are composed entirely of locally obtained coquina and ship ballast, are situated on the very apex of the sandy hill overlooking the old rice fields, flanked to the south by the overseer's house and to the north by the rice barn, each at a distance of about 250 feet. The house is situated at the end of a long avenue of oaks. Facing neither the avenue nor the rice fields, the house is situated at a right angle to both, facing south towards the overseer (Figure 2). This unusual position may indicate the Allstons were not interested in traditional arrangements, i.e., a frontal view of the avenue, or simply that the Allstons were not responsible for planting the trees. It may well be that John D. Magill established the avenue after he acquired the plantation in 1825.

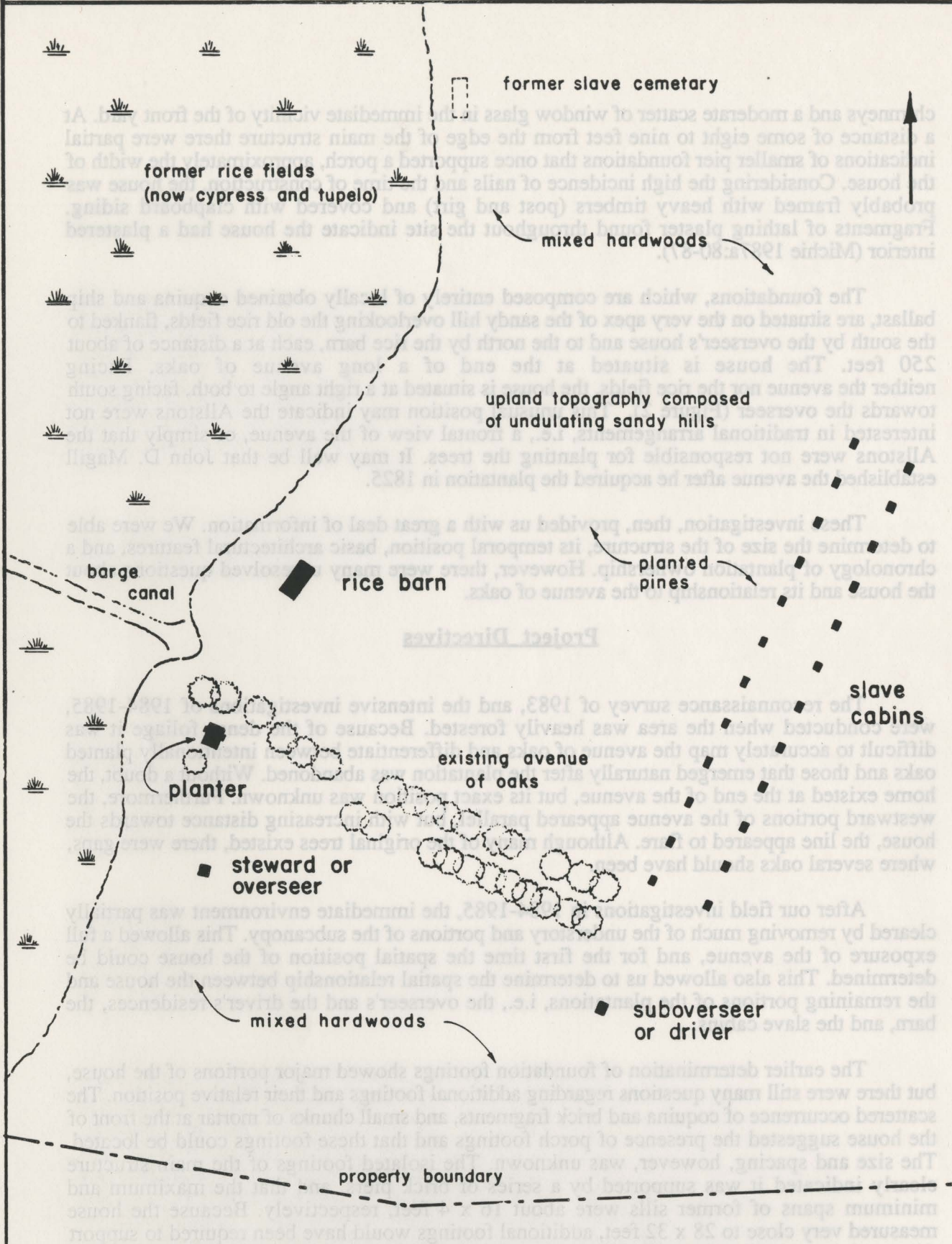
These investigation, then, provided us with a great deal of information. We were able to determine the size of the structure, its temporal position, basic architectural features, and a chronology of plantation ownership. However, there were many unresolved questions about the house and its relationship to the avenue of oaks.

Project Directives

The reconnaissance survey of 1983, and the intensive investigations of 1984-1985, were conducted when the area was heavily forested. Because of the dense foliage it was difficult to accurately map the avenue of oaks and differentiate between intentionally planted oaks and those that emerged naturally after the plantation was abandoned. Without a doubt, the home existed at the end of the avenue, but its exact position was unknown. Furthermore, the westward portions of the avenue appeared parallel, but with increasing distance towards the house, the line appeared to flare. Although many of the original trees existed, there were gaps, where several oaks should have been.

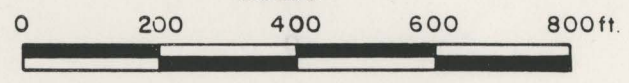
After our field investigations in 1984-1985, the immediate environment was partially cleared by removing much of the understory and portions of the subcanopy. This allowed a full exposure of the avenue, and for the first time the spatial position of the house could be determined. This also allowed us to determine the spatial relationship between the house and the remaining portions of the plantations, i.e., the overseer's and the driver's residences, the barn, and the slave cabins.

The earlier determination of foundation footings showed major portions of the house, but there were still many questions regarding additional footings and their relative position. The scattered occurrence of coquina and brick fragments, and small chunks of mortar at the front of the house suggested the presence of porch footings and that these footings could be located. The size and spacing, however, was unknown. The isolated footings of the main structure clearly indicated it was supported by a series of brick piers, and that the maximum and minimum spans of former sills were about 16 x 4 feet, respectively. Because the house measured very close to 28 x 32 feet, additional footings would have been required to support the remaining structural sills. The discovery of these footings, then, would add significantly to our knowledge of antebellum architecture, and certainly assist in determining the overall appearance of the house.



RICHMOND HILL PLANTATION

scale:



In addition to generating a graphic reconstruction of the house, the sponsors also wanted to partially rebuild the chimney and foundation footings as originally constructed. This included a replication of the mortar, complete with shell fragments, and the utilization of nineteenth century brick. In accordance with the plan, the brick would be laid in the original bond pattern, the piers and chimneys in their original size, and the mortar joints would be duplicated in terms of thickness and style, i.e., flushed, raked, concave, or beaded.

Field Methods

In order to accomplish the directives of the project, it was necessary to excavate an area sufficiently large enough to expose all of the footings and the remainder of the site. The sampling design of the earlier excavation had utilized a permanent datum point on the southern edge of the site to establish a grid system 30 degrees right of magnetic north. The grid system was designed on the basis of 3 foot squares to facilitate the former sampling design and the removal of block units. The same datum point was used in 1987, and a 3 foot square grid was re-established. The site could have been subjected to the removal of larger units in the range of 6 feet, but such squares would have been virtually meaningless in terms of past consistency and the ability to effectively compare data. Therefore, any future analysis and comparison of data would have a much greater meaning if the site was totally excavated in 3 foot squares. Grid control was established and maintained with the assistance of a transit, wooden stakes with nails, and string. The datum continued to function as a common reference point throughout the project.

The depth of cultural materials varied from about 8 to 10 inches, with a mean in the range of 8 to 9 inches. The cultural zone was well defined on the basis of dark brown soil which contained the majority of artifacts. At this mean depth the brown soil immediately disappeared and light yellow sand appeared, which is practically void of materials. In order to consistently verify this observation each unit was excavated to a depth of about 2 inches below the cultural bearing zone. Materials within this lower zone were exceptionally infrequent, and were generally found immediately on or slightly below the contact zone. If the cultural zone continued past the mean, it was excavated until the yellow sand appeared and the unit was then taken into the yellow sand.

Shovel skimming was used to remove soil from each unit, and it was sifted through 1/4 inch hardware cloth with the assistance of a mechanical sifter. All recovered materials, except brick fragments, mortar, and chunks of plaster, were placed in paper bags labeled with appropriate designations, i.e., site and provenience numbers, depth of unit, date, and name of excavator. Samples of brick, mortar, and pieces of plaster were occasionally taken.

Subsurface features and disturbances were exceptionally rare. The few that were found were drawn, photographed, and removed as a separate provenience. The contents were also sifted through 1/4 inch hardware cloth and materials were placed in labeled bags. After the feature was mapped, drawn, and photographed, it was sectioned through the center and line drawings were made of the profiles.

The use of 1/4 inch hardware cloth on any archaeological site forms a safety net for any artifact larger than about .200 inch. Although the wire is spaced on 1/4 inch centers, the actual size of the opening is smaller than the screen size. The efforts of the earlier excavations failed to recover any small artifacts such as needles and pins, or small lead shot. The conspicuous absence of these artifacts prompted us to use smaller hardware cloth on the provenience units immediately associated with the rear of the house where artifact density is the greatest. The screen size was stepped down to 1/8 inch, providing openings in the range of about .090 inch,

and 25% of each unit was sifted. The use of this smaller screen failed to recover any pins or needles, but it did recover smaller lead shot. There were indications of plant remains in the form of seeds.

Throughout the project the site was photographed from various angles which included elevated shots from a height of about 25 feet. Project notes were maintained, including the presence and absence of personnel, weather conditions, daily activities, and other pertinent information. The similarity in provenience units, i.e., soil profiles, was relatively constant and there was no need to duplicate the efforts of graphic depiction with each unit. However, in the vicinity of the east chimney fall, where there was a high concentration of brick and mortar fragments, a linear series of units in an east/west direction was excavated separately to obtain a profile of depth variation and record the spatial distribution of brick. Additional soil profiles exhibiting clam and oyster shell were also recorded near the rear of the house.

Towards the end of the project a series of datum points were established down the center of the oak avenue for the purpose of mapping. From these points the remaining trees were accurately mapped with a transit and steel tape, including the large cedars planted around the house. All measurements were made from the pinned stakes to the centerline of each tree (see Figure 2, in Project Directives).

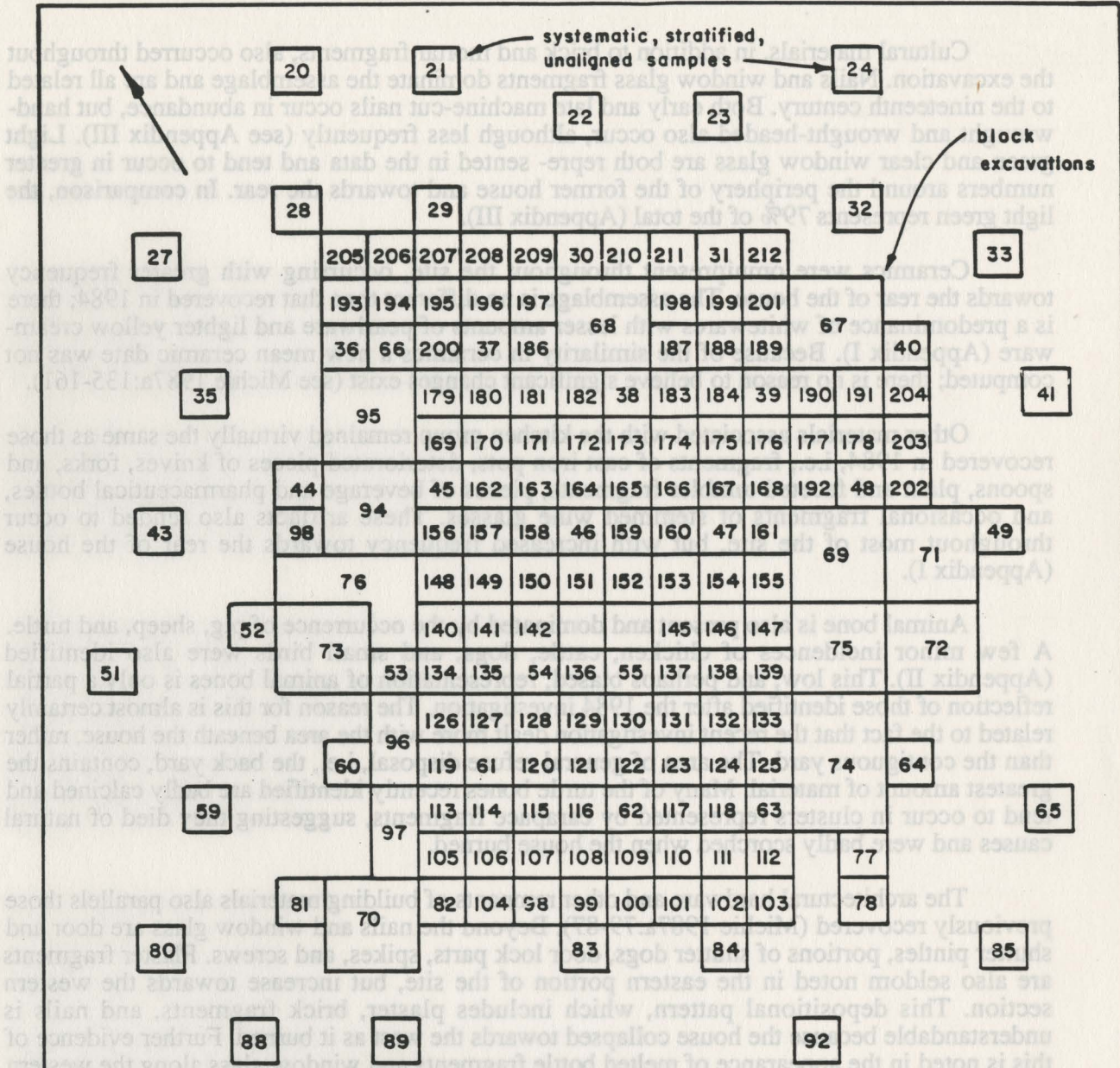
After the field excavations, the project was oriented towards the replication of the former piers and chimneys. Through a number of local contacts, approximately 3,000 nineteenth century bricks were obtained that matched the original fragments. By using a lime-based cement, crushed oyster shells, and sand from the site, we were able to duplicate the original mortar. Alternating rows of headers and stretchers previously noted on a few intact footings, in addition to variable mortar joints, allowed us to replicate a pattern of English bond. As in the original mortar joints, those that we replicated also varied and remained flush.

Results of the Excavations

General Observations

A total of 144 provenience units (3 foot squares) were excavated which resulted in 1,026 square feet of new excavation. Combined with the previous work, the total excavated area measured 2,007 square feet in the immediate vicinity of the house (Figure 3). Although typical soil profiles are difficult to describe because of cultural and natural elements, in addition to the effects of collapsed chimneys, cultural materials were generally present within the first 8 to 9 inches of soil. This specific zone was typically dark brown and terminated abruptly on sterile sand. The deepest deposits tended to occur in the center of the site associated with the chimney fall, and towards the north at the rear of the house. The area associated with the front contained the fewest artifacts and generally ranged from about 6 to 7 inches deep (see Appendices I-VI).

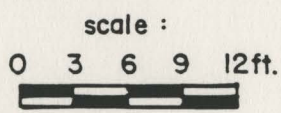
Brick fragments and pieces of deteriorated mortar occurred throughout the site, and with increased frequency in an east/west direction aligned with the east chimney foundation. The greatest density of brick extended laterally towards the northwest from the chimney, and occurred primarily in those provenience units between 147 and 162. The distribution of these fragments is depicted in Figure 4, which presents an east/west profile viewed to the south, and a north/south profile viewed to the west. The east/west direction shows a diminishing number of brick towards the west, in addition to a decrease in the depth of cultural deposits. The other section shows the effects of mounding from the chimney fall and the disturbances from brick scavenging.



NOTE: units 20 through 97 are a partial representation of the former systematic, stratified, unaligned samples and block excavations - 1984

units 98 through 212 represent investigations in 1987

EXCAVATION PLAN OF THE PLANTER'S HOUSE - 38GE266 RICHMOND HILL PLANTATION



Cultural materials, in addition to brick and mortar fragments, also occurred throughout the excavation. Nails and window glass fragments dominate the assemblage and are all related to the nineteenth century. Both early and late machine-cut nails occur in abundance, but hand-wrought and wrought-headed also occur, although less frequently (see Appendix III). Light green and clear window glass are both represented in the data and tend to occur in greater numbers around the periphery of the former house and towards the rear. In comparison, the light green represents 79% of the total (Appendix III).

Ceramics were omnipresent throughout the site, occurring with greater frequency towards the rear of the house. The assemblage is no different than that recovered in 1984; there is a predominance of whitewares with lesser amounts of pearlware and lighter yellow creamware (Appendix I). Because of the similarity in ceramics a new mean ceramic date was not computed; there is no reason to believe significant changes exist (see Michie 1987a:135-161).

Other materials associated with the kitchen group remained virtually the same as those recovered in 1984, i.e., fragments of cast iron pots, deteriorated pieces of knives, forks, and spoons, plain and faceted tumbler fragments, pieces of beverage and pharmaceutical bottles, and occasional fragments of stemmed wine glasses. These artifacts also tended to occur throughout most of the site, but with increased frequency towards the rear of the house (Appendix I).

Animal bone is also present and dominated by the occurrence of pig, sheep, and turtle. A few minor incidences of chicken, cattle, dogs, and small birds were also identified (Appendix II). This low, and perhaps biased, representation of animal bones is only a partial reflection of those identified after the 1984 investigation. The reason for this is almost certainly related to the fact that the recent investigation dealt more with the area beneath the house, rather than the contiguous yard. The area of general refuse disposal, i.e., the back yard, contains the greatest amount of material. Many of the turtle bones recently identified are badly calcined and tend to occur in clusters represented by carapace fragments, suggesting they died of natural causes and were badly scorched when the house burned.

The architectural hardware and other remnants of building materials also parallels those previously recovered (Michie 1987a:79-87). Beyond the nails and window glass are door and shutter pintles, portions of shutter dogs, door lock parts, spikes, and screws. Plaster fragments are also seldom noted in the eastern portion of the site, but increase towards the western section. This depositional pattern, which includes plaster, brick fragments, and nails is understandable because the house collapsed towards the west as it burned. Further evidence of this is noted in the appearance of melted bottle fragments and window glass along the western periphery of the house. Based on this information, then, there is no reason to change or alter previous concepts of architectural styles.

In general, few artifacts were noted on the surface of the site, except for occasional scattered brick fragments. There were no visual indications of additional foundation footings either in the form of articulated bricks or rocks. The majority of structural remains and associated occupational debris was contained within the subsurface deposits. The excavation, however, allowed for the discovery of additional footings and the locational determination of those previously removed by scavenging.

Foundation Footings

The results of our work revealed that all of the foundation footings were constructed from the same materials, i.e., European ship ballast and coquina obtained from the Waccamaw River. The footings were all held together with a lime-based cement containing calcined fragments of oyster shells (see Figure 5). At least two of the footings had collapsed, presumably during the fire and destruction of the house. The west chimney foundation was severely cracked as a result of the chimney toppling to the west, and further displacement occurred during the growth of a large pine tree. The footings that once supported the front porch were totally destroyed, but small concentrations of coquina and mortar fragments, in addition to a few aligned bricks, allowed locational determinations (Figure 5).

Soil disturbances associated with the foundations clearly demonstrate that each one was placed in a shallow excavated pit about 8 to 10 inches below the surface. The excavation for the center foundation was originally misaligned several feet to the west but relocated equidistant between the opposing exterior foundations. The very presence of this footing argues for the presence of yet another located towards the front of the house, and between the other pier foundations (Figure 5). Despite the excavation, there were direct indications of cemented coquina, ship ballast, or cultural intrusions in the form of a foundation pit. Indirect indications were present with the appearance of scattered coquina and mortar fragments. Although there were little archaeological indications for this foundation, it would be extremely difficult to span a distance of 32 feet with a single sill expected to carry floor joists and the additional weight of the house. Because of this, I have indicated a similar foundation in this specific location (Figure 5).

Along the southern edge of the site in the vicinity of the front porch there were numerous fragments of mortar and occasional pieces of brick. At three separate linear locations there were discrete clusters of: (1) mortar and coquina fragments, (2) mortar fragments, and (3) mortar and brick fragments, all of which located the porch foundations. At the western corner of the site, and aligned with these features, was the occurrence of widely scattered pieces of mortar. Given the spacings of these features it appears that the footings were approximately 4 feet from center to center, and at least 9 feet from the frontal edge of the house.

The porch foundations were relatively shallow compared to those of the main structure. The articulated bricks located in the southeast corner of the site exists only 5 inches below the surface, which conforms with the other foundation remnants. The absence of well-defined foundation pits may suggest that the porch was an addition, or that the porch did not require any substantial footings.

Brick Patterns

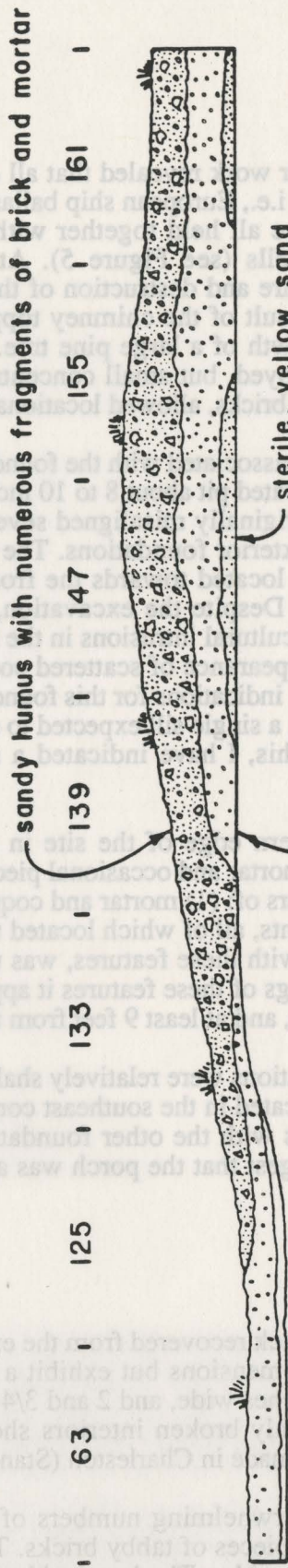
The few whole brick recovered from the excavation, and those noted on the foundation footings, yield similar dimensions but exhibit a variety of colors. Generally, the bricks are about 9 inches long, 4 inches wide, and 2 and 3/4 inches thick. Color ranges from dark brown to dark orange, and freshly broken interiors show the presence of manganese inclusions, similar to the clay bricks made in Charleston (Stanley South: personal communication).

Although the overwhelming numbers of brick fragments were represented by clay bricks, there were a few pieces of tabby bricks. These were approximately the same size but were slightly thicker and wider. The low incidence of these brick argues for: (1) specialized

Provenience units

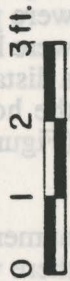


EAST/WEST SECTION



NORTH/SOUTH SECTION

SOIL PROFILES OF 38GE266



application, or (2) the use of recycled brick. The latter consideration may have greater acceptance, especially given the fact that an earlier eighteenth century chimney foundation exists a short distance to the north at Wachesaw plantation. This foundation is made entirely of tabby brick with similar dimensions. Furthermore, the successive occupations at Wachesaw by the Belin and Flagg families tended to build and occupy new residences rather than living in the house constructed by John Murrell in the 1730s (Michie 1987a:67-71). It is possible, therefore, that Murrell's 70 year old residence was in a bad state of dilapidation at the beginning of the nineteenth century and was being used as resource for building materials. This is suggested not only by the presence of tabby bricks at Richmond Hill, but with the appearance of early window glass fragments found at the overseer's house at Wachesaw plantation, built in about 1850 (Michie 1987a:122). Possibly, building materials were being scavenged from Murrell's old home for an extended period of time.

At Richmond Hill, only two of the foundations retained any clay bricks, but impressions of other bricks were noted in the setting beds of three additional foundations. At each foundation the brick patterns were represented by alternating rows of headers and stretchers, typical of English bond. The badly deteriorated and partially collapsed hearth support associated with the west chimney foundation (Figure 5) exhibits a combination of whole and partial brick layed in a running bond. No attempt was made by the masons to remove excess mortar from the joints, and those few mortared bricks existing on the pier supports did not indicate any decorative treatment of the mortar joints; they all appeared to be trowled flush with the brick.

Various examples of mortar joints were measured throughout the project and included not only the bricks remaining on foundations, but fragments seen during the excavation. These produced a great deal of variation in terms of vertical and horizontal joints, ranging from about 3/8 to 1 inch. Joints in the hearth support were the most inconsistent, sometimes approaching 2 inches in horizontal thickness.

Cultural Features

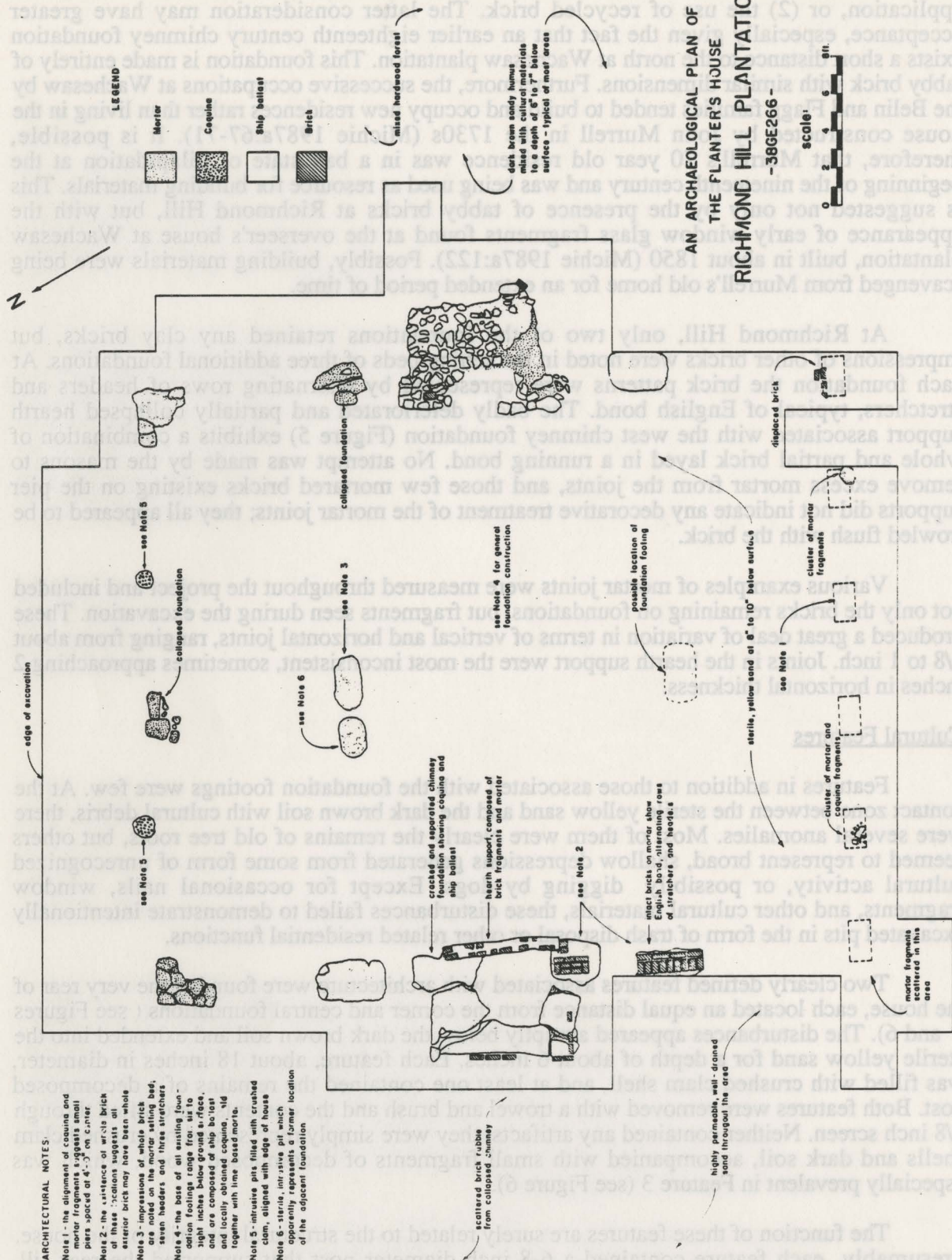
Features in addition to those associated with the foundation footings were few. At the contact zone between the sterile yellow sand and the dark brown soil with cultural debris, there were several anomalies. Most of them were clearly the remains of old tree roots, but others seemed to represent broad, shallow depressions generated from some form of unrecognized cultural activity, or possibly digging by dogs. Except for occasional nails, window fragments, and other cultural materials, these disturbances failed to demonstrate intentionally excavated pits in the form of trash disposal or other related residential functions.

Two clearly defined features associated with architecture were found at the very rear of the house, each located an equal distance from the corner and central foundations (see Figures 5 and 6). The disturbances appeared abruptly below the dark brown soil and extended into the sterile yellow sand for a depth of about 6 inches. Each feature, about 18 inches in diameter, was filled with crushed clam shell, and at least one contained the remains of a decomposed post. Both features were removed with a trowel and brush and the contents were sifted through 1/8 inch screen. Neither contained any artifacts; they were simply represented by crushed clam shells and dark soil, accompanied with small fragments of decomposed wood, which was especially prevalent in Feature 3 (see Figure 6).

The function of these features are surely related to the structural integrity of the house. Presumably, each feature contained a 6-8 inch diameter post that supported the rear sill. Whether or not the posts were added before or after construction is unknown. Because the features are architectural anomalies, i.e., existing only at the rear of the house, suggests they

AN ARCHAEOLOGICAL PLAN OF THE FLANTER'S HOUSE RICHMOND HILL PLANTATION

-38GE266 -



ARCHITECTURAL NOTES:

- Note 1 - the alignment of coquina and mortar fragments suggests small piers spaced at 4'-3" on center.
- Note 2 - the existence of whole brick at these locations suggests all exterior brick may have been whole.
- Note 3 - impressions of whole brick are noted on the mortar setting bed, seven headers and three stretchers.
- Note 4 - the base of all existing foundation footings range from six to eight inches below ground surface, and are composed of ship ballast and locally obtained coquina, laid together with lime-based mortar.
- Note 5 - intrusive pits filled with crushed clam, aligned with edge of house.
- Note 6 - sterile, intrusive pit which apparently represents a former location of the adjacent foundation.

may have been added after construction to alleviate a structural problem such as a collapsing sill or support for weak scarf joints.

The use of crushed clam shell is not well understood, but it may have been used to extend the longevity of the posts. One potential explanation may be related to the constant saturation of contiguous soils by concentrations of rain water shed by the roof. Large amounts of crushed shell would significantly improve drainage through rapid permeability, thus preventing premature deterioration. Dr. Franklin Tainter and Dr. Ben Kissan of Clemson University, and Dr. Gerald Cowley with the University of South Carolina, all of whom are involved in different facets of biology, have suggested rapid permeability in addition to other considerations. They further suggested that the calcium content would elevate soil pH and create localized alkalinity which retards fungus and, quite possibly, termites. Thus, crushed clam shell, would serve a number of functions in terms of preservation.

Architectural Reconstructions

General Statements

The architectural hardware, in addition to other construction materials, supports an earlier conception of the house's appearance (Michie 1987a:79-87). In all respects it was a wooden framed structure erected on brick piers with a full width front porch. Fragments of plaster with lathing impressions demonstrate it had a plastered interior, and the high incidence of flat glass fragments show that it had numerous windows. High numbers of brick fragments and the lateral distribution of chimney falls are also a reflection of relatively high chimneys associated with a rather tall house. However, this masonry information does not support any considerations for a two story house, but rather one with a story and a half. If this is true, then the house may have had dormers (Michie 1987a:81).

The hardware associated with the doors and shutters is composed entirely of pintles and strap hinges; there is no evidence for either HL or H hinges, or butt hinges. The shutter dogs, which were used to secure open shutters, are all plain and simple in design, intended to be driven into the adjacent wooden structure. Although door lock hardware is partial and incomplete, it appears that doors were secured by a system of simple stock locks and thumb latches, and occasional rimlocks and/or rimlatches with glazed ceramic knobs. There is absolutely no evidence in any of the recovered data for the use of brass hardware. All of the construction materials were manufactured from either cast or wrought iron.

The presence of "C"-shaped wrought-headed nails, i.e., those that were clinched in boards, reflects the use of either vertical batten shutters and/or doors, or a combination of both. Flat headed screws are minimal in number (see Appendix III), a pattern previously noted in the 1984 investigation. This provides supporting evidence for the absence of butt hinges, or other related types requiring screws. Such fasteners may have been used in the construction of furniture, cupboards, cabinets, or potentially with the attachment of rimlatches or some other style of door lock.

Based on this information, then, the house may well have been a simple clapboard structure reflective of vernacular styles common to the area of the Pee Dee and Waccamaw Rivers.

Antebellum Architecture in the Project Area

A review of the literature shows that all of the known planter's houses are wooden structures with clapboard siding, and the majority of them rest on brick pier foundations; there are no known solid masonry houses. These extant structures range from the American Revolution to the Civil War, and generally reflect Colonial architectural styles, but Greek Revival and vernacular styles are present (see Lachicotte 1955).

The only surviving houses along the Waccamaw without appreciable alterations are Arcadia and Clifton. Both of these houses are traditional examples of Early Classical Revival with porticos extending to the roof and second story. Arcadia is characterized with a hipped roof and a two tiered entry porch; Tuscan columns support the balcony and Ionic support the triangular front gable. Clifton is a side gabled, two story structure with enclosed end chimneys, and the gabled portico is supported by four Tuscan columns extending the full height of the porch. The second story balcony is supported jointly by the house and columns. Both houses are covered with clapboard.

The Black River hosts at least three antebellum houses with somewhat different architectural styles. The house at Windsor plantation is a single story Georgian with a hipped roof and two dormers. A centered gable supported by four Ionic styled pilasters enhances the front, while symmetrically placed dependencies flank either side. Beneventum plantation has a two story structure with a hipped roof and centrally placed chimneys suggestive of both Georgian and Greek Revival styles. Because the house dates to about 1800, predating the period of Greek Revival, it has closer ties with Georgian. The entrance is covered with a small flat roof porch and a centered gable supported by four Tuscan columns. Dentils are present on the cornice. The relatively small house at Keithfield plantation represents components of Greek Revival. The structure has end gables with enclosed end chimneys, and a full width porch extends across the front supported with four Tuscan columns. The entablature of the porch gable appears relatively simple, but in the center of this gable there is an unusual display of a semi-circular window and two half windows symmetrically opposed.

Over on the Pee Dee River there are fewer formal styled houses and several of them appear in the tradition of vernacular styles. The structure at Nightingale Hall is two stories high with an end gabled roof and enclosed end-chimneys. A one story wooden porch with plain Tuscan columns extends the full length of the house, and the structure appears to be supported with brick piers. The house at Dirleton plantation is similar, although it is two rooms deep with four enclosed end-chimneys and two large dormers. The one story porch extends around the front and the sides of the house, supported by simple square columns and resting on brick piers. At Arundel, the clapboard house appears to have been Greek Revival originally, but alterations and modifications have changed its original appearance. The house at Chicora Wood has a vernacular appearance, and like Dirleton, it is two rooms deep with a porch extending around the front and sides. Tuscan columns support this end gabled house which is elevated about five feet above the ground and on brick piers. The house at Exchange plantation appears to be a mixture of vernacular and Colonial styles; as such it is difficult to find dominant characteristics. It has end gables and two centrally located chimneys and a large central dormer above the entrance. The roof extends in a continuous line over the porch which carries six Tuscan columns. Brick piers support the porch and house.

On the Sampit River near Georgetown, the large Friendfield house represents Early Classical Revival. The two story house is square with a hipped roof and two centrally located chimneys, and the gabled entrance extends full height with four Tuscan columns. The cornice is decorated with dentils and there is no second story balcony or porch. The house at Cat Island

plantation is two stories high and two rooms deep, with two centrally located chimneys. It is typically five ranked, but instead of being covered with clapboard, split shingles serve as siding. Brick piers support the house and the small entrance porch with four columns. The porch is only one story high and extends about half the length of the house. Annandale, located south of Georgetown near the Santee River, is a classic example of Greek Revival architecture. The exterior is entirely clapboard and it has a front gabled roof which constitutes the principle facade, forming a colonnaded porch beneath the gable and giving the house the appearance of a small Greek Temple. The entablature is well developed and the columns are represented by four large Roman Tuscan. On the upper part of Wicklow plantation, a late antebellum house exists which presents details of vernacular architecture. This small two story house is only one room deep and part of the original porch extending the full width of the house has been recently enclosed. It rests on brick piers and a single chimney exists between the end gables. The house at Woodside plantation on the North Santee is also constructed similarly to Dirleton, Nightingale, and Chicora Wood. The clapboard structure at Hopsewee plantation is constructed in the same vernacular tradition, although it has a hipped roof. Two dormers are situated immediately above the first and second story porches, and the chimneys are located centrally. Twelve square columns (six per floor) support the broad portico and the roof extends in a continuous line over the porch. Masonary piers constitute the foundations.

These planter's houses that have managed to survive in the vicinity of Georgetown provide some general indication of the diversity of antebellum architecture associated with rice plantations. This sample constitutes a low incidence of the former structures that once existed along these river systems, and while these homes are capable of making statements about general architectural styles, it should be remembered that they represent only a few. Given the variation seen here, one may suspect a greater amount of variation in those that have been destroyed.

Based on this sample, there are several obvious patterns regardless of the amount of variation. These patterns are noted as: 1) predominance of brick piers, 2) near total use of clapboard siding, 3) the chimneys are all enclosed within the structures, 4) full width porches tend to occur only on vernacular styles, 5) dormers tend to occur with many of the houses, especially vernacular types, 6) dentils and other expressions of traditional architecture are infrequent, 7) Tuscan columns may be associated with either traditional or vernacular styles, and 8) square columns are always associated with vernacular styles.

Potential Appearance of the Richmond Hill House

If the characteristics discussed above, and those in the previous sections, can be used to graphically reconstruct the planter's home, then I would argue for a relatively simple structure. Given that the architectural components, especially the early machine-cut nails and the window fragments, are indicating a construction date in the range of about 1810, the frame would have been constructed by using heavy timbers (post and girt) placed on brick piers. This is indicated by the very fact that balloon style framing did not appear until the mid-1830s (Condit 1968:43). The high incidence of nails strongly suggests clapboard siding, and a high incidence of window fragments indicates multiple windows. The window systems noted in local antebellum architecture all show symmetrical opposed sashes, and in terms of multiple stories the windows are arranged in either three or five ranks. Single story dwellings on the other hand, display either two or four ranks, all with centrally located doors. The ranking of windows is not especially related to the size of a structure, but rather to the apparent desire of the designer. Thus, on small houses either a single or double windows may appear on each side of the door. Similarly, side windows also occur in symmetrical placement. Because the

rear of houses are not indicated, ranking is unknown. However, there is no reason to suspect a deviation from symmetry or established patterns noted in the front.

In considerations of appearance, the brick patterns in the piers and chimneys would be typically English bond with smoothed mortar joints, all resting on footings composed of coquina and ship ballast (Figure 7). Attending this Figure, heavy timber construction is also indicated, which includes clapboard siding and a plastered interior, in addition to a partial elevation of the eastern side facing the avenue of oaks.

The chimney, hearth, and hearth support shown in Figure 7 are based on archaeological data from the site. The height of the hearth and its associated brick support are currently unknown, but it could easily be in the range of two to three feet, dimensions which are consistent with extant houses of the region. The occurrence of virtually clean sand found within the hearth cavity suggests it was used to support the brick hearth.

Graphic reconstructions of the entire house foundation, in terms of pier supports and chimneys, are relatively easy given the location and size of the extant footings. The intact sill supports and their associated foundation footings associated with the west chimney allow a reconstruction of the east chimney (Figure 8). Similarly, the intact footing with alternating headers and stretchers located at the front of the house (southwest corner) allow a reconstruction of the opposite corner and the intermediate supports seen on the northeast side of the chimneys. The extant center foundation clearly exhibits brick impressions demonstrating six headers and three stretchers. The other center footings, therefore, should be similar. The northeast corners are not given easily to interpretation as there are neither bricks nor impressions. However, the size of these foundations, relative to the main supports, are somewhat smaller indicating a reduction in the number of headers and stretchers. The arrangement of bricks indicated in Figure 8 compliments the size of both foundations and may have a relative degree of accuracy.

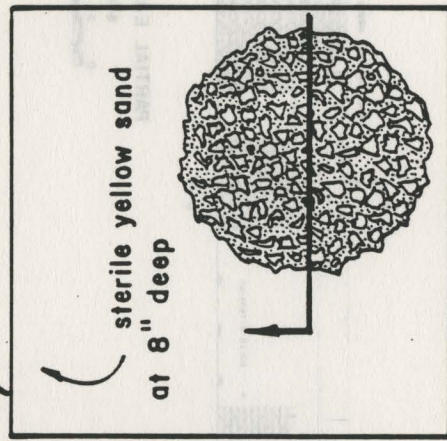
The larger foundations located near the chimneys strongly suggest they once carried the majority of weight. Load bearing towards the rear was obviously less, indicating a structural peak at the chimneys. The smaller piers supporting the porch indicate a minimal amount of load bearing and suggest it may have been built independent of the main frame, or potentially at a later date. Given these structural considerations, and considering the architectural items recovered from the excavation, the house probably resembled a vernacular hall and parlor (Figure 9).

Reconstructions of the Piers and Chimneys

Shortly after the completion of the field excavations, we directed our efforts towards rebuilding the collapsed footings, the piers, and the chimneys. The ship ballast and coquina associated with the collapsed footings were repositioned and were recemented using a lime based mortar. The west chimney foundation, which had suffered partial destruction during the chimney collapse, and additional displacement with the expanding tap root of a large tree, posed a problem; the foundation could not be moved and it was too solid to be torn apart and rebuilt. This problem was solved by simply pouring a cement slab over the existing structure.

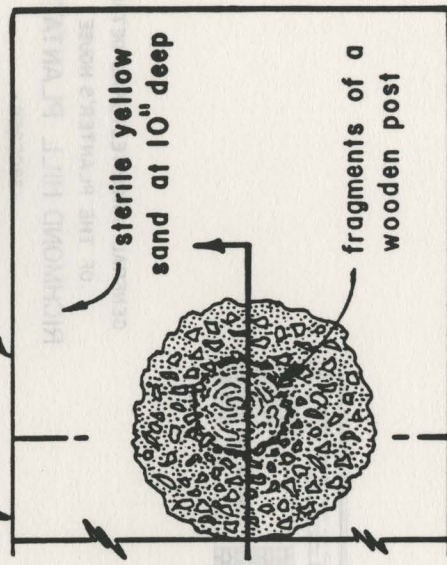
When all of the foundations were reconstructed, a datum point was established with a transit for the masonry work. Batter boards were also placed at each corner of the house and the chimney locations and leveled according to the datum. String was then attached to the batter boards and adjusted to conform with the outside dimensions of existing bricks, piers, and chimneys.

Provenience 196

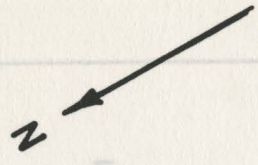


PLAN VIEW
Feature 2

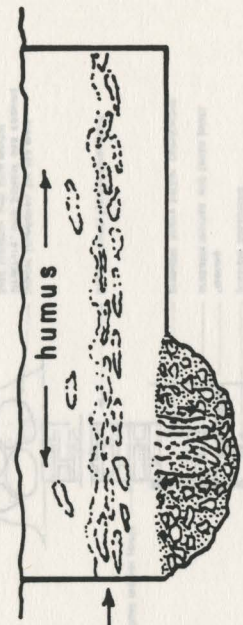
Provenience 198
Provenience 199



PLAN VIEW
Feature 3



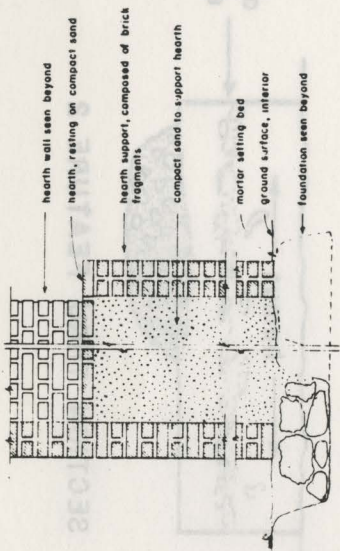
SECTION THRU FEATURE 2



SECTION THRU FEATURE 3

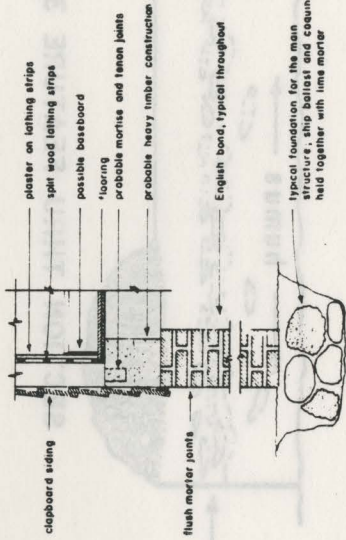
PROBABLE ARCHITECTURAL FEATURES - 38GE266





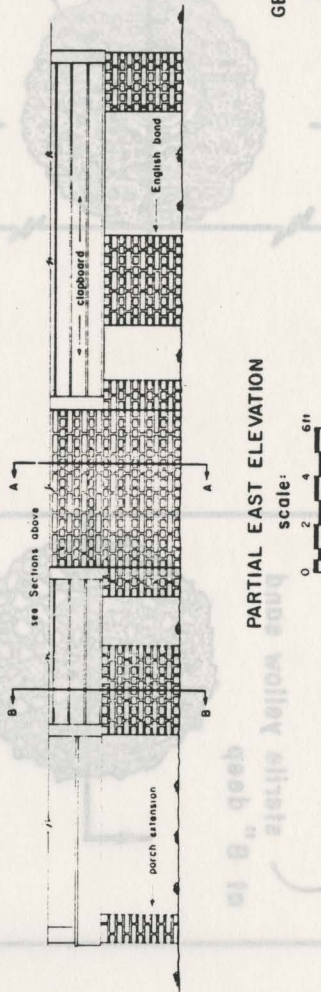
SECTION A-A

scale: 4"



SECTION B-B

scale: 4"

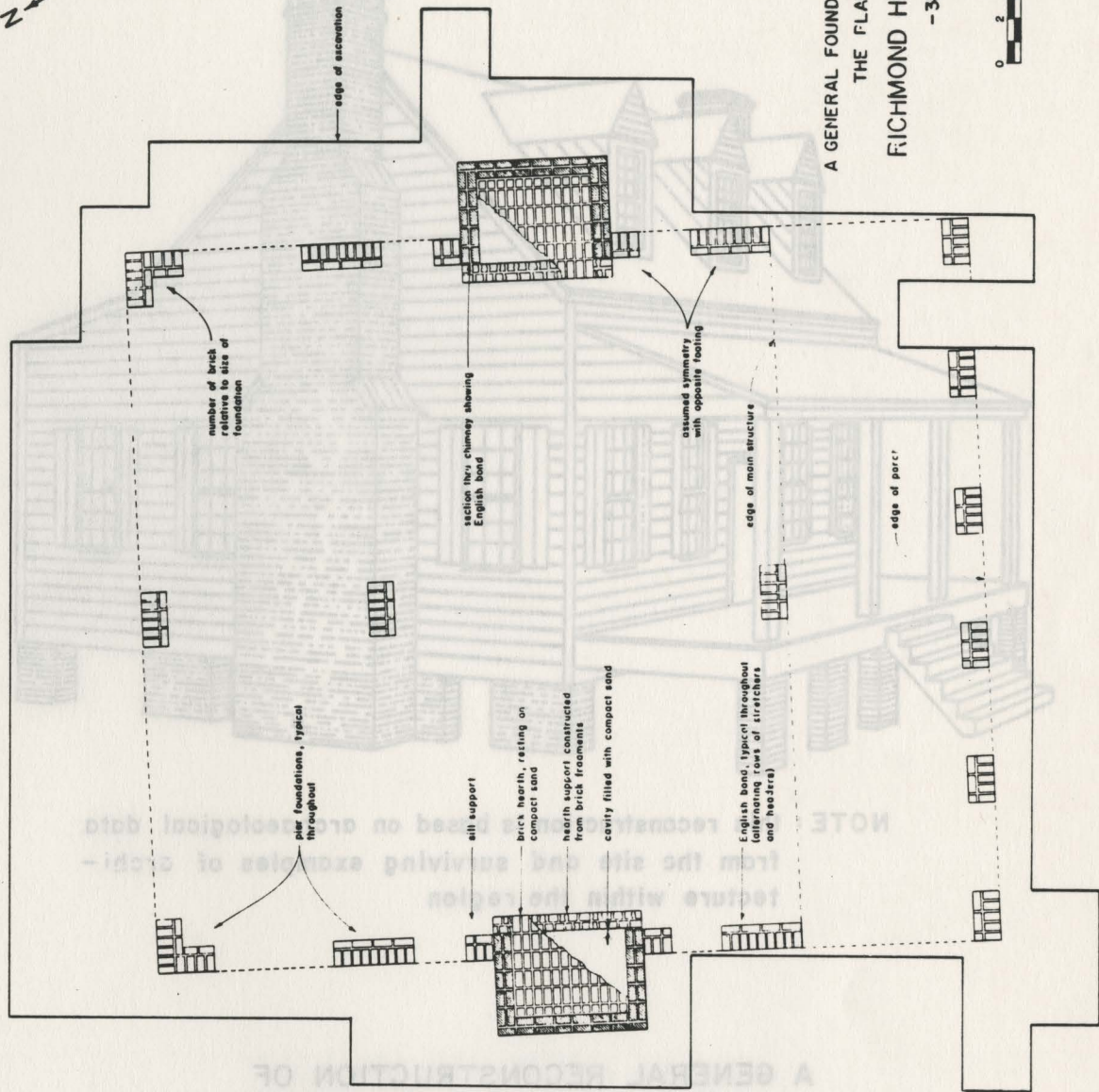
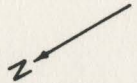


PARTIAL EAST ELEVATION

scale: 6"

GENERAL ARCHITECTURAL DETAILS
OF THE PLANTER'S HOUSE
RICHMOND HILL PLANTATION

-386E266-



number of brick relative to size of foundation

edge of excavation

brick for chimney showing English bond

assumed symmetry with opposite footing

edge of main structure

edge of porch

other foundations, typical throughout

all support

brick hearth, resting on compact sand

hearth support constructed from brick fragments

cavity filled with compact sand

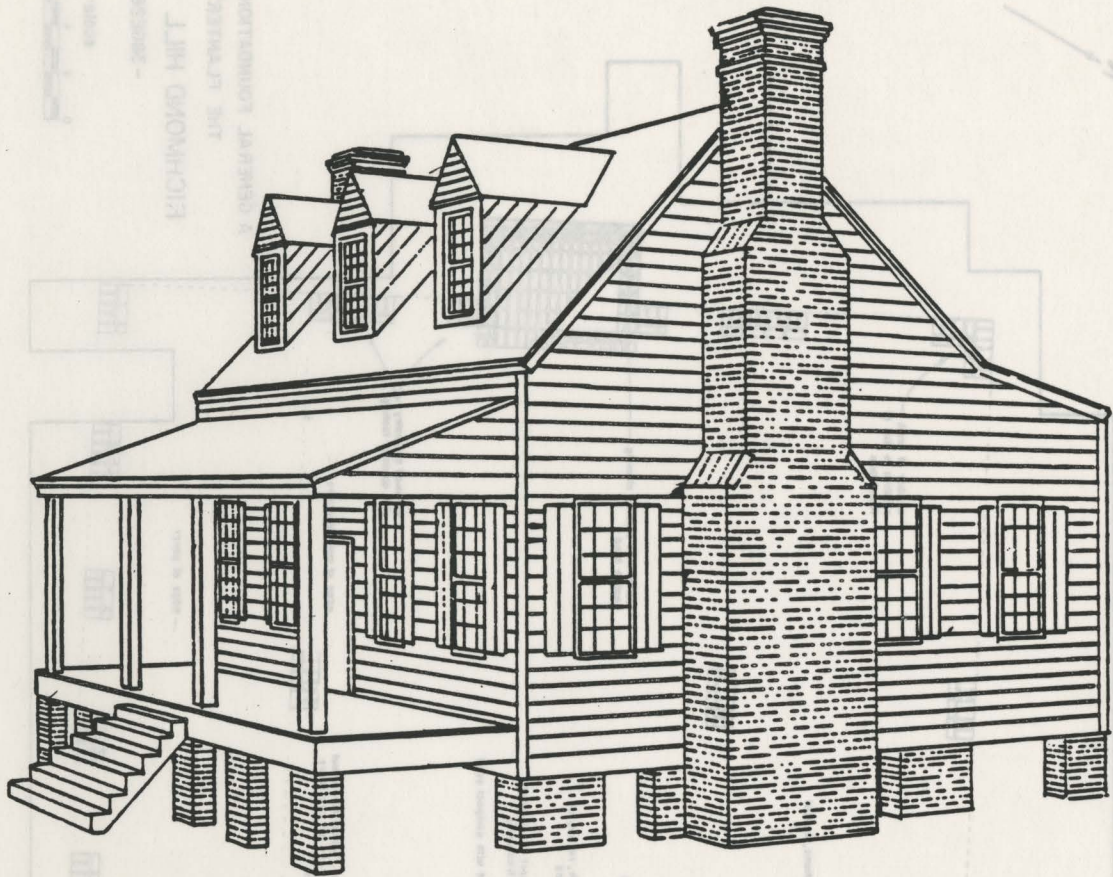
English bond, typical throughout (alternating rows of stretchers and headers)

A GENERAL FOUNDATION RECONSTRUCTION
 THE PLANTER'S HOUSE
 RICHMOND HILL PLANTATION
 -39GE266-



A GENERAL RECONSTRUCTION OF THE PLANTER'S HOME - 39GE266 RICHMOND HILL PLANTATION

no scale



NOTE: this reconstruction is based on archaeological data from the site and surviving examples of architecture within the region

A GENERAL RECONSTRUCTION OF
THE PLANTER'S HOME - 38GE266
RICHMOND HILL PLANTATION

no scale

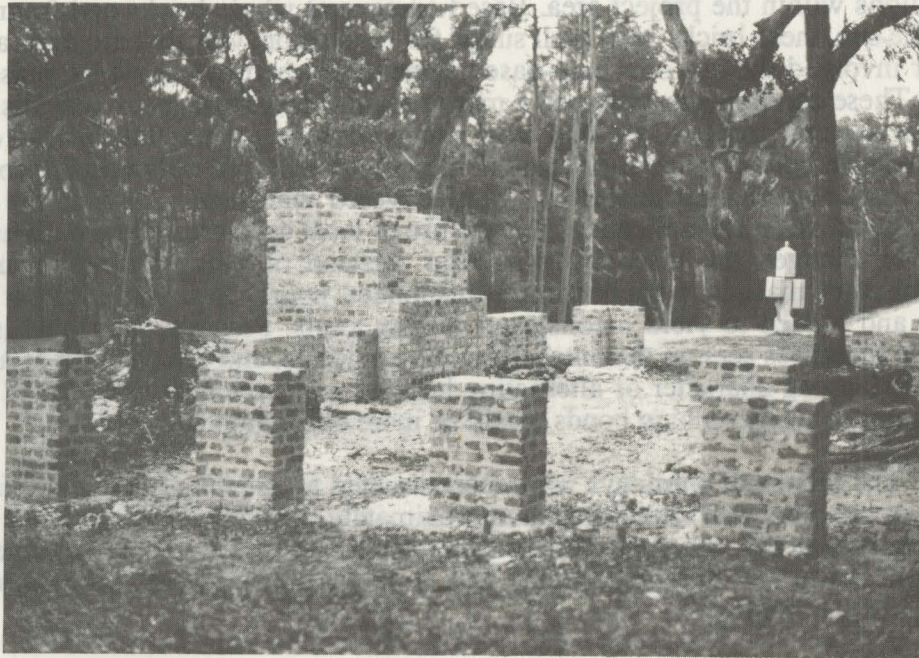


Figure 10. View of porch piers and west chimney, looking towards the northwest.

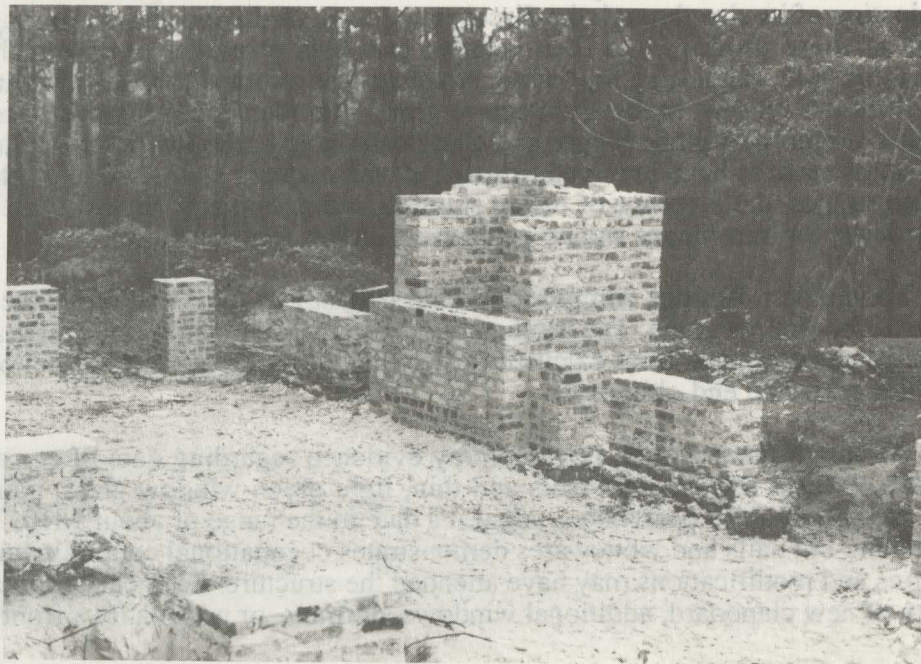


Figure 11. View of the west chimney and associated piers, looking towards the southwest.

The bricks chosen for masonry were all from nineteenth century antebellum plantations within the project area. Based on several whole bricks and fragments recovered from the site, these bricks were well suited for replication. Our first attempts at replicating the mortar involved the use of a lime-based cement, crushed oyster shells, masonry sand, and water. These components produced a mortar similar in texture, but very dissimilar in color. To alleviate this problem, we first tried using a coloring agent, but instead of obtaining the characteristic light gray color of original mortar, we received only varying colors of pink and brown. After much trial and error, we discovered that local sand was the key variable in producing an accurate replication. But the use of local sand created an unforeseen problem; it radically changed the viscosity of mortar. Instead of being hydraulic and amenable to contemporary masonry application, it responded poorly to the adjustment and leveling of bricks and tended to yield inconsistent mortar joints. Perhaps, then, this is the reason for variable thickness seen in the antebellum mortar joints, and the purpose of an English bond. The overlapping character of alternating headers and stretchers would tend to reduce brick displacement, while running bonds would be more difficult to control.

The piers and chimneys were reconstructed as previously indicated in Figure 8. The height of the piers was established at approximately three feet above grade, a height which is not inconsistent with other antebellum structures in the area. The chimneys were discontinued at about seven feet (Figures 10 and 11), a height sufficient to show both the hearth and portions of the fireplace.

Summary

Architecture

The excavations at the planter's home at Richmond Hill plantation enabled a spatial determination of its size through the discovery of most of the foundation footings. The specific location of these footings and their relative size also provided some insights into general architectural style, suggesting the former structure was oriented towards a vernacular, hall and parlor. Artifacts relative to the architecture group provide supporting evidence that the house was rather simple with pintle hinges and clap-board siding. The interior was plastered and door lock systems seem to have involved rimlatches with ceramic knobs. Wrought-headed clinched nails also suggest the presence of batten shutters, and potentially batten styled doors. There is little evidence for butt-hinges and no evidence at all for brass hardware.

Foundation footings composed of ship ballast and local coquina were placed slightly less than a foot below grade. The footings were held together and capped at grade level with a lime-based cement made from calcined oyster shells. Brick patterns, typical of English bond, formed the piers and end-chimneys.

Although there is little documentary evidence regarding date of construction, a high incidence of early machine-cut nails and thin, light green window glass, paired with lighter yellow creamwares and pearlwares, suggest a date in the range of about 1810. The presence of late machine-cut nails and whitewares demonstrates occupational continuity and suggests that alterations and modifications may have attended the structure. Such changes may have been in the form of new clapboard, additional windows, dormers, or potentially a front porch.

General Artifact Data

Artifacts recovered during the excavation are presented in the Appendices, and complement the assemblage recovered in the 1984-1985 excavations (see Michie 1987a). Because this excavation was directed more towards the immediate area of the house, instead of the general area of the contiguous yard, the entire archaeological record was not investigated. The former excavations and the data patterns resulted from a systematic, stratified, unaligned sample of the entire site. Nevertheless, patterns obtained in 1987 are a close parallel.

Beyond the general architecture group, the ceramic assemblage continues to argue against Otto's (1977) expectation for a dominance of transfer-printed wares at a planter's house. Undecorated white porcelain and undecorated whiteware still dominate the assemblage (Appendix I).

The faunal assemblage (Appendix II), as mentioned earlier, reflects a great deal of pig; wild taxa are poorly represented. The earlier excavations, on the other hand, showed a diversity of fauna and a much greater utilization of both marine and terrestrial taxa. The reasons for this are probably related to the concentration of research, i.e., the area immediately associated with the house.

Both furniture and arms groups also show a parallel assemblage, especially the arms group. The earlier data (Michie 1987a:184-187) shows a high incidence of unimpacted lead shot (112/93%) and a low incidence of impacted (8/07%). Present data continue to show a high percentage of unimpacted shot (151/86%) and a low incidence of impacted (24/14%). Comparative data regarding unimpacted lead shot and percussion caps also show compatibility: 112/31 (1984) and 151/29 (1987), a difference of 28% and 19%, respectively. The reason for so much unimpacted lead shot may be related to leisure versus subsistence oriented activities, and hence a socioeconomic pattern capable of differentiating the planter from the manager and the labor force (Michie 1987a: 186).

All the lead shot seems to have been related to the use of shotguns. The diameter range of buck shot, from about .250" to .350", is related to Single O, Double OO, or Triple OOO, depending on size. Since the majority of the shot easily falls within this range (see Appendix IV) one may conclude that shotguns were a primary weapon in hunting. The occurrence of smaller shot in a few of the provenience units, although not measured, would surely have been used in smaller game, such as marine and terrestrial birds, and possibly squirrels, opossums, and raccoons.

The items in the clothing group (Appendix V) are also a close parallel to the efforts of 1984, as are the artifacts in the personal group. The diversity of tobacco pipes, however, is not seen in this new set of data.

Acknowledgements

The efforts at the planter's house were made possible by a number of people who gave freely of their time and energy. I am deeply indebted to Bill Weeks, Kathy Weeks, Genevieve "Sister" Peterkin, Dot Chappell, Pat Shehan, Walt Berner, Joan Ewart, Don Ewart, Susan Ledbetter, Joy Maschoff, and Mike Conner. The continued daily interest and curiosity

expressed by the golfers and other members of Wachesaw is very much appreciated. Their endless questions demonstrate the project was enjoyed by all.

In the summer of 1983, Mr. Ed Fulton, who was Wachesaw's caretaker for fifty years, introduced me to this densely overgrown site. In the heat of that July day no one realized the potential for finding intact foundation footings, or that we would eventually rebuild the piers and chimneys. He was with us in December of 1984, when we found the first of the footings, when we realized that all of them may be there. Ed's absence was deeply felt in April of 1987, when all of the footings were exposed, and again in August when the piers and chimneys were rebuilt.

Acknowledgments

The efforts at the planter's house were made possible by a number of people who gave freely of their time and energy. I am deeply indebted to Bill Weeks, Kathy Weeks, Genevieve "Sister" Peckin, Don Chappell, Pat Sheehan, Walt Berner, Joan Ewart, Don Ewart, Susan Ledbetter, Joy Maschoff, and Mike Connor. The continued daily interest and curiosity

References Cited

Ball, Victoria Kloss

- 1980 Architecture and Interior Design: Europe and American from the Colonial Era to Today. John Wiley and Sons, New York. Condit, Carl W.
- 1968 American Building Materials and Techniques from the Colonial Settlements to the Present. University of Chicago Press.

Glassie, Henry

- 1975 Folk Housing in Middle Virginia: A Structural Ananysis of the Historic Artifacts. The University of Tennessee Press, Knoxville.

Iseley, N. J., W.P. Baldwin, and A.L. Baldwin,

- 1985 Plantations of the Low Country, South Carolina, 1697-1865. Legacy Publications, Greensboro, North Carolina. Lachicotte, Alberta

- 1955 Georgetown Rice Plantations. State Printing Company, Columbia, S.C. McAlester, Virginia and Lee McAlester

- 1984 A Field Guide to American Houses. Alfred. A. Knoph, New York.

Michie, James L.

- 1984 An Initial Archaeological Survey of the Wachesaw/Richmond Hill Plantation Property, Georgetown County, South Carolina. University of South Carolina, South Carolina Institute of Archaeology and Anthropology, Research Manuscript Series #191.

- 1987a Richmond Hill and Wachesaw: An Archaeological Study of Two Rice Plantations on the Waccamaw River, Georgetown County, South Carolina. University of South Carolina, South Carolina Institute of Archaeology and Anthropology, Research Manuscript Series #203.

- 1987b Bioturbation and Gravity as a Potential Site Formation Process: The Open Area Site, 38GE261, Georgetown County, South Carolina. University of South Carolina, South Carolina Institute of Archaeology and Anthropology, Research Manuscript Series #204.

Miner, Robert G., Editor

- 1977 Colonial Homes in the Southern States. Arno Press, Inc. Oser, Charles E.

- 1984 The Past Ten Years of Plantation Archaeology in the Southeastern United States. Southeastern Archaeology 3 (1):1-12.

References Cited

Otto, John Solomon

- 1977 Artifacts and Status Differences-A Comparison of Ceramics from Planter, Planter, Overseer, and Slave Sites on an Antebellum Plantation. In Research Strategies in Historical Archaeology, edited by Stanley South, pp. 91-118. Academic Press, New York.

Pekrul, Sharon

- 1987 Archaeological Investigations at the Wachesaw Landing Site, Georgetown County, South Carolina. Ms. on file at the South Carolina of Archaeology and Anthropology, University of South Carolina, Columbia.

Rogers, George C.

- 1970 The History of Georgetown County, South Carolina. University of South Carolina Press, Columbia, Singleton, Theresa.

- 1985 The Archaeology of Slavery and Plantation Life. Academic Press, New York. Smith, G.E. Kidder.

- 1981 The Architecture of the United States: New England and the Mid-Atlantic States. Anchor Books, Garden City, New York.

Upton, Dell and John M. Vlach, Editors

- 1986 Common Places: Readings in American Vernacular Architecture. University of Georgia Press, Athens.

APPENDIX I

Kitchen Related Artifacts From 38GE266

Ceramics

Porcelain:

- 1-overglazed enameled Chinese trade porcelain
- 98-undecorated white porcelain
- 99-total

Stoneware:

- 56-undecorated white ironstone
- 10-undecorated purple ironstone
- 7-blue transfer-printed ironstone
- 1-white salt-glazed stoneware
- 1-white salt-glazed with Albany interior
- 1-Albany glazed stoneware
- 3-Gray salt-glazed stoneware
- 1-alkaline glazed stoneware
- 1-felspathic stoneware
- 1-ginger bottle stoneware
- 83-total

Earthenware:

- 210-undecorated whitewares
- 117-blue transfer-printed whitewares
- 13-blue willow transfer-printed whitewares
- 4-red transfer-printed whitewares
- 8-black transfer-printed whitewares
- 70-sepia transfer-printed whitewares
- 1-brown stars stamped on whiteware
- 10-undecorated yellow wares
- 1-annular yellow ware
- 21-annular whiteware
- 2-luster ware
- 3-red cork-stamped whiteware
- 1-blue sponged whiteware
- 7-blue edged whiteware
- 5-Bennington wares
- 1-blue spatter ware
- 5-Mocha ware
- 17-undeglazed polychrome hand-painted whiteware
- 496-total

Creamware:

- 45-undecorated creamware
- 45-total

APPENDIX I, Continued

Kitchen Related Artifacts From 38GE266

Pearlware:

- 16-undecorated pearlware
- 61-blue transfer-printed pearlware
- 4-blue willow transfer-printed pearlware
- 8-underglazed blue hand-painted pearlware
- 1-underglazed brown hand-painted pearlware
- 1-finger painted pearlware (polychrome slip)
- 11-blue edged pearlware
- 2-green edged pearlware
- 104-total

Other:

- 10-black-glazed redware
- 4-lead-glazed redware
- 2-engine-turned red earthenware
- 1-unidentified earthenware
- 8-calcined earthenware
- 7-Colonoware
- 32-total

Total Ceramics = 859

Transfer-printed refined earthenwares = 277 (42.9% of total refined earthenwares)

Undecorated refined earthenwares = 281 (43.5% of total refined earthenwares)

Annular wares = 22 (03.4% of total refined earthenwares)

Edged wares = 20 (03.1% of total refined earthenwares)

Wine Bottles

Dark Green	Olive Green	Green	Light Green	Light Blue	Case Bottle
162 (17%)	657 (71%)	64 (07%)	36 (04%)	7 (007%)	2 (003%)

Total Wine Bottles = 928

Tumblers

Plain	Faceted	Embossed	Ribbed	Raised Relief	Pressed	Grooved
441(70%)	142(22%)	23(04%)	15(02%)	4(006%)	7(01%)	1(002%)

Total Tumblers = 633

TABLE 1, Continued

Kitchen Related Artifacts From 38GE266

Pharmaceutical Type Bottles

Clear 241(55%)	Light Blue 51(11%)	Light Brown 26(6%)	Light Green 8(2%)	*Small Frag's 116(26%)
-------------------	-----------------------	-----------------------	----------------------	---------------------------

Total Pharmaceutical = 442

Partial and Complete Embossing Noted on Bottle Fragments

"...RES..." (clear)	"McCORMICK & Co. BALTIMORE, Md. (light blue)
"...YO..." (clear)	"...RILLA..." (sarsparilla) (light blue)
"...ALT..." (light blue)	"...STS..." and "...S.C." (light blue)
"...APA..." (light blue)	"DeWITT'S OIL LINIMENT" and "...RKER & Co. BALT ² MD" (light blue)

*Note: This category includes various colors, but fragments may be related to other types other than pharmaceutical. However, their shapes and structure suggest placement within this category.

Glasswares

Stemmed Wine Glasses 18	Molded, Pressed Wine Glasses 22
----------------------------	------------------------------------

Total Wine Glasses = 40

Tablewares

Cast Iron Spoon 1-badly deteriorated	Brass Spoon 1-intact	Pewter Spoon 1-handle	Knives 1-partial blade and bone handle
---	-------------------------	--------------------------	--

Total Tablewares = 4

Kitchenwares

Cast Iron Pot Fragments 8	Skillet Fragments 1
------------------------------	------------------------

Total Kitchenwares = 9

TABLE I, Continued

Kitchen Related Artifacts From 38GE266

Miscellaneous Glass Containers

Small Unidentifiable Fragments in Various Colors

390

Total Miscellaneous Glass = 390

Note: This category denotes exceptionally small pieces of glass containers in the range of 1/8"-3/8" (.5-1cm). These fragments may well represent portions of wine bottles, tumblers, glasswares, or pharmaceutical bottles.

*Note: This category includes various colors, but fragments may be related to other types other than pharmaceutical. However, their shapes and structure suggest placement within this category.

Glasswares

Stemmed Wine Glasses	18
Molded, Pressed Wine Glasses	22

Total Wine Glasses = 40

Tablewares

Cast Iron Spoon	1
Brass Spoon	1
Pewter Spoon	1
Knives	1
1-partial blade and bone handle	1

Total Tablewares = 4

Kitchenwares

Cast Iron Pot Fragments	8
Skillet Fragments	1

Total Kitchenwares = 9

APPENDIX II

Faunal Identification

Provenience	Description
195	pig tooth fragment small carnivore (dog?)
210	dog-sized carnivore
177	pig tooth; upper premolar, adult, heavy wear chicken-sized bird
179	pig; first phalanx, young, large individual
161	carnivore; metapodial (probably small dog) turtle
169	small bird (?) goat; young
160	mole (?)
186	rat; adult mandible
172	chicken-sized bird unidentified fragment with butchering marks (sheep/goat?)
201	pig; unerupted third molar, less than two weeks old
167	unidentified humerus; carnivore gnawed shaft portion cow; large incisor from an old individual
211	- cow; femoral fragment, large individual, with gnaw marks and butchering marks (probably butchered from an axe blow to the hips)
191	- unidentified bird bone; carnivore gnawed
173	- quail-sized bird; tibiotarsus
194	- bird (?)
198	- sheep/goat; horn core
146	- unidentified turtle; carapace fragment burned
119	- unidentifiable bone fragment
183	- unidentified turtle; carapace fragment
127	- unidentified turtle; carapace fragment
103	- pig; tooth, appears unerupted, very young
147	- unidentifiable bone (sheep/goat size)
187	- unidentified turtle; carapace fragment
99	- pig; worn premolar, young individual
164	- sheep/goat; humerus, young, carnivore gnawed
186	- unidentified carnivore tooth; little wear, small individual
170	- pig; canine fragment, adult
155	- unidentified turtle; carapace fragment - dog; calcaneous - sheep/goat; premolar
151	- unidentified turtle
102	- pig; molar fragment, large individual
145	- unidentified turtle; burned carapace fragments
154	- unidentified turtle; carapace fragments
190	- unidentified bone; extensive gnawing by small carnivore
130	- pig; incisor fragment from a small individual
188	- unidentified turtle; carapace fragment
Feature 4	- unidentified bird bone; chicken/small turkey-sized

APPENDIX III

Architecture Related Artifacts From 38GE266

<u>Architecture Group</u>		Provenience	
<u>Window Glass</u>		195	
Light Green Glass	Clear Glass	210	
5,270 (79%)	1,368 (21%)	177	
Total Window Glass = 6,638		179	
(frequency relationship with nails = 63%)		161	
<u>Nails</u>		169	
Hand Wrought	Wrought Headed Machine-Cut	L-Headed Machine-Cut	
16 (004%)	9 (002%)	1 (0002%)	
T-Headed Machine-Cut	Early Machine-Cut	Late Machine-Cut	Shafts
37 (009%)	813 (21%)	2,100 (54%)	916 (24%)
Total Nails = 3,892		167	
(frequency relationship with window glass = 37%)		211	
<u>Spikes</u>			
Hand Wrought Spikes		191	
8		173	
<u>Construction Hardware</u>		194	
Cast Iron Pintles	Cast Iron Strap Hinges	Flat Head Screws	
5	2	7	
Cast Iron Door Bar	Brass Machine-Cut Nails	Cast Iron Shutter Dog	
1	1	1	
Total Construction Hardware = 17		198	
<u>Door Lock Parts</u>		199	
Brass Locking Lever For Rimlock	Cast Iron Jamb Lock Catch For Rimlock		
1	1		
Pad Lock Parts: Lock Plates and Bail		181	
3		102	
Total Door Lock Parts = 5		145	
Total Architecture Group Artifacts = <u>10,552</u>		190	
		130	
		188	
		Feature 4	

Furniture And Arms Related Artifacts From 38GE266

Furniture Group

Brass Tacks 11	Brass Key Hole Cover 1	Brass Machine-Cut Nails 7
Brass Esceuchon Plate 2	Brass Knob, Drawer Pull 1	Hand-Painted Glass Mantle 16

Note: Hand-painted glass mantle fragments are polychrome, red and gold; red on the interior painted over with gold leaf on exterior.

Arms Group

Lead Shot:

Unimpacted 144	Unimpacted w/teeth marks 6	Unimpacted, burned 1	Impacted 24
-------------------	-------------------------------	-------------------------	----------------

Total Unimpacted = 151 (86%)
 Total Impacted = 24 (14%)
 Total lead shot = 175 (100%)

Percussion Caps:

*Knurled Type 24	**Flared Type 5
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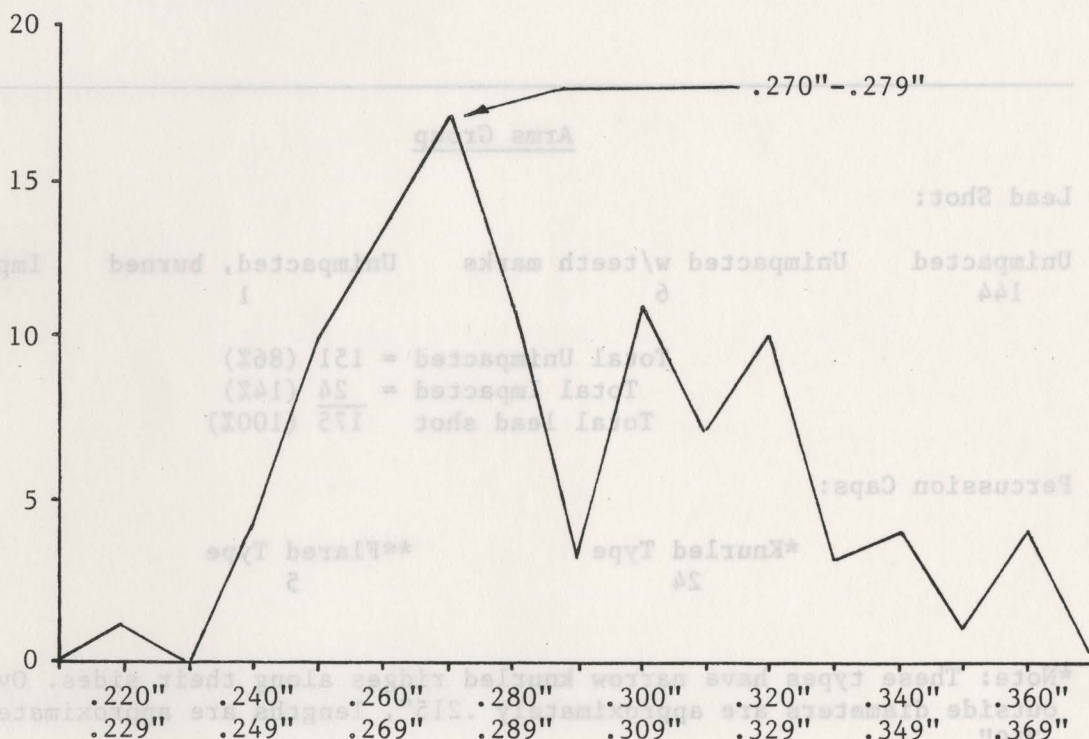
*Note: These types have narrow knurled ridges along their sides. Overall outside diameters are approximately .215", lengths are approximately .250".

**Note: These types have smooth sides, but flared bases, Flaring is not the result of having been fired; rather a manufacturing process. Overall outside dimensions and lengths are similar to the knurled type.

*Two additional shot, .146" and .180", are not included in the graph. Provenience units 305, 306, 307, 308, and 309 were screened with 1/8" hardware cloth to determine the presence or absence of smaller lead shot. Numerous shot in the range of .090"-.125" were found in these units, but are not included within this data. The above data, and the information presented on the preceding page, are intended for a comparison with the previous study (Michele 1987).

APPENDIX IV, Continued

Arms Related Artifacts From 38GE266



*Frequency Distribution of Lead Shot Diameters

*Two additional shot, .146" and .180", are not included in the graph. Provenience units 205, 206, 207, 208, and 209 were screened with 1/8" hardware cloth to determine the presence or absence of smaller lead shot. Numerous shot in the range of .090"-.125" were found in these units, but are not included within this data. The above data, and the information presented on the preceding page, are intended for a comparison with the previous study (Michie 1987).

APPENDIX V

Clothing Related Artifacts From 38GE266

Clothing Group

Thimbles

Brass Thimbles
1

Buttons

Pearl Button, 4 - hole 3	White Ceramic, 2 - hole 1	White Ceramic, 3 - hole 1	White Ceramic, 4 - hole 13	Blue Ceramic, 4 - hole 1
--------------------------------	---------------------------------	---------------------------------	----------------------------------	--------------------------------

Marbled Ceramic, 4 - hole 1	Bone Button, 4 - hole 3	Bone Button, 5 - hole 1	Cast Iron Button 3	Pewter Button, cast eye 1
-----------------------------------	-------------------------------	-------------------------------	--------------------------	---------------------------------

Brass Button, two piece 4	Brass Button, dished, 4-hole 3	Brass Button, rivited eye 1	Brass Button, cast eye 1	Brass Button, flat, sod. eye 3
---------------------------------	--------------------------------------	-----------------------------------	--------------------------------	--------------------------------------

Brass Button, flat, 1-hole 1	Brass Button, strap support 1
------------------------------------	-------------------------------------

Total Buttons = 42

Hook and Eye Fasteners

Brass Eyes
2

Glass Beads

Black Glass,
oval bead
1

Shoes

Brass Rivit and Washer 1	Brass Shoe Grommets 2
-----------------------------	--------------------------

Total Clothing Group = 49

APPENDIX VI

Personal and Tobacco Related Artifacts From 38GE266

Personal Group

Personal Items

Writing Slates	Writing Pencils	Brass Umbrella Rib	Pocket Knife
15	3	1	1

Gold Pendant
1

Total Personal Group = 21

Tobacco Group

Tobacco Pipes

Kaoline Pipe Stems	Plain Kaoline Pipe Bowls	Ribbed Kaoline Pipe Bowls
14	8	2

Kaoline Pipe Bowl With Alternating Ribs and Dots	Kaoline Pipe Bowl With Raised Stars at Bowl Rim
2	1

Total Tobacco Group = 27

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November 30, 1987

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This report is the product of the interests and enthusiasm of professionals and non-professionals alike, who gave of their time, knowledge, and skill to investigate the past at Richmond Hill Plantation's slave community.

Foremost, I wish to thank the people of Wachesaw who invited us to continue investigations into the rice plantation culture at Richmond Hill.

While in the field I was assisted in surveys and excavations by residents of Wachesaw Plantation, Murrells Inlet, Georgetown, and elsewhere in the low-country. Of these volunteers I wish to especially thank Bill and Kathy Weeks of Wachesaw; Mary Jo Donaldson and Dot Chappell of Murrells Inlet; Peter and Sarah Chisholm of Charleston; and Calvin Milam of Savannah who spent several days assisting me in the field.

The laborious task of processing and cataloguing the thousands of artifacts recovered during excavations was undertaken at the South Carolina Institute of Archaeology and Anthropology Laboratories, and completed on schedule with the help of Elizabeth Perry, Valerie Marcil, and Linda Smith.

At the professional level, a variety of specialists were consulted. In analyzing the artifacts James L. Michie, Stanley South, and Carl Steen were often called on for their opinions. Leland Ferguson, with the Department of Anthropology at the University of South Carolina, examined the colonoware, offering his opinions on its comparison with other regional examples. Cynthia Smith, with the University of South Carolina Herbarium, and Gary Crites of the Ethnobotany lab, Department of Anthropology, University of Tennessee were consulted on botanical matters. David Lawrence of the University of South Carolina Geology Department provided an analysis of mollusk shells from the site. John McArdle of the New England Anti-Vivisection Society conducted the faunal analysis. Folklorist Gary Stanton provided information from the Survey of Extant Slave Housing of South Carolina (in progress), conducted by the Folklife Program of the McKissick Museum and Colonial Williamsburg's Architectural Research Department. Richard Brooks of the Savannah River Plant Project (SRP) aided with critiques on historical matters. Advice on statistical matters came from Al Goodyear of the South Carolina Institute of Archaeology and Anthropology and Glen Hanson of Savannah River Plant. The staff at South Carolina Institute of Archaeology and Anthropology who work in concert to produce dozens of manuscripts and reports each year is also thanked for its effort.

Finally, I wish to thank James L. Michie who offered me the opportunity to undertake this work. His unflinching support is deeply appreciated.

INTRODUCTION

This study is the product of the archaeological survey of the slave settlement of Richmond Hill plantation, Murrells Inlet, South Carolina. The field work was conducted by the author between February and April of 1987 under the auspices of James L. Michie, director of the Wachesaw Project for the South Carolina Institute of Archaeology and Anthropology.

Previous archaeological work (Michie 1984, 1985, 1987) had identified and located, in part, the Richmond Hill plantation slave settlement. After assessing the area's archaeological potential, the author outlined a research design based on these earlier findings. Since the site was subjected to extensive cultivation and was later planted in pines, above-grade evidence of slave occupation at the site was scarce. A subsurface sampling strategy was therefore considered the best approach to discover areas of occupation. Through such a strategy the density and dispersion of artifacts from occupation might be determined. Since tillage might have diffused the archaeological record, a goal of this study was to test the effectiveness of our sampling methods in a plowed context.

This survey included two phases of sampling: the first was to identify the location of a row of slave cabins, confirm its orientation, delineate the spatial extent of the slave settlement, and locate specific structures; the second phase involved intensive sampling of one area to gain insight into the degree to which our first phase of sampling was indicative of the archaeological universe. This second phase also provided a methodologically comparable sample for collation with excavations conducted in 1985 at the Laurel Oak site.

Demographics

Introduction

Many questions about the past can never be answered through purely archaeological methods, for the archaeological record is restricted to material culture and the survival of those things through time. Conversely, the historical record is limited by the nature of its entry. The subject and data in written records are, or were, a conscious and selective process, further biased by the perspective of its author. By blending both avenues of research, the historical archaeologist perceives the past from a broader data base, which often affords check and balance.

Archaeological and historical investigations of what remains of Richmond Hill Plantation have recalled its past with considerable depth and detail (see Michie 1987). Further archaeological research into the slave community at Richmond Hill has defined the layout of the settlement and a high degree of architectural and domestic detail. Purely archaeological methods could not, however, define the demographic profile of the community.

The following discussion is based on three documents listing the members of the Richmond Hill slave community: two are from the censuses of 1850 and 1860; the third is from the property assessment in the will of Dr. John D. Magill, owner of Richmond Hill Plantation. Information provided by the censuses affords examination of the age ranges, gender, and life expectancy at two points in time that can be compared to similar statistics for the entire Georgetown District. The slave list appearing in Magill's will, however, provides the most intriguing information. Therein, the slaves are listed by name and in descending age within "familys" (sic.). Such detail is indeed rare in the documentation of

slave populations. From this list we can approach the problem of differentiating households and families. We can infer the size of households/families and the number of children per family. Maternal age at first birth can even be determined with a degree of certainty. Last in our historical research is an examination of the different types of names given to slaves and what they offer as an indication of acculturation.

The 1850 and 1860 Census

The district wide censuses of 1850 and 1860 listed the bondsmen of each slave owner by sex in descending age; we can therefore examine the frequencies of gender and age at two points in time for the Richmond Hill slave population, and compare them for demographic changes over a ten year period (Table 1).

In most age ranges females outnumber males by a small percentage, suggesting that maternal death at childbirth was not frequent at Richmond Hill. This, however, would not be apparent if the number of maternal deaths were masked by a disproportionately high number of male to female deaths at birth or in infancy. The only recognized gender specific anomalies are the relatively low number of males ages 0 to 9 in the 1860 census and the high ratio of men to women in the 30 to 39 year range in the 1860 census. The disproportionately high number of men to women in their 30s is especially noteworthy because ten years earlier, females outnumbered males in their 20s. This suggests an influx in the adult population between the years 1850 and 1860 through acquisition of males and possibly also through the disappearance of females.

Compared to similar statistics for the entire slave population of Georgetown District in 1860 (Joyner 1984:38), the slave population of Richmond Hill had a slightly lower percentage of individuals in the age ranges below twenty years of age and a significantly higher percentage of individuals in their 20's and 30's. The Richmond Hill slave population also differs from the district average in that the upper age range, at which the population decreases sharply precedes the district average, 40 to 50 years, by approximately ten years, suggesting a shorter life expectancy for the Richmond Hill slave. Certainly, life as a slave on Richmond Hill was worse than for others in the region. As Joyner (1984:27) concluded, "Dr. Magill's reputation as a master is uniformly poor, the poorest of any All Saints Parish planter." But, this doesn't explain the disproportionate numbers of few youths and many young adults. Perhaps infant mortality was more of a problem at a Richmond Hill, and perhaps Magill purchased young adults slaves to ameliorate this problem.

Figure One graphically depicts the age range frequencies for the Richmond Hill slave populations of 1850 and 1860. Because a 10 year period separates the recording of these populations, we would not expect the curve representing the 1860 population to retain the shape of the curve representing the earlier 1850 population (except in the case of newborn and elderly individuals) but move to the right, i.e. age, ten years. Any deviation from this predicted pattern should reflect intervening forces which augment the natural demographic progression. Of course these lists may not be accurate; they were, however, a matter of simple quantification for the recorder.

Table 1

Age and Sex Distribution, Slave Population, Richmond Hill Plantation, 1850 & 1860

Age	1850			1860		
	Male	Female	Total	Male	Female	Total
Infants	2(1.0)	1(0.5)	3(1.5)	3(1.6)	7(3.7)	10(5.3)
1-9	12(6.0)	17(8.5)	29(14.5)	11(5.8)	21(11.1)	32(16.9)
10-19	31(15.5)	35(17.5)	66(33.0)	15(7.9)	17(9.0)	32(16.9)
20-29	18(9.0)	26(13.0)	44(22.0)	20(10.6)	24(12.7)	44(23.3)
30-39	18(9.0)	22(11.0)	40(20.0)	25(13.2)	16(8.5)	41(21.7)
40-49	8(4.0)	4(2.0)	12(6.0)	8(4.2)	8(4.2)	16(8.5)
50-60	3(1.5)	1(0.5)	4(2.0)	2(1.1)	1(0.5)	3(1.6)
60-70	1(0.5)	1(0.5)	2(1.0)	1(0.5)	3(1.6)	4(2.1)
70-80	-	-	-	2(1.1)	2(1.1)	4(2.1)
80-90	-	-	-	1(0.5)	2(1.1)	3(1.6)
90-100	-	-	-	-	-	-
	93	107	200	88	101	189
	(46.5%)	(53.5%)	(100%)	(46.5%)	(53.5%)	(100%)

Source: 1850 & 1860 Census, Slave Schedules, SCDAH.

Several impressive deviations from the predicted pattern are apparent in comparing the curves representing the 1850 and 1860 populations (Figure 1). We would expect the eldest group in 1850, represented by 2 individuals between 60 and 70 years of age, to either age ten years or die by the time of the 1860 census. We find, however, that in 1860 there are four individuals in the 70 to 80 year range; and three individuals appear in the 80 to 90. This suggests that Magill purchased additional slaves between 1850 and 1860. It would be counterproductive to acquire seven such aged individuals (Fogel and Engerman 1974:75) unless they were included in the purchase of entire families. It was known that family ties reduced the incidence of runaways (Fogel and Engerman 1974:127), and this may have been an incentive for Magill, who had a high incidence of runaways. Aside from one other Waccamaw planter, Magill alone had the sheriff place advertisements for the return of runaways between the years 1850 and 1860 (Joyner 1984:27-28).

The age group with the highest number of individuals in 1850 was the 10 to 19-year-old group. Ten years later this group had lost approximately 15 individuals. Their disappearance might be due to their sale, their running away, or their death. Death, due to malarial conditions, may account for the disappearance of 15 slaves in their teens and twenties, and to a lesser degree slaves in their thirties and forties. The majority of the labor force working the rice fields was comprised of men and women between the ages of 10 and 50 (Fogel and Engerman 1974:42,220). Extended exposure in the rice fields, which were filled with standing water much of the summer (Joyner 1984:35), heightened this group's risk of contracting malaria. We would, however, expect that malaria would take a proportionate number of individuals from each of these age groups, yet disappearances are primarily from the age group who would have been in their twenties in 1860. It is therefore more likely that their decline in numbers was due to their sale and/or their running away. Of course, malaria and other diseases may have contributed to these statistics. The disappearances noted may have been, at least in part, runaways. Charles Joyner (1984:27-28) cites three instances of flight from Richmond Hill between the years 1850 and 1860. However, the best explanation for the disappearance of 15 individuals from one age group is that they were sold. Slaves in their late teens were entering their most productive part of life and therefore brought the highest market price of any age group (Fogel and Engerman 1974:72-74); for this reason, Magill may have sold these young slaves. Additional incentive for him to do so would be to repay debts which he assumed in 1846 and 1860, debts which eventually forced his sons to sell the plantation in 1869 (Michie 1987:50,53).

As noted in comparing the Richmond Hill population to all slaves in Georgetown District, the upper age range at which the Richmond Hill population experiences a precipitous decline precedes the district average by 10 years. This suggestion of shorter life expectancy for Richmond Hill slaves could conceivably be due to the planter's reluctance to purchase older slaves and the insufficient passage of time for the slave population to approach age spread equilibrium. Were this the case, we would expect that the age at which the population declines sharply in 1850 to advance 10 years, accordingly, by the taking of the 1860 census. We in fact find that the point of decline is virtually identical for both the 1850 and 1860 populations. Thus it appears that the Richmond Hill slave had a relatively short life expectancy, which might be attributed to a number of factors, such as, insufficient or inadequate housing, poor nutrition, excessive work, or some combination thereof. By such means as these the physical condition of Richmond Hill slaves may have been reduced, leaving them more susceptible to a number of diseases.

SLAVE AGE PROFILES RICHMOND HILL PLANTATION 1850 & 1860

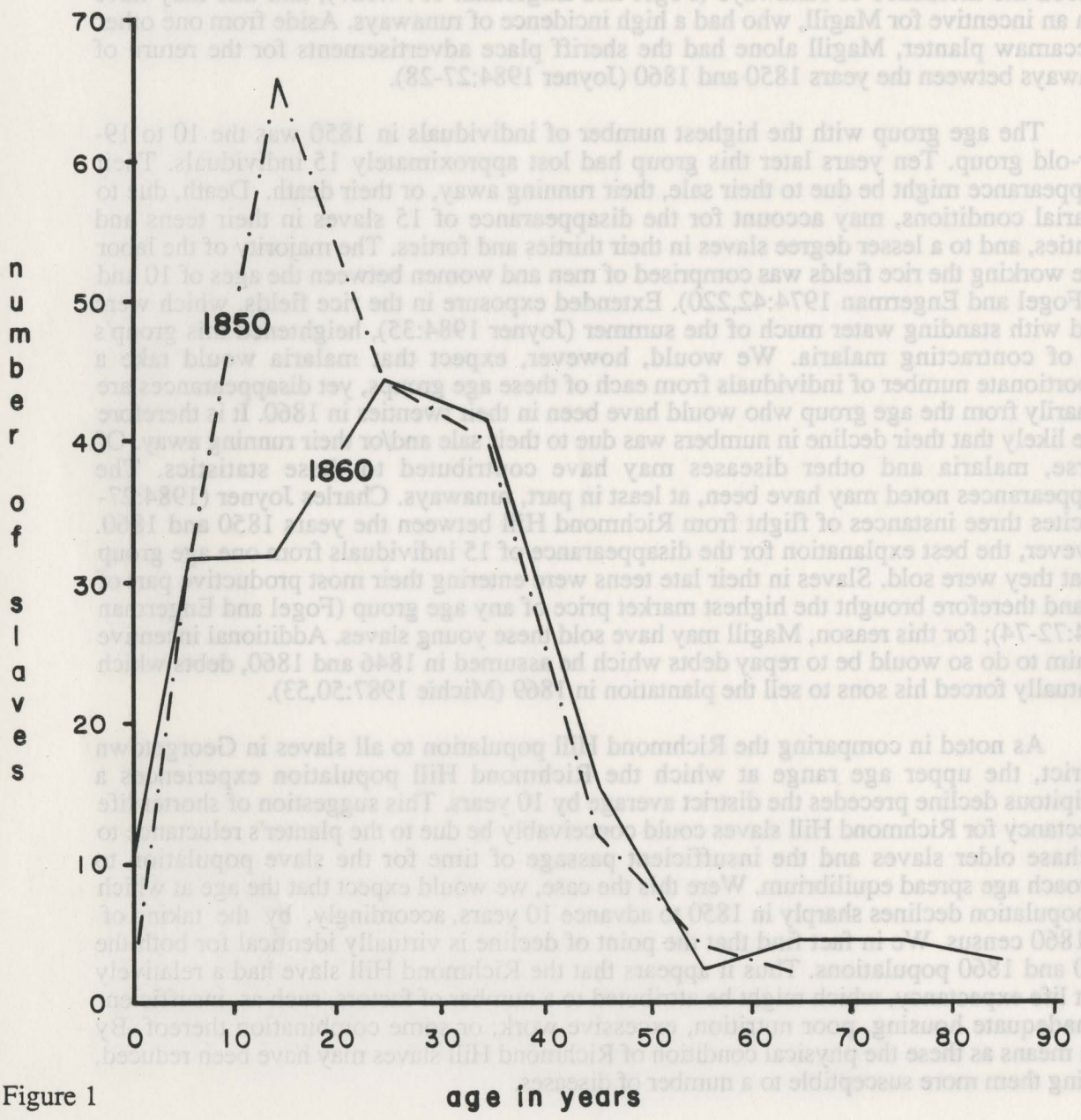


Figure 1

The 1864 Assessment

A listing of the slaves owned by Dr. John D. Magill appears in the property assessment of his will, dated 1864 (GCC, Wills, #270:3). Therein, the names of each slave are listed in descending order of age within "Familys" (sic.). Because this document provides extraordinarily detailed information it was important to check its accuracy as best we could before relying on it for demographic interpretation.

If the ages of slaves in this list had been approximated, a disproportionate number of even to odd ages might have been recorded. This tested negative, even and odd ages appeared in almost equal proportions: 63 odd ages (47%), compared to 69 even ages (51%), and 2 ages omitted (2%). In order to confirm the date of the slave inventory as that of the will's drafting, 1864, individuals appearing in both the 1860 census and the 1864 appraisal were matched by their change in ages. With only a few exceptions (which can be accounted for by external migration), each slave had aged between three and five years (one year leeway in either direction allows for birth dates not coincident with calendar years between listings), thereby confirming the 1864 date of the slave inventory.

As mentioned in the Warrant of Appraisal (reproduced in part as Table 2), the listing of slaves was organized by families. Each family was delineated by a line drawn beneath the last member in one family and above the first member in another family. This demarkation was confirmed by the listing of family members in sequence according to age beginning with the eldest.

The order in which the families are arranged does not reflect family size, number of generations, or age of its members. The lack of any indication as to the sequencing of families within this list suggests that they may have been listed in the order in which their dwellings were arranged.

The list of 134 slaves at Richmond Hill recognizes 36 families, as delineated by the overseer, producing a mean family size of 3.27 members. As suggested above, the recognition of families may have been by household rather than by true family, the distinction being that members of a household are not necessarily blood relatives. The degree to which a household and a family are the same would be determined primarily by the cultural imperative that a family live together and by the availability of ample housing. During the four years between 1860 and 1864, the slave population at Richmond Hill decreased from 189 to 134, which perhaps accounts for nine families of either singles or couples without children. Had the population retained its size such small "families" might have been forced to share housing.

Singles

Four "families," or households, were of a single person, Betty, age 48; Susan, age 30; Cla____, age 35; and John, no age listed. Perhaps the former three women were listed singularly because they were widowed. Although these women would be quite young by today's standards, the demographic profiles of the Richmond Hill slave community in 1850 and 1860 (Figure 1) suggests that the mean life expectancy of the Richmond Hill slave lies between the late 40s and early 50s. It is also conceivable that these three solitary women, well into adulthood, were Magill's concubines, and were retained in isolation by their own community even after their passage from Magill's favor. There is considerable debate,

however, over the prevalence of concubinage in the "Old South." Fogel and Engerman (1974:131) concluded that the several hundred reports of concubinage "out of a population of millions could just as easily be used as proof of the infrequency of the sexual exploitation of black women as of its frequency." For Magill, however, the keeping of mistresses or concubines would not be out of character.

Of note is the slave John. His common name is not replicated in the slave population as are others such as Toby, Titus, Jacob, Frank, and Peter (see Table 3). John's singular name appears at the end of the inventory list and his age is omitted. Only in one other case of the 134 individuals listed is an age omitted, Petigrew, listed among the children of Titus and Silvey, and therefore possibly an infant without a year's age to list. In the case of John, listed as having no other family members, his age may have been excluded for another reason. Listing John's age might have confirmed the possibility of his father being John D. Magill. This is purely speculative with no factual basis. It is merely a supposition possibly explaining this individual's peculiar listing.

Couples

Five families appear to be couples without children. In each, the difference in age between spouses does not exceed five years. If these are indeed couples three of the five are within the age range for bearing children. Two are not: Peter, age 70, and Aubin 65 and Jacob, age 70, and Murrier, age 52. These couples might have been childless, or their children may have established independent families, been assimilated into other families, or been sold from the plantation. The youngest hypothetical couple is Poke, age 18, and Sary, age 17. They may have been newlyweds, as might have been Ley, age 21, and Victoria, age 22.

Families With Children

Excluding "families" of one and two persons, there are 27 families comprising a total of 127 people with a mean family size of 4.704 individuals. The largest family group is seven, of which there are two instances.

Family size	Frequency
one	4
two	5
three	6
four	5
five	4
six	7
seven	2

Table 2

1864 Slave Inventory from
the Assessment of John Magill's Estate

"The following is the List of negroes in families (sic.) as Renamed by Mr. Jones the Overseer of Dr. J.D. Magill Deceased"

Martha	31 years	Titus	40 years
Elsy	7 "	Silvey	38 "
Frances	5 "	Caroline	11 "
Harrick	1 "	* Petigrew	" "
Old Bess	70 years	Toby	3 "
*** Toby	51 "	Titus	2 "
Herriet	52 "	Harculees	70 years
Na__att	26 "	Susanah	67 "
Josephine	13 "	Diner	34 "
Calhoon	2 "	Neeter	17 "
Jefferson	38 years	*** Jack	31 years
Flora	37 "	Plesant	44 "
Elizabeth	15 "	Andrew	18 "
Green	13 "	Isaac	36 years
Effy	11 "	Grace	31 "
***Bruce	27 years	Elgi__	17 "
Lucky	30 "	Maria	40 years
Hanes	13 "	Nancy	29 "
Abby	12 "	Gadsden	13 "
* Isabella	25 "	Hector	4 "
Betty	48 years	Caty	2 "
Titus	70 years	Rachal	2 "
Salina	35 "	Frank	53 years
Caty	19 "	Patience	48 "
Dalis	16 "	Pickney	16 "
Mike	9 "	Cezar	40 years
Fredrick	8 "	Molly	35 "
William	3 "	Clar__	35 years
*** Ley	21 years	Bob	39 years
Victoria	22 "	Milly	33 "
Jacob	70 years	Cib	17 "
Murrier	52 "	Worth	16 "
*** Kib	30 years	Prince	9 "
Betty	35 "	Jacob	3 "

Washington 32 years
 Dorcas 32 "
 Florence 12 "
 Dick 5 "
 Lizy 2 "

Susan 30 years

Peggy 39 years
 Elvira 14 "
 Aron 5 "
 Thomas 2 "

***Gabriel 24 years

Mary 27 "
 Nab 4 "
 Claristee 6 "
 Henen 1 "

Jacob 32 years

Celia 30 "
 Patrick 17 "
 Lucy 16 "
 Zantipy 11 "
 Peter 2 "

Rose 40 years

*Ervinia 12 "
 Sarena 17 "

*** March 19 years

Sarah 21 "
 Mary 2 "

Phebe 36 years

Lee 18 "
 Cox 16 "
 Hagar 5 "

Poke 18 years

Sary 17 "

Elleck 38 years

* Binky 70 "

Yamcha 35 "

Morgan 12 "

I__as 11 "

Margaret 1 "

Peter 70 years

Aubin 65 "

Philanan 40 years

Linden 37 "

Shubrick 11 "

Wallis 27 years

Statinas 24 "

Molly 3 "

Mootry 2 "

Hardtimes 32 years

Pleasant 29 "

Richmond 9 "

Cati 8 "

** Amdas 27 "

Nelly 2 "

*** Ferdinand 40 years

Betsy 51 "

Mary Ann 24 "

Elmo__ 14 "

Lafayette 5 "

* Frank 4 "

** Julianna 41 "

Lydia 38 years

Brutus 11 "

Ellick 3 "

** Affy 67 "

John ___ years

Note: * listed as an insert, most likely an afterthought. ** listed out of age sequence, most likely an afterthought. *** listed out of age sequence in deference to male role.

The number of children per family are

3	3	1	3	
2	4	1	1	
3	2	1	2	
2	1	4	3	
5	3	1	4	
3	4	4	2	

for an average of 2.48. This, of course, does not reflect the average number of offspring from a mature family but the mean number of offspring at a point in time per nucleated family.

Generations within a family can be tentatively identified by recognition of age clustering. Additionally, by noting the difference in age between a female of a likely couple and the eldest child we can infer the ages of mothers at the birth of their first child:

22	20	18	16
22	25	27	18
19	21	26	27
17	13	14	27
16	23	32	

These ages produce a mean of 21.211, and a median of 21, with parameters extending from 13 to 32, a 19-year spread. These statistics nearly match Fogel and Engerman's (1974:137) calculations for slaves throughout the Old South. They determined the average age at first birth to be 22.5 (the median age was 20.8). Cultural mechanisms were evidently at work in the Richmond Hill slave community as elsewhere, which effectively postponed childbearing well past puberty.

The upper limits of age for childbearing might provide clues as to the general health and living conditions of the female slave community, but, unfortunately, it is too hazardous to infer the eldest incidence of childbearing since the range of childrens' ages allows for the possibility of a third generation within a household.

Six families, or at least households, appear to lack husbands, while none appear to be missing wives, although the gender of some names is undetermined. The absence of husbands may reflect: 1) the selling of prime male hands; 2) the exclusive purchase of females; 3) the disproportionately high number of males who, in 1862, were among the 26 slaves who escaped by swimming en masse to a union gunboat patrolling the Waccamaw River (Joyner 1984:27 28); 4) some other cultural construct (whether willingly practiced by the black community or imposed by the whites) than monogamous live-in spouses.

Three "families" appear to include at least one grandparent, and one of these appears to include a great grandparent.

Temporal Dynamics

In addition to the examination of changes in the demographic profile of the slave population between the 1850 and 1860 census's, we are able to identify at least some of the slaves who survived Magill's ownership of Richmond Hill from start to finish. The names

of the 25 slaves J.D. Magill acquired through his marriage to Mary Eliza Vereen in 1825 include:

Sarah	Dick	Peter
Suckey	Amanda	Susannah
Sarah	Thomas	Betsy
William	Affy	Richard
Harriett	Abner	Julianna
Peggy	Jenny	Flora
Sylvia	Lydia	

The remaining five names were illegible. A copy of the original "Marriage Settlement; January 27, 1825; Mary E. Vereen, William Vereen, and John D. Magill" appears in S.C. Archives, Volume 9, page 145.

For these slaves to be listed in 1864 they would have to be at least 38 years of age (1864-1825-1=38). In checking the 1825 marriage agreement against the 1864 will, there appears to be 10 possible survivors of the 25 slaves who came to Richmond Hill through the Magill's marriage:

Name	Inferred Age in 1825
Harriett	14
Peggy	1
Silvey	Infant
Affy	29
Lydia	Infant
Peter	32
Susannah	29
Betty	10
Julianna	3
Flora	1

Of course, these people may have been acquired by other means, or at other times. It is impressive, however, that ten matches were possible. The validity of these matches is supported by each being young in 1825, for wouldn't the better gift be young rather than elderly slaves? Most members of this group appear to have married and bore children by 1864. There is, however, no evidence of marriage between members of this group. Only two individuals, Affy and Lydia, show familial relation (probably mother daughter respectively) to each other in the 1864 Appraisal list. Lydia would have been born to Affy at or just prior to their transfer to Richmond Hill. These patterns suggest that the original group of Richmond Hill slaves may have been comprised of several families whose offspring, over a 39 year period, refrained from intermarriage with kin.

The Choice of Names

The naming of slave children is a study unto itself which exposes the clashing and blending of culture. Not only did African culture meet European culture and Christianity, but also the culture of institutionalized slavery.

Slaves, in abidance with African culture, often chose names which were gender specific for the day on which a child is born, or for other things, concrete or abstract, which were incidental to the birth (Joyner 1984:217,220), such as Hardtimes or Patience. Slaves also gave their children classical African names such as Affy or Saby. Often, however, the slave children were named by the planter or his overseer (Joyner 1984:217-220). This no doubt frustrated many parents who rejoined by choosing a second name for a child which was used except when propriety would not permit (Joyner 1984:217). This is perhaps reflected in the note preceding the 1864 inventory of slaves, which states that the list is "of negroes in familys (sic.) as renamed by Mr. Jones the overseer of Dr. J.D. Magill...". The intended meaning of the word "renamed" might, however, be recounted or recorded.

The most imposing type of names given by whites to slaves were probably the classical names which are often found in slave inventories (Genovese 1976:447, see Table 3). Masters and overseers may have chosen these names from the books they read. Such names would bestow no sense of identity to the African other than a reminder of his/her subordination. Classical names were probably reluctantly accepted and used by the slave community (Genovese 1976:447). After several generations of familiarity with classical names within one's ethnic community, these names might lose their alien identity, gaining meaning through those who bore them. Indeed, the names Toby and Titus, classical derivatives, are often held by more than one slave at a given time on Richmond Hill plantation (see Table 3). This suggests that the slave community was choosing these names and not the planter or overseer, who would refrain from name duplication to avoid confusion. As with the names Phebe and Moses, however, so might Toby and Titus have been willingly used by the black community if they had African near-equivalents.

Names of place, an African practice, were evidently used in conjunction with the peculiar institution. Several of the Richmond Hill slaves have names which are obviously surnames, all of which were found to be the names of plantation owners in the Georgetown District, or up the Waccamaw River in Horry County (see Table 3). It is quite possible that their names were identifiers to their birthplace and their origin as property. Such a name would also mark an individual as an outsider, which perhaps underscored the latent feeling of displacement shared by most slaves.

Some categories of names might have satisfied both the whites and the blacks, and served as a middle ground in the process of black acculturation. These might be Biblical names and those, which in the various African tongues, were similar to European or Classical names, such as, Jaeceo and Jack, Hackless and Harculees, and Sibby and Cib.

Table 3

A Listing of Names of the Slaves at Richmond Hill in 1864 by Category of Name Origin.
 African Names & English Equivalents (Joyner 1984:218,219):

<u>English</u>	<u>African</u>
Effy	Affy
Abby	Abanna
Phebe	Affiba
Hagar	Haga
Harculees	Hackless
Jack	Jaeceo
Cib	Sibby
Binky	Binky

Unconfirmed African Names:

Harrick	Calistee	Clannan
Na__att	Henen	Yamcha
Salina	Zantipy	I__as
Dalis	Ervenia	Aubin
Ley	Sary	Statinas
Murrier	Diner	Amdas
Kib	Neeter	
Dorcas	Elgi__	

Biblical Names:

Classical Names:

Josephine	Titus
Mike	Toby
Jacob (3)	Dalis
Elvira	Brutus
Aron	Hector
Thomas	Cezar
Gabriel	Cib
Patrick	Philanan
Peter (2)	Zantipy
Sarah	Sarena
Mary	Harculees
Isaac	Phebe
Rachel	
John	

Historic Names:

Jefferson
Elizabeth
Washington
Ferdinand
Lafayette
Mootry (Moultrie)

Titles:

Prince

Places:

Richmond
Caroline
Gadsden

Local Landowner Names:

Petigrew = Georgetown District
Pickney = Georgetown District
Cox = Horry District
Wallis = Horry District
Green = Horry District
Lee = Horry District
Frank = Horry District
Morgan = Georgetown District

Replication of Names

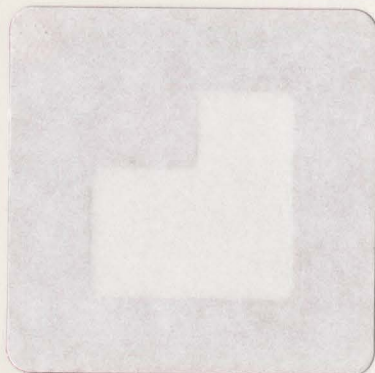
Harrick (2)
Effy, Frank (2)
Mary (2)
Molly (2)
Toby (2)
Titus (3)
Ellick (2)
Pleasant (2)
Jacob (3)
Frank (2)
Betty (2)
Peter (2)
Caty, Cati (3)

The degree of acculturation and its depth might be reflected in the relative frequencies of names occurring in a plantation community at a point in time which corresponds to those which are African in origin, and those which are European or classical, with other categories, such as Biblical names, being neutral. We might expect African names to appear more frequently in earlier populations; conversely, non-African names might appear in greater relative frequency in later, more acculturated populations.

African	White	Neutral	Historic Names
Incidental 9	Title 1	Local Landowners 7	Jefferson 7
African 9	Classical 15	Historic 6	Elizabeth 6
Possible African <u>21</u>	European <u>45</u>	Place 3	Washington 3
		Biblical <u>18</u>	Ferdinand 18
42	61	34	Lafayette 34
(31%)	(46%)	(25%)	Moody (2)

Conclusions

Overall, these three documents reveal that the Richmond Hill Plantation slave community was quite typical of large plantations in the South during the nineteenth century. We do, however, find evidence for a greater degree of external entropy, probably as sales and/or purchases, and as runaways. We are also able to discern that these people may have suffered from poorer health. In terms of names, the slave community of Richmond Hill retained a marked degree of African name forms as late as 1864.



Previous Work

The Richmond Hill slave settlement was first discovered during the 1983 reconnaissance survey of Wachesaw and Richmond Hill plantations conducted by James L. Michie and Eric Croen. They discovered three sites representing the Richmond Hill slave settlement: 38GE262 (Cato Singleton), 38GE277 (Deerfield Road), and 38GE267 (Laurel Oak; see Figure 2). Only 38GE262 (Cato Singleton), produced enough datable artifacts to venture an estimation of its period of occupation; it was found to be contemporaneous with the occupation of the planter's house. Michie (1983:104) therefore proposed that these were indeed sites of slave habitation, and that they were arranged in a linear pattern.

In 1984, Michie returned to Wachesaw, hiring over a dozen laborers to further sample a number of sites including Cato Singleton and Laurel Oak sites. The Singleton site produced an artifact assemblage distinct from the Laurel Oak site which suggests that it was occupied by someone of higher status, such as a sub-overseer or driver (Michie 1987:91,138,141). Further support was discovered after a road was cut through the slave settlement area immediately following our excavations there. The path of the new road ran perpendicular to the avenue of oaks at its beginning (Figure 2). This crude excavation cut away the top six or so inches of the Deerfield Road site and exposed a nearly continuous swath of cultural debris extending to the north through the Laurel Oak site before turning west (Michie 1985). The omnipresence of annular wares, pearlwares, and whitewares in the new roadbed confirmed that this entire area was a lower status domestic occupation site during the early to mid nineteenth century. Architectural materials, including an abundance of nails along with brick and oyster shell mortar, were also found throughout the roadbed. Brick and mortar were discovered in concentration in several places. A vague pattern was visible in the spacing of these clusters; they appeared to be regularly spaced at intervals of 100-120 feet (Michie 1985). A large test unit in the center of one such concentration failed to identify any architectural features.

The effects of tillage are found throughout the slave settlement area and may be responsible for the diffusion of artifacts and the absence of architectural features. It was evident, however, that the new road overlay a row of structures. It was then discerned that the Cato Singleton cabin was offset from this row of cabins (see Figure 2), providing additional support for the hypothesis that the Cato Singleton site was the occupation site of a sub-overseer/driver; for, as is often the case, a sub-overseer/driver's house is strategically positioned central to and at the end of two rows of slave cabins (see Owens 1976:136-137; Smith 1976:71). It remained for us to determine whether or not evidence of another row of slave cabins existed.

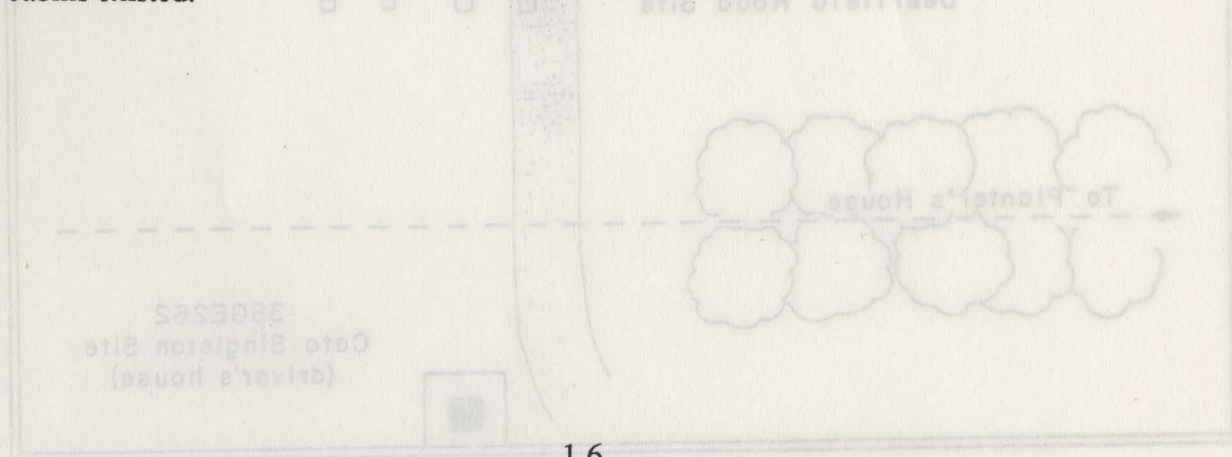
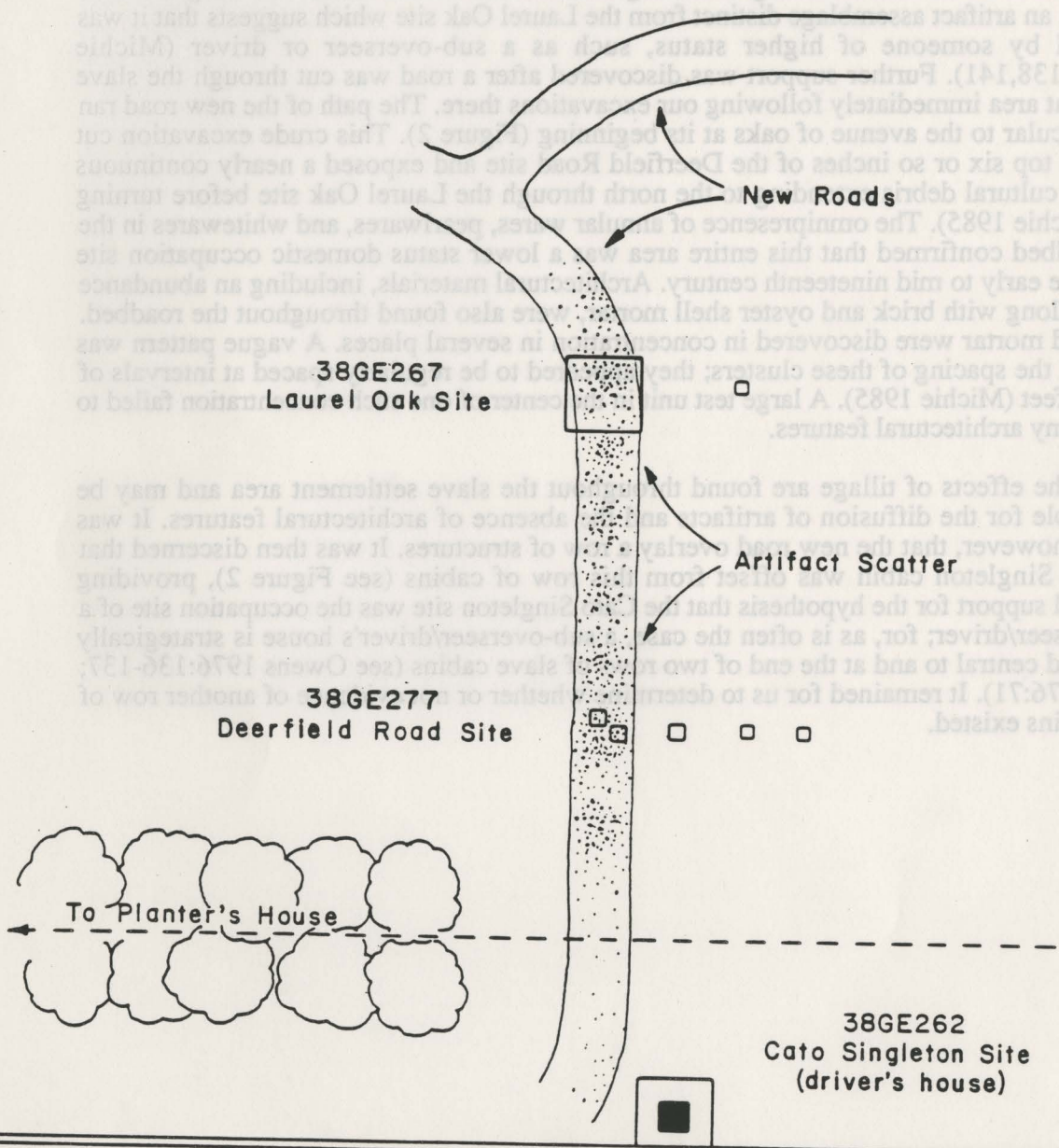
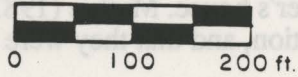
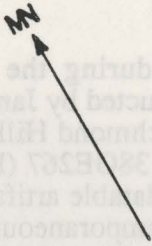


Figure 2

PREVIOUS EXCAVATIONS RICHMOND HILL SLAVE SETTLEMENT 38 GE 306



As the new road was being cut, a subsurface sampling strategy was devised and implemented to test for evidence of a second row of slave cabins facing the row exposed by the road cut. Because the road cut veered to the west (Figure 2) from its route over one row of cabins, we were able to inspect its bed for a second row of cabins to the west of the first. No such evidence was found. A second row of cabins was therefore most likely to be found east of the first row, especially if we were right in assuming that the Cato Singleton cabin was located between two cabin rows. To test for cabins to the east, we first chose two points along the exposed row which were estimations of cabin center points. For these points we used the Deerfield Road Cabin and the Laurel Oak cabin because they were the easiest to define and were at the extremes of the cabin row as we knew it. To the east of the Deerfield Road and Laurel Oak sites, we excavated a number of five foot test units at 50 and 100 foot intervals (Figure 2). Domestic and architectural remains, identical to those found in the new road bed, were recovered as far as 100 feet east of the new road, supporting the hypothesis that, indeed, there was a second row of slave cabins to the east.

SPATIAL ORGANIZATION

According to Lewis (1985:36), the southern plantation evolved in response to the needs of an expanding world economy. On the periphery of European influence, colonial North America was an accessible frontier, ripe for exploitation and development. The availability of suitable land, ample labor, supplies, and means of transporting raw materials to European markets made large scale agricultural production economically practical (Lewis 1985:37).

Earlier plantations were typically arranged as a nucleated settlement of service buildings and labor quarters grouped compactly around the main house (Anthony 1976:13; Lewis 1985: 37). This virtual township in miniature underscored the autonomy of plantations and the caste system incumbent to slavery (Anthony 1976). Examples of eighteenth century plantations with nucleated settlements include Mt. Vernon in Fairfax County, Virginia, and Monticello near Charlottesville, Virginia. These plantations, and others of the period, were arranged in strict bilateral symmetry prescribed by Georgian architectural style (Lewis 1985:38) which was popular at the time (McAlester and McAlester 1984:140).

According to Lewis (1985:38), a major change occurred in the plantation settlement pattern in the last quarter of the eighteenth century, when the dependencies of the main house were shifted from positions flanking the forecourt of the main house to ones in line with the orientation of the main house. Anthony (1976:17) recognizes a fracturing of the nucleated settlement, specifically in reference to the slave quarters. He further states that, once the labor force became spatially separated from the watchful eye of the plantation owner, the employment of an overseer became necessary (Anthony 1976:17). Perhaps this causality is inverted, for as Phillips (1969:310) contends:

"On plantations of small or medium scale the cabins of the field hands generally stood at the border of the master's own premises, but on great estates, particularly in the lowlands, they were likely to be somewhat removed..."

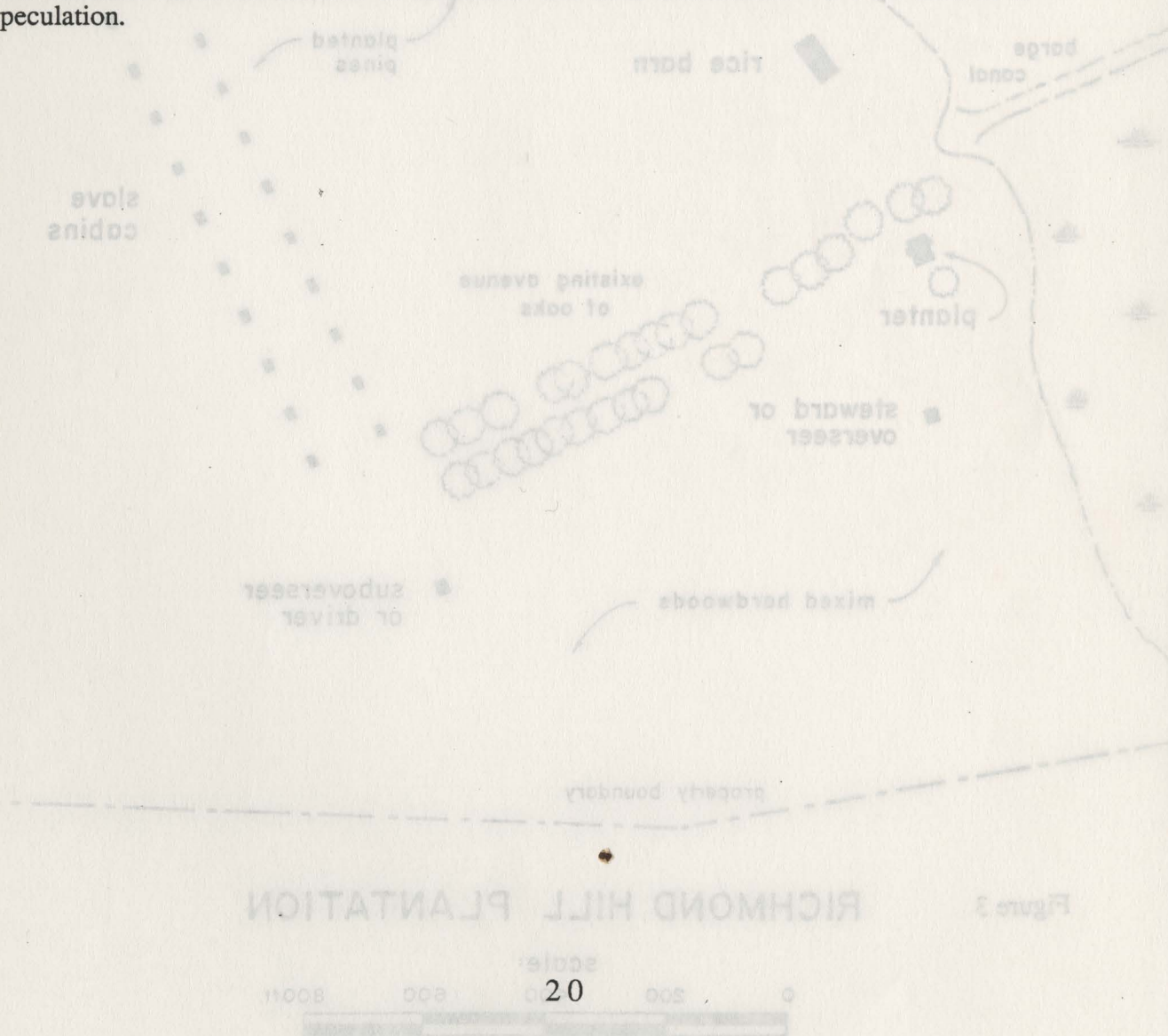
So perhaps plantations with larger labor forces required middle management which in turn allowed the planter to spatially divorce his residence from those of the field hands. In the Georgetown District of South Carolina, most rice plantations were represented by this division between the ruling and enslaved classes. Anthony (1976:13) proposes that the proximity of overseer and slave dwellings to the main house reflected social rank within the plantation community, with the slave quarters farthest from the main house and the slaves occupying a similar position in the hierarchy.

By the nineteenth century a multitude of variations in plantation layout diverge from the earlier nucleated settlement form, yet they usually betray the makers' affinity for symmetry. Because the plantation was a business, the activities peculiar to plantation operation foremost required a functional architectural plan. Prunty (1955) argues that on a plantation the spatial proximity of various buildings and complexes affect the efficiency of crop production. He also argues that, in order to maximize production, a plantation's layout is logically patterned and predictable. The planter's house was situated on high ground with superior visibility because it functioned as an administrative center; accordingly, the structures housing the various support industries, e.g. kitchens, nurseries, blacksmith shops, coopers shops, etc., were situated near the main house. On most plantations the labor housing was situated immediate to the work area(s). They were also placed near the

residence of management, i.e., the planter's, if not an overseer. Other structures, such as privies, tool sheds, barns and mills were also placed according to function (Prunty 1955).

At Richmond Hill plantation, archaeological investigations disclosed a settlement plan concurrent with Prunty's expectations. The planter's house was predictably situated on high ground overlooking the rice fields and at the end of a long drive serving as the central axis of the plantation's general symmetry (Figure 3). Other plantation structures were arranged in juxtaposition to the main house. The slave settlement, as identified through the 1985 excavations, appeared to be a linear arrangement of structures oriented parallel to the edge of the rice fields some 800 feet to the west (Michie 1987:63). This would seem a reasonable distance for workers to travel and may have sufficiently divorced the planter's residence from those of the slaves. We suspect that at least a portion of the area between the slave quarters and the rice fields was in fact a work area as suggested by tillage disturbance noted at site 38GE261 (see Michie 1987b:24).

At the end of our 1984-85 excavations, the most poorly understood physical aspect of Richmond Hill was the slave community. Although excavations confirmed that the occupants were of lower status and present during the early to mid nineteenth century we could only tentatively identify the settlement's layout and the materials used for its construction. As to the number of structures and their dimensions we were limited to speculation.



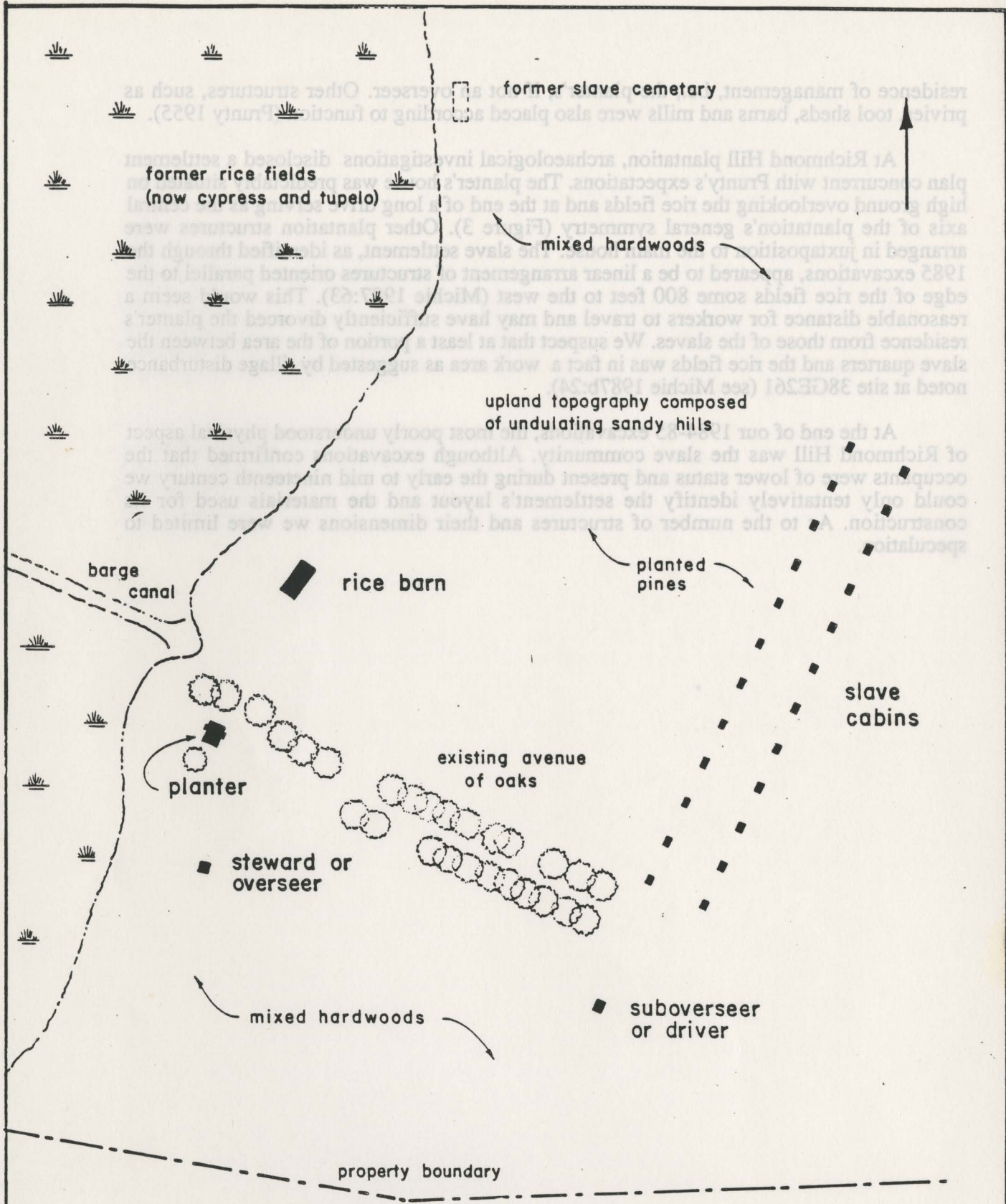
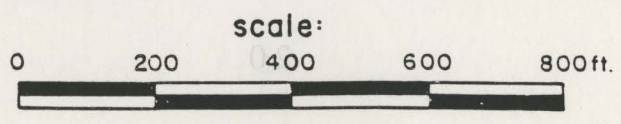


Figure 3

RICHMOND HILL PLANTATION



ARCHAEOLOGICAL EXPECTATIONS

By examination of local and regional examples of slave settlements expectations were developed to address the architectural specifics of the Richmond Hill slave settlement.

In researching descriptions (Joiner 1984:117-126; Smith 1985:119-129; Stanton 1987), plats (South Carolina Archives and History; Charleston County Probate Records), and archaeological evidence (Otto 1984:13,14; Lepionka 1986: 115,151) of nineteenth century slave settlements it was noted that on large rice plantations the slaves were generally housed in one settlement, whereas on large cotton plantations, the residences of the slave populations were often divided into several groups. This might be explained by the relatively concentrated area required for rice cultivation which could easily be accessed by laborers from one settlement. Additionally, the rice fields were typically bordered by a river and flanked by the rice fields of other plantations, leaving only one area suitable for housing. On plantations specializing in upland agriculture, the labor force's access to the fields could be maximized if their housing was divided and located proximate to large parcels of working land (see Otto 1984:13-14). Another determining factor may have been that, in areas where cotton was grown a much higher value would be held for upland property. In such areas smaller groups of buildings could house the labor force on pieces of land between or peripheral to cultivated fields. By contrast, the rice plantation could more easily afford allotting a large parcel of land to housing its labor. Because single unit dwellings consume more land area per housed capita than multi-unit dwellings we might expect to find single unit dwellings more likely to occur on rice plantations than on cotton plantations.

In Coastal South Carolina, examples of slave settlement forms are limited to block, arch, row, and double row arrangements (Stanton 1987; South Carolina Archives and History). Individual structures were built of wood, brick, or tabby (Stanton 1987; Smith 1985:119). Stone, other than coquina, does not naturally occur in the lower coastal plain, thereby explaining its absence as a construction material. Log construction, prevalent in the piedmont and elsewhere in the South (Genovese 1976:524; Smith 1985:121), has not been found represented on the more affluent plantations along the South Carolina coast. Generally, each structure was either a single or double (duplex) form (see Joiner 1984:118-119), while dormitories, and other forms in excess of two units, were quite rare (Fogel and Engerman 1974:115,127; Joiner 1984:124). By far the most common pattern on plantations of South Carolina's lower coastal plain appears to be single pin structures, built of wood, and arranged in a single row or in double rows (Table 4).

Table 4

Extant Examples of Slave Settlement Architecture on Rice Plantations in South Carolina.

Plantation Name	Construction			Form		Arrangement			
	Wood	Brick	Tabby	Single	Double	Arch	Row	Rows	Other
Arundel	X			X		X			
*Boone Hall		X		X			X		
Friendfield	X			X					X
*Hobonny			X	X					X
*Lavington	X			X	X				X
*Mansfield	X				X				X
*McCleod	X			X			X		
*Nieuport		X					X		
*Silver	$\frac{X}{6}$	$\frac{X}{2}$	$\frac{X}{1}$	$\frac{X}{7}$	$\frac{X}{2}$	$\frac{X}{1}$	$\frac{X}{3}$	$\frac{X}{5}$	$\frac{X}{0}$

* from A Survey of Extant Slave Housing of South Carolina (in progress), conducted by the Folklife Program of the McKissick Museum and Colonial Williamsburg's Architectural Research Department.

As a representative sample, the few surviving examples of slave housing are, by themselves, unreliable. Variance in construction technique and materials may have predetermined the likelihood of a structure's survival. Yet we could not predict that brick buildings would better survive wooden structures because brick scavenging of derelict structures was, and is still, a prevalent practice in the low country. Numerous other variables may have biased the survival of certain examples over others, such as cabin size, degree of perceived aesthetic value, property fragmentation since emancipation, and the development value of land. Despite potential biases the overwhelming predominance of single form structures built of wood and arranged in single or double rows in extant slave settlements leads us to believe that this was indeed the most common type of slave settlement. An examination of plats (South Carolina Department of Archives and History; & Charleston County Probate Records) showing nineteenth century rice plantations and their buildings has confirmed that a vast majority of the slave settlements were arranged as single or double rows of structures.

Occasionally, plats of South Carolina rice plantations depict individual cabins in a slave settlement (South Carolina Department of Archives and History, plat No.s 4318, 4320, & 4353; Charleston County Probate Records, plat C-47 & C-60). The number of cabins drawn generally ranges from between 8 to 12 cabins per settlement, which seems quite small considering that most South Carolina rice plantations possessed over one

hundred slaves. The 1860 slave census for rice plantations along the Waccamaw Neck lists thirteen planters, the number of slaves they owned, and the number of dwellings to house those slaves (Table 5). Of these thirteen slave populations, four were cumulative listings from the several plantations owned by the respective planter (Joiner 1984:16-24), the remaining 10 census entries provide examples of the number of slave dwellings per plantation. Using these figures the average number of slave houses per plantation was 33.8 with numbers ranging from 20 to 69.

Table 5

Distribution of Slave Housing in All Saints Parish, by Slaveowner, 1860

Slaveowner	Number of Slaves		Number of Slave Houses	Number of Slaves per House
William Algernon Alston, Jr.	567	*	90	6.3
Charles Alston, Jr.	290	*	90	3.2
John LaBruce	150		35	4.3
John Izard Middleton	201		21	9.6
Plowden C.J. Weston	334	*	80	4.2
Benjamin F. Dunkin	135		30	4.5
Estate of Robert Nesbit	160		31	5.2
William Allan Allston	151		30	5.0
Joseph Blyth Allston	184		28	6.6
Estate of John Hyrne Tucker	188		20	9.4
Martha Allston Pyatt	215		40	5.4
William Heyward Trapier	90		----	----
Estate of Joshua J. Ward	1,121		* 194	5.8
Daniel W. Jordan	261		69	3.8
John D. Magill	189		----	----

SOURCE: 1860 Census, Slave Population Schedules. (Joiner 1984:125)

* The number of slaves and slave dwellings listed belonged to more than one plantation.

There are probably many reasons why a discrepancy exists in comparing the number of slave cabins on plantation plats and the number of slave cabins on plantations as recorded in the 1860 census. The dates of the plats range throughout the first half of the nineteenth century when many plantations were in their infancy, whereas by the time of the census of 1860, rice production in the Georgetown District had reached its zenith (Rogers 1985:324). Another consideration would be the possibility of inaccuracy in plat recording. Because few plats even show slave settlements it appears that their depiction was relatively unimportant. Surely of lesser import was the exact number of dwellings.

Archaeological determination of the number of dwellings on a plantation, along with documentary reference to how many slaves the plantation possessed, would permit estimation of the number of slaves per cabin. According to Blassingame (1972:159) the

number of slaves per cabin on Southern plantations ranged from 3.7 to 12; Genovese (1976:524) states that an average family unit of five or six occupied each cabin; and Fogel and Engerman (1974:115) contend that, on average, there were 5.2 slaves per cabin on Southern plantations. On the Waccamaw Neck, the numbers range from 3.2 to 9.6 with an average of 5.2 slaves per cabin (see Table 5). Because these averages do not distinguish between slaves housed in single and multi-unit dwellings, deviations from these averages may reflect housing form. If, however, the housing form(s) is (are) recovered from the archaeological record, comparison of the case at hand to regional and local averages becomes meaningful. Finally, the dimensions of individual structures must be determined before such comparative statistics can make meaningful statements concerning the degree of crowding in a slave settlement.

Fogel and Engerman (1974:116) state that the typical slave cabin of the late antebellum period measured 18 x 20 feet. According to Genovese (1976:524), standards were adopted by the late 1830's for the size of slave quarters, calling for measurements of 16 x 18 (or 20) feet. He further states that "cabins improved in size and construction as the nineteenth century progressed" (Genovese 1976:525). Examination of extant examples of slave quarters in the South Carolina lower coastal plain (Table 6) shows single unit dwellings ranging in size from 12 x 17 to 16 x 32 with average dimension of 15.54 x 23.55. For the same region, extant examples of double unit dwellings provide average dimensions of 18.62 x 36.87. These figures provide expectations for the Richmond Hill slave settlement.

9.6	21	201	John Izard Middleton
4.2	80	334	Plowden C.L. Weston
4.2	30	132	Benjamin F. Dunkin
2.2	31	160	Estate of Robert Nesbit
2.0	30	121	William Allison
6.6	28	184	Joseph Blyth Allison
9.4	20	188	Estate of John Hymc Tucker
2.4	40	212	Martha Allison Ryan
---	---	90	William Heyward Tropic
2.8	104	1,121	Estate of Joshua J. Ward
3.8	69	261	Daniel W. Jordan
---	---	189	John D. Magill

SOURCE: 1860 Census, Slave Population Schedules. (Joyner 1984:122)

* The number of slaves and slave dwellings listed belonged to more than one plantation.

There are probably many reasons why a discrepancy exists in comparing the number of slave cabins on plantation plans and the number of slave cabins on plantations as recorded in the 1860 census. The dates of the plans range throughout the first half of the nineteenth century when many plantations were in their infancy, whereas by the time of the census of 1860, rice production in the Georgetown District had reached its zenith (Rogers 1982:324). Another consideration would be the possibility of inaccuracy in plan recording. Because few plans even show slave settlements it appears that their depiction was relatively unimportant. Surely of lesser import was the exact number of dwellings.

Archaeological determination of the number of dwellings on a plantation, along with documentary reference to how many slaves the plantation possessed, would permit estimation of the number of slaves per cabin. According to Blasingame (1972:129) the

Table 6

**Measurements of Extant Slave Housing
on South Carolina Rice Plantations**

Plantation Name	Average Dimensions in feet	Dimension Ratio	Area in square feet
*Arundel	16 x 32	.50	512
Boone Hall	12 x 30	.40	360
*Friendfield	15 x 17	.88	255
Hobonny	18 x 27	.67	486
Lavington	14 x 20	.70	280
Mansfield	(18 x 33)	(.55)	(594)
McCleod	12 x 17	.71	240
Nieuport	(19 x 41)	(.46)	(779)
Silver	19 x 24	.79	456

Source: Stanton 1987

* provided by James L. Michie (Michie 1985)

Note: bracket inclosure denotes data from double unit structures.

$$\begin{aligned}
 \bar{x} \text{ Dim.} &= .66, \bar{x} \text{ Area} = 369 & \bar{x} \text{ (Dim.)} &= .51, \bar{x} \text{ (Area)} = 686.5 & XY &= 369 \\
 (\bar{X}\bar{Y}) &= 686.5 & \bar{X}/\bar{Y} &= .66 & (\bar{X}/\bar{Y}) &= .51 \text{ therefore,} \\
 X &= 15.54 & \& Y = 23.55. & \text{therefore, } & (X) = 18.62 & \& (Y) = 36.87
 \end{aligned}$$

A final consideration is the dynamics of slave settlement's growth over time. The plantation was established around the year 1820 (Michie 1987) and by 1850, was in possession of 200 slaves (SCDAH). Thereafter, the slave population decreases to 189 by 1860, and precipitously to 134 by 1864 (see Demographics section of this report). In terms of housing, the post 1850 population probably enjoyed a progressively less crowded housing situation, as, presumably, the same dwellings available to the 200 slaves remained available to a shrinking population. For the first 30 years of the plantation's history the only document mentioning slaves associated with Richmond Hill plantation is found in Magill's marriage contract, through which he acquired 25 slaves, as a gift from his father-in-law (S.C. Archives, Vol.9 p.145). Although these may have been the first slaves on the plantation, we can not assume that they were the only slaves Magill possessed at the time. We might expect, however, that recognition of building episodes in the slave settlement should allow inferences to be made about the population's growth through its first thirty

years. Incremental growth of one or two cabins should reflect a direct and immediate response to population pressures, such as the natural growth of a population, or the acquisition of a few slaves. Conversely, large building episodes of several cabins would likely be the postponed response to exacerbated overcrowding due to natural growth over an extended period of time, or the direct response to an acquisition of a large number of slaves. In other words, a few cabins may have been added periodically, or there may have been large construction phases involving many houses.

The Archaeological Record

Phase One

Introduction

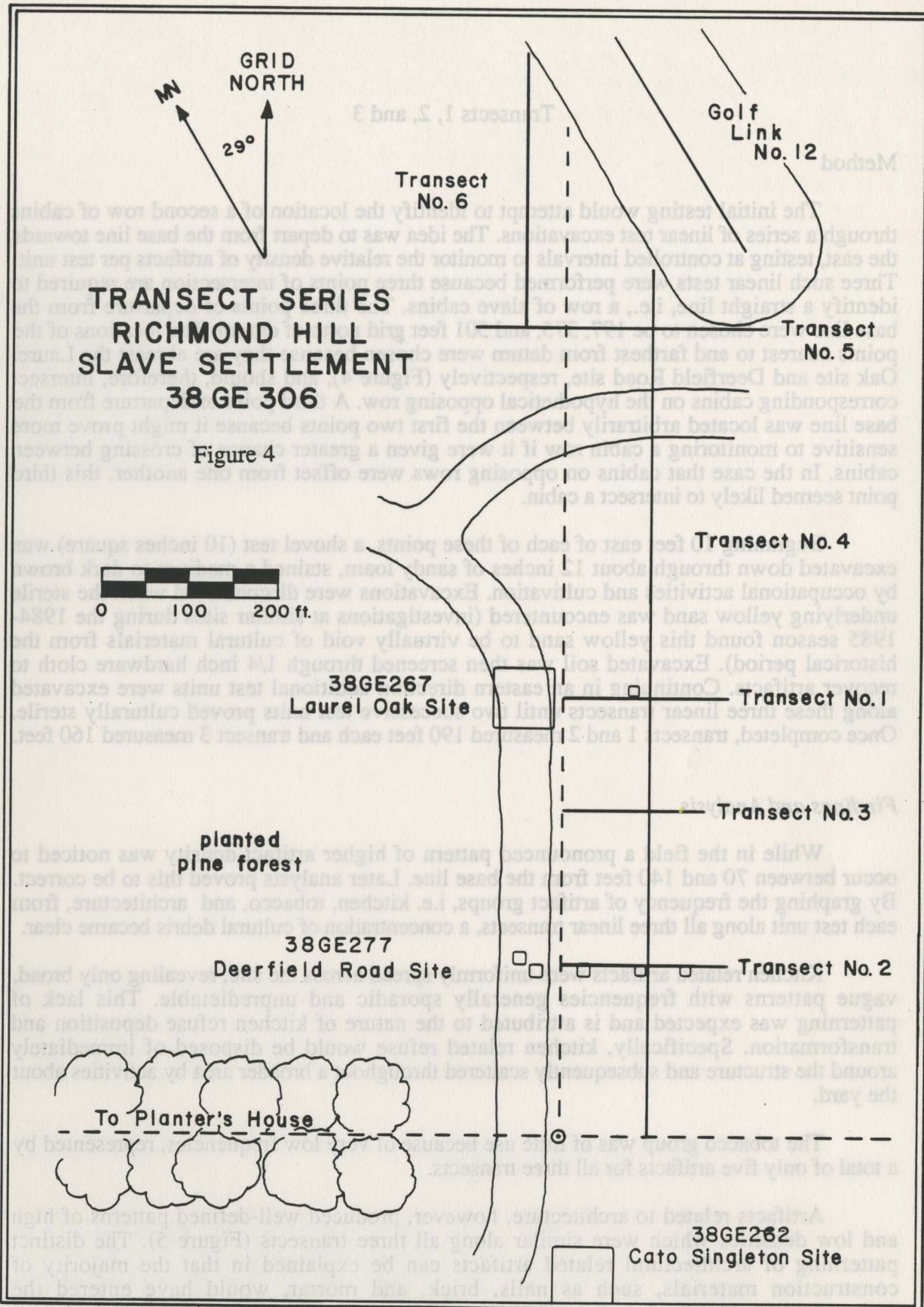
Archaeological investigation in 1984-85 at the slave settlement examined in some detail two cabin sites and located at least one series of cabins, linearly arranged perpendicular to the avenue leading to the planter's house (Figure 2). Evidence suggested the structures were probably constructed of clapboard siding with a brick and mortar chimney and that additional structures were situated to the east. It was suspected that these structures to the east were also in linear arrangement (see Previous Work section of this report). Yet, we did not know the size, number, separation, of any of the structures or the exact layout of the settlement which housed at least 200 people.

A systematic subsurface testing scheme was devised to pursue answers to the following specific questions: (1) what was the spacial extent of the slave settlement, (2) what was its layout, (3) how many dwellings did it include, and (4) what were the architectural specifics of the dwellings? These questions would be directed to the potential archaeological record east of the confirmed row of slave cabins which had since been covered by an asphalt road.

Spatial Control

Before testing for a second row of slave cabins, a grid system was established to control archaeological testing and to accurately translate the past and present landscape into maps. Neither true nor magnetic north served as grid orientation. It made much more sense to follow the symmetry of the plantation which was oriented about the axis of its front drive. Discovery of its orientation was a simple task because the former drive is today lined with large live oaks, presumably planted by Magill (owner of Richmond Hill from circa 1825 until his death in 1864). The center line of the avenue was established with a transit, as well as a base line perpendicular to the front drive and abreast the new road overlaying the row of cabins discovered during the 1984 investigations (Figure 4).

The intersection of the centerline and base line served as a datum point, and the four axes formed by this intersection were identified with the nearest cardinal direction so that any point on the ground surface could be identified in reference to datum by simple notation (e.g. 329'N, 100'E).



Transects 1, 2, and 3

Method

The initial testing would attempt to identify the location of a second row of cabins through a series of linear test excavations. The idea was to depart from the base line towards the east, testing at controlled intervals to monitor the relative density of artifacts per test unit. Three such linear tests were performed because three points of intersection are required to identify a straight line, i.e., a row of slave cabins. The three points of departure from the base line were chosen to be 197, 375, and 501 feet grid north of datum. The locations of the points nearest to and farthest from datum were chosen because they are abreast the Laurel Oak site and Deerfield Road site, respectively (Figure 4), and should, therefore, intersect corresponding cabins on the hypothetical opposing row. A third point of departure from the base line was located arbitrarily between the first two points because it might prove more sensitive to monitoring a cabin row if it were given a greater chance of crossing between cabins. In the case that cabins on opposing rows were offset from one another, this third point seemed likely to intersect a cabin.

Beginning 10 feet east of each of these points, a shovel test (10 inches square) was excavated down through about 12 inches of sandy loam, stained a medium to dark brown by occupational activities and cultivation. Excavations were discontinued when the sterile underlying yellow sand was encountered (investigations at similar sites during the 1984-1985 season found this yellow sand to be virtually void of cultural materials from the historical period). Excavated soil was then screened through 1/4 inch hardware cloth to recover artifacts. Continuing in an eastern direction additional test units were excavated along these three linear transects until two successive test units proved culturally sterile. Once completed, transects 1 and 2 measured 190 feet each and transect 3 measured 160 feet.

Findings and Analysis

While in the field a pronounced pattern of higher artifact density was noticed to occur between 70 and 140 feet from the base line. Later analysis proved this to be correct. By graphing the frequency of artifact groups, i.e. kitchen, tobacco, and architecture, from each test unit along all three linear transects, a concentration of cultural debris became clear.

Kitchen related artifacts were uniformly spread across the site, revealing only broad, vague patterns with frequencies generally sporadic and unpredictable. This lack of patterning was expected and is attributed to the nature of kitchen refuse deposition and transformation. Specifically, kitchen related refuse would be disposed of immediately around the structure and subsequently scattered throughout a broader area by activities about the yard.

The tobacco group was of little use because of very low frequencies, represented by a total of only five artifacts for all three transects.

Artifacts related to architecture, however, produced well-defined patterns of high and low densities which were similar along all three transects (Figure 5). The distinct patterning of architectural related artifacts can be explained in that the majority of construction materials, such as nails, brick, and mortar, would have entered the archaeological record when the structures collapsed. Unlike kitchen refuse, which was deposited and scattered about the yard throughout the period of occupation, the construction

materials were deposited in the immediate area of the structure and suffered relocation only by later cultivation. Because architectural artifacts are a more static record they should be a superior index to house location.

For interpretive purposes the architecture group of artifacts was divided into two sub-groups: carpentry materials, predominantly nails and occasionally window pane fragments; and masonry materials, specifically, brick and mortar. These distinctions were made so that quantification would be meaningful: nails, by whole and/or fragment number; and brick and mortar fragments, by weight. Additionally, the separate measure of carpentry and masonry materials should facilitate recognition of how each method contributed to construction. Based on regional examples and previous excavations at other areas of the site (Michie 1985; Michie 1987), clapboard structures with brick and mortar chimneys were expected to be encountered. This type of construction might be recognized in the spatial relationship of carpentry and masonry materials at the site.

As shown in Figure 5, higher frequencies of carpentry and masonry materials occur together, reflecting the presence of structures built by some combination of carpentry and masonry. Evidence supporting the expectation that the structure was constructed of nailed boards, and a brick chimney was found along transect one where extraordinarily high frequency of brick and mortar were found with high frequencies of nails spread over a larger area (Figure 5).

Working on the assumption that the cabins were arranged in a parallel row, we averaged the location of peaks for the three transects and tentatively estimated the axis of the eastern cabin row to be 100 feet east of the base line (Figure 5). Although data from transect two was the most askew it also presented the least concentrated pattern and was, therefore, taken into lesser account when averaging the peak frequencies. The other two transects showed tightly patterned high frequencies of carpentry and masonry materials, and were the primary source of data for estimating the cabin row center line (Figure 5).

With the approximate axis of an eastern row of slave cabins located, we could further speculate on the nature of kitchen group artifact deposition. It was noted that the higher frequencies of kitchen artifacts were recovered from within 20 feet on both sides of the 100 foot mark (Table 7).

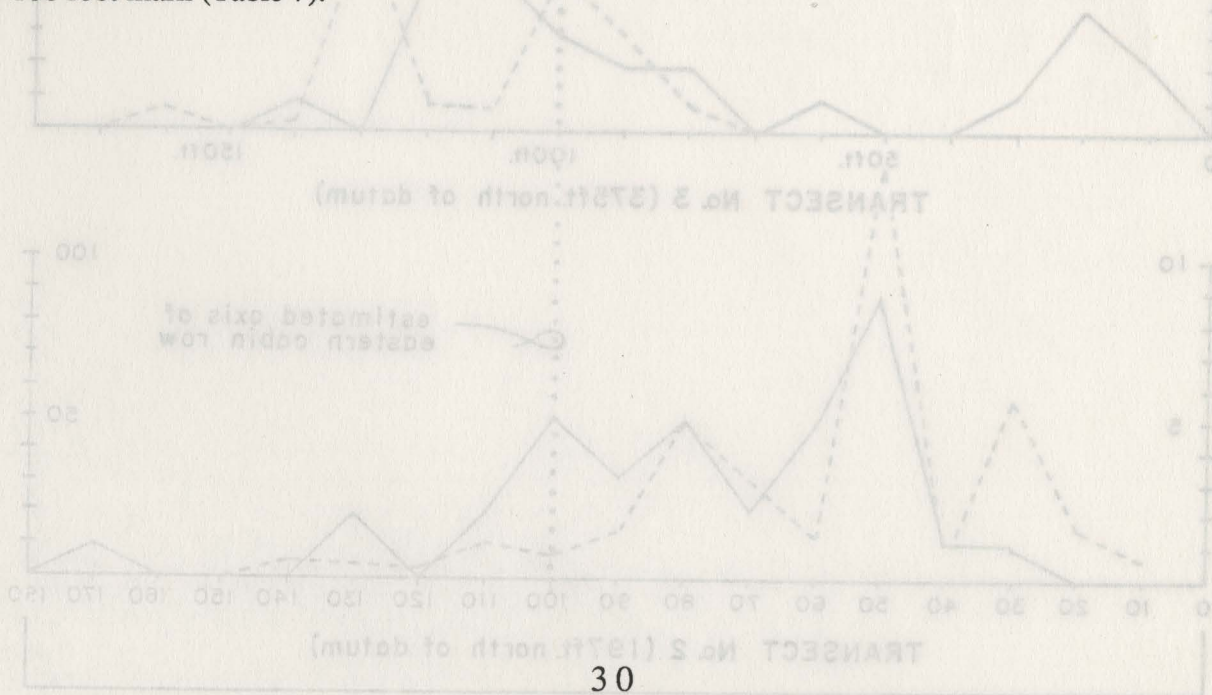


Table 7

**Kitchen Related Artifact Frequencies
along Transects 1, 2, and 3**

Distance grid east of base line		Frequency
@ 70 ft.		5
@ 80 ft.		16
@ 90 ft.		11
----- @ 100 ft.	hyp. row axis -----	9 -----
@ 110 ft.		9
@ 120 ft.		8
@ 130 ft.		3

The highest frequencies of kitchen group artifacts, however, occurred at 80 and 90 ft. east of the base line, placing the major disposal area for kitchen refuse immediately west of the cabin row. Thus the center of activity appears to have been in the "front" yard. The choice of activity areas may have been restricted by lack of a back door (see Fogel and Engerman 1974:116).

Transect 4

Method

Evidence of structures along transects 1, 2, and 3 did not appear in precise alignment. Nevertheless, at a distance of about 100 feet, higher densities of architectural materials, suggested the presence of houses. Beginning at 100 feet east of datum, another linear series of test units was excavated to the north (Figures 4 & 6). To insure against placing test units at intervals coincident with regularly spaced houses, distances between test units were randomly selected from whole numbers between, and including, 5 and 14.

Figure 6. Transect 4, View: North from 0 N. 100 E.
Richmond Hill Plantation, Slave Settlement.



Figure 6. Transect #4, View: North from 0°N, 100°E,
Richmond Hill Plantation, Slave Settlement.

These limits were chosen because a maximum of 14 foot intervals would insure against missing a structure if it measured as narrow as 14 feet, a reasonable minimum allowance if the cabins were small compared to the average width of 18 feet (Fogel and Engerman 1974:116) for the Old South, and 22 feet for the region (see Expectations section of this report). The minimum interval limit of five feet was chosen because it differs from the maximum limit of 14 x 9 feet, giving substantial variation in the distances between test units.

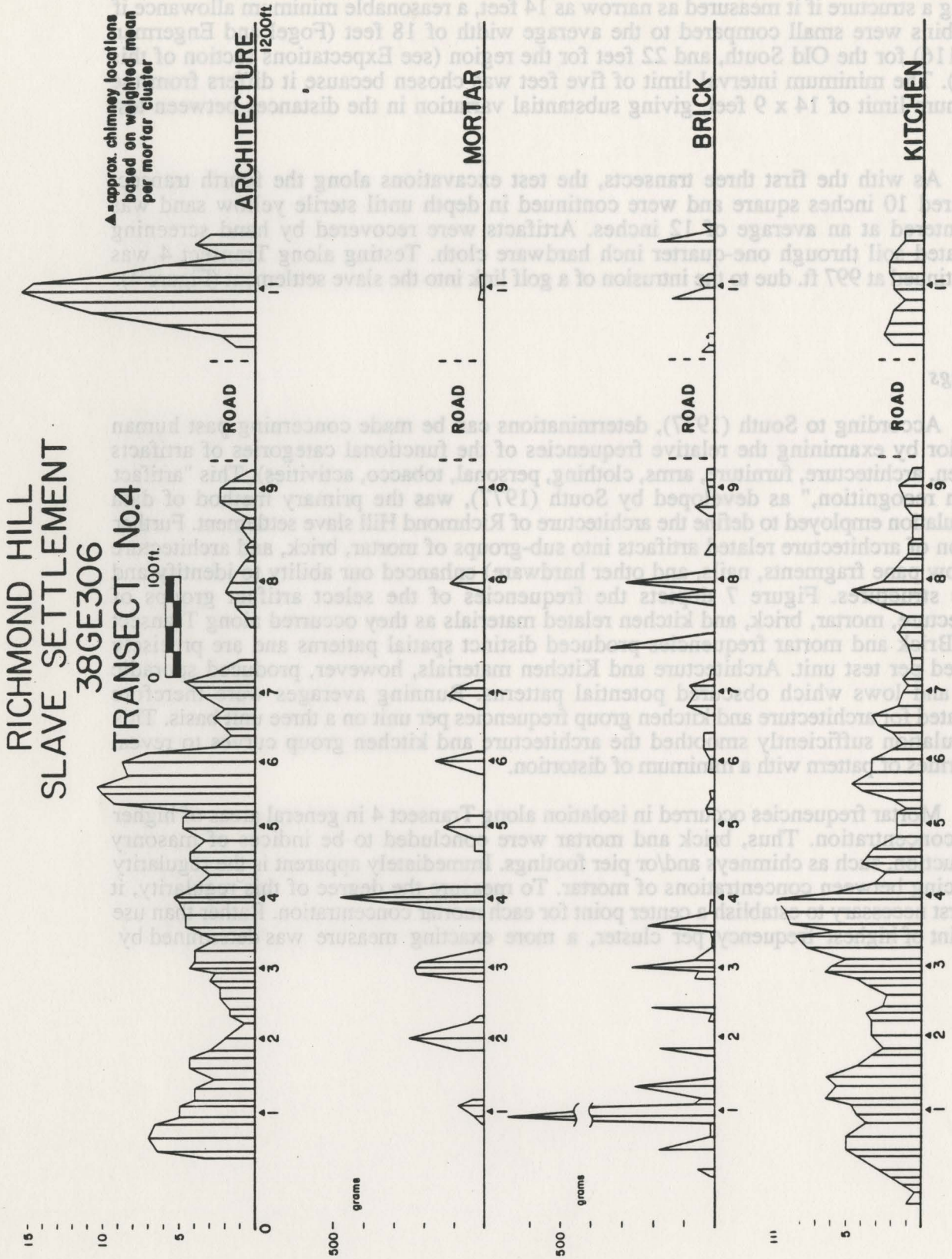
As with the first three transects, the test excavations along the fourth transect measured 10 inches square and were continued in depth until sterile yellow sand was encountered at an average of 12 inches. Artifacts were recovered by hand screening excavated soil through one-quarter inch hardware cloth. Testing along Transect 4 was discontinued at 997 ft. due to the intrusion of a golf link into the slave settlement (Figure 4).

Findings

According to South (1977), determinations can be made concerning past human behavior by examining the relative frequencies of the functional categories of artifacts (kitchen, architecture, furniture, arms, clothing, personal, tobacco, activities). This "artifact pattern recognition," as developed by South (1977), was the primary method of data manipulation employed to define the architecture of Richmond Hill slave settlement. Further division of architecture related artifacts into sub-groups of mortar, brick, and architecture (window pane fragments, nails, and other hardware) enhanced our ability to identify and define structures. Figure 7 depicts the frequencies of the select artifact groups of architecture, mortar, brick, and kitchen related materials as they occurred along Transect Four. Brick and mortar frequencies produced distinct spatial patterns and are precisely depicted per test unit. Architecture and Kitchen materials, however, produced sporadic highs and lows which obscured potential patterns. Running averages were therefore calculated for architecture and kitchen group frequencies per unit on a three unit basis. This manipulation sufficiently smoothed the architecture and kitchen group curves to reveal regularities of pattern with a minimum of distortion.

Mortar frequencies occurred in isolation along Transect 4 in general areas of higher brick concentration. Thus, brick and mortar were concluded to be indices of masonry construction, such as chimneys and/or pier footings. Immediately apparent is the regularity of spacing between concentrations of mortar. To measure the degree of this regularity, it was first necessary to establish a center point for each mortar concentration. Rather than use the point of highest frequency per cluster, a more exacting measure was determined by

Figure 7



calculating the weighted mean for each concentration. This would take into account not only mortar frequencies but also their relative position to one another. The weighted mean for each mortar concentration is marked in Figure 7. Spacing between the weighted means of the first seven mortar concentration was found to range from 72.73 feet to 64.88 feet with an average of 69.31 feet. Through calculation of a "linear nearest neighbor statistic," the regularity of spacing between the first seven mortar peaks was confirmed (Case 1A was used from Stark and Young 1981:284-289). The degree of regularity is gauged by confirmation of regularity in excess of the .995 confidence level.

The remaining mortar clusters, numbered eight and succeeding (Figure 7), are spaced at greater intervals and appear to form a separate series of regularly spaced architectural indices. A 10th mortar cluster was presumably removed by the construction of a new road. It is impossible, therefore, to confirm that the mortar clusters within the second series are indeed regularly spaced. Large concentrations of nails should represent the former locations of structures if the slave quarters at Richmond Hill were of clapboard construction. Architecture group (nails) frequencies (Figure 7) reveal a crude pattern of peaks and troughs, not as well-defined as the regularity of mortar peaks. It is noted, however, that mortar peaks generally occur just to north of architecture peaks (see Figure 7). This pattern strongly suggests that mortar peaks represent chimneys formerly attached to the north side of individual clapboard structures.

To explain the irregularity of the architecture frequency patterning, compared to those of the mortar frequencies, the nature of their deposition and transformation must be examined. Individual structures are likely to have collapsed in different directions, which may in part explain the irregular patterning of architecture group frequencies. Similarly, chimneys would be expected to fall in different directions, yet mortar was found only in tight concentrations at regular intervals. This mortar, however, was found to be quite friable and may have survived almost exclusively within foundations. Although brick frequencies might be assumed to be integrally related to mortar frequencies, the brick produced erratic frequencies in comparison to mortar (see Figure 7). Hence, we have reason to believe that the friability of mortar may have preempted its survival, especially in consideration of tillage and brick scavenging. Nails, on the other hand, should survive dilapidation of the structure and relocation by later plowing.

It was noted that higher frequencies of kitchen related material occur in the areas of the first six mortar clusters, especially in the area of the mortar clusters representing Cabins 1, 2, and 3 (see Figure 7). This might be explained by higher status occupation (see Otto 1984:11) or longer occupation (see Schiffer 1975) at these cabin sites.

We may safely assume that some degree of status variation existed within such a large slave population. Beyond the identification of drivers' occupations, however (see Otto 1984:43; and Michie 1987:91,138,141), archaeological methods have yet to produce reliable evidence for differentiating occupations such as house servants, coachmen, and field hands, as they are potentially manifest in the archaeological record. High slave status, as prescribed by the ruling whites, was accorded extraordinary privileges, including greater access to material culture (see Lange and Handler 1985:22; and Otto 1974:37). Especially in the case of house servants, we might expect to find a higher quantity of material goods and a higher degree of distinct, if not more expensive goods, than at other slave sites. Accordingly, the higher frequencies of kitchen artifacts associated with the first few cabins (see Figure 7 and Table 8) may reflect higher status occupations. It can also be argued that the position of these structures, nearest the drive leading to the planter's house, would be the preferred location for housing higher status individuals. In abeyance with the strategic planning of plantations (see Prunty 1955; Anthony 1976; and Lewis 1985), we might expect the slave

community to be strategically planned also, even to the degree that dwellings were assigned to certain individuals. It would be advantageous to place house servants in cabins with better access to the planter's house (see Figure 3), coachmen in cabins near the road(s) leading to and from the plantation, and managerial staff in dwellings between the work force and higher management. In cases such as these, the cabins nearest the avenue at Richmond Hill would be preferred.

Some degree of socio-economic scaling seems inevitable among the 200 slaves at Richmond Hill. Within the plantation system, various rewards, such as access to plantation surplus, leisure, and social recognition, were probably available to select individuals. If this is true, we should be able to find differential archaeological evidence supporting this proposition. Otto (1984) has clearly found supporting evidence for social differences among plantation administrators, managers, and slaves. Although we have only conducted limited research at two slave cabins on Richmond Hill, and sampled various areas through transects, there are initial indications for higher status in the area of the cabins located near the avenue of oaks. This evidence occurs specifically in the form of ceramics.

At these specific locations we noticed a higher incidence of undecorated, white porcelain and transfer-printed wares (Table 8). This may be explained by the presence of a house servant or other slaves intimately associated with the planter. Given that ceramics were recycled through the plantation from the planter's residence to households of lower status, those persons more intimately acquainted with the planter would have superior access to them. Although this is an attractive explanation, a much larger data base is needed to verify this. It could well be that ceramics were recycled to virtually every family of the slave community, and that distinctive ceramics, mentioned above, are nothing more than a reflection of time and space, and that other ceramics from a later period could be found at additional cabins.

Table 8
Ceramic Assemblage Frequencies per Slave Cabin

Cabin Number	1	2	3	4	5	6	7	8	9	Total
Creamware	-	2	2	-	-	2	-	1	1	8
Pearlware	1	6	5	4	5	4	1	-	1	27
Yellowware	-	-	3	-	-	-	-	1	-	4
Whiteware	8	6	9	3	3	1	3	2	1	36
Sub-total	9	14	19	7	8	7	4	4	3	75
Colonoware	8	4	4	5	5	3	-	2	1	32
Ratio	.88	.29	.21	.71	.63	.43	e .50	.33		.43
Total	17	18	23	12	13	10	4	6	4	107
Transfer printed	3	1	2	-	1	-	-	-	1	8
Porcelain	1	-	1	-	-	-	-	-	-	2
Total	4	1	3	-	1	-	-	-	1	10

Note: data from cabin No. 11 omitted because of its postbellum tenant component.

Sample sizes taken were too small in most instances to allow the relative frequencies of certain ceramics to become apparent. Thus the presence of higher status ceramics can at this time only be interpreted as a function of sample size. Likewise, testing for temporal sequences along transect 4, through recognition of the relative frequencies of earlier and later ceramic types (e.g. creamware and whiteware, respectively), was untenable due to small sample sizes. General ceramic frequencies were noted to decrease in stages with distance from Cabin 1 (Table 8). The highest frequencies were from Cabins 1, 2, and 3; moderately high frequencies represented Cabins 4, 5, and 6; and the lowest frequencies were recovered from Cabins 7, 8, and 9 (Table 8). If ceramic frequencies reflect duration of occupation, their graduated patterning from Cabins 1 to 3, Cabins 4 to 6, and Cabins 7 to 9, may reflect three successive building episodes. The earliest residency would have been in the cabins nearest the plantation avenue. These cabins may have been built when an unknown Allston was in possession of Richmond Hill in 1820 (Michie 1987:43-45). The pattern of decreasing ceramic density suggests that additions to the settlement were made in succession northward, presumably, as its population grew under Magill's ownership (1825-1864). It should be noted that additions to the settlement were probably made to both rows in order to maintain symmetry. Two indices of sequential construction are: (1) the apparent construction of three successive sets of three cabins (as suggested by ceramic frequencies), and (2) the spacing differences as they form a group of seven cabins and a group of four cabins. Although the ceramic frequencies, as they reflect length of occupation, might be a

better indicator of when cabins were built, the obvious spacing variation reflects a change in architectural planning, which has yet to be explained. According to our interpretations, the last cabin (No. 7) in those closely spaced (Nos. 1-7) and the first two cabins (Nos. 8 & 9) in those broadly spaced (Nos 8-11) yielded similar ceramic frequencies, suggesting that they were occupied for approximately the same amount of time.

Indications of building episodes suggest that as many as six structures were built on three separate occasions, presumably in response to a growing slave community.

Transect 5

Introduction

Construction of the Wachesaw golf course may have removed remnants from additional cabins along transect 4. By projecting the transect line across the fairway it was possible to test for continuation of the cabin row on the other side of the fairway. No evidence of occupation was found. The distance across the fairway measured 350 ft. which may have contained as many as five cabins. Having exhausted possibilities for counting cabins along transect 4, the location of the western row of cabins was sought to measure its northern extent. Again assuming that the cabin rows were mirror images, the extent of the settlement could be reconstructed if the northern terminus of a row were identified.

Method

The asphalt road, which greatly disturbed and sealed subsurface remains along the western row of cabins, veers to the west at the approximate location of Cabin 9-West (Figure 4). Subsurface remains of cabins north of this point should therefore be present. The location of this northern portion was identified by means similar to those used to locate the eastern row of cabins. Specifically, a linear transect was extended through the Cabin 11-East site to intersect the opposing row of cabins (Figure 4). Along this transect ten inch shovel tests were excavated at ten foot intervals. Again the soil was screened through one-quarter inch hardware cloth to recover artifacts. The relative densities of carpentry and masonry artifacts served as primary indicators of building location.

Findings

Transect 5 revealed high densities of masonry and carpentry materials between 20 and 60 feet west of base line, with the cabin row axis estimated at 40 feet west of base line. Thus we estimate the cabin rows to be 150 ft. apart.

Transect 5 was also extended towards the east to test the accuracy of transect 4 as it was intended to overlie a row of cabins. Transect four appears to lie 12 feet east of the cabin row axis as identified by transect 5. This error corresponds to 1.5 degrees variation over the 935 foot distance from the plantation's avenue, a quite acceptable degree of error, attributable to either the settlement architect's error in surveying a right angle to the plantation's avenue, or the archaeologist's error in identifying the cabin row location.

Transect 6

Method

With the axis of the northern portion of the western cabin row established, testing was begun along its length to identify structures (Figure 4). The method of testing used along transect 6 was replicated from transect 4. Figure 8 shows the relative frequencies of architecture (nails), mortar, brick, and kitchen related artifacts recovered from along transect 6. Weighted means were calculated for the mortar frequencies to provide a more exacting location of masonry construction.

Running average manipulation of the raw data for architecture and kitchen related materials revealed more distinct patterns for interpretation of these materials. These statistical manipulations are identical to those used in interpreting the eastern row of cabins (see transect 4).

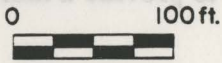
Findings

Correlations made between mortar peaks and higher frequencies of architecture (nails) established four probable cabin locations (Figure 8). Relationships between these frequencies suggested that cabins along transect 6, like those along transect 4, were of clapboard construction with chimneys attached to their northern sides. The spacing between these cabins appears to be only somewhat regular. Testing continued for 101 feet beyond the peak of mortar cluster No. 14, but revealed no evidence of other structures (Figure 9). Thus the full extent of the Richmond Hill slave settlement may have been identified. Additional cabins, however, may have existed in what is today the twelfth fairway of the Wachesaw golf course.

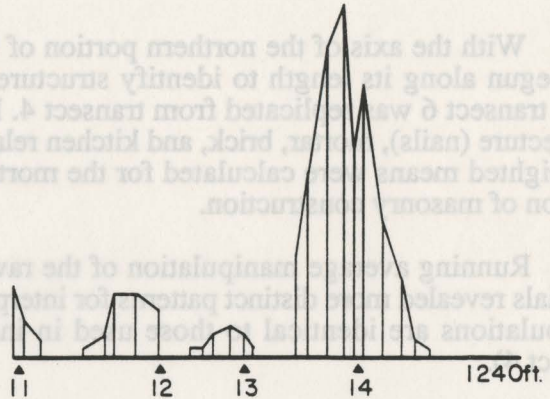
In all, eleven cabins were identified in one row; and, beginning with what is presumably the eleventh cabin in the opposing row, we were able to identify three more cabins. Assuming the cabin rows were mirror images of each other, there were at least 28 cabins in the Richmond Hill slave settlement (see Figure 9). The possibility remains that there could have been as many as 10 additional cabins (5 per row) to the north.

Figure 8

RICHMOND HILL SLAVE SETTLEMENT 38GE306 TRANSECT No.6

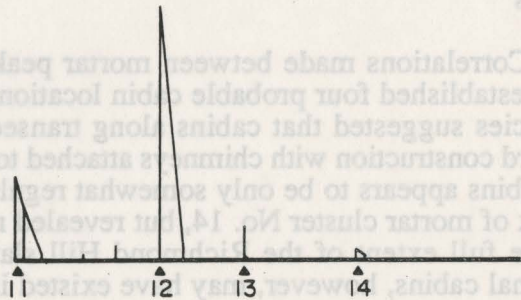


ARCHITECTURE →

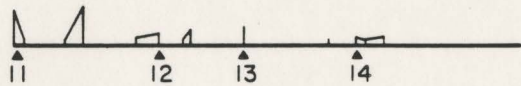


▲=approx. chimney locations
based on weighted mean
per mortar cluster

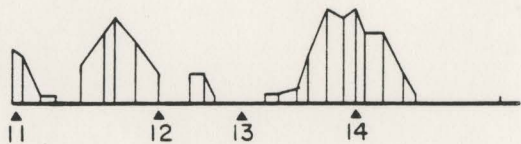
MORTAR →



BRICK →

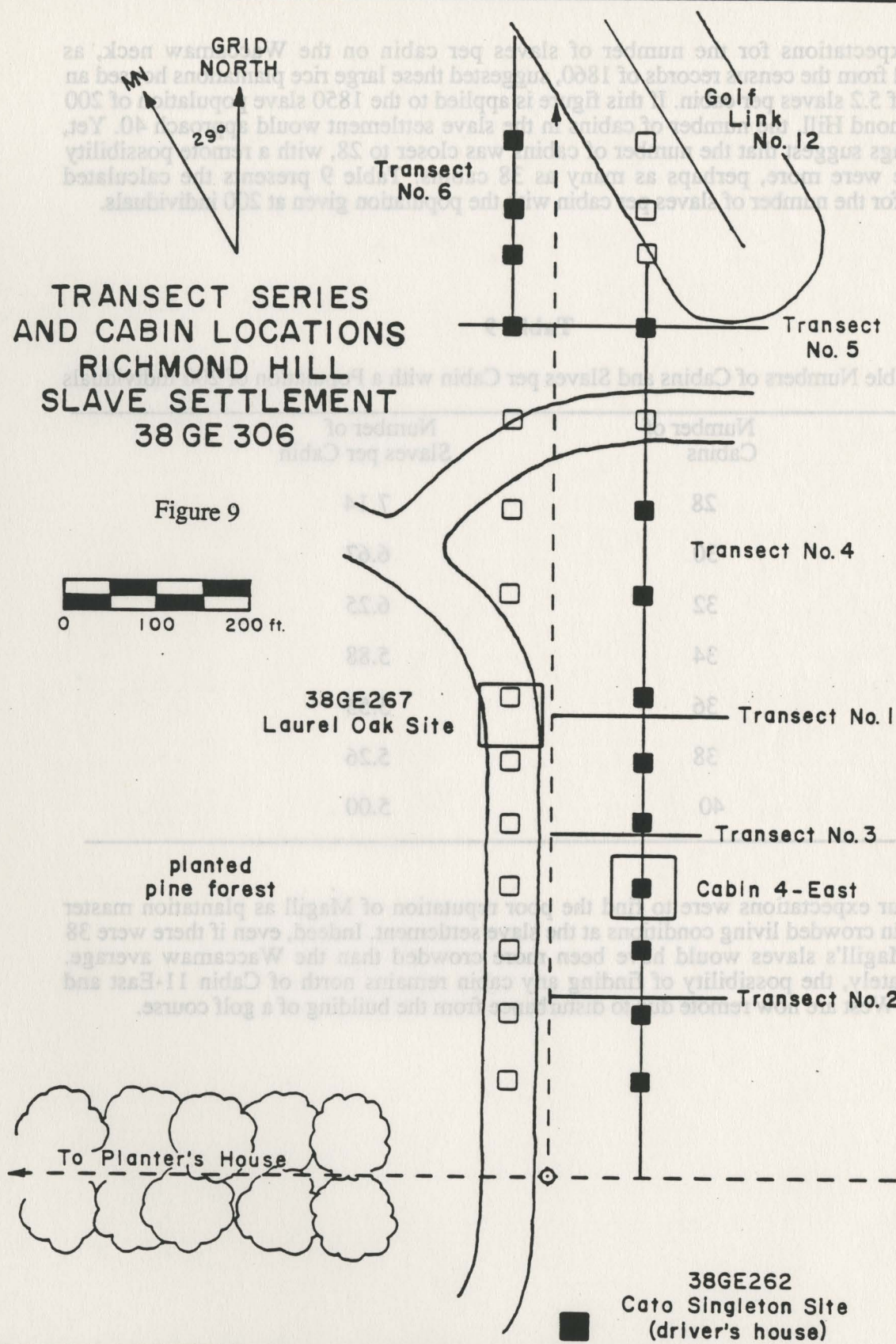
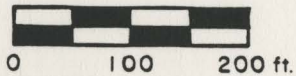


KITCHEN →



**TRANSECT SERIES
AND CABIN LOCATIONS
RICHMOND HILL
SLAVE SETTLEMENT
38 GE 306**

Figure 9



Expectations for the number of slaves per cabin on the Waccamaw neck, as calculated from the census records of 1860, suggested these large rice plantations housed an average of 5.2 slaves per cabin. If this figure is applied to the 1850 slave population of 200 for Richmond Hill, the number of cabins in the slave settlement would approach 40. Yet, our findings suggest that the number of cabins was closer to 28, with a remote possibility that there were more, perhaps as many as 38 cabins. Table 9 presents the calculated averages for the number of slaves per cabin with the population given at 200 individuals.

Table 9

The Possible Numbers of Cabins and Slaves per Cabin with a Population of 200 Individuals

Number of Cabins	Number of Slaves per Cabin
28	7.14
30	6.67
32	6.25
34	5.88
36	5.55
38	5.26
40	5.00

Our expectations were to find the poor reputation of Magill as plantation master reflected in crowded living conditions at the slave settlement. Indeed, even if there were 38 cabins, Magill's slaves would have been more crowded than the Waccamaw average. Unfortunately, the possibility of finding any cabin remains north of Cabin 11-East and Cabin 14-West are now remote due to disturbance from the building of a golf course.

Phase II

Introduction

In the second phase of field research, extensive sampling was conducted at one cabin site to: (1) locate in situ architectural remains; (2) test the accuracy of phase one methods and interpretations; and (3) provide raw data for comparison with the data from the Laurel Oak site, investigated in 1984.

Site selection was based on mortar densities along transect 4, because mortar was found to be the most exacting spatial indicator of former architecture (see Phase I). Along transect 4, test unit 330 N, 100 E produced the highest frequency of mortar by weight (the mode frequency for mortar cluster four is depicted in Figure 7). All mortar fragments from this test unit were from a single mass extending through the plow zone. According to our interpretations, this mortar represented the chimney location of the fourth cabin on the eastern row (Figures 7 & 9). To test this hypothesis, a six foot square block excavation was placed over the interpreted chimney location. In addition, the area around Cabin 4-East was sampled through a systematic, stratified, unaligned, random, sample (11%) (Figure 10). The center of this sampling scheme was placed over the interpreted cabin center, immediately south of mortar peak No. 4 (see Figure 7). Test units measured three feet to a side and were numbered proveniences 2 through 65, with provenience 1 reserved for surface finds. This sampling scheme was chosen for its low degree of bias in large area sampling, and for comparative analysis with the Laurel Oak site where the same method was used in 1984.

Artifacts were recovered by sifting excavated soil through a mechanically driven screen of one-quarter inch hardware cloth, and stratigraphic profiles were drawn of each sample unit.

Findings

Although no in situ architectural remains or features were identified the sampling scheme proved fruitful. Density interpolations for mortar (Figure 11) revealed tight clustering, centered approximately five feet east and three feet north of test unit 330 N, 100 E. Thus our interpretation of data along transects 1, 2, and 3 had adequately identified the axis of the eastern cabin row, and our minimal sampling scheme along transect 4 was sufficient to identify an isolated and tightly clustered mortar concentration.

Nail frequencies, interpolated in Figure 12, revealed a much more scattered pattern than did mortar fragments. This supports the proposition that the friability of mortar precludes its survival. The greatest concentration of nails was found near the site's center where, according to prediction, the clapboard structure once stood. The longitudinal north-south shape of the 40 count interval (Fig. 12) may reflect not only the greater length than width of the structure but the translocation of materials in the direction of plowing. Figure 13 shows plow scars as found throughout the site to always run north and south.

Figure 10

EXCAVATION PLAN OF RICHMOND HILL SLAVE SETTLEMENT (38GE306)

CABIN No. 4 - EAST

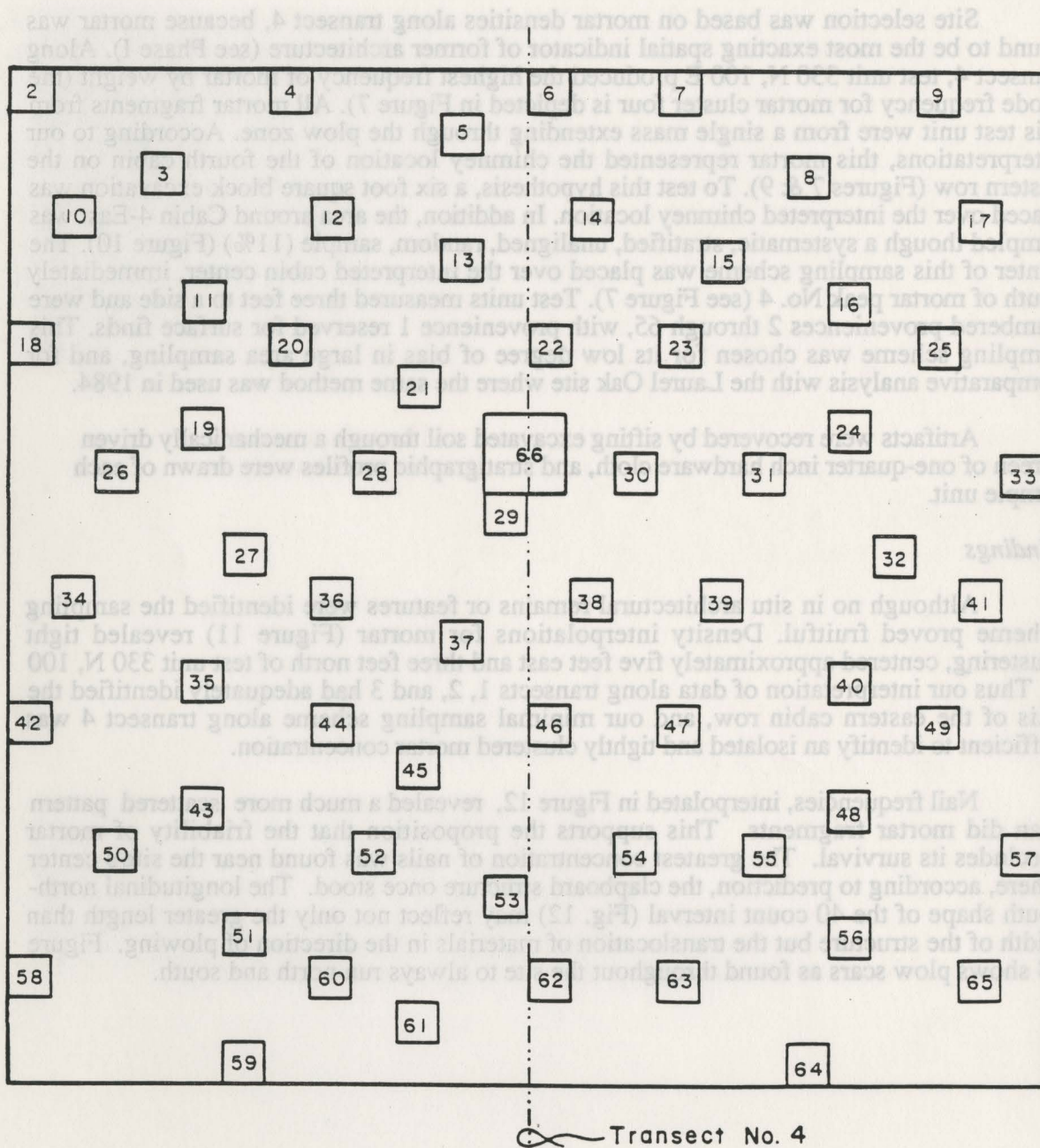
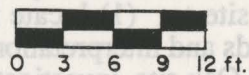
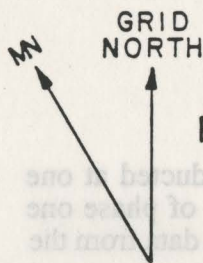
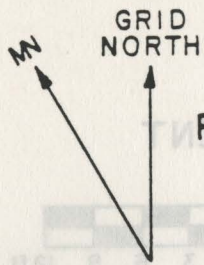
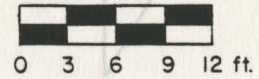


Figure 11

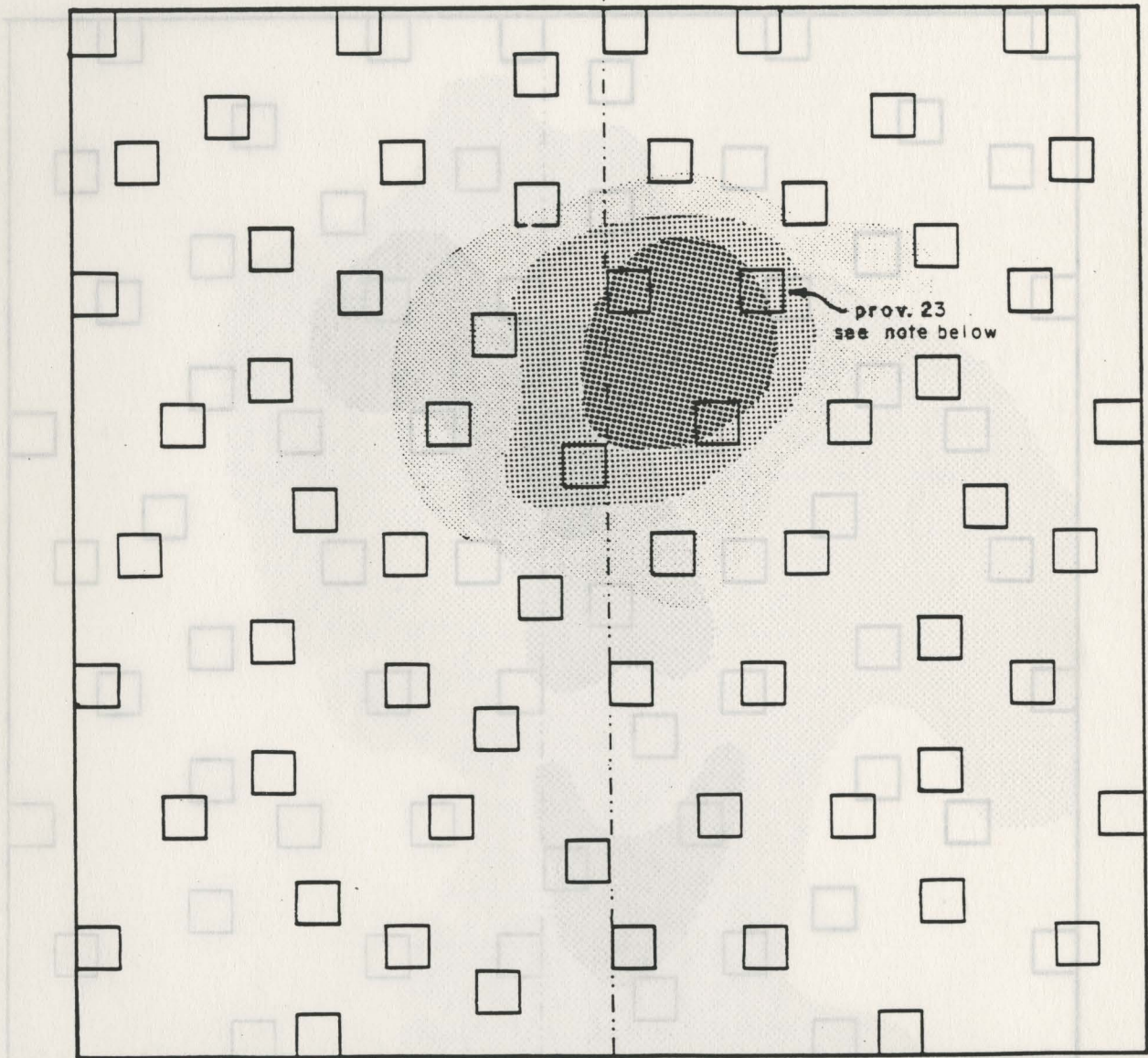


EXCAVATION PLAN
RICHMOND HILL SLAVE SETTLEMENT
(38GE306)

CABIN No. 4 - EAST



DENSITY INTERPOLATIONS OF MORTAR FRAGMENTS



- 1,000 grams
- 3,000 grams
- 5,000 grams

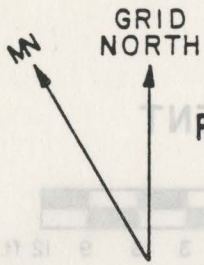
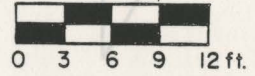
Transect No. 4

Note: cultural material from feature in provenience 23 excluded from data.

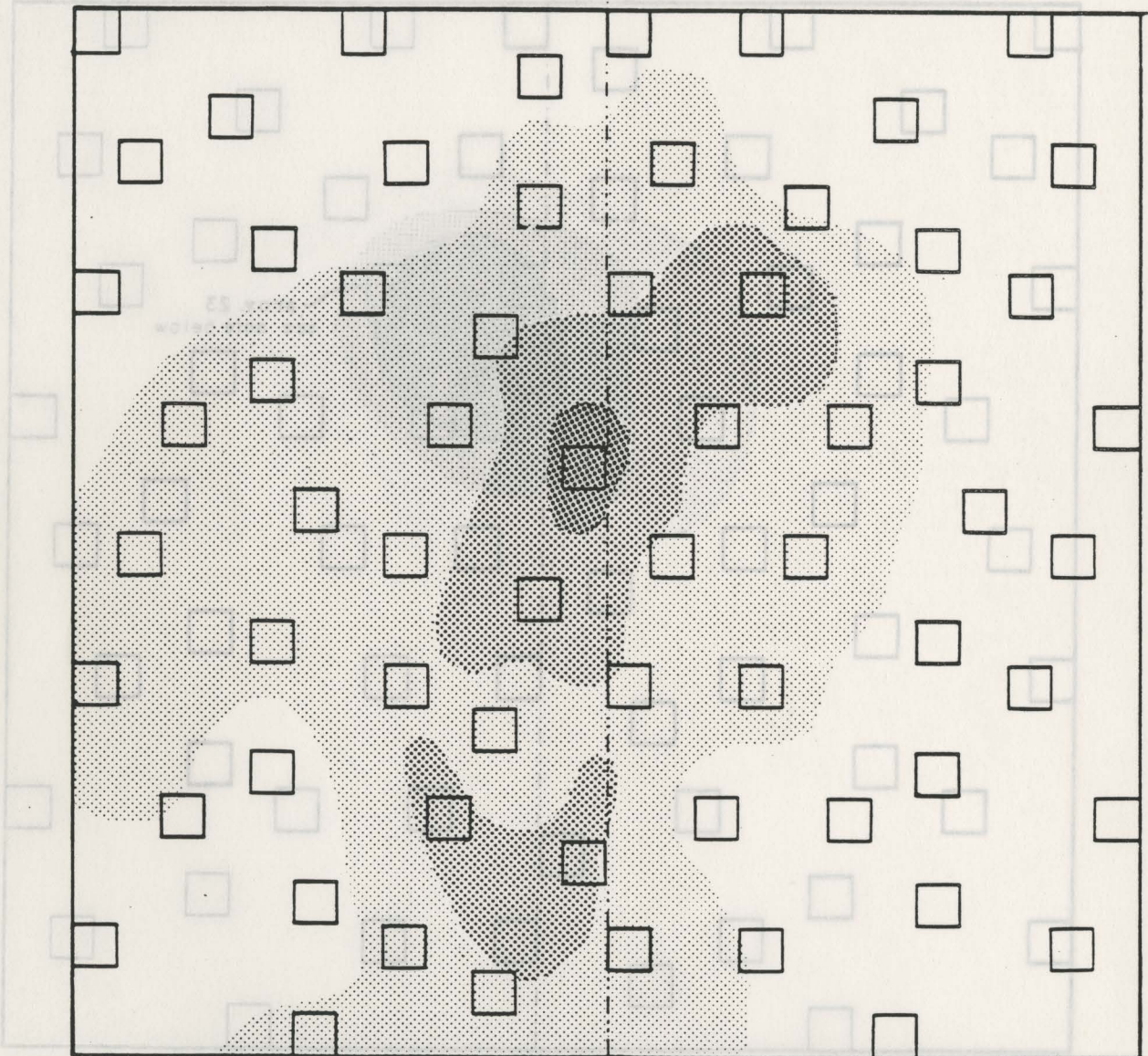
Figure 12




EXCAVATION PLAN
RICHMOND HILL SLAVE SETTLEMENT
(38GE306)

CABIN No. 4 - EAST



DENSITY INTERPOLATIONS OF NAILS



-  - 20
-  - 40
-  - 60

Transect No. 4

The high concentration of nails found northeast of the site's center is correlated with high frequencies of all construction materials found in a feature in provenience 23, which appears to be a disposal pit. Stratigraphic sequence revealed that the deposition in this feature predated cultivation.

A high concentration of nails approximately 30 feet south and 6 feet west of the site's center (Fig. 12) did not coincide with higher densities of masonry materials (Fig. 11). Ceramics, however, were here found in abundance (Fig. 14), suggesting that this area was used for refuse disposal during the site's occupation.

Ceramic frequencies (Fig. 14) were generally very low east of transect 4, suggesting that activities in back of the cabin were limited. The cabin perhaps lacked a back door (see Fogel and Engerman 1974:116). Greater kitchen related activities, i.e., food preparation, eating, and refuse disposal, were manifest immediately in front of the structure by the highest frequency of kitchen related materials, potentially marking the area in front of the cabin door. A much larger area of moderately high frequencies was found south-southeast of the structure (Fig. 14), and probably represents the major area of kitchen refuse disposal. This concentration probably extends beyond the site's southern border which marks the mid-point between cabin 3-East and 4-East. Perhaps this large concentration was a shared disposal area for inhabitants of Cabins 3 and 4-East.

Together, mortar, nail, and kitchen related artifacts strongly suggest that minimal sampling techniques employed through Phase One were effective in identifying the location, configuration, and construction of slave cabins arranged in a row. As predicted, high mortar frequencies, representing the former locations of a chimney, about high frequencies of nails marking the locations of clapboard structures. The highest ceramic frequencies occur east of high nail frequencies, marking the disposal of kitchen refuse in front of the cabin.

Figure 13. Provenience #59, 38 GE306, Richmond Hill
Plantation, Slave Settlement, Murrells Inlet, S.C.

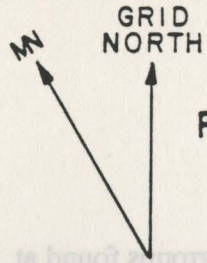
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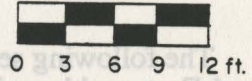
Figure 13. Provenience #59, 38 GE306, Richmond Hill Plantation, Slave Settlement, Murrells Inlet, S.C.

Figure 14

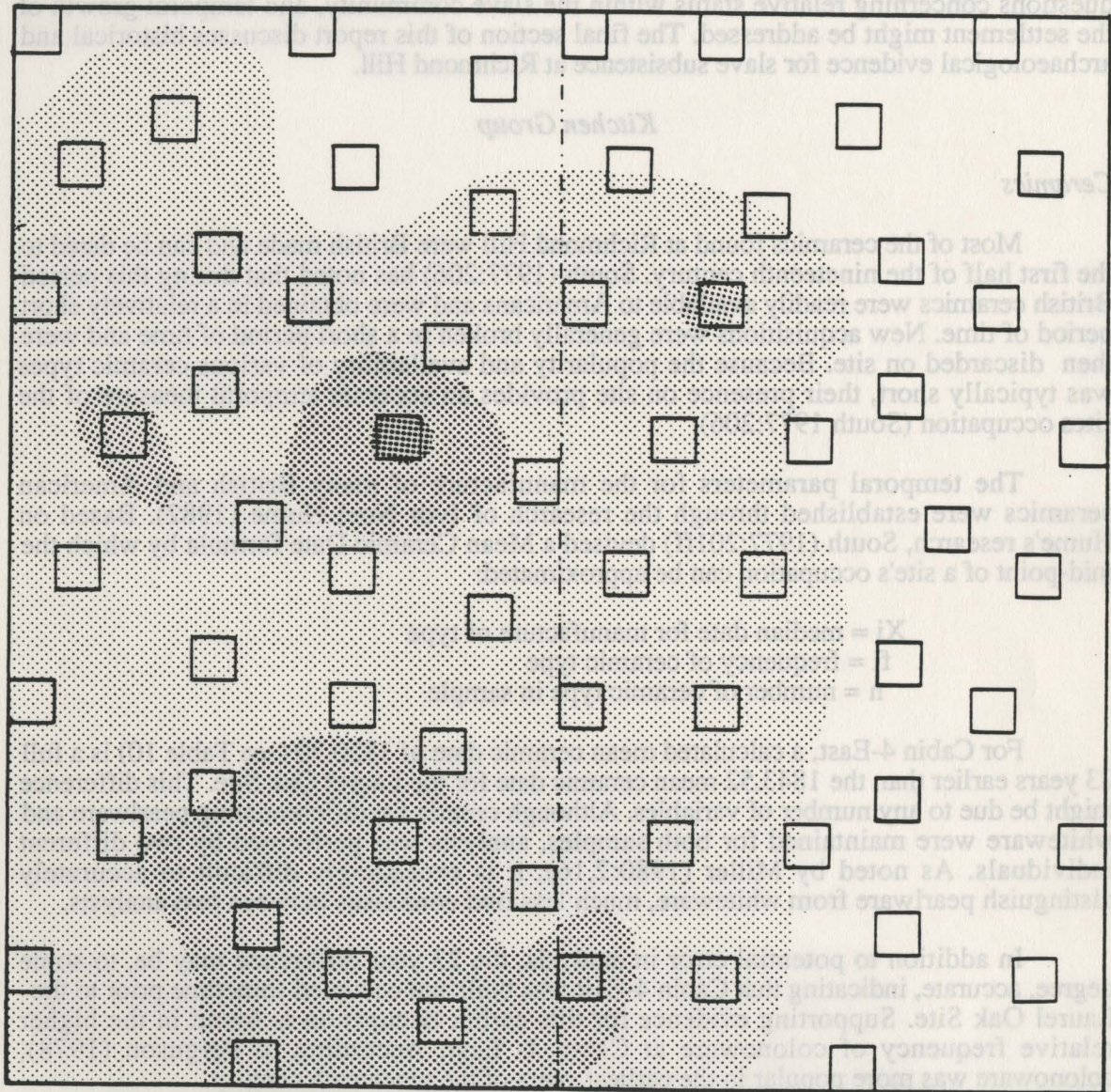





EXCAVATION PLAN
RICHMOND HILL SLAVE SETTLEMENT
(38GE306)

CABIN No. 4 - EAST



DENSITY INTERPOLATIONS OF KITCHEN GROUP ARTIFACTS



-  - 40
-  - 80
-  - 120

Transect No. 4

Figure 14
EXCAVATION PLAN
RICHMOND HILL SETTLEMENT
(1888-1906)

GRID NORTH

Artifact Analysis

Introduction

The following section examines in greater detail the various artifact groups found at Cabin 4-East, problems in their interpretation, and how they potentially reflect lifeways and behavior of the Richmond Hill Slave Community. Integral to this discussion is the comparative analysis of data from Cabin 4-East and the Laurel Oak Site, through which questions concerning relative status within the slave community, and temporal growth of the settlement might be addressed. The final section of this report discusses historical and archaeological evidence for slave subsistence at Richmond Hill.

Kitchen Group

Ceramics

Most of the ceramics found at Richmond Hill were British made and can be dated to the first half of the nineteenth century. South (1977:206) has noted that during this period British ceramics were readily available to Americans and were obtained in a relatively short period of time. New acquisitions were generally broken in a short period of time and were then discarded on site. Because the popularity and availability of various ceramic types was typically short, their presence on site provides an accurate temporal measure of the sites occupation (South 1977:206).

The temporal parameters for the manufacture of many British and American ceramics were established through the research of Ivor Noel Hume (1982). Based on Hume's research, South (1977:201ff) devised a Mean Ceramic Date formula by which the mid-point of a site's occupation can be approximated:

$$\begin{aligned} X_i &= \text{median date for manufacture of type} \\ f_i &= \text{frequency of ceramic type} \\ n &= \text{number of ceramic type in sample} \end{aligned}$$

For Cabin 4-East, a calculated mean ceramic date of 1820.70 (see Table 10) is a full 23 years earlier than the 1843.52 mean ceramic date for the Laurel Oak Site. This difference might be due to any number of variables. Although criteria for differentiating pearlware and whiteware were maintained for both samples, analysis was performed by two different individuals. As noted by Miller (1980:2,16), it is exceedingly difficult to accurately distinguish pearlware from whiteware, much less find consensus between two analysts.

In addition to potential error in analysis, the 23 year difference may be, to some degree, accurate, indicating that Cabin 4-East was built and occupied sometime prior to the Laurel Oak Site. Supporting evidence for this earlier occupation is found in the higher relative frequency of colonoware at Cabin 4- East. According to Ferguson (1978), colonoware was more popular in the earliest years of the nineteenth century.

It has long been thought that the relative economic status of a site's occupants might be revealed in the types of ceramics present at a site (see South 1972). For plantation archaeology, distinct patterns might be found between the ceramic assemblages of the major hierarchy: planter, overseer, and slave. John Solomon Otto (1984), systematically tested for such patterns at Cannon Point Plantation on St. Simon's Island, Georgia. Otto

(1984:15-16) proposed that similarities found between the ceramic assemblages of the planter and overseer reflect a white dominance pattern; that similarities between the overseer and slave ceramic assemblages reflect a wealth-poverty pattern; and that differences existing between all three social stations, planter, overseer, and slave, reflect a hierarchical pattern. Otto predicted that the planter's ceramic assemblage would be distinct from ceramics found at the overseer and slave sites, but that the overseer and slave site ceramics would be similar. Specifically, Otto predicted that overseer and slave sites' ceramic assemblages would be predominantly comprised of undecorated, banded, and blue and green edged wares, amounting to about 70% of their ceramic assemblages, and that the more expensive transfer-printed wares should comprise less than 25% of the sample. Testing at Cannon's Point Plantation (Otto 1984), and at Richmond Hill Plantation (Michie 1987), proved Otto's predictions correct.

The Laurel Oak Site produced 77% undecorated, banded, and edged wares, and 15% transfer-printed wares. Cabin 4-East also met Otto's prediction for a site of relative poverty with 85% undecorated, banded, and edged wares, and 11% transfer printed wares (Table 10). Differences between these relative frequencies may reflect any number of factors, such as an acceptable variation between similar occupations, higher status at the Laurel Oak site, or an earlier occupation at Cabin 4-East when the economic strength of the plantation was less developed. As the plantation grew profitable we might expect higher status goods to be recycled into the slave community in greater numbers.

More than twice as many ceramic sherds were recovered from Cabin 4-East (2,272) than from the Laurel Oak Cabin (921). It should be noted that both sites were tested through a systematic stratified non-aligned 11% sample within a 5,184 square foot area. The difference is at least in part accounted for in that excavations at the Laurel Oak site were apparently to the side of a structure and excavations at Cabin 4-East exactly overlay that structure. However, the greater number of ceramics recovered from association with Cabin 4-East may be due to longer and/or higher status occupation at Cabin 4-East.

Table 10

**Ceramics From
Richmond Hill Slave Settlement
38GE306 Cabin 4-East**

Ceramic Type Name	Total Count	Type Number	Date Range	Median Date	Product
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Porcelain

Vitreous	4	-	-	-	-
Late	1	-	-	-	-

Stoneware

Ironstone	18	1%	c.1813-1900	1857	33,426
Brown salt glazed	18	1%	-	-	-
Tan salt glazed	16	1%	-	-	-
Grey salt glazed	29	1%	-	-	-
Blue and grey salt glazed	1	-	-	-	-
Blue and tan salt glazed	1	-	-	-	-
Unglazed	5	-	-	-	-
Alkaline glazed	8	-	-	-	-
Feldspathic	7	-	-	-	-
White salt glazed	1	-	-	-	-

Earthenwares

Creamware

Undecorated creamware	19	1%	c.1762-1820	1791	34,029
Undecorated lighter ylw.	170	8%	c.1775-1820	1798	305,660
Annular creamware	2	-	c.1780-1815	1798	3,596
Finger painted creamware	1	-	c.1790-1820	1805	1,805

Pearlware

Undecorated pearlware	408	18%	c.1780-1830	1805	736,440
Underglazed blue hnd. ptd.	20	1%	c.1780-1820	1800	36,000
Underglazed					

poly.hnd. ptd.	3	-	c.1795-1815	1805	5,415
Underglazed polychrome p.	14	1%	c.1820-1840	1830	25,620
Blue transfer printed	74	3%	c.1795-1840	1818	134,532
Black transfer printed	9	-	c.1795-1840	1818	16,362
Brown & Green transfer p.	1	-	c.1795-1840	1818	1,818
Annular ware pearlware	107	5%	c.1790-1820	1805	193,135
Blue edged pearlware	67	3%	c.1780-1830	1805	120,935
Green edged pearlware	29	1%	c.1780-1830	1805	52,345
Blue sponge	1	-	-	-	-
Green sponge	3	-	-	-	-
Green and red sponge	1	-	-	-	-
Red and brown sponge	1	-	-	-	-

Refined

Undecorated whitewares	181	8%	c.1820-1900+	1860	336,660
Underglazed poly. hnd ptd.	5	-	c.1820-1900+	1860	9,300
Blue transfer-printed wht.	35	2%	c.1820-1900+	1860	65,100
Sepia transfer-printed wht.	24	1%	c.1820-1900+	1860	44,640
Purple transfer-printed wht	1	-	c.1820-1900+	1860	1,860
Red transfer-printed wht.	1	-	c.1820-1900+	1860	1,860
Blue edged whiteware	1	-	c.1820-1900+	1860	1,860
Green edged whiteware	1	-	c.1820-1900+	1860	1,860
Annular wares whiteware	106	5%	c.1820-1900+	1860	1,860
Green sponge whiteware	1	-	c.1820-1900+	1860	1,860
Undecorated yellow ware	32	1%	-	-	-
Blue transfer-printed "	1	-	-	-	-
Annular ware wellow ware	11	-	-	-	-
Luster (fluted)	1	-	c.1790-1840	1815	1,815

Other earthenwares:

Lead glazed red earthenw.	48	2%	c.1600-present	-
Colonoware	785	35%	-	-
<hr/>				
Total	2274	99%		2,113,993

Mean Ceramic Date

Total Number of Sherds with Known Dates = 1,299
Total Product Based on Median Dates = 2,365,093
Mean Ceramic Date (Product Divided by Total Sherds) = 1820.70

Test of Otto's Hypothesis:

Hypothesis: Undecorated, banded, and blue and green edged sherds should be relatively abundant on slave and overseer sites, comprising about 70% of the total sherds. Transfer-printed sherds should comprise less than 25% of the total.

Test Results: A frequency comparison with the total number of refined earthenwares, i.e., whitewares, creamwares, and pearlwares (1331), shows that undecorated (815), banded (216), and edged (98) constitute 85%. The number of transfer printed wares (147) constitute 11%.

Colonoware

Colonoware was originally termed "Colono-Indian ware" by Ivor Noel Hume in reference to aboriginal pottery of the colonial period which demonstrated European influence in its production (Baker 1972:3). Its presence on Afro-American sites was originally explained as acquisitions from merchant minded aboriginal pottery makers (Baker 1972:14). Richard Polhemus was perhaps the first to note similarities between "Colono-Indian wares" and earthenwares made in West Africa and proposed that at least some colonoware was produced by Afro-Americans through African tradition (see South 1974:186). Ferguson (1978) refined this hypothesis, noting specific correlations between West African pottery and colonoware, and that colonoware is found almost exclusively on Afro-American sites.

Ferguson (1978) and others have noticed that colonoware was used predominantly by slaves and appears to die out during the first half of the nineteenth century. The time of its disappearance marks a point of abandonment of African heritage. Colonoware, as a form of African material culture retained by slaves in the new world, serves the anthropologist as a socio-economic indicator and a barometer to acculturation. Furthermore, different households, slave settlements, and regional populations may have quit using colonoware at different times. Recognition of such differences would provide insight into the processes affecting the acculturation of Afro-Americans.

Colonoware at Cabin 4-East

At Cabin 4-East an abundance of colonoware was recovered: 785 sherds, only 40 of which were rim sherds. Examination of rim sherd profiles revealed only one possible closed form, the remaining 39 rim sherds appeared to be from large bowls. According to Otto (1984:66-68) the slave diet was dominated by broths and stews for which bowls served a greater utility than other forms.

A great diversity of color was found in the colonoware recovered from the site: hues of brown, tan, red, yellow, black, and combinations thereof (Munsell soil chart color equivalents include 2.5YR 5/6,4/4,2/0; 5YR 5/6; 10YR 6/4,6/2,& 5/4). Inconsistency of color in colonoware can be attributable to different clay sources, and to a lack of control over firing temperature and duration (see Wheaton 1983:235,237-238).

Only three decorated sherds were found: two dowel impressed rims, and one rouletted rim of a much thinner and finer made vessel which was perhaps Catawba pottery (see Wheaton et al. 1983:229) or an imitation of rouletted red glazed earthenware also found at the site.

The 785 colonoware sherds recovered from the cabin comprise 35% of the all ceramics found. To confirm that these low-fired earthenwares were associated with the slave occupation the colonoware and European type ceramic densities at Cabin 4-East were examined and found in coincident high and low frequencies. Colonoware was recovered from non-slave sites at Richmond Hill, but in very low frequencies, reflecting a strong white dominance status pattern (Michie 1987:138). Site specific colonoware frequencies and their relative percentages of ceramic assemblages are presented in Table 11.

Table 11

Site Specific Colonoware Frequencies
from Richmond Hill Plantation Sites

Site	No. Colonoware Sherds	Percent Colonoware per assemblage
38GE266 (Planter)	4	< 1%
38GE256 (Overseer)	14	1%
38GE262 (Driver)	0	-
38GE267 (Slave)	207	22%
38GE306 Cabin 4-E (Slave)	785	35%

Ferguson (1978:76-77) states that colonoware production peaked sometime in the eighteenth century and quickly declined during the first half of the nineteenth century. Otto (1977:100) accredits colonoware's demise to the increased availability of cheap European wares during this period. Supporting evidence for this was found at Richmond Hill by Michie (1987:138), who noted that colonoware was absent only from the site of the most recent occupation -- the driver's house (Michie 1987:91,141).

The comparatively low colonoware frequencies at the planter's and overseer's sites, and the total lack of colonoware at the relatively late driver's site, evidence the potential usefulness of colonoware in determining status and chronology at Richmond Hill Plantation. At different sites within the slave community, questions of status and chronology might also be addressed through quantitative analysis of colonoware.

The higher incidence of colonoware at Cabin 4-East (35% of the total ceramic count) than at Laurel Oak Cabin (22%) may reflect a number of behavioral differences between the occupations: 1) a lower status occupation at Cabin 4-East, 2) an earlier occupation of Cabin 4-East, 3) a lower degree of acculturation in the inhabitants of Cabin 4-East, or, 4) a combination of the above.

Assuming that European ceramics were preferred to colonoware and that colonoware was only used when European ceramics were economically or otherwise unavailable (South 1977:173), we can assume colonoware to be a reliable gauge of socioeconomic status. By these criteria Cabin 4-East appears to have been a lower status occupation than the Laurel Oak Cabin. Other status markers support this; specifically, transfer printed wares comprised 11% of the Cabin 4-East ceramic assemblage, and 15% of the Laurel Oak Cabin ceramic assemblage.

Evidence suggests that Cabin 4-East was occupied before the Laurel Oak site and for a longer period of time. Specifically, Cabin 4-East's mean ceramic date is 23 years earlier than the Laurel Oak's, and nearly twice as many ceramics were recovered from Cabin 4-East. The higher ceramic count at Cabin 4-East can only partially account for its higher colonoware frequency, which exceeds that of the Laurel Oak site by more than three-fold (see Figure 11). One explanation would be that colonoware was falling into disuse at Richmond Hill between the times of construction for these cabin.

Although the time period between the building of Cabin 4-East and the Laurel Oak Cabin appears to be a period in which the popularity of colonoware was declining, this may not explain such high colonoware frequencies for such a late date. According to Ferguson (1978), colonoware virtually disappears by 1820. One explanation for high incidence of colonoware at Richmond Hill would be a slower rate of acculturation. The entire Waccamaw slave culture may have experienced a lag in acculturation because of its high ratio of blacks to whites. Between the years 1810 and 1860 blacks "composed 85 to 89 percent of the population of Georgetown District, the highest percentage of slaves in any district in South Carolina" (Rogers 1970:343). The acculturation process would conceivably be retarded by these lopsided proportions of European and Afro-american cultural representatives. Thus in the Waccamaw region, we might expect to find an abundance of colonoware at sites of later date than we would in other regions where colonoware was more rapidly displaced.

Wine Bottles

The contents of spirit bottles, traditionally termed "wine bottles," can generally be identified by the color of the bottle glass: greenish amber colors, termed "black glass," generally held ales and porters; and lighter green bottles were likely to contain champagne, brandy, or whiskey (Switzer 1974:16-21). Otto (1984) examined bottle fragments from various sites on Cannon's Point Plantation and predictably found the champagnes and whiskeys more common at the planter's house. At lower status occupations, he found a higher incidence of ale/porter bottles. At Richmond Hill Plantation, Michie (1987:139) noticed that the relative frequency ale/porter bottle fragments was highest at the slave site (Laurel Oak Cabin). Bottle glass from Cabin 4-East concurred with Michie's findings: a slight dominance of "black glass" indicated slaves drank a variety of intoxicants, but predominantly cheaper forms, such as ale, beer, cider, and porter.

Tumblers

Fragments from tumblers were infrequently found at both slave sites indicating that the slaves possessed drinking glasses but very few of them. Three types were found, two were distinctly faceted, and another was plain and cylindrical.

Pharmaceutical and Glassware

An abundance of lighter green, and aqua colored glass from small and large square and rectangular bottles was found which suggests that a variety of medical elixirs were used by the slaves. One specimen was identified by John Kirby (personal communications) as a container for mineral water from Saratoga, New York which probably dates to around 1870 to 1880.

Tableware

Three portions of large (kitchen?) knife blades were found at Cabin 4-East. Less substantial spoons and forks may have deteriorated in the site's acidic soil. Alternatively, the slaves may not have had much tableware. Joyner (1984:95) states that, "Sometimes wooden spoons, clam shells, or pieces of broken pottery served as eating utensils. On some plantations the slaves ate with their hands."

Kitchenware

Kitchenware at Cabin 4-East and the Laurel Oak site was composed of an abundance of deteriorated cast iron fragments, much of which was probably from cast iron pots and skillets.

Architecture Group

Evidence suggests that the slave cabins at Richmond Hill were clapboard constructed with an end gabled chimney made of brick. By existing regional examples this would be typical for the region. The construction materials by which identification of structures was possible are addressed in detail in the following discussion.

Bricks

Bricks used in chimney construction at Richmond Hill slave settlement were low fired and high in sand content, which is characteristic of bricks of that period produced in the lower coastal plain. We suspect that large quantities of bricks were made in Charleston and shipped to outlying regions for construction (South, personal communications). At some distance from Charleston, however, it would become impractical to transport heavy cargos of brick. As noted in this report by Michie the number of plantation homes built of brick diminishes with increasing distance from Charleston. The builder who wished to use bricks, but found it expensive or troublesome to acquire commercially made brick might have resorted to manufacturing bricks on or near the construction site from locally available clay deposits. On Boone Hall Plantation, just 10 miles from Charleston, bricks were made on site and probably account for the atypical use of brick in construction of slave quarters (Iseley et al. 1985:67).

Wattle and daub was often used in the construction of chimneys for slave cabins which often caught fire as a result (Genovese 1976:525; see also Wallace 1934:VI). Thus brick was a preferred, although more expensive, construction material. Although the foundations of Magill's house were made of whole brick, the foundations of other structures on the plantation were built of a combination of whole bricks and brick fragments (Michie 1987:80,91,95,114). It seems likely that in the lowest status housing on the plantation (that of the slaves), that brick recycling also occur. At Friendfield Plantation, 15 miles south of Richmond Hill, the brick in the chimneys of two extant slave cabins are a combination of whole and fragmented brick, suggesting that they were constructed with recycled brick (Michie 1985b). At Richmond Hill slave settlement no whole bricks were found, suggesting that recycled brick were used in lieu of more expensive whole bricks. The presence of only brick fragments at the slave settlement may, however, be the result of whole bricks being removed by brick scavengers or broken through decades of cultivation.

Mortar

The recognition of mortar densities proved the best method for identifying the location of former structures. The tight patterning of high mortar concentrations at Richmond Hill may be attributable to its friable nature preventing it from surviving relocation by plowing. Evidence supporting this was found in the association of mortar with oyster shell. Clam and oyster were found in abundance at Cabin 4-East, with clam generally dominant. The frequency of oyster, however, increased relative to higher densities of mortar, and we frequently found oyster fragments adhering to mortar. Apparently, oyster shell was not only pulverized to make lime for mortar, but was incorporated into the matrix of the mortar in large fragments contributing to its structural integrity. We noticed that the mortar was much more friable than the shell fragment to which it clung. This would explain the high incidence of oyster shell fragments found in conjunction with higher incidences of mortar. Presumably, if cultural transforms were given more time they might thoroughly remove mortar from the archaeological record; however, the relative frequency of oyster shell could act as an indicator of the former existence of mortar.

Hearthstone

Several pieces of quarried and cut dolomitic stone were found in the area of higher mortar density. They were white and measured about an inch thick. They resemble fragments of tile and may have served as hearthstones. Very few examples of this stone were recovered from the site, perhaps due to brick scavenging activities.

Nails

Nails found throughout the slave settlement were almost exclusively machine cut nails, which were commonly used from c. 1815 until the 1880s when modern wire nails came into general use (Nelson 1968).

Occasionally, other nail types, such as wrought headed, wrought headed machine-cut (commonly used in door construction), and "L" headed nails, were found. Their scarcity suggests that the structure was built sometime after 1815, and that earlier nail forms were used for special purposes or were present in already made objects. The absence of modern wire nails argues strongly for the termination of the occupation no later than 1880.

The high frequency of nails recovered from 38GE306 Cabin 4- East (1,312) probably indicates clapboard construction (see Fig. 12). Similar high nail frequencies were represented for other cabins along transect four (see Fig. 7). Cabin 11-East & 14-West, however, had much higher nail frequencies (see Figs. 7 & 8), which suggests variant construction, rebuilding, or maintenance. Cabin 11-East is believed to have been occupied into the twentieth century. According to Ed Fulton (personal communications with James L. Michie, 1984), former caretaker of the property, a tenant farmer by the name of Zeke Pickett lived in one of the last remaining slave cabins on the property. By Fulton's description, Pickett's cabin, which fell to ruin in the 1920s, was in the same location as Cabin 11-East, identified in this survey. The similar high frequency of nails found at Cabin 14-West (see Fig. 8) leads us to believe that it too was a later occupation.

Window Glass

Karl G. Roenke (1978) demonstrates that window glass was produced in increasing thickness throughout the nineteenth century, and that specific thicknesses are relative to specific periods of time. Slave cabin windows generally had shutters but no panes (Genovese 1976:524,525); however, a few window pane fragments were recovered from the Cabin 4-East area. Although the sample included only 28 fragments, it was apparent by their thicknesses (.035 to .085 inches) that they represented the full range of dates from the 1810-1825 period to the 1855-1885 period. Thus it appears that the inhabitants of Cabin 4-East had access to window glass throughout their residency. These panes of glass may have been provided by Magill or they may have been scavenged from other places by the slaves. The low number of window pane fragments recovered from the site suggest that the cabin windows were small and few, probably one to either side of the front door, and perhaps two more on the back of the house.

Furniture Group

Furniture was generally not provided to the slaves and what they had they generally made (Genovese:531). At Magill's other plantation, Oregon, the slaves had no chairs, only "crude wooden benches made from a single piece of wood with four spokes serving as legs"(Joyner 1984:123). Yet at Cabin 4-East at Richmond Hill several brass furniture tacks suggest that upholstered furniture was at the site. Furthermore, a brass lock plate for a drawer and a part from a second plate suggest that the site's occupants possessed a chest of drawers.

Clothing Group

Generally, clothing was given to the slaves on a biannual basis, to outfit them for the seasons. On many plantations cloth and sewing supplies were provided each household and the slaves made their own clothes (Otto 1984:110-111). Whether made by the slaves or purchased, their clothes were practical (Otto 1984:110 111).

In addition to finding scissors, a thimble fragment, and two dress clasps, an abundance of buttons was found at Cabin 4-East. They include: four ceramic, four-hole buttons; one one-hole, one four-hole, and one five-hole bone buttons; Three iron and four lead buttons, two brass saucer buttons; eight brass disc buttons; and one two piece brass domed button. The abundance of large brass disc buttons suggests that heavier outer garments were worn, and probably well worn. The bone buttons may have been used on undergarments.

Personal Group

The trinkets people value and loose are often recovered by the archaeologist. At Cabin 4-East a 1852 U.S. two cent piece was found, as well as an inverse cameo of blue glass; a stout iron key; two clear, faceted, glass beads; one amber, globular glass bead; and a finely crafted brass clock key. Some of these objects, such as the clock key, may have been mere trinkets which the slaves acquired incidental to tasks or other activities. The jewelry, however, argues for women living at the site. Although this might be assumed, it is reassuring to have this evidence.

Tobacco Pipes

An abundance of clay pipe fragments were found throughout the Richmond Hill slave settlement, indicating the popularity of tobacco smoking among the Richmond Hill slaves. Tobacco may have been purchased by the plantation and rationed or awarded to the slaves, or the slaves may have grown and cured it themselves. All that remains, however, are broken pieces of their pipes.

Michie (1987:170) hypothesizes that "Smoking pipes were recycled from the planter and main overseer to the slaves and drivers." He explains:

"Given that stems shatter with greater frequency than bowls, the high number of stems at the planter's house may indicate that usable portions of pipes were given to the labor force. If this is true, then we would expect a higher incidence of specific bowls in the refuse of lower status individuals and a low incidence of the bowl type at the location of the donor." (Michie 1987:170)

Table 12

Relative Frequencies of Tobacco Group Artifacts

Artifact Class	*Planter 38GE266	*Overseer 38GE256	*Driver 38GE262	*Slave 38GE267	Slave 38GE306.4-E
Kaolin stems...28(88%)		83(60%)	36(54%)	39(54%)	89(47%)
Kaolin bowls... 4(12%)		54(40%)	30(46%)	34(46%)	100(53%)
Total.....	32(100%)	137(100%)	66(100%)	73(100%)	189(100%)

* from Michie 1987:171.

The data presented from Cabin 4-East support Michie's hypothesis (Table 12). In fact, Cabin 4-East is the only site at which the number of pipe bowls exceeds the number of pipe stems, thereby best reflecting receivership in pipe recycling behavior.

Comparison of the number of original pipe mouthpieces to the cumulative length of pipe stem fragments is another method of testing for the recycling of tobacco pipes. Assuming that when a pipe breaks, it is most likely that the bowl and the original mouth piece would become separated. Sites where few new pipes were present would receive few original mouthpieces into the archaeological record. Secondhand pipes, however, would be broken and contribute both stem and bowl fragments to the archaeological record. If the cumulative length of pipe stem fragments is divided by the number of original mouthpieces, the resulting figure would be considerably longer than expected stem lengths for that period if secondary use were prevalent at the site. By this method the cumulative stem length for the site was 78.94, which when divided by three, the number of original mouthpieces, provides the figure: 26.31 inches, which is well in excess of even the longest pipes of the nineteenth century. Thus it appears that not only was secondary use of pipes prevalent at Cabin 4-East, but original pipe usage appears to have been quite rare.

With evidence of pervasive pipe recycling from the managerial classes to the slaves, we would not expect to find differential status between these people reflected in pipe decoration. Pipe decoration may, however, be chronologically sensitive. Figure 15 presents

some variations in decoration and Table 13 lists the frequencies of decorative motifs as found in the Cabin 4-East pipe bowl assemblage.

Table 13

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Artifact Class	*Planter 38GE266	*Overseer 38GE256	*Driver 38GE262	*Slave 38GE267	Slave 38GE306-4-E
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Figure 15

Table 13

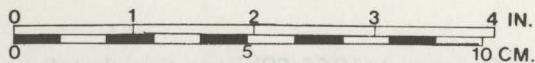
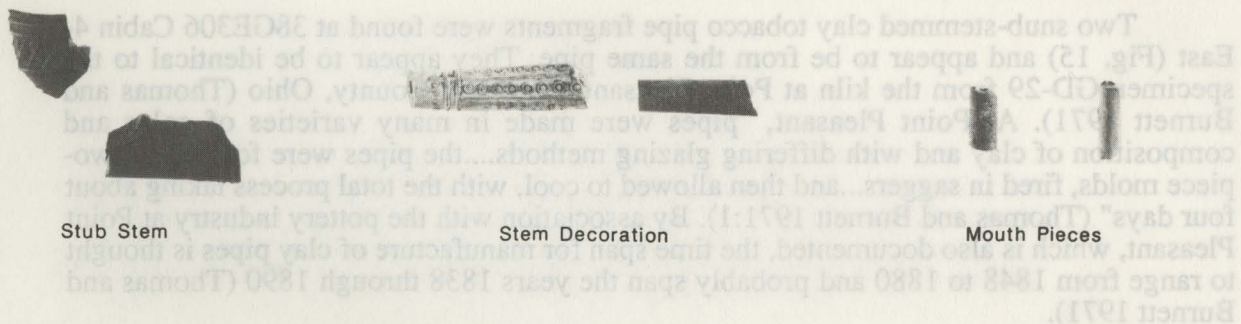
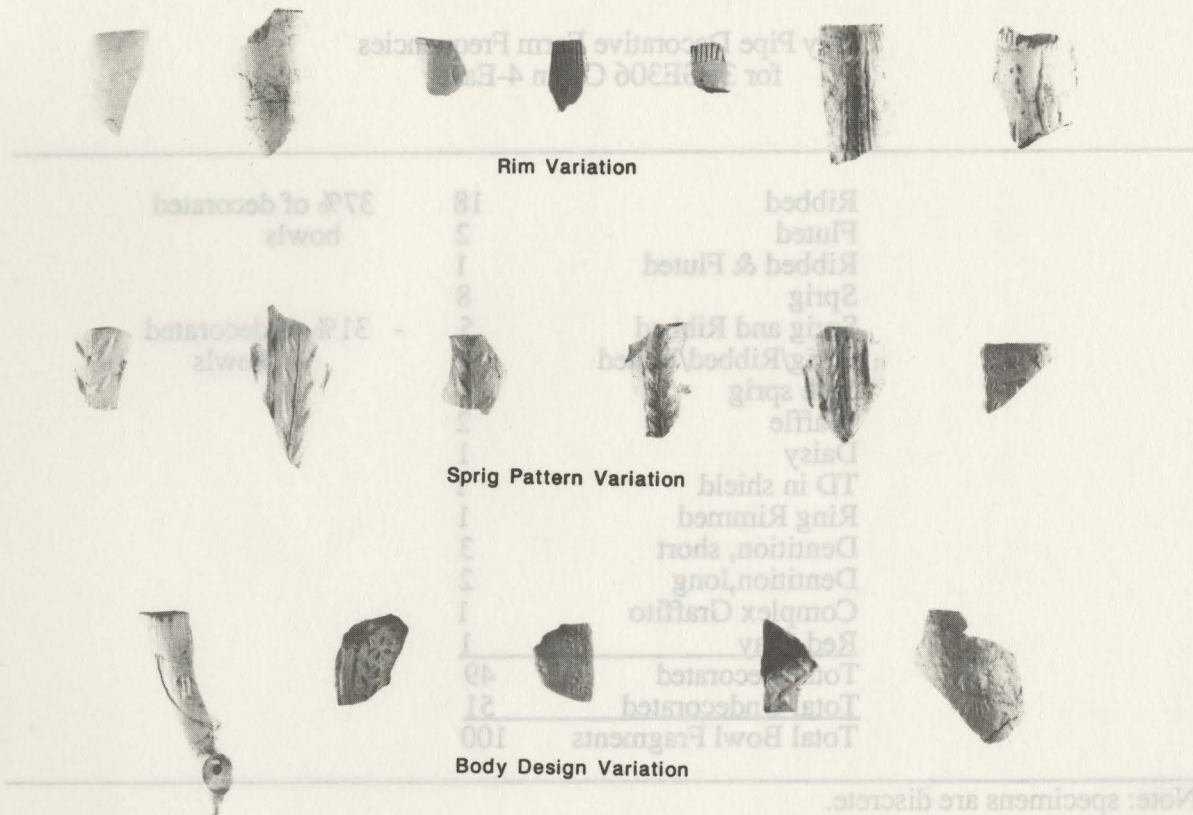


Figure 13
Table 13

Clay Pipe Decorative Form Frequencies
 for 38GE306 Cabin 4-East

Ribbed	18	37% of decorated
Fluted	2	bowls
Ribbed & Fluted	1	
Sprig	8	
Sprig and Ribbed	5	- 31% of decorated
Sprig/Ribbed/Fluted	2	bowls
Side sprig	1	
Waffle	2	
Daisy	1	
TD in shield	1	
Ring Rimmed	1	
Dentition, short	3	
Dentition, long	2	
Complex Graffito	1	
Red Clay	1	
<u>Total Decorated</u>	<u>49</u>	
<u>Total Undecorated</u>	<u>51</u>	
<u>Total Bowl Fragments</u>	<u>100</u>	

Note: specimens are discrete.

Of 100 pipe bowl fragments, 49 (49%) were decorated. Two dominant motifs, ribbing and sprig or leaf patterning concealing the mold seam, together comprised 68% of the decorated sample. The decorative ribbing or pillar molding became popular in Britain and America during the late eighteenth century and continued into the nineteenth century. Variations on this style were manufactured in large quantities in America beginning in the early nineteenth century (Hume 1982:307).

Two snub-stemmed clay tobacco pipe fragments were found at 38GE306 Cabin 4-East (Fig. 15) and appear to be from the same pipe. They appear to be identical to the specimen GD-29 from the kiln at Point Pleasant, Clermont County, Ohio (Thomas and Burnett 1971). At Point Pleasant, "pipes were made in many varieties of color and composition of clay and with differing glazing methods....the pipes were formed in two-piece molds, fired in sagers...and then allowed to cool, with the total process taking about four days" (Thomas and Burnett 1971:1). By association with the pottery industry at Point Pleasant, which is also documented, the time span for manufacture of clay pipes is thought to range from 1848 to 1880 and probably span the years 1838 through 1890 (Thomas and Burnett 1971).

Walker (1974:102) sites Caywood (1955:59) in stating that *Arundinara gigantea* was a preferred species of reed used for stems in snub-stemmed clay tobacco pipes. This species

grows in abundance along the Waccamaw River in Georgetown County (Cynthia A. Smith, personal communication).

Two pipe stems from the site were decorated. One was decorated on opposing sides with alternating vertical ridges and four dots, two over two. The other was more elaborate (see Figure 15) with rows of concentric circles along the stem and a cartouche framing the raised lettering of an advertisement, "16.18.20 / CHAMB... / NEW YORK / LORILLA... / TOBACCO".

Activities Group

A carpenter's tool was found on the site (Cabin 4-East) resembling a headless nail with a flattened and curled point which has been sharpened on one side. South (personal communication) identified it as the scorp to a race knife. This tool was used by carpenters to mark boards and timbers for cutting or placement in construction. Two of these tools were found on the site. It is possible that one of the occupant was a skilled carpenter, or carpenter's aid. It is likely that such a knife was used in maintaining the dikes and gates in the rice fields. Other activities related artifacts include small fragments of pencils and slate which suggest that the slaves drew and perhaps wrote. Also found were brass tips from walking canes (or furniture legs), another from an umbrella, and numerous unidentifiable metal pieces.

Subsistence

Introduction

This section examines the means by which slaves attained food, and the nutritional value, regularity, and diversity of their diet. The body of knowledge concerning slave subsistence was formerly based solely on plantation records, eyewitness accounts, and the recollections of former slaves. Although these records are invaluable they are generally incomplete and have a high potential for bias (Reitz, Gibbs, and Rathbun 1985:167). Such partial historic accounts have allowed researchers to support conflicting interpretations of the human condition under slavery (see Blassingame 1972; and Fogel and Engerman 1974). Archaeologists, using traditional archaeological methods, have joined with various specialists from other sciences to attempt to provide impartial data concerning slave subsistence. When held against the backdrop of historical evidence these data reveal patterns of agreement and omission, and a wide range of variation between individual plantations. Although the archaeological data is itself incomplete and potentially biased it has proven itself crucial to an improved understanding of slave subsistence.

Patterns of Slave Subsistence

Available evidence indicates that slaves had access to a wide range of food resources. Food rations were typically provided by plantation management and were composed predominantly of support crops grown on the plantation by slave labor. Certain items, unavailable on the plantation, were either forgone or obtained through barter of surplus goods or outright purchase. To supplement their diets, slaves gardened and raised livestock, fished, hunted, and even stole from the plantation stores (see Fairbanks 1984; Otto 1984; Reitz et.al. 1985; Joyner 1984).

Joyner (1984) provides a wealth of information on the subsistence means of the Waccamaw slaves. He emphasizes the importance of alternate food resources to the slave diet in lieu of plantation rations, which were often sparse. To demonstrate the disparate rations from plantation to plantation, Joyner cites James R. Sparkman, proprietor of Dirleton Plantation on the Pee Dee River, who recalled that each working adult received:

"of Meal 10 quarts, of Rice or Peas 8 quarts, and of Sweet Potatoes one Bushell. This is the full allowance of every adult, and the younger negroes the same, no matter what their age, as soon as they are put to task work. Molasses is given throughout the year at proper intervals, Salt Fish only in winter, Pork or Bacon and Beef during summer. The allowance of Molasses is 1 pint (for one week), of Salted Fish (Mullet or Mackerel) 2 or 3 according to size, of Pork or Bacon 2 lbs." (Joyner 1984:91)

In stark contrast is the report from Titus Small's daughter on rations at John D. Magill's Richmond Hill:

"a week's food for a slave family was a peck of sweet potatoes, a dozen salted fish; if there was a baby in the family you got one peck of grits and one piece of fat back. In the summertime you got one peck of meal and one quart of syrup." (Joyner 1984:91,92)

Such meager allowances could have starved Magill's slaves. It is likely, however, that they provided for themselves by gardening, hunting, and fishing. Time for such activities was afforded by the task system which characterized the coastal rice plantations (see also Reitz, et. al. 1985:183,185). The task system assigned a unit of work to each slave commensurate to his or her ability; accordingly, slaves were classified as full-task hands, three-quarter-task hands, etc. When a slave's assigned task or task portion was completed, he or she was "free" for the remainder of the day (Joyner 1984:43-45).

Joyner maintains that a major portion of the slave diet was comprised of vegetables, including corn, sweet potatoes, Irish potatoes, tomatoes, collards, turnips, peanuts, okra, eggplant, beans, and peas. Yet, these foods are conspicuously absent from most ration lists, presumably because vegetables were produced by the slaves themselves. Although instances of communal gardening reportedly occurred, small household plots were more typical for slave communities in the Waccamaw region. Each family's garden could be attended after plantation work and on Sundays (Joyner 1984:95,96).

The Sabbath was generally a day off for the slaves and was often spent hunting and fishing. William Oliver, former slave of the Waccamaw region recalled, "Go fishing Sabbath. That was day off. Sunday free day" (Rawick 1972:219). As a positive work incentive, planters awarded a day off to slaves who accomplished double their task in a day's work. As this free day was often spent at the sea shore or marsh collecting a store of food (Joyner 1984:130), the planter augmented the cost of feeding his slaves at no expense to crop production.

The coastal environment offered a storehouse of foods for easy harvest. Fishing, crabbing, oystering, and clamming provided not only needed food for the slaves but some of their only forms of recreation (Joyner 1984:101). Former slaves interviewed in the 1930's mentioned their preferences for various game, including squirrel, rabbit, deer, racoons, opossums, geese, ducks, turkey, woodcock, snipe, rice birds, and pigeon. When food was scarce, fox, crow, and hawk sufficed (Joyner 1984).

A number of archaeological investigations at coastal plantations have revealed a pervasive reliance on wild taxa (Reitz, Gibbs, & Rathbun 1985; Otto 1984; Michie 1987). Planters' diets are generally the highest in game and seafood taxa, while overseers' are somewhat less. Wild taxa from slave sites are still quite high, at 70% to 80%, yet they generally constitute the lowest percentages for domestic occupations on plantations (Michie 1987:177).

Domestic animals may have also been among the hunted. According to former slave, Sabe Rutledge of Dirleton Plantation, "Woods full up with cow. Cattle loose --- free. When you want beef have to hunt for 'em like we hunts deer now" (Rawick 1972:67). Historical and oral accounts suggest that pig, chicken, sheep, and goat were also commonly available. Archaeological investigations have largely validated these statements (e.g., Otto 1984; Michie 1987). Historians have stressed the documentary evidence for pork dominating the diet of rice plantation slaves (Joyner 1984; Smith 1985). It has been argued that pigs would be preferred over cattle because they reproduce more quickly, have multiple births, mature rapidly, have flesh which is more easily preserved, and are more resourceful in terms of survival. Contrary to most historical accounts, archaeological investigations along the southern coast are revealing a greater utilization of beef than pork. This might be explained by the use of boneless cuts of pork, such as bacon or fat back, and/or salted pork. Hypothetically, bone in salted meats would be less likely to survive in the archaeological record (Reitz & Honerkamp 1984; Reitz, Gibbs, and Rathbun 1985:169-170).

Evidence from Richmond Hill

Until this study was undertaken, the subsistence data from the slave community at Richmond Hill Plantation was represented by an 11% excavated sample from the area around one slave cabin, the Laurel Oak Site. This could not be assumed to represent the entire slave settlement because a wide range of variant behavior might have occurred within the slave community. The subsistence data from only one site may reflect idiosyncratic behavior or one level of a status hierarchy within the slave community. Thus, data from a second slave site, e.g. Cabin 4-East, should provide insight into the potential variation in diet among slave households. In order to enhance comparison of these two sites the sampling strategy used at the Laurel Oak Site in 1984 was replicated for the investigation of Cabin 4-East.

Vegetal Remains

Vegetal remains generally decompose quickly, especially in the acidic soils of the coastal plain (Reitz, Gibbs, and Rathbun 1985:167). This probably explains the absence of vegetal material at the Laurel Oak Site and the low number of seeds recovered from Cabin 4-East. The few seeds recovered from Cabin 4-East are predictably of the hardy sort, one *Prunus sp.* (plum) (Cynthia Smith, personal communications), and two inedible *Ryssa aquatica* (swamp tupelo) (Gary Crites, personal communications). These specimens may or may not have been associated with the slave occupation. The appearance, however, of only hardier seeds maintains the possibility that a wide range of vegetables and fruits were exploited by the slaves.

Shellfish

In excavating the fireplace of a tidewater slave dwelling on Fort George Island, Florida, Fairbanks (1974), a pioneer in plantation archaeology, noted that,

"Covering the original hearth level was a compact mass of ash with some fairly fresh shell. This fresh shell was even more concentrated to the front of the hearth, strongly suggesting the remains of oysters roasted in the fireplace. On top of the ash and shell a second hearth had been laid of tabby bricks some 0.5' above the original hearth level." (Fairbanks 1974:73)

Although Fairbanks found no artifacts with which to date this feature, its being sealed by architectural renovation strongly suggests that the slaves of Kingsley were eating oysters. Kingsley slaves could have obtained oysters from the tidal margins of the Fort St. George River, approximately 1000 feet (0.2 miles) from their quarters (see Fairbanks 1974:65). At Richmond Hill 2.0 miles separate the slave settlement from the salt marsh of Murrells Inlet, yet a great abundance of mollusk remains (91.459 kilos or 201 lbs. 10 oz.) were recovered during test excavations. They were all extant species, that evolved after the last period of geologic deposition (see Cooke 1936:6,147). The notion that shell at the site had been introduced in an attempt to add lime to the soil for cultivation (Michie 1987) was rejected because shell at Cabin 4-East was found only in context with, and in direct proportion to, cultural materials.

Mollusk species recovered from 38GE306 include *Mercenaria mercenaria* (quahog or clam), *Crassostrea virginica* (Gmelin or common oyster), and *Busycon carica* (knobbed whelk). By far the two most common species recovered were clam and oyster. Clam appeared to be slightly more prevalent than oyster. Oyster, however, was found in greater abundance than clam as one approached an area of high mortar concentration (see Architecture section of this report). Although some of the oyster remains were once a constituent of mortar, most probably were not. However, even those that were used for mortar were likely to have been harvested for human consumption first.

Clams were most likely harvested by the Richmond Hill slaves in the shallow mud flats of the Murrells Inlet estuarine system. According to Waselkhov (1982:22-23) shell gathering world wide is predominantly an adaptive strategy executed by women and children; men generally participate when strenuous methods are employed. Unfortunately, such questions are untenable through archaeological methods.

Seasonality analysis of clam remains from the site was forgone because of the involved laboratory process it requires (see Thomas and Larson 1979). Oyster remains, however, are relatively easy to analyze. David Lawrence, of the University of South Carolina Geology Department, analysed a large sample of the oysters from Cabin 4-East and found that they were, almost without exception, harvested in winter. Although both subtidal and intertidal specimens appear to have been exploited, subtidal oysters comprised the bulk of the sample. Subtidal specimens were identified by their robust size and their low percentage of attachment areas. By contrast, intertidal oysters are more elongate, have thinner shells, and have exterior surfaces showing the shell impression of another oyster. These characteristics are due to the crowding typical in intertidal oyster colonies (Lawrence, personal communications 1987).

The intertidal specimens could have been gathered with ease from the banks of the marsh or in shallow areas of the estuaries that run along the entire length of the Waccamaw Neck.

The majority of the oyster specimens from Cabin 4-East were subtidal, which means that a boat would probably have been necessary for their collection. Subtidal oysters could have come from a number of sources, including Murrells Inlet, less than 4 miles away. But the specimens from Cabin 4-East also had an abundance of marrings and markings from oyster associates, such as boring sponges and bristleworms. These organisms, some harmful to their hosts, others not, are found in greater association with oysters from waters of lower salinity, such as in Winyah Bay, 15 miles south of Richmond Hill. The nearest alternative would be the Santee River Delta five miles south of Winyah Bay.

It seems doubtful that the slaves possessed boats or time enough to travel 30 river miles, round trip, to collect oysters. Deep water oysters may, however, have been harvested incidental to some other activity, such as a trip to Georgetown. Such an opportunity would present itself sometime in late November of every year, when the harvested rice would be loaded onto barges and poled down river to the Georgetown docks (Joyner 1984:55). While at Georgetown on Winyah bay the slaves may have lingered to harvest oysters.

According to Lawrence (see Appendix I) the subtidal oysters identified in the shell sample were collected sometime between the end of November and the second week in February. Thus the slaves may have had numerous opportunities to collect oysters in Winyah Bay during the slack months between harvest and planting (Joyner 1984:50).

The abundance of shell at Cabin 4-East suggests that the oysters and clams gathered by the slaves were processed at the cabin sites. The lack of forced entry marks on either clam or oyster shells indicates that they were probably opened by application of heat, either through boiling or steaming (baking was ruled out because of the lack of charring of sample specimens).

Several specimens of *Busycon carica* (Knobbed Whelk) were found at the site and probably also contributed to the diet of the Richmond Hill slaves. This particular species of whelk is the most common in South Carolina waters and feeds predominantly on thick-shelled bivalves, such as clams and oysters (Eversole n.d.). They can often be found living on oyster colonies or "oyster banks" (personal observation of the author) where they could be obtained incidental to oyster gathering. Clearly, whelk was a prized delicacy to former slave Sabe Rutledge:

"Snail built up just like a conch (whelk). They eat good. Worms like a conch. Bile conch. Git it out shell. Grind it sausage grinder. Little onion. Black pepper. Rather eat conch than any kind of nourishment out of salt water." (Rawick 1972:62)

Faunal Remains

The preservation of vertebrate material is by degree more like vegetal matter than mollusc shell. Taphonomic agents, such as acidic soil and cultivation, greatly reduce the number of bones at archaeological sites, leaving primarily harder bones such as teeth and foot bones. Because the faunal material from Cabin 4-East represented less than 200 individuals (see Reitz, Gibbs, and Rathbun 1985:168 for problems of sample size) and was badly fragmented, the use of MNI (minimum number of individuals) was forgone. It was,

however, evident that pig remains dominated the assemblage of identifiable bone. Historical documents stress the emphasis of pork in the Southern diet, especially with slaves (Joyner 1984:99 Smith 1984:113,114), yet archaeological evidence from plantation sites along the coast almost invariably indicates a dominance of beef (Reitz & Honerkamp 1984; Reitz 1986:9-10). Although body weight per taxa was not calculated for the Cabin 4- East faunal assemblage the data strongly suggested that pork was the dominant source of protein (McArdle 1987). A number of variables including differential preservation and/or disposal patterns, may explain the pattern of pork dominance at this site. On the other hand it may be accurately in agreement with historical sources.

Pig remains from Cabin 4-East were almost exclusively from young individuals (McArdle 1987). A similar pattern was discovered by Honerkamp at the Charleston Center site (Reitz and Honerkamp 1984:76). Perhaps this pattern evinces a preference for younger pigs that could be consumed quickly because of their small size, thereby avoiding spoilage and waste of precious meat. Alternatively, young pigs may have been easier to catch, especially if livestock was feral. It seems unlikely, however, that pigs eaten in downtown Charleston were from feral stock.

The Cabin 4-East pig remains were predominantly tooth fragments. This appears to be part of a general pattern: Reitz (1986) compiled faunal data from coastal plantations and found that on nine out of ten plantation sites head elements exceeded body and limb elements for pig remains. This pattern may be explained by: (1) the relative ease in identifying teeth, the dominant type of head element present; (2) the high soil acidity on coastal sites and therefore the greater presence of resilient bone, especially teeth; (3) the accelerated decomposition of body and limb elements due to their presence in cuts of meat which were brined; or (4) the destruction of long bones by carnivores, specifically, domestic dogs.

At slave sites, pig head elements would represent an even larger percentage if cuts containing body and limb bones were infrequently available. Joyner (1984:99) states that prime cuts of pork were reserved for the planter and that less desirable portions found their way to the slaves' tables.

Fish and bird appear to have been of minor subsistence emphasis at Cabin 4-East, while wild mammalian taxa were totally absent (McArdle 1987). In contrast, the Laurel Oak faunal assemblage, which was recovered by the same methods, contained specimens from opossum, raccoon, and deer. The wild/domestic taxa ratios suggest variation in diet between the households. It should be stressed, however, that smaller samples generally fail to represent the diversity within a statistical population. Although these samples may be biased, the apparent patterns might also be a product of time or status.

From available evidence we suspect Cabin 4-East to be of earlier construction and therefore have a longer occupation. We would expect a longer occupation to produce a larger faunal sample and thus reveal a greater diversity of taxa, yet, Cabin 4 East produced only six taxa to the Laurel Oak site's seven (see Table 14).

The dominance of domestic taxa found at Cabin 4-East might be evidence of higher or lower status of the occupants. Higher status slaves may, by that virtue, have had access to sufficient quantities of domestic meat to complete their diet, thus explaining the lack of wild taxa in the archaeological record. On the other hand, lower status slaves may not have had the freedom to hunt. Only with additional sampling at these and other sites at Richmond Hill might conclusive statements be made concerning these hypotheses.

Table 14

Faunal Taxa Represented at Two Slave Sites

Taxa	Laurel Oak Cabin	Cabin 4-East
Pig	X	X
Cow	X	X
Sheep/Goat	-	X
Chicken	X	X
<hr/>		
Sub Total	3	4
<hr/>		
Fish	-	X
Turtle	X	X
Deer	X	-
Raccoon	X	-
Opossum	X	-
<hr/>		
Sub Total , wild	4	2
<hr/>		
Total Taxa	7	6

Note: Domestic Dog remains were also found at Cabin 4-East.

An alternative explanation would be that, regardless of status or time, the slaves of one household might have had preferences or skills which lead them to favor domestic over wild taxa, or shellfish over wild game, etc.

Food Procurement Tools

There is evidence that the inhabitants of Cabin 4-East probably possessed firearms. Seven lead shot and a gun flint were found at the site. In a number of instances (see Fairbanks 1984:2,7,9-10; Otto 1984:45-46; and others) the presence of firearm related artifacts at slave sites has challenged the traditional belief that slaves were not permitted the use of firearms. Indeed, written law forbade slaves from bearing arms, yet, archaeological evidence from Cabin 4-East strongly suggests that slaves at that site possessed at least one shotgun. Lead shot found at Cabin 4-East were of various sizes which correspond to modern shot sizes 6 through No. 4 buckshot. The single gun-flint found on the site appeared to be relatively new, suggesting that it had been lost, rather than discarded. Furthermore, it showed no signs of secondary use as a "stik-a-lite." Had this been the case, it would seem likely that the flint was acquired by the slaves for the use of starting fires rather than for firing a gun.

In contrast to seven lead shot and a fresh gun flint found at the Cabin 4-East site, only one lead shot was found at the Laurel Oak site. Apparently, the slaves at Cabin 4-East had use of a gun whereas those at the Laurel Oak Cabin did not. The single lead shot found at the Laurel Oak site was, in all probability, brought to the site in the carcass of an animal

killed by someone other than the inhabitants. One possibility is that only select slaves were permitted the use of guns. Another possibility is that the occupation of Cabin 4-East predates Magill's presence on the plantation, and that Magill denied gun privileges. These are suppositions, which offer possible explanations for the possession of arms at one slave site and not at another on the same plantation. Additional work at other cabins may begin to resolve this question.

The presence of a single lead weight, the type typically used on small gill or cast nets, found at Cabin 4-East, suggests that netting was a form of fishing practiced by the slaves. Joyner (1984:99) mentions that the slaves "caught autumn mullet at night in cast nets and hauled quantities of them home in sacks."

Conclusions

Although some puzzling differences appear in the faunal assemblages of Cabin 4-East and Laurel Oak Cabin, it is apparent that the Richmond Hill Slaves were exploiting diverse food sources. Evidence suggests that they hunted, at least some of them with guns; fished; and gathered shellfish. Domestic animals, however, comprised a large portion of their diet. They probably also raised vegetables in their own gardens although scant evidence has survived.

By this archaeological evidence, oral claims (see Joiner 1984:91-92,97) that rations were dietarily insufficient are in essence validated. Magill's frugality in feeding his slaves was perhaps, however, at his own expense. As Joyner (1984) noted, Richmond Hill plantation produced less rice per acre and less rice per slave than any other plantation in the region. This may have been a direct result of the treatment the slaves at Magill's plantation received.

Conclusions

This project tested a minimum sampling scheme devised to efficiently and accurately locate a row of slave cabins then the individual cabins themselves.

By monitoring the density and dispersion of artifact groups (i.e. nails, brick, mortar, and kitchen refuse) from small, shovel width test units along strategically placed transects we were able to secure individual dwellings and confirm that the settlement was comprised of two facing rows of cabins. We were able to locate fourteen cabins, and hypothesize that there were at least twenty eight cabins in the settlement. Furthermore, these methods proved sensitive to defining the configuration of structures, the materials used in their construction, and the disposal patterns of their inhabitants. That this was possible in a plowed context may seem to many remarkable, and demonstrates the value of plowed sites.

Additionally, historical records have been discovered which have allowed us to draw a detailed demographic profile of the Richmond Hill slave population.

Suggestion of three building episodes was discovered through analysis of ceramic assemblages along the cabin row; but, because of small sample sizes this could not be statistically substantiated. Therefore, future work at the site will involve the collection of a larger sample of ceramics from each cabin site.

Through a second phase of investigation in which one cabin site was intensively sampled phase one methods and interpretations were tested and found to be accurate. This second phase also provided a methodologically comparable sample for collation with excavations conducted in 1985 at the Laurel Oak site. Marked differences were found in ceramic, faunal, and firearm assemblages which might be the result of status differences between households or of time and other factors. Only through further investigations might these questions be resolved.

Baker, Steven G. 1972. *Colono-Indian Pottery from Cambridge, South Carolina, with Comments on the Historic Gadsden Pottery Trade*. Notebook, Vol. IV. Institute of Archeology and Anthropology, University of South Carolina, Columbia, pp. 3-30.

Blaug, John W. 1972. *The Slave Community: Plantation Life in the Antebellum South*. Oxford University Press, New York.

Cook, Wyrne C. 1936. *Geology of the Coastal Plain of South Carolina*. U.S. Geological Survey, Bulletin, 889.

Fairbanks, Charles H. 1974. *The Kingsley Slave Cabins in Duval County, Florida, 1968*. The Conference on Historic Site Archeology Papers 1973 7-62-93.

Fogel, R. W., and S. L. Engerman. 1974. *Time on the Cross*. Little, Brown, and Company, Boston.

Genovese, Eugene D. 1976. *Roll, Jordan, Roll*. Vintage Books, New York.

Hume, Ivor Noel. 1982. *A Guide to Artifacts of Colonial America*. Alfred A. Knopf, New York.

Jacobs, N. Jane. 1982. *William F. Baldwin, Jr., and Agnes L. Baldwin: Plantations of the Low Country, South Carolina 1867-1882*. Legacy Publications, Greensboro, North Carolina.

Joyner, Charles. 1984. *Down by the Riverside*. University of Illinois Press, Urbana.

Lepionka, Larry. 1986. *Archaeological Reconnaissance Survey of Spring Island, Beaufort County, South Carolina*. Ms. on file, SCIAA, Columbia.

Loew, William B. 1980. *Linrick: Old and in the Way: Archeological Investigations at Linrick Plantation*. Anthropological Studies 5. Occasional Papers of the Institute of Archeology and Anthropology, University of South Carolina, Columbia.

REFERENCE

- Baker, Steven G.
1972 Colono-Indian Pottery from Cambridge, South Carolina, with Comments on the Historic Catawba Pottery Trade. *Notebook*, Vol. IV. Institute of Archeology and Anthropology, University of South Carolina, Columbia, pp.3-30.
- Blassingame, John W.
1972 *The Slave Community: Plantation Life in the Antebellum South*. Oxford University Press, New York.
- Cooke, Wythe C.
1936 *Geology of the Coastal Plain of South Carolina*. U.S. Geological Survey, Bulletin, 869.
- Fairbanks, Charles H.
1974 The Kingsley Slave Cabins in Duval County, Florida, 1968. *The Conference on Historic Site Archaeology Papers* 1972 7:62-93.
- Fogel, R.W., and S.L. Engerman
1974 *Time on the Cross*. Little, Brown, and Company, Boston.
- Genovese, Eugene D.
1976 *Roll, Jordon, Roll*. Vintage Books, New York.
- Hume, Ivor Noel
1982 *A Guide to Artifacts of Colonial America*. Alfred A. Knopf, New York.
- Iseley, N. Jane, William P. Baldwin, Jr., and Agnes L. Baldwin
1985 *Plantations of the Low Country, South Carolina 1697-1865*. Legacy Publications, Greensboro, North Carolina.
- Joyner, Charles
1984 *Down by the Riverside*. University of Illinois Press, Urbana.
- Lepionka, Larry
1986 Archaeological Reconnaissance Survey of Spring Island, Beaufort County, South Carolina. Ms. on file, SCIAA, Columbia.
- Lees, William B.
1980 Limerick. Old and in the Way: Archeological Investigations at Limerick Plantation. *Anthropological Studies* 5, Occasional Papers of the Institute of Archeology and Anthropology, University of South Carolina, Columbia.

- Lewis, Kenneth E.
 1985 Plantation layout and function in the South Carolina low country. In *The Archaeology of Slavery and Plantation Life*, edited by Theresa A. Singleton, pp. 35-66. Academic Press, New York.
- McAlester, Virginia and Lee McAlester
 1984 *A Field Guide to American Houses*. Alfred A. Knopf, New York.
- McArdle, John
 1987 Notes on the Analysis of Vertebrate Faunal Remains from Cabin 4-East, Richmond Hill Slave Settlement, Georgetown Co., South Carolina. Ms on file, South Carolina Institute of Archaeology and Anthropology, Columbia, South Carolina.
- Michie, James L.
 1984 An Initial Archeological Survey of the Wachesaw/Richmond Plantation Property, Georgetown County, South Carolina. Institute of Archeology and Anthropology, University of South Carolina, *Research Manuscript Series* 191.
 1985 Some Notes Concerning the Test Pits Excavated at the Deerfield Road Cabin Site - 38GE277. Ms. on file, South Carolina Institute of Archaeology and Anthropology, Columbia.
 1985b Notes on Friendfield Plantation slave settlement, Georgetown Co., S.Carolina. Ms on file, South Carolina Institute of Archaeology and Anthropology, Columbia.
 1987 Richmond Hill and Wachesaw: An Archaeological Study of Two Rice Plantations on the Waccamaw River, Georgetown County, South Carolina. South Carolina Institute of Archaeology and Anthropology, *USC Research Manuscript Series* 203.
 1987b Bioturbation and Gravity as a Potential Site Formation Process: The Open Area Site, 38GE261, Georgetown County, South Carolina. Ms. on file, South Carolina Institute of Archaeology and Anthropology.
- Miller, George L.
 1980 Classification and Economic Scaling of 19th Century Ceramics. *Historical Archaeology* 14:1-40.
- Otto, John Solomon
 1977 Artifacts and Status Differences - a Comparison of Ceramics from Planter, Overseer, and Slave Sites on an Antebellum Plantation. In *Research Strategies in Historical Archaeology*, edited by Stanley South, pp. 91-118. Academic Press, New York.
 1984 *Cannon's Point Plantation 1794-1860: Living Conditions and Status Patterns in the Old South*. Academic Press, New York.
- Prunty, Merle
 1955 The Renaissance of the Southern Plantation. *Geographical Review* 45(4):459-491.

- Rawick, George P.
1972 *The American Slave: A Composite Autobiography, vol 3: South Carolina.* Greenwood Publishing Co., Westport, Connecticut.
- Reitz, Elizabeth J.
1986 Problems in Analysis of Plantation Foodways. Paper presented at the 10th Annual Symposium on Language and Culture in South Carolina, Columbia, South Carolina.
- Reitz, Elizabeth J., Tyson Gibbs, and Ted A. Rathbun
1985 Archaeological Evidence for Subsistence on Coastal Plantations. In *The Archaeology of Slavery and Plantation Life*, edited by Theresa A. Singleton, pp. 163-191. Academic Press, New York.
- Reitz, Elizabeth J., and Nicholas Honerkamp
1984 "Historical" Versus "Archaeological" Dietary Patterns on the Southeastern Coastal Plain. *South Carolina Antiquities* 16:67-86.
- Roenke, Karl G.
1978 Flat Glass: Its Use as a Dating Tool for Nineteenth Century Archaeological Sites in the Pacific N.W. and Elsewhere. *N.W. Anthropology Research Notes* 12-2-2. Moscow.
- Rogers, George C. Jr.
1985 *The History of Georgetown County, South Carolina.* University of South Carolina Press, Columbia, S.C.
- Shiffer, Michael B.
1975 The Effects of Occupation Span on Site Content. In *The Cache River Archeological Project*, assembled by Michael B. Schiffer and John H. House, Arkansas Archeological Survey, Research Series, No. 8, pp 265-269.
- South, Stanley
1964 Analysis of the Buttons from Brunswick Town and Fort Fisher. *Florida Anthropologist* 17.2:113-133.
1972 Evolution and Horizon as Revealed in Ceramic Analysis and Historic Archaeology. *The Conference on Historic Site Archaeology Papers* 1971, 6:71- 106.
1974 Palmetto Parapets. University of South Carolina, South Carolina Institute of Archeology and Anthropology, *Anthropological Studies* 1.
1977 *Research Strategies in Historical Archaeology.* Academic Press, New York.
- Stanton, Gary
1987 A Survey of Extant Slave Housing in South Carolina (in progress), conducted by the Folklife Program of the McKissick Museum and Colonial Williamsburg's Architectural Research Department. Ms. on file with Gary Stanton, Folklorist, McKissick Museum, Columbia, S.C.

- Stark, Barbara L., and Dennis L. Young
1981 Linear Nearest Neighbor Analysis. *American Antiquity* 46:284-300.
- Thomas, B.B., Jr. and R.M. Burnett
1972 A Study of Clay Smoking Pipes Produced at a Nineteenth Century Kiln at Point Pleasant, Ohio, *The Conference on Historic Site Archaeology Papers* 6 : 1-31.
- Thomas, David Hurst, and Spencer Larson Clark
1979 The Anthropology of St. Catherine's Island II, The Refuse-Deptford Mortuary Complex. *Anthropology Papers of the American Museum of Natural History*, vol.56: part 1. New York.
- Walker, Iain C.
1974 The American Stub-Stemmed Clay Tobacco-Pipe: A Survey of its Origins, Manufacture, and Distribution. *The Conference on Historic Site Archaeology Papers*, Volume 9, Part 1, Edited by Stanley South.
- Wallace, D.D.
1934 *History of South Carolina*, vol. VI.

APPENDIX I

OYSTERS FROM THE RICHMOND HILL SLAVE SETTLEMENT (38GE306),
GEORGETOWN COUNTY, SOUTH CAROLINA

by

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Oyster shell analysis can add significantly to reconstructions made from coastal archaeological sites. The shells have potential for deciphering: (1) environmental sources of the oysters, including intertidal vs subtidal origins, (2) uses to which the oysters were put, (3) human behavior during gathering and processing of these objects, involving culling and valve separation aspects, (4) season of gathering of live shell, via a ligament area growth model, and (5) environmental manipulation by humans, especially the presence of purposely built structures for fishing and/or shellfishing (Lawrence, in press a,b,c). More details of these references, with the types of evidence involved and appropriate literature references, are included herein as Table 1.

Oyster shells from the slave settlement at Richmond Hill Plantation (38GE306) were examined with these possible reconstructions in mind. Materials were supplied by James O. Mills of the South Carolina Institute of Archaeology and Anthropology and, at my request, consisted of left valves only. Although this sample subset precludes analysis of left-right valve sorting, it does allow the rapid and time-efficient handling of relatively large numbers of shells. Twenty-two individual provenience lots were chosen at random, and these oysters were examined in detail.

Although entire valves occur in the collections, the main of the oysters are quite fragmented, consisting most commonly of the more durable umbonal or dorsal regions of the valves. A number of explanations for this condition exist, including surface exposure with trampling underfoot by humans, the chemical actions of surface or ground waters, and reworking by cultivation including plowing of the site. Sharp margins of some valves suggest that at least part of the fragmentation was relatively recent in occurrence.

Both intertidal and subtidal oysters are present in the collections. Indeed, most of the more entire valves examined show characteristics (ovate outlines, valve cupping) typical of lowest intertidal/subtidal individuals, a finding not unexpected because these are the thicker, more robust, more preservable shells. Yet these same valves do not show evidence of the abundant oyster associates expected in subtidal, high salinity settings (e.g. Proveniences [P] 6, 11, 43, 56, 57). Boring sponges and bristleworms do occur in shells collected live, but the incidence of them and other shell epibionts is low. Using diversity arguments (Wells, 1961), this set of shell characters is more typical of estuaries with low salinity regions, such as Winyah Bay, than it is of close Estauries with higher overall salinity patterns, such as the nearby regions around Murrells Inlet. The oysters, thus suggest the need to search for other lines of evidence linking site inhabitants to the more southerly Winyah Bay area.

Individual valves collected dead are included in a number of the lots (e.g. P 8, 23, 37, 59). This finding is compatible with subtidal origins and gathering by "grab sampling," with sorting taking place later, at the site where the valves occur in archaeological context.

The fragmentary nature of the valves makes their use by humans difficult to decipher; valve portions which would document marginal chipping, forceful entry, and use as foodstuffs are rarely preserved in the material examined. The very occurrence of the valves around slave quarters, however, may help support a very practical, and foodstuffs, interpretation of the oysters' use. One valve (P 21) appears discolored as if baked or burnt, but comparative materials from the site are lacking and this interpretation must remain tenuous (see Table 1).

According to the ligament growth model (Table 1), at least four of the lots (P 15, 27, 35, 45) contain individuals which were gathered live during the coldest months of the year

(November - February). No consistent and recognizable patterns of other months of the year could be seen in the individuals examined.

In summary, the oyster valves examined from the Richmond Hill Plantation slave quarters include both intertidal and subtidal individuals, with the subtidal organisms likely collected from a low salinity setting, such as Winyah Bay to the south. Grab sampling was involved at least in part, with culling of dead shell taking place at the Plantation site. Foodstuffs use is suggested but cannot be documented from the valves themselves. Winter time gathering of at least some shell is indicated, and archaeological interpretations of the site should explore the travel of site occupants to the Winyah Bay area during these coldest months of the year.

TABLE 1

Types of archaeological reconstructions which can be made through oyster shell analysis. Based upon published literature, personal observations of recent and fossil oysters from North America, Europe, and Africa, and archaeological material from North Carolina, South Carolina, and Georgia. Developed for use in the Carolinian Biogeographic Province (Cape Hatteras - Cape Canaveral). From Lawrence (in press c). Captions at head of each page.

INFERENCE

Evidence	Comments	References
SOURCE AREA INTERTIDAL; CREEK BANKS	Elongate, thin valves; large left valve attachment areas; few preserved epibionts/endobionts	
SOURCE AREA SUBTIDAL; CREEK OR RIVER/BAY BOTTOMS	More ovate, thicker, evenly cupped valves; smaller attachment area; more numerous preserved oyster associates Local variations exist; establishing details of living, nearby oyster communities can strengthen arguments	Battle, 1891; Dean, 1981; Lunz, 1941; Hartman, 1958; Galtsoff, 1964; Lawrence, 1969
UNWANTED OYSTERS REMOVED DURING PROCESSING; TRASHED BY FIRE	Gray to black shell hues Other shell characters (e.g. small size) lend support, as does presence of additional, non-oyster, burnt refuse; hues not to be confused with grays produced by long (geologic) residence time of valves with muds	
DEAD SHELL REMOVED AT SITE DURING PROCESSING	Significant fraction of shells with valve interiors penetrated or encrusted by other organisms In intertidal clusters, dead shells commonly serve as substrate for live, perhaps desired oysters	
FOODSTUFFS USE; SHUCKED RAW	Marginal valve chippings oriented towards adductor muscle scar, indicating forceful entry Not always preserved; not to be confused with chippings of non-human predators	Galtsoff, 1964

TABLE 1

INFERENCE

Evidence	Comments	References
FOODSTUFFS USE; BAKED/STEAMED	Valves darker shades of brown than others from equivalent levels at same site	Recognition of appropriate pits supports the interpretation
USE AS LIME OR MORTAR	Calcium-rich, chalky soil horizons; kilns or burning pits preserved	Finch, 1824; Eckel, 1907; Loughlin and others, 1921; Wheaton and others, 1987
USE AS STRUCTURAL FRAMEWORK ELEMENTS	Tabby buildings; shell rings/crescents and the like	Rings or crescents may represent features constructed of refuse, with oysters originally or primarily used otherwise
USE OR GATHERING AS OBJECT OF CURIOSITY	Eye-catching traces of other organisms upon or within the valves Inference never very strong yet possibility exists	Gilman, 1839; Crum, 1940; Manucy, 1962; Hemmings, 1970; Puckette, 1978; DePratter, 1979; Trinkley, 1985
FALL/WINTER (VS SPRING) SEASON OF LIVE SHELL GATHERING	8-12 major lamellae (vs 2-5 for spring) added since last-formed relatively narrow, significant topographic high in mid-cardinal (ligamental) area of valves	Requires recognition of previous year's growth unit and, normally, 2+ years old oysters. Growth units quite variable; necessary sample size may be 50+, with 6+ definitive of particular season for strong inference
HUMAN-FABRICATED STRUCTURES PRESENT INTERTIDALLY/SUBTIDALLY	Left valves displaying growth, in constant orientation, attached to object(s) to which natural and non-human origins cannot be assigned	Nelson, 1942; Haskin, 1954; Lawrence, in press a,b

REFERENCE

- Battle, J.D.,
1891 An Investigation of the Coast Waters of South Carolina, with Reference to Oyster-Culture. *U.S. Fish Commision Bulletin for 1890*, p. 303-330.
- Crum, M.
1940 *Gullah: Negro Life in the Carolina Sea Islands*. Duke University Press, Durham, North Carolina, p. 351.
- Dean, B.
1891 The Physical and Biological Character of the Natural Oyster-grounds of South Carolina. *U.S. Fish Commision Bulletin for 1890*, pp. 335-361.
- DePratter, C.
1979 Shellmound Archaic on the Georgia Coast. *South Carolina Antiquities* 11:1-69.
- Eckel, E.C.
1907 *Cements, Limes, and Plasters; Their Materials, Manufacture, and Properties*. John Wiley and Sons, New York, p. 712.
- Finch, J.
1824 Geological Essay on the Tertiary Formations in America. *American Journal of Science* 7: 31-43.
- Galtsoff, P. S.
1964 The American Oyster *Crassostrea virginica* Gmelin. *U. S. Fish and Wildlife Services Fishery Bulletin* 64:480.
- Gilman, E.
1839 *The Economic Builder: A Treatise on Tapia and Pise Walls*. Jacob Gideon, Jr., Printer, Washinton, D.C., p. 23.
- Hartman, W. D.
1958 Natural History of the Marine Sponges of Southern New England. *Peabody Museum (Yale University) Bulletin* 12, p. 155 .
- Haskin, H. H.
1954 Age Determination in Molluscs. *N. Y. Academy of Science Transaction* 16 : 300.
- Hemmings, E. T.
1970 Emergence of Formative Life on the Atlantic Coast of the Southeast. University of South Carolina, Institute of Archaeology and Anthropology, *Research Manuscript Series* 7: 10 .
- Lawrence, D. R.
1969 The Use of Clionid Sponges in Paleoenvironmental Analyses. *Journal of Paleontology* 43: 539-543.

- Lawrence, D. R.
1988a Oysters as Geoarchaeologic Objects. *Geoarchaeology*, in press.
- Lawrence, D. R.
1988b Oysters in Coastal Zone Site Occupation Studies: An example from North Carolina. *N.C. Archaeological Council, Publication Series*, in press.
- Lawrence, D. R.
1988c 3000+ years of Oyster Utilization by Humans. 1987 Interstate Seafood Seminar Proceedings, p. 11.
- Loughlin, G. F., Berry, E. W., and J. A. Cushman,
1921 Limestones and Marls of North Carolina. *N.C. Geological Economic Survey Bulletin* 28: 211 .
- Lunz, G. R., Jr.
1941 Polydora, a Pest in South Carolina Oysters. *Elisha Mitchell Science Society Journal* 57: 273-283.
- Manucy, A.
1962 *The Houses of St. Augustine*. St. Augustine Historical Society, St. Augustine, Florida, p. 179.
- Nelson, T. C.,
1942 The Oysters, pp. 49-64. In *The Boyleston Street Fishweir. Papers R. S. Peabody Foundation Archaeology for 1942, Volume 2.*
- Puckette, C. C.
1978 *Edisto: A Sea Island Principality*. Seaforth Publication, Cleveland, Ohio, 92 p.
- Trinkley, M. B.
1985 The Form and Function of South Carolina's Early Woodland Shell Rings, p. 102-118. In R. S. Dickens, Jr. and H. T. Ward (Editors), *Structure and Process in Southeastern Archaeology*. University Alabama Press, Tuscaloosa, Alabama.
- Wells, H. W.
1961 The Fauna of Oyster Beds, with Special Reference to the Salinity Factor. *Ecological Monographs* 31: 239-266.
- Wheaton, T. R., Jr., Reed, M. B., and M. E. Gantt,
1987 *The Jimmy Green Lime Kiln Site, Berkeley County, South Carolina*. Garrow and Associates, Inc., Atlanta, Georgia for S. C. Dept. Highways and Public Transportation, FA Number I-526- 4(63), 176 p.(plus appendices.)