

OUTSIDE OF TOWN:
PRELIMINARY INVESTIGATION OF THE AIKEN-RHETT HOUSE

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CHAPTER I

INTRODUCTION

In 1975 The Charleston Museum acquired the Aiken-Rhett house, located one block from the new museum facility. The structure was placed on the National Register of Historic Places in 1976; although the National Register form mentions an archaeological component at the site, there is no clear statement or understanding of the nature or integrity of this resource. Preliminary testing was conducted at the site September 29 - October 11, 1985 in order to assess the nature, extent, and clarity of the archaeological record, and to amend the National Register entry to include the archaeological component.

After The Charleston Museum acquired the property in 1975, plans were made to establish it as an historic house museum. The need for extensive renovation and repair, and lack of funding for such, delayed the opening of the house until 1982, and continues to hamper full use of the property. Recent efforts by the Museum to emphasize the house, and to obtain funding for its renovation, have already produced visible results. The Aiken-Rhett house is a popular attraction, and attendance has steadily increased. The entrance and art gallery have recently been completely renovated, and repair of the porches is underway.

As part of the Museum's new emphasis on the history and natural history of Charleston and the lowcountry, the Aiken-Rhett house will play an important role in the interpretation of Charleston's development; the house is an excellent example of the residence of the antebellum elite. The initiation of archaeological investigations is but a part of the increasing emphasis on the property as an interpretive and educational tool. To this end, the project was used to pilot an expanded program in historical archaeology, offered through the Museum's education program. The site also offers an excellent data base for the investigation of several historical and archaeological issues, as part of the Museum's ongoing research in Charleston. The preliminary testing will allow us to evaluate the potential use of the site for these purposes.

Background

The Aiken-Rhett house is an excellent example of an antebellum planter's townhouse, constructed on the more spacious lots available in the Charleston Neck subdivisions. The house was constructed by John Robinson, a wealthy Charleston merchant, in 1817. The Robinson house contained twelve upright rooms, four on each floor, with cellars and storeroom below.

The house was acquired by William Aiken, Sr. in 1827. At his death in 1831, William Aiken, Jr. acquired the property and resided there until his death in 1887. Aiken, Jr. made several changes to the property after he moved in. He enlarged the house, enlarged the kitchen building, and added gothic arches to all of the outbuildings in the back yard.

Both William Aiken, Sr. and his son were wealthy and influential citizens, and both were involved in public life. William Aiken, Jr. was one of the wealthiest men in the state before the Civil War, and owned extensive properties in and around Charleston.

After William Aiken, Jr.'s death in 1887, the property passed to his wife, and then in 1892 to his daughter, Henrietta Aiken Rhett. The property continued to be transferred through succeeding generations of Rhetts, until in 1975 Francis Dill Rhett donated the property to The Charleston Museum.

Project Goals

The preliminary testing program allowed us to work towards several goals simultaneously. The primary goal of the project was to assess the nature and integrity of the archaeological component. This information will be used to amend the National Register information, which currently focuses on the architectural significance of the main house.

The data derived from these investigations are also utilized to initiate, or continue, long term research on several issues. These research questions were proposed as a result of the documentary research in preparation of an Archaeological Preservation Plan for Charleston (Zierden and Calhoun 1984a, 1984b), and have been investigated through a number of projects within the original boundaries of the city (Zierden and Calhoun 1986). The Aiken-Rhett site is an important addition to this data base for a number of reasons. First, this is the first investigation conducted on the Charleston Neck, outside of the original boundaries of the colonial city (Figure 1). Investigations in this antebellum suburban area will provide a more complete picture of the city, in terms of site formation processes, spatial patterning, and neighborhood development. Secondly, considerable documentation is available on the site occupants, providing concrete data on site function, socioeconomic status, and household composition. These known variables can then be compared to the archaeological data to derive a documentarily anchored model. This model can then be used for sites where such information is less complete. Finally, all of the buildings constructed on the site are still standing, which will allow a more complete understanding of the spatial patterning at the site, relative to the test units. Again, these data can be used on a comparative basis with sites whose information is less complete.

The research domains at the Aiken-Rhett site can be divided into two main areas; investigating particular aspects of the site, and applying the data generated by the testing to research issues. The first domain concerned specifications for determination of National Register eligibility, specifically:

- 1) locating and identifying archaeological remains at the site,
- 2) determining their condition and extent, and
- 3) evaluating their significance for making a determination of eligibility.

Determining the adequacy and limitations of the archaeological data base is essential to ensure the validity of more problem oriented investigations.

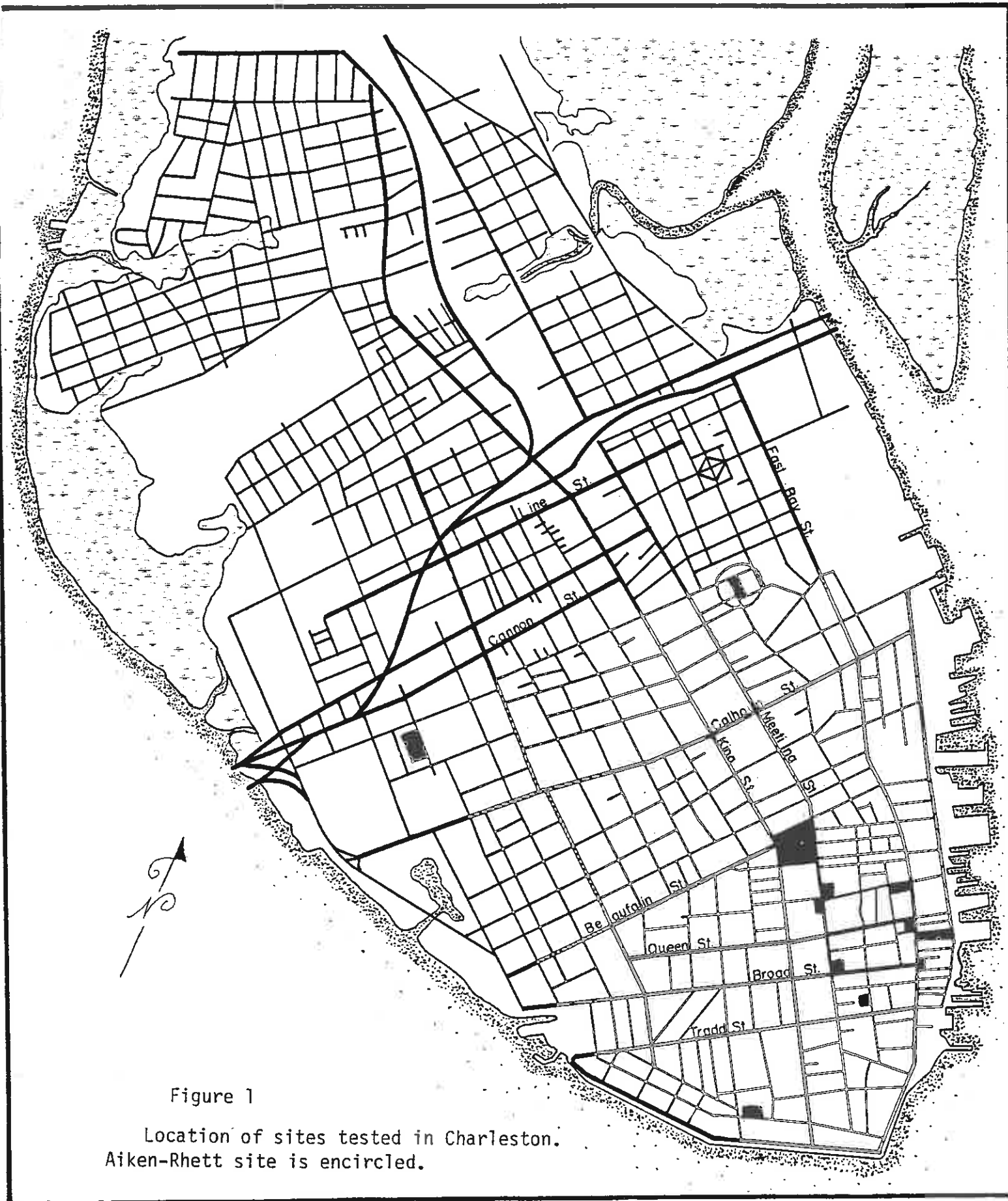


Figure 1
Location of sites tested in Charleston.
Aiken-Rhett site is encircled.

In addition to focusing on the particulars of specific projects, research should address those problem domains warranting a regional perspective (Raab and Klinger 1977:633). Therefore, it is appropriate to utilize data derived from the Aiken-Rhett project to address issues pertinent to urban and historical archaeology in the southeast. Several such topics were originally proposed for the city in a research design (Zierden and Calhoun 1984), and have subsequently been investigated at a number of urban sites. These data form a comparative base which can be used in the present investigations. Other research questions were formulated on the basis of urban research in other cities.

1. Spatial patterning- The demands of the urban environment are reflected in the spatial patterning of the urban compound. During the eighteenth and nineteenth centuries, most of the structures found dispersed across the rural plantation site were crammed onto the constricted urban lot (Catille et al. 1982:5; Wade 1964:61). Urban compounds, particularly those located within the commercial core, were organized to make the most efficient use of available land. Lots were deep and narrow, to maximize the street frontage available. Houses fronted directly on the street, with the narrow end facing the road. The southern side was complete with piazzas, while the northern side was devoid of large openings. Behind the main structure, auxiliary structures were arranged within a fenced compound. The back yard was the focus of many activities, including commercial as well as domestic enterprises.

The Aiken-Rhett house is expected to diverge from this model. With his wealth, and location in the suburban area of the city, Robinson was less sensitive to the expense and constrictions which were so much a factor in the central core of the city. This, combined with the domestic-only function of the site, should produce a more dispersed spatial pattern than exhibited at more central sites. The Aiken-Rhett site is an excellent data base for expanding the model of urban spatial patterning; all of the structures are extant, and considerable details on site activities are available.

2. Site formation processes- In order to interpret the remains of human activity present in the urban site, it is first necessary to understand the cultural and natural processes responsible for the formation of the archaeological record. The by-products of human activities undergo a number of cultural and natural transformations as a living site becomes an archaeological site. Although all archaeological sites result from similar processes, these processes are often amplified on the urban site, resulting in increased complexity. An important part of interpreting the urban archaeological record is a more complete understanding of the processes responsible for the formation of the site.

The processes responsible for the formation of the archaeological record at the Aiken-Rhett site may be somewhat different than those in the more intensely utilized urban core. Investigating this suburban site will provide a more complete understanding of site formation processes on a city-wide basis.

3. Site function- Many, indeed possibly a majority, of the structures in Charleston served a dual function as residences and businesses. Artifactual materials recovered from such sites have been overwhelmingly domestic in

nature, and attempts to recognize the commercial function of the site in the archaeological record have been only moderately successful. The overwhelmingly domestic nature of the assemblages is believed to be a result of the unique processes responsible for the formation of the urban archaeological record. Researchers in Charleston and elsewhere (Honerkamp et al. 1983; Honerkamp and Fairbanks 1984) have suggested disorganization may be a cultural characteristic of the urban archaeological record; the majority of the urban archaeological record may be an averaging of all urban behavior. Therefore, specific cultural activities may be less visible. The Aiken-Rhett site, documented as a domestic-only occupation, may provide some guidelines for investigating dual function sites in Charleston, in that this assemblage will reflect only urban domestic behavior.

4. Socioeconomic status- A recent focus of historical archaeology in general and urban studies in particular has been the delineation of socioeconomic status (Cressey et al. 1982; Deagan 1983; Otto 1975; Spencer-Wood and Riley 1981; Spencer-Wood 1986; Wise 1984). Using the documentary record as a control, the socially stratified urban center can serve as an excellent data base for recognizing socioeconomic status and consumer choices in the archaeological record. A problem in local status studies has been the lack of specific documentary information on site inhabitants, and the inability to associate individual site contexts with specific occupants. Solid evidence of site boundaries and status of the occupants are available for Aiken-Rhett; the present site should provide some direct correlations between status and patterns of material culture, diet, and housing.

5. Subsistence strategies- Increasing attention is being focused on the study of subsistence strategies in historic populations, using faunal and floral remains recovered from historic sites (Reitz and Scarry 1985). Faunal and floral remains have been used to address a variety of questions concerning historic subsistence strategies. These include studies of cultural conservatism, adaptation to local environments, ethnicity, and social variability. Recent urban investigations suggest a rural-urban dichotomy on historic sites in the southeast, based on the ratio of wild to domestic fauna (Reitz 1986). Although these differences seem to crosscut temporal and social parameters, the diet of the wealthy, whether urban or rural, seems to have been more varied. With status as a known factor, the Aiken-Rhett data can be used to test the present model.

6. Public vs. private adaptive strategies- Records of several of the larger cities indicate an ongoing concern with fires and health problems exacerbated by crowded conditions. During the nineteenth century, technological advances made it possible to centralize such services as fire control, water procurement, sewage management, and trash disposal. Such a shift is seen as an adaptive strategy dictated by the unique conditions of the urban environment. The intense occupation of the site during this period of neighborhood growth and technological advance makes the Aiken-Rhett site a good data base for initiating such studies in Charleston.

These research questions are discussed in greater detail in Chapter 5; the site is described in Chapters 2 and 3, and the assemblage is described in Chapter 4.

CHAPTER II

BACKGROUND

Introduction

In 1680, the settlement of Charleston was moved to its present location at Oyster Point (Figure 2). The town, which had been surveyed and laid out according to a Grand Model, was originally bounded by present day Water, East Bay, Cumberland, and Meeting Streets. Until 1783, the city was bounded to the north by present day Beaufain Street (Figure 3).

In 1783, the city limits were expanded to include the area between Beaufain and Calhoun, formerly known as Boundary, Street. This section was quickly filled with homes and businesses. The area north of Calhoun Street became known as the Charleston Neck. Throughout the colonial period, the northern section of King Street which ran through the Neck served as the backcountry's artery to Charleston. Wagon yards were a common sight in this area, where the land was primarily undeveloped and divided into large, individually owned tracts.

Following the devastating fire of 1838, the municipal government of Charleston began the enforcement of earlier ordinances forbidding the construction of wooden buildings within the city limits. Many of those citizens unable to afford the more expensive brick residences were forced to move in an effort to find more affordable housing.

The obliteration of alley housing took place increasingly throughout time as upper class residential districts became more differentiated. All of these factors resulted in an outward push of lower class whites and blacks. Members of the lower class, including free blacks and slaves "living out," settled on the Neck. The 1848 Charleston Census commented,

the slaves and free colored have removed to the Neck . . . where the class of houses suited to their condition are numerous, and obtained at moderate rents. . . (1848 Charleston City Census).

The Neck was not solely the bastion of the lower class, however. There was a scattering of middle class citizens as well as some planters who, preferring spacious lots and the cleansing sweep of sea breezes, established homes on the Neck near the shore of the Cooper River.

The Charleston Neck was annexed by the City in 1849 in order to better control its potentially rebellious black population. Fear of revolt by the city's black denizens was always a motivating factor in the actions of white Charlestonians. In this instance, it provided the rationale for the inclusion in the "holy city" of a district which, despite the presence of some middle and upper class homes, had a decidedly unsavory reputation.

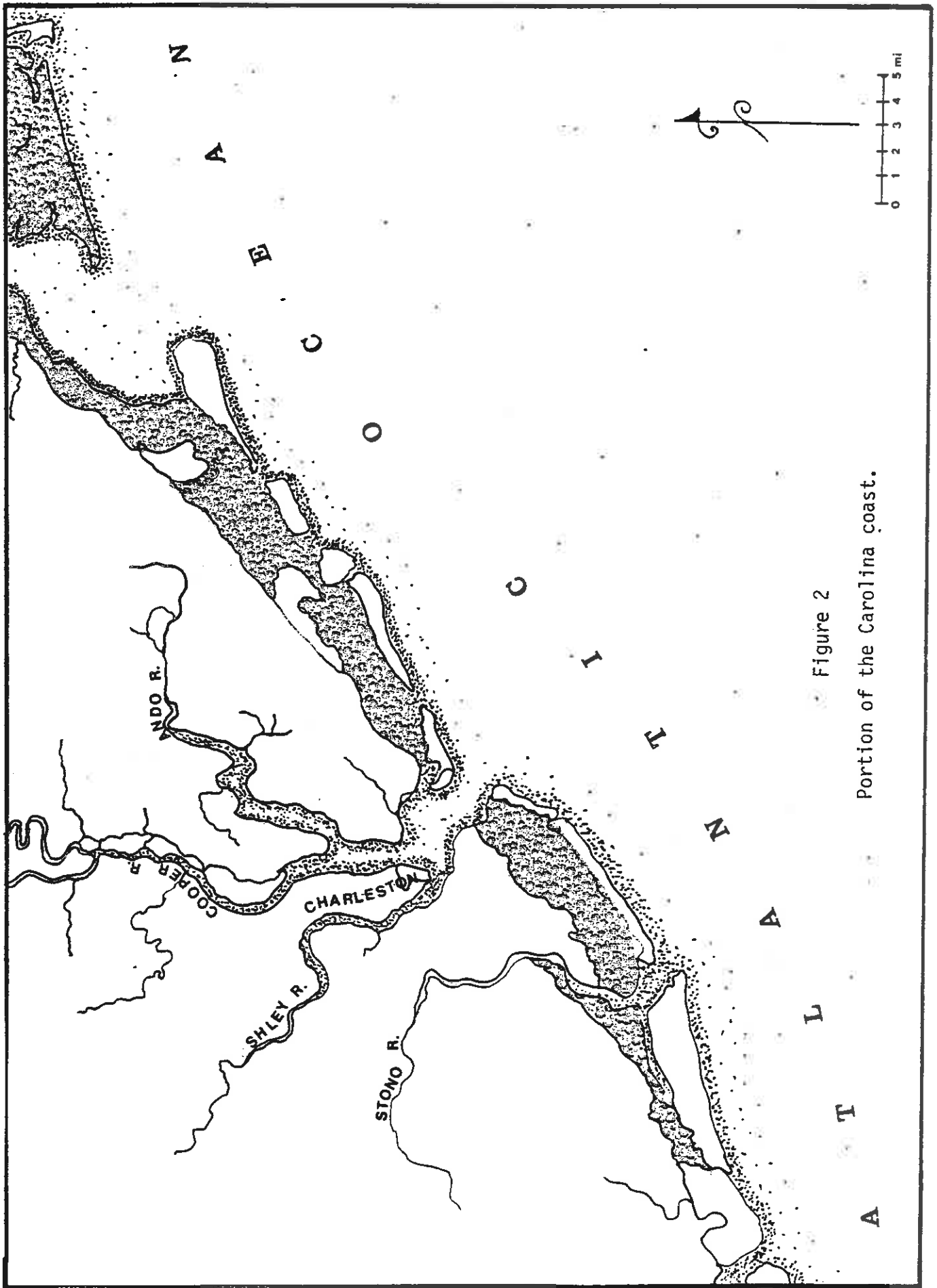


Figure 2
Portion of the Carolina coast.

48 Elizabeth Street

Joseph and Samuel Wragg were granted an extensive amount of land which became known as the Barony of Wraggsboro in return for their services in bringing large numbers of immigrants to Carolina. Following Joseph Wragg's death in 1751, his property was divided among his children (Rogers 1980:59). John Wragg inherited the 79 acres east of the "Broad Path," now known as King Street, and created the neighborhood of Wraggsboro (Rogers 1980:59,64). The streets of Wraggsboro were named after members of the Wragg family. The two parks in the district, Wragg Square and Wragg Mall, were set aside for public use by the estate of John Wragg in 1801 (Stoney 1976:33,128)(Figure 3).

On December 20, 1804, the lot at 48 Elizabeth Street was released by Henrietta, Elizabeth, and Charlotte Wragg to James Henry Ladson for one dollar (CCRMCO 07:265). Ladson apparently did nothing with the property and, on June 24, 1817, sold the lot to Thomas P. Chiffelle (CCRMCO 58:312). Six months later, Chiffelle sold 48 Elizabeth Street to John Robinson, a wealthy factor (CCRMCO Y8L208-209).

John Robinson also purchased the lot at 10 Judith Street. He had dwellings constructed on both lots. The two buildings appear to have been completed in 1820. Robinson apparently resided at 10 Judith, which his widow retained possession of until 1859 (Simons and Thomas 1968). In 1820, John Robinson's household consisted of 15 whites, 16 blacks, and one free person of color (1820 Census:71A).

In the 1820s, Robinson experienced financial difficulties. In an effort to satisfy his creditors, to whom he owed \$195,200, Robinson released the lot and house at 48 Elizabeth Street, along with other properties in Charleston, Sullivan's Island, Florida, and elsewhere, to Charles Edmonston, William Aiken, Sr., and Lewis Petray (CCRMCO R9:233-239). Apparently this agreement was overturned by the courts for, on March 7, 1827, the Master in Equity sold the lot and dwelling at 48 Elizabeth Street to William Aiken, Sr. for \$15,600 (CCRMCO T9:238-243).

William Aiken, Sr. was born in Ireland on July 17, 1778 (Aiken Family Bible). He left his family in Ireland at the age of eight, and came to Charleston to make his fortune (Jones 1977:13). On the 15th of November, he married Miss Henrietta Wyatt, a native of Charleston (Aiken Family Bible). They had one son, William Aiken, Jr.; he was their only child to survive to adulthood.

William Aiken, Sr. became a cotton merchant and, by the late 1820s, was considered one of the wealthiest men in the state. From 1824 on, he served in several sessions of the South Carolina state legislature. He was extensively involved with the origin and development of the South Carolina Railroad. In 1828, he was elected president of what later became the first section of the Southern Railroad System (Johnson 1964: 128-129).

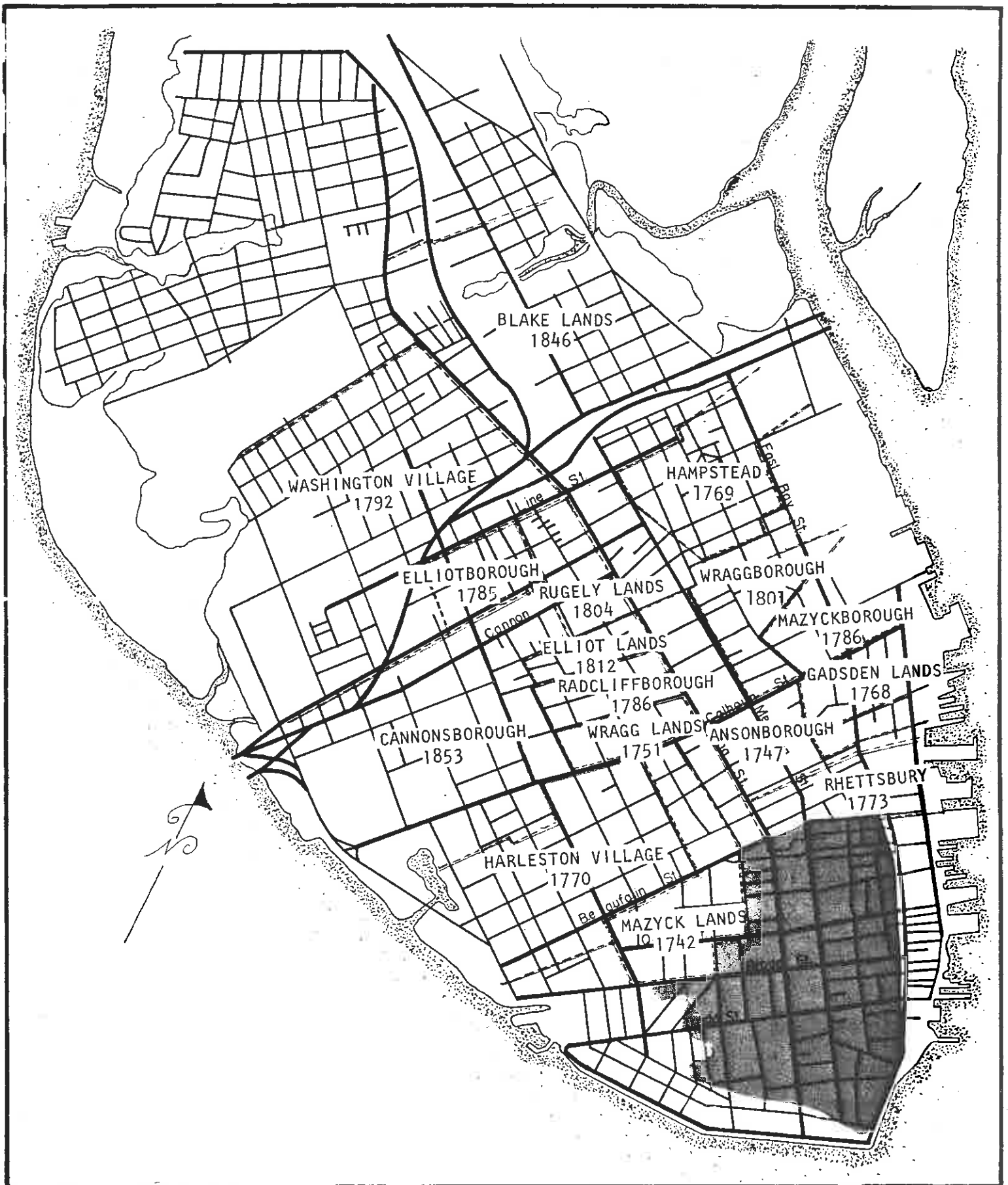


Figure 2: The Charleston peninsula, showing subdivisions above the Grand Model (shaded area).

Aiken, his wife, and son, William Aiken, Jr., lived at the corner of King and Ann Streets on the Charleston Neck (Charleston City Directories). Aiken utilized the house and lot at 48 Elizabeth Street as rental property. On March 20, 1827, he advertised,

TO RENT

That desirable Mansion House, at the corner of Elizabeth and Judith Streets, Wraggborough. One of the most pleasant and healthiest situations on Charleston Neck. To an approved tenant the rent will be very moderate (Charleston Courier 3/20/1827).

William Aiken, Sr. died in a carriage accident in 1831. His obituary in the Charleston Mercury lamented his loss and described him in glowing terms:

Aiken was among the wealthiest of citizens and his enterprise and public spirit corresponded to his wealth. He was a man of much sound practical understanding and much goodness. He was one of the progenitors of the railroad. He was also a member of the legislature for several years and in that capacity was useful, judicious, and industrious. He was president of the railroad at the time of his death (Charleston Mercury 3/7/1831).

Following his death, Aiken's widow and son divided his holdings between themselves. William Aiken, Jr., who married Harriet L. Lowndes in the same year, decided to make the residence at 48 Elizabeth Street their home. Under the terms of the agreement with his mother, he acquired the property on March 21, 1833 (CCRMCO D51:337).

Not content with the 48 Elizabeth Street house as it was, Aiken made extensive changes and turned it into a showplace. He enlarged the house, closed the central entrance which had faced Judith Street and had a Greek Revival entrance constructed which fronted on Elizabeth Street. He also enlarged the kitchen building and added Gothic arches to all of the outbuildings in the backyard.

The backyard was never used for any sort of formal gardens. Instead, it served as a service area. Paved with brick and extending from the main house to the end of the large service buildings, the courtyard had magnolias as its only decoration. Looking down into the yard from the back landing, to the right there was a large building which was used as a kitchen and servants' quarters (Figure 9). It also had one room for the servants' meals and work. Farther back, there was a chicken shed which was probably destroyed in the earthquake of 1886. On the left, there was a long building in which there were a carriage house, stable, groom's quarters, and storage for feed. Behind this building, there was a cow shed. A "necessary" (privy) was in each far corner of the yard. It is possible there was also an herb garden at one time (Jones 1977). In the 1840s, William Aiken, Jr. built seven houses on the north side of Wragg Square. Referred to as "Aiken's Row" or the "seven days of the week," the rental income from each was intended to support the mansion at the corner of Judith and Elizabeth Streets one day a week (News and Courier 2/23/1954).

In 1850, Aiken's household consisted of himself, his wife Harriet Lowndes, their daughter Henrietta, and Pauline Boudet, a 20 year old Frenchwoman who had been married within the year. The total value of his real estate at this time was \$199,000 (1850 Census:293). Although the largest slaveholder in South Carolina prior to the Civil War, he maintained only a relatively small staff of slaves in Charleston. In 1850, he had only seven slaves in town (1850 Slave Schedule:1). Nine years later, his real estate holdings had increased in value to \$290,600 and he was taxed for twelve slaves. Obviously one of the wealthiest men in the state, he paid the most in taxes of anyone in the city of Charleston for the year 1859 (List of Tax Payers 1859:5). By 1860, he owned 19 slaves in the city, 11 of whom, all mulattoes, were fugitives from the state. The remaining slaves were housed in ten "Slave Houses," probably merely a convenient term for rooms (1860 Slave Schedule:14). In the same year, he was taxed for 14 slaves, real estate assessed at \$281,100, one carriage, and two horses (List of Tax Payers 1860:5).

William Aiken, Jr. had inherited a large fortune and numerous business responsibilities from his father. He was more interested in agriculture and politics than commerce, however, and spent a great deal of time developing his rice plantation on Jehossee Island into a model of its kind. In 1854, J.D.B. De Bow published a sketch of "the magnificent rice estate of Ex Governor Aiken." According to Solon Robinson, who wrote the description following a visit to Jehossee,

This island contains about 3,300 acres, no part of which is over ten or fifteen feet above tide, and not more than 200 to 300 acres but what was subject to overflow, until dyked out by an amount of labor almost inconceivable to be performed by individual labor, when we also take into account the many miles of navigable canals and smaller ditches. There are 1,500 acres of rice land Part of the land was tide-water marsh, and part of it timber swamp. Besides this, Governor Aiken cultivates 500 acres in corn, oats, and potatoes; the balance is gardens, yards, lawns, and in woods, pasture and unreclaimed swamps.

The plantation was also very efficient.

The average annual sales of the place do not vary materially from \$5,000, and the average annual expenses not far from \$10,000, of which sum \$2,000 is paid the overseer, who is the only white man upon the place, besides the owner, who is always absent during the sickly months of summer. All the engineers, millers, smiths, carpenters, and sailors, are black. A vessel, belonging to the island, goes twice a week to Charleston and carries a cargo of one hundred casks. The last crop was 1,500 casks; the year before, 1,800 and all provisions and grain required made upon the place. Last year, there was not more than half a supply of provisions.

The care and treatment of the slaves on the plantation were exemplary. Robinson noted,

The number of negroes upon the place is just about 700, occupying 84 double frame houses, each containing two tenements

of three rooms to a family, besides the cockloft. Each tenement has its separate door and window, and a good brick fireplace, and nearly all have a garden paled in. There are two common hospitals and a 'lying-in hospital,' and a very neat commodious church

Despite the obvious care lavished on the plantation and the efficiency with which it was operated, Aiken suffered from a common problem - a low return on his investment. Robinson estimated,

There is a pretty good supply of tools, carts, boats, & c., and the land is estimated to be worth \$100 an acre, for the rice land, which would be, \$150,000

The 500 acres upland, \$25 per acre, 12,500

The negroes, at \$300 each 210,000

Stock, tools and other property, say 7,500
380,000

which will show rather a low rate of interest, made from sales of crops, notwithstanding the amount of slaes look so large (De Bow 1854:424-425).

William Aiken, Jr.'s residence on Jehossee was modest (De Bow 1854: 425). He spent the bulk of his time, however, at his magnificent mansion on Elizabeth Street where a small but excellently trained staff of slaves attended to the needs of his household. Jefferson Davis, the President of the Confederacy, was said to have been very pleased with the quality of Aiken's servants during his visit to the 48 Elizabeth Street mansion in 1863. Mary Boykin Chestnut (1823-1886) recorded in her diary what she had heard about Davis' visit.

Governor Aiken's perfect old Carolina style of living delighted him (Jefferson Davis). Those old gray-haired darkies and their noiseless, automatic service, the result of finished training - one does miss that sort of thing when away from home, where your own servants think for you; they know your ways and your wants; they save you from all responsibility even in matters of your own ease and well doing (Martin and Avery 1961:253).

William Aiken, Jr. was extensively involved in politics. He served two terms in the South Carolina Legislature, one term in the state Senate, and was elected Governor in 1844 (Johnson 1964:128-129). To celebrate his inauguration, Aiken gave "a magnificent Democratic party" at a hotel in Columbia. His 1,000 guests drank 1,800 bottles of champagne and an unknown, but undoubtedly equally impressive, amount of wine and brandy (Jones 1977:20). He served as Governor until 1846, when he enjoyed a brief retirement from public life. Aiken ran for Congress in 1850, and was re-elected to the Thirty-third and Thirty-fourth Congresses (Johnson 1964:128-129).

The respected position of William Aiken, Jr. in society and politics made it possible for him to bestow political favors. In the 1850s, J.B. Grimball, another prominent Charlestonian, gave a dinner in honor of Aiken in return for his having secured the appointment of John Grimball to the United States Naval Academy. Probably typical of elegant dinners served by antebellum Charleston high society, the meal consisted of:

1st course - Calf's Head Soup, and Vegetables
2nd course - Broiled Bass and Fried Whiting
3rd course - Saddle of Mutton, Ham, Roast Turkey, Oysters
Desert - Ice Cream 4 Quarts, 1 dozen apples, 1 dozen bananas,
and groundnuts (Grimball Diary #11, 1852-1857:20).

A staunch Unionist, Aiken regretfully witnessed the secession of South Carolina from the United States in 1860. Despite his misgivings, he supported the Confederate cause with donations of supplies and generous subscriptions to Confederate loans. Confederate President Jefferson Davis stayed in Aiken's Elizabeth Street home during his one week visit to Charleston in 1863 (Martin and Avery 1961:253). From December 1, 1863 to April 20, 1864, Southern General Pierre T. Beauregard maintained his headquarters at the mansion of his friend, William Aiken, Jr. (Roman 1884:167).

In 1865, Charleston surrendered to Federal troops. Aiken's home was looted by the invading army and he himself taken prisoner and sent to Washington, D.C. On his arrival, friends in the capital secured his release and he was allowed to return to Charleston. He was once again elected to Congress but was refused his seat by Northern members. He retired to private life and died in Flat Rock, North Carolina, in 1887 (Johnson 1964:128-129).

William Aiken, Jr. died intestate and his home was inherited by his widow, Harriet L. Aiken, and his daughter, Henrietta Aiken Rhett. Harriet Aiken died on March 24, 1892, and the mansion at 48 Elizabeth Street became the property of her daughter. Following the death of Henrietta A. Rhett in 1918, the house was inherited by her five children. The grandchildren of William Aiken, Jr. retained their joint interest in the property. In 1949, I'On L. Rhett, the sole surviving heir, purchased the interests of his brothers and sisters, which had now passed on to their children (CCRMCO D51:337-339).

I'On L. Rhett died on December 18, 1959. He bequeathed the residence at 48 Elizabeth Street to his wife, Frances Hinson Dill Rhett. On October 9, 1975, she "individually and as Executrix of the Estate of I'On L. Rhett," gave what would come to be known as the Aiken-Rhett mansion to The Charleston Museum (CCRMCO E108:376).

CHAPTER III

DESCRIPTION OF FIELDWORK

Site Description

The Aiken-Rhett house is located at 48 Elizabeth Street, on the northeast corner of Elizabeth and Judith streets. The site is located within the historic suburban neighborhood of Wraggsboro, which was first subdivided in the 1750s. The majority of the neighborhood development took place in the early 1800s. The neighborhood is currently primarily residential, with lower to middle class occupants.

The site measures 281 feet by 80 feet. The site contains a number of extant structures, including main house, kitchen, stables, chicken coop, cow shed, and privies. The main house, fronting on Judith Street, is constructed of stucco over brick. The original house was three stories, four rooms on each, with an above ground cellar. Wide piazzas faced Judith Street (Figure 4). A large three story wing was added to the northeast corner in the 1830s, and the piazzas were extended. In 1857, William Aiken, Jr. constructed a wing at the northwest corner of the building along Elizabeth Street to house his extensive art collection. This wing was built over the large cistern between the main house and stable building. The main house measures approximately 80 feet by 80 feet.

To the rear of the main house are a number of outbuildings. The kitchen building, measuring 70 feet by 20 feet, is located along the east property line (Figure 5). Governor Aiken doubled its size when he acquired the property, and added large gothic arches at the north end (Figure 6). Three large kitchens and workrooms are located on the first floor, while the second floor contains a series of servant's quarters.

A stable building of identical dimensions is located on the west property line opposite the kitchen building. Stalls occupy the entire first floor, while the second floor housed a feed storage area and two rooms, which were probably groom's quarters.

At the rear corners of the lot are two gothic arched brick privy buildings (Figure 7). Set at mid point between the privies and other outbuildings were two brick shed-like structures. These structures, against the west and east walls, were used as a cow shed and chicken coop (Figure 8). The western building is no longer standing.

The entire rear yard is surrounded by a 10 foot high brick wall, with a large gate in the center of the rear wall (Figure 9). An avenue of magnolia trees is located between this gate and the rear of the kitchen and stable building. This portion of the backyard is overgrown with weeds. The remainder of the rear yard, between the kitchen and stable up to the rear entrance of the main house, is covered with brick laid in a herringbone pattern, forming a courtyard effect (Figure 10).

Figure 4

Front view of the Aiken-Rhett mansion,
facing north along Judith St. The
Elizabeth Street entrance is visible
behind the first palm tree on the left.

Figure 6

North exterior wall of the kitchen building,
showing the added gothic arches. Facing south.



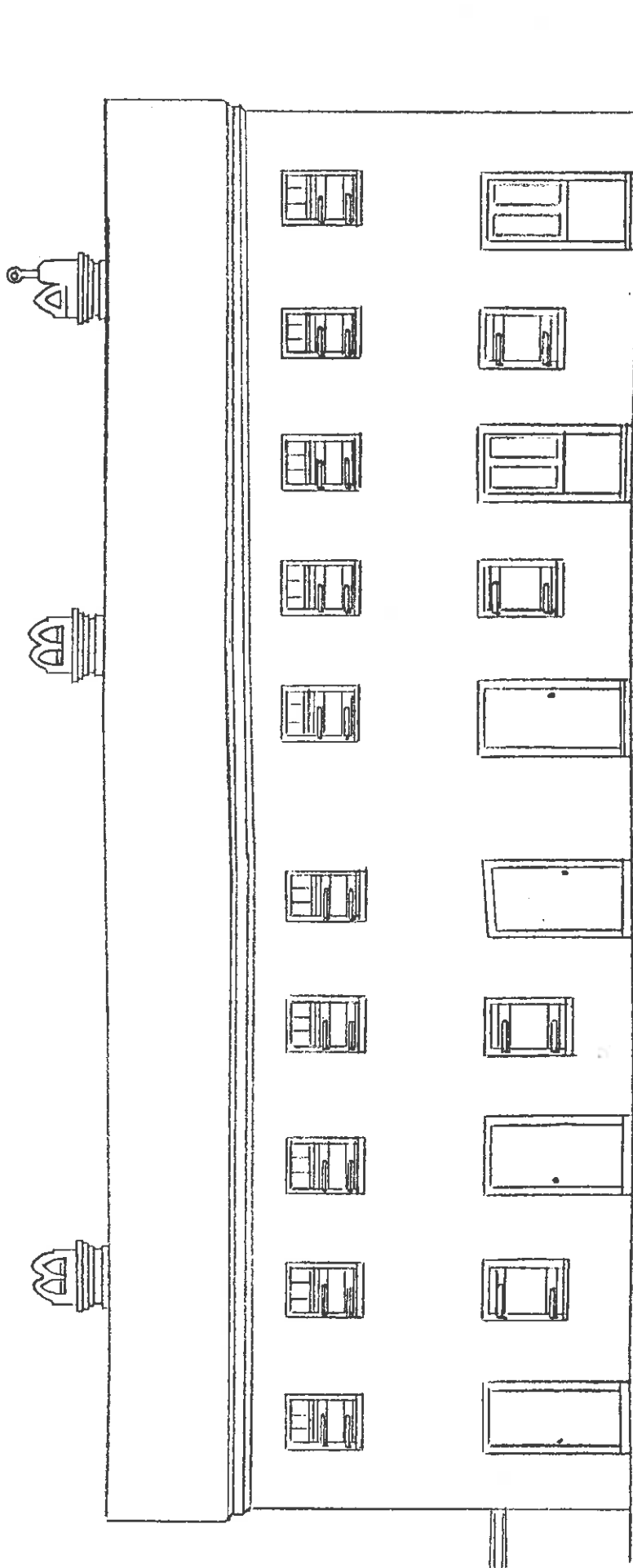


Figure 5
East elevation, kitchen building.
(HABS drawings)

Figure 7

Privy in northwest corner.

Figure 8

Brick chicken coop along western wall.

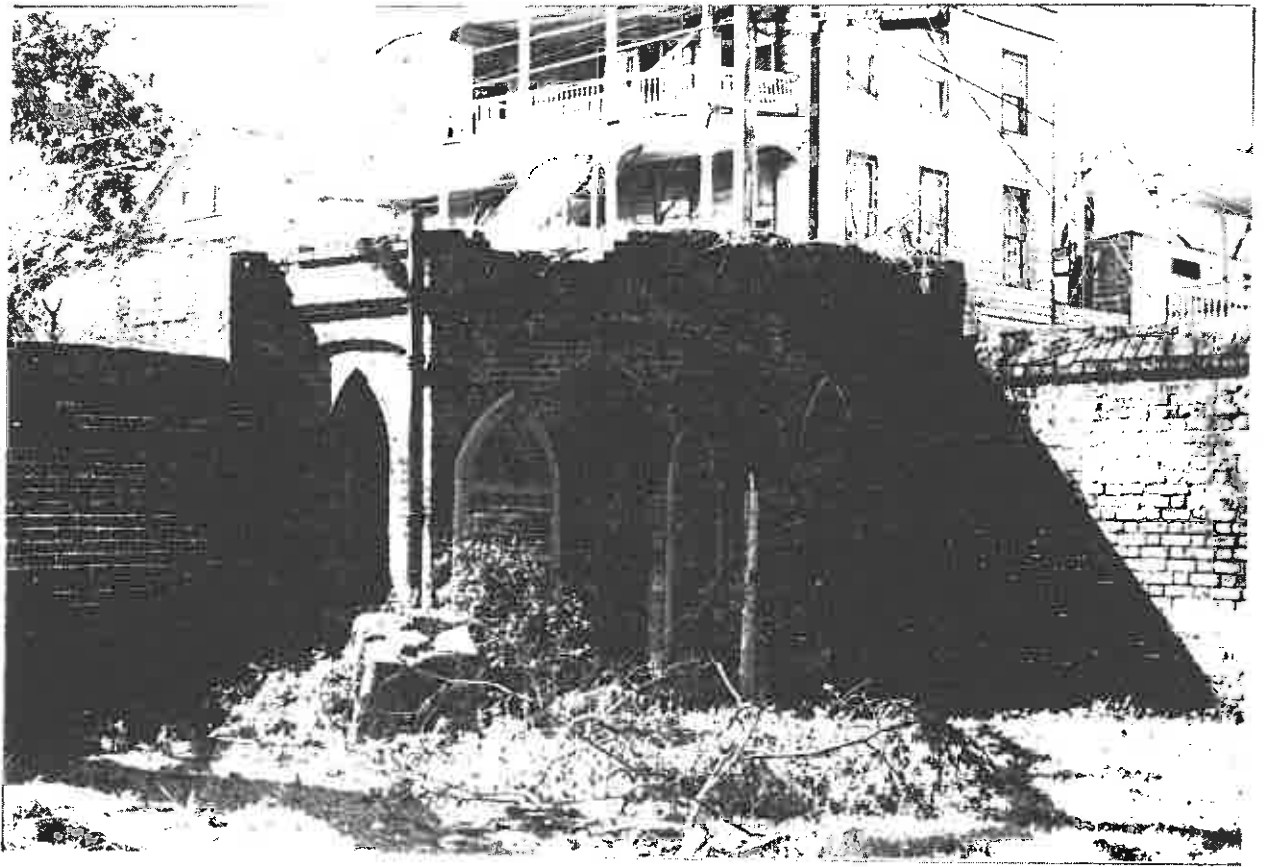
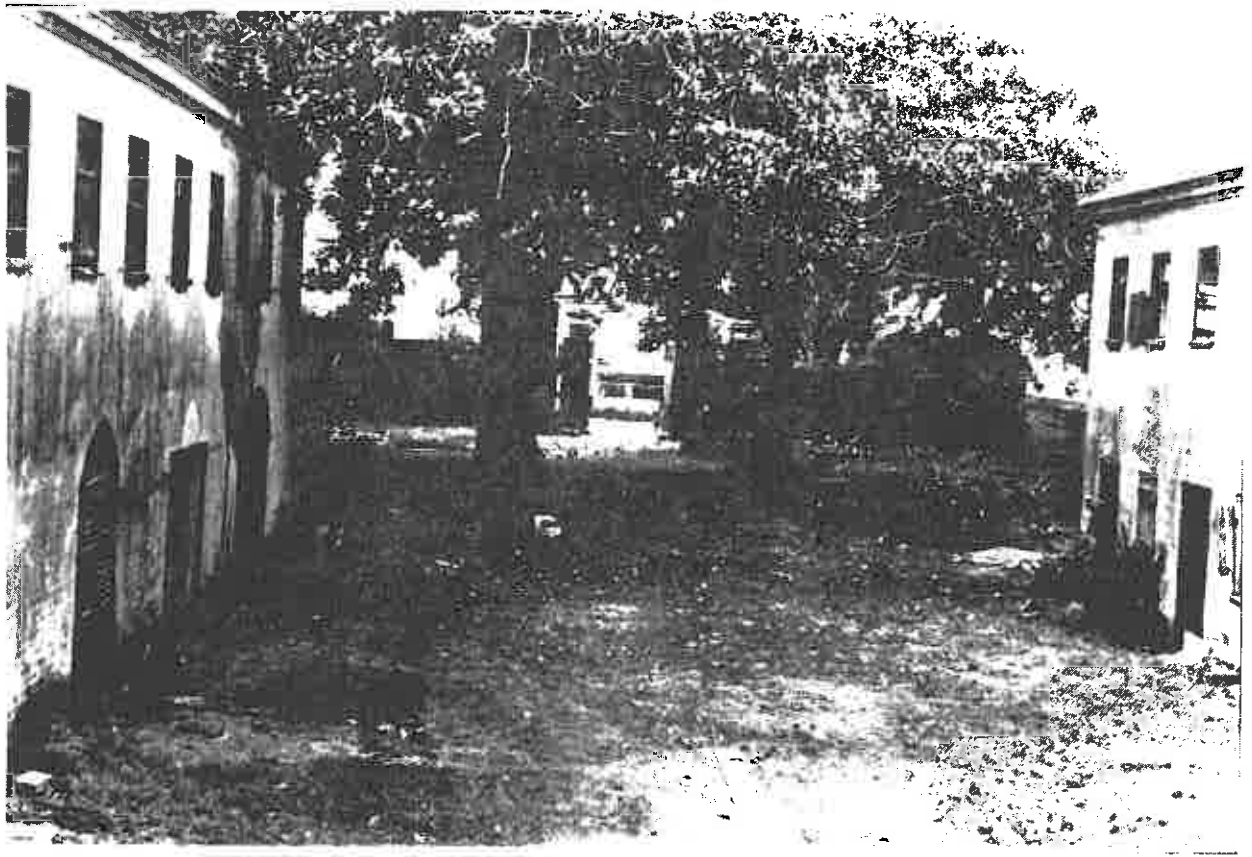


Figure 9

Rear yard of the Aiken-Rhett site, facing north. Note the avenue of magnolias, brick wall, back gate, privies, kitchen (right) and stable building (left). The paved brick courtyard is in the foreground.

Figure 10

Rear elevation of the Aiken-Rhett mansion, showing the kitchen and stable, rear entrance, and brick courtyard. The well visible in front of the modern kitchen is a prop, used during the filming of North and South, book II.



Testing Methodology

The testing program consisted of placement of dispersed units in the rear yard area. During this initial project, testing was limited to the unpaved portion of the yard, beyond the limits of the brick courtyard. Six units were placed in this area (Figure 11).

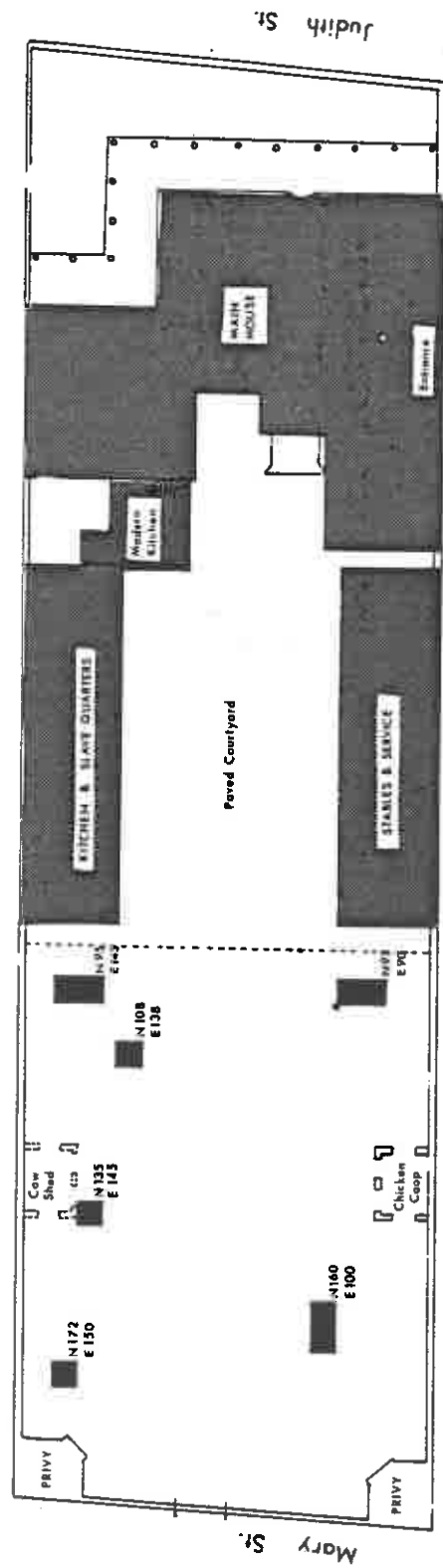
Horizontal control was established by superimposing a modified Chicago grid over the site. A datum point 15.0 feet north of the northeast corner of the stable building was given the designation N100E100. All units were located in reference to this point. Measurements were taken in feet, and all units were designated by the coordinates of the southeast corner. The grid was oriented parallel to Elizabeth Street and the Aiken house structures. This base line was 20° west of magnetic north.

Vertical control was maintained with the use of a transit. An elevation point was established on the north side of the lowest rear entrance step, and all elevations were taken relative to this point. The absolute elevation of this point is 12.69 feet MSL. Elevations in this report are listed as feet above mean sea level (MSL).

All units were excavated with shovels and trowels (Figure 12). Screening for the entire site was conducted in a central location. All materials were water screened through ¼ inch mesh (Figure 13). All units were troweled and photographed at the base of the cultural deposits, and wherever appropriate. Photographs were taken in black and white and color, and planview and profile drawings were made of each unit. Narrative notes as well as a variety of field forms were completed on a daily basis.

An auger test was conducted for this area by two volunteer excavators. A hand operated bucket auger with a 3 inch diameter bit was used. Tests were placed at 10 foot intervals in the south half of the yard, and at 20 foot intervals in the north half. Materials retrieved from the auger tests were dry screened through ¼ inch mesh.

The auger testing revealed that artifacts were concentrated along the eastern side of the site. A heavy concentration of materials was located in the vicinity of the back of the kitchen building to 30 feet north of the building. This concentration of the materials was verified by the relative density of materials in N95E155 and N108E138. A second concentration was noted along the N75 line, in the vicinity of the back wall. Once again, artifacts were clustered along the east side of the property. A 5 foot square, N172E150 was located on the basis of the auger testing. A third concentration was noted in the middle of the yard, in the N135E130 vicinity, but no test units were located here. The western one third of the site yielded no artifacts; once again, this horizontal pattern was supported by the testing program.



Elizabeth St.

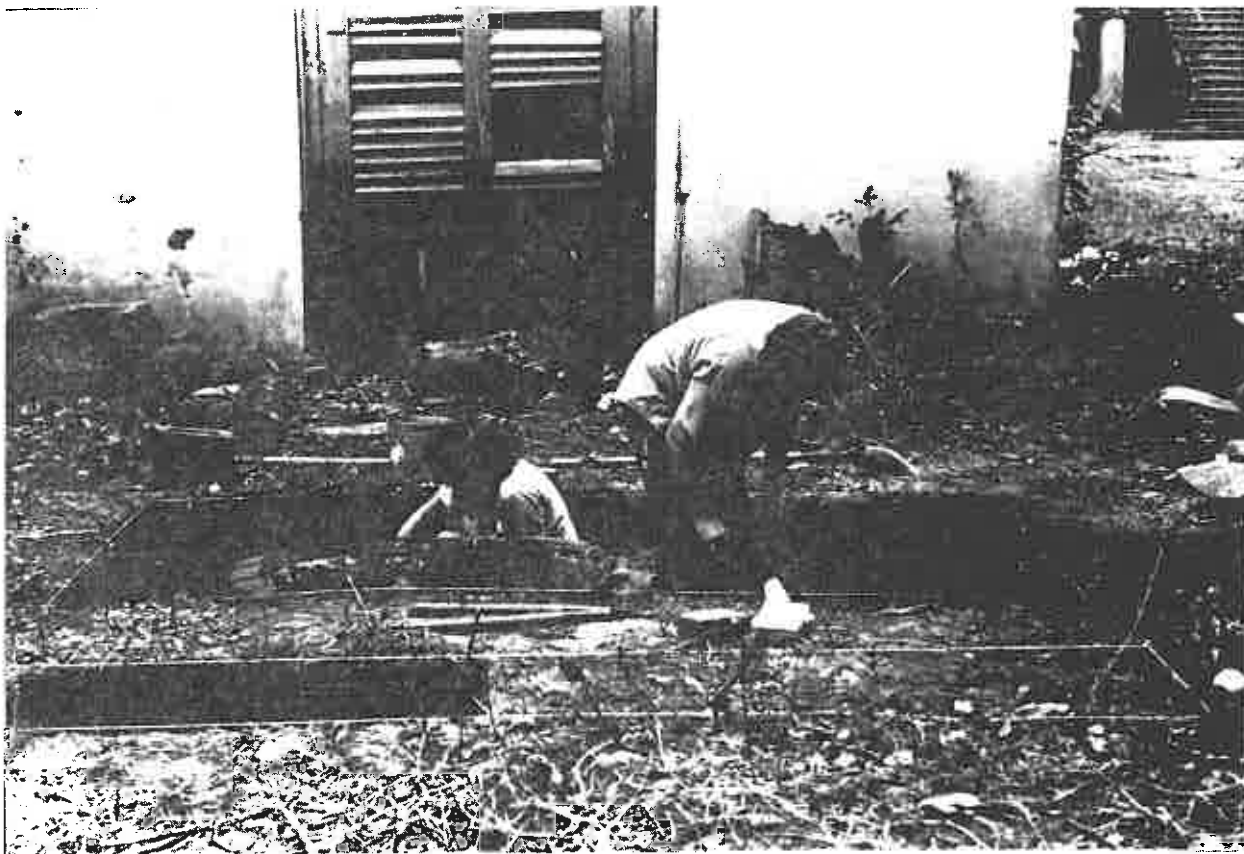


Figure 11

Map of the Aiken-Rhett site.
shaded areas indicate standing structures.

Figure 12
Excavation of N95E155

Figure 13
Students from Courtenay Middle School
participate in the screening during the
education program.



Description of Excavated Proveniences

The first test unit, N95E155, measured 5 feet by 10 feet, with the long axis oriented east/west. This unit proved to contain the deepest and most abundant cultural deposits. The unit contained three zone deposits. Zone 1 was a dark brown sandy soil. It contained a quantity of material, which dated to the twentieth century. Zone 1 was .4 feet deep. Zone 2 consisted of medium brown, grey, and yellow mottled soil, flecked with charcoal and mortar. This zone was .8 feet deep and was excavated in three arbitrary levels. Zone 3 consisted of tan and yellow mottled sand and was .2 feet deep.

Several features were encountered in this unit. The most impressive was a network of brick-lined drains. Feature 2 was a well constructed brick drain. The drain was 1.3 feet wide on the interior. The base of the drain consisted of two courses of brick laid end to end. The sides of the drain consisted of single bricks laid end to end, two bricks high. The feature was covered by a "cap" of large, irregularly shaped slate paving stones, which were mortared to the top of the bricks. This drain ran northwest/southeast through the unit. Along the south wall of the unit, an auxiliary drain line was located beneath feature 1, which was a circular brick basin. The basin measured 3.6 feet in diameter and was roughly 1.0 feet deep. The interior of the basin was lined with plaster. Set into the base of this feature was a square stone with a small (.05 feet) hole in the center. It appears that this hole could be plugged so that the basin held water, or opened so that the contents passed into the brick drain system. Several interpretations were considered for this basin. It was suggested that it was a fountain base, with the square stone supporting a piece of statuary. Others suggested that it was a watering basin for animals, which could collect rainwater, and then be drained. Given the documented working function of the Aiken house back yard, and the number of animals kept there, this second interpretation seems more plausible. Feature 1 was filled with a dark brown sandy soil containing twentieth century materials, essentially the same as zone 1. Feature 2 was filled with a loamy dark brown soil containing late nineteenth century materials. These appear to have collected in the drain system subsequent to its abandonment (Figure 14).

Present on the exterior of feature 2 was a builder's trench of tan sand. This feature was present on both sides of feature 2, but only the west side was excavated. The builder's trench, feature 3, averaged .5 feet in width.

Two additional features were present in N95E155. Feature 5 was a large rectangular area which intruded into the north wall. The top zone of this feature consisted of a slumped area of dark soil and ash, followed by yellow sand. Beneath this lensed deposit, the feature fill consisted of very loose unconsolidated tan sand. Artifacts were most numerous at the top of the tan sand layer, but were present throughout the fill. The feature was straight sided. Excavation continued to a depth of 9.12 feet MSL where it was halted due to lack of visibility. The bottom was not encountered. It appears that the tan sand layer represents the true feature fill. The upper zones of sand and ash may represent later deposits placed in the slumped area of the feature.



Figure 14

N95E155 at the base of excavations.

Feature 6 consisted of another construction trench of tan sand, which ran northwest/southeast. A brick foundation was present in the eastern half of the feature, but not in the western half. It did not appear that the bricks had been robbed from this area. The portion of the feature present in the test pit was too small to determine the configuration and function of the foundation; more extensive excavation will be necessary to determine this. Feature 6 initiated below feature 2, indicating that this foundation predates the drainage system (Figure 15).

Determining the location, configuration, and function of the brick drainage system was of primary interest. The south wall of Trench 1 was located 2 feet north of the north wall of N95E155. The trench measured 2 feet by 10 feet, and the eastern half was excavated. This unit was located to encounter feature 2 if the branch continued past feature 1. Excavation of Trench 1 did not reveal any evidence of the drain, indicating that the drain extension originated at the basin.

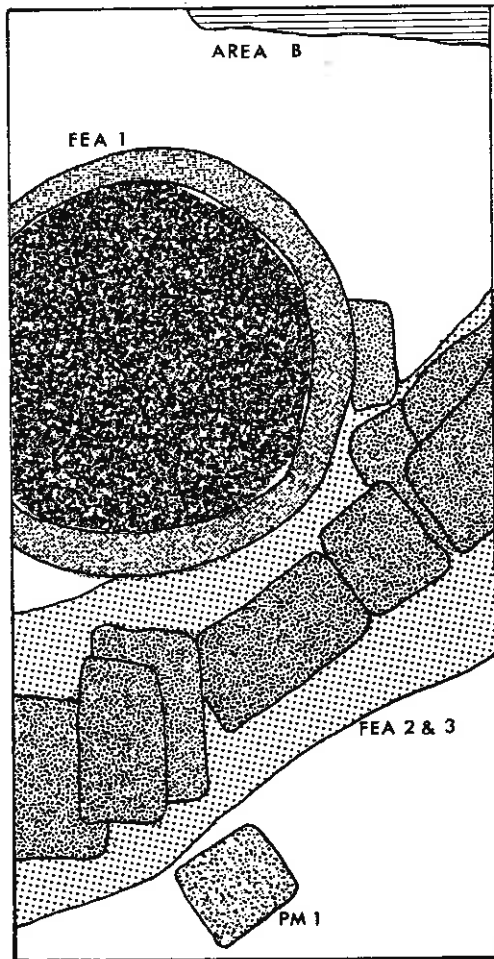
The bucket auger was used to trace the configuration of the drain. The main line of the drain continued northwest beyond the limits of N95E155; it then turns north and continues the length of the back yard to a point roughly 20 feet south of the back wall. We were unable to determine the direction of the drain from here.

Unit N108E138 was a 5 foot square located to intersect feature 2. Stratigraphy in the unit was identical to that of the first unit, with few differences. Zone 2 was shallower in this unit, and it contained fewer materials. The zone was excavated in two arbitrary levels. Features 2 and 3 were located at the base of zone 2. These were identical in configuration to those in N95E155, and were excavated in a similar manner. Feature 2 was filled with the same black loam, but in this unit the fill contained almost no cultural materials.

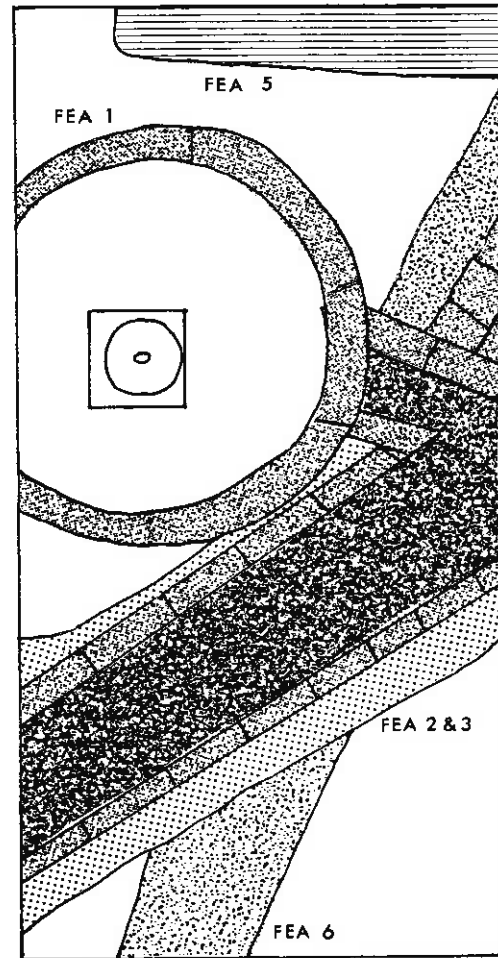
The only other feature located in N108E138 was a small circular pit of tan sand. This feature intruded into feature 2. Feature 7 was 1.4 feet deep with a rounded bottom. Zone 3 was present in this unit, but was excavated only in the eastern half of the square (Figure 16).

Unit N160E100 was located in the northern portion of the yard, and was designed to intersect any drain lines leading to the western privy. The unit measured 5 feet by 10 feet, with the long axis oriented north/south. N160E100 exhibited very different stratigraphy than the more easterly squares. Zone 1 was followed immediately by sterile red clay, and zone 2 was present in profile as a very thin (.05 feet) band. Intruding into subsoil were a series of amorphous and circular stains. These were interpreted as features from shrubbery and other yard plants. All intrusions were mapped; two of these were assigned feature numbers and tested. Feature 8 was a circular pit with a rounded bottom. The feature contained dark grey soil with quantities of coal. Feature 9 intruded into the southeast corner, and contained tan sand and broken bricks. Both features were small, 1.5-2.0 feet in diameter, and less than 1.0 feet deep, and contained very few artifacts.

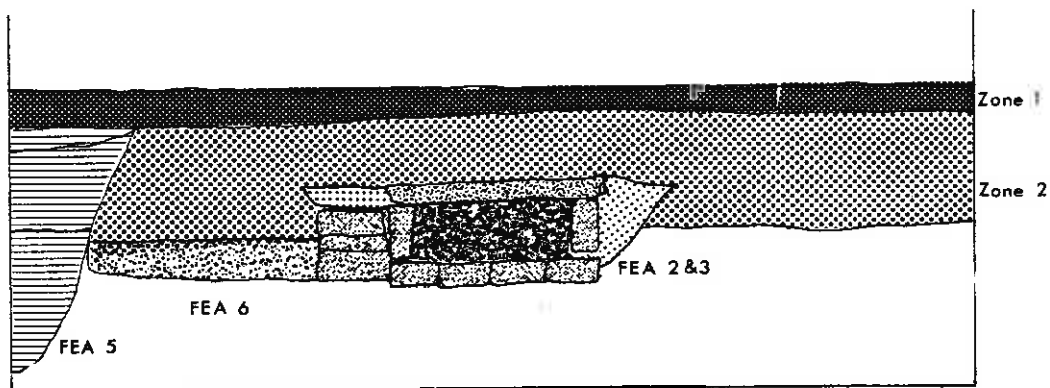
N135E145 was a 5 foot square located adjacent to the remains of the cow shed along the east wall of the property. Zone deposits were identical to the other two units along the eastern side of the site. Zone 1 was .2 feet deep



Base Zone 2 level 2



Base Zone 2 level 4



South Profile

Figure 15

Unit N95E155 at the base of Zone 2 level 2 and Zone 2 level 4; south profile.



Figure 16

N108E138, base zone 2;
features 2, 3, and 7 before excavation.

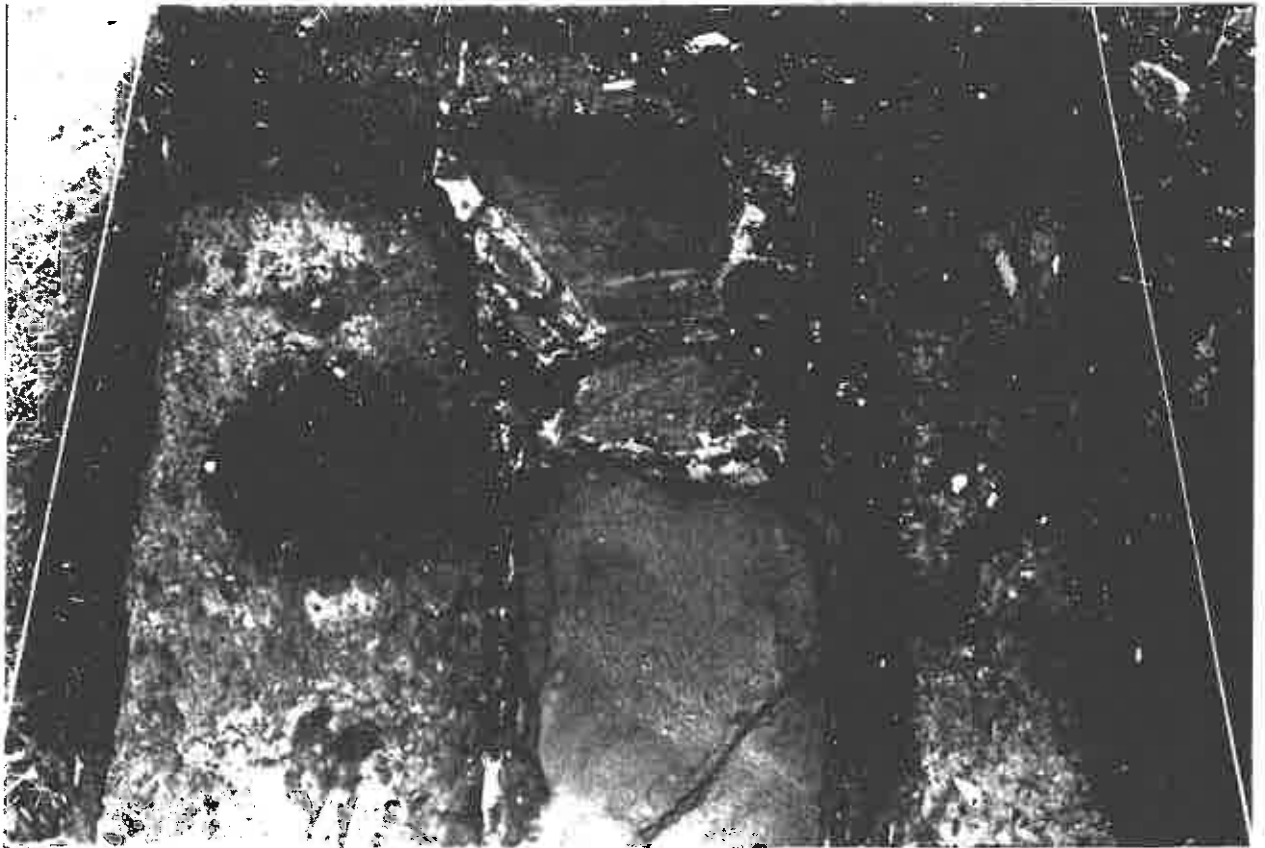
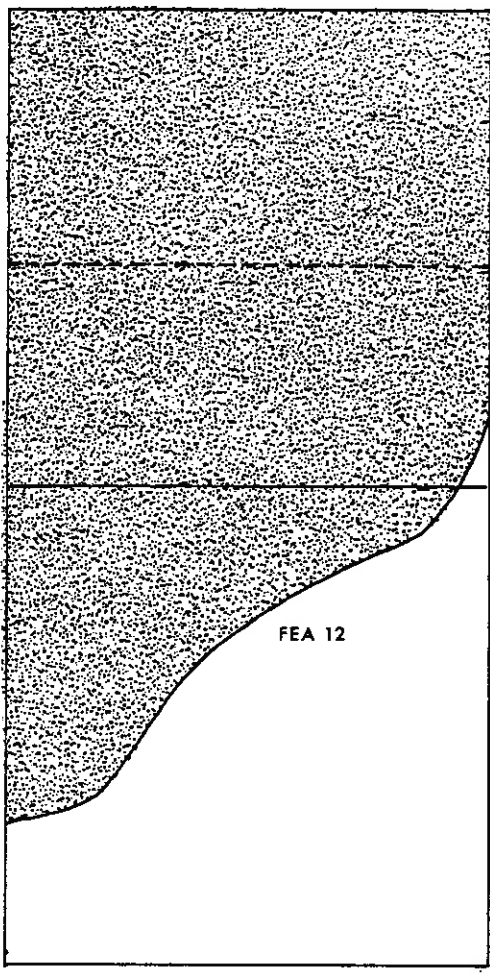
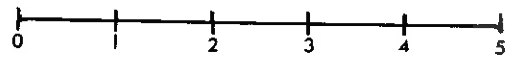
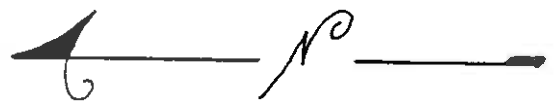
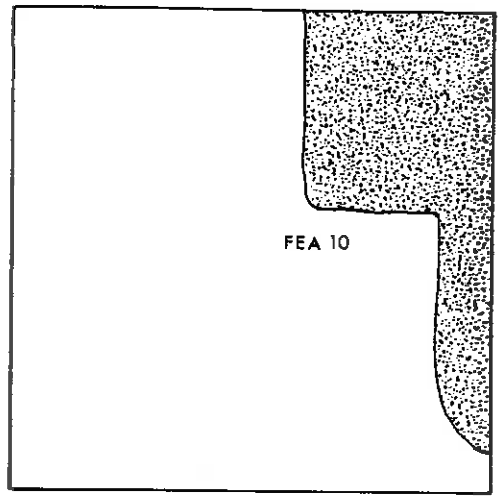


Figure 16

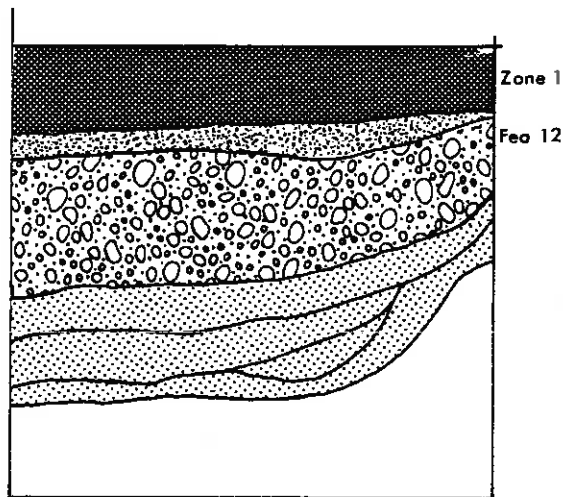
N108E138, base zone 2;
features 2, 3, and 7 before excavation.



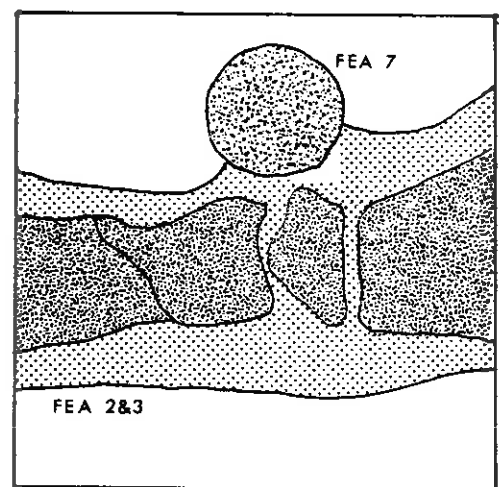
N95 E90



N 135 E145



East Profile



N 108 E138

Figure 17

Planview and profile, N95E90,
planviews, N135E145, N108E138.

and zone 2 was .6 feet deep. Zone 3 was present, and was loose and unconsolidated; the zone continued for .5 feet. Feature 10 was located in the southeast corner of the unit at the base of zone 2. The feature was square, with a shallow, rounded bottom. The tan sand fill contained flecks of mortar, and there was a concentration of mortar at the top of the feature. Feature 10 may be a builder's trench for the cow shed structure (Figure 17).

N95E90 was a 5 foot by 10 foot unit with the long axis oriented east/west. Zone 1 was relatively deep in this unit, and zone 2 was once again quite shallow (see Table 1). Zone 3 was not present. Two features were present in this unit. Feature 11 was a laid brick walk or driveway. The walk was oriented with the stable door. The brick was laid in running bond, unlike the brick courtyard which was laid in a herringbone pattern. Zone 1 was present above and below the feature, suggesting that it was constructed in the twentieth century. Feature 12 initiated at the base of zone 2. This feature was a large pit filled with building construction rubble. The feature was present in the eastern 2/3 of the unit. The feature was filled with tan sand, bricks, mortar, and slate. Beneath this deposit, which continued for 1.2 feet, was an additional .8 feet of loose sand fill, containing occasional brick fragments. Feature 12 appears to be a large pit used to discard rubble associated with construction and/or renovation of the structures (Figures 17 and 18).

N172E150 was located in the northeast corner of the yard, adjacent to the privy. Auger testing had revealed a relatively heavy concentration of artifactual materials in this vicinity. Excavation revealed the three zone deposits found along the eastern side of the site. Zone 1 was .5 feet deep, zone 2 was .5 feet deep, and zone 3 was .3 feet deep. Once again, zone 3 was loose and unconsolidated. A variety of amorphous stains were present at the base of zone 3, but no features were identified.

Another interesting feature was investigated; this feature was visible above ground and was not located in any of the test units. Clearing of the undergrowth adjacent to the north wall of the kitchen building revealed a rectangular brick "pit" or vault (Figure 19). The feature contained black loamy soil, quantities of artifacts dating to the late nineteenth/early twentieth centuries, and a cap of lime. The soil was the same color and consistency as that in feature 2. Excavation of the rectangular vault, which measured 1.0 feet by 1.5 feet revealed that the vault was 2.5 feet deep, and bottomed out onto the brick drain, feature 2 (Figure 20). The drain ran in a straight line from its location in N95E155, beneath feature 4, and evidently past the property line in a southeast direction. Examination of the north wall of the kitchen building suggests that the feature was at one time covered by some type of structure, attached to the wall. This is suggested by the presence of nails and stains in the stucco (Figure 19).

Based on the similarity of the fill, the presence of the lime, and the location and configuration of the feature, feature 4 is tentatively interpreted as a small privy designed for slave use. Wade (1964) describes such slave privies, and indicates that they would be located at the end of the slave quarters, in precisely this location. The small vault would have been covered by a lean-to type shed. The connection of this privy, and possibly the other privies, indicates an advanced sewerage/drainage system. Alternately, feature 4 may simply have served as an access for cleaning the drain.



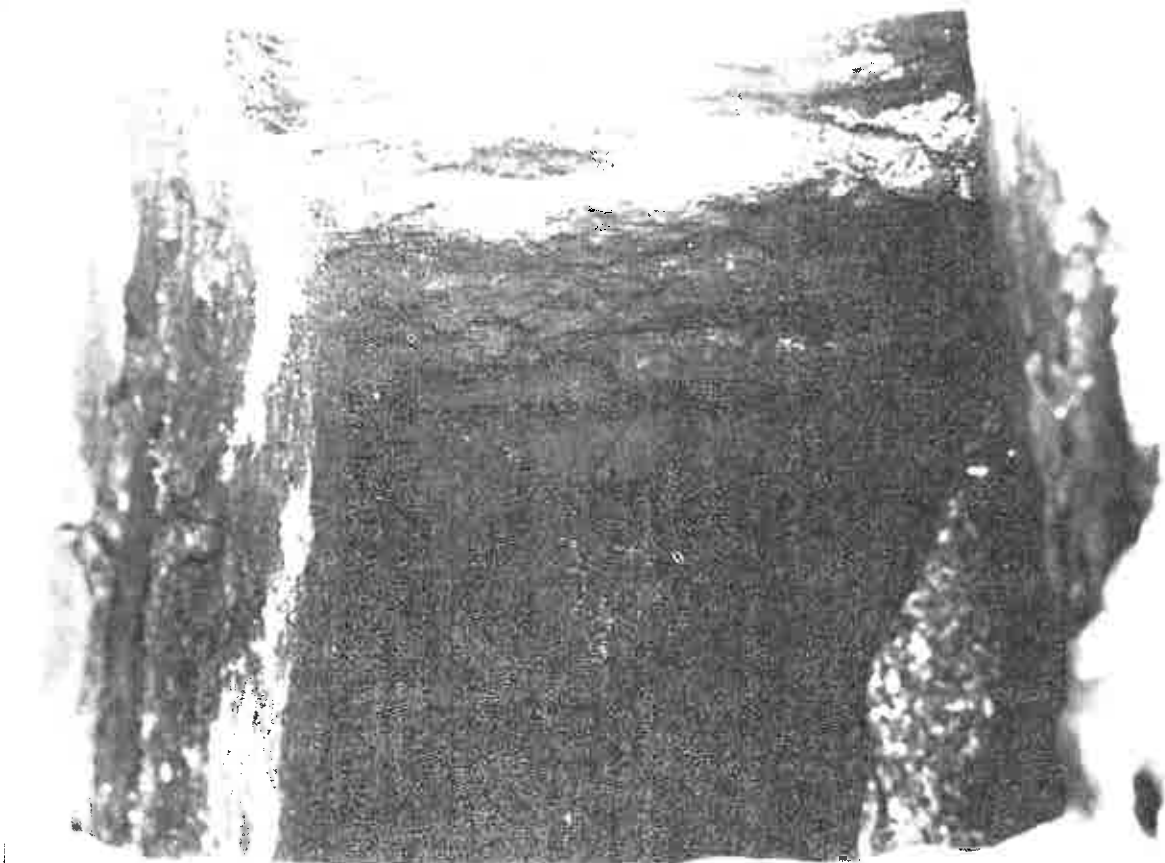
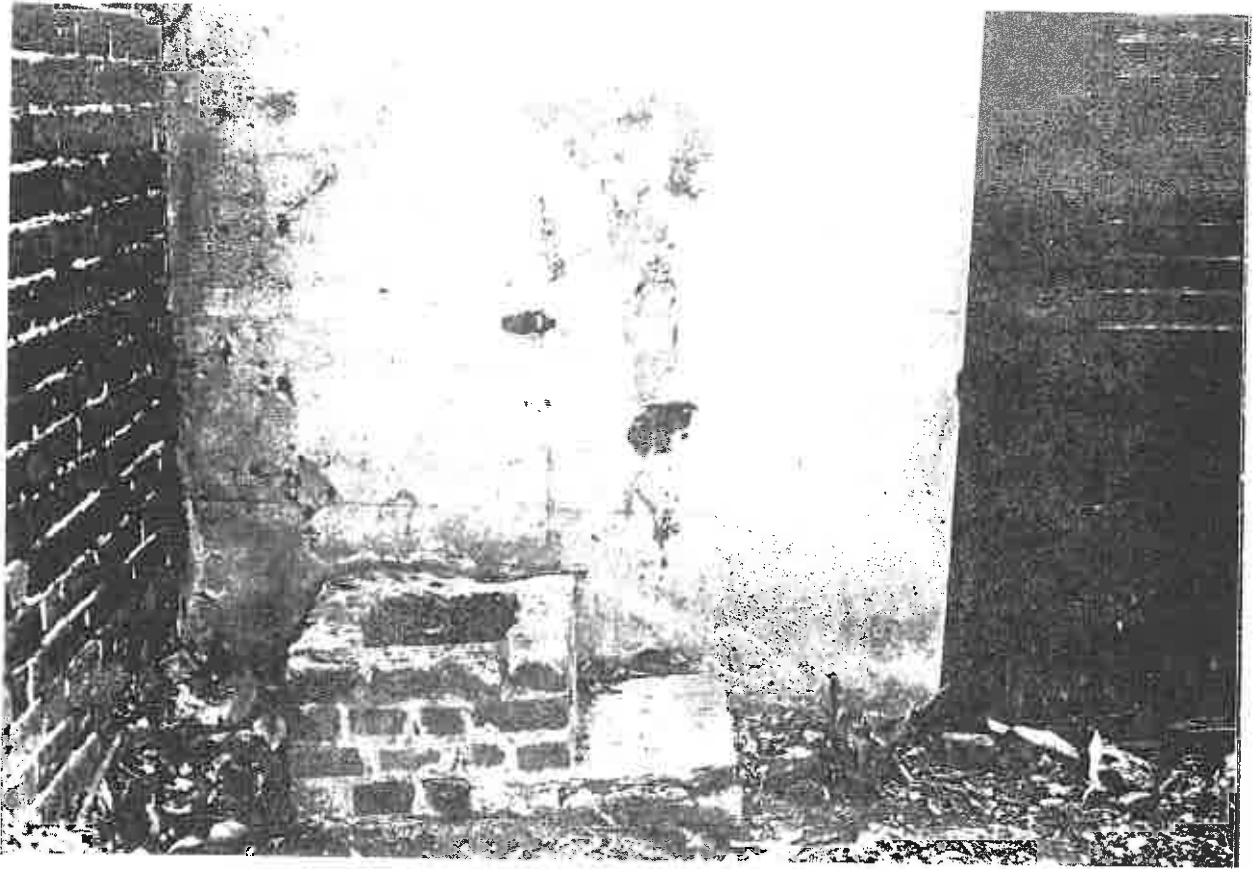
Figure 18
N95E90, feature 12 profiled.

Figure 19

Feature 4, located at the rear of the kitchen. Note the nails and stains on the kitchen wall, the brick vault, and the step to the right.

Figure 20

Feature 4 after excavation. Note the brick drain located at the base; and the lime cap adhering to the sides of the vault.



Summary

Testing in the Aiken-Rhett back yard resulted in the recovery of deposits dating to the nineteenth and twentieth centuries. Nineteenth century deposits include those from the antebellum and postbellum periods (Table 1).

Three zones were present across the site. Zone 1 was a dark sandy loam averaging .4' in depth. The soil contained abundant materials and was deposited in the early to mid twentieth century. Because of the abundance and late date of the materials, this zone was retained and screened only in N95E155; it was discarded in all subsequent units.

Zone 2, grey and tan mottled sand, was present in all units, but varied considerably in depth, ranging from .8' along the eastern side of the site, to .2' along the western side. Artifact density also varied, with N95E155 containing considerably more materials than the other units. Zone 3 was present only along the eastern side of the site. Based on the disparity in depth, zones 2 and 3 may represent some deliberate filling, or collection of refuse, in lowlying areas. The area between Judith and Chapel streets was originally an expanse of creeks and marsh, so that the Aiken house lot would be expected to slope to the southeast (see Figure 30). These zones may be part of the gradual filling of these areas.

A number of features were encountered in the rear yard. The most dramatic was the network of drainage ditches. All of the other features appear to be architectural in nature. No extensive midden deposits or trash filled features were encountered, and low artifact density characterized much of the site. This suggests that the yard area was kept relatively clean. Dating and interpretation of these deposits will be discussed in the following chapters.

Table 1
Provenience Guide

FS#	Provenience	Function	TPQ	Date of deposition
2	N95E155, zone 1	zone	safety pin	20th century
22	N160E100, zone 1	zone	cement	20th century
23	N160E100, zone 1-2	zone	annular w.ware	20th century
32	N135E145, zone 1	zone	whiteware	20th century
39	N95E90, zone 1	zone	decaled w.ware	20th century
40	N95E90, zone 1	zone	pencil top	20th century
	under fea 11			
45	N172E150, zone 1	zone	whiteware	20th century
3	N95E155, zone 2, level 1	zone	flow blue ware	1850s
5	N160E100, zone 2 level 2	zone	hand paint whiteware	1840s
6	N95E155, zone 2 profile	zone	spring	antebellum
8	N95E155, zone 2 level 3	zone	purple trans. print ww	1840s
13	N95E155, zone 2 around fea 1	zone	nail	antebellum
15	N95E155, zone 2 level 3 trowel	zone	red trans. print ww	1830s
16	trench 1, zone 2	zone	handpaint whiteware	antebellum
17	N95E155, zone 2 level 4	zone	handpaint whiteware	1830s
24	N108E138, zone 2 level 1	zone	blue sponged whiteware	1840s
26	N108E138, zone 2 level 2	zone	coin 1847	1840s
33	N135E145, zone 2	zone	blue trans. print ww	1840s
41	N95E90, zone 2	zone	blue trans. print ww	1840s
43	N95E90, zone 2	zone	flow blue whiteware	1840s
46	N172E150, zone 2	zone	green trans. print ww	1840s
34	N135E145, profile	zone	blue trans. print ww	1840s
30	N108E138, zone 3	zone	creamware	1820s
35	N135E145, zone 2	zone	green trans. print ww	1830s
47	N172E150, zone 3	zone	trans print whiteware	1830s
36	N135E145, trowel	zone	whiteware	1830s

Table 1, cont.

FS#	Provenience	Function	TPQ	Date of Deposition
4	N95E155	fill?	flow blue whiteware	1840s
7	N95E155, pm 1	postmold	annular ww	1830s
9	N95E155, fea 2	drain fill	whiteware	1880s
10	N95E155, fea 3	builders trench	purple trans. print ww	1830s
11	fea 4, zone 1	privy?	pipe	early 20th cent.
12	fea 4, zone 2	privy?	dispensary bottle	early 20th cent.
14	N95E155, fea 1	basin fill	pencil top	20th century
18	N95E155, fea 6	builders trench	annular ww	
19	N95E155, fea 5	pit	button	1840s
20	N95E155, fea 6	builders trench	whiteware-1842	1840s
27	N108E138, fea 2	drain fill	undecorated porcelain	late 19th century
28	N108E138, fea 7	pit	green trans. print ww	1850s
29	N108E138, fea 3	builders trench	purple trans. print ww	1840s
31	N160E100, fea 8	pit	shoe rivets	late 19th century
37	N160E100, fea 9	pit	green glass	early 19th century
38	N135E145, fea 10	builders trench	blue trans print pw	1830s
42	N95E90, fea 12	constr. pit	annular pw	1820s
44	N95E90, fea 12	constr. pit	trans. print pearlware	1820s

FS# = Field Specimen number (assigned sequentially to excavated proveniences)

TPQ = Terminus Post Quem

CHAPTER IV

ANALYSIS OF THE MATERIALS

Methods

Following excavation, the materials were removed to The Charleston Museum, where they were washed and sorted. The first step in the analysis of the materials was the identification of the artifacts. The Museum's type collection, Noel Hume (1969) and Stone (1974) were the primary sources used, although a number of other reference books were consulted for specific artifacts. In addition, several antique dealers in Charleston were consulted.

Following identification, the materials were grouped according to functional categories, based on South's (1977) and Garrow's (1982) models for the Carolina Artifact Pattern. Under this method, artifacts are organized into different types, groups, and classes, based on their function. South's technique has been widely adopted by historical archaeologists, allowing for direct intersite comparison; all of the data from Charleston has been organized in this manner. South's categorization is an extremely useful heuristic device in that it allows complete quantification of the assemblage.

Conservation and Curation

During fieldwork, ferrous objects were separated from the other artifacts during screening, and placed in a concentrated solution of baking soda and water. This solution stabilized the materials and prevented further breakdown. After analysis, eleven ferrous artifacts were placed in electrolysis in a weak sodium carbonate solution with a current of 6 amperes. Upon completion of electrolysis, they were placed in successive baths of distilled water to remove chlorides, then coated with a solution of tannic acid and phosphoric acid to protect the surfaces. Ferrous artifacts which did not undergo electrolysis were placed in successive baths of distilled water to remove chlorides, then air dried and bagged.

Seven non-ferrous copper based artifacts were also placed in electrolytic reduction, in a more concentrated solution, with a current of 12 amperes. They were then placed in the distilled water baths to remove surface chlorides before being coated with Incralac to protect the surfaces. Non-ferrous metallic artifacts not requiring electrolysis were cleaned with a soft, dry brush and bagged.

All materials are curated in the Charleston Museum storage facility according to standard Museum policy. Artifacts were packed in standard low acid boxes labeled, and stored in a controlled environment. Field records and photographs are curated in the Charleston Museum library in the high security area. Copies on 100% rag paper are available in the general research area of the library.

Dating of the Proveniences

After all of the materials were identified, each provenience was analyzed to determine the date of deposition. This was based on the stratigraphic point of initiation and the Terminus Post Quem, or TPQ (the initial manufacture date of the latest dating item in the provenience). While much of nineteenth century material culture has a long period of manufacture, several key features contained tightly dated materials. These provided information which could be used to determine a date of deposition for all proveniences (Table 1).

A variety of features were encountered in the rear yard of the site. The most dramatic was the network of drainage ditches. A TPQ of 1830 for feature 3, the builder's trench suggests a mid-nineteenth century date of construction. A TPQ of 1880 was noted for feature 2 fill; this was obtained from a maker's mark on an ironstone cup and saucer. This suggests that the drain system was abandoned in the late nineteenth century. A TPQ of 1842 for feature 6, which underlies feature 2, further supports a mid-nineteenth century date of construction.

Several of the small features were also filled in the mid-nineteenth century. A TPQ of 1840 for feature 5 was provided by purple transfer printed whiteware and a pre-Civil War regiment button. As discussed above, whiteware with a maker's mark provided a TPQ of 1842 for feature 6. Green transfer printed whitewares provided a TPQ of 1830 for feature 7, although it is more likely that it was deposited in the 1850s, based on the date of deposition for feature 3, located beneath it. Feature 10 contained only pearlware and may date to the early nineteenth century. A TPQ of 1795 (annular pearlware) for feature 12 suggests that it was deposited in the early nineteenth century.

Feature 4 contained a dispensary bottle, providing a TPQ of 1903 (Huggins 1971). Other datable ceramics recovered from this feature were manufactured in the second half of the nineteenth century. Based on this information, the Aiken-Rhett assemblage may be divided into two subassemblages; zone 1 plus the fill in feature 1 date to the twentieth century. The nineteenth century assemblage includes zones 2 and 3, plus all other feature deposits. With the exceptions of features 2 and 4, these were deposited in the first half of the nineteenth century.

Nineteenth Century Assemblage

Kitchen

Kitchen materials comprised 64.24% of the nineteenth century assemblage. This assemblage was composed of 41% ceramics and 58% glass. The majority of the ceramics, 78.4%, consisted of refined earthenwares. Creamware comprised 1.5% of these refined earthenwares, pearlwares, 11.45%, and whitewares, 86.9%. No decorated creamware sherds were recovered. Forty-three percent of the pearlwares were undecorated, but the pearlware group also included transfer printed (20%), annular ware (15%), hand painted (8%), and shell edged wares (2%). Whitewares also consisted of 43% undecorated wares, and included transfer print in blue (22%) and other colors (7.7%), hand painted (10%), annular ware (9%), shell edged (5%), with minor amounts of sponged (1.5%) and flowed blue (1.5%) wares (Table 2).

Table 2

Relative Proportions of Refined Earthenware
Decorative Motifs

	#	%of type	%of ceramic group
Creamware, undecorated	9	11.25	1.48
Pearlware, undecorated	35	43.75	5.77
annular	12	15.0	1.98
shell edged	1	1.25	.16
hand painted	7	8.75	1.15
transfer printed	16	20.0	2.64
whiteware, undecorated	227	43.16	37.45
blue transfer printed	119	22.62	19.63
transfer printed, other	41	7.79	6.76
annular	52	9.89	8.58
hand painted	53	10.08	8.74
shell edged	26	4.94	4.29
sponged	8	1.52	1.32
flow blue	2	2.50	.32

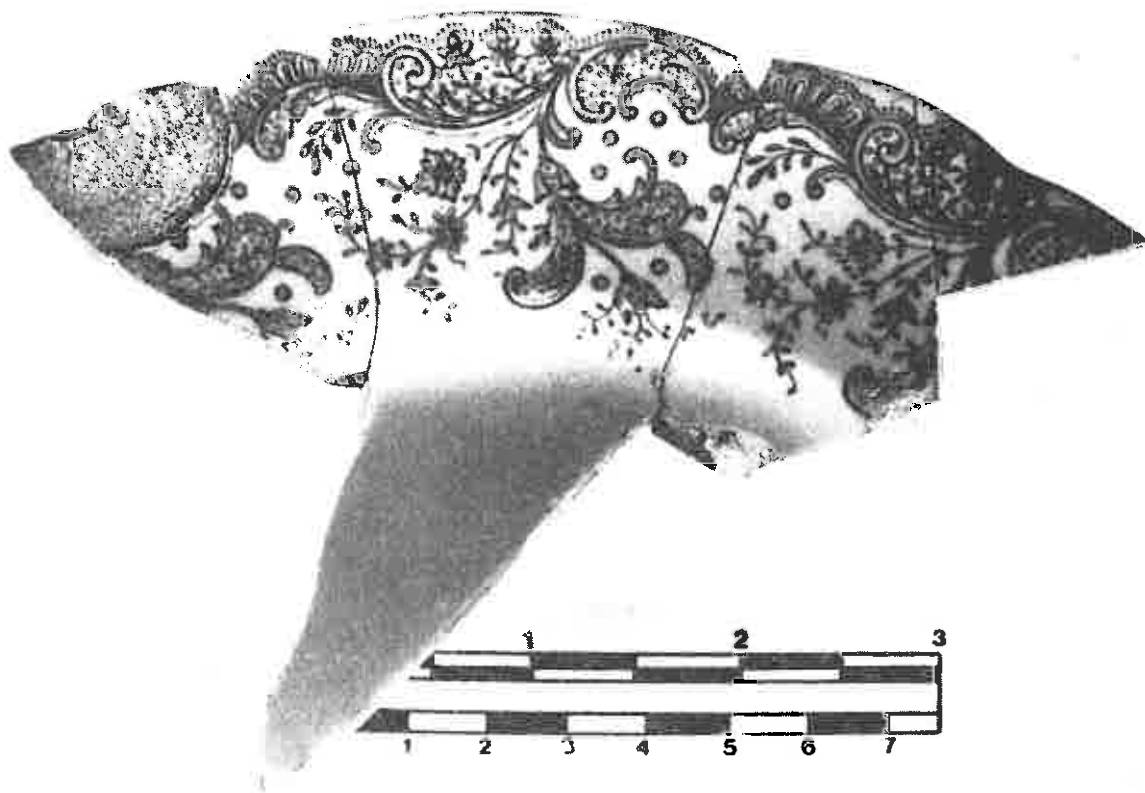
The relative proportions of these wares were compared to the temporal assemblages described in Price (1979) for the eastern ozark border region. The presence of a minor, but significant amount of pearlwares suggest that materials recovered date from the earliest documented site occupation, 1817. While transfer print whiteware in bright colors, sponged ware, and flow blue ware is present, these later (post-1830 and 1840) types represent the minority of the refined earthenwares.

Price (1979:30-31) has suggested that pearlware sherds with cobalt blue and earthen colored hand painted decoration appear to be good diagnostic markers of pre-1830 occupation. Brightly colored transfer printed sherds, sponge decorated vessels, and brightly colored handpainted types together with blue and green shell edged wares appear to be good diagnostic markers of the 1830-1860 period. The post 1840 to 1850 period is marked by the addition of stamped vessels, flow blue, and plain embossed types.

Based on Price's discussion, it appears that the antebellum assemblage was deposited between 1817 and ca. 1860. This is based on the presence of 15% pearlware and creamware, and the very small percentage of post-1840 types (3%). The exception to this date range is the drain fill, features 2 and 4. A transfer print whiteware cup and saucer present in feature 2 exhibited a washed out color and a "John Maddock and Sons Royal Vitreous" maker's mark (Figure 21). This indicates that the ceramic was manufactured between 1880 and 1896 (Godden 1964:406). Likewise, the recovery of a South Carolina Dispensary bottle from feature 4 provided a TPQ of 1903 (Huggins 1971). This feature also contained fragments of porcelain produced by the Haviland and Limoges companies. Many of these contained maker's marks, dating them to 1891, 1842-1898, 1840, and 1876, respectively. These later dates for these features support the interpretation that they were filled subsequent to abandonment in the late nineteenth century (Kovel and Kovel 1966).

Other tablewares include white porcelain, which comprises 12% of the ceramic assemblage. The majority of these wares were undecorated; two sherds of blue on white Canton porcelain were recovered. Other decorated sherds include overglazed sprigged and hand painted varieties. A gilt edged type was recovered from feature 2.

Utilitarian wares comprised 7.2% of the assemblage. These consisted of lead glazed and unglazed coarse earthenwares, grey saltglazed stoneware, ginger beer bottle, and a variety of nineteenth century stoneware types. Eight sherds of the alkaline glazed stoneware were recovered (Greer 1970), including one that exhibited white slip sprigging (Figure 22). Several varieties of a fine red bodied earthenware were recovered. The majority of these exhibited a white slip on the interior, and some luster glazing on the exterior. Two sherds exhibited an apple green lead glaze on the exterior, while one had a yellowish tan interior. Similar sherds were recovered from early nineteenth century (ca. 1810) contexts at the Charleston Place site. These exhibited a fine red clay paste, white slipped interior with a clear lead glaze, resulting in a dark brown exterior. One vessel exhibited a yellow transfer printed exterior, while the other exhibited a yellow and pink overglaze floral design. Both vessels appear to be small pitchers. This ware is called Portobello ware and was manufactured by the Scott brothers of Scotland. The ware was manufactured between 1796 and 1825



inches

centimeters

Figure 21

Top: transfer printed whiteware, marked John Maddock & Sons, 1880-1896
 Bottom: transfer printed whiteware marked James Edwards & sons, 1851-82.

(Lindsay 1962:526). These fragments may be variations of this Portobello ware (Figure 23).

Several eighteenth century ceramic types were recovered, including five sherds of white saltglazed stoneware, three of brown saltglazed stoneware, four of combed and trailed slipware, and three of delft. These artifacts are not numerous enough to suggest a pre-1817 occupation of the site; further, three of these four types were manufactured as late as the early nineteenth century. Thus they may represent minority wares in an antebellum assemblage. The final ceramics were two sherds of River Burnished ware (Ferguson 1985) and one of Colono-Yaughan ware (Anthony 1986). These low fired earthenwares of local manufacture are a predominantly eighteenth century type, and they rapidly diminished in importance in the early nineteenth century. Their small proportion (.3%) in the Aiken-Rhett assemblage support this date range.

Glass artifacts comprised 58% of the kitchen group. Black, light green, and brown bottle glass, representing wine, beer, and other alcoholic beverages, comprised 47% of the glass. Clear container glass comprised an additional 39.2% of the glass. Other types consisted of blue, purple, amber, and milk glass; these comprised 3% of the glass and were of undetermined function. Pharmaceutical glass comprised 4% of the glass.

Table glass comprised 6.5% of the glass and 3.8% of the kitchen group. This included several fragments of goblets and tumblers, most exhibiting etched designs. Four fragments of goblets were present. Also included in this group were fragments of cut or pressed glass. This group also included two glass handles from pitchers or cups (Figure 24).

The final kitchen items were two fragments of cutlery and a decorative brass bottle cap.

Architecture

Architectural items comprised 32.5% of the assemblage. This consisted primarily of nails and window glass. The majority of the nails were too corroded for positive identification, but all appear to be machine cut nails. A single wire nail, manufactured after 1850, was recovered from a zone 2 provenience.

Measurements were taken of all window glass thicknesses. Recently, the use of window glass as a dating tool has been advanced by Adams (1980), Orser et al. (1982), and Trinkley and Caballero (1983). Basically, window glass tends to increase in thickness throughout the nineteenth century, although thickness is variable in different parts of the United States. Orser et al. (1982:652) offers a regression formula for calculating the date of the window glass based on thickness:

$$Y = 41.46x + 1762.76$$

where 41.46 is the slope of the line, 1762.76 is the y intercept, and x is the modal glass thickness. The Aiken Rhett antebellum assemblage yielded a mean date of 1829.51, which corresponds well with the history

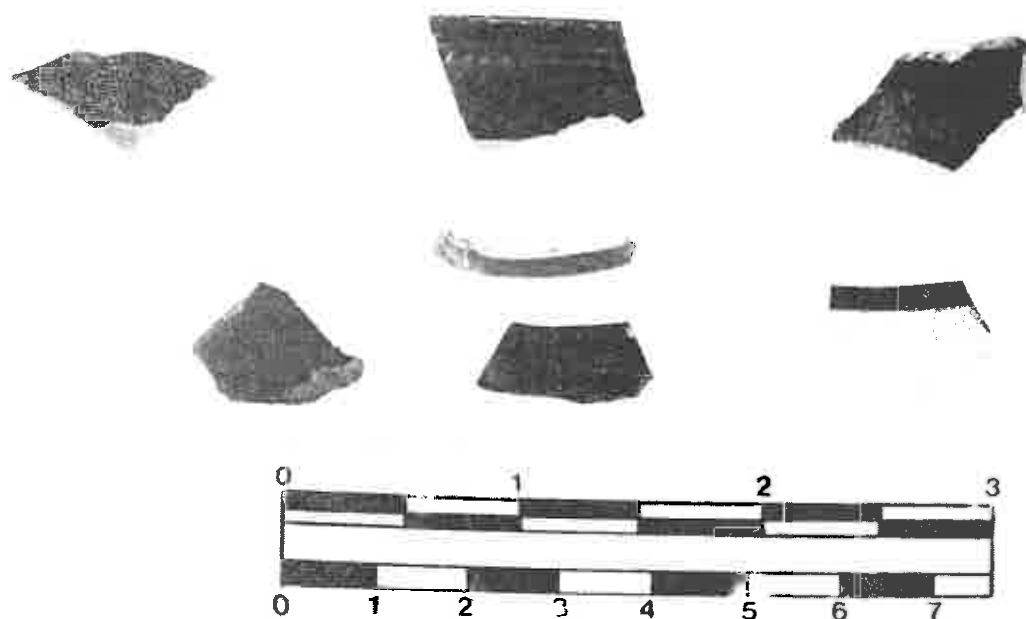
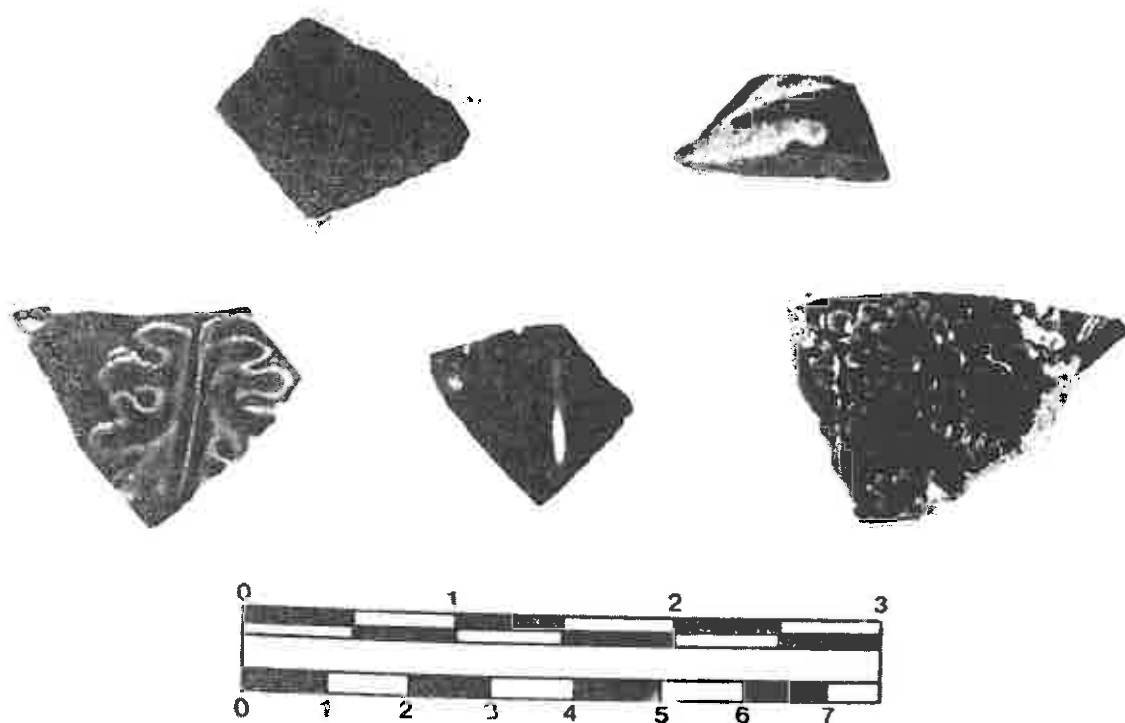


Figure 22

Top right: white sprigged alkaline glazed stoneware.
Others: unidentified stoneware types.

Figure 23

Fine red bodied earthenwares with lead glazed exteriors and white slipped interiors.

of house construction. Although Orser et al. (1982) suggest a correction factor of +53.75 years, this does not seem applicable here.

Other architectural items included seven fragments of roof tile plus two fragments of delft tile. Final items were two flat bottomed wood screws, four spikes, and a shutter pintle.

Arms

Arms materials comprised .3% of the assemblage. The most common artifact were rifle shells, followed by lead shot. The most unusual artifact was a small gunflint. It was manufactured of local chert, rather than imported English flint (Figure 24).

Clothing

The clothing group was rather large and varied, comprising .96% of the assemblage. Buttons were the most common artifact; twelve 4-hole and five 1-hole bone buttons were recovered. Other common buttons were the 4-hole porcelain buttons. All of these are hallmarks of nineteenth century assemblages. Five brass buttons were also recovered. The most unusual artifact was a pre-Civil War South Carolina regiment button, dating to the 1840s (Figure 25).

Other clothing items included six brass hooks and eyes, a shoe eyelet, a snap, and a porcelain collar stud. A single spherical blue glass bead was recovered. Items related to the manufacture and repair of clothing include a thimble, a straight pin, and a bone lace bobbin (Figure 25).

Personal

Compared to the Charleston mean, the personal group was quite large and varied, comprising .32% of the assemblage. The only identifiable coin recovered was an 1847 penny. Another was too eroded to identify. Six fragments of slate pencils were recovered. Bone items included two fragments of combs, two portions of tooth brushes, and a single fan slat. A fragment of mirror glass was also recovered.

An unusual die was recovered. Unlike the more common bone dice, this one was of lead. There were two faces with one dot, and one each with 3, 4, 5, and 13 dots. The most unusual personal items were two small fragments of gold jewelry. These appear to be part of a necklace or earrings (Figure 26).

Furniture

Furniture items comprised .17% of the assemblage. This included five brass tacks, two brass escutcheons, and a lead tag.

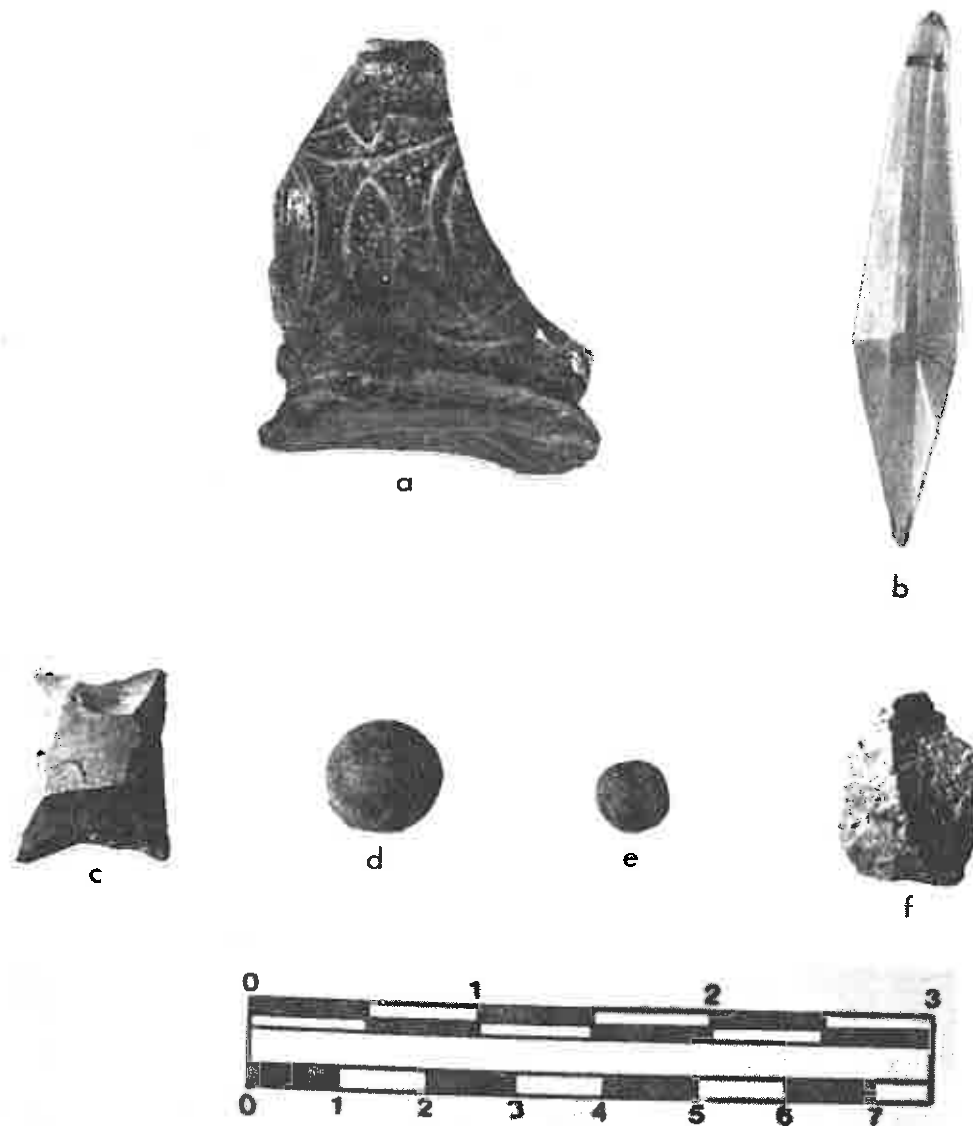


Figure 24

a) pressed glass container, b) chandelier prism,
c) gunflint of local chert, d,e) lead shot, f)
chert flake.

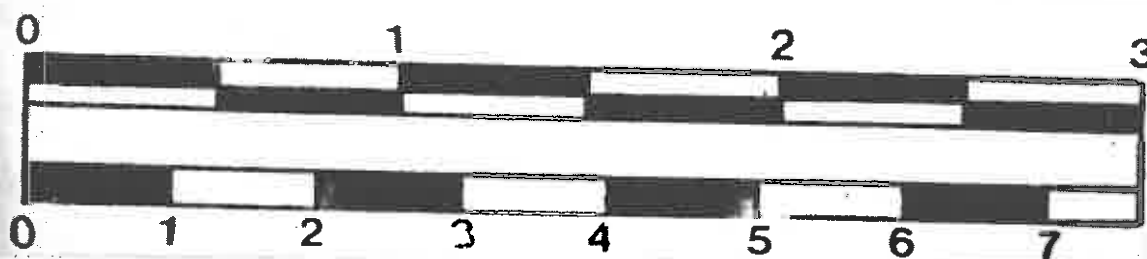
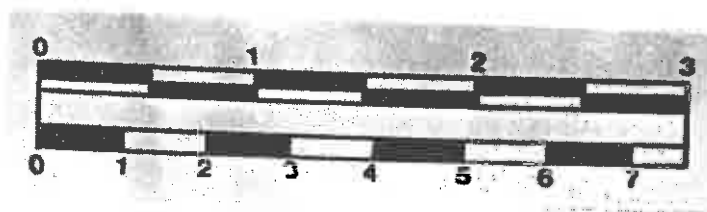
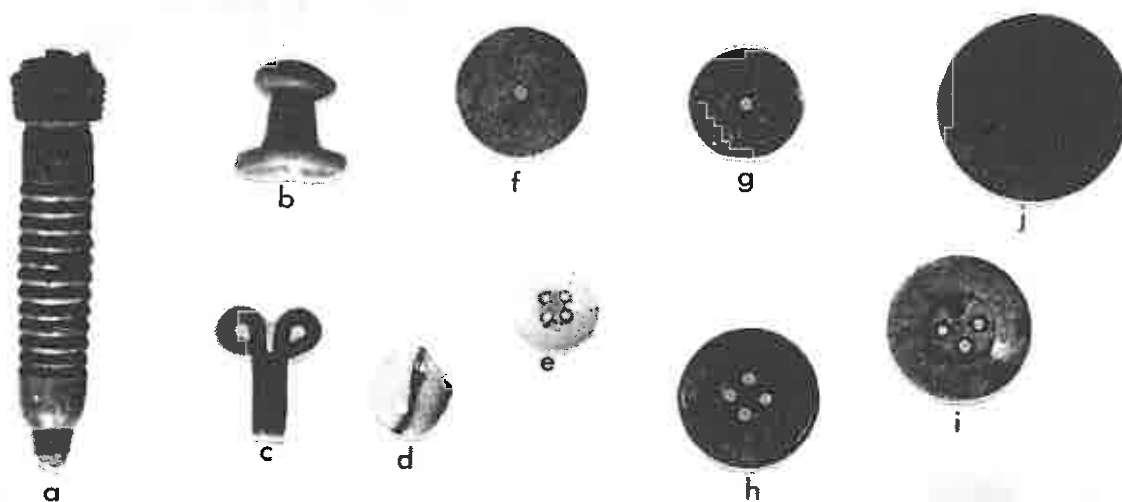


Figure 25

Clothing items: a) lace bobbin, b) collar stud, c) brass hook, d,e) porcelain buttons, f-j) bone buttons. Bottom: pre-Civil War South Carolina Regiment button, ca. 1840.

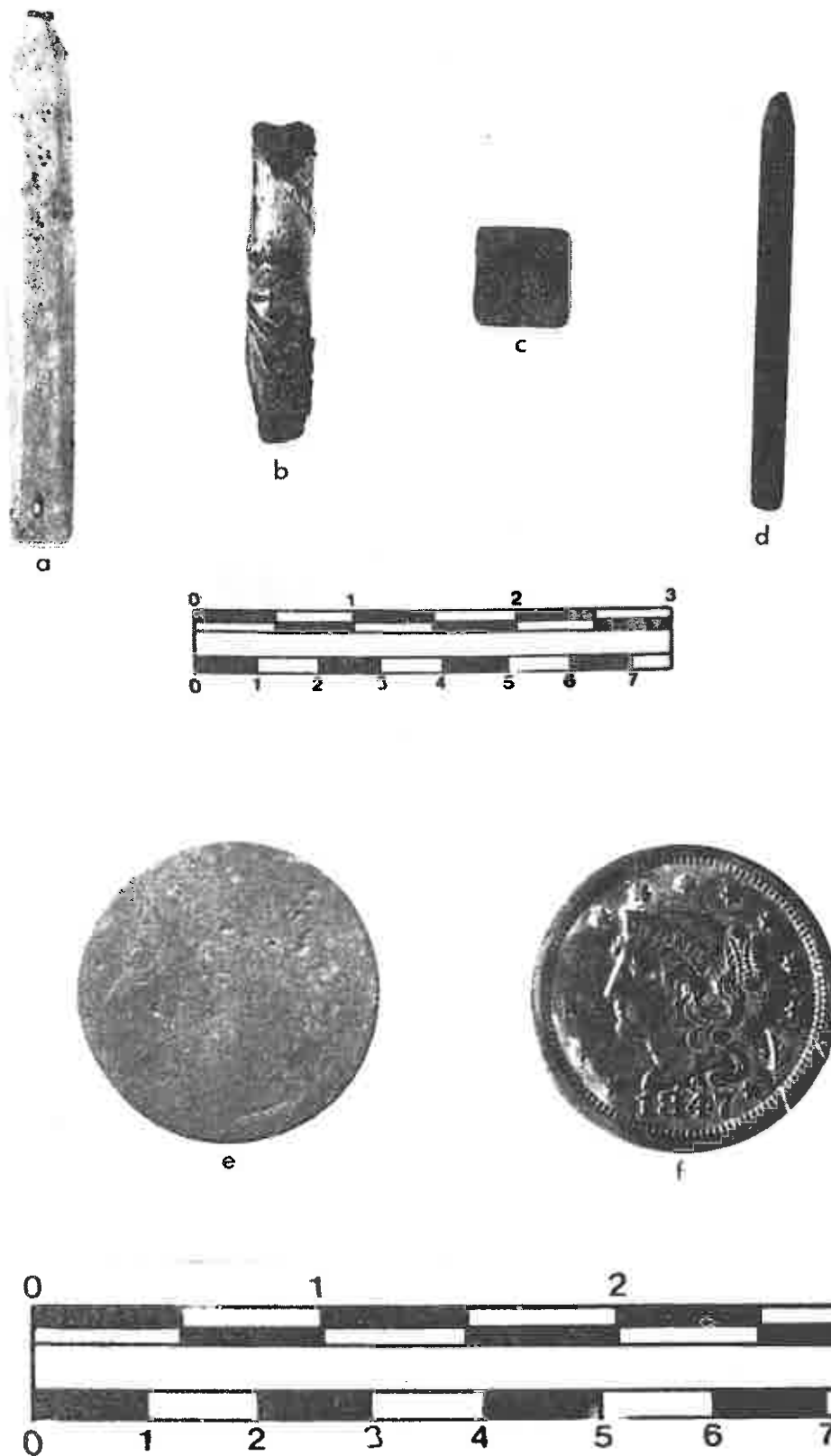


Figure 26

Personal Items: a) bone toothbrush handle, b) bone cutlery handle, c) lead die, d) slate pencil, e,f) coins.

Pipes

Pipes comprised only .72% of the assemblage. The majority of these were of white kaolin clay. The more unusual pipes included a stub stemmed unglazed red clay pipe, a red clay pipe similar in style to the kaolin pipes, and a stub stemmed pipe of River Burnished ware (Figure 27).

Activities

Activities items comprised .76% of the assemblage. The most common activities items were toys, including five marbles, two toy dishes, and three fragments of porcelain dolls. Storage was represented by a single barrel strap fragment. Other items include fragments of lead, brass wire, and possible iron tools. Construction items include a nut and an iron staple (Figure 28, Table 3).

Twentieth Century Assemblage

The twentieth century assemblage was quite different from the nineteenth century assemblage, suggesting different types of activities. The twentieth century assemblage includes materials from zone 1 and feature 1 (Table 4).

Kitchen

Kitchen materials comprised 38% of the assemblage. Ceramics comprised 15% of the kitchen group, and glass containers comprised 81%. Ceramics consisted entirely of tablewares; European and American porcelains, and refined earthenwares. Refined earthenware consisted of a single sherd of pearlware, plus 37 sherds of whiteware. These consisted of undecorated, handpainted, transfer printed, sponged, and annular decorations. Decaled whiteware, manufactured after 1850, was also present.

The lack of storage and utilitarian ceramics may be countered by the presence of a quantity of container glass, which became cheaper, more readily available, and more quickly disposed in the nineteenth century. Bottle glass in clear, green, black, brown, and aqua were present. Identifiable container glass included a Cheeseborough Mfg. Co. Vaseline jar, an aqua glass panel bottle, and a clear glass perfume bottle with a stopper. A quart capacity SC Dispensary bottle was dated to 1903 (Huggins 1971). A preserve jar was manufactured between 1860 and 1920 (Lewis and Haskell 1981:96). Other bottles were not identifiable to date of manufacture.

Table glass included fragments of a ribbed tumbler plus a number of fragments of a pressed glass bowl. Other kitchen items include eight crown bottle caps, manufactured after 1903 (Lorraine 1968). Two spoons, and four tin can fragments, common after 1850 (Fontana and Greenleaf 1962) completed the group.

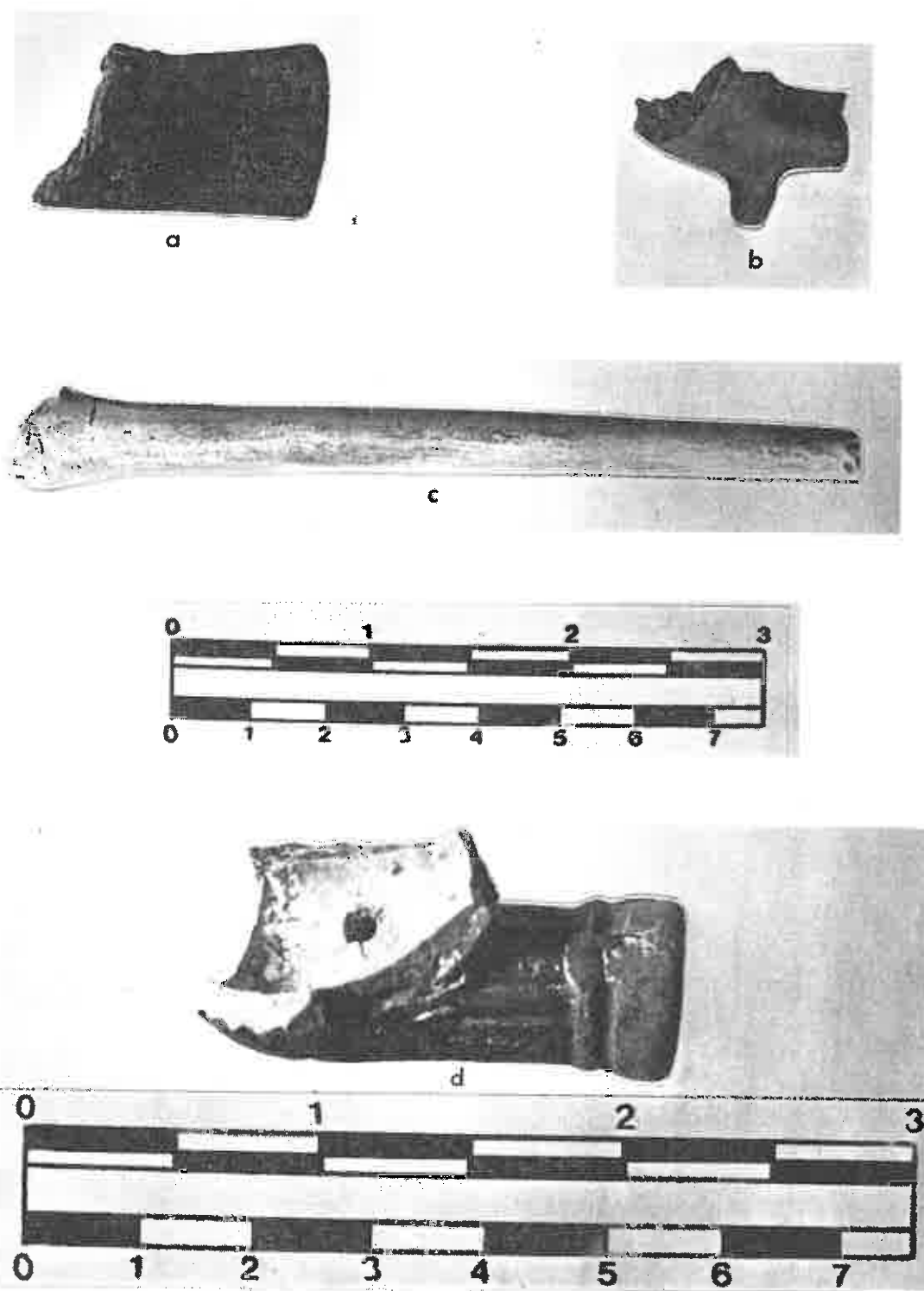


Figure 27

Pipes: a) River Burnished pipe, b) English style pipe of red clay, c) kaolin pipe stem, d) stub stemmed red clay pipe.

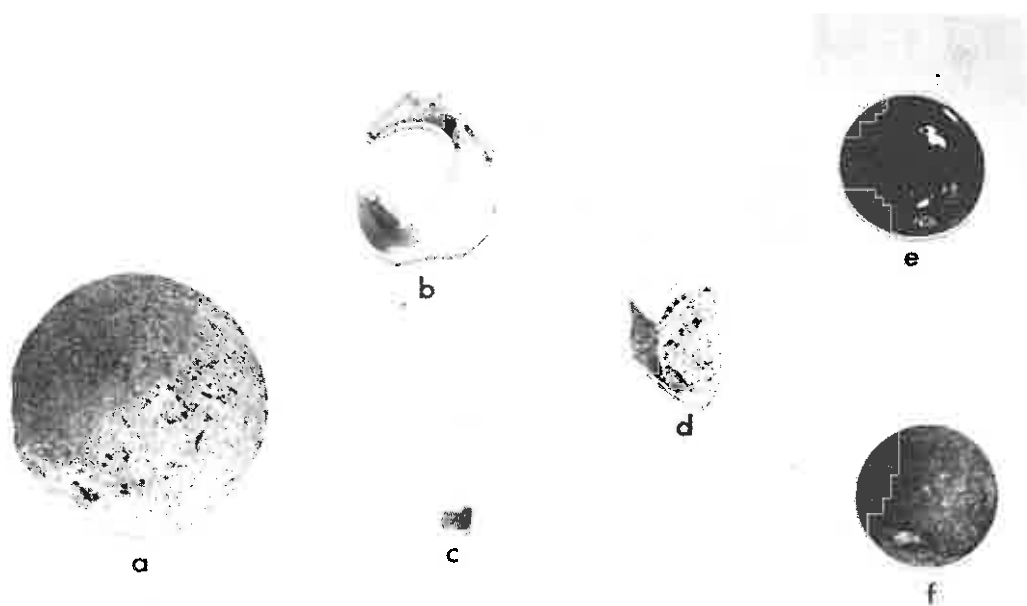


Figure 28

Toys: a,e,f) marbles, b,c) porcelain doll parts, d) porcelain tea set.

Table 3

Quantification of the
Nineteenth Century Assemblage

Kitchen	Zones	Features	Total
Porcelain, undecorated	77	20	97
Porcelain, decorated	16	8	24
Lusterware	3		3
Creamware	9	2	11
Pearlware, undecorated	35	3	38
annular	12	3	15
shell edged	1	1	2
hand painted	7		7
transfer printed	6	3	9
Whiteware, undecorated	227	50	277
blue transfer print	199	6	205
other transfer print	41	20	61
annular	52	8	60
hand painted	53	1	54
shell edged	26		26
sponged	8	1	9
flow blue	14	2	16
Lead glazed earthenware	13	7	20
fine red bodied earthenware	4	2	6
Yellow ware	29	2	31
Grey saltglazed stoneware	2		2
nineteenth century stonewares	9	1	10
Alkaline glazed stoneware	7	1	8
Ginger beer bottle	1	1	2
Colono wares		3	3
Slipware, combed and trailed	3	1	4
Delft	3		3
White Saltglazed Stoneware	5		5
Brown saltglazed stoneware	3		3
Black bottle glass	291	41	332
light green bottle glass	274	61	335
brown bottle glass	9	5	14
clear container glass	438	127	565
milk glass	11	3	14
purple glass	3		3
amber glass	6	3	9
aqua glass	18	10	28
blue glass	9	7	16
decorative table glassware	85	9	94
pharmaceutical glass	10	8	18
bottle cap	1		1
cutlery	2		2

Table 3, cont.

<u>Architecture</u>			
nail, unidentified	806	115	921
nail, cut			
nail, wire	1		1
window glass	324	224	548
roof tile	5	2	7
screw	1	1	2
spike	3	1	4
pintle	1		1
delft tile	2		2
<u>Arms</u>			
shells	6	2	8
shot	3		3
gunflint	1		1
<u>Clothing</u>			
lace bobbin	1		1
hook & eye	4	2	6
brass button	3	2	5
bone 1 hole button	5		5
bone 4 and 5 hole button	10	2	12
straight pin	1		1
porcelain button	8	2	10
thimble	1		1
bead	1		1
shoe eyelet		1	1
snap		1	1
collar stud		1	1
<u>Personal</u>			
gold jewelry	2		2
die	1		1
coin	1	1	1
slate pencil	5	1	6
comb	1	1	2
mirror		1	1
tooth brush	1	1	2
fan		1	1
<u>Furniture</u>			
lead tag	1		1
brass tack	4	1	5
escutcheon	1	1	2
<u>Pipes</u>			
river burnished		1	1
red clay		2	2
kaolin clay	23	7	30

Table 3, cont.

<u>Activities</u>			
barrel strap	1		1
marble	2	3	5
toy dish	2		2
doll	3		3
ud iron	6		6
ud lead	6	6	12
brass spring	1		1
hasp	1		1
nut	1		1
iron staple		1	1

Table 4

Quantification of the
Twentieth Century Assemblage

<u>Kitchen</u>	
porcelain, decorated	10
porcelain, undecorated	5
pearlware, blue transfer print	1
whiteware, undecorated	12
whiteware, sponged	1
whiteware, blue transfer printed	2
whiteware, annular	3
whiteware, decaled	6
whiteware, polychrome hand painted	13
black bottle glass	6
light green bottle glass	25
clear container glass	185
brown bottle glass	5
aqua glass	11
milk glass	7
decorative table glass	49
crown bottle cap	8
cutlery	2
tin can	4
<u>Architecture</u>	
window glass	178
nails, ud	188
nails, wire	98
nut	2
roof tile	1
padlock	1
window stripping	10
hinge	1
utilitarian porcelain	4
hasp	1
<u>Arms</u>	
shot	1
<u>Clothing</u>	
safety pin	10
shoe buckle	3
shoe rivet	2
clothing rivet	1
brass button	4
porcelain button	5
bone button	1
pearl button	7
garter snap	2

Table 4, cont.

<u>Personal</u>	
key	1
comb	1
cosmetic container	1
pencil	4
<u>Furniture</u>	
lamp chimney	2
chandelier prism	2
curtain weight	2
escutcheon	1
<u>Pipes</u>	2
<u>Activities</u>	
machine part	6
screw	1
nut	2
staple	3
marble	2
bucket handles	7
top	1
wire	1

Architecture

Architectural materials comprised 52.6% of the assemblage. This consists primarily of window glass and nails. The majority of nails were unidentifiable. Ninety eight wire nails were recovered; these were manufactured after 1850. Other architectural artifacts include a hasp, a hinge, ten fragments of window stripping, a padlock, a roof tile, and two nuts.

Arms

The only arms item recovered was a single lead shot, comprising .1% of the assemblage.

Clothing

A variety of clothing items were recovered. Most numerous were steel safety pins. Buttons included four brass, five porcelain, one 4 hole bone and seven mother of pearl buttons. More recent artifacts include two garter snaps, two shoe rivets, and a clothing rivet. Clothing comprised 4.3% of the assemblage.

Personal

Personal items comprised 1.08% of the assemblage. This included a key, a comb, a milk glass cosmetic jar, and four wooden pencil tops.

Furniture

Furniture comprised .76% of the assemblage. The most unusual items were two chandelier prisms (Figure 23). These are identical to those currently hanging in the house. Other items included a kerosene lamp chimney, a light bulb base, two curtain weights, and a brass escutcheon.

Pipes

Two pipes were recovered. One was a kaolin pipe stem. The other was a portion of a stubstemmed pipe. This was of red clay, unglazed, with a ribbed exterior (Figure 26). Pipes comprised .21% of the assemblage.

Activities

Activities items comprised 2.5% of the assemblage. These included six unidentified machine parts, a wood screw, and three staples. Toys included the iron point to a top and two marbles. Other items include a fragment of barbed wire and seven wire bucket handles.

CHAPTER V

INTERPRETATIONS

Establishing the Presence of a Coherent Archaeological Data Base

An essential first step in any archaeological endeavor, and central to the goal of the testing program is to establish the presence of archaeological resources and evaluate their condition. In the earliest days of cultural resource management studies on urban sites, such an issue was critical. The urban archaeological record, while often deep and highly complex, may also be badly disturbed, and even nonexistent, as a result of major land altering activities (Honerkamp et al. 1982). Even extensive evidence of earlier occupations can be obliterated by twentieth century construction practices.

Continued examination of urban sites, however, suggests that such disorganization and the resulting lack of closed contexts may in fact be characteristic of urban sites, and may serve as an index of the intensity of occupation (Honerkamp and Fairbanks 1984). Honerkamp and Fairbanks suggest that controlled excavation and analysis of even recently disturbed contexts can provide meaningful data on the urban site. These researchers suggest that archaeologists must develop new methods appropriate to the conditions of the urban archaeological record, including more sophisticated field and analytical methods as well as more innovative use of the documentary record (Deagan 1984; Dickens 1984; Garrow 1985; Honerkamp and Council 1984).

With these developments in mind, it seems that the most appropriate method for determining the coherence of the urban archaeological record is a controlled, careful excavation of the site stratigraphy, and an assessment of artifact density and context. The Aiken-Rhett house represents a domestic only site within a suburban area. The original structures are still standing; the site experienced only three building phases and no demolition or rebuilding. It therefore seems that the site was less likely to have experienced the major reorganization that often characterizes sites in the commercial core (see Honerkamp et al. 1982 for an example). On the other hand, it was possible that most of the refuse generated by the household was deposited off site, or that the yard area was subject to postdepositional disturbances.

Six test units located in the rear yard revealed three stratigraphically distinct zone deposits. These also represented temporally distinct events. Zones 2 and 3 were deposited in the nineteenth century, ca. 1817-1860, while zone 1 was deposited in the twentieth century. In addition to cultural materials, the zone deposits also contained faunal and floral remains which were amenable to archaeological study. These zones, particularly zones 2 and 3, varied considerably in depth and artifact density.

In addition to these zone deposits, the testing program produced a number of interpretable features. These features produced closed context deposits with date ranges from 1817 to ca. 1900. While a number of the features were architectural in nature, i.e., construction pits and builders trenches, others provided considerable information on a variety of site activities. Most notable was the extensive drainage system.

A measure of site occupation density was calculated for the Charleston Center site by Honerkamp et al. (1982). This is expressed as artifact and feature frequency per square foot of excavated area. This site produced .4 features, 74.9 grams of bone, and 35.4 artifacts per square meter of excavated area. The Aiken-Rhett site produced .56 features and 184.2 artifacts per square yard. These figures suggest a relatively dense site. Once again, the density of the site varied from area to area.

In summary, the artifact density, temporal stratification, and presence of discrete features suggest that the site is an adequate data base for sound scientific research. As will be demonstrated in subsequent sections, the data base is suitable for addressing a number of issues of current archaeological interest. Clearly, the Aiken-Rhett site contains a significant archaeological resource.

Site Formation Processes

Investigation of site formation processes has been central to ongoing archaeological research in Charleston. In order to properly interpret an archaeological site, it is first necessary to understand the processes responsible for the development of that data base.

Cultural materials are introduced into the ground by three basic methods; discard, loss, and abandonment (Schiffer 1977). Once in the ground, they can be redistributed, or they can be removed (Ascher 1968; Binford 1981; Honerkamp and Fairbanks 1984; Schiffer 1983). Usually, the archaeological record is a combination of all three events. In the urban situation, where these processes can become increasingly complex, archaeologists are particularly interested in the processes which introduce and alter materials.

Continuing research suggests that sheet midden, or zone deposits, are characteristic of rural sites, particularly farm or plantation sites. This pattern has been noted on plantation sites in coastal Georgia (Singleton 1980) and South Carolina (Drucker and Anthony 1979; Zierden and Calhoun 1983; Zierden et al. 1985, 1986). Another common depositional practice during the colonial and antebellum periods seems to have been the use of adjacent swamps and marsh for refuse disposal. Features, while present at these sites, usually contained sparse materials. With the availability of large, open areas, rural residents were able to deposit refuse on the ground surface, or in lowlying areas, at a convenient distance from the habitation area. The extensive excavations at Daniels Island revealed that while this practice was prevalent, large subsurface features such as a well and abandoned brick foundation were secondarily used for refuse disposal (Zierden et al. 1986).

Although there is considerable overlap, reuse of subsurface features for refuse disposal appears to be more common on urban sites. The backyard area was the locus of refuse disposal. Although some refuse was scattered on the ground as sheet midden, much of it was deposited into features such as wells and privies. This was probably done in response to the relatively crowded urban conditions and resulting health considerations.

Crowded conditions and health considerations also resulted in the deposition of refuse in any convenient space in the city. Open lots, unpaved streets, and alleys were likely candidates (Calhoun et al. 1984; Zierden and Calhoun 1983a). Quantities of material were also dumped into creeks and lowlying marshy areas, creating viable real estate (Zierden and Calhoun 1986).

Urban archaeological deposits reflect abandonment and loss, as well as discard. Abandonment activities include loss of materials due to fire and storm, and the resultant cleanup activities, or the exchange of property between tenants and owners (Zierden et al. n.d.; Lewis and Haskell 1981). Another key aspect of the urban site may be disorganization, the result of continuous reoccupation and the intrusion of later deposits into earlier ones. Additional factors unique to urban sites are private or municipal collection of refuse, i.e., removal of refuse by scavengers, which resulted in the redeposition of refuse far from its place of origin, and the replacement of private handling by municipal or corporate management of such basic needs as water procurement and storage, sanitary waste management, and trash disposal (Honerkamp and Council 1984; Zierden and Calhoun 1986).

The Aiken-Rhett site is the result of many of these same processes. Much of the refuse is contained in zone deposits. This is particularly true of the twentieth century materials, which are contained in zone 1. However, most of the artifacts contained in the zone are small, ideosyncratic items, such as buttons and straight pins, suggesting that most of these items were lost, rather than discarded. Municipal trash service was in place by this time, so most twentieth century refuse was probably deposited off site. The nineteenth century zones also contain a quantity of materials, but there is considerable variation in artifact density. This suggests that, while materials were deposited on the ground surface, this was limited to certain localities, specifically the rear of the kitchen building. Other portions of the yard, particularly the west side, appear to have been kept relatively clean. Such localized surface scatter may be characteristic of other urban sites, but verification will require more extensive excavation. Once again, it is possible that a good portion of the nineteenth century materials were deposited off site. Aiken could have enlisted the services of a scavenger, or dumped trash into the nearby marsh that was filled to form the block between Judith and Chapel streets (Figures 29 and 30).

There is also evidence for the deliberate deposition of refuse in subsurface features. This is best seen in feature 4, the possible privy, and feature 12, the large pit filled with construction rubble. The concentration of refuse in feature 2 may also be the result of continued filling of feature 4. Other small features contained only sparse material, but this may be due to their architectural function.



Figure 29

Portion of the 1852 Bridgens and Allen map, showing the Aiken-Rhett site, and the remains of the marshy area between Chapel and Elizabeth streets.

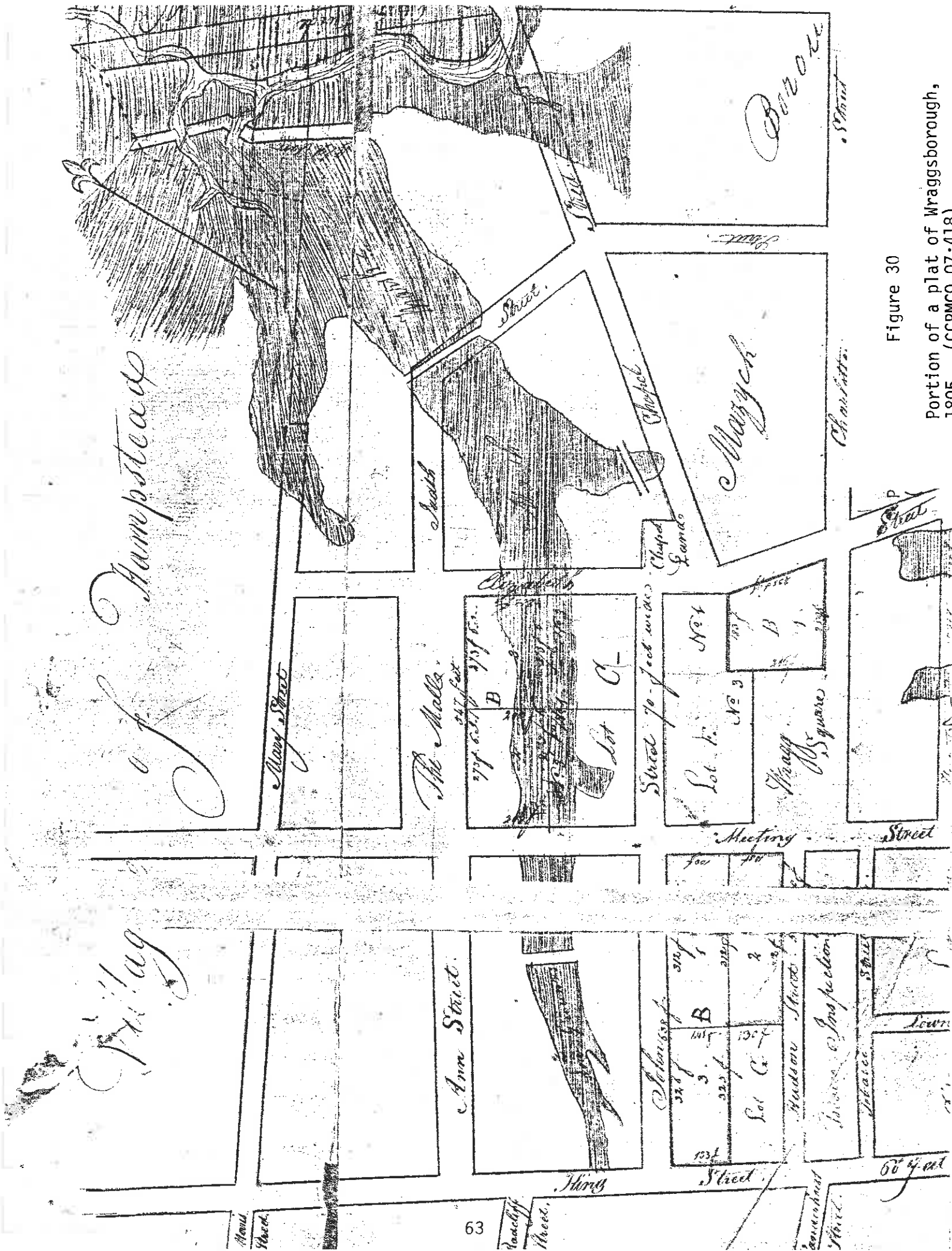


Figure 30

Portion of a plat of Wraggsborough,
1805 (CRMCO 07:418).

In summary, the Aiken-Rhett site appears to be a combination of discrete refuse disposal in subsurface features and broadcast discard in sheet deposits. The site does suggest localized refuse disposal in these sheet deposits. Loss and discard are the major processes responsible for site formation here. Besides this localized refuse disposal, it is likely that much of the refuse was deposited off site.

Socioeconomic Status

The investigation of socioeconomic status as it is reflected in the archaeological record has been a central concern in historical archaeology in recent years. Significant studies have been conducted on lower status, particularly black slave, sites, resulting in the delineations of patterns which reflect low status. John Otto's pioneering study combined the examination of ceramics and faunal remains to suggest that relative percentages of ceramic styles and vessel types may be used to detect socioeconomic status (Otto 1977). The use of such vessels, in turn, reflects dietary trends associated with that status. A related landmark study was conducted by George Miller (1980). Using price guides from the early nineteenth century, Miller developed an index for the relative value of refined earthenware decorative motifs, with undecorated ware being the least expensive and transfer printed the most expensive. Once again, socioeconomic status may be determined through relative percentages of these various types.

Other researchers have examined the relative percentages of various functional artifact groups, based on South's (1977) patterns, to determine socioeconomic status. Once again, these studies have focused on lower status sites. In her examination of slave sites on Butlers Island, Singleton (1980) noted that the majority of artifactual materials were associated with subsistence and shelter (kitchen and architecture groups), with very low percentages of "luxury" items, such as those found in the clothing, personal, and furniture groups. A similar pattern was noted by Trinkley and Caballero (1983) on early twentieth century tenant sites; artifact groups other than kitchen and architecture were very small, when compared to the Carolina Artifact Pattern. These authors suggest that these artifact patterns reflect the poverty of the inhabitants.

Still other researchers have suggested that the relative percentage of particular artifact types is indicative of socioeconomic status. For example, high status may be reflected in the presence of large amounts of decorative table glass and oriental porcelain, particularly overglazed varieties (Lewis 1985). On Spanish colonial sites, high status is reflected in a high percentage of hispanic majolicas, relative to the amount of locally made aboriginal wares (Deagan 1978; 1983).

Socioeconomic status has been investigated on previously examined Charleston sites. These include McCrady's Longroom, which catered to an elite clientele (Zierden et al. 1982), Lodge Alley, the home of lower class citizens (Zierden et al. 1983a), and First Trident, presumably occupied by poorer citizens in the colonial period and by more affluent individuals in the antebellum period (Zierden et al. 1983b). These studies have been

hampered by a number of factors. The sites in question were used for a variety of purposes, both residential and commercial, throughout the eighteenth and nineteenth centuries. Owners, and presumably occupants (not necessarily the same) changed several times. Further, documentation on these specific owners and occupants is lacking for several periods of site occupation; in these cases occupant status was inferred from the general demographic profile of the neighborhood for various periods. While this approach has validity, several variables exist which cannot be controlled. These include the often mixed nature of Charleston neighborhoods, and the proclivity for dumping refuse in any available space. This, plus the resulting "averaging" of the urban archaeological record (Honerkamp and Fairbanks 1984; Zierden and Calhoun 1986), limits the value of these studies. Status was not examined at two other Charleston sites (Atlantic Wharf and Charleston Center) because these variables were even more pronounced.

The Aiken-Rhett site, therefore, presents an excellent opportunity to examine socioeconomic status in an urban setting. The occupants, and their socioeconomic status, are known; William Aiken Jr. was one of the wealthiest men in Charleston. Also, the site functioned only as a domestic site, therefore reducing the variable of site function. This tighter control should aid in correlating status with artifact patterns; these results can then be utilized on sites with less available documentary information.

There is one problem with the present status study; master and slave lived in close proximity at the site. The refuse recovered, therefore, most likely includes materials from both social groups. This may serve to "blur" status differences. One consistent factor, however, is that all Charleston sites exhibited this phenomenon. Therefore, comparisons should be internally consistent. In addition, Wade (1964) has suggested that slaves living in their master's urban compound maintained a diet similar to the master and used his discarded wares; in other words, the urban slave reflected the status of his master. This phenomenon makes mixing of master and slave materials less critical on urban sites than on plantation sites, where rationing and segregation were more common.

The nineteenth century assemblage was examined for clues to socioeconomic status. Diet is expected to be sensitive to status (Schultz and Gust 1983; Miller 1978; Reitz and Cumbaa 1983). Thus, artifacts in the kitchen group which function in sociotechnic and technomic spheres (Binford 1972) are expected to reflect social status, as are floral and faunal remains. In addition, personal, highly curated objects are expected to reflect social status, based on relative availability (Zierden 1981).

Previous research in Charleston, and other areas, has suggested that within the kitchen group, an increase in the relative percentage of oriental porcelain (in the eighteenth century) and transfer printed refined earthenware (in the nineteenth century), glass tableware, and ceramic tableware should vary positively with income and status. Likewise, variety in vessel form has been demonstrated to vary positively with relative affluence (Otto 1975). In addition, variety within and relative percentage of clothing and personal groups are expected to reflect social variability. Lewis (1985) examined these same artifact categories in the extensive assemblage from Drayton Hall. Drayton Hall was one of several plantations owned by the wealthy

planter family. Lewis' study supported these artifact categories as indicators of upper status.

Based on these indicators, the Aiken-Rhett assemblage strongly reflects the wealth and high status of its occupants. The clothing, personal, and furniture groups together comprise 1.45% of the assemblage. At other presumed high status sites, McCrady's Longroom and antebellum First Trident, these groups comprised .53% and 3.8%, respectively. At low status sites, Lodge Alley and colonial First Trident, they comprised .88% and .95%. The large percentage at the antebellum First Trident may reflect the commercial function of the property (Table 5).

The clothing group was quite varied. Clothing items included a variety of brass, bone, and porcelain buttons, as well as hooks and eyes, a snap, and a collar stud. In addition, several items associated with the manufacture of clothing were present, including a thimble, a lace bobbin, and a straight pin. This variety in the clothing group was also reflected at Drayton Hall (Lewis 1985:132).

The personal group was also quite varied. Perhaps most indicative of the status of the family were the two fragments of gold jewelry. The assemblage also included a fan slot, two toothbrush fragments, a mirror, and a comb. Also indicative of the family's status is the relative percentage of furniture items. At .17% it is one of the highest encountered in the city. This assemblage was also more varied than those at other Charleston sites.

Examination of the kitchen groups also provides some clues to the socioeconomic status of the inhabitants. Most outstanding is the relative percentage of table glass, which comprised 4.06% of the kitchen group. These wares comprise only .25% and .74% of the McCrady's and First Trident assemblages. This class included a variety of etched tumbler and goblet fragments. Ceramic tableware comprised 96% of the ceramics, compared to 66% at McCrady's and 71% at First Trident. While this is believed to reflect the high status of the Aiken family, small sample size and the increasing availability of refined earthenwares as the nineteenth century progressed cannot be overlooked.

Porcelain comprised 4.63% of the ceramics, compared to McCrady's at 11% and First Trident at 6.2%. The temporal association of the respective sites are probably responsible for these differences; while considered a high status ware in the eighteenth century, porcelain declined dramatically in both quality and price in the early nineteenth century. More revealing of the status of the Aiken family is the percentage of transfer printed refined earthenwares. These were the most expensive types of refined earthenware in the early nineteenth century. This type was also most often associated with matched sets and specialized serving pieces. Transfer printed ware comprised 12.3% of the ceramics, compared to 10% at First Trident.

Although the majority of the Aiken-Rhett ceramics were fragmentary in nature, the assemblage was examined for formal attributes. An analysis of vessel form is contained in Table 6. Plates of various types were the most numerous, with 21 being present. These were in undecorated, shell edged, and transfer printed patterns. Bowls were the next most common, present

Table 5
Comparison of Sociotechnic Categories

	Aiken-Rhett	McCrary's Longroom	First Trident antebellum	Lodge Alley
porcelain, % of ceramics	4.63	11.0	6.2	5.0
transfer print earthenware, % of ceramics	12.34		10.0	4.0
tableware, % of ceramics	96.0	66.0	71.0	
table glass, % of kitchen	4.06	.25	.74	.04
clothing, % of total	.96	.5	3.2	.5
personal, % of total	.32	.1	.3	.2
furniture, % of total	.17	.1	.3	.1

Table 6

Distribution of Vessel Forms,
Aiken-Rhett antebellum assemblage.

	Transfer print	Annular	undecorated	shell edged	hand painted
cup					1
bowl		3	3		2
plate	4		4	12	1
jar lid	1				
saucer			1		1
teapot			1		

in annular, undecorated, and hand painted motifs. Other identifiable vessel forms included cups, jar lids, soup bowls, saucers and teapots. The variety of vessel forms, dominated by plates, underscore the affluence of the family.

The affluence reflected in the kitchen artifacts is also mirrored in the faunal remains. For the first time, a Charleston faunal assemblage exhibited the characteristics believed to reflect high status. High status households utilized a wide range of food resources because they valued dietary variety and could afford to augment standard fare by hiring the services of a hunting or fishing specialist. Although small, the Aiken-Rhett assemblage contained a number of wild and domestic birds, turtles, and a variety of fish, including two typically offshore species. Both the diversity and the offshore taxa of the wealthy Aiken-Rhett household fish inventory may reflect a similar status-related regard for a varied menu, coupled with the requisite means to purchase resources not readily available to the less affluent. Both fish and turtles were considered a delicacy in antebellum Charleston. At the same time, the faunal assemblage reflects the heavy reliance on domestic taxa characteristic of urban sites, regardless of status (Reitz 1986). The Aiken-Rhett site also contains the first direct evidence of on site butchering.

Although little evidence of plant foods was recovered, analysis of the wood charcoal revealed a higher proportion of hardwood to softwood than has previously been recovered on a Charleston domestic site. Such woods were more desirable in that they produced better coals and longer, more even heat. Given the fact that firewood became increasingly scarce and expensive, this may once again reflect Aiken's ability to obtain scarce and expensive resources.

Site Function

A major research issue in Charleston has been the reflection of site function in the archaeological record. Many of the sites in Charleston, and all of those investigated prior to the Aiken-Rhett site, were the site of both residential and commercial activities. Initial research on the delineation of functional characteristics of sites through analysis of artifactual materials has led archaeologists to suggest that certain commercial activities may not be reflected in the archaeological record. Both Lewis (1977:177) and Honerkamp et al. (1982:17) have suggested that commercial enterprises that transfer, rather than produce, goods (such as retail shops) are likely to produce little in the way of byproducts which would be recovered archaeologically. This was supported by data from the Charleston Center site, a locus of nineteenth century retail commercial activity, which produced refuse from domestic activities almost exclusively (Honerkamp et al. 1982:142-155). By contrast, sites characterized by craft oriented, or combined craft-domestic occupations appear to generate at least some discarded byproducts indicative of site function (Honerkamp 1980; Lewis 1977).

Subsequent investigations, though, suggest that commercially related artifacts may be present as the result of abandonment, as opposed to discard or loss (see Schiffer 1977:19-24; Zierden et al. 1983a:63-67). These abandonment behaviors include such activities as the major cleanup associated with the transfer of property from one family to another (Lewis and Haskell 1981), or following disastrous events such as fires or floods. These postulated cleanup activities involved large scale deposition of refuse and rubble, often in large subsurface features such as privies (Zierden et al. 1983a; Bryant 1984). To date, the most dramatic evidence of abandonment of commercial activity areas has been from craft related deposits. This includes deposits associated with a possible burned in situ jewelry smithing operation at 38 State Street (Zierden et al. 1983a) and extensive evidence of coopering activities behind the Exchange building, destroyed by the 1752 hurricane (Herold 1981). Evidence for craft activities has also been recovered from secondary refuse deposits, such as at the First Trident site, where extensive evidence of leather working was recovered.

Evidence of retail commercial activities has also been recovered from abandonment type deposits; some of the privy deposits salvaged at the Charleston Center site (Zierden et al. n.d.a) contained evidence of commercial activities. Some of these deposits appear to be the result of cleanup after the fires which devastated the area in the early nineteenth century while others seem to represent cleanup after a property changed hands.

Site function in Charleston has been examined by comparing the site assemblages to South's (1977) Carolina Artifact Pattern, which is presumed to represent an averaging of domestic behavior. By utilizing data from a number of British colonial sites, South proposed a range of variability that can be expected for the frequency percentages of artifact classes and groups. By establishing the normal variation, it should be possible to recognize non-domestic activities as variations from these ranges.

Comparison of the Charleston assemblages to the Carolina pattern reflects a general conformity to the pattern. The Carolina pattern and the mean for Charleston sites is shown in Table 7. The major difference is in the activities

Table 7
Comparison of the Aiken-Rhett Assemblages
to the Carolina Artifact Pattern

	19th cent. assemblage	20th cent. assemblage	Carolina Pattern	Charleston mean
Kitchen	64.24	38.36	63.0	63.1
Architecture	32.49	52.6	25.5	25.03
Arms	.30	.1	.5	.2
Clothing	.96	4.34	3.0	1.18
Personal	.32	1.08	.2	.14
Furniture	.17	.76	.2	.08
Pipes	.72	.21	5.8	5.97
Activities	.76	2.5	1.7	4.14

group, which averages 4.1% for Charleston, compared to 1.7% for the Carolina pattern. This suggests that the majority of the refuse recovered in the urban setting is related to domestic activity.

Other researchers investigating site function in the urban setting have proposed the Public Interaction Pattern (Wise 1978; Garrow 1982; 59, 64). The pattern was formulated from both urban and rural sites which served as public structures. The most striking feature of this pattern is the nearly equal representation of kitchen and architectural groups. The authors suggest that this reflects the substantial nature of public structures and the reduced importance of domestic activities at these sites. None of the Charleston data fit this pattern, however. Further, research in the lowcountry suggests that the relative percentage of architectural items is more dependent on the site formation processes, i.e., whether a building was leveled, or decayed in place, rather than site function. Although it is heavily biased toward craft enterprises, the activities group seems to be the best monitor of site function in Charleston.

The Aiken-Rhett assemblage was examined for clues to site function, in order to test these assumptions. It is known that the site served only as a domestic locus throughout its history, with the exception of the Civil War period. Thus the artifact profiles can be used as a control for investigations of dual function sites. As expected, the activities group at the site was quite low, comprising only .76% of the assemblage. This is in contrast to the Charleston mean of 4.1%, and even the Carolina pattern at 1.7%. The only comparable sites in the city are Lodge Alley, a domestic only residential area (.77%), and McCrady's Longroom, whose commercial function was essentially domestic in nature (.25%). Therefore, the Aiken-Rhett assemblage appears to be more domestic than the Carolina pattern. This is not necessarily unexpected; other researchers have noted that the empirical artifact profiles South used in establishing the Carolina pattern were derived from assemblages of combined domestic-craft sites. Therefore, domestic only refuse, from whatever source, should exceed the mean for domestic artifact classes, i.e., kitchen, clothing, personal, and furniture (Honerkamp et al. 1982:147-157).

Assuming the validity of archaeological patterning in general and the Carolina pattern as a reflection of British colonial domestic activity in particular, the Aiken-Rhett assemblage strongly reflects domestic activity. This assemblage should serve as a good control for future excavations on dual function sites.

Spatial Patterning

The spatial patterning of Charleston, particularly on the individual site level, reflects the particular demands of the urban environment. During the eighteenth and nineteenth centuries, most of the structures found dispersed across the rural plantation site were also crammed onto the constricted urban lot (Castille 1982:5; Wade 1964:61; Zierden and Calhoun 1986). Urban compounds, particularly those located within the commercial core, were organized to make the most efficient use of available land.

Lots were deep and narrow, to maximize the available street frontage. Houses fronted directly on the street, with the narrow end facing the road. The southern side was open and complete with piazzas, while the northern side was devoid of large openings; this allowed residents to take full advantage of prevailing breezes while maintaining maximal privacy.

Behind the main structure, auxiliary structures were arranged within a fenced compound, often including slave quarters, kitchen, stables, well at mid lot, and privy in the rear corner. Gardens, both ornamental and functional, might be planted and livestock might be kept. The backyard was the scene of many commercial as well as domestic activities (Honerkamp et al. 1982; Zierden and Calhoun 1986). Intersite patterning in the commercial area also reflects the constriction of the urban environment. The city expanded vertically, and in toward the center of blocks, before it expanded horizontally, particularly in a northerly direction. Following the Revolution, the city gradually began to expand physically, to the north. Plantation lands in the Neck area were gradually subdivided and sold.

Spatial patterning on sites in the Neck is expected to be somewhat different than in the commercial core. First, many of the sites in this area served only as residences, with site occupants commuting to work in the commercial core. While many of the wealthy merchants remained in the core, preferring to live near their businesses, planters began to purchase and build on the spacious, and healthier, lots located in the Neck. The Aiken-Rhett site is an example of one of these opulent antebellum townhouses and, as such, varies somewhat from the pattern established for the commercial core.

The lot itself is larger than most of those in the commercial core, particularly for the nineteenth century. Study of the Charleton Center block suggests that the initially narrow lots of the eighteenth century were further subdivided longitudinally, resulting in lots less than 30 feet wide, but over 200 feet long (Honerkamp et al. 1982:35). In contrast, the Aiken-Rhett lot is 82 feet wide and 288 feet deep; it is therefore the width, rather than depth of the lot that is unusual. Also, the site has street frontage on three sides. Rather than facing sideways, the house is oriented with the long side facing Judith Street; the original entrance was in the center of the front. The front of the house still retains the double piazza.

The rear yard exhibits similar spatial arrangement to the suggested pattern, the exception being that the arrangement is more spacious. Kitchen and slave quarters are located along the east wall, and stables and service rooms are parallel along the west wall. A well was located between the kitchen and main house, and privies were located in both rear corners. An interesting feature of the rear yard service facilities is the possible slave privy, located adjacent to the kitchen building. Wade (1964) describes such features in precisely this location.

The rear yard was never a formal garden, but was instead a working yard. This is supported by the presence of structures for livestock, the chicken coop and cow shed, as well as the possible watering basin. The only intact ornamental aspects are the paved brick courtyard and the avenue of magnolias, leading from the rear service gate. The entire compound is surrounded by a ten foot brick wall.

Aiken-Rhett, then, is similar to sites in the commercial core in that it contains the same elements in a more or less similar spatial arrangement. The main differences are orientation of the main house parallel to the street front, and the addition of a small front yard. The lot is also more spacious, twice to three times as wide as the more central lots. This pattern, while more common in the suburban areas, is expected only on the lots of the wealthier citizens. Delineation of spatial patterns for middle and lower class sites in the Neck awaits further research.

Individual versus Corporate Adaptations

As archaeological research in Charleston shifts from primarily eighteenth century sites to antebellum sites, it becomes necessary to investigate the major adaptive changes occurring in Southern cities during this period. Specifically, the eighteenth century featured individual, household level responses to such basic needs as water procurement, trash disposal, and sanitary waste management. These adaptive strategies are present in the archaeological record in the form of wells, trash pits and sheet deposits, and privies, respectively. In terms of trash disposal, all of the above features were secondarily used for refuse disposal.

Technological advances in the nineteenth century, coupled with the urban population growth, resulted in a shift from these individual responses to more centralized, corporate responses. This is seen in the development of municipal water systems, sewer and storm drainage systems, and trash pickup. The archaeological manifestations of these changes are quite different from those of the earlier period, and result in the disorganization of the archaeological record that characterizes many urban sites (see Honerkamp and Council 1984 for a more thorough discussion of the archaeological manifestations of these events).

The antebellum years witnessed tremendous changes in the social, economic, and technological systems of the United States. Industrial development was a key factor in these changes, and cities were the center of these events. This was manifested most graphically in municipal support of, and competition for, railroads (Goldfield 1982; Greb 1978; Pease and Pease 1985). A national economy replaced local and regional economies. The nineteenth century was the age of commerce and industry, and cities were the repositories of the changes (Goldfield 1977:52).

Key factors in nineteenth century cities was keen competition between Northern and Southern cities, and among Southern cities themselves. In order to capture new commerce and industry, cities strove to establish and maintain images of health, attractiveness, and modernization. Few visitors and customers would be attracted to a city that was unhealthy, unattractive, or unpleasant. The pressure of competition made the provision of services such as lighting, disease prevention, water, and street maintenance a necessity (Goldfield 1977:67).

In order to meet the needs of, and services demanded by, urban residents. city governments expanded. Such services as lighting, road maintenance, and

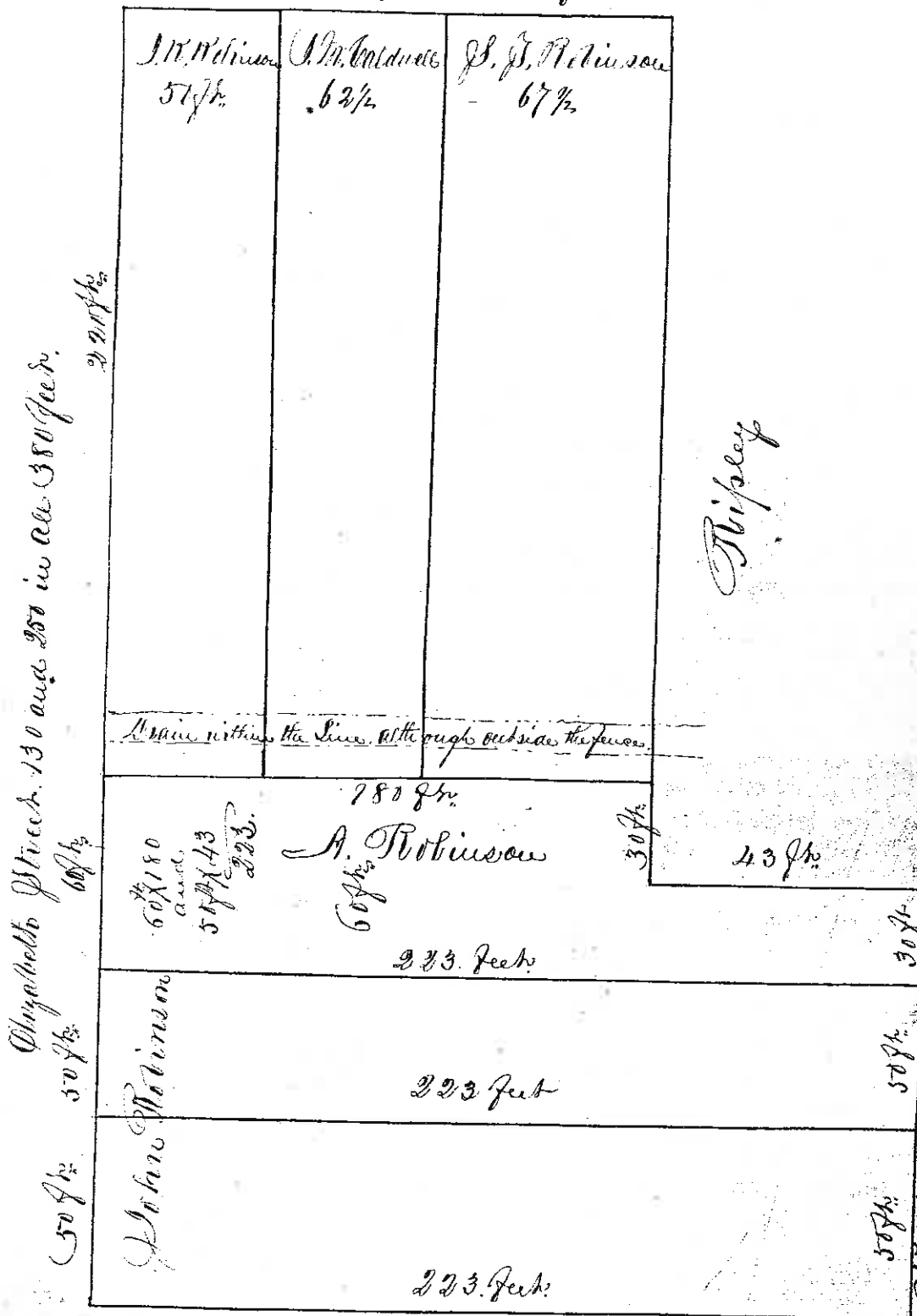
fire control could no longer be maintained by the private citizen or volunteer groups. Cities found it necessary to centralize in order to modernize. City governments and the city's financial bases were expanded. Meeting the need for urban services became a joint effort of municipal and private sectors.

Fear of epidemics and prevention of disease resulted in municipal water and sewerage systems and trash pickup; cleanliness was seen as the major preventive. This began in 1826 in Charleston, when the Charleston Board of Health appointed a commission to study the problem (Goldfield 1977:69). A municipal water system was, however, a long time in coming, and not developed until the second half of the nineteenth century (Pease and Pease 1985:196-7). Prior to this, Charlestonians began to rely on cisterns designed to catch and store rainwater, as shallow water wells were increasingly contaminated by seepage from privies (Honerkamp et al. 1982:159). Drainage, of both storm and sewerage were seen as more immediate problems. Drains were first constructed in 1806, to replace the privy vaults, which required physical removal of waste on a regular basis. These proved to be less effective than the vaults themselves, however, and no suitable improvement was found until 1854 (Dingle 1892). At this time, construction began on the tidal drainage system, designed for both storm and sewerage water. Throughout the second half of the nineteenth century, city officials sought to replace individual privy vaults with municipal hookups; an ordinance ratified in 1851 banned individuals from connecting their privies to the municipal drains (Lebby 1870:15; Parker 1853).

Excavation on urban sites occupied in the nineteenth century, then, is likely to reveal archaeological evidence of these new adaptive strategies, or modernizations. The brick drain uncovered during archaeological investigations at the Aiken-Rhett site was assumed to be a municipal improvement, as a plat of similar lots facing on Judith Street (Figure 31) reveal a drain which had been constructed within the property lines, but outside their enclosing fence. This plat is dated 1846.

The drain uncovered in the rear yard of the Aiken house ran from the area of the back gate parallel to the east wall of the property, and then turned at a 45° angle, where it was encountered in N95E155. The drain evidently continued at this angle, where it was connected with feature 4. The drain then evidently continued in this direction beyond the property line, presumably to the marsh, or on to the Cooper River (Figure 29). Artifacts contained in the drain and its builders trench suggest that it was constructed in the mid-nineteenth century and abandoned after 1880. The connection of the drain with the basin and with feature 4, tentatively interpreted as a slave privy, calls into question the presumed municipal origin of this feature. It is unlikely that the basin and privy were municipal features, and it is equally unlikely that Aiken would have violated the city ordinance, and connected such features directly to municipal drains. Finally, although documentation is currently not available, it seems unlikely that municipal sewerage service was available to residents of the Neck at this early date; the Neck was not annexed until 1849. Therefore, the most plausible explanation for the drainage system this time is that it was a private enterprise, commissioned by Aiken himself for his property. The drain probably connected to the privies, and ultimately flowed to the marsh below Judith Street.

Judith Street 780 feet,



20
 M. C. O'Connor, Co. Officer
 Chicago Street District
 I Certify that this is a correct copy of a
 plat attached to a deed from the Ordinary of C. W. Robinson to S. J. Robinson and his
 heirs for records 1294/1846 - records Book No. 11, page 37.
 M. S. Kille
 Register

Figure 31
 Plat of Robinson's Judith Street properties,
 showing the drain line. (CCRMCO W11:37).

If this is so, then such a system reflects a state-of-the-art adaptation to the same environmental pressures that resulted in the municipal systems. Aiken, exercising his wealth and authority, constructed an elaborate system to relieve the pressures caused by his family and several slaves living in a relatively constricted area. Like the municipal systems, this feature reflects innovative attempts to solve the problems of daily life exacerbated by the urban condition.

Several theories have been proposed for the origin and function of the features encountered at the Aiken-Rhett site; all of these are tenuous and require additional archaeological and historical research. Clearly, a clearer understanding of nineteenth century Charleston will involve a more thorough knowledge of the shift from individual to corporate services and/or innovative advances in individual responses. This will be an important avenue of inquiry in both archaeological and historical investigations.

CHAPTER VI

CONCLUSIONS

Summary

Testing at the Aiken-Rhett site revealed the presence of a coherent archaeological record. Excavation of 225 square feet revealed three temporally stratified zone deposits and twelve discrete features. These proveniences provided closed contexts dating from the 1820s through the early twentieth century; these were divided into two subassemblages dating to the nineteenth and twentieth centuries. In addition to 4570 cultural artifacts, the testing also resulted in the recovery of faunal and floral samples sufficient for detailed analysis. Based on these data, it is suggested that the archaeological component of the Aiken-Rhett property should be included in the National Register of Historic Places.

The data derived from the present study were used to address a number of ongoing research questions. The Aiken-Rhett site is a significant data base for urban studies because of the more extensive documentary base and the reduction of site variables. The fact that the site served only a domestic function and the household composition and socioeconomic status of the occupants is known makes the Aiken-Rhett data base an important control for future studies. Issues addressed in the present study include site function, site formation processes, spatial patterning, socioeconomic status, subsistence strategies, and corporate responses to urban environmental demands. The present study suggests that the Aiken family's high socioeconomic status is reflected in the archaeological record, in both the cultural and biological remains. This is the first time such correlations have been recorded in Charleston. The testing also provided preliminary data on site formation processes and spatial patterning in the suburban areas, complementing similar studies within the commercial core. Finally, the present study facilitated initial studies of the replacement of individual adaptive behaviors with corporate systems. This study is an important aspect of the ongoing investigation of adaptation to the urban environment. Future investigations at the Aiken-Rhett site will focus on these issues. Because of the amount of available documentary information for the site, and the relatively clear aspects of site function, the Aiken-Rhett site will be an important data base for future comparative studies.

Suggestions for Future Research

The present study has provided a strong foundation for ongoing research. There are several issues that should be investigated further:

1. Refuse deposits in the rear yard were highly localized, with a concentration of refuse in N95E155, and almost none in N160E100. This suggests that, contrary to the initial hypotheses, refuse was not necessarily discarded at the greatest possible distance from the house; evidently parts of the yard were deliberately kept clean, while others were used for refuse disposal. Future investigations should be spatially diverse, in order to examine these patterns of refuse disposal.

2. Given the fact that refuse was not concentrated in the rear yard, that it was localized, and that off site refuse disposal probably increased as the nineteenth century progressed, it is likely that refuse may be concentrated closer to the main house, and that most of the materials will be associated with the earliest occupation of the site. Excavations should be conducted in the kitchen building, particularly around the hearth, and beneath the brick courtyard. It is expected that these features served to seal earlier deposits, and that these are likely places for refuse disposal. In addition, the area between the main house and kitchen contains a depression reputed to be the original well. This feature should be investigated.

3. The drain system requires further investigation to determine its function, origin, and extent. The line should be traced to determine if it originates outside the property, whether or not it connects with the privies, and where it goes. This should be augmented by considerable documentary research to determine the history of municipal sewerage service in Charleston, when the drain was built, who built it, and how it functioned.

4. In addition to being considered as a single entity, the role of the site within the neighborhood and within the city should be considered. This will involve a detailed background study on the occupation and development of the Neck. Such a study is planned for the future, and continued investigation of the Aiken-Rhett site should complement such a study.

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APPENDIX I

ZOOARCHAEOLOGICAL ANALYSIS OF THE VERTEBRATE FAUNA
FROM THE AIKEN-RHETT HOUSE

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Abstract

The vertebrate fauna from the Aiken-Rhett house, Charleston, South Carolina, was excavated in 1985 by Martha Zierden of The Charleston Museum. The materials date to the 1820s through the 1860s. Documentary evidence identifies the site as the townhouse residence of a prominent antebellum planter. Research focused on examination of urban, in contrast to rural, subsistence patterns, identification of socioeconomic status markers, and influence of site function as reflected in the archaeological fauna. The resulting data were compared with those from contemporaneous residential and mixed residential/commercial sites. Faunal analysis suggest that high status urban subsistence strategies emphasize a variety of domestic taxa and a diverse diet.

Introduction

Recent research in the historical archaeology of Charleston has pursued several lines of inquiry through analysis of subsistence strategies. Among these are identification of social status markers and the delineation of characteristically urban or rural subsistence patterns among temporally and environmentally equivalent sites. A growing body of literature (Reitz and Honerkamp 1983; Reitz 1984; Reitz et al. 1985; Zierden and Trinkley 1984) indicates that contrasts between urban and rural sites are visible in the archaeological record. Where documentary evidence is lacking or inadequate, socioeconomic status evaluated on the basis of faunal assemblages is often problematical. For many sites, attempts to identify social status markers are impeded by the admixture of several functional activities.

The Aiken-Rhett house is a suburban antebellum site for which there is abundant documentary evidence. This evidence has clarified not only the identity and social status of the owner-occupant, but site function as well. Aiken-Rhett is a domestic only site. This functional restriction eliminates the perplexing interpretive problems common to sites representing mixed commercial and residential activities. Investigations of subsistence patterns for a household of known socioeconomic status and function may serve to develop a baseline for identification of these parameters in faunal assemblages recovered from analogous sites.

Valid interpretation of subsistence patterns, however, requires recognition of the biases inherent in depositional, recovery, and analysis processes. Bias is introduced in the size of bone fragments in an archaeological sample by a variety of interrelated factors. These include not only the methods by which the sample is collected and analyzed, but also pre-depositional factors (butchering techniques, structure of the bone) and post-depositional diagenetic processes.

The selection of recovery techniques has a significant effect on the analysis of faunal remains. Samples that are not screened are usually biased towards larger bones (Behrensmeyer and Boaz 1980) and therefore towards larger species. When small species are underrepresented in the sample, the ensuing analysis is necessarily biased. For many sites, lack of documentary information about activity areas results in selection of excavation units with limited subsistence information.

Both the locale of slaughtering and the techniques of butchering selectively influence the elements deposited at the archaeological site as well as the degree of fragmentation of the processed bone. Meat purchased by the cut, as in a market economy, is not generally represented by the same array of elements as is meat slaughtered in situ. Skull fragments, teeth, phalanges, and other elements which are commonly discarded are often not present in the archaeological sample when meat is purchased by the cut. On the other hand, the presence of such elements may reflect culturally influenced preference rather than butchering or marketing factors. The tools used to process carcasses may

produce small fragments of unidentifiable bone (i.e., those produced by cleavers) or larger, readily identifiable cuts (i.e., those produced by sawing).

Post-depositional survival of bone is dependent on a number of variables, such as anatomy of the bone. Since the bones of large mammals (e.g. bovids) are dense and have a thick cortex, they are generally more resistant to breakage than are bones of smaller mammals (Brain 1980; Brain 1981; Lyman 1985). In general, large thin-walled elements such as mammalian scapulae and avian sterna and synsacra are easily fragmented; such fragments cannot usually be identified to genus or species. Age of the animal, as well as bone anatomy, is an important factor in bone durability. Bones of immature animals with unfused epiphyses are readily fragmented; very immature bone is porous and easily damaged (Hill 1980). Such age- or structure-related differential survival of bone tends to distort relative frequencies of age-classes and of fragile skeletal elements. Ultimately, both the identification and the analysis processes are affected.

Taphonomic factors also affect the post-depositional survival of bone. In general, bone survival is enhanced by burial. Left at the surface, bone is subjected to post-mortem mechanical and chemical weathering, trampling, and scavenging (Behrensmeyer and Boaz 1980). The burial environment produces slow chemical and physical changes (diagenesis) in the microstructure of the bone. Durability of bone is decreased by leaching of the organic components and by breaking down the organic matrix (racemization). Post-depositional diagenetic factors may also include secondary mineralization of bone (by silica, iron oxides, etc.) resulting in enhanced durability. Both processes affect bone weight. Leaching and mineralization are dependent on temperature, chemistry of the groundwater, water-table level, and length of burial (Hare 1980).

Finally, recognition of the variables that influence choices of food resources is necessary for valid interpretation of subsistence patterns. Such factors as status, ethnicity, cost, environmental zone, and site function are reflected in the character of the faunal inventory. These factors are often interrelated, however, and may produce misleading similarities among faunas which were actually influenced by a different set of variables (Reitz 1985).

Recognition and evaluation of these introduced biases can only enhance our understanding and interpretation of the complex variables of the archaeological matrix. Additional factors affecting the analysis process will be addressed in the context of quantification procedures (see Methods).

Materials

Aiken-Rhett, a suburban domestic site owned and occupied by a prominent antebellum planter, was excavated in 1985 by Martha Zierden of The Charleston Museum. Three 5 by 10 and three 5 by 5 foot units were excavated by hand. All materials were water screened through $\frac{1}{4}$ inch mesh. The deposits analyzed in this study date from 1820 through 1860. No functional differences were perceived among these analytical units. A list of the proveniences examined in this study are provided in Appendix A.

Methods

The vertebrate fauna from Aiken-Rhett was analyzed using the comparative skeletal collection of the Zooarchaeology Laboratory, Department of Anthropology, University of Georgia. Standard zooarchaeological methods were employed. Bones of each taxon were weighed and counted in order to determine relative abundance of identified taxa. Notations of age, symmetry, and degree of epiphyseal fusion were recorded. Where present, bone modifications were described in order to assess butchering techniques and other taphonomic processes. Where possible, skeletal elements were measured in order to determine the original size of animals utilized at the site. Measurements are based on guidelines established by Driesch (1976).

Determination of the minimum number of individuals (MNI) was based on paired elements, age, and sex of the individual. For each species identified and the minimum number of individuals, as well as the percentage of the total site MNI this figure represents, was calculated. Quantification and interpretation of taxonomic abundance (MNI) are not without problems; the minimum number of individuals for a given taxon may over- or underestimate actual abundance. The reliability of this measure is dependent on such factors as the validity of the defined provenience units (are the units actually mutually exclusive?), degree of fragmentation of the bone, and durability of the bone itself (determined in part by age and taxonomic position). It has been noted (Wing and Brown 1979) that the MNI index tends to overemphasize the contribution of small species to the total subsistence pattern. Careful interpretation of this quantification measure eliminates such unfounded assumptions as equating identification of a species in the archaeological sample with utilization of the entire carcass. Certainly for historic sites, the redistribution aspects of a market economy influence the distribution of elements in the archaeological sample. Consideration of this factor is essential for establishing a reasonable reconstruction of site dynamics.

Biomass estimates provide information about the quantity of meat supplied by identifiable species. Applications of biologically realistic allometry (Gould 1966, 1971) to estimates of biomass (amount of soft tissue represented by a measured quantity of bone) in archaeological samples have recently been presented by Reitz and Cordier (1983) and Reitz et al. (1985). In these applications, estimates are based on the allometric principal that proportions of body mass, skeletal mass, and skeletal dimensions change with increasing size. (The cross-sectional area of weight-bearing limb bones in large vertebrates increases to compensate for increasing body mass.) Compensation by differential increase of such structures may be expressed mathematically by the allometric equation:

$$Y = aX^b$$

where Y is a measure of biomass (quantity of meat or original live weight), X represents a body size measure (a linear dimension of a bone; skeletal weight), b is a constant, and a is the ratio of specific growth rates of Y and X. The logarithymic form of this equation:

$$\log Y = a(\log X) + \log b$$

develops a rectilinear plot for variables on logarithmic coordinates where a represents the slope of such a plot and b represents the Y value at $X = 1$. As a result of the allometric nature of growth, biomass can be predicted by a given quantity of bone, or a specific skeletal dimension.

For an archaeological sample, allometry is used to predict two distinct values. A conservative estimate of biomass is calculated based on the weight of skeletal materials actually recovered from the site: kilograms of meat represented by kilograms of bone, where x is the archaeological bone weight. This estimate of biomass reflects the probability that only certain portions of the animal were utilized - an appropriate assumption for an historic site where preserved or redistributed meat was consumed. In the second application x represents a linear skeletal measurement such as those defined for mammals and birds by Driesch (1976). Here, scaling predicts either total live weight or total length of the animal. While calculations of total live weight are used to assess the size of livestock and fish, they do not imply consumption of the entire animal.

The application of allometric formulae to faunal remains is not invariably reliable. Casteel (1978) has pointed out, for example, that as body weight of domestic pigs increases, bone weight values are significantly less than expected. The influence of domestication on the generally predictable allometric scaling ratio remains to be clarified. Further, since the accuracy of allometric predictions based on bone weight of taxa in archaeological samples is affected by condition of the bone, it is important to assess the results of such diagenetic processes as post-depositional leaching and secondary mineralization that may significantly alter this measurement.

Values for a and b are obtained from calculations based on data at the Florida State Museum, University of Florida. The allometric formulae used in this study are listed in Table 1.

Both MNI and biomass calculations (and consequently interpretation of subsistence practices) are affected by sample size bias. Grayson (1979, 1981) and Wing and Brown (1979) have shown that samples of fewer than 200 individuals or 1400 bones do not reliably represent either resource diversity or utilization. Sixty-five individuals were identified from the Aiken-Rhett faunal assemblage; the bone count is 956 (Table 2). However, since the Aiken-Rhett site represents a functionally and temporally discrete entity with documented high status ownership and occupancy, subsistence patterns emerging from analysis of the site's faunal remains may provide a basis for identification of social status markers.

The age of identified species was estimated by observing the degree of epiphyseal fusion for diagnostic elements. For mammals, degree of epiphyseal fusion is an indication of maturity. Proximal and distal ends of long bones (such as the humerus) fuse in a regular temporal sequence (Gilbert 1980; Schmid 1972; Silver 1963) as centers of ossification merge. When growth is complete the ends (epiphyses) are fused with the shaft of the element. This process occurs in vertebra, ribs, scapulae, etc., as well as in long bones.

Rates of fusion are affected by domestication and environmental factors (Watson 1978). Unfused epiphyses that normally fuse in the first year or so of life may be interpreted more reliably than fused elements. The latter may represent animals that died just after, or years after fusion was complete. To alleviate this ambiguity the majority of age categories listed in Table 3 (Number of Elements Identified for Selected Age Categories) are given for upper age limits. The number of elements on which these age categories are based is also presented.

As a further step in analysis, identified species were summarized into faunal categories (Table 4). The domestic mammal category includes pig (*Sus scrofa*), cow (*Bos taurus*), and caprines. Since osteological differences between sheep and goats are often difficult to determine, both taxa are included in the term "caprine". Wild mammals identified include the white-tailed deer (*Odocoileus virginianus*), opossum (*Didelphis virginiana*), and beaver (*Castor canadensis*). Chickens (*Gallus gallus*) and a rock dove (*Columba livia*) are considered domestic birds; ducks (Anatidae), Canada geese (*Branta canadensis*), and turkey (*Meleagris gallopavo*) are considered wild species. Aquatic resources include pond turtles (*Chrysemys* spp.), chicken turtles (*Dierochelys reticularis*), and diamondback terrapins (*Malaclemys terrapin*). Marine fish identified include the following taxa: hardhead catfish (*Ariopsis felis*), gafftopsail catfish (*Bagre marinus*), black sea bass (*Centropristis striata*), jack (*Caranx* spp.), snapper (*Lutjanus* spp.), sheepshead (*Archosargus probatocephalus*), black drum (*Pogonias cromis*), and red drum (*Sciaenops ocellatus*). Inasmuch as it lives in close association with human residences, the rat (*Rattus norvegicus*), is considered a commensal inclusion in the deposits rather than a food item. Biomass summaries for these faunal categories utilize only those taxa for which MNI was calculated. Taxa such as unidentified mammal or Ariidae are not included in the tabulations of Table 4.

Results

The relatively small Aiken-Rhett faunal assemblage consists of 65 individuals. In terms of both individuals and biomass, cattle (*Bos taurus*) is the dominant taxon, represented by twelve individuals and more than 60% of the biomass. Pigs (*Sus scrofa*) and caprines are equally represented; eight individuals were identified from each of these taxa. These domestic animals comprise 43% of the individuals identified and nearly 95% of the biomass (Table 4). Based on size and thickness of the cortex, many of the long bone fragments assigned to the unidentifiable artiodactyl category may well represent cattle, but in the absence of diagnostic landmarks, such identifications are equivocal. The wild mammal component of the fauna, consisting of three deer (4.6% of the total MNI), an opossum and a beaver, constitutes 7.7% of the individuals, domestic birds are twice as numerous as wild birds; MNI percentages are 12.3% and 6.2%, respectively. The biomass contributed by domestic birds is nearly twice that of wild birds; 1.6% and 0.9%, respectively. Aquatic reptiles contributed 9.2% of the individuals and 1.3% of the biomass. Although fish provided only 0.5% of the biomass, they represent 18.5% of the individuals identified and constitute a diverse resource.

Analysis of age categories of domestic mammals based on epiphyseal fusion as described above indicates that with the exception of a juvenile pig, all individuals were either sub-adult or adult. Information based on

degree of epiphyseal fusion, however, is amplified by additional evidence of mammalian age categories derived from tooth eruption sequences. A recently erupted deciduous premolar and a little worn incisor (indications of a young animal) were identified for Bos taurus. Additionally, for the same taxon, a scapula and a diaphyseal fragment of a radius representing one or more young animals were identified. In contrast, an old individual is represented by both a premolar and a molar which have been worn to the gumline. It may be speculated that this aged animal represents a nonproductive milk cow assigned to the stew pot. The range of age classes for Bos taurus, then, is extended from juvenile to old adult. A deciduous premolar was also identified among the pig elements. Pigs are represented by juvenile, sub-adult, and adult age classes. No juvenile caprines were identified; this taxon consists of elements from sub-adult and adult animals. Among the wild mammals, age parameters indicate that the deer were adult animals; the beaver was a juvenile. For the avian species, one juvenile chicken was identified.

The sex of an animal is difficult to assess in the archaeological record. Where present, such diagnostic features as antlers in deer and tarsometatarsal spurs in galliform birds are diagnostic. No evidence of sex was apparent among the identified species, although medullary bone was present on a diaphyseal fragment of an unidentified bird. The presence of medullary deposits on bird bone indicates females in laying condition. Such deposits provide a source of calcium (Rick 1975). Additionally, eggshell fragments identified in the collection are probable indications of the presence of laying hens.

Evidence for butchering in the Aiken-Rhett collection includes bones that were sawed, hacked (by a cleaver or axe) and cut (Table 5). Forty-three percent of the cow remains showed such modifications. Sawing was the most common bone modification observed; the majority of sawed bones (53%) were from cattle. Innominate bone cuts representing both rump and sirloin portions of the carcass were common. Cuts that typically separate the forelimb from the scapula - across the head of the proximal humerus and across the glenoid fossa - were evident. Sawed portions of the scapula posterior to the glenoid fossa are also represented. Such cuts are sold today as pot roasts (Zeigler 1966). Most of the vertebrae are from the short loin, reportedly the most expensive portion of the carcass (Gust 1980). Cervical vertebrae may represent soup bones or stew meat cuts. Teeth are the most common head elements represented; their abundance argues for in situ butchering rather than procurement of beef cuts through the prevailing market system. This argument is strengthened by the presence of two sawn sections of a single scapula which fit together. Twenty-four percent of the pig remains show evidence of butchering. The presence of two sawn ilium fragments which fit together indicate that pigs were butchered in situ. Thirty-five percent of the caprine elements show evidence of butchering. Butchering patterns indicate that for all artiodactyls both individual cuts such as steaks or chops and units representing roasts were brought to the table in the Aiken-Rhett household.

To ascertain the relative abundance of cuts of meat utilized, Table 6 groups the skeletal elements identified for artiodactyls according to portions of the carcass. In this table, head elements include teeth, mandible, maxilla, and skull fragments. Forequarters include the scapula, humerus, radius, ulna,

and anterior vertebrae. Forefeet include metacarpals and carpals. Hindquarters include the sacrum, innominate, femur, patella, tibia, fibula, and posterior vertebrae. Hindfeet, the metatarsals and tarsals, and "feet", those bones which could not be assigned to other foot categories - phalanges and metapodial fragments. The category designated "other parts" consists of sesamoid bones and unidentifiable long bone, rib, and vertebrae fragments. The general pattern of distribution of elements for all domestic artiodactyls indicates that a large proportion (28%) represent the hindquarter section of the carcass. Forequarters are less abundant (8.5%). The hindfeet identified (10%) are primarily from cattle. Forefeet elements are entirely lacking. White-tailed deer are represented by two hindquarter elements and a single tooth. In contrast to the distribution of these mammalian elements, all parts of the skeleton are abundantly represented in the domestic avian fauna.

Additional bone modifications identified in the sample include gnawing by rodents (3 elements) and by dogs (1 element) and the presence of a small quantity of burned bone (2.6% of the total bone count).

Comparison of wild and domestic species indicates that in terms of biomass the Aiken-Rhett household relied on domestic species considerably more than wild. The total biomass contribution of domestic species is 96.3%; the total for all non-commensal wild species is 3.7%. This contrast is not as striking in terms of MNI (55.4% domestic species; 44.6% wild species). However, two aspects of this comparison merit consideration. First, wild birds pose a problem in faunal analysis; it is not always apparent which species were wild. It is possible that the turkeys, Canada goose, and duck were domesticated or captive animals. The turkey, a native North American bird found wild by early colonists, was eventually domesticated (American Poultry Association 1874). Most turkeys, however, were probably wild until late in the nineteenth century. Similarly, by the late 1800s at least some mallards and Canada geese were tamed. If these birds do indeed represent domestic or tamed animals, then the MNI percentage of the wild component is reduced to 38.5%. Turtles constitute a substantial percentage of the wild component of the assemblage (MNI of 6; 9.2% of the biomass). The diamond-back terrapin, an abundant reptile in coastal sites, inhabits estuaries. As its meat is considered a delicacy, this species has been heavily exploited in historic times (Carr 1952). Chicken turtles inhabit quiet waters such as ponds and marshes. Carr (1952) reports that "formerly it was commonly sold in the markets of southern cities" and that the meat of these turtles is considered succulent. While the MNI percentage calculated for fish (18.5%) is relatively high, a significant dietary contribution by this class of vertebrates is not implied; estimated biomass contributed by fish is only 0.5% (It is appropriate in this context to note the above-mentioned bias in the archaeological record that emphasizes the dietary importance of small species over large.) While the biomass contribution by fish is small, the taxa represented by this resource are unexpectedly diverse for a small sample. This aspect of the Aiken-Rhett fish fauna is compared to that of four previously analyzed Charleston sites in Table 7.

Estimation of dietary importance of fish, however, poses additional interpretive problems. Fish purchased and consumed as filets leave no archaeological record. Similarly, salt-preserved fish which are generally at least partially boned, are practically invisible archaeologically (Reitz

1984). Thus scarcity of fish in the faunal sample cannot be strictly equated with actual consumption of this dietary component.

With two exceptions, the identified fish are inshore species, often caught in estuaries; they are commonly found in historic sites of the southern Atlantic seaboard. Species of jacks (*Caranx* spp.) however, are most abundant offshore, although young specimens are occasionally collected in marshes and along the beach. Snapper species (*Lutjanus* spp.) are also primarily offshore fish but are sometimes found in coastal rivers; only small specimens are common in shallow estuaries (Dahlberg 1975; Manooch 1984).

To establish a basis for comparison of food resource variability and utilization among historic sites, diversity and equitability of the Aiken-Rhett faunal assemblage was calculated (Shannon and Weaver 1949; Sheldon 1969; Table 8). In this application, a high value for diversity (maximum value: 5.0) indicates species richness or variety of utilized resources. Equitability measures the uniformity of resource utilization. These indexes enhance comparison of subsistence patterns in terms of both variety of faunal components and degree of reliance on these components. It should be noted, however, that diversity is one of the variables that is dependent on sample size (Grayson 1981; Reitz 1981). Both diversity and equitability for Aiken-Rhett are relatively high, however, which is not usual in small samples.

Measurements (Table 9) are provided as a basis for future work.

Discussion

Although the faunal sample from the Aiken-Rhett house is small, characteristics typical of nineteenth century urban subsistence emerge from analysis of this material. Since the collection is from a household of documented high status, it provides data on the relationship between socioeconomic status and subsistence patterns resulting from such factors as access to diverse food resources and preferred cuts of meat.

Comparative studies of archaeological fauna from a variety of southern Atlantic coastal plain sites (Reitz 1984) reveal distinct patterns that characterize urban and rural sites. Where documentary evidence of status is available, these urban/rural contrasts appear to take precedence over socioeconomic factors. Late eighteenth to middle nineteenth century urban diets differed from rural diets in a notably greater reliance on domestic meat sources, both mammal and bird. Such domestic meats were derived from a wider variety of taxa than were those of rural diets, the differences undoubtedly reflecting the function of the market systems. Urban diets were, however, typically less diverse than rural ones, which depended more on wild resources. These studies also suggest that affluence is associated with a varied diet. The degree of taxonomic diversity in a given archaeological sample, then, may be indicative of status.

The broad faunal categories summarized in Table 4 indicate that the Aiken-Rhett fauna typifies the urban pattern in its reliance on a variety of domestic resources. As discussed above, beef provided the major percentage of biomass utilized in this household; pigs and caprines comprised a significant

part of the diet. Wild mammals and birds were minor components of the sample. As outlined above, the dietary contribution of fish in terms of biomass is small; the taxa represented are diverse. In a total of 12 fish identified to species or to genus, eight were of different taxa. This figure is striking when the relatively small, functionally domestic Aiken-Rhett house is compared to the Charleston sites listed in Table 7. All except the Lesesne Plantation were mixed residential-commercial; the strictly commercial Charleston Beef Market was excluded. Charleston Place, Lodge Alley, and Lesesne Plantation are significantly larger than Aiken-Rhett in terms of both sample size and biomass. McCrady's Longroom is somewhat smaller. The tabular data demonstrate that the fish inventory for the Aiken-Rhett house was at least as diverse as that of the larger, and more diverse than that of similar-sized functionally mixed urban sites. The expected prediction for a small sample would be less than comparable or more diversity. Additionally, the presence of two typically offshore (and therefore not readily available from estuarine resources) taxa merit further consideration.

In their study of foodways in eighteenth century Spanish St. Augustine, Reitz and Cumbaa (1983) found a correlation between high diversity and equitability and affluence. High status households of St. Augustine utilized a wide range of food sources, possibly because they valued dietary variety and could afford to augment standard fare by hiring the services of a hunting or fishing specialist. Both the diversity and the offshore taxa of the wealthy Aiken-Rhett household fish inventory may reflect similar status related regard for a varied menu, coupled with the requisite means to purchase resources not readily available to the less affluent. It should be noted that high diversity also characterized low status sites in St. Augustine. For these sites diversity was associated with the necessity to utilize a wide variety of local, readily obtainable resources. An equivalent pattern may be represented among the Charleston faunas by Lodge Alley, a site of documented low socioeconomic status. Interestingly, the percentages of fish taxa (the number of different species and genera) identified for the Lodge Alley fauna is the same as that for Aiken-Rhett (Table 9). The taxa represented in the Lodge Alley sample, however, are all common in estuarine environments.

The utilization patterns that emerge from analysis of the Aiken-Rhett vertebrate fauna are similar in several respects to those of the Block-Catts house (Stewart-Abernathy and Ruff 1986). As this Arkansas site is in a different environmental zone, the inventory of available natural resources differs from that available in the southern Atlantic coastal plain. Like Aiken-Rhett, however, the contemporaneous Block-Catts house is a documented high status, functionally domestic site. The subsistence pattern for this household was also one of reliance primarily on domestic mammals and birds. Wild resources contributed to the variety of the menu, but in terms of biomass constituted a minor component of the fauna.

Conclusions

Until recently, few vertebrate samples had been analyzed from historic sites. Data are now available from a number of collections, many from Atlantic coastal sites. As this data base enlarges, subtleties of regional subsistence strategies and causal trends emerge.

As an urban site of known socioeconomic status and function, the Aiken-Rhett assemblage was examined for indications of subsistence representing urban strategies, for identification of social status markers, and for characteristics indicative of site function. The data reviewed here indicate that the Aiken-Rhett vertebrate fauna conforms to the urban subsistence pattern which typifies a number of southern Atlantic coastal plain historic sites. Domestic taxa form the mainstay of the urban diet; wild taxa contribute variety to the menu. While urban diets are typically less diverse than rural ones, a varied menu appears to be valued in high status households and may be achieved through hiring the services of a specialist. For the Aiken-Rhett collection, the diversity of fish taxa may represent such a strategy. A similar pattern may represent high status urban sites in other regions.

The Aiken-Rhett materials have provided information about and perhaps at least an interim model for urban subsistence strategies in high status nineteenth century domestic sites of the southern Atlantic coastal plain. As additional contemporaneous collections become available, intersite comparisons may confirm or alter what at present appears to be a relatively consistent pattern of subsistence.

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Table 1. Allometric Values Used in This Study.^a

Faunal Category	N	log a	b	r ²
<u>Biomass, kg, from Bone Weight, kg</u>				
Mammal	97	1.12	0.90	0.94
Bird	307	1.04	0.91	0.97
Turtle	26	0.51	0.67	0.55
Osteichthyes	393	0.90	0.81	0.80
Siluriformes	36	1.15	0.95	0.87
Perciformes	274	0.93	0.83	0.76
Serranidae	18	1.51	1.08	0.85
Carangidae	17	1.23	0.88	0.86
Sparidae	22	0.96	0.92	0.98
Sciaenidae	99	0.81	0.74	0.73

^aThe allometric formula is $Y = aX^b$, where Y is biomass, X is bone weight, a and b are scaled constants, N is the number of observations used in the regression, and r^2 is the proportion of total variance explained by the regression model (Reitz and Cordier 1983; Reitz et al. 1986).

Table 2. Aiken-Rhett: Species List.

	CT	MWI		WT,GM	BIOMASS	
		#	%		KG	%
UID Mammal	406			242.57	4.404	9.6
<u>Didelphis virginiana</u>	2	1	1.5	1.47	0.0372	0.08
Opossum						
<u>Rattus norvegicus</u>	9	2	3.1	2.54	0.0646	0.1
Norway rat						
<u>Castor canadensis</u>	1	1	1.5	0.90	0.0239	0.05
Beaver						
Artiodactyl	155			306.81	5.4203	11.8
<u>Sus scrofa</u>	29	8	12.3	175.48	2.9403	6.4
Pig						
<u>Odocoileus virginianus</u>	3	3	4.6	8.85	0.2073	0.5
Deer						
<u>Bos taurus</u>	92	12	18.5	1639.45	27.5554	60.1
Cow						
Caprine	20	8	12.3	157.52	2.8935	6.3
Sheep/Goat						
UID Bird	74			16.85	0.3112	0.7
Anatidae	1	1	1.5	0.35	0.0079	0.02
Duck						

Table 2. Continued.

	CT	MNI		WT, GM	BIOMASS	
		#	%		KG	%
<u>Branta canadensis</u>	2	1	1.5	5.22	0.0919	0.2
Canada goose						
<u>Gallus gallus</u>	24	7	10.8	27.34	0.4849	1.1
Chicken						
<u>Meleagris gallopavo</u>	5	2	3.1	12.85	0.2219	0.5
Turkey						
<u>Columba livia</u>	1	1	1.5	3.50	0.0638	0.1
Rock dove						
UID Turtle	11			8.55	0.1452	0.3
Emydidae	4			3.16	0.0858	0.2
<u>Chrysemys</u> spp.	4	1	1.5	7.87	0.1260	0.3
Basking turtle						
<u>Deirochelys reticularis</u>	3	2	3.1	8.30	0.1613	0.4
Chicken turtle						
<u>Malaclemys terrapin</u>	6	3	4.6	7.75	0.1697	0.4
Diamondback terrapin						
UID Fish	80			7.51	0.1987	0.4
Siluriformes	1			0.04	0.0009	0.002
Catfishes						
Ariidae	1			0.71	0.0144	0.03
Sea catfishes						

Table 2. Continued.

	CT	MHI		WT,GM	BIOMASS	
		#	%		KG	%
<u>Ariopsis felis</u>	1	1	1.5	0.20	0.0043	0.01
Hardhead catfish						
<u>Bagre marinus</u>	4	3	4.6	0.77	0.0162	0.04
Gafftopsail catfish						
<u>Centropristis</u> spp.	3			0.27	0.045	0.01
Sea bass						
<u>Centropristis striata</u>	1	1	1.5	0.08	0.0012	0.003
Black sea bass						
<u>Caranx</u> spp.	1	1	1.5	0.85	0.0337	0.07
Jack						
<u>Lutjanus</u> spp.	1	1	1.5	0.20	0.0072	0.02
Snapper						
<u>Archosargus probatocephalus</u>	3	1	1.5	0.02	0.0004	0.0009
Sheepshead						
<u>Pogonias cromis</u>	2	2	3.1	0.80	0.037	0.08
Black drum						
<u>Sciaenops ocellatus</u>	6	2	3.1	2.57	0.092	0.2
Red drum						
UID Bone	---	---	---	4.03	---	---
TOTALS	956	65		2655.38	45.8266	

Table 3. Aiken-Rhett: Number of Elements Identified for
Selected Age Categories.

<u>PIG</u>	
Less than 2 years of age	2
At least 2 years of age	0
Less than 3 years of age	3
3 years of age or older	<u>1</u>
TOTAL	6
<u>COW</u>	
Less than 1.5 years of age	0
At least 1.5 years of age	0
Less than 3 years of age	9
3.5 years of age or older	<u>0</u>
TOTAL	9
<u>CAPRINE</u>	
Less than 1.5 years of age	0
At least 1.5 years of age	0
Less than 3 years of age	4
3.5 years of age or older	<u>1</u>
TOTAL	5

Table 5. Aiken-Rhett: Modifications Observed.

Taxon	Cut	Burned	Hacked	Sawed	Rodent	Dog
					Gnawed	Gnawed
UID Mammal	4	20		5		
Artiodactyl	6	3		15		
Pig	2			5	1	
Deer	1			1		
Cow	7		6	30		
Caprine	3		3	1	1	1
UID Bird		1				
Chicken	1					
Turkey	1				1	
UID Fish	--	1	1	1	-	-
TOTALS	25	25	9	57	3	1

Table 6. Aiken-Rhett: Elements Identified.

Element Groups	Pig	Deer	Cow	Caprine
Head	10	1	19	1
Forequarters	2		9	1
Forefeet				
Feet	2		2	
Hindquarters	13	2	16	11
Hindfeet	1		10	3
Other Parts	1		36	4
TOTALS	29	3	92	20

Table 7. Aikin-Rhett: Comparison of Fish MNI and Taxa.^a

	Aikin-Rhett	Charleston Place	Lodge Alley	McCrady's Longroom	Lesesne Plantation
Total MNI for Site	65	293	44	39	63
Total Biomass for Site	35.24	239.0	79.64	26.92	60.73
Total Bone Count for Site	956	11,105	3,070	920	4,392
Total Number of Taxa for which MNI estimated for Site	23	51	20	16	22
Number of Fish Individuals (MNI) for Site	12	40	8	5	9
% Fish MNI for Site	18.5	13.7	18.2	15.4	14.3
Amount of Fish Biomass for Site	0.19	1.10	0.48	0.41	0.31
% Fish Biomass for Site	0.5	0.5	0.6	2.1	0.5
Number of Fish Taxa for which MNI estimated	8	15	7	5	4
% of Fish Taxa for Site	35.0	29.0	35.0	31.0	18.0

^a Notes: Data from the 1981 and 1985 excavations at Charleston Place are combined (Honerkamp 1982; Carder 1986). Lodge Alley taken from Zierden et al. 1983. Data from McCrady's Longroom and McCrady's Tavern are combined (Zierden et al. 1982). Lesesne data are taken only from Feature 155 and miscellaneous features whose materials were recovered using 1/4-inch screen (Wood and Reitz 1986).

Table 8. Aiken-Rhett: Diversity and Equitability.

	Total	N	Diversity	Equitability
MNI	65 MNI	23	2.7243	0.8689
Biomass	35.2416 kg	23	0.8854	0.2824

Table 9: Aiken-Rhett: Measurements.

Taxon	Element	Dimension	Measurement, mm
<u>Bos taurus</u>	Astragalus	GLa	58.05
		GLI	63.0
		Bd	42.2
<u>Gallus gallus</u>	Scapula	Dic	11.7
	Humerus	Bd	14.8
	Coracoid	GL	61.6
		La	56.5
		BF	12.8
	Femur	Bb	15.7
		Bd	12.9
		Dp	8.4
	Tibiotarsus	Bd	10.6
		Dd	10.4
	Tarsometatarsus	Bp	17.0

Appendix A. Aikin-Rhett: Provenience List.

FS	UNIT	ZONE	LEVEL	AREA	FEATURE
3	TP 1	2	1		
4	TP 1			A	
5	TP 1	2	2		
6	TP 1	2			
7	TP 1			PM1	
8	TP 1	2	3		
9	TP 1				2
10	TP 1				3
15	TP 1	2	3		
16	Trench 1	2			
17	TP 1	2	4		
18	TP 1				6
19	TP 1				5
20	TP 1				6
21		2			4
24	TP 3	2			
26	TP 3	2	2		
27	TP 3				2
28	TP 3				7
33	TP 4	2			
35	TP 3	3			
41	TP 5	2			
43	TP 5	2			
44	TP 5				12
46	TP 6	2			
47	TP 6	3			

APPENDIX II

ETHNOBOTANICAL ANALYSIS OF SAMPLES FROM THE AIKEN-RHETT HOUSE,
CITY OF CHARLESTON, SOUTH CAROLINA

by

Michael Trinkley
Chicora Foundation, Inc.

Introduction

During October 1985 archaeologists with The Charleston Museum conducted test excavations at the Aiken-Rhett house in downtown Charleston, South Carolina. This structure, constructed in 1817, is an excellent example of an antebellum planter's townhouse. Originally built by John Robinson, a wealthy Charleston merchant, the house was acquired by William Aiken, Sr. in 1826 and remained in the Aiken-Rhett family until 1975 when it was donated to The Charleston Museum.

While the structure is listed on the National Register of Historic Places, the Museum has conducted archaeological testing in the rear service yard in order to assess the nature and integrity of the archaeological components. A total of 225 square feet (three 5 by 10 and two 5 by 5 foot units) were excavated in the rear yard. The bulk of the nineteenth century deposits were found in zone 2, which consists of mottled grey, tan, and yellow sands. Zone 3, found only along the eastern side of the courtyard, consists of similar sands, but dates to the early nineteenth century.

Five features were identified by the Museum work and are examined in this study. Feature 2 consists of the fill associated with brick-lined drains, Feature 5 is an indeterminant pit, Feature 6 is a ditch or builder's trench, Feature 7 is an indeterminant circular pit, and Feature 12 is a brick rubble filled pit which probably represents the debris from construction. In addition, a single postmold, a slump area (Area A), and a variety of levels within Zones 2 and 3 were available for study.

Charcoal was handpicked from both the excavations and the $\frac{1}{4}$ inch waterscreen. A series of 13 such samples were submitted for analysis. In addition, a series of four soil samples, ranging in size from 5 to 15 gallons, were collected for flotation. These samples were floated by the Museum staff subsequent to fieldwork. Flotation samples were submitted from Feature 2, Zone 2 of N95E155, and Area A of N95E155.

Major issues investigated by the archaeological work include nineteenth century upper class subsistence strategies, site formation processes at a solely domestic site within a suburban area, and comparison of urban to rural antebellum planter's sites. It, however, is difficult to separate antebellum and postbellum ethnobotanical remains with any accuracy. It is likewise difficult to separate the high status planters' remains from the lower status slaves' remains because of the close proximity of the two groups at the Aiken-Rhett site. With these potential limiting factors in mind, the first goal of the ethnobotanical study is to assess the site's ethnobotanical potential. This is intended to insure future research at the Aiken-Rhett site maximizes data recovery. A second goal is to isolate plant foods and plant food remains, if present, in order to contribute to a better understanding of the Charleston urban subsistence system. This will assist in the comparison of urban to rural sites. The third goal is

to isolate non-food plants from the Aiken-Rhett assemblage. Specific attention is to be paid to the identification of seeds, which may shed light on the nature of the "working garden" perhaps present in the service yard. The fourth goal is to continue research on the wood species used as fuel in Charleston and the ratio of wood charcoal to coal. I have previously suggested that the woods used for fuel might vary by status group (Trinkley 1983b, 1985a) or by function (heating vs. cooking, for example) (Calhoun et al. 1984). In addition, there appears to be a gradual replacement of wood by coal through the nineteenth century at urban Charleston sites.

Procedures and Results

The four flotation samples were prepared in a manner similar to that described by Yarnell (1974:113-114) and were examined under low magnification (7 to 30x) to identify carbonized plant foods and food remains. Remains were identified on the basis of gross morphological features and seed identification relied on U.S.D.A. (1948, 1971), Martin and Barkley (1961), and Montgomery (1977). The flotation sample from Feature 2 (brick drainage system) consisted of 15 gallons, the samples from N95E155, Zone 2 (levels 2 and 3) were both 10 gallons, and the sample from Area A within N95E155 consisted of 5 gallons. The results of these analyses are provided in Table 1.

Wood charcoal is the dominant component of each sample, except from Area A, ranging from 55.6 to 80% by weight. The Area A sample is anomalous in that it contains a high incidence of soil and noncarbonized debris (primarily roots). The only food remains represented are a single grape (*Vitis* sp.) seed and hickory nutshell fragments from the third level of Zone 2 in N95E155, and acorn shell from Feature 2. These remains do not constitute a significant portion of the samples and may represent accidental inclusions in the archaeological record. The 10 to 15 gallon samples appear to have yielded samples of a size sufficient to reject sample size as the explanation for the absence of plant foods or food remains.

The handpicked samples also were examined under low magnification (7 to 30x) with larger pieces of wood charcoal identified, where possible, to the genus level, using comparative samples, Panshin and de Zeeuw (1970), and Koehler (1917). Wood charcoal samples were broken in half to expose a fresh transverse surface. The results of this analysis are shown in Table 2, which is organized by provenience.

The wood charcoal from the site is primarily pine (*Pinus* sp.), although small quantities of hickory (*Carya* sp.), maple (*Acer* sp.), and cedar (*Juniperus virginiana*) are also identified. In addition, oak (*Quercus* sp.) is a strong component, being found in seven of the 12 samples (58%) and dominant in two collections (17%). Pine, in comparison, is found in 11 samples (92%) and is dominant in 6 (50%). Rosin, probably from pine wood, is found in four samples. Although no plant foods or food remains were found in the hand picked samples, a single plant part, resembling a tuber fragment, was found from Test Pit 1, Zone 2, Level 2.

Provenience	Wood		Shell	Stone/ Soil		Uncarb.		Plant Foods				Seeds	
	Charcoal	wt %	wt %	wt %	%	wt %	Organic %	Acorn	Hickory	wt %	wt %	wt %	total seeds
TP1, Z2, L2	11.13	71.2				4.50	28.8						15.63
TP1, Z2, L3	11.60	80.0				2.83	19.5		.07	0.5	t	-	14.50 1 grape
TP1, Area A	12.00	26.4		4.33	28.6	6.81	45.0						15.14
TP1, Fea. 2	16.57	55.6	.08	0.3	.16	0.5	12.94	43.4	.05	0.2			29.80

t = trace

Table 1. Flotation sample components, weight in grams.

Provenience	<u>Quercus sp.</u>	<u>Pinus sp.</u>	<u>Carya sp.</u>	<u>Acer sp.</u>	<u>Juniperus virginiana</u>	rosin	UID wood	diffuse porous wood	coal	UID plant part	animal bone
TP 1, Z 2, L 2	p	+					t	t	t	t	t
TP 1, Z 2, postmold 2		+	t	t							
TP 1, Z 2, profile	+			t			t		t		
TP 1, Z 2, L 3	p	+				p			t		
TP 1, Z 2, L 4	+	t					t				
TP 1, Fea 5	t	+							t		t
TP 1, Fea 6	t	t				+					t
TP 1, Fea 7		t					t		+		
TP 4, Z 3		+									
TP 5, Fea 12		+			t						
TP 6, Z 3	p	+					t		t		
Trench 1, Z 2		p					p				

+ = abundant. p = present, t = trace

Table 2. Analysis of handpicked charcoal samples from the Aiken-Rhett site.

Coal is found in six of the 12 collections (50%), apparently spanning the nineteenth century use of the site. It is abundant, however, only in Feature 7. Unfortunately, the collection of coal at the Aiken-Rhett site was not standardized; it is likely that coal was selected against, significantly reducing its abundance in the study material.

Discussion

The ethnobotanical remains from the Aiken-Rhett rear yard provide only limited information regarding the use of plant foods. Of the three potential plant foods remains, grape, hickory nut, and acorn, only the grape is likely to have been a food item. Reese comments that "next to the pineapple, grapes, . . . have always been considered the most delicious fruit for dessert" and "used as a food, grapes are extremely nutritive in general, and very wholesome if quite ripe" (Reese 1847:506-507). While grapes are most frequently associated with wines, it is clear that they were an integral part of "polite" dining (see Cummings 1970:41). Olmsted (1953:62) even notes them dried at a Virginia farmstead in 1852. Although a 1796 cookbook suggests that grapes "grow fpontaneoufly" and that "trifling attention is only neceffary for their ample growth" (Simmons 1984:17), this view is not supported by Youman (1873:133-134 or Hilliard (1972:179-182). It is unlikely that Aiken grew grapes in the city; they were probably acquired from nearby rural plantations, or perhaps from his own plantation, Jehossee.

Both hickory nuts and acorns may be a wild food item or supplement to the diet (Hilliard 1972). Lawson, a century earlier than Aiken, remarked that the "hickory Nuts have . . . excellent sweet Kernals" which taste "as well as any Almond" (Lefler 1967:105). The nuts, however, are not found in cookbook dishes, nor are they particularly noted as medicinal plants (Millspaugh 1974; cf. Morton 1974:125-126, 134). The occurrence of these items is so sparse at the Aiken-Rhett site that they probably represent accidental inclusions.

The woods at the Aiken-Rhett site are dominated by pine, typical of all Charleston area sites thusfar studied, including First Trident (Trinkley 1983a), Lodge Alley (Trinkley 1983c), and Archdale (Trinkley 1985a). For only the second time in the study of Charleston ethnobotanical collections is a hardwood a strong component of the studied collection. The other example is the eighteenth century Beef Market site, where hickory and oak species were common (Calhoun et al. 1984:90-91).

I have previously suggested that the woods used for fuel will vary by status group (Trinkley 1983b, 1985a). Reese notes that,

The heavy and dense woods give the greatest heat,
burn the longest, and have the densest charcoal. To
the dense woods belong the oak . . . to the soft . . .
the pine of different sorts (Reese 1847:116).

Thus, it was clearly recognized by the mid-nineteenth century that hardwoods would provide a better fire. The presence of hardwoods at the

Aiken-Rhett house, given Aiken's wealth, should be no surprise. Certainly he enjoyed sufficient prosperity either to purchase the better woods, or to have them cut from his own plantation. More surprising is the quantity of pine present in spite of Aiken's wealth.

The softwood may represent wood provided for the slave quarters, or may have been used for cooking where the quality of the wood may have been less significant. In this regard Reese (1847:116) suggest that pine made into fagots, which would burn with "a strong and quick heat", may have been used to heat ovens for the baking of breads.

Of equal significance to the understanding of fuel consumption in suburban Charleston is the depletion of wood which was noticeable by the mid-eighteenth century. Weir remarks that,

Hauled in from a distance, fuel was becoming increasingly expensive in Charles Town by the end of the Colonial period. Some residents therefore burned imported coal, and many complained about the price of wood (Weir 1983:44).

Reese,, by the mid-nineteenth century, remarked that,

wood makes a very cheerful fire, from its abundant and bright flame; but it consumes quickly, and requires often renewing; on this account it is expensive, and the labor necessary to prepare it is also very considerable . . . It has the advantage of kindling readily, but affords an unsteady heat (Reese 1847:116).

He further notes that wood, in Britain, is used only by the poorer classes. Those of the middle and upper class use coal, whose "superiority . . . over every other combustible, for domestic as well as many other purposes, is now generally acknowledged" (Reese 1847:119).

Accounts of coal use in Charleston are less well researched, although there are numerous advertisements for peach orchard red ash, orrel, Liverpool, Newcastle, "Stone Hinge", and Smith's coal in the Charleston newspapers during the mid-nineteenth century (Jeanne Calhoun, personal communication 1985). At least three coal yards were in business, including H.F. Baker at 173 East Bay, J.S. Ryan at the corner of East Bay and Fitzsimon's Wharf, and P.W. Knapp at Cumberland near Church Street. Prices at this time were from \$6 to \$7 per ton and apparently both the caking or bituminous and anthracite coals were available.

The coal found archaeologically from the Aiken-Rhett house is anthracite and represents small, unburned waste fragments. Reese notes that,

When coals are dug they are liable to be broken more or less; hence there is always a quantity of fragments, which constitute the small coal. When the coal is bituminous and of the best kind, this small coal is useful, as it will cake together

. . .; but when the coal is little bituminous . . . this small coal does not cake, and it is then of little value. It is customary . . . to separate the large from the small by screening; and the small is sold at a much lower rate, under the name of slack. It is no uncommon thing for dishonest dealers to mix some of this slack with good coals, although some of it is scarcely combustible (Reese 1847:120).

Coal functioned not only for heating (Reese 1847:93-98), but also for cooking when used with a stove (Reese 1847:808-820). Coal, however, required the use of wood kindling, so that even if both heating and cooking were primarily through the use of coal, the use of wood remained essential (Reese 1847:120).

Summary

This ethnobotanical study has revealed that the Aiken-Rhett site does contain carbonized plant remains. Flotation samples of at least 15 gallons of soil are the best producers of charcoal and will yield more reliable collections than smaller soil samples. Handpicked samples, while providing data on wood use and the presence of coal, are poor producers of food remains and are easily biased by incomplete recovery. Future work should emphasize the recovery of flotation samples and the uniform sampling of waterscreened material for the recovery of charcoal and coal.

The Aiken-Rhett site has yielded little information concerning the use of plant foods in Charleston, in spite of several large flotation samples. At rural sites the recovery of carbonized plant food is more common (Trinkley 1983b; 1985b), which suggests several factors may be responsible for the scarcity of plant foods at urban sites, including both preparation techniques and disposal practices. These aspects of the urban environment have been discussed by Zierden and Trinkley (1984) and Trinkley et al. (1985). The study at Aiken-Rhett also failed to reveal any indication of seeds from rear yard plantings. Based on the limited opportunities for carbonization, however, it is probable that much larger samples would be required to adequately address the ethnobotanical identification of a "working garden." At present, there are no plant seeds which would support a "working garden" hypothesis.

More success was had in delimiting fuel wood types and the use of coal, although the study was hampered by collection bias. The presence of higher status hardwoods is noted in the collection, although the lower status pine is still quite common. Coal is almost certainly more common at the Aiken-Rhett site than the collections suggest, because coal was selected against in the handpicked collections. It is probable, given the wealth and status of Aiken, that coal was used more commonly for both heating and cooking than wood, but that wood remained necessary for certain tasks, such as kindling and possibly baking. Additional research at the Aiken-Rhett house should be designed to pursue the topic of wood and coal use by wealthy nineteenth century Charlestonians.

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