

OLD AIKIN RESIDENCE.

Aiken Rhett House: Archaeological Research

**Archaeological Contributions 31
The Charleston Museum
October 2003**



***Aiken-Rhett House:
Archaeological Research***

by
Martha A. Zierden
The Charleston Museum

with contributions by

John Jones
Washington State University

Elizabeth Reitz
Elizabeth May
University of Georgia

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The Charleston Museum
October 2003***

PREPARED FOR

Historic Charleston Foundation
as part of a Historic Structures Analysis

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Chapter I

Introduction and Planning

In 1995, Historic Charleston Foundation acquired the Aiken-Rhett house from The Charleston Museum. The purpose of the Aiken-Rhett house museum, according to the Historic Charleston Foundation, is to “conserve and interpret the townhouse complex built by Jon Robinson in 1818 and renovated and enlarged by the Aiken family in 1833 and 1857.” (HCF 2001). “Conservation” and “preservation” are key aspects of interpretation of this property, rather than restoration or full furnishing. The Aiken-Rhett house is unique, in that all of the service buildings, as well as the main house, remain intact and an enormous amount of historic fabric survives in each of the structures. The goal of Historic Charleston Foundation (HCF) is to document, stabilize, and interpret the house, outbuildings, grounds, and artifacts of the Aiken-Rhett property, to understand the evolution of the structure and furnishings, and chronicle important changes to the property. The Mission Statement for the property continues,

“The house and outbuildings with their surviving early decorative schemes and furnishings provide an interpretive framework to explore the evolution in taste in antebellum Charleston and to place the family and their slaves within Charleston’s urban culture and its regional, national and international context...” (HCF 2001).

Preservation of the historic fabric at the property is remarkable. The house and outbuildings in particular exhibit paint finishes, wallpapers, and lighting fixtures of national significance. Careful exploration of all aspects of the material evidence, including the archaeological resources, is considered by Historic Charleston Foundation to be essential to the informed conservation and preservation of the property (HCF 2001; see also Weyeneth 2000:174-178)

The receipt of a bequest from the estate of Theodore Maybank and a grant from the Joanna Foundation in 2001 enabled the Foundation to engage a group of consultants to analyze the property and prepare a full historic structures report. This report will allow the Foundation to make informed decisions about conservation and repairs to the property, and interpretation of the property to the public. Study of the archaeological resources by the author has been part of this long-term endeavor. A number of specific architectural topics were addressed under the general framework of understanding the function and layout of the front and rear yard areas.

A limited archaeological testing program was designed in consultation with HCF staff and architectural specialists to explore areas and issues of interest to the overall understanding of the property. Funds available in 2001 allowed for the excavation of ten test units, and location and rationale for their placement was prioritized by the consultants. These excavations were visited by the other consultants, and described in an interim report to the research team. As is often the case, the 2001 testing raised as many questions as it answered. This, plus evolving needs at the property, generated a need for further testing. This was achieved in 2002 with a Preservation

Services grant from the National Trust for Historic Preservation, and a generous donation from the Ceres Foundation. These two funding sources made it possible to return to the site in October 2002 and excavate an additional ten test units. Some of these expanded the work done in 2001, while others explored new areas. The fieldwork and results of both projects are described in this report.

The initial archaeological testing at Aiken Rhett in 1985 was the first residential site excavation in Charleston conducted by the author, and thus the site report now appears somewhat dated in its organization and interpretation. Our cumulative knowledge of the urban archaeological record, particularly at townhouse sites, has expanded dramatically in the past fifteen years (figure 1). Thus a reassessment of the archaeological evidence at the Aiken-Rhett house is appropriate at this time. For that reason, data from 1985 were re-analyzed as part of the present project. The proveniences encountered in 1985 are summarized below. The artifacts from the 1985 project are tabulated with those from the present excavations. Likewise, the faunal remains from 1985 were re-tabulated with those from the present project to produce a sample of sufficient size for valid comparison. The Aiken-Rhett sample contains the first late 19th century component of sufficient size for study.

Previous Archaeological Research

The Aiken-Rhett house was acquired by The Charleston Museum through a bequest in 1975. It was opened to the public as a historic house museum in 1982, and operated under a philosophy similar to that of the present mission espoused by Historic Charleston Foundation. Several small archaeological projects were conducted by Charleston Museum archaeologists during the Museum ownership (figure 2).

1985 Testing: Initial archaeological testing at the Aiken-Rhett house was funded under a Survey and Planning grant administered by the South Carolina Department of Archives and History. This project was designed to assess the nature, extent, and integrity of the archaeological component at the site, and to amend the National Register nomination (approved in 1976) to include the archaeological component (amended in 1987). The testing consisted of placement of six dispersed units in the rear yard, beyond the limits of the brick courtyard (Zierden, Calhoun and Hacker 1986).

An auger test was also conducted in this area. A hand-operated bucket auger with a three-inch diameter bit was used to test at 10' intervals in the south half of the yard and at 20' intervals in the north half. Materials retrieved from the auger tests were screened through 1/4" mesh. The auger testing revealed that artifacts were concentrated along the east side of the site, with a heavy concentration about 30' north of the back of the kitchen building. The western third of the site, in contrast, was relatively sparse.

Excavation units in the eastern portion of the yard revealed three zone deposits: zone 1 was a dark brown sandy soil, .4' deep, dating to the 20th century. Zone 2 consisted of medium

brown, grey, and yellow mottled soil, flecked with charcoal and mortar, in varying depths across the site. This zone consistently contained c. 1850s artifacts. Zone 3 was present only on the eastern side of the site, and may represent filling of low areas. The zone 3 deposits contained artifacts dating to the 1820s. No extensive midden deposits were encountered, and low artifact density characterized much of the site. Features and deposits encountered in these units are described in more detail in Chapter III.

A number of features were encountered in the yard. Most dramatic was a network of drainage features, revealed in N95E145 and N108E138. The first unit revealed Feature 2, which consisted of a drain with brick sides and bottom, covered by a cap of large, irregularly-shaped paving stones. The drain was connected to feature 1, a circular basin 3.6' in diameter and 1.0' deep. The interior of the basin was lined with plaster, and the base featured a square stone with a small hole in the center. This allowed the basin to empty into an underlying drain line. The drain system continued due north, and was again encountered in N108E138, but not in N172E150. A well-defined builders trench for the drain, feature 3, contained artifacts post-dating 1830 (see figures in Chapter V).

The drain system also connected to the rectangular entrance vault present at the northeast corner of the kitchen building. At the time of the project, this vault, designated feature 4, was filled with loamy soil and a heavy cap of lime. The soil was excavated 2.5' deep to the base of the drain. The final destination of the drain line remains unknown.

Beneath the drain system, in N95E145, were two additional features, including a brick foundation running northeast/southwest. Feature 6 was a single brick wide in a construction trench of tan sand, with a TPQ date of 1820. Feature 5, an anomalous pit of mixed soils, dated to the 1840s. Feature 6 is worthy of further investigation.

N172E150 was excavated in the vicinity of the northeast privy. The three zone deposits were encountered here, as were a variety of amorphous stains at the base of zone 3. These were not defined as features. N135E145 was excavated near the posited northwest corner of the rectangular building, reputed to be the cow shed. The previously defined zone deposits were present, but the zone 3 deposits were loose and unconsolidated. A rectangular, sand-filled feature was located in the southeast corner of the unit and may be a builders trench for the structure. This was designated feature 10, and bears further examination. Feature fill contained transfer print pearlware and may date to the 1830s.

Two units were excavated in the eastern portion of the yard. N95E90 was located at the rear of the carriage house and revealed shallow deposits of zones 1 and 2. Feature 11 was a brick walk or drive way dating to the 20th century. Feature 12, which initiated at the base of zone 2, was a deep pit filled with artifacts and building rubble, suggesting deposition of construction debris. This feature was the earliest encountered on the property, and may date to c. 1820.

Unit N160E100 exhibited very different stratigraphy from the rest of the site. Zone 1 was immediately followed by sterile clay, and zone 2 was present only as a thin lense. Intruding into

the subsoil were a series of amorphous and circular stains, all of which appear to be plant stains. All intrusions were mapped, but only two were designated and excavated. Features 8 and 9 were both less than one foot deep and contained very few artifacts.

Several of the features encountered in the 1985 project bear further investigation. This includes the drain system (features 2 and 3), the foundation underlying the drain (feature 6), the possible construction trench for the yard building (feature 10), and the plant stains in N160E100.

1991 Kitchen Investigations: Salvage excavations in the northern room of the kitchen building accompanied the rebuilding of the northern chimney following general degradation accelerated by Hurricane Hugo. Renovations as planned at that time called for completely rebuilding the chimney. The chimney was dismantled to the ground, and the restoration specialists began to excavate around the chimney foundation to pour cement for rebuilding. The crew encountered dark soil full of large artifacts and animal bone, and so suspended excavations and called the archaeologists. The excavated trenches were cleaned and recorded, and an undisturbed column of dirt in the center was excavated and screened in a controlled manner. The soil excavated by the restoration specialists was also screened.

The excavation of the dirt column inside the hearth and on either side of the exterior of the hearth revealed mixed and mottled sands, a large collection of animal bone, and a moderate collection of 19th century artifacts. Excavation on the north side revealed a brick feature which appeared to predate the brick fireplace foundation. This was an unusual 'keyhole-shaped' brick foundation, five courses deep. Its function is unknown.

Based on these discoveries, reconstruction of the chimney was canceled, and the area backfilled and secured. No further excavation or research was done at that time, and none has been conducted since. All of the features encountered bear further research. Further, the wealth of artifacts recovered in the room suggests that this may be a significant area for future archaeological research.

1992 Privy Restoration: In December 1992, Ron Anthony of The Charleston Museum, aided by volunteer Larry Cadigan, spent two days monitoring restoration of the northeast privy building. This restoration entailed excavation of trenches along the exterior walls of the building. Soil from previously excavated areas was screened, and archaeologists excavated the remaining portions of the trenches. The soil followed the general stratigraphy noted during the 1985 excavations, and contained few artifacts. Two trenches were excavated on the interior of the privy, following removal of a great deal of debris. This cleanup revealed an additional, inner brick foundation which ran north/south and may predate the gothic facade of the present structure. It is possible that this represents an original west wall of the privy building, before the gothic renovation. Alternately, it may define the below-ground vault of the privy proper.

1996 Builders Trench Excavation: In April 1996, Martha Zierden was invited by Robert Leath of Historic Charleston Foundation to sample the soil floor in the western basement room. The old wooden flooring had been removed as part of renovation of this area as restrooms, and the ground was slated for some disturbance. Unlike the other rooms of the basement, there was no brick paving here. Leath suggested it was possible that soil and artifacts may have accumulated here in a manner similar to the kitchen building.

A small (2' x 2') test unit was excavated adjacent to the southeast corner of the room. This excavation revealed a disc of wood, about 5" in diameter, on top of a whole brick, which may have served as some sort of temporary foundation. The loose soil beneath this contained a c. 1840 cathedral-style decanter stopper. Beneath this was a mottled yellow and dark grey sand, excavated as level 2. A builders trench was visible along the west wall. It was well-defined, and excavated to 1.4' below surface. The profile revealed a second, later builders trench, which initiated in the level one soils and may be associated with the wooden column. The earlier builders trench contained no artifacts. No photographs were taken due to the light conditions in the room. Profile drawings are available.

Proposed Areas of Research

The limited archaeological excavation at the Aiken-Rhett house to date suggests that the site contains an archaeological record of sufficient clarity and integrity to inform on a number of issues, both site-specific and city-wide. Initiation of an historic structures study presents an opportunity to reexamine all aspects of the property (see figure 3). Though the site and its occupants are relatively well-documented and the surviving architectural evidence remarkable, little is known about the layout or function of the yard. As an example, the long-held assumption that the rear yard was for service only has been questioned by the team. Additional archaeological research, coupled with re-analysis of existing collections and comparison to other 19th century townhouse sites, can contribute to a more thorough understanding of the site.

Funds available for archaeological work allowed for excavation of ten test units in 2001. The consultants suggested that the rear yard be considered in quadrants, with the north-south line running through a suspected central drive from the rear gate to the service buildings, and an east-west line running just south of the yard structures on the two side walls. Because the southeastern quadrant, just behind the kitchen, was rather thoroughly tested in 1985, no new units were proposed for this area. The tests described below balance testing of these four quadrants with investigation of locations key to answering particular architectural questions. Locations for this testing were based on issues raised by Foundation staff and architectural consultants.

1. A large excavation unit in the center of the front garden should encounter evidence of a front stair or entry to the house during the Robinson era. At that time, the entry was from Wragg Street into the center of the front parlors. Overlying deposits could contain evidence of gardening or other uses for the front area. An initial plan to excavate to the front wall was curtailed because of large bushes in the area.

2. Test units around the independent fence or gate pier in the southwest corner of the property. There is some suggestion that this pier may pre-date the existing south and east walls of the property, and may be evidence of a gate or drive in this area during the earliest architectural phase. The unit or units should also expose a portion of the builders trench for the walls for dating purposes.

3. Test units in the enclosed area between the main house addition to the south, the south edge of the kitchen building, and the eastern property wall. Exposure of this area may inform on the traffic pattern for this portion of the site and possibly expose any evidence for a drive. This area was, until recently, covered by the 20th century kitchen addition.

4. Test along the demolished garden building on the eastern wall in the rear yard. Such excavations may inform on the function of the building, as well as dates of construction and demolition.

5. Establish the character and dimensions of any driveway from the rear gate to the paved work yard by excavating a trench or series of units across this thoroughfare. A desirable location for this trench would be adjacent to the northern edge of the courtyard paving, which should inform on the nature of rear yard deposits and construction of the paved courtyard, as well as any drive. (However, serious root intrusion from the magnolias precluded excavation in this location.)

6. Excavate adjacent to the western yard building (previously referred to as the cow shed). Excavations adjacent to this building should inform on the possible use of the rear yard as a garden, rather than a service yard. It is also possible that internal divisions, such as fences, hedges, or walls, may be located adjacent to the building.

7. Excavations should be located to test all sections of the rear yard, including both sides of a proposed central north/south drive, and areas south and north of the garden buildings. Such testing may inform on possible divisions and uses of various portions of the yard, even if the boundaries are not located.

Excavations in these areas produced many new questions. So, too, did some ongoing conservation, restoration, and interpretation projects at the house. The acquisition of additional funds allowed excavations in new areas, as well as expanded study of the 2001 units. Priorities for the 2002 project were as follows:

1. Continue to explore the evidence for a trellis or fence bordering the rear driveway, discovered in 2001. This includes units tracing the line of posts found in N375E115 and observation of the repair work to the rear gate columns. Also included under this directive were additional units in the suspected garden area in the northwest quadrant of the rear yard. Five units were excavated in this area.

2. Study the flooring sequence inside the stable building, in anticipation of repair or stabilization of this area. Two units were excavated in the horse stalls.

3. Explore the paved courtyard. It has long been anticipated that the paving between the kitchen and the stable was a later addition to the work yard complex. It was further expected that evidence of earlier work yard activities would likely exist below this paving, as refuse accumulation in front of kitchen buildings has been noted at other urban sites. In the past year, the Foundation has worked to clear the topsoil from the bricks, under the assumption that the brick paving was intact below this soil. Excavations first exposed a deep, regular trench running north/south in front of the kitchen building. Further work revealed a series of smaller depressions, at right angle to this long ditch. The reason for the existence of the uneven surface was a second impetus for excavation. Finally, the tree roots of the nearest magnolia has caused considerable disturbance to the bricks near the stable building, creating a pedestrian hazard. All of these reasons combined to make excavation in the courtyard a priority. Four units were excavated in or adjacent to the brick courtyard.

Archaeology, Preservation, and Public Interpretation

Since 1980, archaeological research in Charleston has been guided by a series of long-term research goals. Studies at individual sites such as Aiken-Rhett have been cumulative, as well as comparative, in nature. The proposed research topics address a number of issues, both descriptive and processual. The issues were proposed from archival as well as archaeological studies, and formalized in a series of research design reports. Data from excavated sites are then utilized to examine these issues, whenever appropriate. Research topic selection for individual projects is based on the scale of the project, as well as temporal and functional affiliation of the site. The unified research approach gives weight to small projects, as each has a place in the growing comparative data base. Studies at individual sites such as Aiken Rhett are thus cumulative. Data from similar sites are also used in a comparative framework.

The Aiken-Rhett house is one of eight elite townhouses investigated by The Charleston Museum, and date from these projects are incorporated into the present study. Of particular relevance to this site are three dating to the early 19th century - the Nathaniel Russell House dating to 1808 and the Simmons-Edwards house dating to 1800. The Joseph Manigault house, built in 1803 is also located in the Mazyck-Wraggborough neighborhood.

Archaeology's role in the preservation of a property such as the Aiken-Rhett house is two-fold. First, the archaeological record - the layers of soil and artifacts - is part of the total historic fabric, worthy of preservation. All standing structures have an associated archaeological component, whereas not all archaeological sites have an extant architectural component. Further, the archaeological component is non-renewable, damaged, or destroyed by any ground-disturbing activity. At the same time, the ground-altering activities of today, just as those of the 18th and 19th centuries, are part of the ongoing changes and additions to a continually occupied archaeological site.

Secondly, archaeological research is an additional source of broad interpretive data for an historic site, ranging from tangible artifacts and foundations to abstract ideas. The key word is interpretation, for current anthropological theory suggests that all types of data are subject to interpretation, to be read by many viewers. Archaeological data, like architectural data, documentary information, maps, plats, oral history, etc., contribute to a clearer understanding of a historical question, but archaeological answers do not supercede those from other disciplines. This report, along with numerous other documents, artifact, and reports, is one contribution to the multifaceted exploration of the evolution of the Aiken-Rhett house.

Illustrations - Chapter I

Figure 1: Map of sites excavated in Charleston, showing the location of the Aiken-Rhett House.

Figure 2: Site map of the Aiken-Rhett house, showing excavated units, by phases.

Figure 3. Elizabeth Street view of the Aiken-Rhett house, showing main house and exterior of the stable building, c. 1950. (HABS no. SC-269-8)

Sites Excavated in Charleston

Town-house sites

- 1. Aiken-Rhett
- 2. William Gibbes
- 3. John Rutledge
- 4. Miles Brewton
- 5. Joseph Manigault
- 6. Heyward-Washington
- 7. Nathaniel Russell
- 8. 14 Legare St.

Single-house sites

- 9. 66 Society St.
- 10. 40 Society St.
- 11. 72 Anson St.
- 12. 70 Nassau St.
- 13. President St.

Residential/ commercial/ public sites

- 14. Charleston Place
- 15. McCrady's Longroom
- 16. Lodge Alley/38 State St.
- 17. First Trident
- 18. Atlantic Wharf
- 19. Exchange building
- 20. Beef Market
- 21. Judicial Center
- 22. Powder Magazine
- 23. Visitor's Center



Figure 1

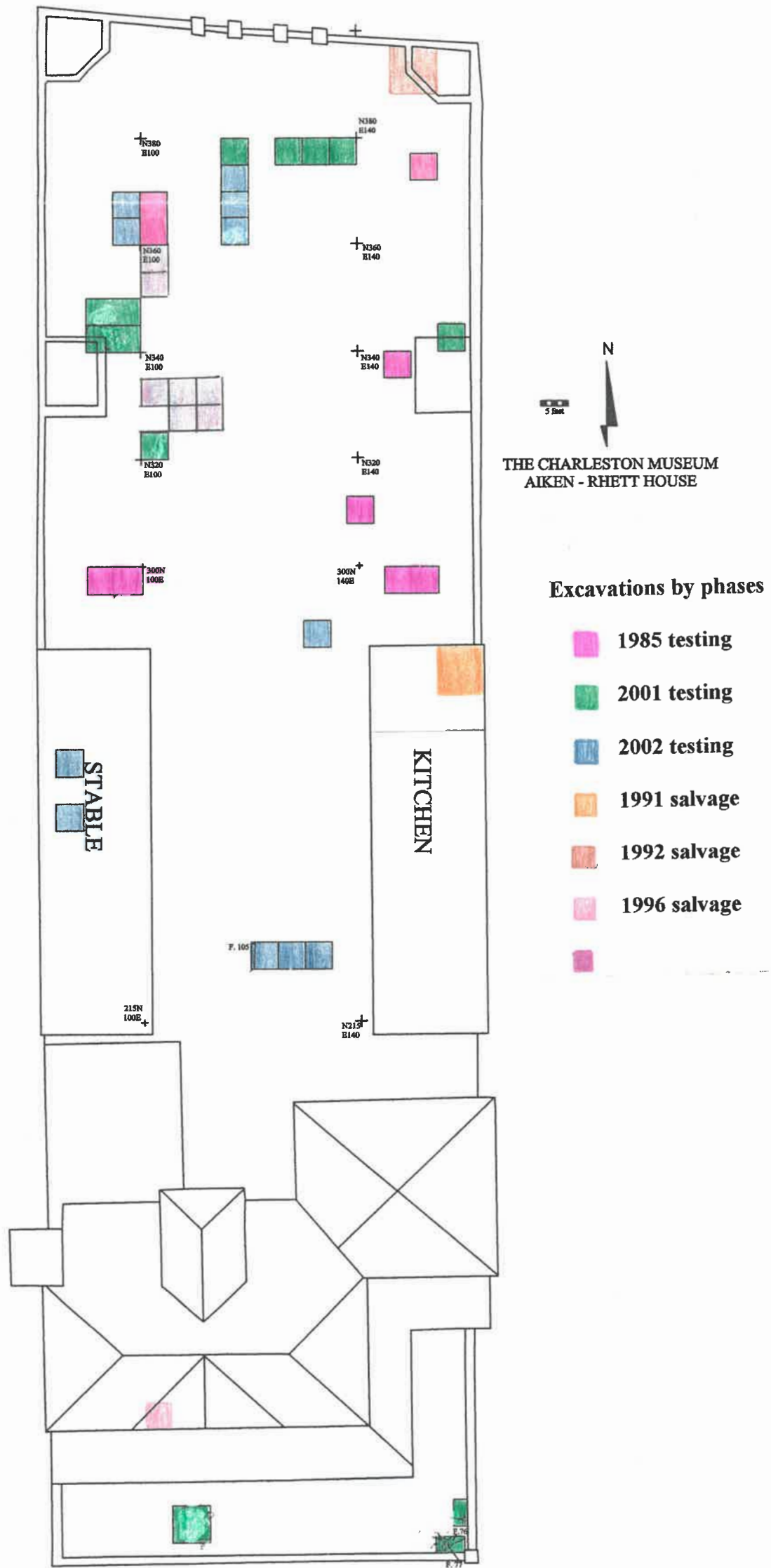


Figure 2

HAB 50 50-269



Figure 3

Chapter II

Historical Background

Documentary and architectural research are major components of the ongoing historic structures analysis. The historical summary of property use provided below is designed to be adequate for archaeological interpretation, and is not to be considered comprehensive. Much of the narrative below was prepared by Charleston Museum historian Jeanne Calhoun in 1986. Additional details were derived from the exhaustive documentary research conducted by Ms. Carrie Albee for Historic Charleston Foundation in 2001, by the architectural team of Willie Graham, Carl Lounsbury, and Orlando Ridout V for the Architectural Overview in 2003, and by Dr. Susan Buck for her dissertation research in 2003. Unless otherwise cited, the details presented here, and their references, may be found in these documents on file at Historic Charleston Foundation.

The Charleston Neck

In 1680, the settlement of Charles Town was moved to its present location at Oyster Point, the peninsula formed by the confluence of the Ashley and Cooper rivers. 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. As the 18th century advanced, Charles Town expanded in size, economic importance, and the relative affluence of its citizens. Still, the city limit remained at Beaufain until incorporation in 1783, when the city limit was moved four blocks north to Boundary Street (now Calhoun). Within these confines, a growing population was accommodated by subdividing lots and expanding into the center of blocks. The area north of the city limits, known as Charleston Neck, was slow to develop.

Throughout the colonial era, the Neck was countryside, occupied by small plantations and farms (figure 4). King Street ran through the center of the Neck, and served as the backcountry's artery to Charleston. Wagon yards were a common site in this area, where the land was primarily undeveloped. These landholdings were subsequently divided among heirs. As the city spread northward, these tracts were subdivided and developed along the lines of English villages. The early 19th century tracts of Mazyckborough, Wraggborough, and Hampstead were three such subdivisions (figure 5).

The earliest residents of subdivided lots were planters, who preferred the spacious lots and healthy breezes afforded by this suburban location to the central location deemed convenient by the city's merchants. Large townhouses such as the Joseph Manigault house and the Aiken Rhett house were among the first built in the Neck, but they were soon followed by the modest and

middling homes of a variety of city dwellers (Rosengarten et al. 1987).

After two major fires in the 1830s, the City outlawed building in wood within the City limit (Poston 1997:412; Rosengarten et al. 1987). Those who could not afford brick homes flocked to the Neck, and built single houses of wood. Around and between planters' large houses a heterogeneous population took up residence. White artisans, tradesmen, and mechanics lived in more modest houses, above shops, or in cottages built by their employers. German and especially Irish immigrants in increasing numbers crowded into tenements and competed for jobs with black people, slave and free.

The Neck had special advantages for city dwellers of African descent, especially for free blacks and for slaves granted the privilege to work and live on their own. Rents were lower, real estate was more available and less expensive, and new houses could be built of wood. The suburb offered some respite from police surveillance and control; hence the Neck appealed to runaways, slaves "passing as free", and other people eager to expand their personal liberty (Berlin 1987, 1998; Wade 1964).

In the 19th century, retail businesses and professional offices were concentrated on King Street, as the thoroughfare was transformed from a wagon road to a bustling retail center. Small family owned shops, often owned by German immigrants, sold groceries, liquor, or household goods. These were scattered throughout the Neck, often in "corner store" locations. The Neck also offered relatively isolated and spacious lots to businesses that were dangerous, malodorous, or sprawling, such as tanneries, butcher shops, tallow and soap chandleries, and wood yards. A few decades later, the open spaces, lower real estate values, relaxed building restrictions, access to deep water harbors, and proximity to rail lines attracted large-scale manufacturing enterprises. These included iron foundries, car manufacturers, a new gas works, and two rail lines, the Northeastern Railroad along East Bay and the South Carolina Railroad between Meeting and King streets. In less than half a century, the Neck was transformed from "country", a sparsely settled suburban haven for planters, to the center of Charleston's industrial future, home to both new industries and their workers (Rosengarten et al. 1987).

In contrast to the lower city, the Neck continued to grow, both during the Civil War and after (Rosengarten et al. 1987). Comparison of the 1852 Bridgens and Allen map to the 1872 Bird's Eye city map and the City block plats of 1882 show a good deal of new construction and increased building density. All of the available lots on the East Side were improved by this time, and only the later filling of marshes, including those east of the Aiken-Rhett house would allow for additional construction in the 20th century (figures 6-7).

48 Elizabeth Street

Joseph and Samuel Wragg were granted an extensive amount of land which became known as the Barony of Wraggborough 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 Wraggborough (Rogers 1980:59, 64). The streets of Wraggborough 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).

On December 20, 1804, the lot at 48 Elizabeth Street was released for sale by Henrietta, Elizabeth, and Charlotte Wragg to James Henry Ladson for one dollar (CCRMCO O7:265). Ladson apparently did nothing with the property and, on June 27, 1817, sold the lot to Thomas P. Chiffelle (CCRMCO S8:312). Six months later, Chiffelle sold 48 Elizabeth Street to John Robinson, a wealthy factor (CCRMCO Y8:208-209). Robinson purchased the north lot that extended the property to Mary Street in 1820.

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 by 1822. 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).

The Robinson house included four rooms on each floor "all well finished, cypress and cedar piazzas and fences, and large cellars and store rooms under the dwelling" The principal entrance fronted Judith Street, adjoining the central hall (figure 9). The property also included a basic retinue of service structures in the rear yard. Some evidence suggests that a drive ran along the east side of the house, providing access to the service yard from Judith Street.

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 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 1801, he married Henrietta Wyatt, a native of Charleston. 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 in 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). Aiken, his wife, and son lived at the corner of King and Ann Streets on 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, Wraggsborough. 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. Under the terms of the agreement with his mother, he acquired the property on March 21, 1833 (CCRMCO D51:337). In July of that same year, a detailed marriage settlement was drawn up between Henrietta Wyatt Aiken (William Aiken Sr's widow) and her intended, George Edwards, and William Aiken Jr. and his cousin Robert Martin, assigning the entirety of William Aiken's estate to William Aiken Jr. Mrs. Aiken married George Edwards two years later, and the couple resided in the Aiken house on King Street, though Edwards was barred from possession of any of his new wife's assets (CCRMCO Deed book E10:309, "Henrietta Aiken and George Edwards to Robert Martin and William Aiken Jr."). Henrietta Wyatt Aiken died in Paris in 1848, and Edwards vacated the King Street house shortly thereafter.

William Aiken, Jr., who married Harriet L. Lowndes in the same year, decided to make the residence at 48 Elizabeth Street their home. Shortly thereafter, the Aikens began ambitious renovation and expansion of the house. The architectural team describes these changes as "enlarging the house, modernizing its layout, and updating the interior finishes." Aiken closed the central entrance which had faced Judith Street and constructed a more formal neoclassical entrance at street level on the west facade of the house, along Elizabeth Street (figure 8). Architectural and documentary analysis suggests that the original sandstone staircase from the Judith Street entrance was moved to the rear of the building, where they remain. The interior floor plan was radically altered. The central hallway was closed, and a double-parlor plan was arranged (Poston 1977:605; Graham et al. 2003) A massive two-story east wing, with first floor

dining room and second floor ballroom was constructed. Buck notes that this wing was built on top of a once-separate one room warming kitchen, which still retains exterior shutters that now open onto an enclosed rear service hall. A rear staircase was also constructed to provide service from the basement and the separate kitchen building to the new dining and ballrooms (figure 10).

Aiken's 1830s renovations included the service buildings. The two-story kitchen building was doubled in size, and there is some evidence that the stable building received a second storey at this time. Any previous entries to these buildings from the street were closed, and access to the property was through the rear gate on Mary Street (construction of the dining room wing necessitated closure of the Judith Street access to the rear yard). Gothic revival detailing was added to the outbuildings, and it appears that the gothic privies in the rear corners and the yard structures (previously known as the chicken coop and cow shed) were built during this time. The brick wall that enclosed the property, built after 1825, was raised to its present level at this time (Graham et al. 2003).

Traditional interpretation of the property (Jones 1977) has held that the rear yard was used in its entirety as a service yard, with no pleasure gardens. The avenue of magnolias were interpreted as the only landscape feature, and the rectangular structures in the center of the east and west walls interpreted as a cow shed (destroyed in the 1886 earthquake) and chicken coop. Interpretation of these buildings, and indeed of a significant portion of the yard area, has recently been called into question as it relates to the 1830s renovations of the property.

William Aiken Jr. was a wealthy and influential man. He inherited much of his wealth and property from his father. Like most men of means of his time, significant resources were invested in cotton and rice production. His principal plantation on Jehossee Island was known to contemporaries as a "model of its kind". Aiken acquired the core of the plantation in 1830, and additional tracts in 1859. In 1854, J.B.D. De Bow published a sketch of "the magnificent rice estate of Ex Governor Aiken". Reporter Solon Robinson described the plantation in the following manner:

"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 over flow, 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... Besides this, Governor Aiken cultivates 500 acres in corn, oats, and potatoes; the balance is gardens, yards, lawn, and in woods."

Robinson also commented on the efficiency of the plantation:

"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.”

Aiken evidently acquired his large number of slave workers after purchase of Jehossee (Trinkley 2002:64; see this document for more extensive documentation of William Aiken’s plantation property). 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 care lavished on the plantation and the efficiency of operation, Robinson noted that Aiken suffered a low return on his investment,

“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 - \$7,000 [totals] \$380,000, which will show rather a low rate of interest, made from sales of crops, notwithstanding the amount of sales look so large” (De Bow 1854:424-425).

William Aiken’s residence on Jehossee was, by some reports, modest (De Bow 1854:425), as he spent the bulk of his time at his Charleston residence. 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 (1850 Census:293). Aiken’s real estate holdings were valued at \$199,000. Though the slave schedules of that year list 878 people owned in Charleston and Colleton districts, Aiken maintained only a small number of these people at his townhouse. The majority worked on his plantation at Jehossee and at his railroad sites (HCF files; In 1850, only seven slaves lived 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 12 slaves in town. By 1860 he owned 19 slaves in the city, eleven of whom, all mulattoes, were fugitives from the state. The remaining bondsmen were housed in ten “slave houses,” probably referring to the second-floor rooms in the outbuildings (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).

The servants were evidently a fluid group. Scholars of urban slavery have noted that the

census data for the city may be misleading, as a number of urban slaves lived off of the site of the master's residence (HCF 2001; Berlin 1998). Others traveled between the city and the owner's plantations, or worked for others for protracted periods. This may account for the fluctuation in numbers of enslaved people at the Elizabeth Street property. Little is known about individuals in residence there. The only hint is Aiken's 1874 petition for compensation following slave emancipation. Aiken noted that he was the owner "of the following slaves, who were of his immediate household in and about his family...Ann Greggs and her son Henry Greggs, Sambo and his wife Dorcas Richardson and her children Charles, Rachael, Victoria, Elizabeth and Julia. Charles Jackson and Anthony Barnwell, and two carpenters, Will and Jacob...[and]... that those about his person and in his family were very valuable from their peculiar qualities as attendants in the service of his house and establishment." (Aiken-Rhett papers, The Charleston Museum). A second enumerated document dates to 1845, when William Aiken becomes the trustee for stock and slaves belonging to Harriet Lowndes Aiken. The slaves are identified as Ann, Kelly, Thomas, Phoebe, Ann, Elizabeth, Henry, Sambo, Dorcas, Rachael, Victoria, Eliza, Betsey, Elijah, William, Dinah, Judy, Andrew, and Molly (Charleston county deed book R-11:52). Historical researcher Carrie Albee has recently discovered the names of several of these people in the Death Records from the Charleston Health Department. Phillis died of consumption (tuberculosis) at age 16 in 1858. Lizzy, age 30, died of the same illness in 1863. Ten days later, 14 year-old William died of typhoid/pneumonia.

Though he focused his attention on plantation agriculture, Aiken was equally well-known as an investor in enterprises which diversified the lowcountry economy, principally the railroads. He was a director of the Charleston and Hamburg Railroad (c. 1832-1836), director of the Planter's and Mechanics' Bank of Charleston (c. 1833-1836, 1849-1857), director of the Peoples' National Bank of Charleston (c. 1867-1868, 1874-1875), and a director of the City Railroad Company of Charleston (1869). He was an incorporator of the Charleston and Philadelphia Steam Packet Company (1835), of the Moultrie House Company, a hotel enterprise on Sullivans Island (1850), and the West Point Mill company (1860-1861).

As a staunch supporter of the railroad, William Aiken had no reticence about hiring out his slaves for industrial work. Many slave owners were reluctant to do so, citing hazardous and grueling conditions likely to detract from the investment value of their human property (Rosengarten et al. 1987: 129). In 1864, William Aiken provided the Coals Field and Northeastern Railroad companies with a list of Negroes available for hire. Ten years later, Aiken submitted the two slave schedules to corroborate an affidavit addressed to Federal Judge George Bryan, requesting compensation for his lost investment. One schedule lists 505 slaves and distinguishes them as field hands, children, old and infirm, runaways, carpenters, and deceased. "Coal Field Rail. Way - List of Negroes" is written on the back of the schedule (Aiken-Rhett papers, The Charleston Museum). Aiken described the Coal Field Rail Way simply as a corporation in the state of South Carolina. It may have referred to the Charleston Gas Company's double track railroad, built for the purpose of conveying coal. The other slave schedule contains three lists sent to Aiken by John Nettles of the Northeastern Railroad (located along present-day East Bay Street.) The first recorded the names of 167 people, grouped as

families and marked as full or half hands. A tally at the end counts 44 working men, 43 working women, six old men, 26 old women, and 48 children. On the reverse of the list is written "Northeast Railway/List of Negroes." The second named 170 "Negroes at Lanes," repeating approximately three fourths of the people on the first list. Again on the back is written "Northeastern Railway, November 1864." The third records the names and ages of 36 children under the age of 12, and the names of 35 people over 50 years of age. Aiken also requested compensation for 3/37th of the undivided shares of "91 slaves owned by the private unincorporated association of West Point Mills" (Aiken-Rhett papers, The Charleston Museum).

Aiken entered politics in 1838 as a Democrat, when he was elected to the South Carolina House of Representatives, representing the City parishes. He served in the House until 1842, when he was elected to the South Carolina Senate, serving until 1844. William Aiken was elected Governor that year in a secret vote of the General Assembly, after three indecisive ballots. The hotly-contested election pitted the Nullificationists, led by Robert Barnwell Rhett, against the Unionists, counseled by John C. Calhoun. After Aiken's election, the Nullification candidate, Edisto planter Whitmarsh B. Seabrook, charged that the wealthy Aiken was victorious through the efforts of "corrupting legislators through banking accommodations, backed up by [wealthy Charleston merchant and wharf-owner] Ker Boyce. But after this, Aiken's two year term was relatively quiet. His efforts were devoted to economic development and railroad construction (Biographical Directory of Governors). Aiken celebrated his inauguration with "a magnificent Democratic party" at a hotel in Columbia. His 1,000 guests drank 1,800 bottles of champagne and an unknown, but likely impressive, amount of wine and bandy (Jones 1977:20).

After his term as Governor, William Aiken left public life for a few years. He was elected to the U.S. House of Representatives in 1851, and served until 1857, when he retired from public life. Governor Aiken was opposed to the secession of South Carolina from the Union, but he nonetheless made substantial loans to the Confederate States of America.

Aiken's financial, political, and social success engendered another round of renovation and expansion to his Elizabeth Street house in the 1850s (figure 11). He redecorated with gas lighting fixtures, wallpapers, and carpets, and added the art gallery wing to house items acquired in Europe during their year-long tour in 1857 (Aiken-Rhett papers, Charleston Museum). The third floor was expanded to create additional chambers and service space, and modern conveniences were installed, including gas lighting, a service bell system, and improved plumbing (Graham et al. 2003) The additions to the house and grounds during these two major renovations were enjoyed by members of the lowcountry planter society, and guest traveling to Charleston. There are a few surviving descriptions of dinners and parties given by the Aikens. Frances Kinloch Middleton describes such an event in 1839, after the first-floor renovations to a double parlor, designed for entertaining:

".... last night I was at the handsomest ball I have ever seen - given by Mrs. Aiken - Miss Lowndes that was - they live near Boundary Street [now Calhoun] in a house he has added to and furnished very handsomely - two floors

were entirely thrown open - the orchestra from the theater played for dancers - and the supper table was covered with a rich service of silver - lights in profusion and a crowded handsomely dressed assembly” (HCF timeline, Cheves-Middleton Papers, SCHS)

In his diary, J.B. Grimball hosted a dinner for Aiken, in return for his having secured the appointment of John Grimball to the United States Naval Academy. Probably typical of the elegant dinners served by 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).

Despite his staunch Unionist stance, Aiken supported the Confederate cause with donations of supplies and generous subscriptions to Confederate loans. Confederate President Jefferson Davis stayed in Aiken’s 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 P.T. Beauregard maintained his headquarters at the mansion of his friend, William Aiken Jr.

In 1865, when Charleston surrendered to Federal troops, Aiken’s home was looted by the invading army and he himself taken prisoner and taken to Washington D.C. On his arrival, friends in the capital secured his release and he was allowed to return to Charleston. Aiken’s plantation lands were returned to him in 1866. According various sources, the majority of the freedmen previously owned by Aiken chose to remain on Jehossee Island after the war. Traveling mapmaker Nathaniel H. Bishop reported in 1875 that old Jehossee was “a happy place for master and for slave”. Nonetheless, Aiken’s property on the island was ravaged during the War by the Union Army in 1862, who “found a number of valuable things, set fire to the House & burned it to the ground” (Letter from “Lafayette” to his father, Jan 1, 1802, South Caroliniana Library). Further looting was conducted by the Confederate army soon after, and by agents of the Freedmans’ Bureau after the War. Carrie Albee notes, however, that members of the Aiken family continued to reside on the island part-time, and even entertain there, well into the 19th century, suggesting that other substantial buildings survive the marauders.

William and Harriet Aiken continued to reside on Elizabeth Street after the War, until his death in Flat Rock, North Carolina in 1887 (Johnson 1964:128-129). Tradition has held that the house was little changed during the postbellum period, and began the slow decline that characterized the house in the 20th century. But recent research by Carrie Albee had unearthed documents that indicate additional rounds of renovation, refurnishing, and re-landscaping during this period. The architectural team notes some reorganization of the third floor rooms to accommodate new bathroom fixtures. William Aiken purchased bedroom furniture and hired an upholsterer for a long list of tasks in 1874 and purchased a large amount of paint and supplies in 1876. New carpets were ordered in 1884. His daughter Henrietta Aiken Rhett purchased a

variety of landscaping plants in the spring of 1881 and summer and fall of 1882. There is further evidence that the avenue of magnolias in the rear yard was planted after the War (Bridgens and Allen 1852; Drie 1872). Additional changes occurred after the earthquake of 1886 and in the early 1890s. (Graham et al. 2003; Buck 2003)

William Aiken Jr. and Harriet Lowndes Aiken had one child who survived to adulthood, Henrietta Aiken, born in 1836. A second child, Thomas Lowndes Aiken, was born in 1841, but survived less than two months. At age 26 Henrietta Aiken married Andrew Burnet Rhett, two years her senior, in Flat Rock, North Carolina. Andrew Burnet Rhett was the son of William Aiken's political rival, Robert Barnwell Rhett. After their wedding on August 21, 1862, Andrew Burnet and Henrietta Aiken Rhett evidently lived with the Aikens in the Elizabeth Street mansion. Mrs. Rhett is responsible for some of the postbellum improvements to the property discussed above, particularly the landscaping.

The Rhetts had five children between 1869 and 1877. In 1878 Andrew Burnet Rhett moved to Flat Rock due to poor health. He died a year later, and his widow and children remained in the mansion with her parents. William Aiken Jr. in 1887 at the age of 81, leaving his widow and daughter as sole heirs of the Elizabeth Street property and Jehossee plantation. The two women evidently continued to make improvements to house; invoices indicate extensive repainting in 1891, major plumbing work in 1895, and new carpeting and curtains in 1897. Rice production and other plantation agriculture also continued on Jehossee, by wage and contract labor. The plantation was plagued by the problems that decimated all rice plantations in the late 19th century, including hurricanes, rising labor costs, and poor production. Records indicate that the Rhett family continued to visit the plantation, and entertain occasionally.

Harriet Lowndes Aiken died in 1892, leaving Henrietta Aiken Rhett as the sole owner of the properties. Mrs. Rhett continued to reside on Elizabeth Street. Through the years, several children and grandchildren were also in residence, particularly her three sons, William Aiken Rhett, I'on L. Rhett, and Andrew Burnet Rhett. Mrs. Rhett died in 1918, leaving the property to her five children. Though the household furnishings were divided among the heirs in 1923, William Aiken Rhett, Edmund Rhett, Harriet Lowndes Rhett Maybank, I'on Lowndes Rhett, and Andrew Burnet Rhett, held the property in common until 1949. At that time I'On L. Rhett, the sole surviving heir, purchased the interests of his brothers and sister, which had passed to their children (CCRMCO D51:337-339). I'On Rhett and his wife, Frances Hinson Dill Rhett, lived at the Elizabeth Street property until his death in 1959. Frances Hinson Dill Rhett remained on the property, reportedly using fewer and fewer rooms, until 1975, when she bequeathed the property to The Charleston Museum for the sum of \$1.00. Mrs. Rhett died in 1982. The Charleston Museum opened the property as a historic house museum, now known as the Aiken-Rhett House, that same year, and operated it as such until sale to Historic Charleston Foundation in 1995.

Illustrations - Chapter II

Figure 4. 1802 map of the City of Charleston, showing sparse development in the Charleston Neck area.

Figure 5. Plat of Wraggborough, c. 1800, by Joseph Purcell

Figure 6. Portion of the 1852 Bridgens and Allen map of Charleston, showing the location and layout of the Aiken-Rhett property (South Carolina Historical Society).

Figure 7. Portion of the 1872 Drie (Bird's Eye) map of Charleston, showing the location of the Aiken-Rhett property (South Carolina Historical Society).

Figure 8. View of the Aiken-Rhett house about 1865.

Figure 9. Floor plans for Period I, ca. 1820, (from Graham, Lounsbury and Ridout 2003)

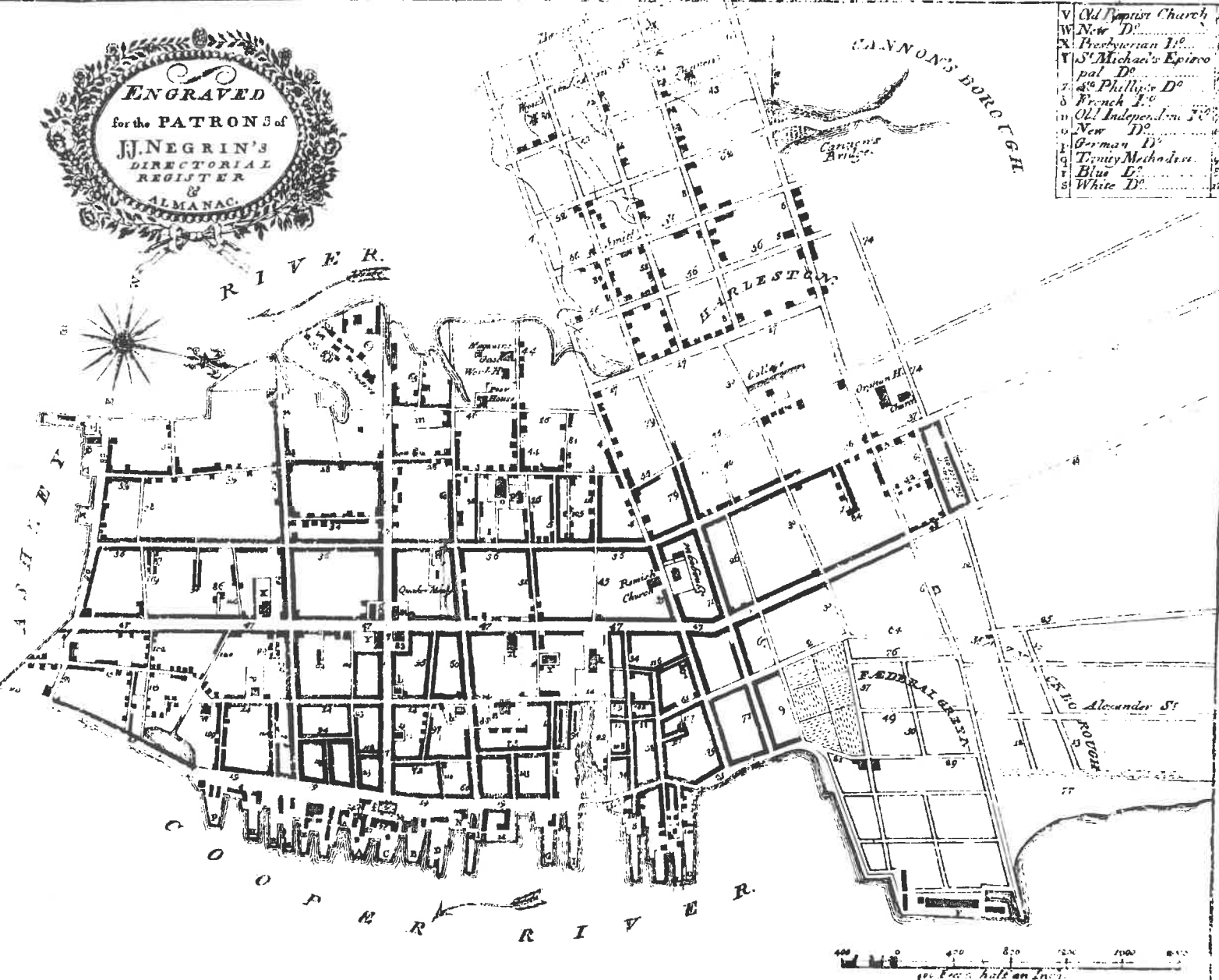
Figure 10. Floor plans for Period II, ca. 1833-36 (from Graham, Lounsbury, and Ridout 2003)

Figure 11. Floor plans for Period III, 1858 (from Graham, Lounsbury, and Ridout 2003)

REFERENCES

To the Streets, Alleys, Lanes, Squares, Wharves
PUBLIC BUILDINGS, &c. de Saer 66.

STREETS.	W. of	E. of
1. Aron Street.	61	62
2. Anson	81	82
3. Archdale	81	82
4. Beaufain	81	82
5. Berkeley	81	82
6. Boundary	81	82
7. Broad	81	82
8. Bull	81	82
9. Cantrion	81	82
10. Champney	81	82
11. Charles	81	82
12. Charlotte	81	82
13. Chapel	81	82
14. Church St. mca	81	82
15. Clifford	81	82
16. Co. n9	81	82
17. Cumberland	81	82
18. East Bay	81	82
19. East Bay St.	81	82
20. East Bay cont'd	81	82
21. Ellory	81	82
22. Elliot	81	82
23. D ^o cont'd	81	82
24. Elizabeth	81	82
25. Federal	81	82
26. D ^o Green	81	82
27. Friend	81	82
28. Front	81	82
29. George	81	82
30. Gougeon	81	82
31. Groves	81	82
32. Gulton	81	82
33. Gougeon	81	82
34. Harrell	81	82
35. King	81	82
36. D ^o cont'd	81	82
37. Lamb	81	82
38. Loper	81	82
39. Loper	81	82
40. Loper	81	82
41. Loper	81	82
42. Loper	81	82
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100. Loper	81	82



V	Old Baptist Church	27
W	New D ^o	33
X	Presbyterian D ^o	33
Y	S ^t Michael's Episco	33
Z	pal D ^o	33
1	St Phillips D ^o	33
2	French I ^o	33
3	Old Independence T ^o	33
4	New D ^o	33
5	German D ^o	33
6	Trinity Methodist	33
7	Blue E ^o	33
8	White D ^o	33

PLAN OF THE CITY OF CHARLESTON SOUTH CAROLINA.
Engraved by G. Connor.

Figure 4

EXPLANATION

The parts or parcels of land marked A and colored red are allotted to the Children of Joseph Wang and
 The lots marked 1 are given to South Slagg - 2 to Benjamin White - 3 to Elizabeth Slagg -
 4 to Ann Slagg - 5 to Joseph Slagg - 6 to Joseph Slagg and 7 to Mary Slagg.
 The parts marked B and colored yellow are allotted to Joseph Slagg.
 The parts marked C are colored green are allotted to the Children of Mary Slagg (wid). The lots marked 1
 are given to Joseph Slagg - 2 to James Slagg and 3 to John Slagg.
 The parts marked D and colored blue are allotted to Christopher Slagg.
 And the parts marked E and colored purple are allotted to the Children of Elizabeth Slagg (wid).
 The lots marked 1 are given to Joseph Slagg - 2 to William Slagg - 3 to Gabriel Slagg and 4
 to Ann Slagg.

The part or parcel B is reserved.
 The Marsh Land Sea on front marked B contains his share
 of Marshes, a piece of flat land and about the bottom
 boundary line of the plot is marked in the following manner:
 ... and a small is marked with five little containing each about 2 acres
 of thousands of marsh and mud flats
 and the part not in his plot is marked with
 into four parcels containing each
 about 2 or 3 A. of marsh &
 mud flat. And are allotted
 in the same manner as the
 other lots marked in
 distinguished with the
 number 1 & 2

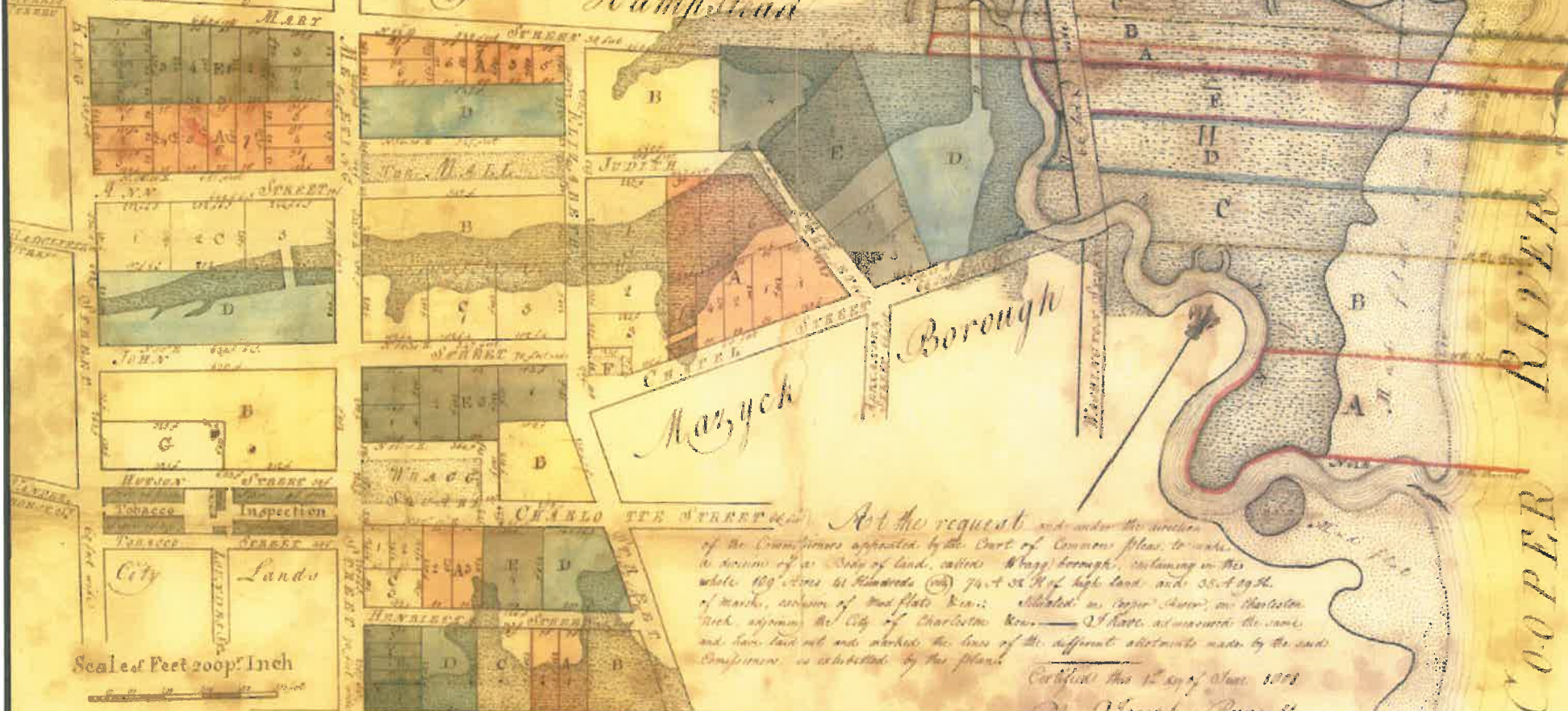
Village

Hampstead

Borough

Maryock

COOPER RIVER



At the request and under the authority
 of the Commissioners appointed by the Court of Common Pleas to make
 a division of a piece of land, called Wang's borough, containing in the
 whole 109 Acres 61 Roods (cont) 79 A 38 R of high land and 35 A 19 R
 of marsh, and one of two flats River situated in Upper Slagg on Charleston
 Neck, adjoining the City of Charleston, S.C. - I have accompanied the same
 and have laid out and marked the lines of the different allotments made by the said
 Commissioners, as exhibited by the plan.

Certified this 12th day of June 1798
 By Joseph Purcell

Figure 5



REFERENCES

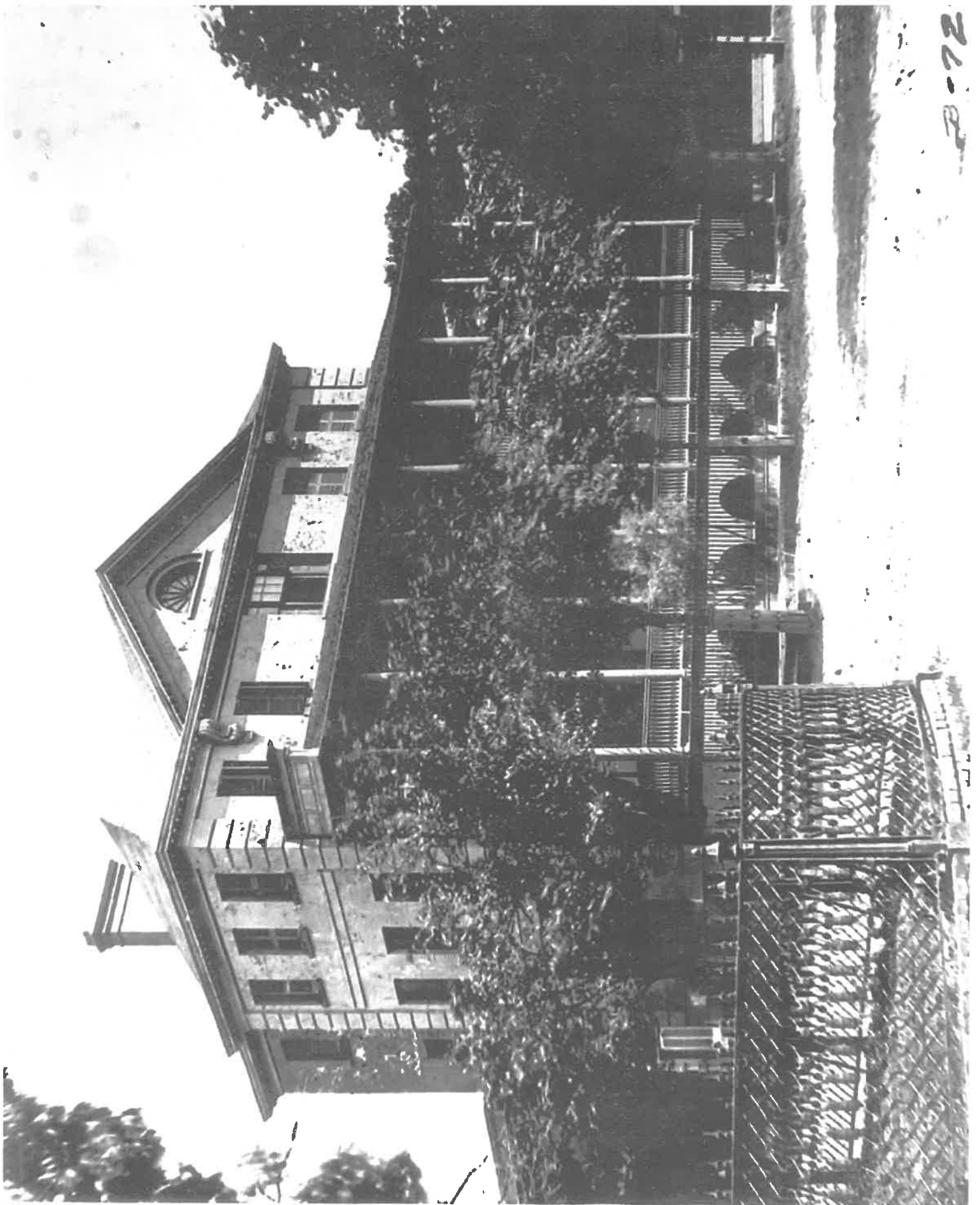
- 47. Contemorary City of Salisbury
- 48. Cathedral Church
- 49. Methodist Church
- 50. Methodist Church
- 51. St. Luke's Church
- 52. St. John's Church
- 53. St. Paul's Church
- 54. St. Peter's Church
- 55. St. James Church
- 56. Catholic Church
- 57. Zion's Church
- 58. Mt. Zion Church
- 59. Bethel Church
- 60. Ebenezer Church
- 61. St. Luke's Church
- 62. St. John's Church
- 63. St. Paul's Church
- 64. St. Peter's Church
- 65. St. James Church
- 66. Morris St. Baptist Church
- 67. Zion's Church
- 68. Mt. Zion Church
- 69. Bethel Church
- 70. Ebenezer Church
- 71. St. Luke's Church
- 72. St. John's Church
- 73. St. Paul's Church
- 74. St. Peter's Church
- 75. St. James Church
- 76. Morris St. Baptist Church
- 77. Chapel Square Baptist Church
- 78. Bethel Church
- 79. South Carolina Hall
- 80. Masonic Hall
- 81. Commercial Hall
- 82. Military Hall
- 83. Masonic Hall
- 84. G. S. Morris
- 85. Holston Opera House
- 86. Telegraph Office
- 87. South Carolina R. R. Co.
- 88. North Eastern R. R. Co.
- 89. Miscellaneous
- 90. Green Hill
- 91. Chamberlain Hotel
- 92. Mills House
- 93. Walker's Hotel
- 94. Brewery

BIRD'S EYE VIEW OF THE CITY OF

SALISBURY
SOUTH CAROLINA
1872

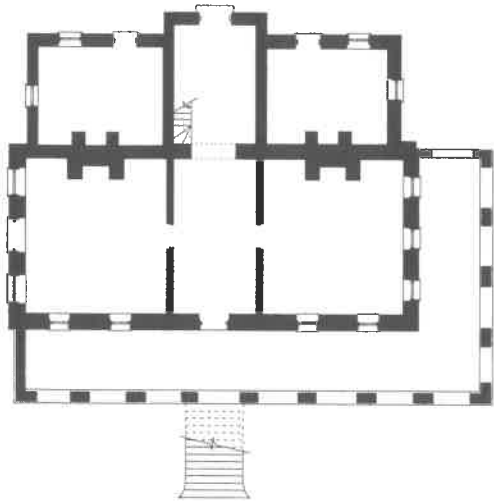
DESIGNED AND PUBLISHED BY CURTIS

Figure 7

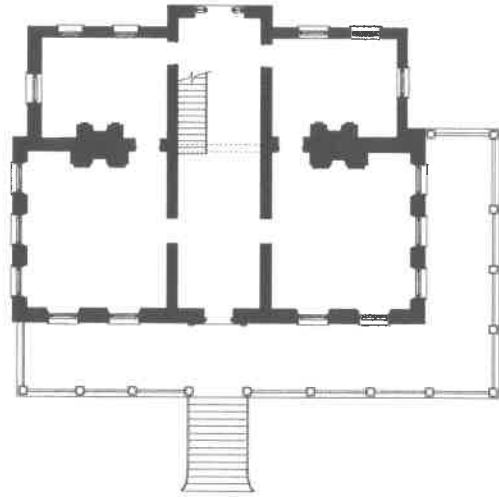


View of front shot about 1865. Window trim is dark in color. Period III changes were undertaken shortly before this image was made. Charleston Museum.

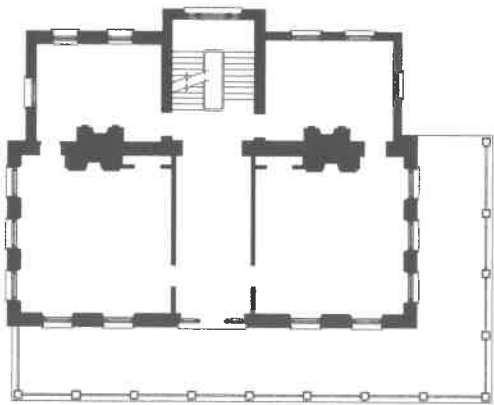
Figure 8



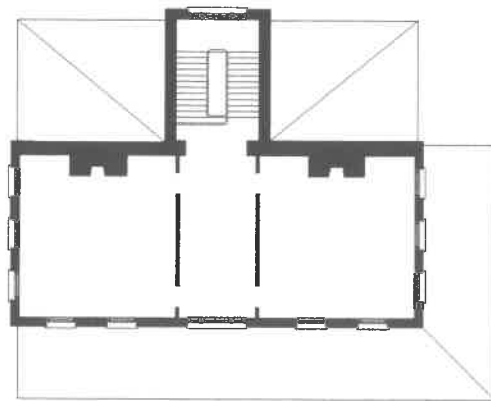
CELLAR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

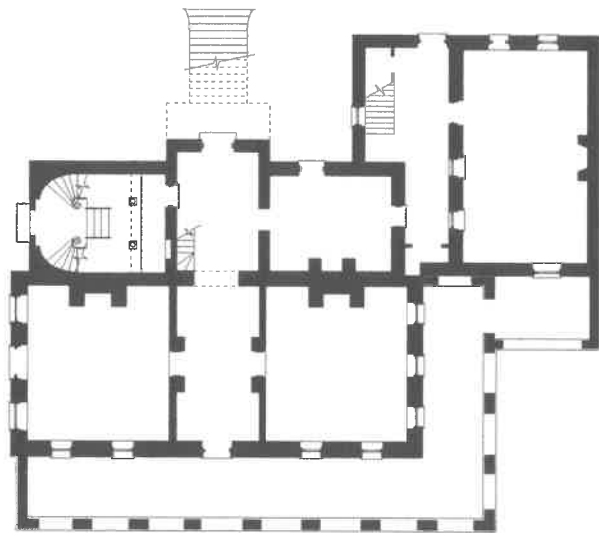


THIRD FLOOR PLAN

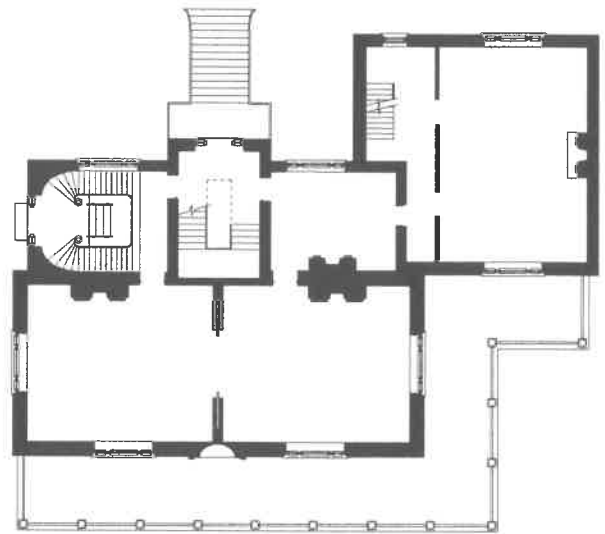
PERIOD I

ca. 1820

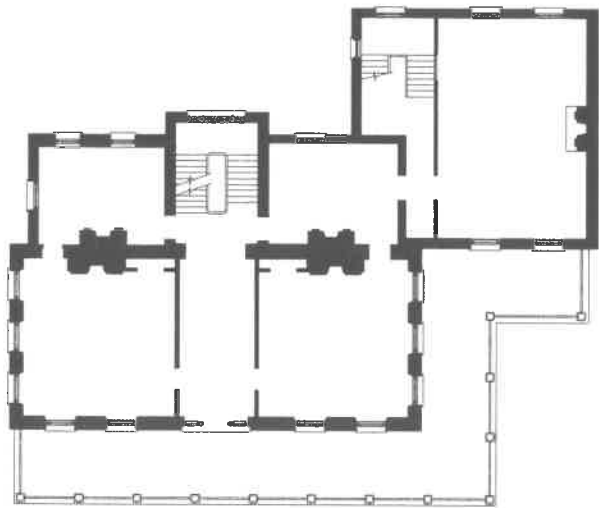
Figure 9



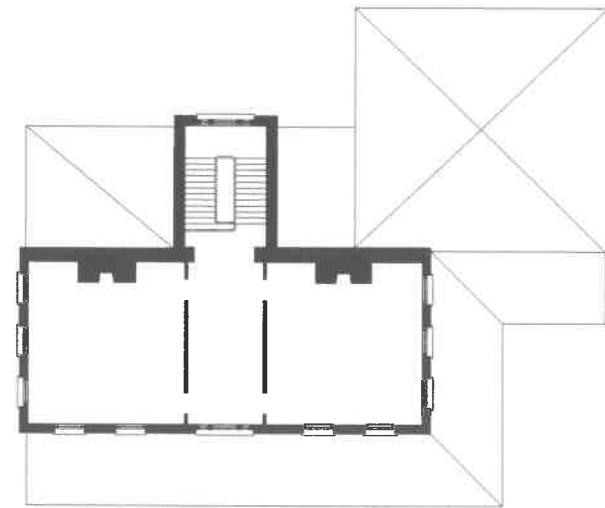
CELLAR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

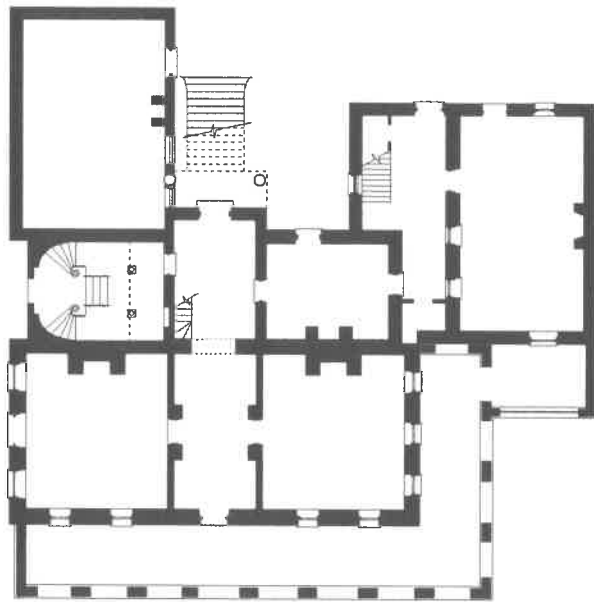


THIRD FLOOR PLAN

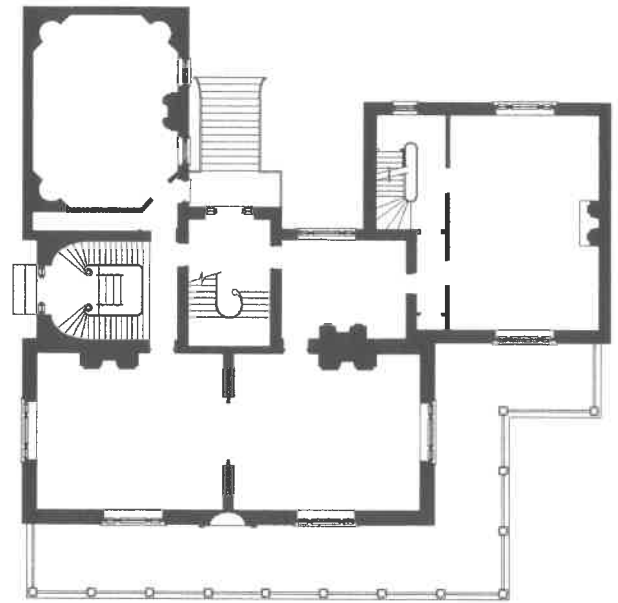
PERIOD II

ca. 1833-36

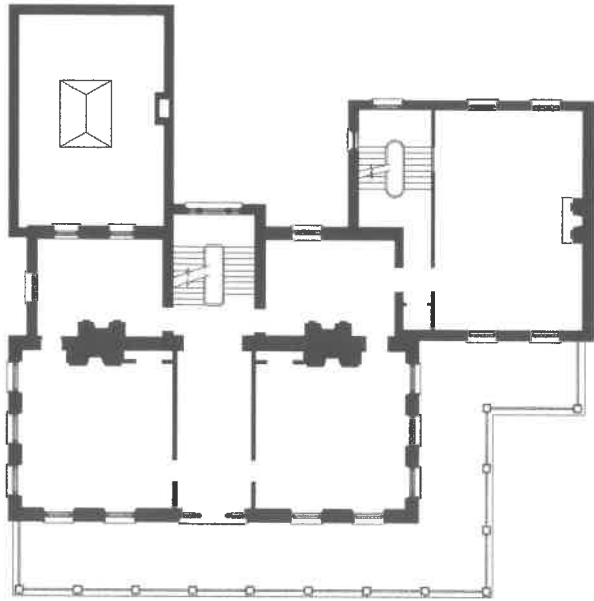
Figure 10



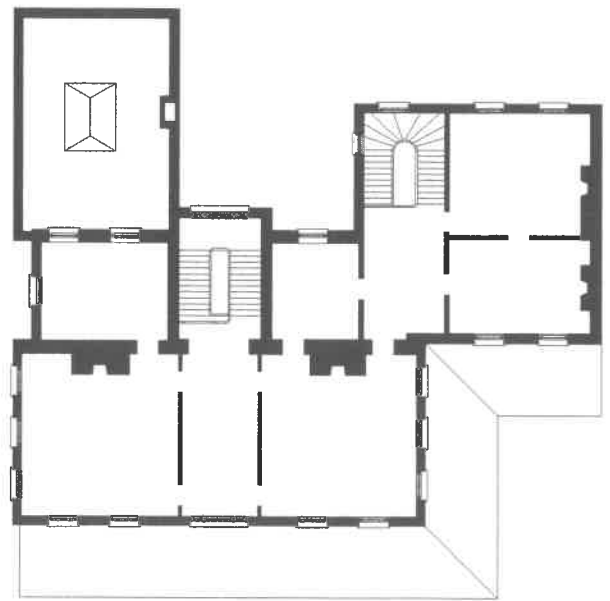
CELLAR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN

PERIOD III

1858

Figure 11

Chapter III: Excavations

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 Wraggborough, which was first subdivided in the 1750s. The majority of neighborhood development took place in the early 1800s. The area remains primarily residential.

The site measures 281 by 80 feet, and borders Judith Street to the south, Elizabeth Street to the west, and Mary Street to the north. The property contains a number of extant structures, including the main house and a retinue of service buildings. The main house is constructed of brick with a stucco finish. The original house was three stories, four rooms on each plus a central hall, with an above-ground cellar. Wide piazzas faced Judith Street. 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. The basement of this wing contains a large cistern. The main house measures approximately 80 feet by 80 feet. A small front yard or garden area exists between the front piazza and the fence along Judith Street; this space originally accommodated the steps leading to the central front entrance (see figures 3, figures 9-11).

To the rear of the main house are a number of outbuildings (figure 12). The kitchen building, measuring 70 feet by 20 feet, is located along the east property line. Documents and architectural data suggest Governor Aiken doubled its size when he acquired the property. Three large rooms, for kitchen and washing, are located on the first floor. The third room, subject to some archaeological salvage following Hurricane Hugo in 1989, has been re-floored and is used as a workshop for structural repair and maintenance. The second floor contains a series of servant's chambers, arranged along a side hall passage. A stable building of identical dimensions is located on the west property wall opposite the kitchen building. Carriage bays and horse stalls occupy the first floor, while the second story housed a hay loft and two rooms, presumably grooms' quarters.

At the rear corners of the lot are two gothic arched brick privy buildings. The eastern structure, destroyed in Hurricane Hugo, was rebuilt in 1990. The pit was excavated by looters in the late 1970s. The western building was fitted with modern plumbing in the early 20th century. Set at mid-point between the privies and other outbuildings were two rectangular brick structures. The western building was toppled in the 1886 earthquake but the outline remains along the property wall. These were used in the early 20th century as a cow shed and chicken coop, but their original function has recently been questioned by the Historic Structures team.

The entire rear yard is surrounded by an 8 foot high brick wall, with a large gate in the center of the rear wall. Remnants of an avenue of magnolia trees is located between this gate and the rear of the kitchen and stable buildings. This portion of the yard is currently grass, with a few smaller trees and shrubs. The rear yard between the kitchen and stable building is paved with brick in a herringbone pattern. Until recently, much of this brick was covered with soil and weeds, but Historic Charleston Foundation has worked to clear much of the brick surface. This clearing has revealed a linear depression in the brick, parallel with the front of the kitchen building, plus a series of shorter, perpendicular depressions. The brick is damaged in some places, but relatively intact throughout the courtyard.

During the Museum's ownership of the property, the main house included a c. 1950 kitchen addition to the rear of the dining room. This modern structure has since been removed, exposing the courtyard between the dining room and the kitchen building. This area contains a large well covered with an iron cap. The area formerly beneath the kitchen is now paved loosely in brick.

Field Methods

During the 1985 project, horizontal control was established by superimposing a Chicago grid over the site. The grid was oriented parallel to Elizabeth Street and the Aiken house structures. This base line was 20 degrees west of magnetic north.

A datum point was established 15.0' north of the northeast corner of the stable building. This point was re-established for the 2001 project by triangulating a point relative to the north face of the stable building. This datum point was given the designation N100E100 in 1985; in order to carry the grid to the front yard area, this point was re-named N300E100. Grid lines were established north and east of the N300E100 line, and a second, parallel line was established to the north from the N300E140 point. A point to the south was also established, at N215E140. These grid lines, while internally consistent, are not precisely parallel with the eastern property wall.

Because the foundation of the main house spans the entire width of the property, it was not possible to use the transit and tapes to establish grid points in the front yard. Instead, the points were established by triangulating relative to known landmarks (the front wall and the foundation to the piazza), and then measuring along the outside of the east wall of the property to determine the grid coordinates of the points. Each of the three survey maps of the property showed measurements for the site features that varied from each other, and from those taken during the project. Grid coordinates for the front units are, then, approximate. The locations for these units are also given relative to known landmarks.

After the 2001 excavations most, but not all, of the nails were removed. When we returned to the property in 2002, we worked to re-establish the same grid. The datum point at N300E100 remained in place, as did a few nails in the E100 line. By this time we had determined

that this grid was internally consistent, but was not exactly aligned with the front of the stable building. We determined that consistency with the 2001 grid was more critical than 'correcting' the grid, and we therefore re-established the 2001 grid, paying careful attention to measure locations of grid points to known landmarks. The site map produced for this report shows the grid as it actually existed on the ground.

For the 2002 work, the transit was used to establish the E100 line from N300 to the wall at N397.8. An east-west line was established along the N300 line to E135. A second meridian was established along the E135 line. Tapes and transit, as well as nails from the 2001 units, were then used to ensure internal accuracy of these lines.

Grid points were also established south of the N300 line along the E135 line, to N215. Measurements of these relative to the front of the kitchen building were taken to place the grid on the site map. The location of some of these nails was adjusted to avoid damage to the intact paving. The exact location of these is recorded in the field notes.

Vertical control was maintained with the use of a transit, in the same method used in 1985. An elevation point was re-established on the northeast side of the lowest rear entrance step, in front of the book scraper. All elevations were taken relative to this point, which is 12.69 feet above mean sea level. All elevations in this report are listed as feet above mean sea level.

All units were excavated with shovels and trowels. Screening was through 1/4 inch mesh, and was accomplished at each unit. All units were troweled and photographed at the base of the cultural deposits and whenever appropriate, informative, or confusing. Photographs were taken in black and white (Tmax 100) and color (Kodachrome 200), and plan view and profile drawings were made of each unit. Digital photography was utilized, as well. Narrative notes and a variety of field forms were completed on a daily basis and were augmented by feature forms, excavation unit forms, photographic logs, and field specimen logs.

Description of Excavated Proveniences, 2001

N340E90/N345E90: Two adjacent 5 by 10 foot units were located in the vicinity of the northwest corner of the yard structure. This was located to expose the foundations of the building and possible plant features around the structure. Unit N340E90 was placed so that the outside of the building occupied the southwest quadrant of the unit, while the inside corner of the building was contained in the unit as well (figure 13). This created a small section of the unit that was completely segregated from the rest by continuous brick foundations. This small section was excavated separately and exhibited different stratigraphy. The adjacent unit N345E90 explored the yard area north of the building.

Zone 1 was a dark grey to black loam (10yr2/2), excavated to a depth of .3'. The zone 1

deposit here was characterized by a very large quantity of modern bottle glass. This was true for the entire yard, but particularly so for this unit. The soil at the base of this zone was lighter and somewhat mottled. Well-defined builders trenches for the garden structure were present at this level and were designated feature 14. Builders trenches corresponded with the north entry, the northeast pier, and the east entry of the building. The trench in front of the east entry was the same color as elsewhere, but was very soft and loose with a concentration of brick to the north. This was segregated during excavation as feature 14a (figure 13). The builders trench around the north entry and north side of the pier was darker than the surrounding soil. These were designated features 14b and 14c, respectively, but appeared to be the same event.

Excavation of the three sections suggested that trench on the north side, features 14b and 14c, was intact and of some antiquity; artifacts dated to the 19th century. The areas along the north, labeled 14a, were soft and loose, and eventually encompassed a wide area. The loose soil continued around the flagstone at the entry step. These soils contained portions of vinyl phonograph records, while a surrounding zone 1 level 3 contained a 1968 penny as well as other modern items.

At this point, the unit was expanded to the north, and zone 1 in N345E90 was excavated to the base of the dark soil. Removal of feature 14 and the surrounding zone 1 level 3 soils revealed a light brown sand, possibly sterile subsoil, and several amorphous features. The units were troweled, photographed, and mapped at this point. The most distinct stains received separate feature designations. Two features were located and mapped at the base of feature 14. Both were rectangular stains of brown sand. Feature 22 was slightly smaller and lighter (10yr4/2) compared to feature 23 (10yr4/1). Both could be planting stains, or could reflect architectural activity. The stains in the northern half of the block were more easily classified as planting events. Feature 29 was an oval pit along the north profile filled with brown soil (10yr4/3). Upon excavation it proved to be filled with homogenous brown sand and a deliberate layer of coal and cinder, mortar and brick fragments at the base of the feature (figures 14-16). The feature was 1.4' deep. Feature 28 intruded into the east profile at the northeast corner and also appeared to be a plant stain, though the darker fill (10yr3/2) suggests it might be a later event. Feature 28 was also deeper, continuing to 2.1' below surface. Feature 30 was the designation given a linear area with undulating sides (suggesting a grouped planting) in the center of the unit. Feature 31 was also a linear plant stain. Neither feature was excavated.

The features noted in N340E90 and N345E90 may relate to those discovered in 1985 in unit N160E100 (now N360E100). This 5 by 10 foot unit revealed a very shallow zone 1 deposit followed immediately by sterile subsoil. Intruding into sterile were a series of small round features, interpreted as plant stains. The features could be grouped by soil color and appeared to represent two eras of planting, similar to features 28 and 29 (see figure 58, Chapter V).

The southwest quadrant of N340E90 was located on the interior of the yard structure, and so was excavated separately. The portion contained within the brick was approximately 2' by 2'. It also revealed a different stratigraphic sequence. Zone 1 was a dark soil full of brick rubble

(nearly 50 pounds). Also recovered from this deposit was an early 20th century artillery button. Zone 2 was lighter and browner, and contained far less rubble. Distinctive artifacts included a horse shoe and a flower pot fragment. Beneath this zone were two later features. Feature 42 was a builders trench full of dark loam (10yr3/2), while feature 41 was a loosely-packed pit of disturbed soil. A beer bottle label and other modern trash, including the corner of a square glass ash tray, was recovered from the latter feature. With these removed, a second level of zone 2 was excavated to sterile subsoil. Organic content of the zone was relatively high. A second, earlier builders trench was defined along the east (or front) wall of the structure. This was designated feature 47. A small square post on the interior (southwest corner of the unit) was designated feature 47. This proved to be quite deep and well-defined.

N375E115-N375E135: This series of four units (N375E120 was not excavated) was located to transect the central drive from the rear gate to the work yard, and to explore the interface of this drive and the yard areas on either side. Excavation began with N375E125, and this unit defined stratigraphy for this portion of the site. Zone 1 was excavated in two levels, and was a dark (10yr2/2) topsoil. Beneath this was a lighter brown sand mottled with orange, and a significant increase in mortar and brick fragments. Zone 2 was excavated in two levels, as well, though the proportion of light soil increased with excavation. Artifacts were sparse, but brick and coal increased.

A concentration of coal within the zone 2 matrix in the western third of the unit defined a late 19th century drive surface and was designated feature 17. The most significant deposit was feature 15, a small circular stain intruding into the north profile. At the base of zone 2 this was an area of brown mottled sand with three half-brick fragments. Excavation of the top levels revealed a sparse artifact content. Two smaller stains, possibly posts, were also defined as features 18 and 19. These were not excavated. Feature 15 appeared to be oriented with the rear gate post that defines the central drive. A linear brown stain, designated feature 16, was interpreted later as a root stain (see figure 20).

The unit on the other side of the central drive exhibited a more complicated version of this same depositional sequence. Unit N375E115 was located to intersect the west side of the drive and the area aligned with the gate column. Zone 1 was excavated in two levels. At the base of this deposit, a linear concentration of coal defined the later driveway surface and here was designated feature 27. This was shovel-excavated separately. Excavation of zone 2 as a single level proceeded afterwards. This revealed a light brown sand, possibly sterile subsoil, with a concentration of amorphous soil stains along the western wall of the unit. The eastern portion of the square, that below feature 27, was a hard-packed sterile orange sand. This was tentatively interpreted as an original dirt driveway surface. Both areas were excavated as zone 3. This soil contained coal fragments with a minor component of small brick fragments.

The mottled area in the western half of the unit proved to be a complicated series of postholes with post-molds. All were characterized by mottled soil fill with the majority the same orange sand as the surrounding sterile. Therefore they were best viewed after excavation, in

profile. The first feature defined was feature 37, whose characteristics and location matched that of feature 15 in N375E125. Feature 37 was a brown sand (10yr4/3) with half-bricks in place. Like feature 15, this deposit was relatively shallow, however, only .5' deep. Feature 38 was defined at the same level, and appeared as a square post stain. Upon excavation it proved to be a wedge-shaped post stain, within a much larger post hole of mottled fill. A small shallow area of brown sand in the center of the unit was excavated as feature 43, but this proved to be a pocket of residual zone 2.

Excavation of feature 38 and the soil profile revealed in the sides and bottom of the feature suggested that the western portion of the unit still contained disturbed soil, possibly a ditch. Excavation of an additional level of zone 3 in this area instead revealed an overlapping series of postholes and post molds, most characterized by mottled soil with a majority fill of orange sand. The features, then, were very difficult to discern in plan view. Feature 44 was a large mottled pit below feature 37 in the northwest corner. It may predate feature 37, or it may actually be a large post hole for feature 37. If the two are the same deposit, then it is likely that feature 15 in N375E125 was not completely excavated. Feature 44 appeared to undercut, and thus predate, the posthole for feature 38. Feature 45 was a large mottled pit in the south profile, slightly east of features 37 and 38. No dark, distinct post stain was evident in feature 45. A late discovery was a post in the northern profile, aligned with feature 45, designated feature 64 (figures 17-19).

With the exception of the wedge-shaped post mold in feature 38, all of the features in N375E115 were substantial, 1.5 to 2.0' in diameter and 2.0' deep. All had straight to sloping sides and a rounded bottom. When sterile subsoil was excavated to completely expose the west profile, it was possible to determine the sequence of installation for the posts. Very few datable artifacts were recovered from the series of posts.

The exposure of the series of posts in N375E115 suggests that further excavation of feature 15 and in the vicinity of N375E125 is warranted. The posts have been interpreted as evidence of a trellis or fence separating the drive from the yard, likely on both sides of the yard.

The units on the east side of the drive and trellis provided less substantial evidence for use of the northeast quadrant of the yard. Excavation of N375E130 and N375E135 revealed a series of two zones, with sparse artifacts. An amorphous pit was located in the center of the interface of the two units, and contained fragments of dressed marble, coal, and a few cultural materials. Feature 24 in turn, overlay feature 39 and was an equally amorphous stain filled with brown sand. Feature 40 was a small square post in the north profile of N375E135. It was very regular and relatively deep (1.0'). Elsewhere in the unit, a linear area of mis-matched bricks and polished stone in the eastern profile (in the matrix of zone 2) may represent a garden edging of some sort, or may be an accidental deposit of architectural materials (figure 20). Excavation of N172E 150 (now N372E150) in 1985 likewise revealed deep, somewhat amorphous deposits and no substantial evidence of activities in this quadrant of the yard.

N320E100: This unit was located to further test the southwest quadrant of the rear yard. It was located near to, and exhibited stratigraphy similar to, the 5' by 10' unit at N295E90, excavated in 1985. Zone 1 was relatively deep, and was excavated in three levels. The depth of zone 1 was due partially to heavy root disturbance. A paved brick drive area, laid in running bond, occupied the eastern two feet of the unit. The same feature was noted in N295E90 in 1985 and then designated feature 11. The same designation was used in the present unit. Feature 11 was left intact, and excavation proceeded with the western three feet of the unit (figure 31b).

An underlying zone 2 (brown-grey sand, 10yr4/2) was excavated in two levels; this was complicated by the presence of several large roots. Beneath this zone was a large pit filled with heavy brick and mortar rubble. This was designated feature 53, and is similar to feature 12 noted in N295E90. The pit continued to a depth of 2.3' below surface, and contained some nails and used roof slate, as well as large brick fragments and mortar. No other features were encountered in the unit.

N340E155: This unit was located adjacent to the eastern property wall, in the vicinity of the northern edge of the second service/garden building. This unit was the deepest and the most complex of the 2001 phase, and it contained layers from all periods. The unit contained substantial features from every phase of occupation at the property.

The unit was a 5' square, designed to intersect the brick wall surrounding the property and the building, supposedly demolished after the 1886 earthquake. Zone 1 was a dark topsoil (10yr 3/1), excavated in two levels. The second level was marked by an increase in brick and mortar rubble, and artifacts. The deposit was .4' deep.

Zone 2 was lighter and browner (10yr4/2). There was a dramatic increase in brick and mortar rubble, as well as coal, iron and slate. After the first level, the soil became quite loose and mottled. A concentration of coal debris in the northeast corner was segregated and excavated as Area A. Excavation revealed an unusual find; a rectangular iron (tin) can, with the soil inside the can a homogenous dark grey, likely stained by the former contents of the can. The can was photographed *in situ* and then excavated. Some darker areas were noted along the west wall, but were not clearly defined until the base of zone 2 level 2

Feature 20 was defined at the base of zone 2, and this proved to be the most substantive trash pit encountered on the site. The round pit in the northwest corner was filled with dark grey-brown sand (10yr3/2), and whole oyster shell. The presence of the shell was notable, as oyster shell, either whole or fragmentary, is conspicuously absent from the site. Feature 20 was 2.4' in diameter and 1.2' deep, and excavated in two levels (figure 21). Also encountered at this level was a linear area of soft mortar, designated feature 21. This feature did not have any depth or structural integrity. It has been tentatively interpreted as a foundation pad for an entry step (see photo of extant structure on west wall, figure 57).

Zone 3 below was a mottled brown soil (10yr4/3). It appeared to be fill soil, or at least disturbed soil associated with demolition of the garden building, as it was soft as well as mottled. At the base of zone 3 (1.0' below surface), a linear area of darker soil (10yr4/2) appeared along the south wall of the unit. This was designated feature 26, and was poorly defined for the first level. The feature continued, and was eventually interpreted as demolition for the garden building (figure 22).

Another amorphous, roughly linear area was defined along the property (east) wall. This was designated feature 32 (10yr4/3). The surrounding zone 4 soil was much lighter (10yr5/6 mottled with 10yr6/6 and 10yr8/6). Feature 32 was relatively shallow, and resolved into three small circular features of darker soil intruded into feature 32. These were designated features 33-35, and appear to be planting stains. Two more amorphous stains were designated Area B and Feature 36.

When these features were removed, excavation of zone 4 continued. The soils defined as zone 4 were actually a mottled fill, but the content of the soil changed dramatically with zone 4. The soil contained far less coal, and was full of red brick fragments and oyster mortar that match the garden building. The zone also contained earlier artifacts.

Also present in zone 4, beneath and separate from feature 26, was a linear area of brown sand in the southern portion of the unit, marked by a concentration of brick. The bricks were a mix of small red bricks used in the garden buildings and larger 'grey' bricks found in the property wall. This area was designated feature 52, and was excavated in several levels. None of the bricks exhibited any mortar, and may have been discarded before use. Excavation of levels of feature 52 eventually revealed an intact foundation for the garden building, fashioned out of red brick (figure 23, 24). This feature intruded into a narrow builders trench for the property wall, designated feature 51. It corresponded with a footer level in the wall foundation.

A cluster of three circular features intruded into feature 51 in the northeast corner; these were designated features 48-50, and were initially interpreted as a series of posts (see figure 22). They were excavated together, and contained a late ceramics. The dark soil terminated on a new curved brick foundation against the property wall. With limited visibility, the feature was tentatively reinterpreted as a drain vault (see figure 26).

Clearly fill, the zone 4 soils continued by levels. At the base of zone 4 level 3, it became apparent that the remaining soil was a very deep fill deposit, and so the designation shifted from zone 4 to feature 69. The 'extra' bricks around the footer in the vicinity of feature 48-50 proved to be a substantial buttress for the wall, which continued 2.8' below the initial point of definition (4.3' below ground surface; figure 26b). Though sparse, artifacts were recovered throughout the feature 69 fill, and all dated to the late 18th century. This was eventually determined as the builders trench for a very deep foundation (including buttress) for the property wall. A very narrow, initial builders trench for the wall, at the base of the feature 69 fill, received a separate designation as feature 78, and contained a single sherd of pearlware. The red brick fill around the

garden building foundation, then (feature 52), was a later event and appears to be the construction trench for the garden building (figure 25).

The deep and complicated stratigraphy of unit N340E155, then, spans the entire period of occupation at the site and contains evidence of many of the significant architectural changes to the property. The early artifacts contained in the deep construction pit confirms that the property wall was an early, if not original, event. Construction of the garden building is somewhat later, but occurs during the first half of the 19th century. The series of small features (33-36) were also created at this time. The as-yet poorly understood event represented by feature 48-50 occurs at mid-century, while the demolition of the garden building and the filling of feature 20 occur near the end of the 19th century. The proveniences in order of deposition (from latest to earliest) are listed below:

Zone 1

Zone 2

Area A (cluster of coal debris)

Feature 20 (oyster-filled trash pit)

Zone 3

Feature 21 (mortar pad)

Feature 26 (demolition of structure)

Feature 48-50 (drain entry vault)

Zone 3

Feature 51 (later builders trench for property wall)

Feature 32 (plant stains)

Area B

Feature 33-36 (plant stains)

Zone 4

Feature 52 (brick from building construction)

Feature 69 (builders trench for property wall)

Feature 78 (small builders trench for property wall)

Interpretation of the events represented by these deposits will be discussed in greater detail in the interpretive sections.

N118E105: The first unit excavated in the front yard area was located in the center front of the piazza, in the expected location of steps for the Phase I entrance. The unit measured 7' by 7'. The northward measurement was determined by pulling a tape along the outside of the house from the rear of the stable building to the footer at the front of the piazza (160'). The unit was located by measuring from the corner inside the front garden wall east along the footer of the piazza. Nails were placed at East 23' and 30'. From here a 7' by 7' unit was triangulated to the south. The coordinates of the unit were determined to be N118E105, based on measurements described above.

Work in this vicinity began with removal and storage of plants by the volunteer master gardeners. Mulch was then removed, and the topsoil sampled and discarded. An underlying zone 1 (10yr3/1) was highly mottled from modern planting efforts and was also discarded. Excavation and screening began with zone 2, a lighter brown, but still mottled soil. This rather shallow deposit was quickly followed by a complex series of intrusive features. These included later plant stains filled with dark (10yr3/2) soil, small features filled with the brown soil that is the hallmark of 19th century deposits at the site (10yr4/3), and linear/rectangular features representing 20th century pipe trenches. A linear area of mortar in the western wall was possibly associated with former front step foundations (figure 27).

Several of the features were poorly defined, and intruded into earlier ones. Interpretation of the front was further complicated by a notable absence of cultural materials in any of the deposits. Dating and sequencing of the features in this unit, then, are based principally on stratigraphy, and absolute dates remain problematic. Feature locations and designations are listed below in order of deposition, from latest to earliest.

Feature 65	10yr2/1	unknown
Feature 57	10yr4/3 mottled	pipe trench
Feature 60	10yr4/3	pipe trench
Feature 56	10yr4/3	pipe trench
Feature 54	10y42/2, 3/2	plant stain
Feature 55	10yr4/3	unknown, relatively shallow
Feature 59	10yr4/3	amorphous; tentatively interpreted as posts
Feature 58	10r4/3 mottled	older pipe trench; underlies feature 57
Feature 61	10yr4/3, 5/6 mottled	unknown
Feature 62	10yr5/6, w/mortar	remnants of step foundation
Feature 63	same	same?
Feature 66	10yr4/3	under fea 56
Feature 68	10yr4/3	unknown, under fea 56
Feature 67	10yr4/3 mottled	under fea 55

The most significant feature in the unit was feature 62, an L-shaped deposit of brown sand and crumbly mortar. This was sampled originally, and then the southern portion was excavated completely. A single sherd of shell-edged whiteware (TPQ 1820) was recovered from the fill.

N116E151.5: Two units were established in the southeast corner of the front yard (figure 28). This was accomplished by pulling tapes from the northeast corner of N118E105 (a nail laid against the front piazza foundation). This measured 41.8' from the nail to the east wall of the property. Nails were then placed along the east property wall, at 5' and 10' north of the north side of the brick corner column. From this point, a 5 by 10 foot unit (with long axis running north/south) was triangulated. The unit was then subdivided into two 5 by 5 foot units, and half of each was excavated. The units were located to answer questions about the original layout of the front yard, interface of front and rear yard prior to segregation by construction of the dining

room wing, and dates of construction for the walls. Like N118E105, these units were plagued by a lack of cultural materials in the stratified deposits. Intrusion of modern features further compromised evidence for these changes.

N116E151.5 was the designation given the eastern half of the northernmost 5' square, and was therefore a 2.5' by 5' unit. This unit was placed to explore the connection of the front yard and work area prior to construction of the dining room, and creation of a segregated front yard area.

The topsoil and zone 1 deposits were excavated to 1.1' below surface, exposing two courses of the east wall footer and a series of features. The most recent was an amorphous area that appeared to be a series of three planting stains, designated feature 70. These were filled with a homogenous dark soil (10yr4/1), and were excavated separately as feature 70a, b, and c. The group was first bisected, and there was no clear distinction among the three. Feature 71 was beneath feature 70, to the north, and was slightly lighter with more mottling (10yr4/2). Feature 72 is heavily mottled grey sand (10yr4/3). An area designated feature 73 was actually similar to subsoil.

Feature 70 was removed completely and features 71-73 sampled. The underlying zone 2 was then excavated. This was a light grey sand with little organic material (10yr6/1). This was excavated in two levels. Excavation of zone 2 revealed that the east property wall, a replacement wall following construction of the dining room wing, was relatively shallow, only 3 courses deep. Sterile subsoil was visible beneath the foundation (figure 29).

Two additional features were noted at the base of zone 2. Feature 79 was a dark stain in the southwest corner of the unit. This in turn intruded into feature 80, a linear, somewhat uneven surface of crushed oyster shell. Both appear to be early deposits. Feature 80 has been interpreted as a possible drive surface. The feature did not continue the entire length of the unit, but terminated about one foot north of the south profile. The feature continued into the north profile, however, and the shell deposit became thicker as one moved north (figure 30). Sterile soil was encountered beneath this deposit.

N111E149: This was the designation given the southern half of the southernmost 5x5' unit triangulated in the southeast corner of the front yard. The long axis of this unit abutted the southern (front) property wall and included the corner gate post (figure 28). A quarter-circle brick foundation for the corner gate post occupies the southeastern quadrant of the unit. This substantial foundation did not continue below zone 1, and so seems to be a later addition to the property. An adjacent square brick box proved to be an entry vault for a sewer pipe which runs along the garden wall and occupies much of the unit. An electrical conduit line also runs along the wall, but had less impact on the archaeological record.

Excavation of zones 1 and 2 exposed the brick courses for the front wall and a series of features. The foundation for the front wall was stepped out two courses above ground surface,

and a third time just below surface. The bricks beneath this were recessed, and appear to be an earlier foundation, subsequently built upon for the present wall. There was no apparent builders trench that could be isolated to explore this idea, however. Additional excavation showed that the front wall foundation was very shallow.

Feature 76 was the designation given the pipe trench for the sewer pipe. Three other small round features intruded into this; designated features 74, 75, and 77. These appeared to be modern plant stains, based on their shape and stratigraphic position. Feature 74 contained architectural debris instead, including small red bricks, slate, and a large iron pipe flange. Feature 77 was a valve for the sewer pipe. All of the deposits in this unit appear to date to the 20th century. The unit was therefore unable to provide data on the date of the gate post and front wall.

Description of Excavated Proveniences, 2002

Excavations resumed in October 2002 with further exploration of the post features in the rear yard that suggest a fence or trellis along the driveway. Excavation of N375E115 had revealed a series of overlapping post stains along the west wall of the unit. Three contiguous units were established south of this, to further document the existence of this post line or lines. N370E115, N365E115, and N360E115 were excavated simultaneously. Excavation began with N370E115. As was the case during the 2001 project, the dark topsoil of zone 1 was filled with bottle glass from the late 20th century, and so this level was discarded in the subsequent units. The area of coal debris associated with the central drive was encountered in the eastern portion of these units at the base of zone 1, approximately .3' below surface. This was designated feature 27, and excavated separately. Feature 27 was excavated with shovel in each of the units. The underlying zone 2, beside feature 27, was excavated as zone 2 level 1. The zone 2 soils beneath feature 27, contiguous across the unit, were excavated as zone 2 level 2. Zone 2 was a dark grey brown soil (10yr3/2) mottled with increasing amounts of light brown (10yr5/3). In some areas, a distinct third zone of medium brown sand (10yr4/4) was excavated. In other places, this deposit was less clear.

An additional deposit present principally in N365E115 was a lense of granular grey sand (10yr4/1 to 4/2), excavated as zone 2A (figure 31a). This may be associated with a large trash pit, feature 85, or it may be an earlier paving effort for the driveway. This sand was excavated separately. If it is a driveway paving event, it is also a postbellum event.

Beginning with N370E115, numerous features were noted at the base of zone 2. At this level, however, most were very poorly defined, and so the units were excavated an additional .2 to .4' into the zone 3/sterile subsoil level. The majority of the features encountered exhibited highly mottled soils of medium brown, gold, and orange sand, their color and artifact content suggesting antebellum deposits. Some later features were noted at this level, as well. Each feature will be described separately, beginning with the later events.

Feature 88 was the designation given to a construction trench for the water pipe leading to the northwest privy. The trench was in the zone 2 levels, and intruded into sterile subsoil only slightly. The fill was characterized by dark grey-brown sand mottled with orange sand.

The three-unit block was dominated by a large pit designated feature 85. This feature was first encountered in the southwest corner of N370E115, and was sampled to sterile subsoil at this point. Subsequent excavation of the other two units revealed an oval pit measuring 6.5' in length. The feature intruded into the western profile, but was 3.0' at its widest point. The feature was characterized at its point of initiation by a fill of mottled orange sand containing coal, with an outer 'rim' of denser coal. Excavation of the mottled sand in the N370 section revealed a concentration of brick and building stone. Contained in this dump were scraps of dressed marble, bluestone, slate, and brick. Beneath the stone was a concentration of coal cinders filled with kitchen debris, including bottles and bone. The bottom of the pit was filled with a pile of enameled iron kitchen pots. Mold seams on the bottles suggest an early 20th century date of deposition. Each of the layers was excavated separately. Only the northern 2.0 feet of the feature was sampled (figure 32).

Several areas of granular tan sand were noted at the base of zone 2 in N360E115. These appeared to be remnant pockets of a fill sand, and so all received the designation feature 89, with letters denoting the individual areas. Feature 89 was excavated only in areas where they overlay earlier features.

Though the large late pit dominated the N370 block, there were several early post stains around and beside the pit. All of these were characterized by a mottled brown sand fill (10yr4/3, 10yr5/6, 10yr5/4), confirming their initiation in zone 3 (10yr4/4). Most, though not all, of the post features were located along the western wall of the unit. All of the posts were bisected, and half of each feature was left intact (figures 33, 34).

Feature 84 in N370E115 was the first encountered, and was the least substantial. It measured .6' by .9', and was .5' deep. The top layers contained an 1899 penny. There was no distinct post mold and post hole.

Feature 87, also along the western profile and adjacent to the north edge of feature 85, was more substantial. This mottled sand stain was rectangular in shape, and .8' wide by 1.2' long. Feature 87 exhibited a very regular shape, with straight sides and a flat bottom, 1.4' in depth (2.1' below surface). There was no distinguishable post mold /post hole.

Feature 90 intruded into the west profile, and was located beneath feature 88, the pipe trench, in the southwest corner of N360E115. Feature 90 exhibited the same brown mottled soil, with sloping sides and a flat bottom. The base was 1.7' below the point of initiation, and the overall depth and shape of feature 90 was comparable to feature 87. The southern edge of feature 87 was truncated by feature 85.

Likewise, the northern edge of feature 91 was altered by feature 85. Feature 91 was a larger oval area of mottled brown sand, but became much narrower with excavation of the first few tenths. Feature 91 exhibited straight sides and was 2.4' deep. The edges of the feature were somewhat amorphous at the lower depths, but the post had a rounded bottom.

Feature 101 was a small rounded stain of homogenous brown sand. It was very shallow and did not appear to be a post stain. The feature terminated .3' below the point of initiation.

Feature 102 was the designation given a round stain of mottled brown sand. This feature was located in the eastern portion of N360E115. It was a round stain of mottled sand, initially 2.4' in diameter, but redefined at 1.4'. The profile revealed that this feature was relatively shallow, .6' in depth, and rounded in cross-section. It did not appear to be a post, though the soil would suggest it is contemporaneous with the post features.

An area of brown stone with a concentration of whole brick created an interface between feature 91 and 102. This eventually received a separate designation as feature 103. Once the bricks were removed, the remaining brown soil was relatively shallow. The shape remained amorphous.

Also located adjacent to feature 103 was a very faint stain of mottled brown soil. This was designated feature 104 and, upon excavation, proved to be a substantial post stain. The fill was very light (10yr5/3 and 10yr5/6), but the post was 1.8' deep, with straight sides and a rounded bottom.

The most substantial post in the block was also the most enigmatic. Feature 86 was located in the southeast corner of N370E115 and intruded into the south wall of the unit. The portion contained in the N370 unit was excavated. The top portion of the fill appeared to be mostly orange sterile sand, somewhat hard-packed. Beneath this was a well-defined post mold in post hole. The post mold was 3.2' deep and was a mottled sand, suggesting the post was pulled out, rather than rotted in place. The surrounding post hole continued for an additional .4' deep, and this lower portion was characterized by water-washed sands, suggesting the hole sat open a bit before the post was placed and the hole refilled (figure 35). The surrounding post hole was .6' wider than the post mold. This post does not align with those along the western portion of the unit, and is within the driveway, as defined by the gate posts and feature 27. This may represent a separate, possibly earlier, event.

As part of this research, two adjoining units were excavated in the postulated garden area. N360E95 and N365E95 adjoined a 5x10 unit excavated in 1985, N160E100. Those units revealed an overlapping series of small features, from the late 19th century and early 19th century, respectively. These were interpreted as plant stains. Excavation of N360/365E95 was designed to expand this view (see figure 58).

Zones 1 and 2 were removed from each unit to the top of orange sterile soil. This

revealed few features. Most distinct was feature 81, a regular, round feature of dark soil (10yr3/2, 2/2), surrounded by a grey area (10yr3/3). Feature 82 was a linear deposit of dark soil, intruding into the east profile. This extended length of both units, with a 1.5' wide gap present in the center. Features 81 and 82 were both filled with the dark grey-brown soil characteristic of the late 19th century activities at the site.

A lighter stain, possibly a plant stain, intruded into the north profile of N365E95. This was designated feature 83. Some additional stains of medium brown soil were recorded in N360E95. These were amorphous, and were not given feature designations. None of the features in these two units was excavated.

Courtyard: Exploration of the courtyard construction included units in and adjacent to the paved area. N285E130, a 5x5 foot unit, was positioned along the northern edge of the courtyard, adjacent to the northern side of the kitchen building. The southern edge was a few inches beyond the visible brick edging. While the intended location of the unit was the intersection of the central driveway and the courtyard, the unit was positioned further east to avoid the heavy root mass from the large magnolia tree.

Zone 1 was relatively deep in this location and contained little material culture. The subsequent zone was marked by a thin lense of crushed brick and gravel. This was designated zone 2 level 1, and it was characterized by a concentration of artifacts, most of which were trampled and very small. The lense of crushed brick proved to be rather thin, and the dark grey-brown sand characteristic of zone 2 elsewhere on the site. This underlying sand was excavated as zone 2 level 2. Level 2 was also filled with small, trampled ceramics. A lead pipe was encountered in the northeast corner of the unit at the base of zone 2.

Removal of zone 2 revealed an underlying layer of yellow-brown sand, which initially appeared to be somewhat sterile. Unlike natural subsoil, however, this was a hard-packed granular sand, highly mottled with spots of dark soil, shell, brick and artifacts. (10yr6/3 mottled with 10yr3/2, 10yr5/8, and 10yr8/3). Both the texture and the color were characteristic of fill, rather than natural accumulation. Zone 3 was excavated in two levels. Several features were present at the top of zone 3 level 2.

Just barely visible in the southeast corner was an area of bluestone paving. This was the top of feature 2, the brick-lined drain first encountered in 1985. The builders trench for the drain, feature 3, was also present in the unit as an area of slightly darker sand (10yr5/3 mottled with 10yr6/3). Feature 3 was .8' wide and .7' deep.

A large, rounded pit was present in the northeast corner of the unit. This pit, designated feature 93, intruded into feature 3 and was characterized by highly mottled soil (10yr4/4 to 5/4) and large brick fragments. Feature 93 was fairly deep, and was filled with re-deposited lenses of

the surrounding zones, and so was challenging to define and excavate. For this reason, the feature was excavated in three levels, totaling 2.4'. The function of the pit could not be determined from the archaeological evidence specifically, but location of the feature relative to the remaining magnolia trees would suggest the pit was associated with the magnolia avenue (see figure 38).

A small amorphous area of brown soil (10yr4/3 and 5/6) in the northwest quadrant was excavated as feature 95, while an associated small square post was designated feature 94. Feature 94 was relatively shallow, .3' deep (but later proved to be 1.4' deep). Feature 95 appeared to end at the same level.

Excavation of the remainder of zone 3 then resumed. Artifact content in zone 3 was sparse. The soil beneath zone 3 was darker (10yr 5/3 to 5/4) and contained a greater concentration of artifacts. This was excavated as zone 4. Zone 4 also appeared to be a fill layer, and was relatively deep, .8', and excavated in three levels. Features 93 and 94 continued in this level, and a new square post was defined in the vicinity of feature 95. This was first excavated as feature 95, but upon re-examination of the profile it was determined that the two features were separate events, and so the new post was designated feature 100. This post was 1.1' deep. Feature 94 post-dated feature 100.

The underlying zone, designated zone 5, was an orange mottled sand. This also appeared to be a fill level. Zone 5 was excavated in two levels. Zone 5 contained additional architectural information. A concentration of large brick fragments was noted at the base of zone 4. At the base of zone 5 there was an additional concentration of brick, and a linear area of white mortar (figure 36). This was designated feature 99, and corresponds with the same feature and elevation in the courtyard excavations (discussed below). The white mortar and brick concentration of feature 99 was left intact in the eastern half of the unit, and the western half was excavated further (figure 37). The brown sand (10yr5/3) beneath this feature was designated zone 6, and excavated in two levels. Sterile subsoil was discovered beneath zone 6, nearly 5 feet beneath the ground surface.

An additional feature was noted at the base of zone 6, intruding into sterile subsoil. Feature 107 was a well-defined pit, roughly rectangular with rounded corners (figure 36). The feature occupied the center of the unit, and so continued under the feature 99 baulk. Therefore, the western portion of the feature was excavated, leaving a profile in the center of the unit. Feature 107 exhibited gently sloping sides and a flat bottom. The sides of the feature contained dark organic sand (10yr4/2), while the center was a mottled orange sand (10yr5/4 to 5/6), suggesting fill after a wooden structure collapsed and slumped. Examination of the central profile suggests that the feature initiated in zone 6, about .6' before it was defined, and was nearly 2.0' deep.

The fill soils, particularly zones 4, 5 and 6, correspond with fill episodes noted in the courtyard excavations. Three contiguous units were placed in the southeast quadrant of the

courtyard, in a location in front of the front half of the kitchen building, intersecting the long north-south brick-paved trench in an area where the dark fill dirt in the ditch was intact, an adjoining east/west depression, and the bluestone-capped central drain. These were units N225E125, N225E120, and N225E115, respectively. Each was excavated and screened separately. N225E130 was laid out but not excavated.

Excavation of the units began by stringing the units on top of the herringbone brick paving. Each brick contained in the units was then numbered with yellow construction crayon, and the numbered bricks photographed. The numbered bricks were then removed by Jim Crow and Rolf Young of Historic Charleston Foundation.

Excavation began with N225E125, the unit that included the cross-section of the north/south ditch. Here, bricks were present only in the northwest quadrant and along the eastern edge of the unit; the ditch itself, filled with dark soil, did not have brick paving in this unit, though the brick paving was intact across the bottom of the contour immediately north of the unit boundary.

It was immediately apparent that the soils in the trough, and beneath the bricks, were fill and there were many distinct layers. To avoid confusion with the zone deposits already identified elsewhere in the site, these soil deposits were designated as "layers". Each distinct layer was described and excavated separately. It was also readily apparent that the layers of fill followed the surface contours of the brick paving.

Layer 1 was the dark grey-brown topsoil (10yr3/1) currently extant over much of the courtyard. This was relatively thin in most places, averaging .1' in depth. In the area of the swale this was followed by a pocket of coal, coal ash, and clinkers, characterized by the white-pink-black color of coal ash (5yr4/3). This was designated Layer 2. This was followed by a cap of brown sand with slight gold mottling (10yr4/4), about .2' in depth. Some pockets of layer 3 were present on the top of the ditch, beneath the brick paving, as well. Layer 4 was also present only in the dip of the trough. This was a thick, somewhat uneven, pocket of loose black coal dust, mostly powder (10yr2/1). The coal dust layer was unique in that it contained large amounts of broken window glass.

Layer 5 existed in a continuous band from the bottom of the ditch to the top of the 'rise', throughout the entire block. Layer 5 was the designation given to a series of lenses of soft, builders-type sand, ranging from grey sand mottled with black (10yr4/1), orange sand (10yr5/8), brown sand (10y44/3), white hard-packed sand (10yr6/3), and yellow sand (10yr5/6). It was apparent from the profile, that these layers were stacked in some places, mixed, in others, and in reverse order elsewhere. It was for this reason that the bands were determined to be a single fill event and excavated together as layer 5 (see figures 41-42).

Layer 5 proved to be a fill event on top of a prepared mortar bed, designated feature 99. Feature 99 was a white lime mortar, contiguous across the units, and following the surface

contours (see figure 39). This includes the sides and base of the deep north/south trough. Further, feature 99 had clear impressions of brick laid in herringbone pattern. Feature 99, then represents a previous paved surface for the courtyard. The paving was missing in the northeast corner of N225E125, replaced by a lead pipe, leading down through the sand layers at a 45 degree angle. In this location the soils of layer 4 and layer 5 were mixed, though no distinct builders trench for the pipe could be detected.

Excavation of unit N225E125 was terminated at the top of feature 99 (the bottom of the contour). The paving at the base of the trough was left intact, and the underlying sands were excavated around this elevation, to eventually level the floor of the unit. Figure 41 shows the center of the unit filled with feature 99 at its lowest elevation, with the underlying soils excavated and their profiles exposed. The white mortar and bricks noted in unit N285E130 at the base of zone 5 appeared to be part of the same paving feature and was also designated feature 99.

Excavation then commenced in N225E120; this unit was centered on the highest point of the contour, rather than the lowest. Here, layer 1 was followed immediately by layer 3; layer 2 and layer 4 were not present in this unit. Layer 5 was relatively thin, only .2' thick. This was followed by feature 99, intact across the top of the rise and the sides of the depression. In order to preserve portions of feature 99, the western half of the unit was left intact at this point, and excavation of the underlying layers continued in the eastern half of the unit only.

Layer 6 was a deep deposit of brown sand with some mottling of orange sand and charcoal. This was a relatively deep and homogenous deposit, .8' thick, with a moderate amount of artifacts. Layer 6 was followed by a second mortar surface. This time the white mortar was softer and more granular, and no brick impressions could be detected in the surface. This was designated feature 106 when it was first encountered. The mortar layers of feature 106 were thicker than those of feature 99, and contained a relatively large quantity of cultural material. These were excavated as layer 7. Taken together, feature 106/layer 7 included pockets of orange clay and white mortar, followed by granular sandy mortar (10yr5/2) with charcoal inclusions. The curvature of feature 106 again followed the surface elevations, but was somewhat flatter, and less dramatic. Areas of layer 6 and feature 106/layer 7 were also excavated in N225E125, on the edges of feature 99 (figures 40-42).

More layers of fill followed feature 108. Layer 8 was a grey sand with large mortar chunks and charcoal bits (10yr6/2). A concentration of artifacts was noted in this layer, which was .3' thick. This was followed by layer 9, a deeper deposit of yellow and brown loosely mottled sand (10yr3/3), which was nearly sterile. The next layer was a lense of dark brown, gummy organic material, designated layer 9a. This was .1 to .2 feet thick, and exhibited a fair degree of bioturbation. As it also followed the curvature of the courtyard, it appears to represent a fourth deliberate surface, this one of wood. This was followed by layer 10, a dark grey (10yr3/3) loamy sand, blending into orange sterile subsoil, 3.2' below ground surface (figure 40).

Some slumping was evident on the surface at various points throughout the courtyard, as

indicated by an irregularity in the brick paving. Such a gap was present at the tip of the east/west depression in N225E120 (at N225E123-124, precisely). It was evident from the profile that a break, or 'drop' in the stratigraphy occurred at level 7 (figure 40) and continuing through level 9.

A small portion (.5') of unit N225E115 was excavated, to expose the eastern side of the bluestone drain and to sequence the courtyard paving, the drain, and any underlying deposits. The bricks adjacent to the drain cap were numbered, photographed, and removed. Layer 1 was then excavated. This revealed the brick sides to the drain, suggesting it is the same feature as feature 2. For the present testing project, however, it received a separate designation as feature 108. Removal of layer 1 revealed a relatively deep deposit of this dark grey-brown sand. Further, it appears that the drain box proper (the brick sides) slope and follow the contours of the courtyard. Some of the bluestone pavers appear to have been raised, and straightened, as part of the filling activity associated with layer 1 (figure 65-66).

A wide builders trench of mottled orange and brown sand was present, and designated feature 105. This feature had breached feature 99 at a .7' east of the unit wall, and so this 1.1' wide area was excavated as a single unit. Excavation of feature 105 revealed it to be a construction trench for two pipes, one iron and one lead, rather than a construction trench for feature 108. Feature 105, then, was a later event, and one that compromised the integrity of a builders trench for feature 108. After feature 105 was removed, the soils remaining between it and the drain were excavated as a builders trench, feature 109. Both of these deposits ended level with the bottom of the brick drain box. Layer 6 soils were present beneath, and a small sample of layer 6 was excavated to 1.2' below surface. Excavations of this unit were halted at this point.

Excavations at the Aiken-Rhett house occurred during an extremely rainy month; over 6 inches of rain fell during, and immediately after the project. Despite careful covering of the courtyard units, the smooth, sloping surface carried great quantities of rainwater under the edges of the plastic and into the unit. Because the fill layers were soft and uncompacted, wash-out of the units and adjacent walls was extreme. Portions of the south profile of the trough in N225E125 collapsed to a point over one foot beyond the unit limits. Any re-excavation of this area will exposed backfilled walls that are quite uneven as a result. Future excavators should be aware of the fragile nature of these courtyard deposits. Excavations during a drought is advised.

Stable Interior: Excavations were initiated in the interior of the stable building, to determine flooring sequence. These units were located in the stalls, an area currently marked by dirt surfaces (figure 43). Transit and tapes were used to bring grid coordinates into the building, and two 5-foot units were laid out; N251E84 and N261E84. Each were positioned to avoid intact, or semi-intact floor joists and paved areas, and to be centered in individual stalls, as indicated by architectural elements. The more southerly unit was positioned in a stall that was altered in the early 20th century to accommodate automobiles. The second unit was positioned in

the central stall, one apparently intact. Excavation began with N251E84.

The soil was very dry and powdery brown soil, which was designated zone 1. Organic preservation was very good in this protected environment, and zone 1 included fragments of wood, leather, and paper, as well as bone and ceramics. Wood fragments, brick rubble, and darker soil steadily increased as excavation proceeded. Excavation of .2' revealed linear areas of brown wood, reflecting floor joists. The joist central to the unit, aligned with the stall post, was particularly well preserved. This, and the surrounding layer of wood fragments, was designated feature 96. Because of the dry, organic nature of the soil, and the lack of adequate lighting, it was difficult to determine precise boundaries to the feature; it instead appeared to be a layer of decayed wood, now in varying thicknesses.

In the areas between the joists, at this level, were areas of white shell mortar and red brick fragments, most of them burned and charred. These areas were designated feature 97 and excavated separately. Beneath this rubble was another layer of decayed wood, this one designated feature 98. A one-foot wide exploratory trench was excavated along the eastern side of the unit, and a single level of the decayed wood was excavated (figure 44). This was filled with organic material, including egg shell, small bone, bits of fabric.

Excavation of N261E84 commenced at this time, and zone 1 was excavated. Removal of a .2' layer revealed an even greater concentration of organic material. Zone 1 was followed by the same layer of decayed wood. At this point, it became apparent that the wood was evidence of earlier flooring, and that the stratigraphy and architectural evidence contained in the units was very complex. For this reason, it was decided to suspend excavations inside the stable for the present time. Filter fabric was placed over the excavated areas, and the soil was backfilled.

Upon completion of excavation, all units were backfilled. Those in the front garden were re-planted by the volunteer gardeners. Those in the rear yard were re-filled and re-sodded. The courtyard excavation was refilled and the numbered bricks were left for the Foundation restoration crew. The uneven depressions in the courtyard were secured with a chain fence for visitor safety. The N300E100 key stake was left in place, as were several grid nails, particularly in the brick courtyard along the E135 line. These should facilitate reconstruction of the grid, and units, in the future.

Illustrations - Chapter III

Figure 12. Photograph of the Aiken-Rhett courtyard, facing north.

Figure 13. Possible garden features in N345E90, facing west.

Figure 14. Photo of the possible garden structure, and excavation of N340E90 in progress.

Figure 15. North profile, N345E90, showing feature 29.

Figure 16. Excavated profile of feature 29, plant stain; note concentration of coal in base of feature. Figure 16b shows a black and white view of the plant stains in N345E90.

Figure 17. Post features in N375E115; a) features before excavation, b) west profile, c) north profile.

Figure 18. Composite profile, north, west, and south walls, unit N375E115.

Figure 19. Composite north profile, N375E125-N375E130.

Figure 20. Possible garden edging; a) bricks *in situ* in N360E95, b) brick and stone material in east profile of N375E135.

Figure 21. Feature 20, trash-filled pit, in west profile of N340E155.

Figure 22. N340E155 at base of zone 4, facing east. Feature 52 is visible in the south half of the unit, and feature 48-50 is present in the northeast corner.

Figure 23. N340E155, south profile at the base of feature 52, showing intact structure foundation.

Figure 24. South profile, N340E155

Figure 25. West and north profile, N340E155.

Figure 26. Excavation of N340E155 in progress, showing location of unit relative to features in property wall; view of foundation buttress at base of excavations.

Figure 27. View of N118E105, facing south, from first floor piazza.

Figure 28. View of N116E151.5 and N111E149 in southeast corner of property.

Figure 29. Views of east profile, N116E151.5, showing base of property wall.

Figure 30. North profile of N116E151.5, showing feature 80, possible shell paving, at base of excavation.

Figure 31a. N365E115, east profile, showing feature 27, layer of coal in expected drive location and zone 2A, layer of granular sand.

Figure 31b. N320E100, showing feature 11 (paving) and feature 53 (brick rubble pit).

Figure 32. N360E115-N370E115, showing feature 85 at: a) top of excavation, b) base of level 1 showing concentration of brick and stone, and c) sample excavated to base of level 3, exposing collection of enameled ware kitchen wares.

Figure 33. Profiles of possible fence posts; a) N370E115, east profile of features 87 and 84, b) N360E115, east profile of feature 90.

Feature 34. Composite profile of features 88 and 90.

Figure 35. N370E115, feature 86, facing south and southeast.

Figure 36. N285E130 at base of excavation. Feature 107 is visible in the base of the unit, at the base of zone 6. Feature 99 remains intact at the base of zone 5.

Figure 37. N285E130, south profile.

Figure 38. N285E130, east profile.

Figure 39. Various views of mortar bed, feature 99, in N225E120, facing east and north.

Figure 40. Views of courtyard excavations: a) shows north profile of units and contours of layers relative to the surface of the courtyard, b) shows layers 4-10 in the east profile of N225E120, and the curved sides of the drain are visible beyond the soil profile, c) shows a close-up of layer 9a, the wood, in the south profile of N225E120.

Figure 41. North profile, N225E120-N225E125, showing layers 1-10, features 99 and 106 at various levels of excavation.

Figure 42. Drawing, north profile of N225E120-N225E125.

Figure 43. Excavations inside stable, showing wood flooring and beams *in situ*.

Figure 44. View of the stable interior (HABS SC-275-6)

Figure 12



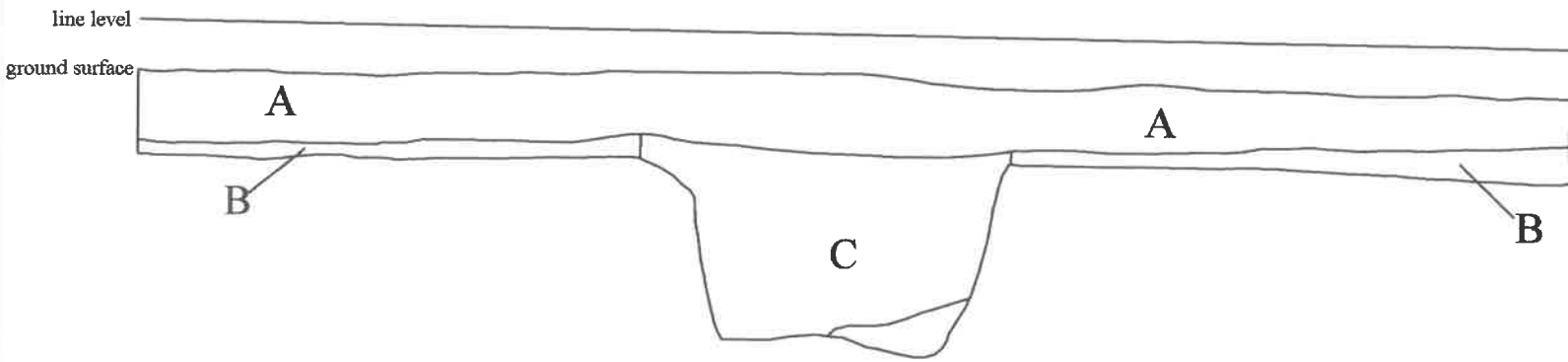


Figure 13



Figure 14

N345 E90
North profile



A - zone 1/zone 2
B - sterile subsoil
C- Feature 29

Figure 15



Figure 16



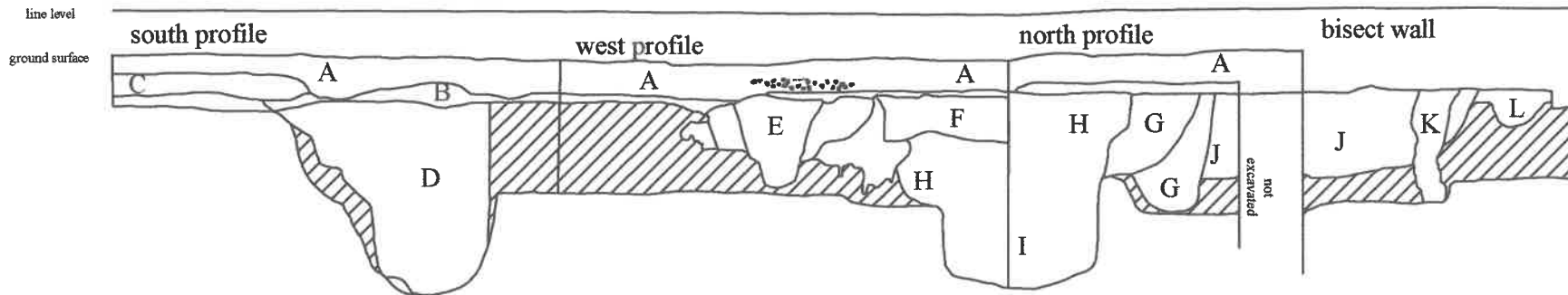
Figure 17.



N375 E115
Unit wall profiles



1 foot



A - zone 1/zone 2

B - excavated as zone 3

C - feature 27

D - feature 45

E - feature 38

F - feature 37

G - feature 45

H - feature 44, hole

I - feature 44, mold

J - feature 64

K - rodent disturbance

L - unknown

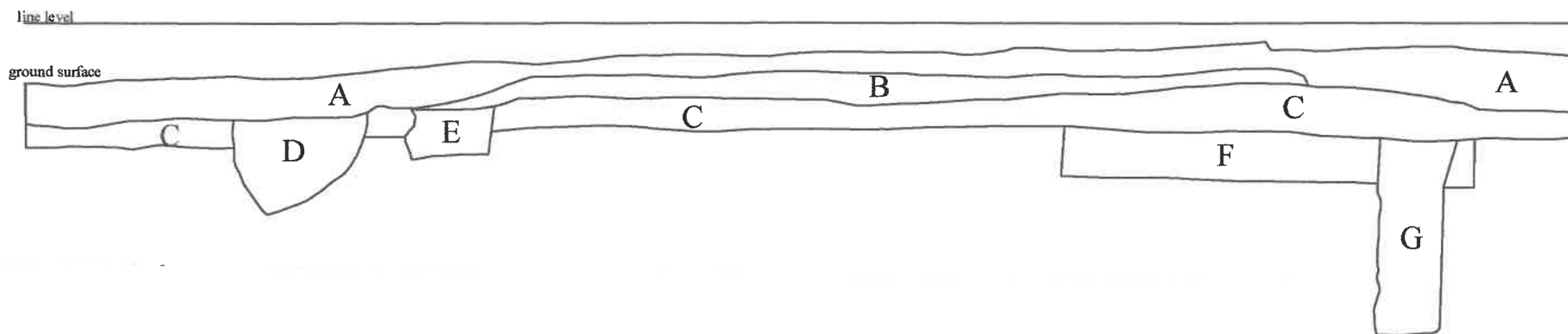
57

N375 E125, N375 E130, N375 E135
North wall profile



1 foot

Figure 18



A - zone 1/zone 2

B - feature 27

C - zone 3/sterile subsoil

D - feature 15

E - feature 19

F - zone 3

G - feature 40

Figure 19



Figure 20



Figure 21



Figure 22



Figure 23

Figure 24

N340 E155
South wall profile

- A - zone 1
- B - zone 2
- C - zone 3
- D - feature 26

- E - exc. with feature 52
- F - feature 52
- G - undesignated feature



1 foot

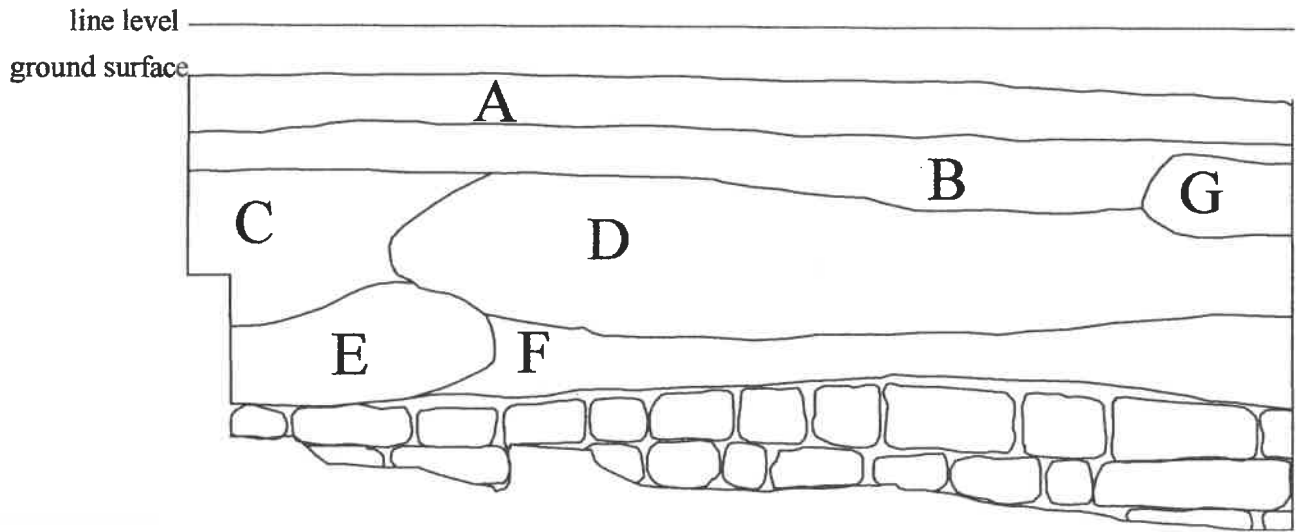


Figure 25

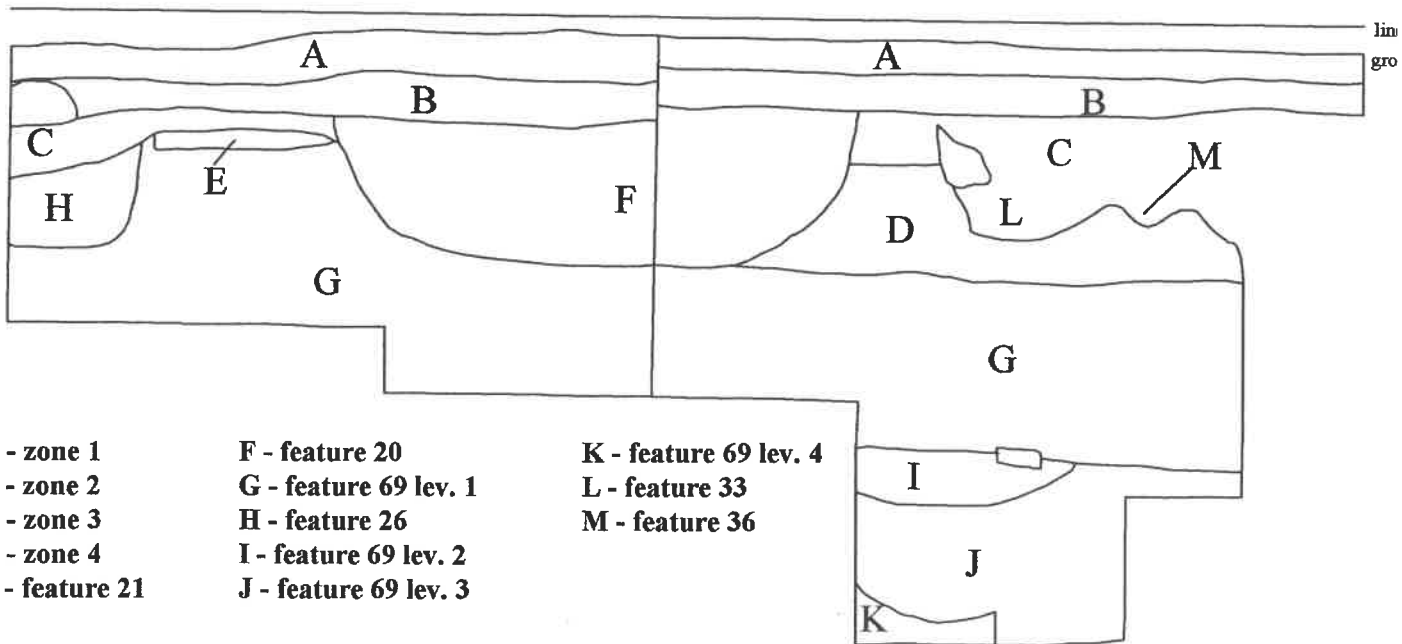
N340 E155
West and North wall profiles



1 foot

West profile

North profile



- A - zone 1
- B - zone 2
- C - zone 3
- D - zone 4
- E - feature 21

- F - feature 20
- G - feature 69 lev. 1
- H - feature 26
- I - feature 69 lev. 2
- J - feature 69 lev. 3

- K - feature 69 lev. 4
- L - feature 33
- M - feature 36



Figure 26



Figure 2'



Figure 28



Figure 30



Figure 29



Figure 31

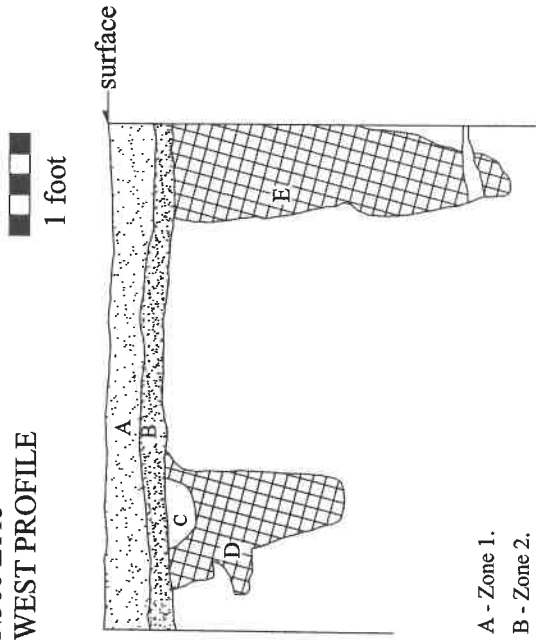


Figure 32



Figure 33

AIKEN RHETT
 N360 E115
 WEST PROFILE



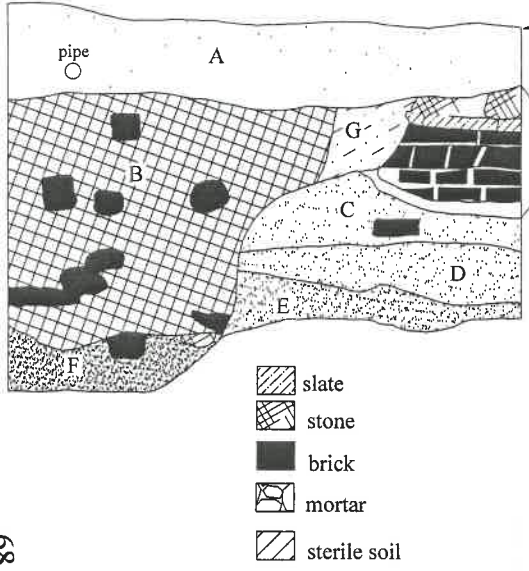
- A - Zone 1.
- B - Zone 2.
- C - Fea. 88, pipe trench.
- D - Fea. 90, post with a tree root.
- E - Fea. 01 root

Figure 34



Figure 35

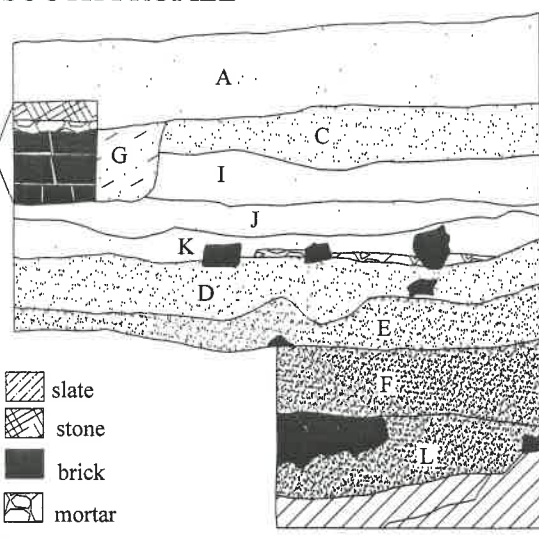
AIKEN RHETT
N285 E130
EAST PROFILE



- ← surface
- A - Zone 1 and Zone 2. 10YR 2/1.
 - B - Feature 93. (only in east profile)
 - C - Zone 3. 10YR 5/4.
 - H D - Zone 5, level 1. 10YR 5/4.
 - E - Zone 5, level 2. 10YR 6/6.
 - F - Zone 6, level 1.
 - G - Feature 3, builders trench.
 - H - Feature 2.
 - I - Zone 4. (only in south profile)
 - J - 10YR 5/6 (only in south profile)
 - K - 10YR 5/6. (only in south profile)
 - L - Zone 6, level 2.

Figure 38

AIKEN RHETT
N285 E130
SOUTH PROFILE



- ← surface
- A - Zone 1 and Zone 2. 10YR 2/1.
 - B - Feature 93. (only in east profile)
 - C - Zone 3. 10YR 5/4.
 - D - Zone 5, level 1. 10YR 5/4.
 - E - Zone 5, level 2. 10YR 6/6.
 - F - Zone 6, level 1.
 - G - Feature 3, builders trench.
 - H - Feature 2.
 - I - Zone 4. (only in south profile)
 - J - 10YR 5/6 (only in south profile)
 - K - 10YR 5/6. (only in south profile)
 - L - Zone 6, level 2.

Figure 37



Figure 36

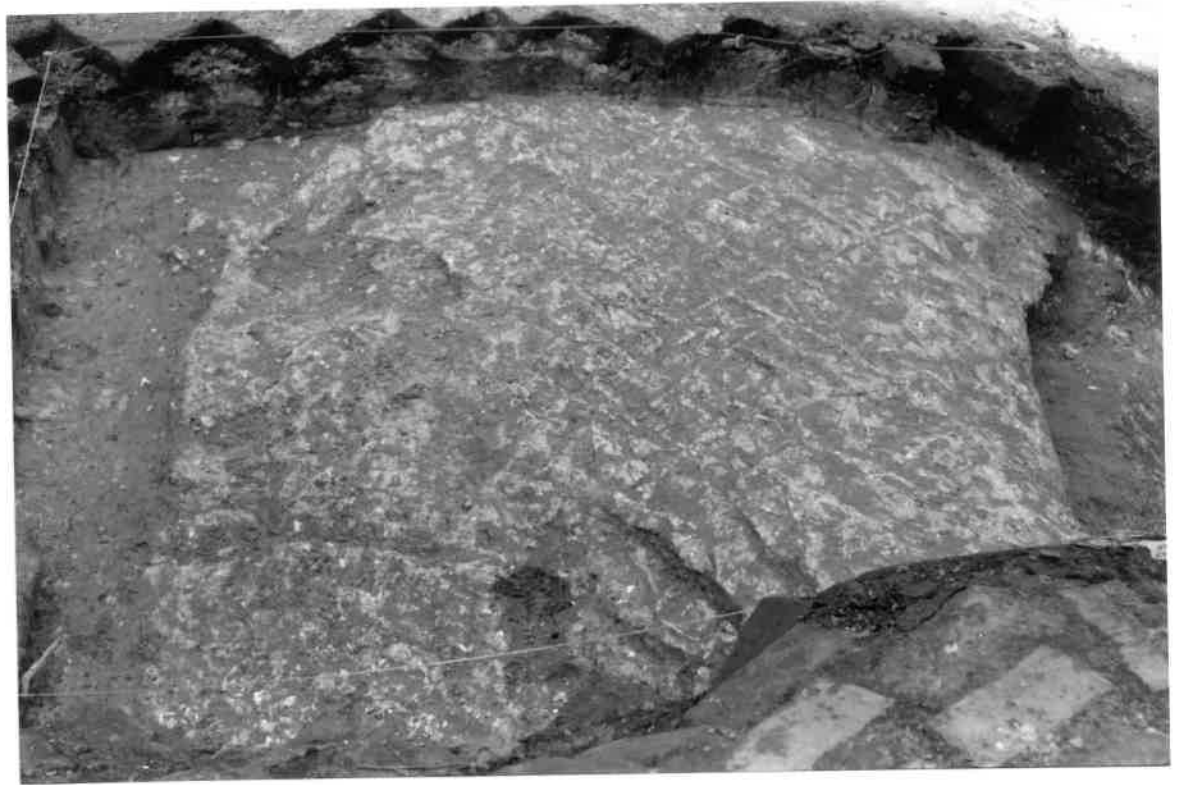


Figure 39



Figure 40

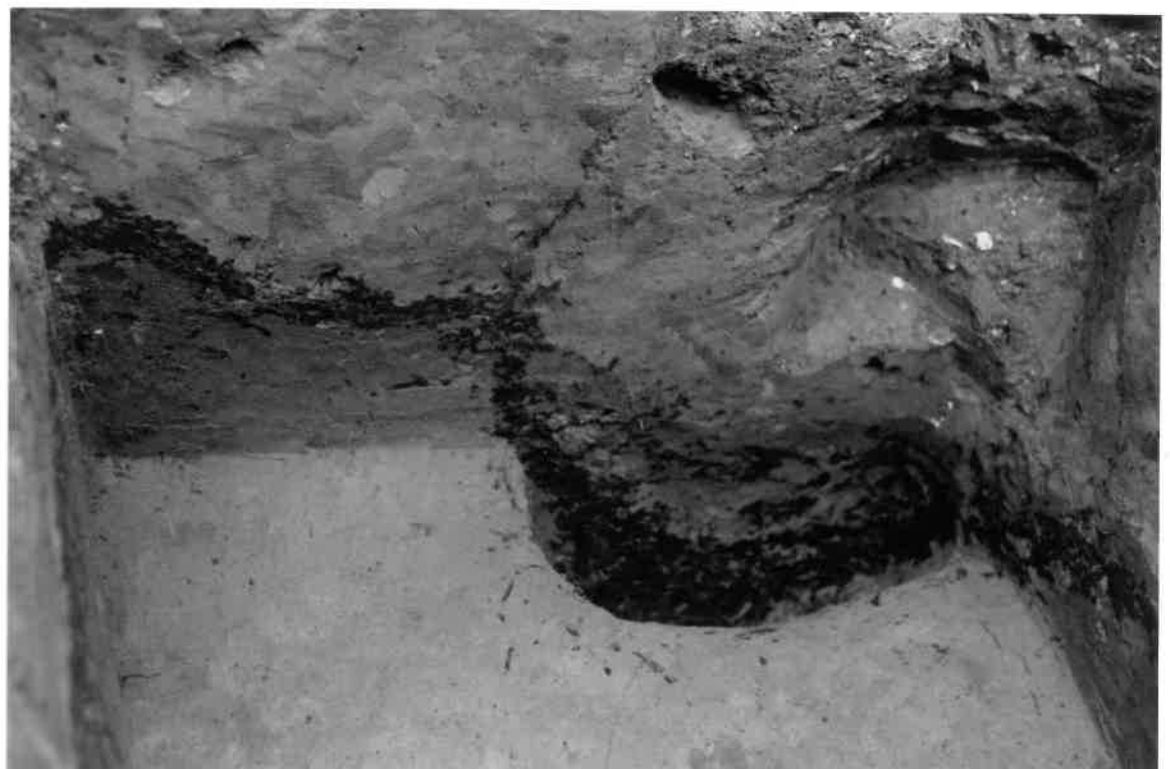
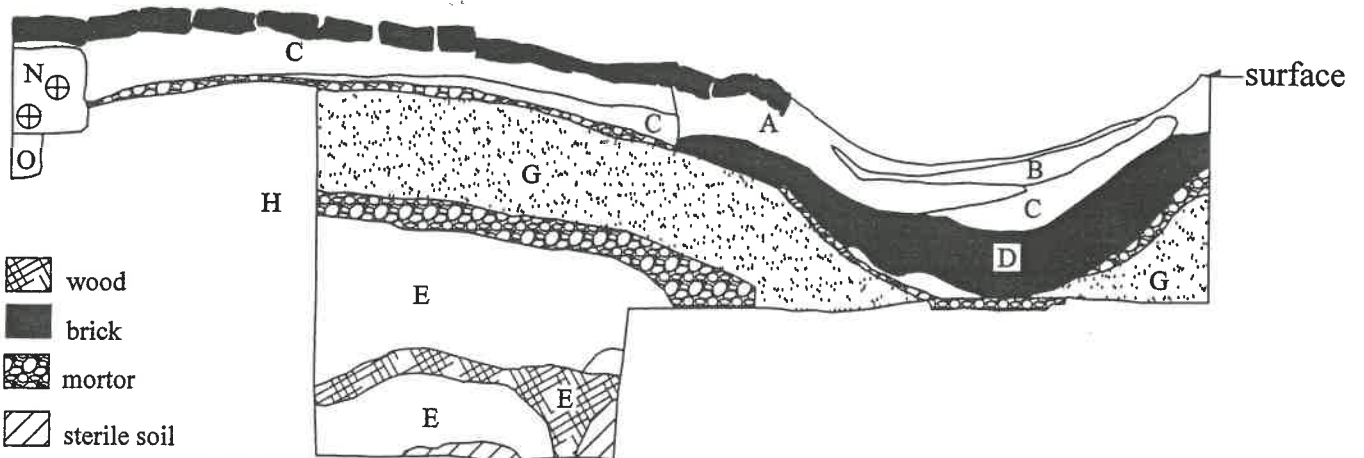




Figure 41

AIKEN RHETT
 N225E125, N125E120
 NORTH PROFILE



- | | | |
|--|--------------------------------------|-------------------------------|
| A - Dark soil, 10yr3/1 | F - Top of feature 99 | K - loamy sand, 5yr2/2 |
| B - Lense of coal and ash, 5yr4/3 | G - Brown sand w/ charcoal | L - sand, 10yr3/3 |
| C - Brown sand, 10yr4/4 | H - Feature 106 | M - washed-out lenses of sand |
| D - Powder coal, 10yr2/2 | I - sand w/ artifacts, mortar, char. | N - feature 105 |
| E - Lense of soft sand (only in south profile) | J - sand, 10yr3/3 | O - feature 109 |

Figure 42



Figure 43



Figure 44

Chapter IV Material Culture and Temporal Affiliation

Laboratory Methods

Following excavation, all materials were removed to The Charleston Museum where they were washed, sorted, and analyzed. All bagged materials were sorted by the field provenience number (FS#) and inventoried. Each artifact in each provenience was then washed in warm water with a soft brush and re-bagged when dry. Analysis by provenience included identification and counting of each artifact by type. Washing and sorting commenced immediately after each field project, and was conducted by trained laboratory technicians, students from the College of Charleston, and experienced volunteers.

Conservation procedures included reconstruction of ceramic and glass vessels, where possible, and stabilization of metal artifacts. Ceramic and glass vessels were restored with conservator's glue, B-72 and a number of commercial super-glue products, all reversible in acetone. Ferrous materials were separated during analysis and stabilized by placing them in successive baths of distilled water to remove chlorides. They were then oven-dried, bagged and stored separately. Stabilization of iron from downtown Charleston sites usually requires at least one year of soaking. Several ferrous and all non-ferrous metal artifacts were selected for further treatment through electrolytic reduction. The ferrous items were placed in electrolysis in a weak sodium carbonate solution with a current of six amperes. Upon completion of electrolysis, ranging from a few weeks to a few months, they were placed in successive baths of distilled water to remove chlorides and dried in ethanol. Finally the artifacts were coated with a solution of tannic acid and phosphoric acid, and dipped in microcrystalline wax to protect the surfaces. Non-ferrous artifacts were also placed in electrolytic reduction, in a more concentrated solution with a current of 12 amperes. Electrolytic reduction of these artifacts was usually accomplished in one to two days. They were then placed in distilled water baths to remove surface chlorides, dried in ethanol, and gently polished before being coated with Inralac to protect the surfaces.

Faunal materials were washed, separated from other materials, and weighed by provenience. They were then shipped to the Zooarchaeology Laboratory, University of Georgia for analysis. The report by Dr. Elizabeth Reitz appears in this volume. Soil samples, ranging from one to two quarts in size, were inventoried, and portions of selected samples were dried and rebagged for various analyses; samples were sent to Dr. John Jones for pollen analysis. The remainder of the soil samples were double-bagged and boxed for permanent curation.

Historic Charleston Foundation decided that permanent curation of the collection at The Charleston Museum was appropriate, and donated the collection to the Museum. The Aiken-Rhett materials received the accession number 2002.30, and are catalogued by provenience, using

catalogue numbers ARL 27696 through ARL 27949. All excavated materials are curated in The Charleston Museum's storage facility according to museum collection policy. Artifacts are packed by provenience in standard low-acid boxes, labeled, and stored in a climate-controlled environment. Those artifacts worthy of individual study or exhibition are stored in easily-accessible drawers in fireproof metal storage cabinets in the same storage facility. Field records and photographs are curated in the Museum's archive in acid-free containers in the security section. Archival stable copies are available in the general research section of the library.

Analysis

The first step in the analysis of materials was the identification of the artifacts. The Museum's type collection, Noel Hume (1969), Stone (1974), Ferguson (1992), and Deagan (1987) were the primary sources used. Ceramics references included Towner (1978), Gaimster (1997); Austin (1994), Sussman (1997), and Cushion (1976). Other references were consulted for specific artifacts. Lorrain (1968), Huggins (1971), Kechum (1975), and Switzer (1974) were used to identify bottle glass. Epstein (1968) and Luscomb (1967), as well as South (1964) were used for button identification, and Fontana and Greenleaf (1962) and Sutton and Arkush (1996) were consulted for nails.

For basic descriptive purposes, the artifacts from each of the temporal assemblages were sorted into functional categories, based on South's (1977) model for the Carolina Artifact Pattern. South's methodology has been widely adopted by historical archaeologists, allowing for direct intersite comparison; all of the Charleston data have been organized in this manner. For nearly twenty years, archaeologists have attempted to classify the artifacts they recover by function, or how they were used in the everyday life of their owners. Artifacts are quantified in relative proportion to each other within eight broad categories. Broad regularities, or patterns, in these proportions prescribe the average retinue of activities on British colonial sites. While some have criticized this methodology as being too broad, it has been widely adopted by historical archaeologists working in the southeastern United States. In Charleston, it has been used as an initial organizing tool.

Some artifact types were subject to more detailed identification. Nails were identified by manufacture type, head type, and size, where possible, though this was rarely possible. Architectural rubble - brick, mortar, and plaster - was weighed by provenience in the field and discarded. Several samples of architectural material - brick, mortar, stone, etc. were retained for further study.

Following this exercise, the relative proportions of a variety of artifact types were examined, based on the work of King (1990, 1992), and many others in the mid-Atlantic region. This recent exercise (Zierden 1993, 1994) has provided more details on proportions of consumer goods and how they were used by Charlestonians. Each of the temporal assemblages is summarized separately.

Temporal Subdivisions

The archaeological deposits from the 2001 and 2002 projects were subdivided into five temporal periods, associated with occupational and architectural changes in the property, as documented by architects and historians. As part of the present project, data from the 1985 testing was re-analyzed and placed in the appropriate temporal categories.

The first period, 1817-1833, covers construction of the house by John Robinson, sale of the property (including structures) in 1825, and transfer of the property to William Aiken, Jr. in 1833. Aiken made significant changes to the house upon acquisition, beginning in 1833. These changes included removal of the entry from Judith to Elizabeth Streets, construction of the entrance foyer, and construction of eastern (dining room and ball room) wing. The service buildings were enlarged and remodeled, and the garden buildings constructed. The second temporal period, then, begins in 1833 and continues to 1857. The third period, 1857-1876, covers a second major remodeling of the house, which includes construction of the art gallery wing, extensive redecorating of the house interior, and addition of gas lighting and improved plumbing. Recent documentary evidence for another round of changes, mirrored in the archaeological record, prompted creation of a fourth period from 1876 to 1900. This period includes renovations for a series of family events, as well as repair from natural disasters, such as the 1886 earthquake. The final period covers the twentieth century. Maps of feature locations, and well as artifact distribution, for each of the five periods were prepared on computer.

Archaeological evidence was encountered for both construction and demolition events during Phase I. Evidence for first phase landscape features that were later abandoned include the front step foundation, feature 62, as well as a crushed shell drive from Judith Street to the kitchen building, feature 80. Feature 69 in N340E155 supports the suggestion that the surrounding brick wall was erected between 1818 and 1825. The large rubble-filled pits, containing construction debris, in the southwest quadrant of the yard, feature 12 and feature 53, are also associated with Period I activities. There was little surviving zone accumulation from this time period (only zone 4 in N340E155). The lowest levels of the courtyard layers date to Phase I; layers 7, 8, 9 and 10 are associated with this period, as is layer 9a, the wooden remains. Likewise, the lowest levels of unit N285E130 are from this earliest period; these include feature 107 and the overlying zone 6. and relatively few artifacts. Finally, the deep post in the rear yard, feature 86, is a first period event. Twenty-five proveniences dated to phase I.

Phase II corresponds with an active period of change under William Aiken's ownership, and is more strongly reflected in the archaeological record. Features associated with construction of the garden structures (features 10, 26, 46, 47) date to this period, as do several trash-filled deposits in the rear yard. There is also evidence for some gardening activity in the rear yard during this period. Most of the series of posts encountered in 2001 that seem to represent a fence or trellis in N375E115 and N375E125 (features 38, 44, 45, 64, 15), as well as other smaller posts (features 19, 24, 25, 40). The small stains of brown soil in the northern quadrants of the yard have been tentatively interpreted as planting stains, and represent at least informal, if not formal, gardens (feature 9 and other undesignated stains in N360E100, features 22, 23, 29, 30 and 31 in

N340E90, and Features 33, 34, 35, and 36 in N340E155). Features 63 and 68 in the front yard area may also reflect planting activities, though this interpretation is more tenuous.

Several of the posts discovered in the rear yard in 2002 are also associated with Phase II. These include features 84, 87, 90, 91, 102 and 101. Fill episodes in and around the courtyard are also associated with Phase II. Much of the courtyard construction and filling occurred at this time. Feature 99, the first laid brick surface, and the underlying layer 6 are antebellum events, as are the overlying layers 4 and 5. Zones 4 and 5 in N285E130 may also date to this time period. The zone 3 deposits throughout the property also dated to the second quarter of the 19th century. The Phase II deposits include 78 proveniences.

The phase III period, which spans Aiken's second renovation of his property and the Civil War, left a less substantial imprint on the archaeological record. The most notable archaeological event was construction of the drain system noted during the 1985 excavations. This includes features 1, 2, 3, 5, and 7 in the southeast quadrant of the rear yard, and the possibly associated drain feature in N340E155, feature 48-50. These may be part of the larger 'modernization' efforts inside the house, which include gas lighting and plumbing changes. Three features in the front garden also date to this period (features 55, 56, 66), though their function is currently unknown. Layers 1 and 2, and the current paved courtyard surface, as well as the bluestone-capped drain, also appear to be Phase III events. Deposits in N285E130 associated with this period include feature 93, feature 3, features 94 and 95, and zone 3. Zone 2a in the rear yard also dates to this period, and may reflect a paving surface for the rear drive. Thirty-two proveniences are associated with this period.

One surprising result of the present project was the level of activity and change during the late 19th century, as reflected in the archaeological record. There was evidence for demolition of the eastern garden building, as well as repair of the western structure. A new drive surface was laid, and it is possible that the trellis/fence system was abandoned during this period, replaced by the avenue of magnolias. As hinted in the documents, there is also evidence of new planting, or replanting in the northwest quadrant of the yard, and for increased planting in the front yard area. The zone 2 soil deposits, present in most units, were also associated with the late 19th century.

The phase IV assemblage also contained the largest amount of domestic debris, and kitchen materials dominated the assemblage for the first time. The 77 proveniences contain an assemblage was more diverse, with a significant number of furniture, clothing, and activities items.

Phase V (20th century) activities and changes were also reflected in the archaeological record. Most significant was the paved area, presumably a driveway, represented by feature 11 and evidently communicating with the stable building. Feature 14 was associated with recent repairs to the garden building. The front units contained modern planting stains and the addition of service lines for water, electricity, and sewerage. Some of these may date to the late 19th century, but a lack of datable artifacts made this difficult to determine. The large refuse pit in the rear yard, feature 85, also appears to date to the early 20th century.

Fifty-five proveniences were associated with the 20th century; with a moderate amount of artifacts. The majority of these were kitchen-related, and almost all of these were fragments of

bottle glass. Certain locations of the back yard, particularly the garden structure, appear to be the locus for illicit alcohol consumption, and activity that may still be ongoing.

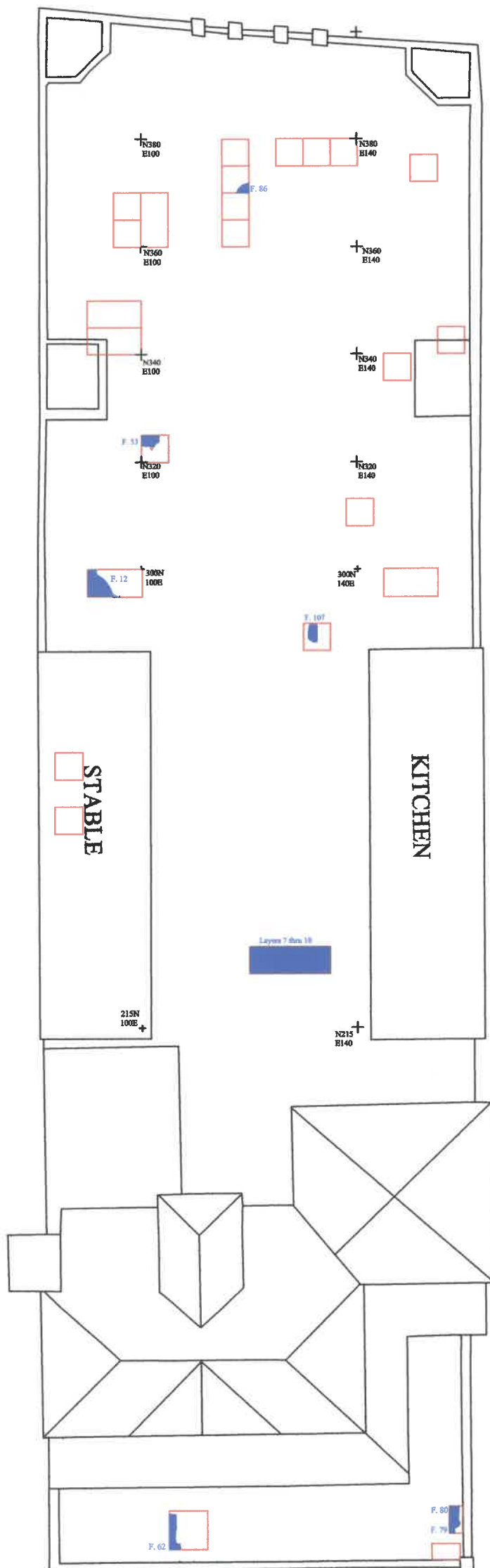
Provenience Guide by Temporal Periods

<u>FS#</u>	<u>Unit</u>	<u>Provenience</u>	<u>Function</u>	<u>TPO</u>
<u>Phase I: 1818-1830</u>				
42	N295E90	feature 12	construction rubble pit	annular p.w.
44	N295E90	feature 12 lev 2		transfer print p.w.
127	N340E155	zone 4, east side	zone/fill	black tr. pr. w.w.
167	N340E155	feature 51	poss. builders trench	mortar
169	N320E100	feature 53	rubble-filled pit	undecorated p.w.
170	N340E155	zone 4, lev 2		undecorated p.w.
180	N340E155	zone 4, lev 3		hand paint p.w.
183	N340E155	zone 4, lev 3		hand paint p.w.
184	N340E155	feature 69, lev 2	builders trench	creamware
187	N340E155	feature 69, lev 3		mochap.w.
194	N340E155	feature 78	builders trench	undecorated p.w.
204	N116E151.5	zone 2 lev 4	zone	hand paint p.w.
205	N116E151.5	zone 3		hand paint p.w.
226	N370E15	feature 86	post mold and hole	clear glass
246	N370E15	fea 86 lev 2		annular p.w.
252	N370E15	fea 86 lev 3		hand paint p.w.
306	N225E120	fea 106/layer 7	mortar bed/fill layer	transfer print p.w.
307	N225E120	layer 8	fill layer	transfer print p.w.
308	N225E120	layer 9	fill layer	glass/nail
312	N225E120	layer 9a	wood/fill layer	brick
316	N225E120	layer 10	fill layer	undecorated p.w.
287	N225E125	layer 7	fill layer	undecorated w.w.
315	N285E130	feature 107	rectangular pit	hand paint p.w.
302	N285E130	zone 6	fill layer	transfer print p.w.
304	N285E130	zone 6 lev 2	fill layer	undecorated p.w.

Phase II: 1833-1850s

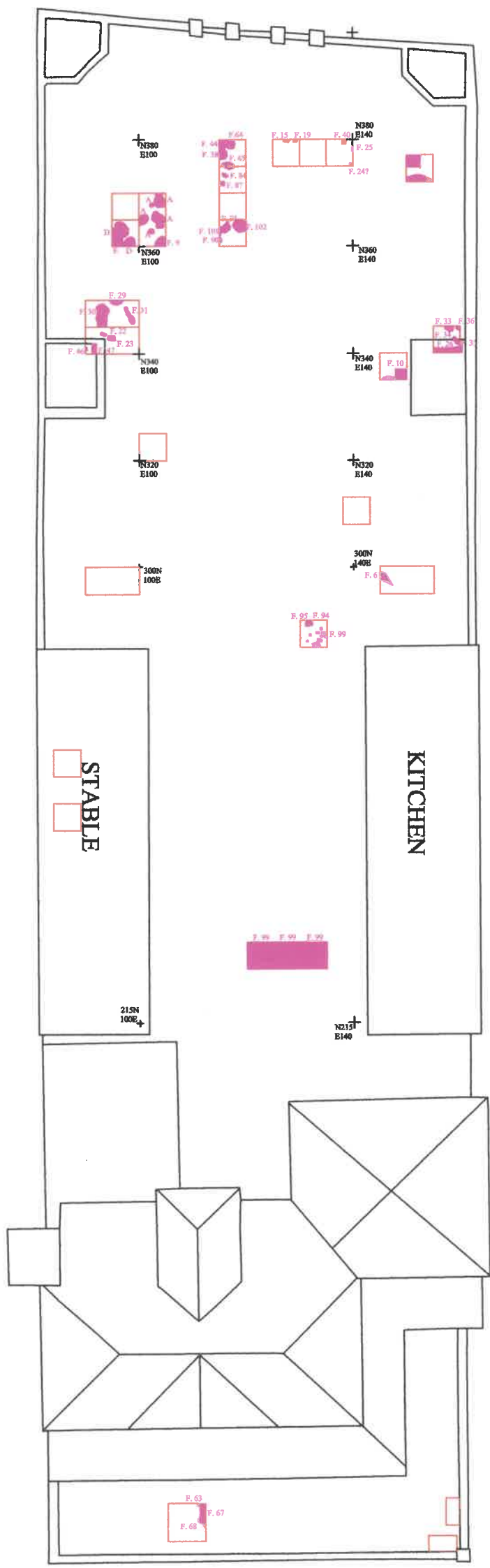
18	N295E155	feature 6	builders trench	black tr. pr. w.w.
20	N295E155	feature 6		w.w. - "Edwards"
30	N308E138	zone 3	zone/fill	undecorated w.w.

37	N360E100	feature 9	pit	olive green glass
38	N335E145	feature 10	builders trench	black tr.pr. w.w.
47	N372E150	zone 3	zone	white porcelain
50	kitchen	south side hearth	level 1-3	black tr.pr. w.w.
51	kitchen	hearth interior	level 2	black tr.pr. w.w.
52	kitchen	sw of hearth	level 2	prosser button
53	kitchen	outside hearth	level 2	pipe
55	kitchen	column sample	level 2	white porcelain
58	kitchen	north side hearth	level 3	white porcelain
67	privy	trench II	level 4	clear glass
68	privy	trench II	level 5	clear glass
54	kitchen	column	level 1	prosser button
102	N340E155	zone 3	zone/fill	dispensary bottle
112	N345E90	feature 29	plant stain	flow blue w.w.
115	N375E135	feature 32, lev 1	residual zone	annular w.w.
116	N345E90	feature 28	plant stain	schist paving stone
120	N375E125	feature 19	post hole	undecorated w.w.
122	N340E155	feature 33	plant stain	no matl
123	N340E155	area b	area of coal residue	nail fragment
124	N375E125	feature 15	post hole and mold	cut nail
129	N375E115	feature 37	post mold and hole	.22 shell
131	N375E135	zone 3 lev 1	zone	white porcelain
132	N375E115	zone 3/fea 38	post stain	19 th cent. delft
134	N340E155	feature 34	plant stain	undecorated w.w.
135	N340E155	feature 35	plant stain	cut nail
136	N340E155	feature 36	plant stain	window glass
138	N375E115	zone 3 lev 1		yellow ware
142	N340E155	zone 4	zone	black tr.pr. w.w.
143	N375E115	feature 38b	post mold and hole	hand paint porcelain
148	N375E135	feature 40	amorphous	cut nail
149	N375E115	feature 44	post mold and hole	brown bottle glass
150	N340E90	feature 46	post mold	no matl.
151	N340E90	feature 47	builders trench	no matl.
152	N375E130	zone 3	zone	.22 shell
160	N375E115	feature 43	possible post	no matl.
161	N375E115	feature 45	post mold and hole	cut nail
164	N340E155	feature 52	brick construction	transfer print p.w.
174	N118E105	feature 55	unknown	cut nail
175	N118E105	feature 56	possible plant stain	brown bottle glass
179	N118E105	feature 66 lev 1	unknown	cut nail
185	N118E105	feature 56		window glass
186	N118E105	feature 66		bone button
188	N118E105	feature 67	unknown	shell edged w.w.
189	N118E105	feature 53	part of fea 67	no matl.
208	N118E105	feature 62	foundation to steps	no matl.
209	N118E105	feature 62		no matl.




THE CHARLESTON MUSEUM
AIKEN - RHETT HOUSE
 Phase I
 1818 - 1830

Figure 45
89



THE CHARLESTON MUSEUM
AIKEN - RHETT HOUSE

Phase II
1830 - 1858

STABLE

KITCHEN

Figure 46

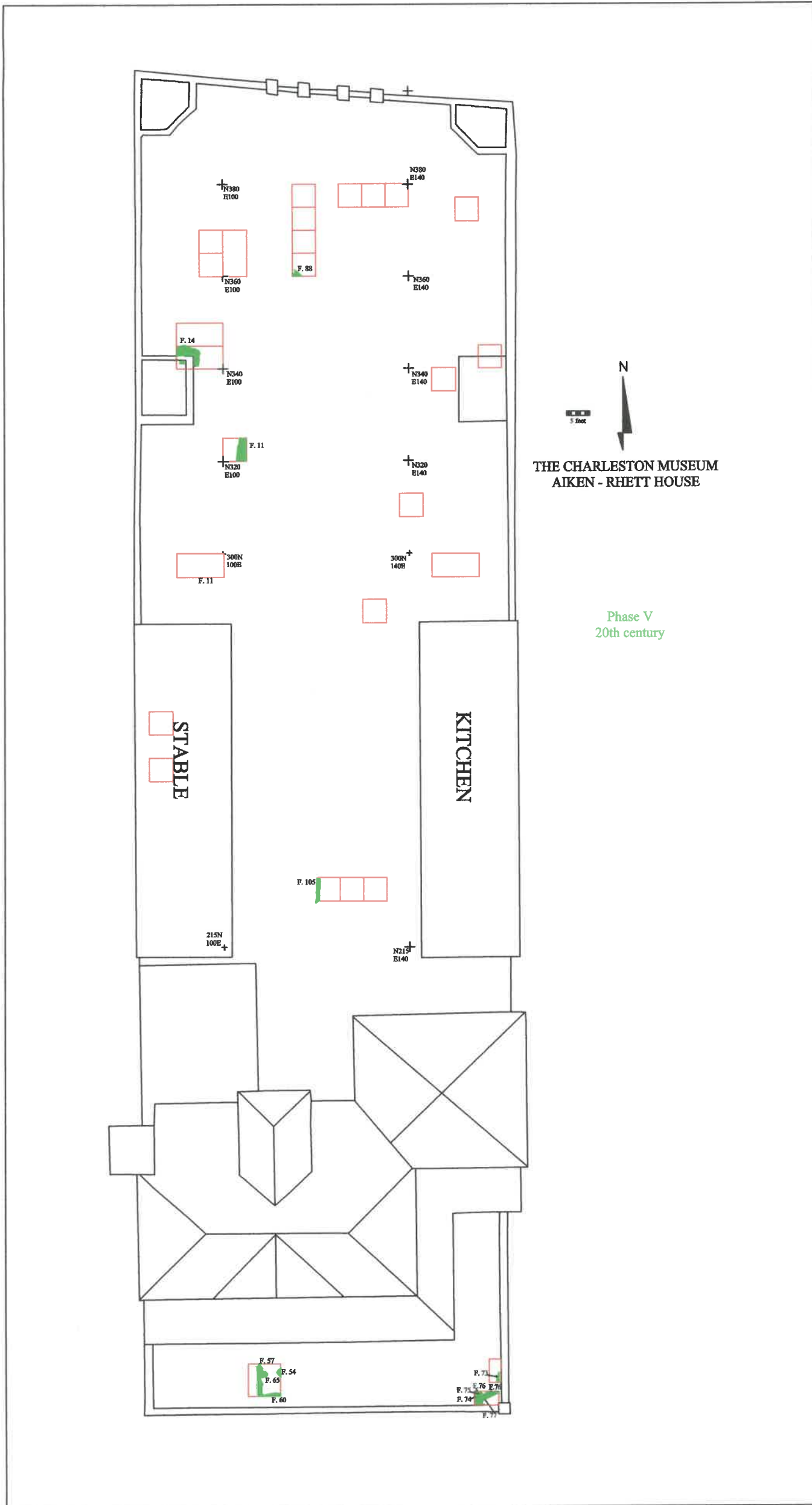


Figure 49



Figure 50

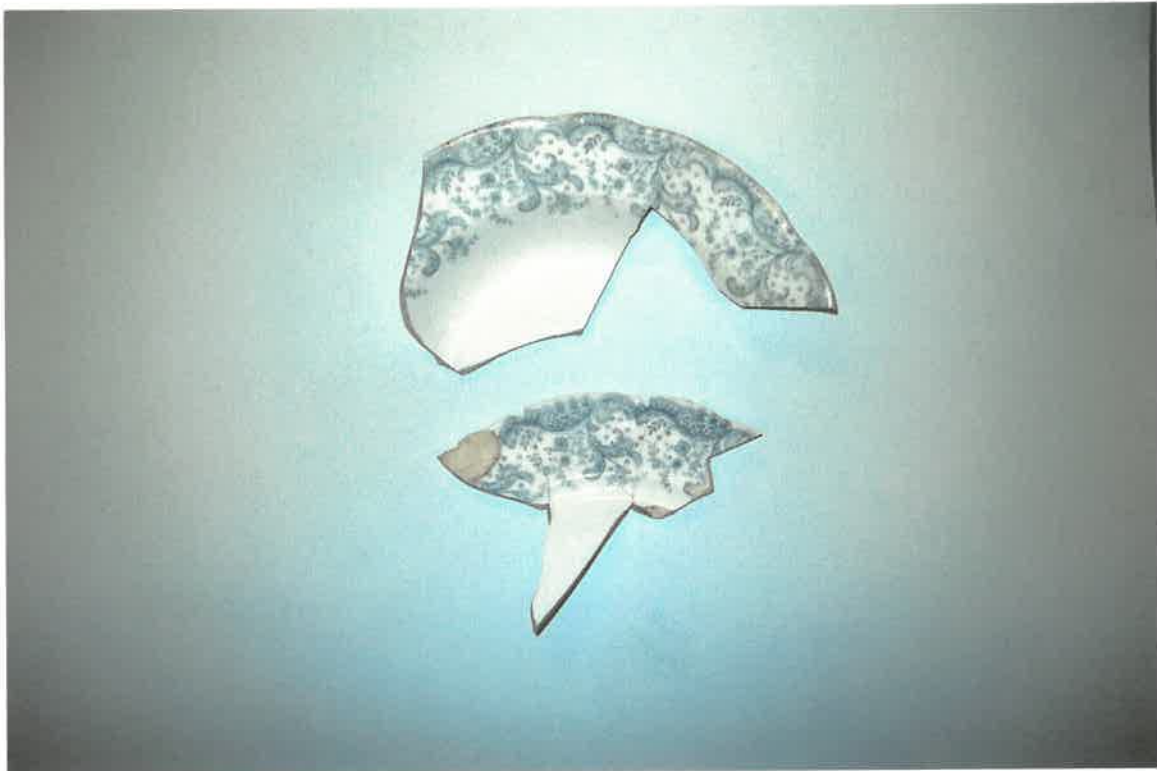


Figure 51



Figure 53



Figure 54



Figure 52



Figure 60

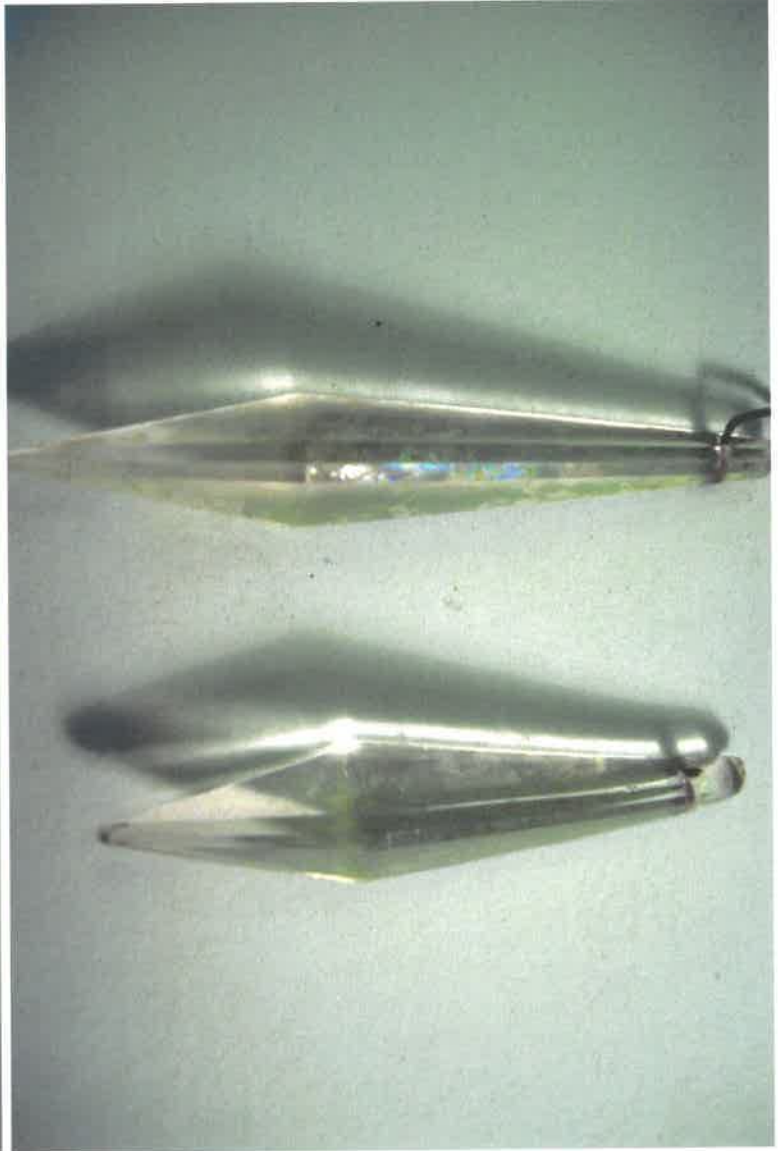


Figure 59



Figure 58
97



Figure 61



Figure 62

Chapter V: Interpretations

Context for the Aiken-Rhett Study

Evolution of the urban landscape has been the principal focus of archaeological research in Charleston since 1990. This broadly based study encompasses a number of topics, including diet and subsistence strategies, terrain alteration and site formation, health and sanitation, spatial patterning and architectural reconstruction. This research approach derived from a focus on residential sites in the city, begun in 1985 with the testing of the Aiken-Rhett house. The Charleston Museum has since studied several townhouse properties of Charleston's economically privileged class. These serve as a context for exploring landscape and architectural issues at the Aiken-Rhett house.

Eight townhouses of the Charleston elite have been studied to date, and are relevant to the study of the Aiken Rhett house in several ways. All of these sites are slightly earlier than the Aiken-Rhett house, particularly to the Aiken family occupation. The Nathaniel Russell House was built in 1808, the Joseph Manigault house was built in 1803, and the Simmons-Edwards house was built in 1800 and renovated in 1818. The Simmons-Edwards and Nathaniel Russell houses are located in the lower peninsula, but the Manigault house is also located in Wraggborough, a few blocks from the Aiken Rhett house. The Nathaniel Russell house, the Simmons-Edwards house, and the Miles Brewton house (built 1769) have all been the scene of garden excavations, and have re-framed our understanding of early 19th century gardens. The Heyward-Washington house is much earlier than the Aiken-Rhett house (1772) and located in the oldest part of the city, but the layout of the property is comparable to the Aiken Rhett property.

The sites considered in this study have been classified as the homes of Charleston's elite. Charleston's elite was the richest society in colonial America; historians have suggested that in 1774 Charleston's wealth per (free) capita was 416 pounds sterling, compared to 38.2 for New England and 45.2 for the mid-Atlantic colonies (Coclanis 1989; see also Jones 1980, Edgar 1998). There was great disparity between the city's wealthy and its poor and enslaved groups. David Smith (1987) and others have argued that this resulted from a heavy dependence on trade with Britain and on enslaved people for every kind of labor, from domestic servitude to fine carpentry. The few successful small proprietors employed slaves and invested their earnings into their own lands and slaves; most merchants were also planters. Though there was less disparity between cities in the 19th century, Charleston maintained its status as a center of privileged living. Frederic Jaher (1982:318, 350) suggests that Charleston's elite was composed of about 90 families. Over 70% of these stemmed from the colonial elite, while the others emerged from self-made patriarchs in the 19th century. William Aiken Jr. and his father were among the latter group. But an

astonishing accumulation of capital, astute marriages, and wise political choices assured their place in Charleston society.

Among the present sample, those property owners classified as “wealthy” and “elite” owned their townhouses and at least one plantation. They maintained at least eight slaves in the city, as well as a larger number on their plantation(s), and they held public office at some point in their adult life. In physical terms, the elite sites are those with houses in excess of 7,000 square feet and urban lots larger than 18,000 square feet.

Artifact Patterning and Yard Function

The deliberate placement of specialized service buildings, separation of work yards and gardens, and specific locations for refuse disposal were conscious attempts to mold an urban landscape suitable to the social values, as well as physical needs, of urban residents. The needs and values of Charleston’s citizens changed as the 19th century progressed. Archaeology has not only outlined the basic features of an 18th century compound, it has also documented changes to these features for the next century. Many of the visible changes were attempts to improve sanitation and prevent the spread of disease in an increasingly crowded city. The Aiken Rhett site is unique in that it was not occupied until 1818, it was built in a relatively isolated section of the city, and it contains a significant late 19th century component, a period for which there is little archaeological data.

An overall goal of the archaeological research was to determine the function of the rear yard of the Aiken Rhett house, or the function of various components of the yard. The traditional interpretation has been that the entire rear yard was a ‘work yard’. Excavations in the yard in 1985 focused on the area immediately behind the kitchen building and recovered a substantial amount of refuse from that area. A larger amount of debris was recovered inside the northernmost room of the kitchen building in 1991. While some of the refuse pre-dated this addition to the kitchen, most dated to the second quarter of the 19th century, indicating that the refuse must have been deposited beneath the building. When excavation began in 2001, expectations were altered to embrace the idea that at least a portion of the rear yard was used for gardens.

Additional units in the yard soon demonstrated that refuse disposal was very sparse throughout the site, particularly in the northernmost portion of the yard and in the small front garden. An easy measure utilized at other sites has been the number of artifacts per cubic foot of soil excavated. The 14 Legare site (c. 1800) averaged 11.8 artifacts per cubic foot - here the majority of the excavations were in the formal garden, an area expected to have less refuse overall. The Miles Brewton site (1769), where excavations focused on the work yard, averaged 24.8 artifacts per cubic foot. The Nathaniel Russell house (1808) saw excavations divided between both locations and averaged 16.7 artifacts. The Aiken Rhett site yielded 6.7 artifacts per cubic foot. Figures 50 - 55 show that this distribution is highly variable, however. The faunal

remains are a more dramatic measure of refuse disposal. The three townhouses mentioned above - 14 Legare, Nathaniel Russell house, and Miles Brewton house - were remarkably similar, containing 23 to 26 grams of bone per cubic foot of excavated soil. The Aiken Rhett site, in contrast, contained only 3.5 grams per cubic foot.

The artifacts that were recovered were clustered principally in the southeast quadrant of the rear yard, adjacent to the rear of the kitchen building. This clustering of artifacts is matched by a rather dramatic concentration of animal bone in the same location (figures 50-51). It appears from the present data that this is the only portion of the site that was used for refuse disposal to any extent. The data suggests that refuse disposal in this area continued through the 19th century. There is likewise a heavy concentration of refuse inside the northernmost room of the kitchen building.

These figures, combined with the virtual absence of oyster shell, suggest that very little of the Aiken family's refuse was discarded on-site. This is supported by the data shown in Chapter IV, where the majority of artifacts that were recovered are architectural in nature, compared to the Carolina Artifact Pattern and to the majority of archaeological sites in Charleston. The majority of the daily refuse must have been discarded elsewhere, by where, and by what mechanism, remains unknown. Perhaps the isolation of the Aiken Rhett house afforded the opportunity to haul refuse a short distance, to the adjoining lowlands. Perhaps Aiken, reputed to be a efficient and forward-thinking man, in terms of modern conveniences and conventions, made an unusual effort to keep his property clean. The lack of refuse does not seem to relate directly to the relatively late date of occupation, as the later components are in fact the most refuse-laden. Likewise, these efforts do not seem to have ensured a vermin-free environment, as the faunal collection contains an unusually high ratio of rats for both the early 19th century and the later 19th century. The majority of these specimens were retrieved from units within the outbuildings.

Gardens and Gardening

As with their buildings, Charlestonians copied English and other European garden styles, but melded them with the physical conditions of their American setting and community self-image. Along with houses, furnishings, and fashionable possessions, gardens were "statements of wealth and the right to own it" (Kryder-Reid 1994:131). Gardens as an outdoor extension of interior space may have held particular importance in Charleston, where hot weather abounded. Barbara Sarudy has noted in her study of garden furniture that Charlestonians moved themselves, and their furniture, outside in search of cooling breezes (Sarudy 1995b; personal communication). There is plenty of evidence that gardens and gardening has been an important element of the Charleston landscape since at least the mid-18th century, though the styles and meanings of gardens have evolved through the centuries. James Cothran (1995) suggests that early in her history the city became the center of gardening in the southern colonies. Through the 18th and 19th centuries, the city boasted a number of nationally-important naturalists and horticulturalists. Charleston's

horticultural knowledge was greatly enhanced by the founding of the Charleston Library Society in 1748, which boasted many important reference works. Local nurseries and seed dealers gradually replaced English suppliers as the colonial period proceeded. Formal gardens in the European style could be found on plantations by the second quarter of the 18th century and in the city by 1750. By the Revolutionary period, professional gardeners were advertising their services (Cothran 1995).

Three Charleston gardens have been explored through archaeological excavations. All contain gardens designed in the early 19th century, and all of these exhibit irregular, or curving patterns. The first investigated was at the 1769 Miles Brewton house (Zierden 2001). Here, research by Dr. William Kelso and testing under the direction of the author revealed an 18th century garden with rectangular beds and paths at right angles. A second garden, now attributed to the Alston occupation of the property (c. 1770-1830), exhibited an elaborate paisley design. The extensive excavations of the George Edwards garden (c. 1818) at the 14 Legare Street townhouse revealed a bold and elaborate 'rosary' pattern. The center of the pattern is a bowed lozenge, turning to eight circles, each of the double lobes terminating in a rounded node (Brown 2001; Zierden 2001). And recent testing in the front of the Nathaniel Russell house revealed garden features that suggest a garden with broad, curved beds shown in a late 19th century photograph may be the first garden installed at the site, dating to c. 1810 (Zierden 2003). Taken together, these recent projects have provided a broader knowledge of gardening practices in early 19th century Charleston. They have also led to greater recognition of garden features in the archaeological record.

The long-standing interpretation of the Aiken-Rhett house states that the relatively spacious property never had a formal garden, that the rear yard was instead a "working yard". The basis for this interpretation appears to be the use of the yard, or lack of use, in the 20th century, coupled with William Aiken's reputation for efficiency and modernity. The two small rectangular buildings in the rear yard, centered on the west and east walls have been interpreted as the cow shed and chicken coop, respectively (Jones 1974, 1977). The structure on the east wall fell, or was demolished, after the 1886 earthquake. Aside from the remaining magnolias from the central avenue, and occasional trees and bushes, there is no extant evidence of gardening or landscaping. Excavation of N360E100 in 1985, however, revealed relatively shallow stratigraphy and two sets of small round or oval stains, interpreted as plant stains in 1985. Their significance was not understood at the time, however.

But during their initial visit to the Aiken Rhett house, Carl Lounsbury, Willie Graham, and Orlando Ridout called into question the interpretation of the small structures as livestock sheds. Their location and configurations instead suggested garden buildings. Archaeological investigations were then planned with this new interpretation in mind. Lounsbury, Graham and Ridout suggested a testing scheme that divided the rear yard into quadrants, along a central drive axis and across the south sides of the two yard structures. New test units were placed in the northeast, northwest, and southwest quadrants; the southeast quadrant had been the focus of testing in 1985. Based on evidence encountered in 2001, additional units were excavated in the northwest quadrant in 2002.

Though the data are preliminary, it appears that there is evidence for the northwest quadrant, and perhaps the entire northern half, of the rear yard functioning as a garden of some sort. Small features just north of the two yard buildings appear to be plant stains, similar to the two linear clusters first noted in N360E100. All of these are filled with medium brown soil (10yr4/3) and date to the first half of the 19th century. Most of these were not excavated at present. No pattern was evident at the present time. Extensive excavations of the northwest quadrant will be necessary to discern patterning, if any. A single unit was excavated in the northeast quadrant, N372E150 in 1985. This unit did not reveal any plant stains, but a lack of kitchen refuse, coupled with the plant stains in N340E155, suggests that the garden continued in this quadrant as well.

Suggestion of a garden in the northern half of the yard is bolstered by the rather dramatic evidence of a fence, or trellis bordering the central drive during the antebellum period. The four units along the E115 line (N360E115 to N375E115) revealed an extensive series of posts in post holes. A total of eight posts were present in this 20-foot section, and they were aligned along the western side of the unit. As suggested elsewhere, artifacts were sparse in the Aiken-Rhett site and particularly sparse in the post features themselves. Dating these features, then, was particularly challenging. The few datable artifacts - machine cut nails and brown bottle glass - place the features no earlier than the second quarter of the 19th century. They have therefore been assigned to the period of construction of the yard buildings (c. 1833), suggesting the events may be associated, and lending credence to interpretation of the structures as garden buildings.

There was some stratigraphic evidence for sequencing of these posts. Based on the depositional sequence, the size and shape of each post, and their relative positions, it is possible that there are two, and possibly three, construction episodes represented by the eight features. Features 44, 45, and 91 may be the earliest set. Posts are set 5' apart. The large 20th century refuse pit, feature 85, likely removed a matching post at N370E115. Features 87 and 90, and possibly 38, may represent a second construction episode; again feature 85 occupies the location of a suspected fourth post. These are slightly smaller in size. These may reflect deliberate rebuilding, or they may simply be replacement of rotted posts. All were filled with the brown soil characteristic of the early 19th century.

There is also some evidence for replanting of this area, particularly the northwestern quadrant, in the later 19th century (Phase IV). A number of features encountered in N360E100, N340E90, and N360E95 are filled with 'zone 2' soil and date to the late 19th century. Documentary research by Carrie Albee led to the suggestion that the avenue of magnolias, which currently defines the rear drive, may be a late 19th century alteration to the rear yard; it is possible that the magnolias replaced the structure represented by the post holes. The discovery of a significant amount of magnolia pollen in Phase IV proveniences, and none in earlier deposits, supports this interpretation. The pollen samples from both Phase II and Phase IV contain a number of possible ornamental plants, both native and exotic.

These areas did not produce any significant zone deposits, however, suggestive of broad planting beds, such as those encountered at 14 Legare Street (Zierden 2001). Nor did the deposits contain any concentration of bone or other organics, as noted in the formal garden at 14 Legare Street, which date to the same period. The northwest quadrant was particularly devoid of animal bone. Soil chemistry analysis suggested some increased fertilization of the plant holes, relative to non-planting deposits, for both the antebellum and late 19th century periods. The pollen record contained a number of cereals which may have served as fodder for animals on the property, and be present in the yard in the form of manure fertilizer. It is possible that manure, rather than composted household refuse, was a major source of fertilizer in the Aiken gardens. These cereals were found in Phase II and Phase IV samples.

Summary of Soil Chemistry Analysis

<u>Phase II Samples</u>	<u>Phosphorus(P)</u>	<u>Potassium(K)</u>	<u>Calcium(Ca)</u>	<u>Magnesium(M)</u>	
N340E155, fea. 34, FS 134	749	90	7275	191	(plant)
N375E115 fea 38, FS 143	552	167	2900	95	(post)
N375E115 fea 45, FS 161	147	51	1539	75	(post)
<u>Phase IV Samples</u>					
N375E125 zone 2, FS 82	220	75	9196	134	(zone)
N340E90 fea 28, FS 116	478	73	2834	96	(plant)
N340E90 zone 2, FS 147	1034	41	5091	269	(zone)
N375E135 fea 39, FS 155	355	31	2679	67	(post)
N118E105 fea 54, FS 171	718	26	3131	62	(front plant)
N115E151.5 fea 71, FS 201	1605	20	4808	65	front plant)
N118E105 zone 1, FS 157	625	59	8942	302	modern

A related question was the function of the small yard at the front of the Aiken Rhett house. This space has been interpreted traditionally as a small formal garden. Excavations here revealed possible planting stains, particularly from the late 19th century. Features 54, 70, 74, and 75 contained

dark grey-brown (10yr3/2) fill characteristic of the zone 2 deposits. Dating and association of features in the front yard was problematic because the area was largely devoid of artifacts used in dating. Interpretations are therefore tenuous, and dating is based on relative stratigraphic position in most cases. With those cautions in mind, it is possible that some of the earlier soil features in N118E105 may be plant stains from the first half of the 19th century. This awaits further research.

Indirect evidence for the existence of a formal garden in the rear yard also comes from the architectural evidence from the outbuildings, particularly from the paint analysis in the kitchen and slave quarters by Dr. Susan Buck (2003). Dr. Buck suggests that the elaborate finishes in the outbuildings may spring from their visibility, as guests passed through the work yard on their way to the garden. Close proximity of work yard and garden is not uncommon on Charleston sites, and it was not always possible to segregate the work yard completely. This was accomplished at the Miles Brewton, 14 Legare, and Joseph Manigault houses, where the work yards occupy one side of the property. Though segregated by fences, there was some visual connection between the garden and the work yard. On other properties, such as the Heyward-Washington house, visitors would pass through the work yard to reach the garden, often in a much more constricted setting. Susan Buck suggests that the Aiken-Rhett service buildings may have therefore been highly decorated and deliberately displayed to guests.

Health and Sanitation: the Courtyard and Drainage Issues

The deliberate placement of specialized service buildings, separation of work yards and gardens, and specific locations for refuse disposal were conscious attempts to mold an urban landscape suitable to the social values, as well as physical needs, of urban residents. Archaeology has not only outline the basic features of late 18th century compounds, it has also documented changes in these features for the next century. Many of the visible changes were attempts to improve sanitation and prevent the spread of disease in an increasingly crowded city (Rosengarten et al. 1987).

A large part of maintaining a healthy and sanitary site was managing the animals who lived on that site. Zooarchaeologist Elizabeth Reitz has recently summarized the animals who would have lived alongside the human residents of a townhouse property such as Aiken-Rhett. The archaeological record, and to a lesser extent the documentary record, suggests that the work yard was filled with domestic animals such as cows, pigs, and assorted fowl, maintained for milk and eggs and ultimately destined for the dinner table. Also present were work animals and pets. The maintenance of these animals, their feed, other food stocks, and the resulting refuse, attracted other unwanted animals. These practices were common in the 18th and 19th centuries, and they persisted in some form into the 20th century (Reitz 2000). Further, the character of this animal maintenance changed through time, as urban sanitation and public health became an increasing problem, and an increasing concern. Reitz further suggests that a large part of garden maintenance, as well as overall site maintenance, involved “keeping chickens and pigs out of the garden, cats out of the well, and rats out of the larder” (Reitz 2000).

Paved work yards and drain systems seem to be Charleston's answer to these problems in the early 19th century. Excavations at townhouses built in the 18th century have revealed paving efforts in the work yard that date to the early 19th century and cover quantities of earlier refuse. While a few of the brick drains encountered were earlier, most are early 19th century improvements or additions. While some of the drains facilitated storm water runoff on low-lying sites, their presence on some high lots suggest other functions, as well. The accumulation of refuse and small artifacts in some of these drains suggests that they were used primarily for the disposal of waste water. William Aiken, known as a progressive and efficient land manager, evidently expended considerable effort in maintaining a sanitary and efficient yard on his Elizabeth Street property. Courtyard paving and drainage issues seem to have been part of his original changes to the property in the 1830s and part of his modernization efforts in the 1850s.

One of the most challenging issues of the historic structures analysis was the interpretation of the original layout and function of the paved brick courtyard. During the 1980s and 1990s, the courtyard area between the rear of the main house and the northern edges of the outbuildings exhibited paving with brick in herringbone pattern. Much of the brick had been covered with soil, presumably an inadvertent, gradual accumulation. Visible through the soil, running north/south through the center of the courtyard, were large bluestone slabs which topped a brick drain (feature 2, encountered in the 1985 excavations). Brick paving appeared to be higher, and more regular, along the sides of the kitchen and stable buildings, gradually sloping towards the center of the courtyard. There was also some suggestion of settling of the brick, and relaying of the bluestone, in certain areas. The brick was also disturbed by magnolia tree roots in the northwestern quadrant of the courtyard, adjacent to the stable building. Historic photographs, from the 1960s, however, show this courtyard completely covered with soil and overgrown with weeds.

One of the restoration/stabilization efforts of Historic Charleston Foundation was removal of the overburden and exposure of the complete paved courtyard. Excavation soon revealed that the courtyard was not merely uneven, but exhibited significant relief. In particular, a trench, 3.5' across and 1.8' deep was laid parallel to the kitchen building, initiating 7' north of the south end of the structure (at grid N220) and terminating near the north end of the building (at grid N267). Several shallower, shorter depressions were perpendicular to this feature. The east/west depressions are bisected by the bluestone drain, and are clustered in two groups of three. They are roughly 15' long and 3' across. Visual inspection of the courtyard suggests that the paving adjacent to the two outbuildings, to a width of 8', was higher in elevation than the center of the courtyard.

Exposure of the brick, particularly in the western half of the courtyard, was postponed until completion of the historic structures report. The exposed contours have created some traffic flow and visitor safety issues. Careful study of the present surface, through on-site visits, mapping, and photography, suggests that the courtyard is symmetrical, and that the west side may mirror the east when fully exposed. The herringbone paving appears complete, and fairly uninterrupted.

Interpretation of the original appearance and intent of this feature has been most challenging. Slumping was the initial explanation of the irregular ground surface. The brick paving, however, appears fairly intact and there is little interruption in the spacing of the bricks. This is particularly

true along the surfaces of the trenches. This would suggest that the contours were deliberate, and original to the paving effort. Archaeological excavation was expected to inform on this issue. Likewise, archaeology was expected to confirm the suggested 1850s date of paving, and to possibly expose refuse deposits from the early 19th century, sealed beneath the paving. Excavation at other Charleston townhouse sites (the Miles Brewton house in particular) have revealed work yard paving efforts dating to the 1840s or later, covering refuse-strewn dirt yards.

Archaeological work consisted of excavation of strategically placed test units and topographic mapping. A 15' by 5' trench was strategically placed to intersect the principal north/south trench, an adjoining east/west depression, and the bluestone-capped drain. The units also included one irregularity in the brick paving, at the eastern end of the east/west trench. Stratigraphy has been described in detail in Chapter III. The excavations revealed ten distinct layers of fill soil, 3.6' deep. The contours visible on the paved surface continued throughout the layers. The layers included two mortar layers, construction beds for previous paved surfaces. Artifacts contained in the soil layers between these mortar beds provide possible dates of deposition. The present paved surfaces dates to the 1850s. Materials contained in fill layers 1-5 above, and layer 6 below, suggest that the previous paving event is associated with William Aiken's 1830s renovations. Feature 99 was an intact bed of white mortar, with clear impressions of brick set in herringbone pattern. The nearly 1' thick layer of fill dirt, layer 6, was followed by feature 106, the second mortar bed. This mortar was softer and less homogenous, and there were no visible brick impressions. The contours of feature 106 were less pronounced than the present ground surface or feature 99. Based on the recovery of transfer print pearlware in layers 8 and 9 below, feature 106 appears to date to the 1820s. A third deliberate feature, possibly paving, is represented by layer 9a, a deposit of brown organic loam, interpreted as a wood surface. The exact nature of this wood surface is not known. Pearlware recovered in layer 10 below suggests that layer 9a was deposited after 1790.

**Dates of Deposition
Fill layers in Courtyard**

	<u>N225E125</u>	<u>N225E120</u>
Layer 1	plastic/pink porcelain/white porcelain	panel bottle neck
Layer 2	annular ware	Parian ware/white porcelain
Layer 3	letter-molded bottle	no matl
Layer 4	no matl	no matl
-1840- Layer 5	flow blue whiteware	transfer print whiteware
feature 99	—	—
Layer 6	blue transfer print pw (1816)	white porcelain/pearlware
-1820- feature 106	—	—
layer 7	undecorated pearlware	transfer print pearlware, 1800

layer 8	no matl	transfer print pearware
-1795- layer 9	no matl	glass
-1780- layer 9a	---	brick
layer 10	—	pearlware

The archaeological record, then, confirms that the courtyard has been paved in some manner since construction of the Aiken-Rhett house, and that the surface has seen three, and possibly four, paving events. These likely correspond with the three construction/renovation episodes documented for the site. Fill material was introduced prior to each paving event, gradually raising the ground surface three feet. The archaeology also strongly suggests that the depressions are deliberate, and have followed these same contours for each paving event, perhaps becoming more pronounced after 1830. The one point of slumping, in the eastern edge of the east/west trench, was revealed in the soil profile (figure 40c); the collapse appears to have occurred at the top of feature 106. Otherwise, the contours are uninterrupted.

If the trenches are deliberate, then they are most likely for drainage. Close examination of the ground, coupled with contour mapping, indicates that the Aiken Rhett house is built on the lowest portion of the lot. The top of the courtyard surface at the rear of the house is 1.0 foot lower than the courtyard at the north end of the stable, and 2.2' lower than the yard at the rear gate. The entire lot slopes to the south. Archaeological stratigraphy suggests that this difference may have been more pronounced in the early 19th century. There is less than 6" of soil accumulation in the rear yard, and possibly 3' in the courtyard. Heavy rains of the past year have demonstrated that the depressions are successful in channeling storm water runoff in the courtyard.

The function and appearance of the mortar beds, feature 99 and feature 106, are fairly evident. Interpreting the function and appearance of layer 9a, the wooden surface, is more challenging. Sean Taylor has suggested that the wood may suggest an original drainage system, buried underground, that later collapsed, causing the present contours, or at least exaggerating them. The wood may also be a level paved surface. Though less likely, there are other possible explanations for the wood layer. Carl Borick (2003 and personal communication) suggests that the Aiken Rhett house is in the vicinity of the trenches and the canal constructed by the British during their siege of Charleston in 1780. Plank drains, woefully inefficient, were constructed throughout the city, beginning in 1806. These were replaced in the Neck in 1856, with tidal drains that featured brick sides and a plank bottom.

There is also evidence that the drainage system suggested by the trench may have continued beyond the present limits. Feature 99 was also present in N285E130, at the base of zone 5 (a layer of fill). Here the feature consisted of an irregular mortar bed with large fragments of disarticulated red brick. The feature was roughly at the same elevation as feature 99 (at the base of the contour) in N225E125.

The bluestone-capped drain in the center of the courtyard was likely installed at the same time as the present courtyard paving, or slightly after. The drain, with brick sides and bottom and stone top, was first encountered in 1985 in N295E155 and designated feature 2. Here the drain ran in a northwest/southeast orientation, before turning due north, as encountered in N308E138. The same drain, in a southwest orientation and aligned with the visible drain in the northern third of the courtyard, was encountered in N285E130. All encountered portions of the drain are of the same style and construction, and so are likely all part of the same system. Materials in the builders trench, encountered in each of the three units, support an 1850s date of construction.

The brick drain, feature 2, was also exposed in the excavation of N225E120 and E115. Here, the brick was of identical construction. Moreover, the brick sides appeared to follow the contours of the courtyard surface (figures 66-67). In some places, the bluestone tops had been leveled and reset. The interior of the drain in this location was not exposed. Agreement with the contours of the courtyard might suggest that the drain was added after the courtyard was complete. This drain network bears further research, to determine its complete layout, pitch, point of origin, and point of departure. Maps and plats of the area, as well as archaeological stratigraphy, suggest that the western side of the yard, particularly the northwestern quadrant, was the highest point of land. The late 18th century plat of Mazyck-Wraggsboro show a finger of marsh on the east side of the property, in the vicinity of the north side of the kitchen building (figure 7; see also figures 11-12). The depth of fill in these units, plus the depth of the eastern property wall, suggest extensive filling in this vicinity. The northern, or rear, portion of the property was considerably higher than the south, or front. From here the land form drops significantly to the east, to a large area of wetlands. This area was still low and swampy in the late 19th century, as indicated on the 1872 Birds Eye map. This is still visible in the grade of Judith Street. It is likely that drainage from the Aiken property proceeded this way, though it is unknown where, and how, the drains themselves terminate.

Evidence for Architectural Change

Construction of grand townhouses also included support structures and activity areas which, in conjunction with the main house, formed the urban compound. These served to meet the required range of daily life affairs, from the necessary to the luxurious. While the main house showed a formal facade, the work yard housed the facilities for the affairs of daily life, in a range of decreasing order and increasing dirtiness. These included kitchen and wash house, slave quarters, stables, carriage house, livestock sheds, privy, well, cistern, and drainage system. The maintenance of gardens required additional features. While these structures varied in size, content, construction method, arrangement, and level of specialization, they were present in some forms at all sites, not just those of the elite (Zierden and Herman 1996).

The Aiken-Rhett property has a particularly well-preserved range of structures, including the support structures. Research by the Historic Structures team, including archaeology, has informed on new aspects of maintenance of the main house and the support structures. Archaeological research on structural changes followed from suggestions by the architectural team. The archaeological excavations were successful in documenting certain aspects of landscape and

architectural evolution of the property. Division of the archaeological proveniences into five temporal periods followed the documented changes in ownership and building appearance.

A goal of the front yard excavations was to define features from the first period, that of John Robinson's ownership. Unit N118E105 was located to intersect the expected location of the original entry steps. Feature 62 appears to be the foundation for these steps, though the condition of the feature makes it difficult to be precise about dimensions and construction details. No artifacts were retrieved from the feature itself, and dating is based on the few, later artifacts recovered from features and zones above feature 62. Unit N111E151.5 was located to explore the suggestion by Lounsbury, Graham and Ridout that the kitchen building was accessed from the front of the property and Judith street by a drive, now covered by the 1830s dining room addition. Feature 80 may represent a drive leading from Judith Street, along the side of the main house to the kitchen building. Efforts to located a gate here and to date the front wall were unsuccessful. In the rear, feature 69 suggests that the surrounding brick wall dates to the 1820s or earlier, and is a surviving Phase I feature.

Several units in the rear yard revealed evidence of changes made by William Aiken in the early 1830s (Phase II). Unit N340E155 encountered an intact foundation for the missing garden building, and both construction and destruction features were encountered. Stratigraphy and associated artifacts suggest an 1830s date of construction for the building and a late 19th century date of destruction (documented to the 1886 earthquake). Excavation of the builders trenches for the intact structure, in unit N340E90, supports an early 19th century date of construction, and contains evidence of alteration and/or repair in the 20th century. The post holes encountered in N375E115 indicate an internal division of the property in the second quarter of the 19th century, and abandonment or removal of this feature in the late 19th century (Phase IV).

The 1985 project encountered Aiken's attempt to make the work yard more efficient. The drain system and watering basin were built in the 1850s, likely during the 1858 period of renovations. Archaeological evidence for changes during Phase IV were more those of removal, or destruction, rather than construction. A coal-paved drive was added during the late 19th century, while another drive, or parking area, was added to the southwestern quadrant during the early 20th century.

Project Summary

The excavations conducted suggest that the archaeological record contains data which may alter current interpretation of the house and yard. The small sample size, however, means the above interpretations are tenuous. Additional excavation will be necessary to determine with any certainty the existence of a garden in the rear or front yards. Such studies necessarily require large block excavations.

The present testing was more successful in documenting and dating a number of architectural changes to the property. In particular, the excavations helped date the surrounding property wall as

well as the construction date of the garden buildings. The project also uncovered evidence of a central driveway in the rear and associated structures of some sort. Finally, the project provided preliminary data on the appearance and layout of the property in the first period, prior to acquisition and renovations by the Aiken family.

Additional testing and full-scale excavations will certainly inform on the issues presented here with more certainty. The buildings and historic fabric on the property are remarkably untouched and preserved, though fragile. Any archaeological research should be conducted within a larger research context, in consultation with the specialists involved in the present study. The architectural details, particularly the paint stratigraphy, have provided important new information and interpretations of this site in particular, and 19th century urban life in general. Archaeology has a role in the continuing study of the Aiken-Rhett house.

Illustrations - Chapter V

Figure 63. Relative density and horizontal distribution of bone, by weight in grams.

Figure 64. Relative density and horizontal distribution of total artifacts.

Figure 65. Density and distribution of artifacts, Phase I

Figure 66. Density and distribution of artifacts, Phase II

Figure 67. Density and distribution of artifacts, Phase III

Figure 68. Density and distribution of artifacts, Phase IV

Figure 69. The kitchen/quarter structure, facing northeast. Artifact deposits were densest beneath the floor of the northernmost room, and in the yard just beyond the northern end of the structure.

Figure 70. View of the possible garden structure.

Figure 71. Possible planting features, N360E100 and N360E90. The dark stains are associated with Phase IV, while the lighter brown features date to the early 19th century.

Figure 72. Composite east profile, N360E115-N375E115, showing post features; Excavation in progress, N360E115, showing location of post features relative to avenue of magnolias and courtyard.

Figure 73. Composite planview map, garden features in northwest quadrant of yard, phase II. Plant stains are show in brown, posts in green. The posts are colored dark and light green, based on current understanding of sequence and association.

Figure 74. View to the north from rear landing, showing contours of brick courtyard.

Figure 75. View to the west, showing contours of courtyard.

Figure 76. C. 1960s view of stables converted for automobile storage. Note covering of soil and weeds in courtyard, as well as drive in rear yard.

Figure 77. Topographic map, closeup of courtyard.

Figure 78. N225E120, west profile. Note contours of bluestone-capped drain box relative to contours of feature 99.

Figure 79. South profile, N225E120.

Figure 80. Bluestone-capped drain and watering basin (features 1, 2 and 3), encountered in 1985 excavations, unit N295E145.

Figure 81. Composite map of bluestone-capped drain.

Bone Distribution

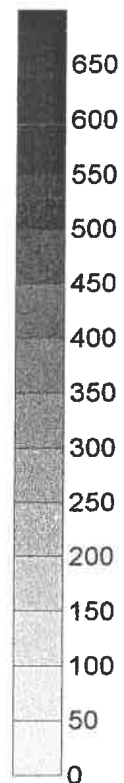
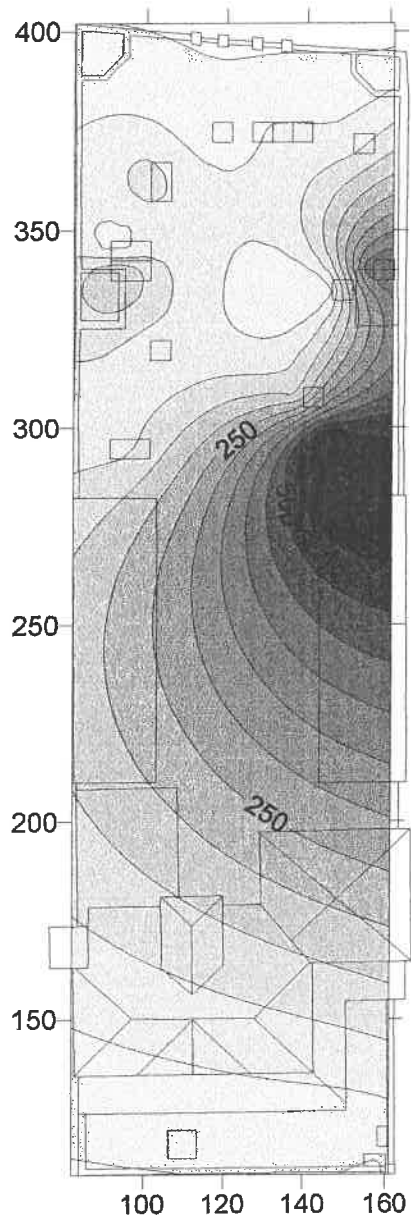


Figure 63

Artifact Density

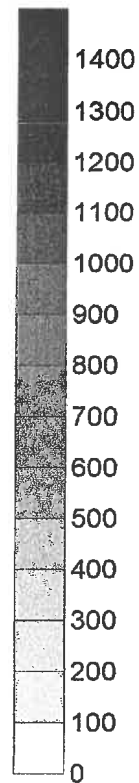
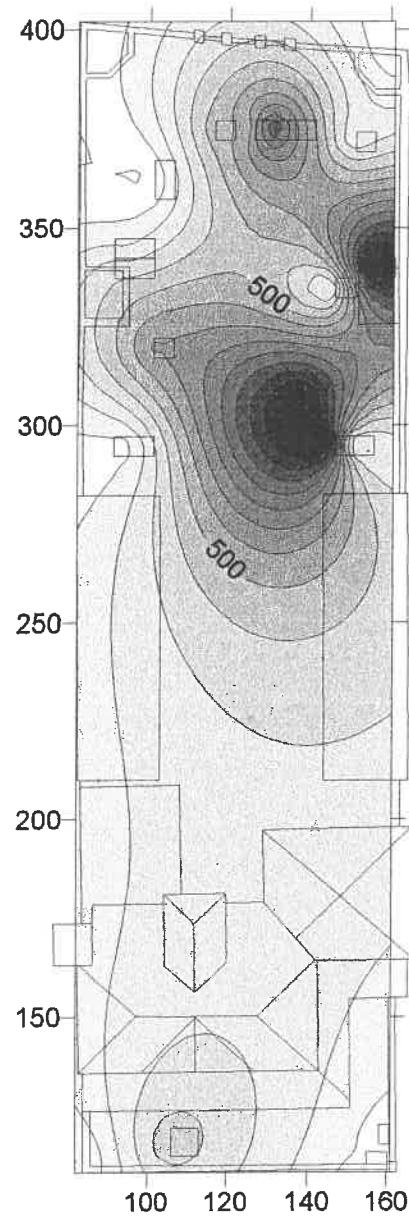


Figure 64

Phase I

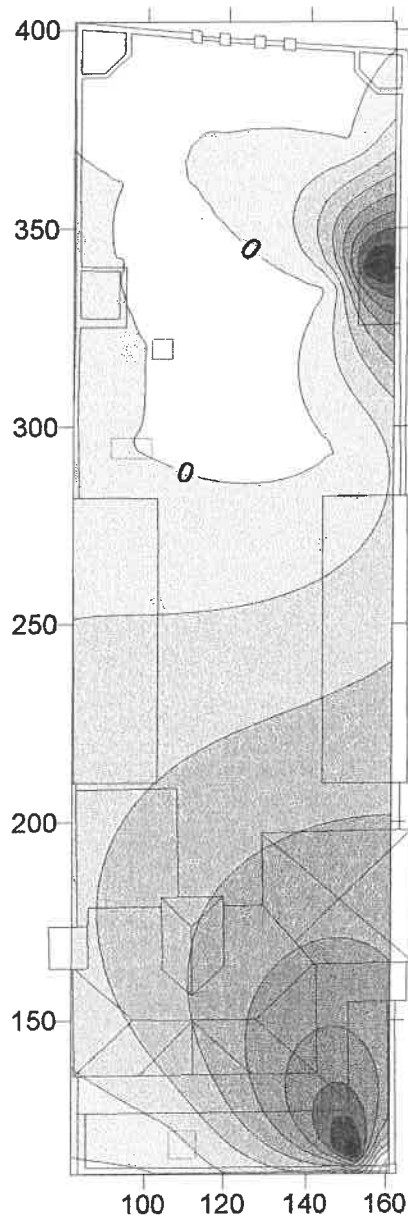


Figure 65

Phase II

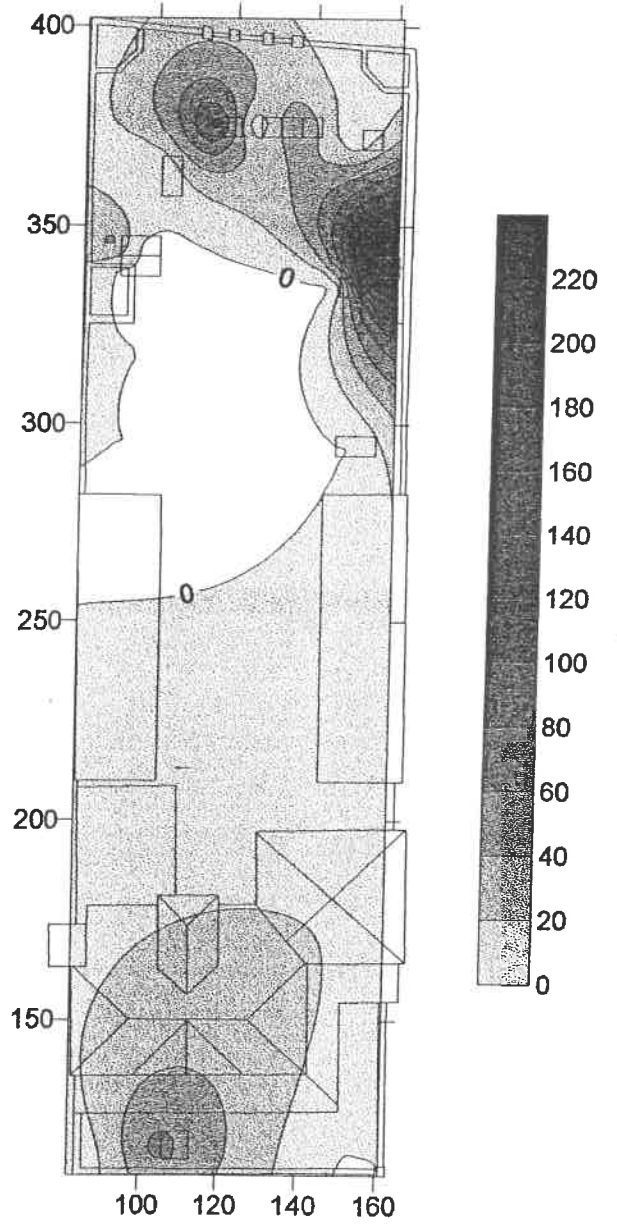


Figure 66

Phase III

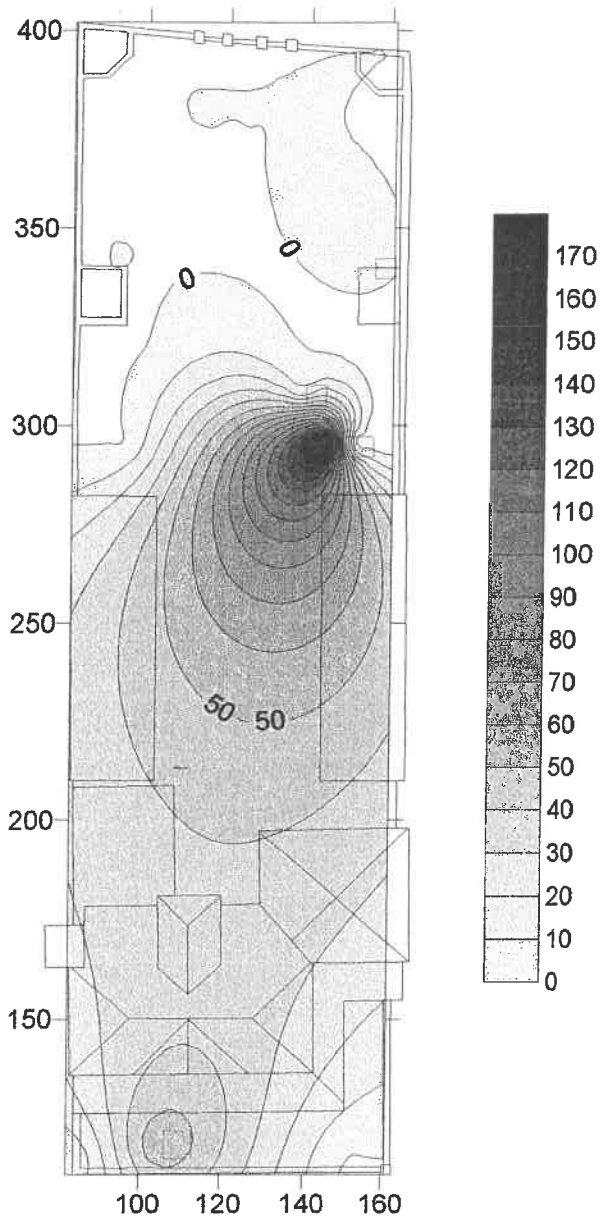


Figure 67

Phase IV

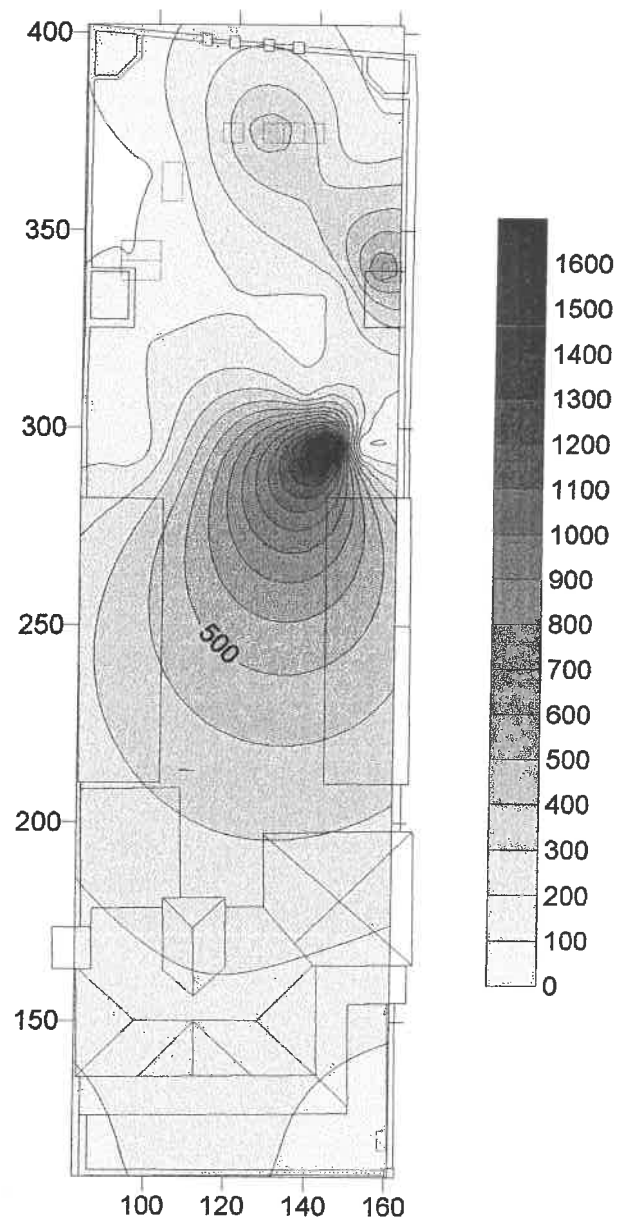


Figure 68



Figure 69

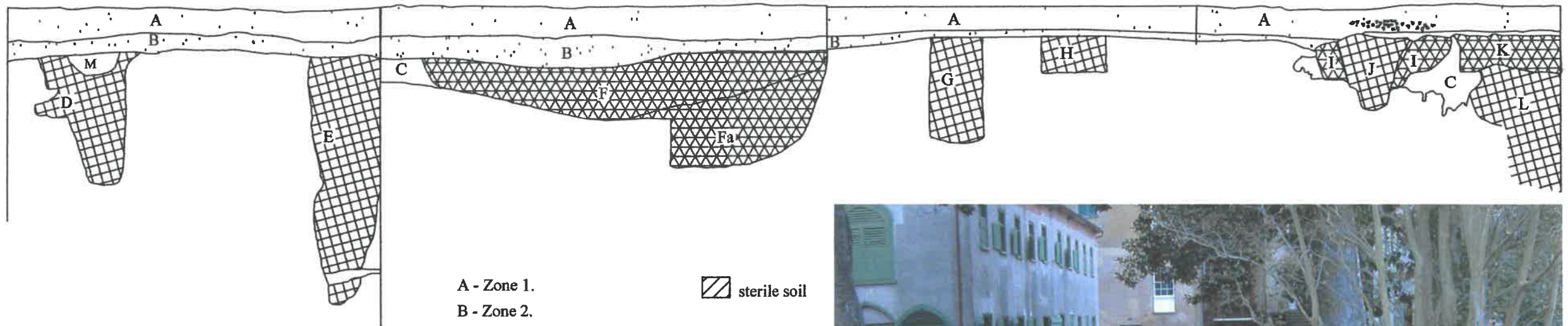


Figure 70



Figure 71

AIKEN RHETT
 N360 E115, N365 E115,
 N370 E115, N375 E 115
 WEST PROFILE

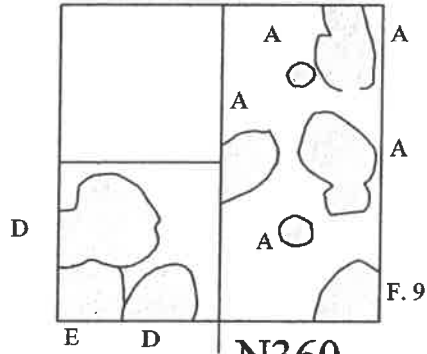


- A - Zone 1.
- B - Zone 2.
- C - Zone 3.
- D - Feature 90, post with a tree root. 10YR 4/3.
- E - Feature 91, post. 10YR 4/4 and 3/4.
- F - Feature 85. 10YR 5/6.
- Fa - Feature 85. 10YR 3/3.
- G - Feature 87. 10YR 4/4 and 5/4.
- H - Feature 84. 10YR 4/4.
- I - Feature 45. 10YR 4/3, 5/6, 5/1.
- J - Feature 38, post mold. 10YR 4/1, 4/3, 5/6, 5/4.
- K - Feature 37. 10YR 4/3.
- L - Feature 44, post. 10YR 5/4, 4/1, 5/6, 6/3.
- M - Fea. 88, pipe trench.

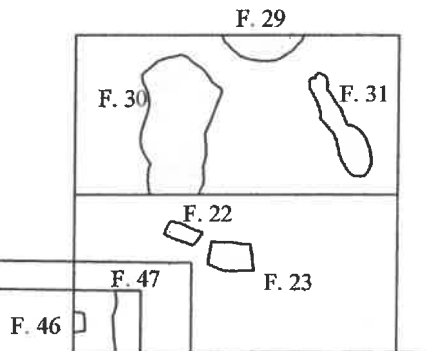
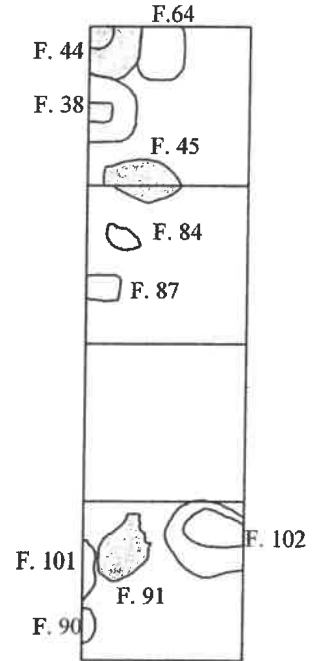


Figure 72

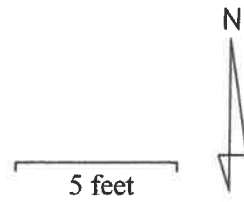
N380
E100



N360
E100



N340
E100



THE CHARLESTON MUSEUM
AIKEN - RHETT HOUSE

Phase II
1830 - 1858



Figure 74



Figure 75



Figure 76

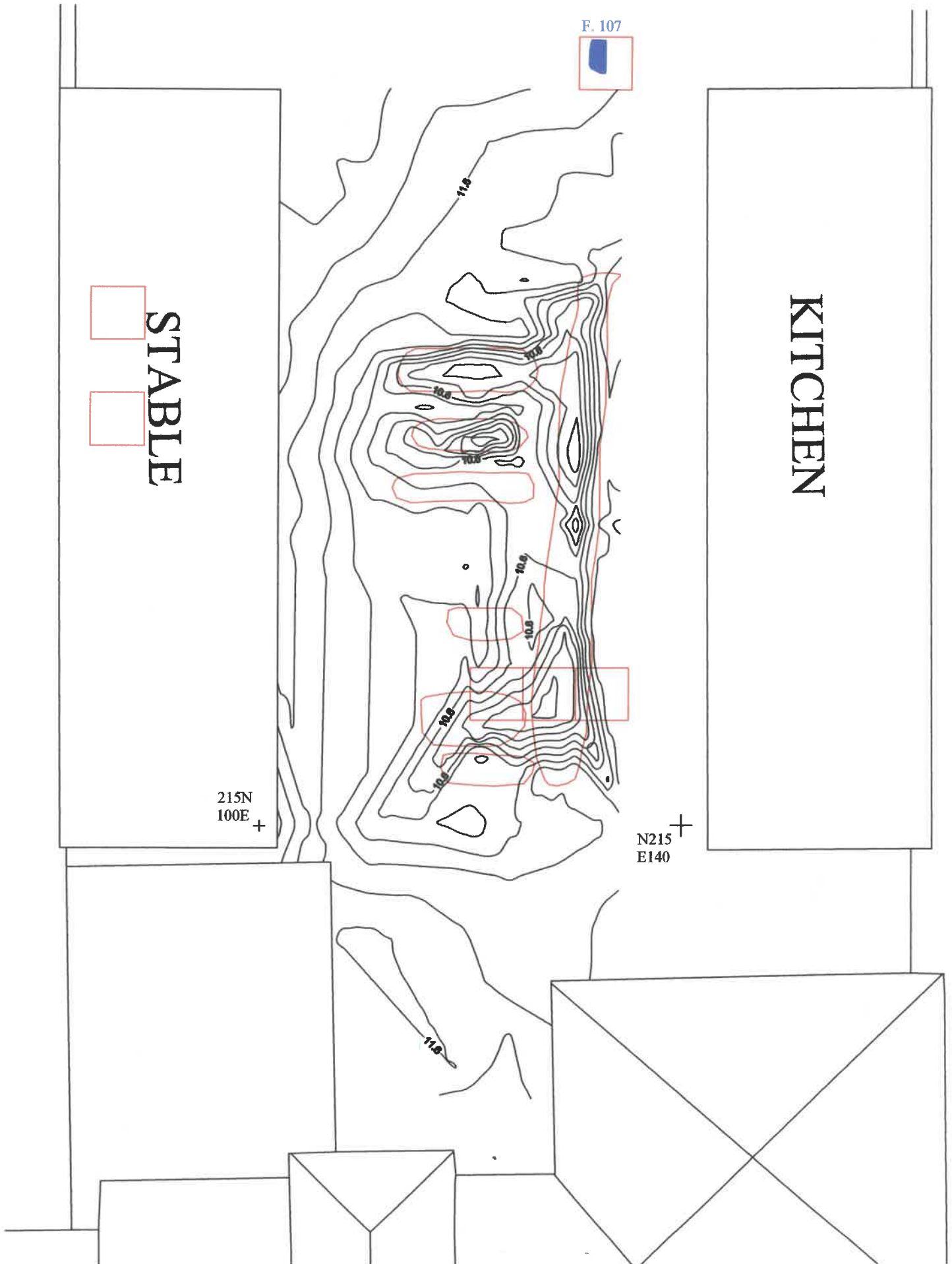
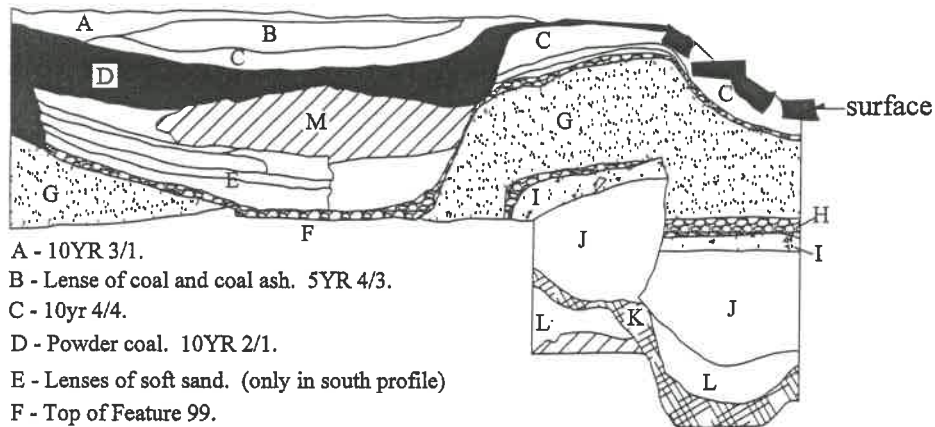


Figure 77



Figure 78

AIKEN RHETT
 N225E125, N125E120
 SOUTH PROFILE



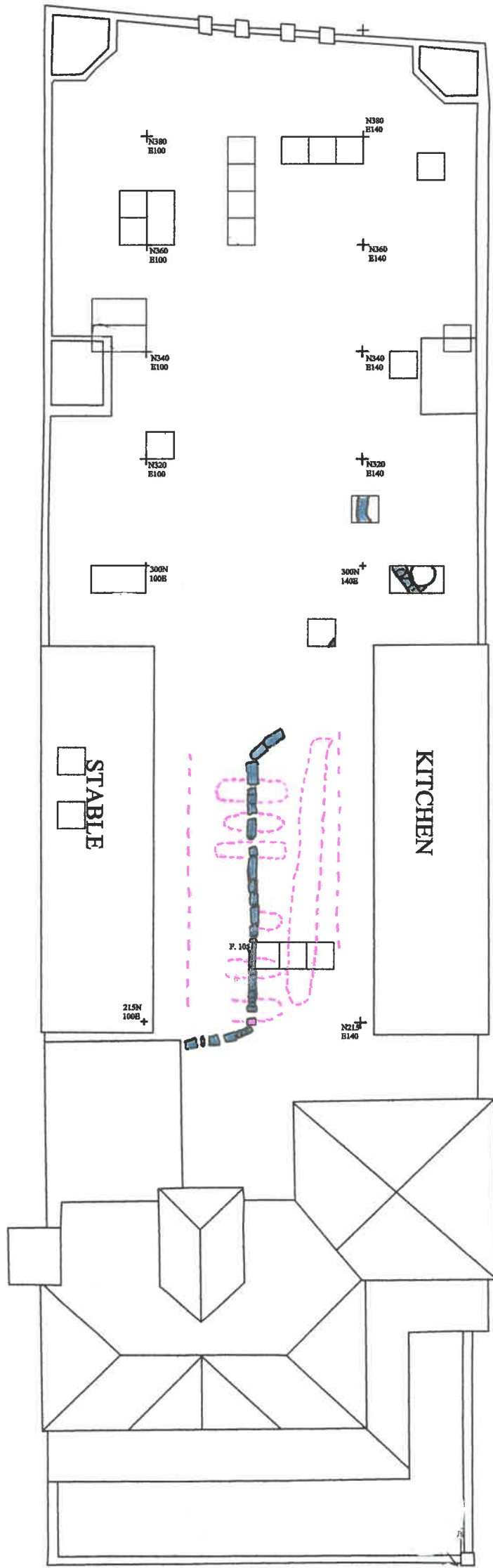
- A - 10YR 3/1.
- B - Lense of coal and coal ash. 5YR 4/3.
- C - 10yr 4/4.
- D - Powder coal. 10YR 2/1.
- E - Lenses of soft sand. (only in south profile)
- F - Top of Feature 99.
- G - 10yr 4/3 with charcoal flecking.
- H - Feature 106.
- I - 10YR 6/2 sand with a concentration of artifacts, mortar and charcoal.
- J - 10YR 3/3 sand.
- K - 5YR 2/2 loam.
- L - 10YR 3/3 sand.
- M - washed out lenses of sand.
- N - Feature 105. (only in north profile)
- O - Feature 109. (only in north profile)

- wood
- brick
- mortar
- sterile soil

Figure 79



Figure 80



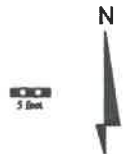

THE CHARLESTON MUSEUM
AIKEN - RHETT HOUSE

Figure 81

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Analysis of Pollen from the Aiken-Rhett House, Charleston, South Carolina

John G. Jones, Ph.D.

Palynology Laboratory, Department of Anthropology
Campus Mail 4352
Texas A&M University
College Station, TX 77843-4352

A total of 15 archaeological sediment samples were examined for fossil pollen content. These samples were collected from excavations at the Aiken-Rhett house, and date to the 19th Century occupation of the house. Proveniences are presented in Table 1. It was anticipated that a detailed examination of fossil pollen if preserved, would offer insights into feature use or function and evidence of gardens. A number of planting holes were samples, in an attempt to identify specific plants that may have been grown on the property.

Methodology

Recognizing that oxidizing conditions exist in the Charleston area, a conservative extraction procedure was employed in the isolation of fossil grains from the sediment samples. The sediments from the Aiken-Rhett House samples were initially quantified (10 and 15 mls), placed in sterile beakers, and a known quantity of exotic tracer spores was added to each sample. Here, Danish clubmoss *Lycopodium clavatum* spores were chosen as an exotic, because these spores are unlikely to be found in the actual fossil pollen assemblages from this region. Tracer spores are added to samples for two reasons. First, by adding a known quantity of exotic spores to a known quantity of sediment, fossil pollen concentration values can be calculated. Second, in the event that no fossil pollen is observed in the sediment sample, the presence of *Lycopodium* tracer spores verifies that processor error was not a factor in the pollen loss.

After the addition of tracer spores, the samples were washed with concentrated Hydrochloric Acid. This step removed carbonates and dissolved the bonding agent in the tracer spore tablets. The samples were then rinsed in distilled water, sieved through 150-micron mesh screens, and swirled to remove the heavier inorganic particles. The samples were next consolidated, and 50% Hydrofluoric Acid was added to the residues to remove unwanted silicates. After the silicates had been removed, the residues were rinsed thoroughly, and sonicated in a Delta D-5 sonicator for 30 seconds. This step deflocculated the residues, effectively removing all colloidal material smaller than two microns.

Following this treatment, the samples were rinsed in 1% KOH to remove alkaline soluble humates. The samples were rinsed until neutral, dehydrated in Glacial Acetic Acid, and were subjected to an acetolysis treatment (Erdtman 1960) consisting of 9 parts Acetic Anhydride to 1 part concentrated Sulfuric Acid. During this process, the samples were placed in a heating block for a period not exceeding 6 minutes. This step removed most unwanted organic materials, including cellulose, hemi-cellulose, lipids and proteins, and

converted these materials to water-soluble humates. The samples were then rinsed in distilled water until a neutral pH was achieved.

Following this treatment, the samples were next subjected to a heavy density separation using Zinc Bromide (Sp.G. 2.00). Here, the lighter organic fraction was isolated from the heavier minerals. After this treatment, the lighter pollen and organic remains were collected, dehydrated in alcohol, stained with Safranin-o and were transferred to a glycerine medium for curation in glass vials.

Permanent slides were prepared using glycerine, and identifications were made on a Jenaval compound stereomicroscope at 400-1250x magnification. Identifications were confirmed by using published keys and the Palynology Laboratory's extensive pollen reference collection.

A standardized technique was employed in counting the fossil pollen, where a 200 or more grain count was made for each sample, as suggested by Barkley (1934). This technique is standard practice among most palynologists, and is thought to reflect past vegetation or economic plant use fairly well. Following the achievement of a 200+grain count, the remainder of a slide was carefully scanned for economic or other significant taxa not recorded during the actual counting.

Concentration values were calculated for all samples. Hall (1981) and Bryant and Hall (1993) note that concentration values below 2,500 grains/ml of sediment may not be well reflective of past conditions, and usually record a differentially preserved assemblage. As a result, counts with low concentration values must sometimes be viewed with caution.

Results

Pollen preservation in the Aiken-Rhett house sediment samples was highly variable. Pollen concentration values ranged from 483 to 21,176 fossil grains/ml of sediment, and three samples (samples 5, 7 and 8) contained so little pollen that counts could not be achieved. Pollen grains are composed of varying amounts of sporopollenin, a complex polymer of lignin, making fossil grains extremely durable. Pollen grains, however, are susceptible to mechanical, fungal and bacterial degradation. Cycles of wetting and drying lead to oxidizing conditions that are favorable for pollen-destroying fungal and bacterial growth. These oxidizing conditions can lead to the total loss of some taxa, while other types may remain in the sediments in variable states of preservation. Through the use of pollen concentration values, it is often

possible to gauge the degree of pollen loss. Generally, concentration values below around 2500 grains/ml should be viewed with extreme caution, for it is likely that some form of differential preservation has occurred. Five of the Aiken-Rhett sediment samples possessed values below 2500 grains/ml, and interpretations based on these samples must be made with care. Still, the counts from these samples are valuable as listings of specific taxa once present in the site area. A minimum of 53 different taxa was noted in the samples (Table 2), including 24 non-arboreal and 29 arboreal taxa. Pollen counts and percentages are presented in Table 3.

Discussion

Pollen samples from the Aiken-Rhett house have been separated, based on archaeological evidence, into discrete episodes encompassing most of the 19th Century.

Phase I, 1818-1830

A single sample dating from this period was examined, sample number 12, FS#187. This sample was collected from feature 69, level 3, a deep builder's trench that may represent a filled creek or depression. Pollen preservation in this sample was poor, with a concentration value of 976 grains/ml of sediment. Despite the poor preservation, at least 25 different pollen taxa were identified in the sediments, and the sample is valuable, at least for a listing of plants once present in the site area. The assemblage is dominated by low spine Asteraceae, Chenopods, Poaceae, *Pinus*, *Quercus* and TCT grains. These taxa all tend to be over-represented in poorly preserved assemblages as they are produced in abundance, are widely distributed, are durable and are readily recognizable even when highly degraded. Additional background taxa noted in this assemblage include Liguliflorae type Asteraceae (dandelion group), Cyperaceae (sedge family), Fabaceae (bean family), *Parthenocissus* (Virginia creeper), Polygonaceae (knotweed family) and Urticaceae (nettle family and hemp). Background arboreal elements in sample 12 are *Carya* (hickory), *Castanea* (chestnut), *Liquidambar* (sweetgum), *Myrica* (wax myrtle), *Platanus* (sycamore), *Salix* (willow) and *Tsuga* (eastern hemlock).

Economic species noted in the assemblage include pollen from *Hedera* (ivy) and *Zea mays* (maize). Ivy is an introduced plant that has long been used as an ornamental. Its presence in an early historical context might be expected, and the relatively high percentage of this normally rare grain suggests

Table2
Pollen Taxa Identified in the Aiken-Rhett Sediment Samples

Taxon	Common Name
NON-ARBOREAL	
Apiaceae	Umbel or Parsley Family
Asteraceae High Spine	Sunflower Group
Asteraceae Low Spine	Ragweed Group
Asteraceae Liguliflorae	Chickory, Dandelion
<i>Cirsium</i>	Thistle
Brassicaceae	Mustard Family
Caryophyllaceae	Pink Family
Cyperaceae	Sedge Family
Cheno-Am	Goosefoot, Pigweed
Fabaceae	Pulse or Bean Family
<i>Hedera</i>	Ivy
Liliaceae	Lily Family
Lythraceae	Loosestrife Family
<i>Parthenocissus</i>	Virginia Creeper
<i>Plantago</i>	Plantain
Poaceae	Grass Family
Polygonaceae	Knotweed Family
Ranunculaceae	Buttercup Family
Rosaceae	Rose Family
Urticaceae	Nettle Family
Verbenaceae	Vervain Family
<i>Vitis</i>	Grape
Cerealea	Domesticated Old World Grain
<i>Zea mays</i>	Maize, Corn
ARBOREAL	
<i>Acer</i>	Maple
<i>Alnus</i>	Alder
<i>Carpinus</i>	Hornbeam
<i>Carya</i>	Hickory, Pecan
<i>Castanea</i>	Chestnut
<i>Cephalanthus</i>	Buttonbush
<i>Cornus</i>	Dogwood
Ericaceae	Heath Family, Rhododendron, Sourwood
<i>Fagus</i>	Beech
<i>Fraxinus</i>	Ash
<i>Ilex</i>	Holly, Yaupon
<i>Juglans nigra</i>	Black Walnut
<i>Liquidambar</i>	Sweetgum
<i>Magnolia</i>	Magnolia
Moraceae	Mulberry Family
<i>Myrica</i>	Wax Myrtle
Myrtaceae	Myrtle Family, Eucalyptus
<i>Nyssa aquatica</i>	Water Tupelo
<i>Pinus</i>	Pine
<i>Platanus</i>	Sycamore
<i>Prunus</i>	Cherry, Plum, Peach
<i>Quercus</i>	Oak
<i>Salix</i>	Willow
Sapotaceae	Soapberry Family
TCT	Juniper, Arbor Vitae, Bald Cypress
<i>Tsuga</i>	Hemlock
<i>Ulmus</i>	Elm
Indeterminate	Too Poorly Preserved to Identify
Unknown G	
<i>Osmunda</i>	Cinnamon Fern

Table 3
Pollen Counts and Percentages from the Aiken-Rhett House

Taxon	Sample			
	1	2	3	4
Asteraceae High Spine		2 (1.0)	1 (0.5)	
Asteraceae Low Spine	4 (2.0)	10 (5.0)	21 (10.5)	23 (11.5)
Asteraceae Liguliflorae			3 (1.5)	2 (1.0)
<i>Cirsium</i>		1 (0.5)		
Brassicaceae		3 (1.5)	2 (1.0)	
Cyperaceae	45 (22.5)	6 (3.0)	4 (2.0)	9 (4.5)
Cheno-Am	30 (15.0)	41 (20.5)	29 (14.5)	12 (6.0)
Fabaceae	1 (0.5)			1 (0.5)
Liliaceae				1 (0.5)
<i>Parthenocissus</i>				1 (0.5)
<i>Plantago</i>	2 (1.0)		2 (1.0)	
Poaceae	14 (7.0)	20 (10.0)	31 (15.5)	14 (7.0)
Polygonaceae			1 (0.5)	
Rosaceae	2 (1.0)		2 (1.0)	1 (0.5)
Cerealea	1 (0.5)	1 (0.5)		
<i>Acer</i>	1 (0.5)			
<i>Alnus</i>		1 (0.5)		
<i>Carya</i>			4 (2.0)	2 (1.0)
<i>Castanea</i>		1 (0.5)	4 (2.0)	
<i>Fraxinus</i>				1 (0.5)
<i>Juglans nigra</i>			1 (0.5)	
<i>Magnolia</i>	3 (1.5)			
Moraceae			1 (0.5)	
<i>Myrica</i>	1 (0.5)		1 (0.5)	2 (1.0)
Myrtaceae				1 (0.5)
<i>Pinus</i>	38 (19.0)	49 (24.5)	23 (11.5)	55 (27.5)
<i>Platanus</i>	4 (2.0)	3 (1.5)	4 (2.0)	4 (2.0)
<i>Prunus</i>				2 (1.0)
<i>Quercus</i>	35 (17.5)	43 (21.5)	41 (20.5)	38 (19.0)
<i>Salix</i>				5 (2.5)
TCT	9 (4.5)	6 (3.0)	11 (5.5)	14 (7.0)
<i>Ulmus</i>	3 (1.5)	4 (2.0)	1 (0.5)	1 (0.5)
Indeterminate	7 (3.5)	9 (4.5)	13 (6.5)	11 (5.5)
Total	200 (100)	200 (100)	200 (100)	200 (100)
<i>Osmunda</i>			2	
Concentration Value (Grains/ml)	10,385	3333	889	2517

Table 3, Contd.
Pollen Counts and Percentages from the Aiken-Rhett House

Taxon	Sample			
	6	9	10	11
Apiaceae			1 (0.5)	
Asteraceae High Spine	1 (0.5)			
Asteraceae Low Spine	21 (10.5)	21 (10.5)	34 (17.0)	18 (9.0)
Asteraceae Liguliflorae	2 (1.0)	1 (0.5)		1 (0.5)
<i>Cirsium</i>		1 (0.5)		
Brassicaceae		4 (2.0)		
Cyperaceae	9 (4.5)	20 (10.0)	6 (3.0)	9 (4.5)
Cheno-Am	38 (19.0)	16 (8.0)	10 (5.0)	6 (3.0)
Fabaceae	1 (0.5)	1 (0.5)	2 (1.0)	1 (0.5)
<i>Hedera</i>		1 (0.5)		
Liliaceae				2 (1.0)
Lythraceae		1 (0.5)		
<i>Plantago</i>	2 (1.0)	1 (0.5)		1 (0.5)
Poaceae	31 (15.5)	29 (14.5)	14 (7.0)	16 (8.0)
Ranunculaceae				1 (0.5)
Rosaceae			3 (1.5)	2 (1.0)
Urticaceae				1 (0.5)
Verbenaceae		1 (0.5)		
<i>Vitis</i>	1 (0.5)			
Cerealea	5 (2.5)			1 (0.5)
<i>Carya</i>	2 (1.0)	4 (2.0)		5 (2.5)
<i>Castanea</i>	5 (2.5)		1 (0.5)	1 (0.5)
<i>Cephalanthus</i>			2 (1.0)	
<i>Cornus</i>			1 (0.5)	
<i>Fagus</i>			1 (0.5)	
<i>Fraxinus</i>			1 (0.5)	
<i>Ilex</i>			1 (0.5)	
<i>Liquidambar</i>		1 (0.5)		
Moraceae		1 (0.5)	1 (0.5)	
<i>Myrica</i>	3 (1.5)	4 (2.0)	3 (1.5)	3 (1.5)
<i>Pinus</i>	11 (5.5)	28 (14.0)	58 (29.0)	53 (26.5)
<i>Platanus</i>	2 (1.0)	3 (1.5)	2 (1.0)	2 (1.0)
<i>Prunus</i>		1 (0.5)	3 (1.5)	5 (2.5)
<i>Quercus</i>	37 (18.5)	29 (14.5)	40 (20.0)	57 (28.5)
<i>Salix</i>		3 (1.5)	1 (0.5)	1 (0.5)
Sapotaceae				1 (0.5)
TCT	16 (8.0)	11 (5.5)	7 (3.5)	8 (4.0)
<i>Ulmus</i>	1 (0.5)	3 (1.5)		1 (0.5)
Unknown G		1 (0.5)	1 (0.5)	
Indeterminate	12 (6.0)	14 (7.0)	7 (3.5)	4 (2.0)
Total	200 (100)	200 (100)	200 (100)	200 (100)
<i>Osmunda</i>	3	2		3
Concentration Value (Grains/ml)	1395	483	21,176	7059

Table 3, Contd.
Pollen Counts and Percentages from the Aiken-Rhett House

Taxon	Sample		
	12	13	14
Asteraceae High Spine		2 (0.5)	
Asteraceae Low Spine	22 (11.0)	22 (11.0)	44 (22.0)
Asteraceae Liguliflorae	7 (3.5)		
<i>Cirsium</i>		1 (0.5)	
Brassicaceae	3 (1.5)		
Caryophyllaceae			1 (0.5)
Cyperaceae	2 (1.0)	3 (1.5)	12 (6.0)
Cheno-Am	14 (7.0)	9 (4.5)	15 (7.5)
Fabaceae	1 (0.5)	3 (1.5)	2 (1.0)
<i>Hedera</i>	5 (2.5)		1 (0.5)
Liliaceae	1 (0.5)		
<i>Parthenocissus</i>	1 (0.5)	1 (0.5)	1 (0.5)
<i>Plantago</i>		2 (1.0)	1 (0.5)
Poaceae	26 (13.0)	21 (10.5)	38 (19.0)
Polygonaceae	3 (1.5)		
Rosaceae	1 (0.5)	3 (1.5)	
Urticaceae	2 (1.0)	2 (1.0)	
Verbenaceae			1 (0.5)
Cerealea			2 (1.0)
<i>Zea mays</i>	1 (0.5)		
<i>Acer</i>			2 (1.0)
<i>Alnus</i>		1 (0.5)	
<i>Carpinus</i>		1 (0.5)	
<i>Carya</i>	6 (3.0)		
<i>Castanea</i>	6 (3.0)	2 (1.0)	2 (1.0)
<i>Cornus</i>			1 (0.5)
Ericaceae			1 (0.5)
<i>Ilex</i>			1 (0.5)
<i>Liquidambar</i>	1 (0.5)	2 (1.0)	
<i>Liriodendron</i>			1 (0.5)
<i>Myrica</i>	2 (1.0)		2 (1.0)
Myrtaceae		1 (0.5)	
<i>Nyssa aquatica</i>			1 (0.5)
<i>Pinus</i>	20 (10.0)	89 (44.5)	24 (12.0)
<i>Platanus</i>	5 (2.5)	2 (1.0)	
<i>Prunus</i>	1 (0.5)		
<i>Quercus</i>	37 (18.5)	19 (9.5)	30 (15.0)
<i>Salix</i>	3 (1.5)		3 (1.5)
TCT	14 (7.0)	8 (4.0)	6 (3.0)
<i>Tsuga</i>	1 (0.5)		
Indeterminate	15 (7.5)	6 (3.0)	8 (4.0)
Total	200 (100)	200 (100)	200 (100)
<i>Osmunda</i>	3	2	2
Concentration Value (Grains/ml)	976	1417	8182

it may have once been planted close to this deposit. Maize pollen, although dispersed by the wind, is large and heavy and rarely travels far from its source. It is likely that at the time the builder's trench was filled in, maize was being grown on or near the Aiken-Rhett property.

Several pollen types were found which might also represent economic or ornamental plants, including Brassicaceae (mustard family), Liliaceae (lily family), Rosaceae (rose family) and *Prunus* (cherry, plum or peach). All of these groups contain native species as well as ornamental or economic members. Identification beyond these levels, unfortunately, is not possible.

Phase II, 1830-1850

Four sediment samples dating to this period were examined, including sample 6 (FS#116), sample 7 (FS#122) and sample 13 (FS#188) all probable planting holes or plant stains, and sample 8 (FS#131), a zone associated with a possible garden. Samples 7 and 8 were found to contain an insufficient amount of pollen for a count to be made. Samples 6 and 13 contained fairly well preserved pollen but concentration values were quite low at 1395 and 1417 grains/ml of sediment. At least 18 different taxa were identified in sample 6, while sample 13 contained a minimum of 20 taxa. Dominant taxa in these samples include low spine Asteraceae, Cheno-Ams, Poaceae, *Pinus*, *Quercus* and TCT pollen types. Additional background types include high spine Asteraceae (sunflower group), *Cirsium* (thistle), Liguliflorae, Fabaceae, *Parthenocissus*, *Plantago* (plantain), Urticaceae, *Alnus* (alder), *Carpinus* (hornbeam), *Carya*, *Castanea*, *Liquidambar*, *Myrica*, *Platanus* and *Ulmus* (elm).

Economic taxa were scarce in these samples, and include Cerealea and Myrtaceae. Domesticated Old World cereal grains including wheat (*Triticum*), rye (*Secale*), oats (*Avena*) and barley (*Hordeum*) can usually be identified from other grass grains based on their large size, although some overlap does occur with a few native grasses. The presence of five (2.5%) Cerealea grains in sample 6 indicates that wheat or another crop may have been grown in the area in the past. Alternatively, the presence of Cerealea grains may also indicate the presence of straw or hay from these plants. The decomposition of fecal matter from horses which may have fed on domesticated grains, and thus ingested its pollen may also account for the presence of Cerealea type pollen.

The presence of a single Myrtaceae pollen grain in sample 13 is significant. This family is native to the tropics and to the Old World, and its pollen would not be expected in South Carolina sediments unless a cultivated member of the family was present in the vicinity. The Myrtaceae family contains a number of economic and ornamental members, including *Psidium* (guava), *Syzygium* (cloves), *Pimenta* (allspice) and *Eucalyptus* (eucalyptus). While the single grain could well be a contaminant from a modern eucalyptus tree growing in the site vicinity, it could also represent a specimen grown near the site during the mid-19th Century.

Additional pollen taxa identified in the Phase II samples, which might represent economic plants, are Cyperaceae, Rosaceae and *Vitis* (grape). Sedges are wind pollinated, and a small amount of Cyperaceae pollen might be expected in many pollen samples. The presence of 4.5% Cyperaceae pollen in sample 6, however, may indicate that sedges were planted in the vicinity of the sampling location. While most sedges might have been considered weeds, a number of species are grown as ornamentals. Three Rosaceae grains (1.5%) were identified in sample 13. Although securely identifiable only to the family level, two of these grains resembled *Rubus* (blackberry or raspberry), and may represent the presence of this or another economic plant. Although *Vitis* is an important economic plant, the presence of only a single grain of grape pollen does not argue strongly for an economic usage, and is probably from a native wild plant.

The pollen evidence sheds little light as to what plants might have been grown in these planting holes. There is an elevated amount of pine pollen in sample 13 (44.5%). Pine produces a tremendous amount of pollen, and if a pine were present on the Aiken-Rhett property, it would be expected in high frequencies in all of the samples. It is alternatively possible that this pollen was introduced into these sediments at the nursery location, removed from the property.

Phase III, 1850-1870

Two samples corresponding to Phase III were examined, sample 3 (FS#28), a possible planting hole and sample 11 (FS#174), a possible plant stain. Pollen preservation in the Phase III age samples was variable. Sample 3 exhibited poor preservation with a concentration value of 889 grains/ml, while pollen in sample 11 was very well preserved with a concentration value of 7059 grains/ml of sediment. Sample 3 contained a minimum of 20 different taxa, with at least 23 different types being recorded in sample 11.

Both samples 3 and 11 are dominated by durable, generally over-represented taxa, including low spine Asteraceae, Cheno-Ams, Poaceae, *Pinus*, *Quercus* and TCT types. Additional types recorded in the assemblages include high spine and Liguliflorae type Asteraceae, Fabaceae, *Parthenocissus*, *Plantago*, Polygonaceae (knotweed family), Urticaceae, *Carya*, *Castanea*, *Juglans nigra* (black walnut), Moraceae (mulberry family), *Myrica*, *Platanus*, *Salix* and *Ulmus*.

Pollen types from plant or probable economic usage in the Phase III samples were few, and were limited to sample 11. Here, pollen from a Cerealea, *Prunus* and possibly Sapotaceae (sapodilla family) were noted. Both Cerealea and a grain comparing favorably to Sapotaceae were represented by single grain occurrences. The Sapotaceae grain is intriguing, as members of this family are not commonly encountered in coastal South Carolina. Most members of this family are tropical, and the only native representative of this family is *Sideroxylon* (Syn. *Bumelia*), commonly called ironwood. As most economic and ornamental members of this family are strictly tropical, it seems likely that *Sideroxylon* is the source of the grain found in this sample.

A total of 5 (2.5%) *Prunus* grains were identified in pollen sample 11. This plant is insect pollinated, and its pollen generally does not occur in such high frequencies in archaeological assemblages unless its source was growing nearby. The specific identification of this pollen type is not possible, although a number of important economic members of this genus are known, including the introduced *Prunus persica* (peach), *P. armeniaca* (apricot), *P. amygdalus* (almond), *P. domestica* (garden plum), *P. avium* (sweet cherry) and *P. cerasus* (sour cherry). Species native to the Charleston area include *Prunus serotina* (black cherry), *P. caroliniana* (Carolina laurelcherry), *P. umbellata* (flatwood plum) and *P. angustifolia* (chickasaw plum) (Elias 1980). Based on the presence of a notable quantity of *Prunus* pollen it is possible that some member of this genus was grown in this plant hole or stain.

Several potential economic pollen taxa were also noted in the sediment samples, including Brassicaceae, Cyperaceae, Liliaceae, Ranunculaceae (buttercup family) and Rosaceae. All of these types have representatives that have economic or ornamental value. However, these families also possess members that are native and are often considered as weeds.

Phase IV, 1870-1900

Five sediment samples corresponding to the late 19th Century Phase IV deposits were examined. Sample 1 (FS#9) represents the interior fill of a drain and sample 9 (FS#155) represents an unidentified pit feature, both located in the rear yard. Three later planting features were also examined including sample 5 (FS#112) in the rear yard, and sample 10 (FS#171) and sample 14 (FS#201) both found in the front yard of the property. Pollen preservation in the Phase IV era samples was highly variable. Sample 5 contained insufficient pollen to allow for a count to be made, and sample 9 from a pit feature had a concentration value of 483, a value considered to be exceedingly low and likely representing a highly distorted assemblage. Other samples from this time period, however, offered excellent pollen preservation and concentration values were very high, ranging from 8182 in sample 14 to 21,176 in sample 10. Sample 1 representing sealed fill from a drain contained 10,385 fossil grains/ml of sediment. An appreciable number of different taxa were noted in the samples, with 16 types occurring in sample 1, 24 types present in sample 9, 22 different taxa in sample 10, and 23 types in sample 14.

Pollen samples dating to the Phase IV period are again dominated by wind-pollinated low spine Asteraceae, Chenopodiaceae, Poaceae, Pinus, Quercus and TCT. These types are all extremely durable, abundant and readily recognizable when degraded thus tend to be over-represented in many archaeological assemblages. Background weedy taxa noted in the samples include Apiaceae (parsley family), Liguliflorae, *Cirsium*, Fabaceae, *Parthenocissus* and *Plantago*. Background arboreal elements in the pollen samples are *Acer* (maple), *Carya*, *Castanea*, *Cephalanthus* (buttonbush), *Fagus* (beech), *Liquidambar*, *Liriodendron* (tuliptree), *Myrica*, Moraceae, *Platanus*, *Nyssa aquatica* (water tupelo), *Salix* and *Ulmus*. It is interesting that *Acer*, *Cephalanthus*, *Fagus*, *Liriodendron* and *Nyssa* pollen types are found only in the Phase IV age samples. This may be due to an increase in the diversity of plants in and around the Aiken-Rhett property, or it could simply be due to the generally better preservation in these samples.

Several different economic taxa were noted in these samples, including *Hedera*, Cerealia, *Magnolia* (magnolia) and Ericaceae (heath family). *Hedera* pollen was represented by single grain occurrences in samples 9 and 14. Pollen from this introduced plant is uncommonly encountered, and its presence in the assemblages strongly argues for its use on the property. Cerealia grains were noted in samples 1 and 14 and may signal that domesticated grains were being grown near the property, or that

straw, fodder or feces were present on the property. The presence of *Magnolia* pollen is significant. This pollen type is usually fairly rare, and the presence of three grains may indicate that a magnolia tree was once present near this sampling location. As this sample represents the interior fill of a drain, it is possible that these sediments represent runoff from a large area. Finally, the single Ericaceae pollen grain identified in sample 14 may well represent an economic or ornamental plant. Plants in this family produce low numbers of pollen grains that rarely travel far from the plant. The presence of even a single grain from this family may be significant, as a number of valuable ornamental plants are known from this family, including *Rhododendron* (rhododendron and azalea), *Vaccinium* (blueberry, cranberry) and *Oxydendrum* (sourwood).

A number of plant types were identified in the Phase IV age pollen assemblages that are possible economics. Included in this group are Cyperaceae, Caryophyllaceae (pink family), Brassicaceae, Lythraceae (loosestrife family), Rosaceae, Verbenaceae (vervain family), *Cornus* (dogwood), *Ilex* (holly, yaupon), and *Prunus*.

The Brassicaceae, Caryophyllaceae, Lythraceae, Rosaceae and Verbenaceae families all contain members that are important ornamental or economic plants. However, as a more refined identification is not possible, it is important to recognize that these grains could simply represent native plants or weeds. The presence of Cyperaceae pollen might be expected, but its occurrence in all four of the Phase IV age samples, in percentages ranging from 3.0 to 22.5% indicated that sedges were a common component of the Aiken-Rhett house plant community. Most members of this family favor semi-aquatic habitats, such as drainage ditches, marshy areas and streamsides. As some sedges can be grown as ornamentals, it is possible that these grains represent plants that may have been cultivated on the property.

Pollen from both *Cornus* and *Ilex* is produced in low numbers and rarely travels far from the plant. The only occurrences of these plants are in the Phase IV age samples, where they are both found in samples 10 and 14, each with a single grain. As both of these features represent a later planting hole in the front yard, it is possible that a dogwood and/or holly was grown in or near these planting features. *Prunus* pollen was noted in samples 9 and 10, although in fairly low numbers. These grains may represent cultivated plants present on or near the property. An unknown grain (Unknown G) was identified in samples 9 and 10. These grains resemble *Cercis* (redbud), but a positive identification is probably not possible. This pollen type was only identified in the Phase IV age samples.

Table 1
Proveniences of Pollen Samples from the Aiken-Rhett House

Sample #	FS#	Feature and Provenience
1	9	Fea. 2, Fill of interior drain, rear yard
2	21	Fea. 4, Zone 2, Drain entry vault with lime cap
3	28	Fea. 7, Possible planting hole or pit feature
4	82	Zone 2, Level 1, Late 19 th Century yard midden
5	112	Fea. 29, Later planting feature, rear yard
6	116	Fea. 28, Plant stain
7	122	Fea. 33, Possible planting hole in rear garden
8	131	Zone 3, Zone deposit associated with possible garden
9	155	Fea. 39, Pit Feature,
10	171	Fea. 54a, Later planting feature, front yard
11	174	Fea. 55, Possible plant stain
12	187	Fea. 69, Level 3, Deep builder's trench, rear yard wall
13	188	Fea. 67, Possible plant hole, front yard
14	201	Fea. 71, Later planting feature, front yard

Summary

A total of 14 sediment samples from the Aiken-Rhett house were examined for fossil pollen content. These samples were collected from a series of archaeological contexts dating to various periods of the 19th Century. Pollen preservation was variable, ranging from poor to very good, and 200-grain pollen counts were obtained for 11 of the samples. Three samples contained insufficient pollen to allow counts to be made. At least 53 different pollen taxa were identified in the sediment samples.

Limited interpretations on past plant cultivation was possible due to the generally less than favorable pollen preservation. Grains from low spine Asteraceae, Chenopods, Poaceae, *Pinus*, *Quercus* and TCT dominated all of the pollen samples. These taxa are frequently over-represented, especially in differentially preserved assemblages, as the grains are abundant and readily dispersed, are durable, and are easily recognizable even when highly degraded. Economic taxa were few, but were noted in sediments dating to all of the time periods. The presence of *Hedera* (ivy) pollen suggests that this imported ornamental was present on the property from early in the 19th Century. *Zea mays* (maize) pollen was also identified in the Phase I (1818-1830) age deposits. Cerealea pollen, domesticated Old World grains, were noted in deposits dating to Phase II (1830-1850), Phase III (1850-1870), and Phase IV (1870-1900) periods. While it is possible that wheat, barley, rye or oats was grown on or near the property in the past, it is also possible that these grains were introduced into the site sediments as hay, straw fodder, or in animal manure.

Ornamental or economic trees on or near the Aiken-Rhett property may be indicated by the presence of *Prunus*, *Magnolia*, *Cornus*, *Ilex* and Ericaceae pollen. A single grain of introduced Myrtaceae from a Phase II age deposit is curious and hints, perhaps at the presence of a *Eucalyptus* tree in town, but probably not on the Aiken-Rhett property.

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VERTEBRATE REMAINS FROM AIKEN-RHETT HOUSE, 1985-2002

Elizabeth M. May and Elizabeth J. Reitz

Zooarchaeology Laboratory

Georgia Museum of Natural History

University of Georgia

Athens, GA 30602-1882

706-542-1464

ereitz@uga.edu

Abstract. The Aiken-Rhett house is one several elite townhouses investigated by The Charleston Museum over the past two decades. Most of these sites have augmented our understanding of the late eighteenth century through the middle of the nineteenth century. Multi-component sites with well-defined deposits from the post-1860s time period are particularly uncommon. Only two sites have provided data from elite households dating to the late nineteenth century and the early part of the twentieth century: Nathaniel Russell and 14 Legare Street. In fact, data are available from only six sites for any socio-economic group during this "late" period of the Charleston archaeological record. Work in 1985, 1989, and 2001 at Aiken-Rhett provides data from a seventh site for this later time period. By combining data from the 1985 excavation at Aiken-Rhett with those from the 1989 and 2001 excavations at this same site, the new Aiken-Rhett assemblage contains 2,189 specimens weighing 5,749.40 g and the remains of an estimated 87 individuals. The assemblage can be organized into a 1818-1870 component (604 specimens and 39 individuals) and a 1870-20th century component (1,585 specimens and 48 individuals). Because the 1870-20th century component is larger than the 1818-1870 one and addresses a poorly-understood time period for the city, this report concentrates on this more recent period. These new data indicate that sawing was a complex phenomenon in the city indirectly related to either time period or to social/economic status. These data strongly support the body of evidence for an important vermin problem within the city during the nineteenth century.

The Aiken-Rhett house is one of several elite townhouses investigated by The Charleston Museum over the past two decades. Most of these sites augment our understanding of the late eighteenth century through the middle of the nineteenth century. Stratified sites are rare and data from the post-1860s time period are particularly uncommon. Prior to work at the Aiken-Rhett site, data were available from only six Charleston sites for the post-1860s in the Charleston archaeological record. Only two of these sites represented elite households: Nathaniel Russell and 14 Legare Street (Zierden 1995, 2001b). Work in 1985, 1989, and 2001 at the Aiken-Rhett site provides data for a seventh site from this later time period as well as data from a third elite site. Although a study was done in 1985 of materials deposited at Aiken-Rhett between 1818 and the early 1900s, the 1989 and 2001 excavations at Aiken-Rhett provide additional information enabling the temporal resolution to be refined. Thus we are able to compare vertebrate use at a single site throughout the nineteenth century. The present Aiken-Rhett assemblage provides evidence of animal use at this site and in the city from 1818 to the twentieth century and greatly improves our understanding of animal use in the city.

Much of the interest in the late nineteenth century focuses on three issues (Table 1). One of these is the apparent increase in sawing toward the end of the nineteenth century and the other is an apparent increase in the incidence of Old World rats. Those few cases where stratified data are available for a single house lot, suggest an increase in these two aspects of animal use in the city. The third research question focuses on developments in the use of animals of economic importance within Charleston, particularly in terms of use of the outlying lands and the sea as well as accommodations to growth within the urban setting.

Sawing (here defined to include clean-cut specimens, see Methods below) is a method of processing meat to produce small portions and is usually associated with butcher shops rather

than home-butchering. If sawing was a common butcher shop technique and an uncommon household treatment, it may also indicate the level to which commercially-prepared meats were used in the city by different social groups. Based on our understanding of the situation prior to the present Aiken-Rhett study (Lucas and Reitz 2001:Appendix IV-6), sawing appears to increase through time at Charleston sites. Sawing is present on 0.4 percent of all vertebrate specimens (total NISP for the sites) in the 1720-1760 faunal assemblage, though sawed specimens are present at all early sites. At sites occupied between 1761 and the 1860s, 2 percent of the specimens are sawed. Although the average for the pre-1860s period is low, the range is from none (First Trident, McCrady's Tavern) to 15 percent of the specimens. After the 1860s, sawed specimens constitute 5 percent of the Charleston assemblage. Although the trend is for the percentage of specimens that are sawed to increase, the ranges for all time periods overlap considerably (Lucas and Reitz 2001:Appendix IV-6).

However, among the deposits dated to the 1761-1860s period, sawed specimens were particularly common at public, middle class, or mixed function sites (Lucas and Reitz 2001:Appendix IV-6). In the group of sites occupied between 1761 and the 1860s, it is the assemblages at President Street (15 percent) and 66 Society Street (10 percent) that have the highest percentages of sawing. Likewise, in the post-1800s, the highest percentages of sawed bones are in the middle-class sites from President Street (16 percent), 40 Society Street (8 percent), and the 70 Nassau Street privy (7 percent) assemblages that have the highest percentages of sawed specimens (Powder Magazine is not thought to be a residential site at this time, Zierden 1997). Redefining the Aiken-Rhett data into four nineteenth-century periods will augment observations for the late nineteenth century.

The other issue that appears relevant to studies of the late nineteenth-early twentieth century is a possible increase in vermin, particularly of Old World rats (Rattus spp.), in Charleston. Commensal taxa of all types increase between 1720-1760 (6 percent of the individuals) and 1860s-1900s (14 percent of the individuals). The increase in rats is one of the more interesting aspects of this increase (Table 1; this table incorporates the new Aiken-Rhett data). Rats increase from 5 percent of the individuals to 9 percent between 1720-1760 and 1860s-1900s. This is clearly related to issues of urban sanitation, health, trash disposal, and the development of the urban environment. The increase in rodents may well indicate that the amount of urban garbage was growing and presented an attractive food source that sustained a growing rodent population. Old World rats constituted 3 percent of the vertebrate individuals in the Aiken-Rhett materials reported in 1986, which combined data from 1818 through the early twentieth century (Ruff 1986). The expectation is that as the temporal assignments of the Aiken-Rhett materials are improved, a trend will be seen at this site in which rats as a percentage of individuals in each time period increases, as will the incidence of rodent-gnawed specimens.

The third issue pertains to the developing urban character of the city (Zierden and Reitz 2001). This, in part, is reflected in the increasing number of rats in the city; but other characteristics are also associated with urbanization. One characteristic that might be associated with growing participation in the national commerce in meat products is increased reliance on domestic animals instead of wild birds, mammals, and fishes (Table 1). Deer, an example of a local wild resource, are far less common in the 1860s-1900 component compared to the 1720-1760 one. Canada geese and turkeys remains about the same in both the early and later time periods; but these birds were probably local wild resources in the 1700s and domesticated resources in the early 1900s. Distinguishing between wild and domestic Canada geese and

turkeys in the Charleston collections has been difficult. The other characteristic might be an increased use of small animals that could be raised within the increasingly constricted urban space. In particular, we might expect to see an increase in small animals such as chickens, which could be raised on kitchen debris in pens in small backyards, at the same time that refuse from large, smelly animals such as cows and pigs decline. We might also see a decline in the variety of non-commensal animals used as diets increasingly are derived from commercial outlets. In essence, we might expect to see the emergence of the twentieth-century diet in the Aiken-Rhett data.

METHODS

Aiken-Rhett is a residential site in the Wraggsboro neighborhood of Charleston, South Carolina. The Aiken-Rhett house was built in 1818 by Jon Robinson and was sold soon after to the Aiken family. It was occupied throughout the 19th and 20th centuries by the Aiken, and later, the Rhett families. The household consisted of wealthy and important individuals who lived in one of the city's elite historic homes.

Archaeological investigations of the site were led by Martha Zierden of The Charleston Museum over a number of years. The samples from the 1985 study are from three 5 by 10 foot units and three 5 by 5 foot units in the backyard of the property (FS# 3-47; Ruff 1986; Zierden, Calhoun, and Hacker 1986). The field work for the subsequent faunal study was conducted during a 1989 salvage project at the Aiken-Rhett kitchen (FS# 48-59) and further excavations in 2001 (FS# 77-207). The materials excavated in 1989 and 2001 were recovered from the northeast corner and the interior of the yard structure, the rear central driveway, and the southwest quadrant of the rear yard. The northern edge of the standing garden building and the remains of the garden structure destroyed in the 1886 earthquake also yielded archaeological

materials. The central front yard and the southeast corner of the front yard were excavated and contained faunal remains as did the features found in most of the above locations. A 1/4-inch mesh was used to recover materials during excavation.

This lengthy field work revealed a stratified site with distinguishable time periods extending from the early 18th century up to the twentieth century. Data in this report supercede the two earlier faunal reports from the site (May and Reitz 2002; Ruff 1986). For this report, data from the analysis of the faunal material excavated in 1985 and reported by Ruff in 1986 (see Zierden, Calhoun, and Hacker 1986) are combined with the 1989 and 2001 materials into five temporal components. These temporal components are 1818-1830, 1830-1850, 1850-1870, 1870-1900, and the 20th-century. This fine-tuned separation of the site by time period enables a more detailed study of changes in household subsistence as well as the site's changing relation to the greater Charleston community. A list of the samples reported here, organized by time period, is attached as Appendix A.

Vertebrate remains were identified using standard zooarchaeological methods. All identifications were made by Elizabeth May, Barbara Ruff, and Gregory Lucas using the comparative skeletal collection of the Zooarchaeology Laboratory located in the Georgia Museum of Natural History, University of Georgia. Following these methods, a number of primary data classes are recorded. Specimens are identified in terms of elements represented, the portion recovered, and symmetry. The Number of Identified Specimens (NISP) is determined. Specimens that cross-mend are counted as single specimens. The only exception is the indeterminate vertebrate category, which is not counted due to the fragmented condition. All specimens are weighed to provide additional information about the relative abundance of the taxa identified. Evidence for age at death, sex, and modifications are noted when observed.

Measurements for mammals and birds are recorded following Driesch (1976).

Measurements are presented in Appendix B.

Combining species list reported in 1986 with those reported in 2002 presents some problems that cannot be resolved at this time. In the 1986 study, a turtle identified as painted turtle (Chrysemys sp.) was reported. In the intervening years, the taxonomy of pond turtles has been revised. It is unlikely that these four specimens are referable to what is now known as the genus Chrysemys; but the correct identification cannot be determined without examining the earlier archaeological specimens, which were not available during the re-analysis. Three cow specimens were inadequately recorded in 1986 so that their identity is now unknown (FS # 6, 21). These materials were adequately identified for the style of presentation used in 1986; hence the error was not corrected during the original study. The Minimum Number of Individuals (MNI) is estimated from paired elements, size, and age. MNI is estimated at the lowest possible taxonomic level, usually genus or family.

While MNI is a standard zooarchaeological quantification method, the measure has several well-known biases. For example, MNI emphasizes small species over larger ones. This can be demonstrated in a hypothetical sample consisting of twenty chickens (Gallus gallus) and one cow (Bos taurus). Although twenty chickens indicate emphasis on chickens, one cow would, in fact, supply more meat. Further, some elements are more readily identifiable than others. The taxa represented by these elements may, therefore, be incorrectly interpreted as more significant to the diet than animals with less distinctive elements. Pig teeth, readily identified from very small fragments, exemplify this situation. Conversely, some taxa represented by large numbers of specimens may present few paired elements and hence the number of individuals for these species may be underestimated. Fish scales and turtle shell

fragments are good examples of this last problem. MNI for these animals will usually be under-estimated relative to the number of specimens. Basic to MNI is the assumption that the entire individual was utilized at the site. From ethnographic evidence, it is known that this is not always true (Perkins and Daly 1968). This is particularly the case for larger individuals, animals used for special purposes, and where food exchange was an important economic activity (Thomas 1971; White 1953).

In addition to these primary biases, MNI is also subject to secondary bias introduced by the way samples are aggregated during analysis. The aggregation of archaeological samples into analytical units (Grayson 1973) allows for a conservative estimate of MNI, while the "maximum distinction" method, applied when analysis discerns discrete sample units, results in a much larger MNI. In estimating MNI for the Aiken-Rhett assemblage, all faunal remains associated by time period are grouped together and analyzed separately.

Biomass estimates attempt to compensate for some of the problems encountered with MNI. Biomass refers to the quantity of tissue which a specified taxon might supply. Predictions of biomass are based on the allometric principle that the proportions of body mass, skeletal mass, and skeletal dimensions change with increasing body size. This scale effect results from a need to compensate for weakness in the basic structural material, in this case bones and teeth. The relationship between body weight and skeletal weight is described by the allometric equation:

$$\underline{Y} = a\underline{X}^b$$

(Simpson et al. 1960:397). In this equation, \underline{X} is specimen weight, \underline{Y} is the biomass, \underline{b} is the constant of allometry (the slope of the line), and \underline{a} is the Y-intercept for a log-log plot using the method of least squares regression and the best fit line (Reitz et al. 1987; Reitz and Wing 1999:224-228). Many biological phenomena show allometry described by this formula (e.g.,

Gould 1966, 1971) so that a given quantity of skeletal material or a specific skeletal dimension represents a predictable amount of tissue or body length due to the effects of allometric growth. Values for a and b are derived from calculations based on data at the Florida Museum of Natural History, University of Florida, and the Georgia Museum of Natural History. Allometric formulae for biomass estimates are not currently available for amphibians or lizards so biomass is not estimated for these groups. The allometric formulae used here are presented in Table 2.

The species identified from the Aiken-Rhett site are summarized into faunal categories based on vertebrate class for each analytical unit. These summaries contrast the percentage of various groups of taxa in each collection. The categories are Fishes, Turtles, Wild birds, Domestic birds, Wild mammals, Domestic mammals, and Commensal taxa. In order to make comparisons of MNI and biomass estimates possible, the summary tables include biomass estimates only for those taxa for which MNI is estimated. For example, biomass for Artiodactyla is not included in the summary table, while biomass for Sus scrofa is included.

Canada geese are placed in the Wild Bird category, but may actually belong in the category of domestic birds. According to the American Poultry Association (1874), standards of excellence for Canada geese were established by the mid-18th century. However, measurements are the primary means of distinguishing between wild and domestic animals and specimens that could be adequately measured are not present in these assemblages. Because wild Canada geese were present in the Aiken-Rhett environment, the more conservative interpretation is to consider the archaeological specimens as pertaining to the wild form.

Taxa tentatively classified as commensal are animals that might be consumed, but that also are commonly found in close association with humans and their built environment as pets,

work animals, or unintentionally as vermin or as part of the urban wildlife. Some commensal animals are ones that people either do not encourage or actively discourage. Just as some of the animals included in the commensal category might have been consumed at this site or at other sites either voluntarily or out of need, likewise some of the animals included in the non-commensal categories might have been commensal. Taxa tentatively classified as commensal are frogs and toads (Anura), Southern toad (Bufo terrestris), Eastern spadefoot (Scaphiopus holbrookii), warblers and allies (Emberizidae), rat (Rattus spp.), and cat (Felis domesticus).

The presence or absence of elements in an archaeological assemblage provides data on animal use such as butchering practices and transportation costs. The artiodactyl elements identified at Aiken-Rhett are summarized into categories by body parts. The Head category includes only skull fragments, including antlers and teeth. The atlas and axis, along with other vertebrae and ribs, are placed into the Vertebra/Rib category. It is likely the Head and Vertebra/rib categories are under-represented because of recovery and identification difficulties. Vertebrae and ribs of deer-sized animals cannot be identified as pig, deer, or caprine unless distinctive morphological features support such identifications. Usually they do not, and specimens from these elements are classified as indeterminate mammal because a number of non-artiodactyls fall into the size-range of these medium-sized ungulates. Forequarter includes the scapula, humerus, radius, and ulna. Carpal and metacarpal specimens are presented in the Forefoot category. The Hindfoot category includes tarsal and metatarsal specimens. The Hindquarter category includes the innominate, sacrum, femur, and tibia. Metapodiae and podiae which could not be assigned to one of the other categories, as well as sesamoids and phalanges are assigned to the Foot category.

The elements identified as artiodactyls are presented visually to illustrate their number and location in a carcass. Loose teeth, tooth fragments, and some skull fragments are not illustrated. Although the atlas and axis fragments are accurately depicted, other cervical, thoracic, lumbar, caudal vertebrae and ribs are placed approximately on the illustration. The last lumbar location is used to illustrate vertebrae which could only be identified as vertebrae. Specimens identified only as sesamoids, metapodiae, podials, or phalanges are illustrated on the right hindfoot.

The archaeological pig and cow element data are also compared to a standard pig and cow using a ratio diagram (Simpson 1941; Reitz and Zierden 1991; Reitz and Wing 1999:212). Described by George Simpson (1941; Simpson et al. 1960:357-358), the formula is as follows:

$$\underline{d} = \log_e \underline{X} - \log_e \underline{Y}$$

where \underline{d} is the logged ratio, \underline{Y} is percentage of each element category in the standard pig or cow and \underline{X} is the same percentage of this category in the archaeological collections. It does not matter to what base the measurements are converted, though one should be consistent in order to remain comparable. As Simpson (1941:23) describes this approach:

The basic purpose of the diagram is to represent each of a number of analogous observations by a single entry and to plot them in such a way that the horizontal distance between any two of them will represent the ratio of either one of those two to the other.

The standard for each artiodactyl is based on the number of elements present in an unmodified skeleton. In order to compare the archaeological data with the standard, the percentages of each element category for the standard pig and cow are converted into logarithms, subtracted from the logged value of the same element category for the archaeological

percentages, and plotted against the standard represented by the horizontal line in the accompanying figure. Values on the positive side of the standard's horizontal line are over-represented and those on the negative side of the line are under-represented. A burial would present an essentially vertical line compared to the standard. Although the archaeological values are specimen counts (NISP) and the values for the standard pig and cow are whole elements, the relationships in the ratio diagrams are similar to those found in unmodified histograms.

Relative ages of the artiodactyls identified are estimated based on observations of the degree of epiphyseal fusion for diagnostic elements. When animals are young their elements are not fully formed. The area of growth along the shaft, the diaphysis, and the end of the element, the epiphysis, is not fused. When growth is complete the diaphysis and the epiphysis fuse. While environmental factors influence the actual age at which fusion is complete (Watson 1978), elements fuse in a regular temporal sequence (Gilbert 1980; Purdue 1983; Schmid 1972). During analysis, specimens are recorded as either fused or unfused and placed into one of three categories based on the age in which fusion generally occurs. Unfused elements in the early-fusing category are interpreted as evidence for juveniles; unfused elements in the middle-fusing and late-fusing categories are usually interpreted as evidence for subadults, though sometimes characteristics of the specimen may suggest a juvenile. Fused specimens in the late-fusing group provide evidence for adults. Fused specimens in the early- and middle-fusing groups are indeterminate. Clearly fusion is more informative for unfused elements which fuse early in the maturation sequence and for fused elements which complete fusion late in the maturation process than it is for other elements. An early-fusing element which is fused could be from an animal which died immediately after fusion was complete or many years later. The ambiguity inherent

in age grouping is somewhat reduced by recording each element under the oldest category possible. Tooth eruption data (Severinghaus 1949) are also recorded.

The sex of animals is an important indication of animal use; however, there are few clear indicators of sex. Males are indicated by the presence of spurs on the tarsometatarsus of turkeys, antlers on deer, the baculum in those species that have one, pelvic characteristics, and characteristics of horn cores in bovids. Male turtles are indicated by a depression on the plastron to accommodate the female during mating. Females are recognized either by the absence of these features or by different shapes in these features. Female birds may also be identified by the presence of medullary bone (Rick 1975). Another approach is to compare measurements of identified specimens for evidence of dimensions which fall into a male or female range, though there rarely are sufficient numbers of measurements to reliably indicate sex.

Modifications can indicate butchering methods as well as site formation processes. Modifications are classified as rodent gnawed, carnivore gnawed, metal stained, burned, calcined, cut, hacked, clean cut, and sawed. While NISP for specimens identified as indeterminate vertebrate is not presented in the species lists, modified indeterminate vertebrate specimens are included in the modification tables. This becomes important when estimating the percentage of specimens in each analytical unit that is burned.

Gnawing by rodents and carnivores indicate that specimens were not immediately buried after disposal. While burial would not ensure an absence of gnawing, exposure of specimens for any length of time might result in gnawing. Rodents would include such animals as mice, rats, and squirrels. Carnivores would include such animals as dogs and raccoons. Gnawing by carnivores and rodents would result in loss of an unknown quantity of discarded material. Kent (1981) demonstrates that some specimens gnawed by carnivores such as dogs may not

necessarily leave any visible sign of such gnawing and yet the specimens would quite probably be removed from their original context.

Burned specimens may result from exposure to fire when a cut of meat is roasted. Burns may also occur if specimens are burned intentionally to remove trash, or unintentionally after discard. Calcined specimens are the result of two possible processes. Burning at extreme temperatures can cause calcination and is usually indicated by blue-gray discoloration. However, calcination can also occur by leaching of calcite from shell deposits. Both types of calcination could have occurred in this assemblage, but no attempt was made to distinguish between them.

Some modifications occur when the carcass is dismembered or as meat is removed from the specimen before or after cooking. Cuts are small incisions across the surface of specimens. These marks were probably made by knives as meat was removed before or after the meat was cooked. Cuts may also be left on specimens if attempts are made to disarticulate the carcass at joints. Hack marks are evidence that some larger instrument, such as a cleaver, was used. Presumably, a cleaver, hatchet, or axe was used as the carcass was being dismembered, rather than after the meat was cooked. The presence of parallel striations on the outer layer of compact bone is evidence that a specimen was sawed, presumably before the meat was cooked. Some specimens present flat, even surfaces across the compact bone but do not have the striations. These are called "clean cut" and are included under the term "saw" in the following text unless specifically mentioned separately. Some marks that appear to be made by human tools may actually be abrasions inflicted after the specimens were discarded, but distinguishing this source of small cuts requires access to higher powered magnification than is currently available (Shipman and Rose 1983).

Specimen count, MNI, biomass, and other derived measures are subject to several common biases (Casteel 1978; Grayson 1979, 1981; Wing and Brown 1979). In general, samples of at least 200 individuals or 1400 specimens are needed for reliable interpretations. Smaller samples frequently will generate a short species list with undue emphasis on one species in relation to others. It is not possible to determine the nature or the extent of the bias, or correct for it, until the sample is made larger through additional work.

These data also reflect the fact that elements of some animals are simply more readily identified than others and the taxa represented by these elements may appear more significant in terms of specimen count than they were in the diet. If these animals are identified largely by unpaired elements, such as scales and cranial fragments, the estimated MNI for these taxa will be low. At the same time, animals with many highly diagnostic but unpaired elements will yield a high specimen weight and biomass estimate. Hence high specimen count, low MNI, and high biomass for some animals are artifacts of analysis. This source of bias is particularly critical to interpretations of the role of fish and turtles in the subsistence strategies reflected in the Aiken-Rhett assemblage.

RESULTS

The newly combined data set contains a total of 2,189 vertebrate specimens weighing 5,749.40 g containing the remains of an estimated 87 individuals. The assemblage can be organized into a 1818-1870 component (604 specimens and 39 individuals) and a 1870-20th century component (1,585 specimens and 48 individuals). The single largest component is from the 1870-1900 time period (NISP = 1,123). All of the other temporal components are smaller (17-531 specimens) and their interpretation is less reliable.

Aiken-Rhett 2003, 1818-1830

A total of 17 specimens and 4 individuals are represented in the samples studied in the 2003 analysis of the faunal remains from the 1818-1830 occupation of the Aiken-Rhett house (Table 3). MNI is estimated for four taxa. Domestic mammals, including pig (*Sus scrofa*), cow (*Bos taurus*), and sheep/goat (*Caprinae*), contribute 75 percent of the individuals and over 99 percent of the biomass for taxa for which MNI is estimated (Table 4). Red drum (*Sciaenops ocellatus*) contributes the fourth individual and a small fraction of the biomass (Table 4). No commensal taxa are present. Artiodactyl elements show varying degrees of dependence on different parts of the carcass (Figures 1-3; Table 5); but the interpretation is limited due to the small sample size (NISP = 5). The age of the pig at death cannot be determined. Tables 6 and 7 summarize the fusion for cow and sheep/goat. Both the cow and the sheep/goat also were at least subadults, if not adults, when they were slaughtered. Modifications are present on 29 percent of the specimens (Table 8). The most common modification is cutting. One pig humerus is sawed (6 percent of the specimens).

Aiken-Rhett 2003, 1830-1850

The collection from the 1830-1850 occupation consists of 531 specimens and 29 individuals (Table 9). MNI is estimated for 20 taxa. The species list illustrates a reliance on many different taxa and may reflect a diverse diet enjoyed by the residents of the Aiken-Rhett household at this time. Domestic birds and commensal taxa each contribute 21 percent of the individuals. Domestic birds contribute 13 percent of the biomass (Table 10). Commensal taxa include two toads (Southern toad [*Bufo terrestris*], Eastern spadefoot [*Scaphiopus holbrookii*]), and four Old World rats (*Rattus* spp.). Although it seems unlikely that commensal taxa were consumed; they contribute 4 percent of the biomass. The majority of the rats are from the

kitchen area (NISP = 26; FS # 51-55, 58) as are the toads (NISP = 3; FS# 54, 55). The other four rat specimens are in FS# 142. Fish are also common in the 1830-1850 Aiken-Rhett collection.

In spite of the large numbers of wild and commensal individuals, domestic animals contribute 35 percent of the individuals and 86 percent of the biomass (Table 10). All of the domestic birds are chickens (Gallus gallus), which are represented by elements from throughout the skeleton, including the head (Figure 4). Domestic mammals (pig [Sus scrofa], cow [Bos taurus], and sheep [Ovis aries]) contribute 14 percent of the individuals and 73 percent of the biomass. Domestic mammals are presented by 25 specimens that are primarily from the Forequarters and Hindquarters (Figures 5-8; Table 11). The Caprinae and sheep remains are from the Forequarter and the Hindfoot. The cow specimens suggest reliance on a wider range of carcass portions than do the pig or sheep/goat specimens.

Wild mammals are much less skeletally complete. The opossum (Didelphis virginiana) is represented by three cranial elements and the beaver (Castor canadensis) is represented by a single lower incisor. The deer (Odocoileus virginianus) is represented by single pelvis fragment.

Age at death indicates use primarily of animals that were at least subadults at death (Tables 12-14). One pig individual was older than 12 months at death and the other was a subadult whose age at death was less than 24 months. It is not possible to determine whether the deer was an adult or a subadult when it died. The cow was a subadult that died between 18 and 42 months of age. The age at death for the sheep could not be estimated. One of the chickens was a juvenile as was the beaver.

Many of the specimens from the 1830-1850 collection are modified (17 percent; Table 15). The most common modifications are rodent gnawing, cutting, and sawing. Rodent gnawing

is found on 4 percent of the collection; cutting on 4 percent of the specimens, and sawing on 5 percent. The high incidence of rodent gnawing is consistent with the high incidence of rodents in the collection. Most of the modifications are found on mammal specimens (79 percent of the modifications).

Aiken-Rhett 2003, 1850-1870

The faunal collection associated with the 1850-1870 occupation contains 56 specimens and the remains of at least 6 individuals representing six taxa (Table 16). Two-thirds of the individuals are domestic animals and one-third are fishes and turtles. The domestic mammals (pig [*Sus scrofa*], cow [*Bos taurus*], and sheep/goat [*Caprinae*]) contribute most of the biomass (96 percent; Table 17). No commensal taxa are present.

With such a small sample size, it is difficult to discern patterns in element reliance or age at death for the mammals. Of the nine elements represented for domestic mammals, the two pig elements are from the Hindfoot and the Foot (Figure 9; Table 18). The cow remains are a little more evenly distributed in the skeleton (Figure 10). The sheep/goat specimens are from the Head and Hindquarter (Figure 11). The pig is the only taxon which has evidence of age at death; it was less than 24 months of age when it died. (Table 19). The cow and caprine died at indeterminate ages.

Mammal specimens show the only modifications (Table 20). Modifications are found on 14 percent of the specimens. Three were burned; one was cut, and two were hacked. Evidence of sawing is present on 4 percent of the collection.

Aiken-Rhett 2003, 1870-1900

The 1870-1900 collection is the largest one reported here. It contains 1,123 specimens and the remains of an estimated 28 individuals representing 22 taxa (Table 21). Eight species of

marine fishes contribute 29 percent of these individuals; though less than 1 percent of the biomass (Table 22). Domestic birds and mammals are the most abundant category (Table 22); contributing 32 percent of the individuals and 95 percent of the biomass. Domestic animals include chicken (Gallus gallus), rock dove (Columba livia), pig (Sus scrofa), cow (Bos taurus), and sheep/goat (Caprinae). The only commensal taxon is a rat (Rattus spp.). The single rat constitutes 4 percent of the individuals. The eight rat specimens are all from FS# 9.

Wild mammals and domestic birds are generally skeletally incomplete. The opossum (Didelphis virginiana) is represented by an ulna and an ilium fragment. One of the domestic birds, the rock dove, is identified from a carpometacarpus but the chicken is represented by specimens from most of the skeleton (Figure 12). The deer (Odocoileus virginianus) is represented by a mandible and an upper premolar as well as by fragments from the pelvis, tibia, and phalanx (Table 23).

The larger sample size yields a more interesting pattern of element representation for the domestic mammals. A total of 116 domestic mammal specimens are present (Figures 13-15; Table 23). The pig elements recovered come largely from the Head (39 percent of the pig specimens) and the Hindquarter region (43 percent of the specimens). The cow also has a significant number of specimens from the Head (24 percent of the cow NISP); but 29 percent of the specimens are Vertebra/ribs; and 22 percent are from the Hindquarter. Sheep/goat elements include specimens from many parts of the skeleton.

Fusion suggests that many of the artiodactyls were subadults when they died (Tables 24-27) and there is some evidence that adult, egg-laying chickens were consumed. One of the indeterminate bird specimens has medullary bone, indicating an adult female in egg-laying condition. At least one of the pig individuals was a subadult less than 24 months old and the

other pig of indeterminate age was at least 12 months old when it died. One of the deer was a juvenile at death but the age of the second deer individual cannot be estimated. One of the cows was a juvenile at death and the other two were less than 36 months old when they died. The sheep/goat was a subadult when it died.

Modifications are present on 13 percent of the 1870-1900 specimens (Table 28). The most common modification is sawing, which is present on 5 percent of the vertebrate specimens. One of the sawed specimens is the deer tibia. Cutting is the next most frequent kind of modification (3 percent of the specimens). Cutting is found primarily on mammal specimens, but two chicken specimens are also cut. The mammal specimens are also gnawed, metal stained, burned, calcined, hacked, and clean cut. One fish specimen is calcined and four bird specimens are carnivore gnawed.

Aiken-Rhett 2003, Twentieth century

The most recent collection from the Aiken-Rhett house is from the twentieth century. This group of specimens includes 462 identified vertebrate fragments and the remains of at least 20 individuals from 12 taxa (Table 29). Domestic birds and mammals dominate the collection (65 percent of the individuals). Domestic animals include chicken (Gallus gallus), turkey (Meleagris gallopavo), pig (Sus scrofa), cow (Bos taurus), and sheep/goat (Caprinae). Domestic taxa contribute 99 percent of the biomass (Table 30). Commensal taxa include a frog or toad (Anura), a warbler (Emberizidae), a Norway rat (Rattus norvegicus), and a cat (Felis domesticus). The majority of the rats are from the kitchen area (NISP = 15; FS # 49; identified as Rattus spp.), as are the anuran and the warbler specimens. The cat is from FS# 147, as is one of the rat specimens. The Norway rat specimen is from FS# 21. These four commensal individuals constitute 20 percent of the MNI.

Element distribution could be examined for 74 artiodactyl and other specimens.

Chicken elements are entirely from the wing and leg (Figure 16). The cat is represented by a single cervical vertebra. Domestic mammal specimens tend to cluster in the Hindquarters: 42 percent of the pig specimens, 35 percent of the cow specimens, and 58 percent of the sheep/goat specimens (Figures 17-19; Table 31). An additional 30 percent of the cow specimens are from the Vertebra/rib portion of the skeleton.

Domestic animals died at an older age than was observed in the collections from earlier time periods. One of the indeterminate bird specimens is from a juvenile as is one of the chicken individuals and one of the turkeys. The presence of a juvenile turkey is the reason turkeys are considered domestic birds in this collection. Turkeys are classified as wild birds in the other Aiken-Rhett collections. Tables 32-34 summarize the degree of fusion for pig, cow, and sheep/goat specimens. One of the pig individuals was a juvenile at death and two were adults. One cow was an adult when it died but the age of the second cow could not be determined. One of the sheep/goats was a juvenile when it died, based on a deciduous, lower fourth premolar; the second individual was an adult when it died.

Many of the mammal specimens from the twentieth century component of the Aiken-Rhett assemblage are modified (19 percent; Table 35). Four bird specimens are gnawed by carnivores and two chicken turtle (*Deirochelys reticularia*) carapace fragments are cut. The most common modification is sawing which is evident on 42 specimens (9 percent of the collection); primarily on indeterminate mammal and cow specimens. The collection contains two sawed sections from a single cow scapula that fit together (FS# 41). In addition, two fragments of pig ilium cross-mend across a sawed area (FS# 21). Rodent gnawing (3 percent) and cutting (4 percent) are also frequent.

DISCUSSION

In some respects, the revised Aiken-Rhett data do not conform to the patterns predicted based on the summaries in Table 1. This may be a result of uneven and sometimes very small sample sizes. The smallest samples are from the 1818-1830 (NISP = 17) and 1850-1870 (NISP = 56) time periods. In an effort to overcome the sample size bias, the following discussion will focus on two combined assemblages: 1818-1870 (early nineteenth century) and 1870-20th century (late nineteenth century).

The percentages of sawed specimens in the Aiken-Rhett assemblage is consistent with the prediction that sawed specimens would be more common in the nineteenth century than in the eighteenth century (Table 1). Although sawing in the Aiken-Rhett assemblage does not increase markedly in frequency between the early and the late nineteenth century assemblages (the range is from 5 percent in the early nineteenth century to 7 percent in the late nineteenth century); sawing as a butchering technique is far more common in the twentieth-century collection from Aiken-Rhett (9 percent of the total NISP) than it is in any of the earlier Aiken-Rhett collections. This supports the argument that sawing was more frequent in the late nineteenth century than it was in the eighteenth century or the early nineteenth century. It also suggests that butchered meat was more common at elite households in the latter part of the century than previously. This may indicate less self-reliance at elite households on their own livestock for meat and increasingly frequent use of commercial outlets. However, the cross-mending fragments in the twentieth century indicate that some on-site butchery of both cows and pigs continued on the Aiken-Rhett property.

The Aiken-Rhett data help distinguish between butchering habits at middle-class and elite households during the nineteenth century. The percentage of sawed specimens found in the

late nineteenth-century Aiken-Rhett data (7 percent of the total NISP) is higher than at the late nineteenth-century 14 Legare Street elite household (3 percent of the total NISP; Zierden 2001b) and lower than at the other elite household, Nathaniel Russell (8 percent of the total NISP; Zierden 1995). Sawed specimens continue to be more common in collections from middle-class sites (average is 8 percent of the total NISP) than from elite ones (average 6 percent; Lucas and Reitz 2001). It may be that the use of "butcher" meat was more common in middle-class households in the early and middle part of the nineteenth century than it was at elite households because urban elite lots continued to be larger and able to house more domestic animals than smaller middle-class properties. By the end of the century, however, the use of sawed meats, presumably obtained primarily from commercial butchers, may have increased in elite households though it continued to be more frequent at middle-class ones. However, even in the late nineteenth century, some urban elite households continued to use outlying rural properties for some of their meat. More work needs to be done with samples from the nineteenth century in order to clarify this relationship.

The log ratio technique provides another way to explore the use of commercial cuts of meat in the city with reference to a complete, undisturbed skeleton (Figures 20-21). In this study, the distribution of pig and cow elements in the early nineteenth century and late nineteenth century components from Aiken-Rhett are compared to the distribution of elements from Charleston Place (Honerkamp et al. 1982; Zierden and Hacker 1987) and 14 Legare Street (Zierden 2001b). The Charleston Place data represent the early half of the century at a mixed residential/commercial venue. The 14 Legare data are from a late nineteenth century elite household. Although this comparison is hampered by uneven and small sample sizes; it is instructive as a preliminary step toward considering changes in the types of elements that might

be represented at archaeological sites in Charleston as meats from commercial sources increased in frequency.

Considering the dramatic economic events during the nineteenth century in Charleston, the overall pattern of pig elements represented compared to the Standard Pig is remarkably similar in all four assemblages (Figure 20). For pigs, elements from the Foot are under-represented in all four assemblages. Likewise, elements from the Vertebra/rib category are under-represented, though this is probably a reflection of identification problems. The higher percentages of pig specimens from the Head in three of the assemblages could indicate on-site butchery or purchase of cuts of meat from the Head. The preference for elements for the Hindquarter in the 1870-20th century Aiken-Rhett collection may indicate a preference for hams as cured pork from the hindquarter as this term came to be restricted to the hindquarter rather than to any part of the pig carcass that was cured. The marked similarity between pig elements represented at Charleston Place and 14 Legare Street requires further study.

Somewhat more variability is found in cow elements represented compared to the Standard Cow (Figure 21). In all four assemblages, elements from the Forequarter and Hindquarter are over-represented compared to the Standard; and elements from the Head, Vertebra/ribs, and Foot are generally under-represented, with some noteworthy exceptions. Vertebra/ribs are likely under-represented due to identification bias, though this problem is less acute for large animals such as cows than it is for small animals such as pigs. Both Head and Foot elements are likely to represent on-site butchery, though they could also be included in meats purchased from commercial sources. The difference between Hindquarter elements from the three elite households and the less affluent Charleston Place compared to the Standard Cow may indicate that cuts from the Hindquarter were preferred over ones from the Forequarter, and

more expensive if they had to be purchased, and thus were beyond the means of most people at Charleston Place.

Although more research needs to be done on elements represented at archaeological sites in Charleston, it is clear that a simplistic association between element representation and either time period or economic status will likely not be the best explanation for the patterns observed.

As seen in Table 1, rats increased in the urban environment as Charleston grew into its damp, low-lying areas and became more crowded. The 1830-1850 component from Aiken-Rhett has the dubious honor of manifesting one of the highest percentages of rat individuals outside the well at 70 Nassau Street. The 70 Nassau Street well was unusual because it appears to have been a natural trap for rats, which constituted 69 percent of the individuals in that faunal assemblage (Reitz 1990). Other sites with a high percentage of rats are the late eighteenth-early nineteenth century dump at Atlantic Wharf (31 percent of the MNI; Zierden and Reitz 2002) and the post-bellum residence at 72 Anson Street (22 percent of the MNI; Reitz and Dukes 1993). With rats comprising "only" 14 percent of the vertebrate individuals in the 1830-1850 time period, Aiken-Rhett is not quite as over-run with rodents as the 70 Nassau Street well or the 72 Anson Street property. Clearly there was a problem with rats throughout the city and this problem was more significant in the late nineteenth century than it had been in the eighteenth century. However, by the late nineteenth-century only 4 percent of the individuals are rats in the Aiken-Rhett collection. Commensal percentages are high (10 percent of the MNI), but these are primarily frog/toads, song birds, and cats rather than rats. Perhaps the late nineteenth-century occupants of the Aiken-Rhett site were able to control their rodent population with more success than were other people in the city.

The third issue pertains to the developing urban character of the city. One characteristic thought to be associated with growing urbanism is increased reliance on domestic animals instead of wild birds, mammals, and fishes (Table 1). This comparison is complicated by the high percentages of commensal taxa, so commensal taxa are deducted from the assemblage MNI for purposes of this study. Thus, the total non-commensal individuals in the early nineteenth-century collection is 33 and the total non-commensal individuals in the late nineteenth-century collection is 43.

Although the percentage of domestic, non-commensal individuals increases from 75 percent of the individuals in the 1818-1830 collection to 81 percent of the individuals in the twentieth-century collection; the expected decrease in the use of wild resources compared to domestic ones is not apparent when the contrast is between the early nineteenth century and the late nineteenth century. Domestic individuals constitute 51 percent of the non-commensal individuals in both the early nineteenth-century and in the late nineteenth-century component. Most wild resources decline between the early and late nineteenth century; but turtles increase from 6 percent to 12 percent of the non-commensal individuals. The use of fish remained constant at 21 percent of the non-commensal individuals. Thus, though the use of outlying rural area and the sea generally declines from the 1720-1760s period to the twentieth century; this decline is not apparent in the Aiken-Rhett assemblage due to what may have been a preference for turtle soup.

CONCLUSION

The Aiken-Rhett assemblage adds additional information to the archaeological record for the nineteenth century in Charleston. These data lend further support to the conclusion that sawing was a complex phenomenon in the city indirectly related to either time period or to

social/economic status. Only additional archaeological and archival research will clarify this relationship. Because so many of the Charleston assemblages for each site and each time period are very small, it may be that larger collections related to each of the possible variables are needed.

On the other hand, the Aiken-Rhett data strongly support the body of evidence for a growing vermin problem within the city. The increasing number of rats is probably directly related to accumulations of trash on urban lots, increased urban density, and decreased availability of other habitats suitable to rodents but further away from where people lived. Evidence is also provided to suggest that the habit of raising cows, pigs, and sheep/goats within the city declined in frequency but that domestic fowl continued to be raised in the city into the twentieth century and that the preferences of some elite households for foods such as turtle soup or other dishes made from wild resources can mask the general trend toward the twentieth-century diet.

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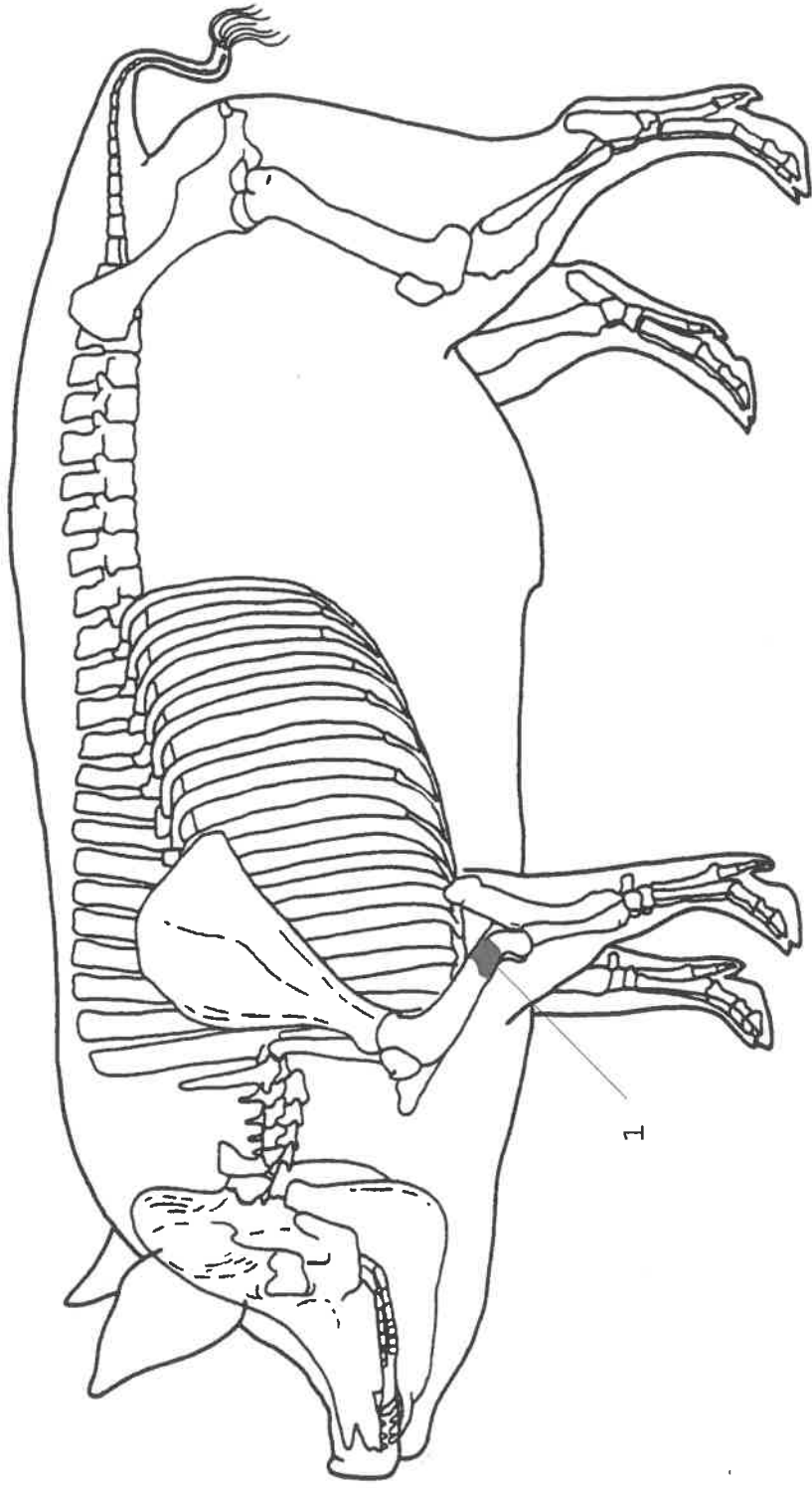


Figure 1. Aiken-Rhett, 2003: 1818-1830: Pig Elements Identified. NISP=1.

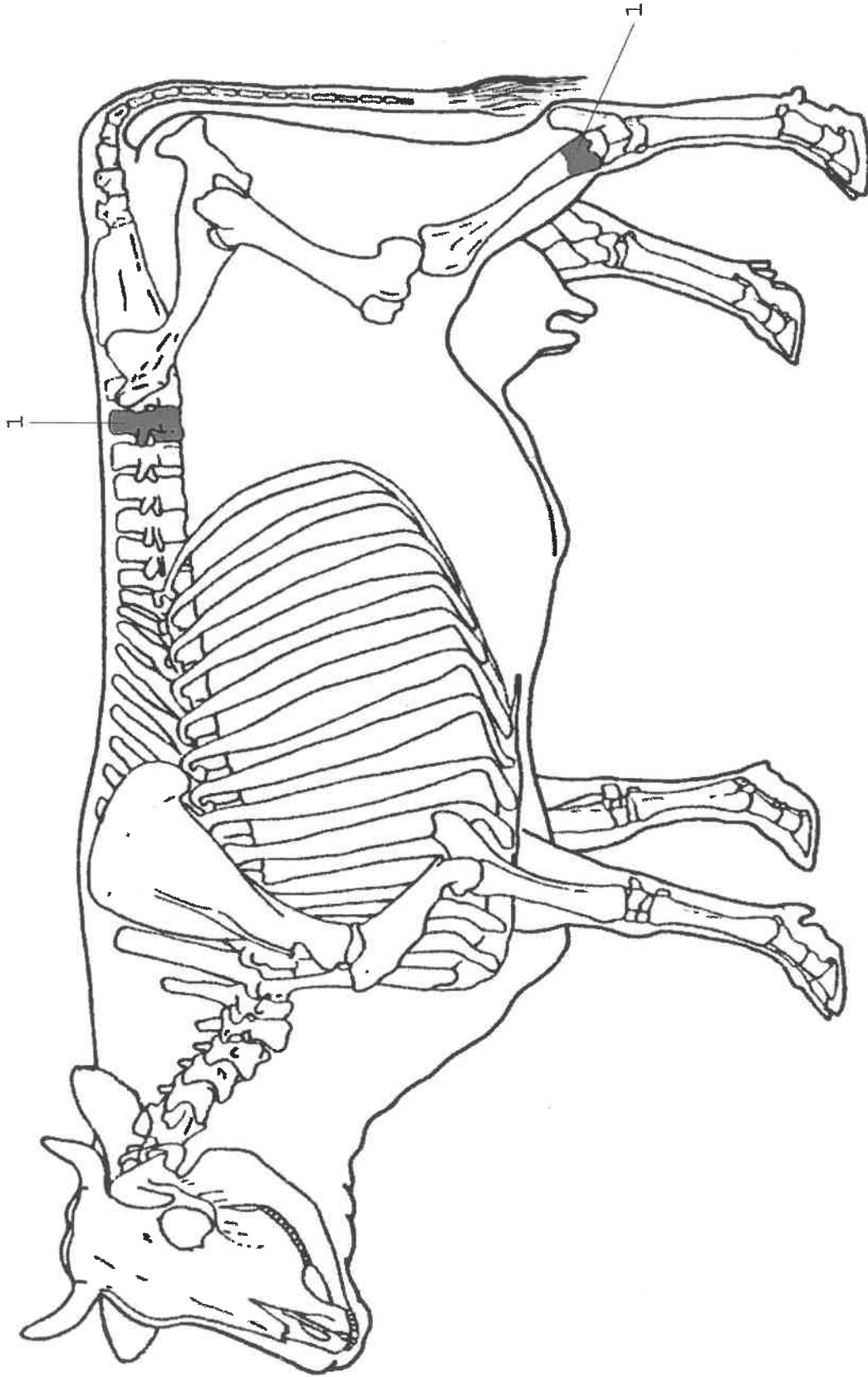


Figure 2. Aiken-Rhett, 2003: 1818-1830: Cow Elements Identified. Not Shown: 1 tooth. NISP=3.

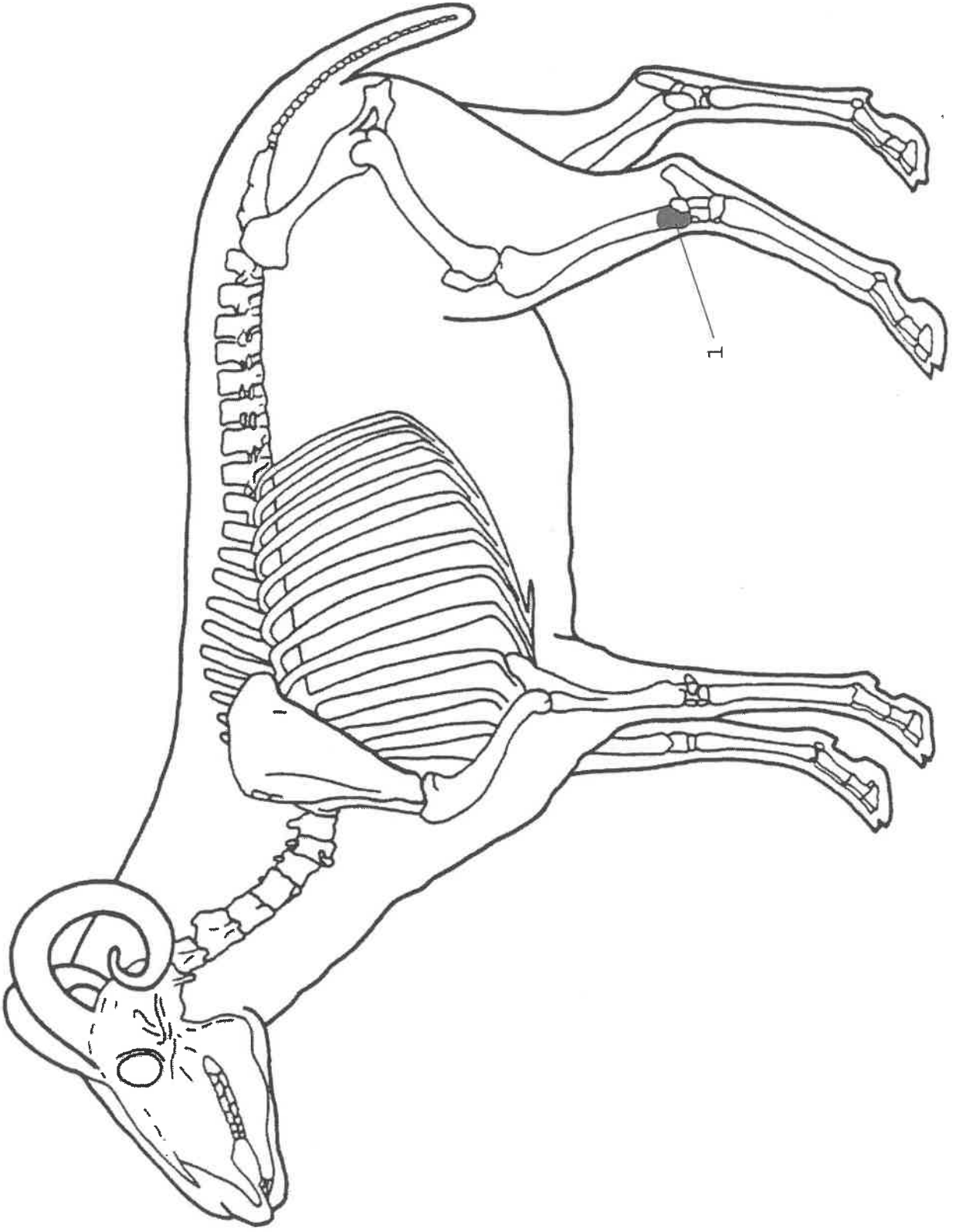


Figure 3. Aiken-Rhett, 2003: 1818-1830: Caprine Elements Identified. NISP=1.

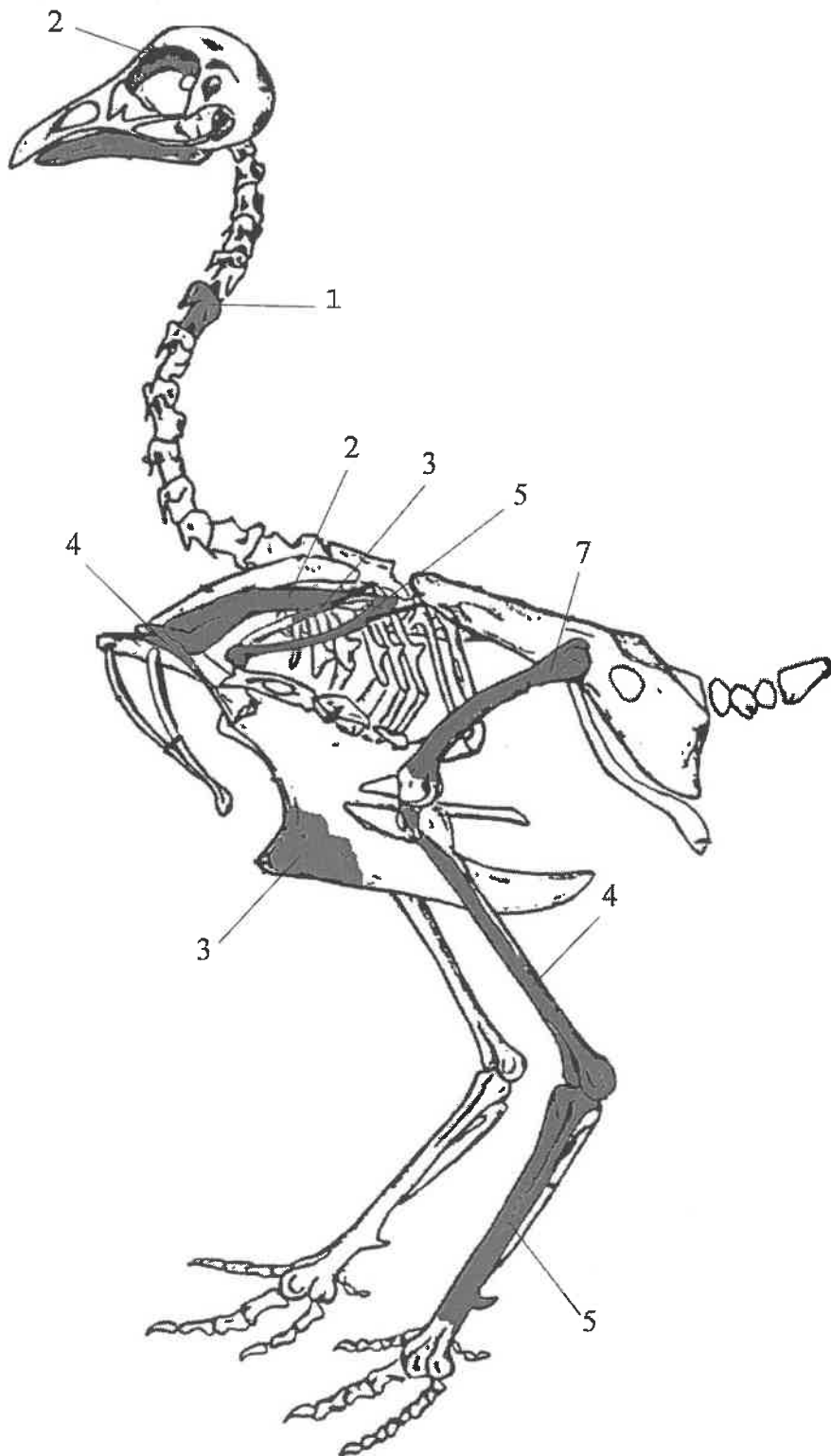


Figure 4. Aiken-Rhett, 2003: 1830-1850: Chicken Elements Identified. NISP=36.

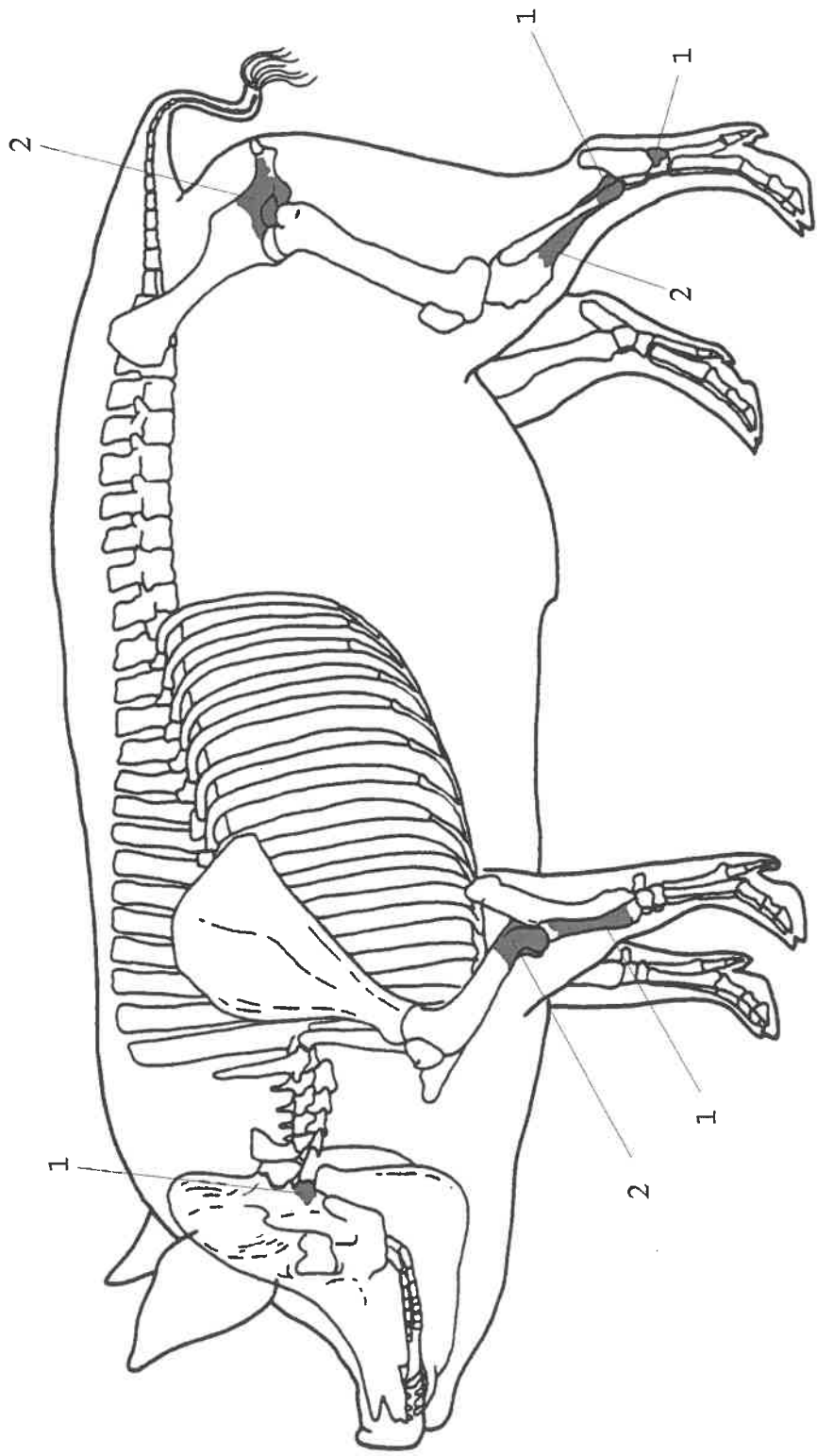


Figure 5. Aiken-Rhett, 2003: 1830-1850: Pig Elements Identified. NISP=10.

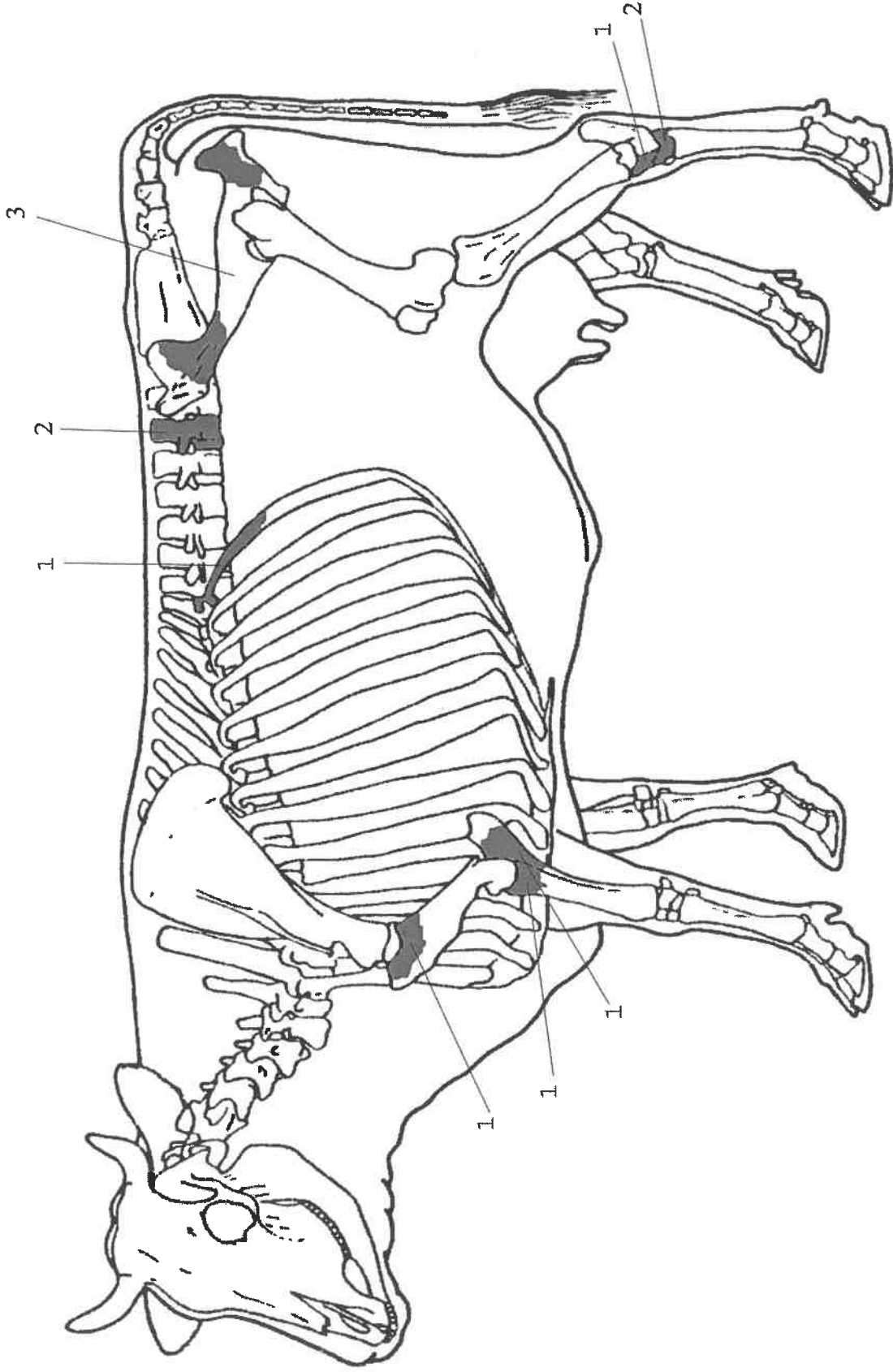


Figure 6. Aiken-Rhett, 2003: 1830-1850: Cow Elements Identified. Not Shown: 1 tooth. NISP=13.

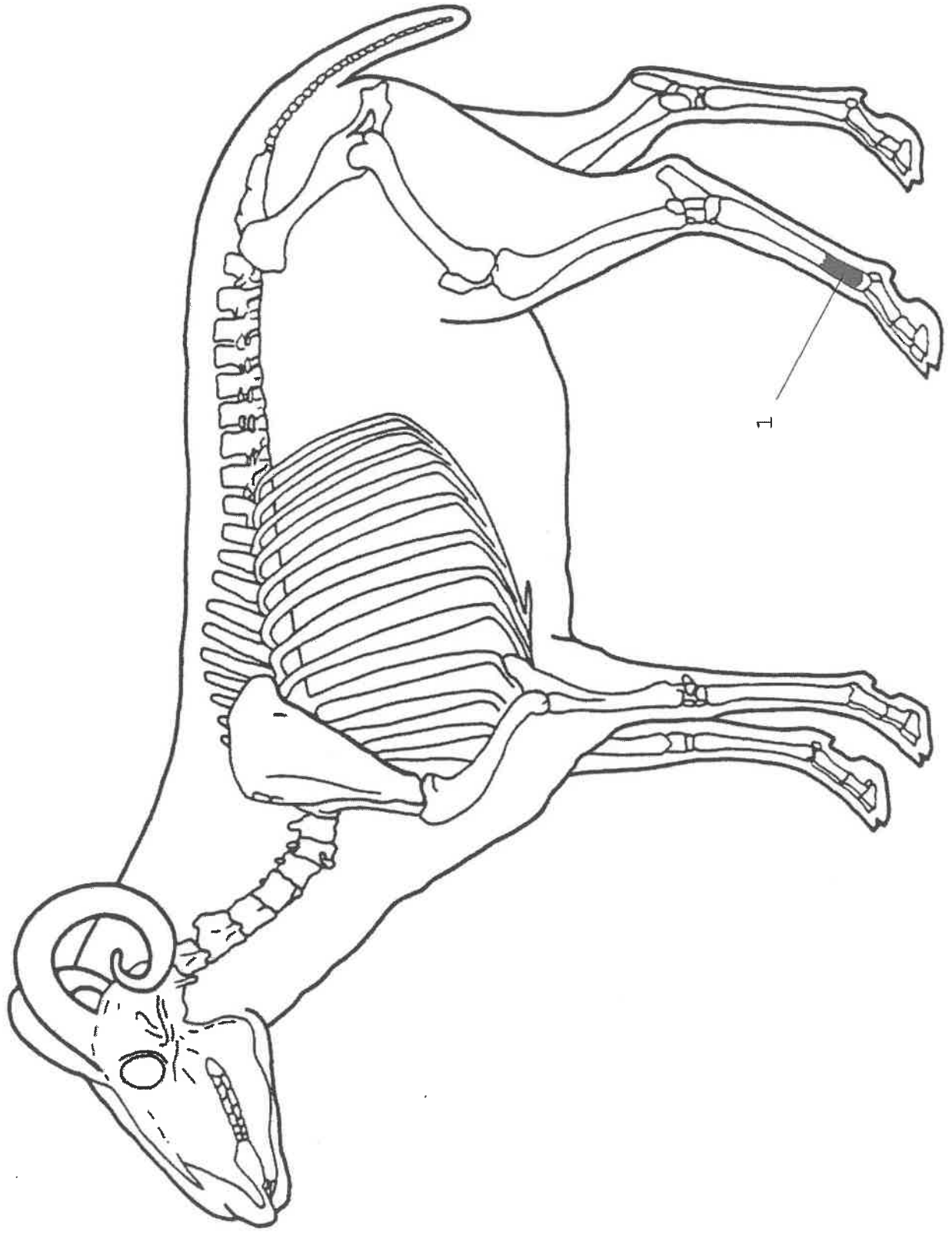


Figure 7. Aiken-Rhett, 2003: 1830-1850: Caprine Elements Identified. NISP=1.

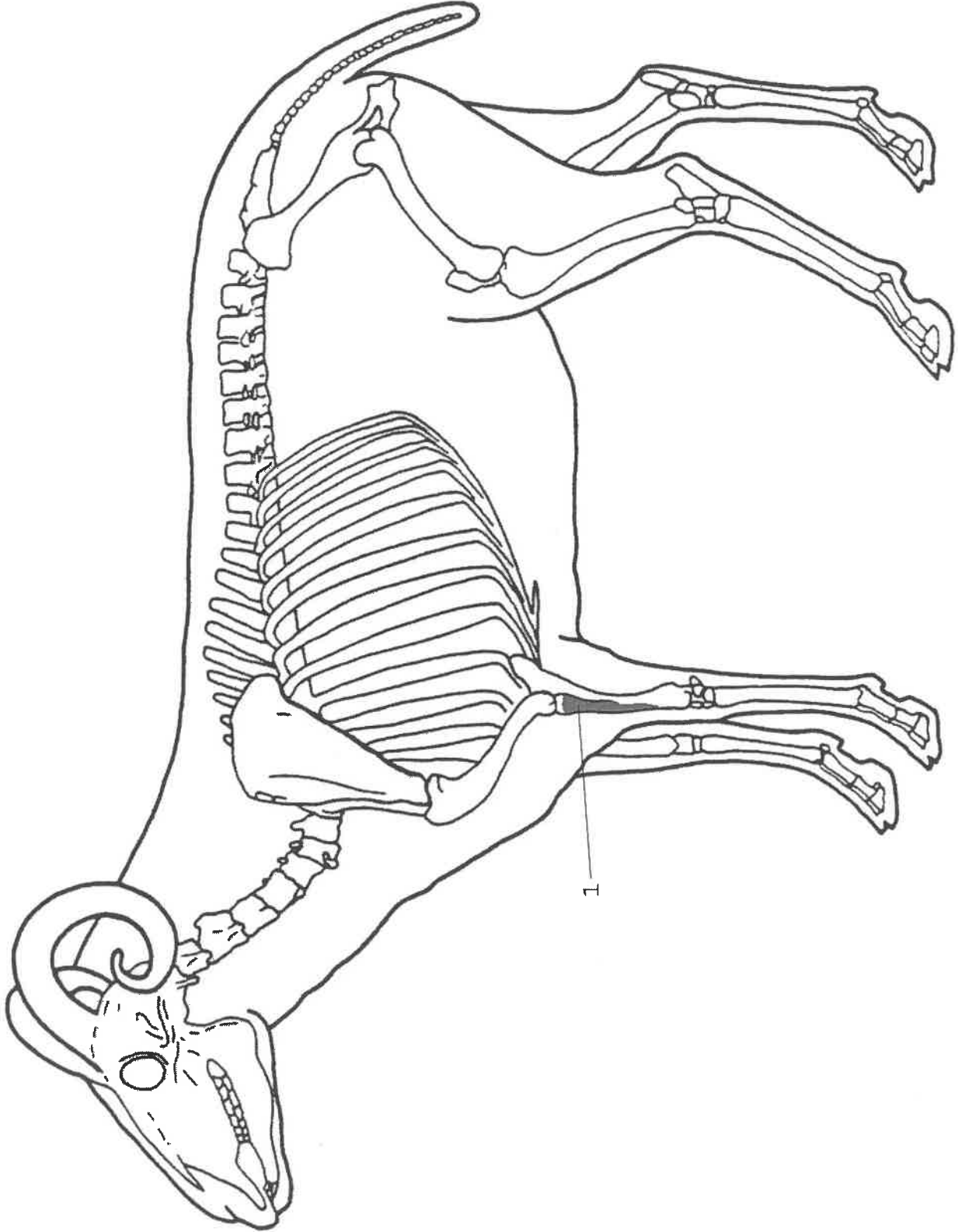


Figure 8. Aiken-Rhett, 2003: 1830-1850: Sheep Elements Identified. NISP=1.

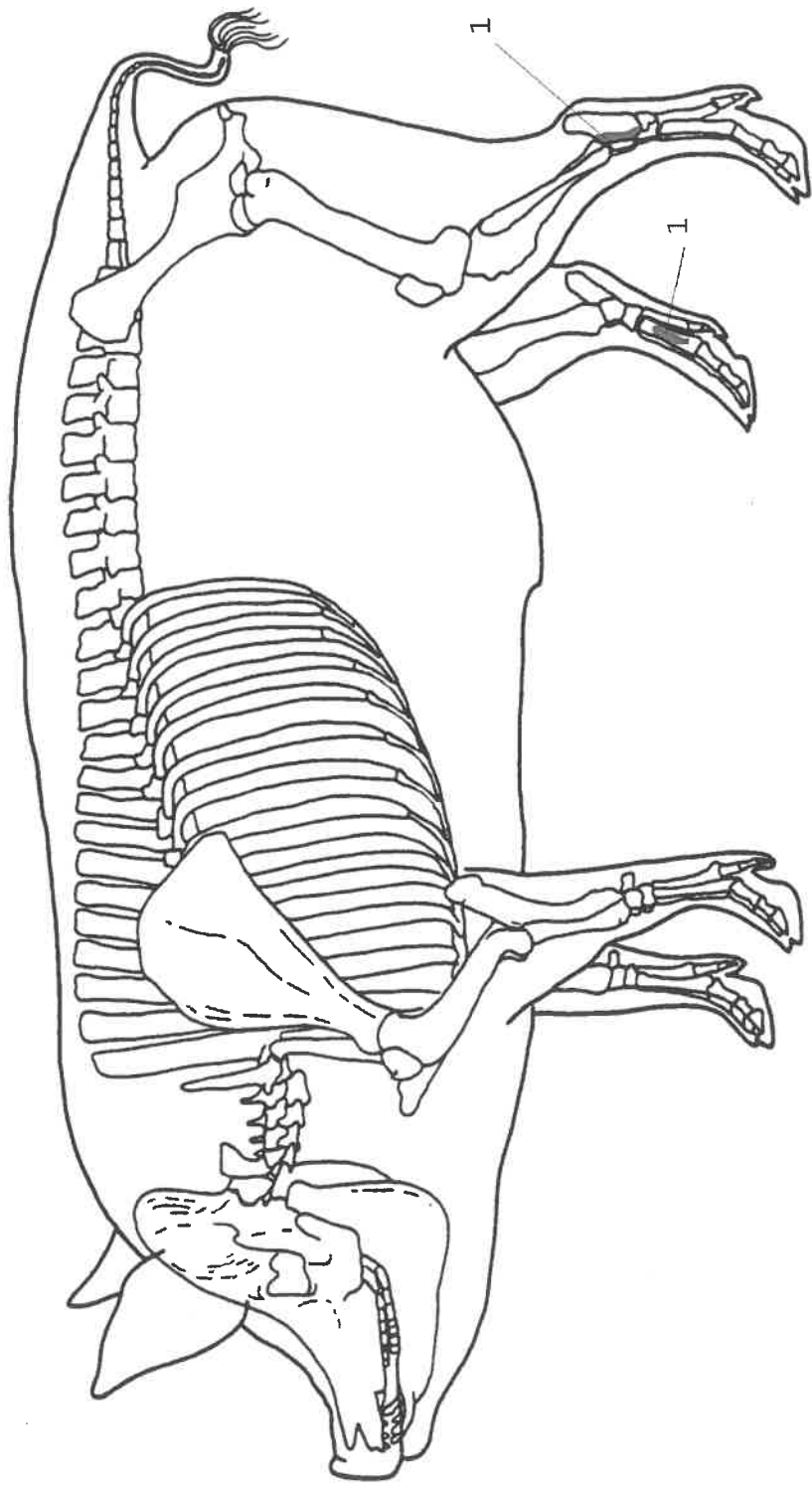


Figure 9. Alken-Rhett, 2003: 1850-1870: Pig Elements Identified. NISP=2.

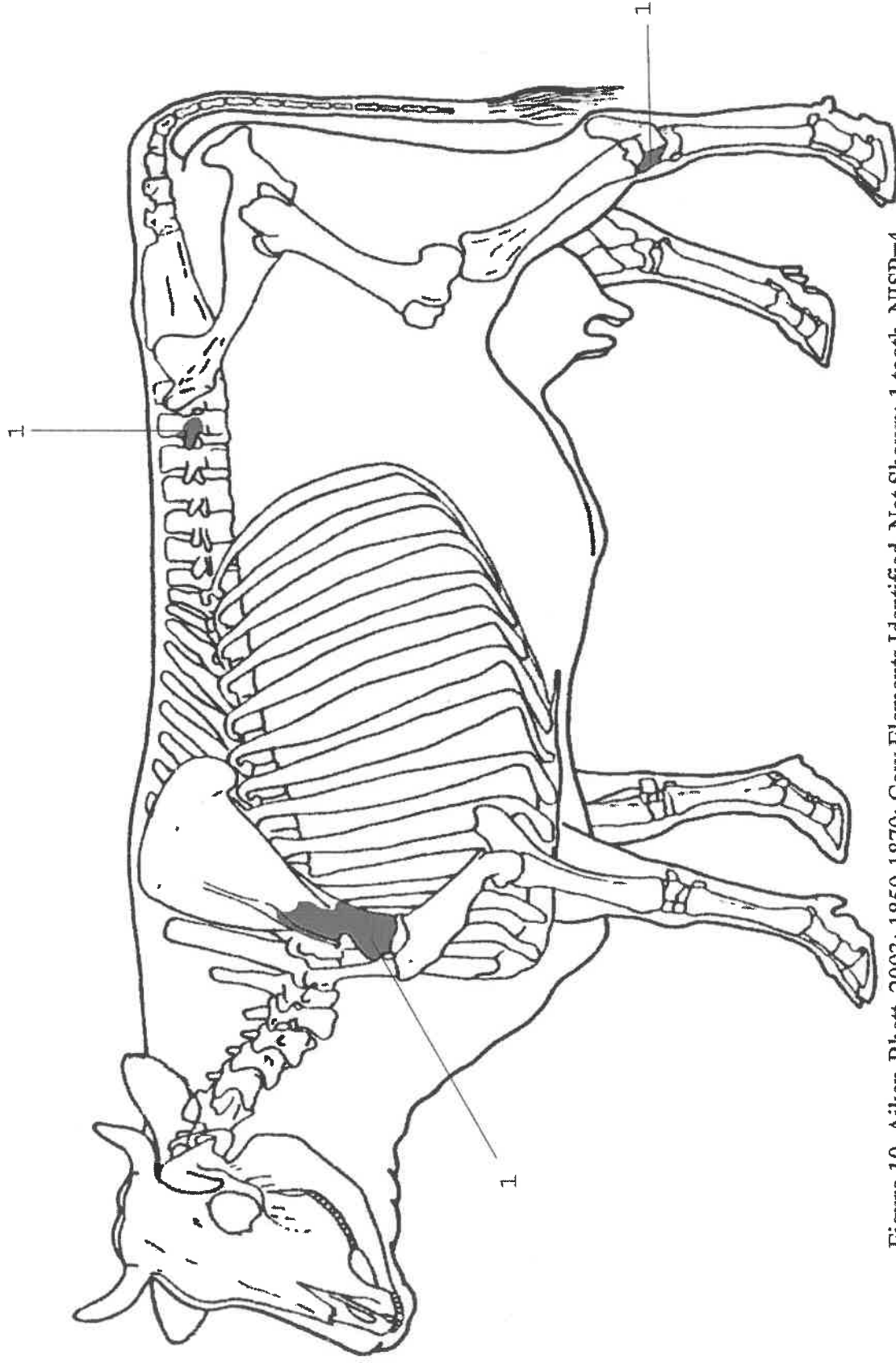


Figure 10. Aiken-Rhett, 2003: 1850-1870: Cow Elements Identified. Not Shown: 1 tooth. NISP=4.

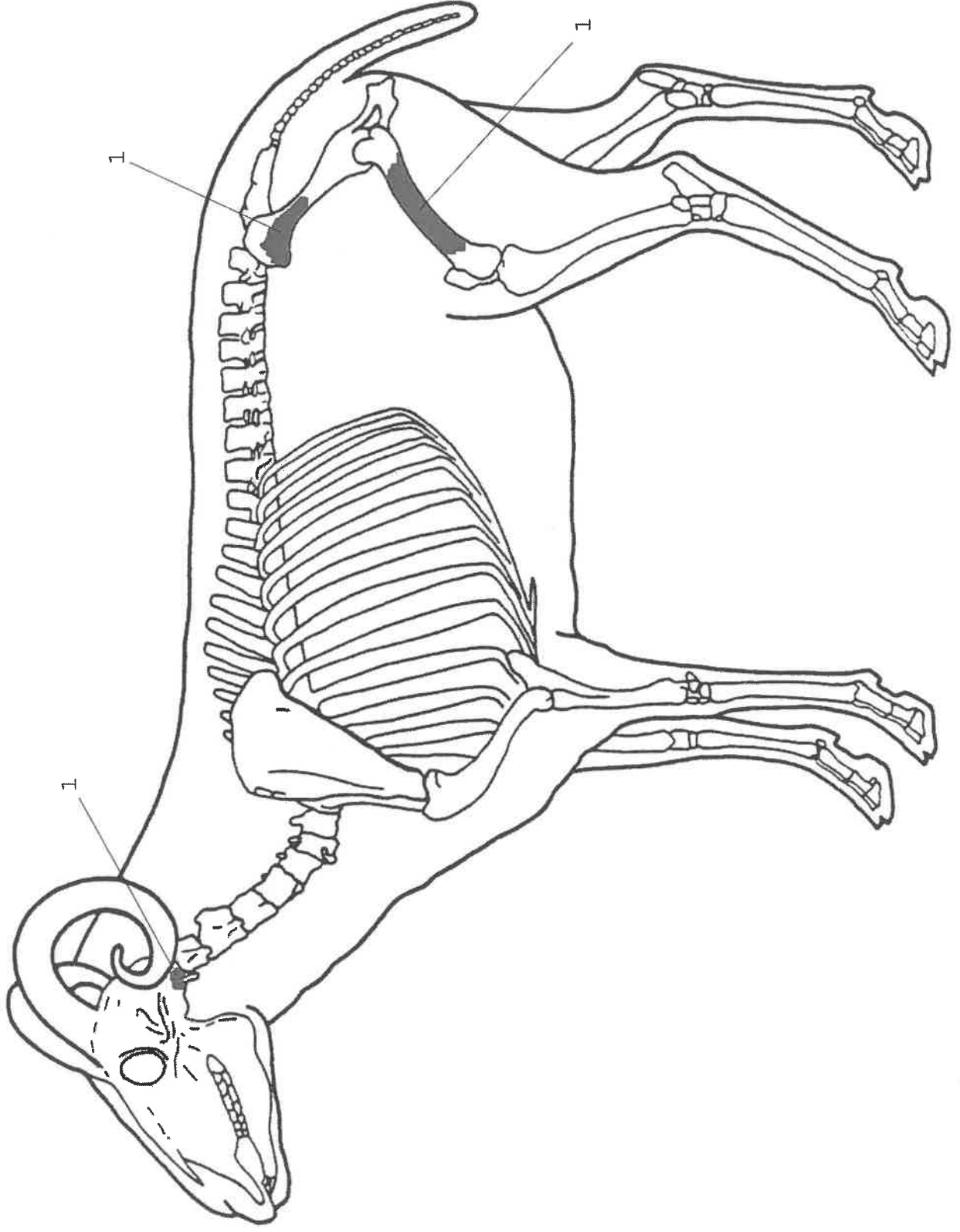


Figure 11. Aiken-Rhett, 2003: 1850-1870: Caprine Elements Identified. NISP=3.

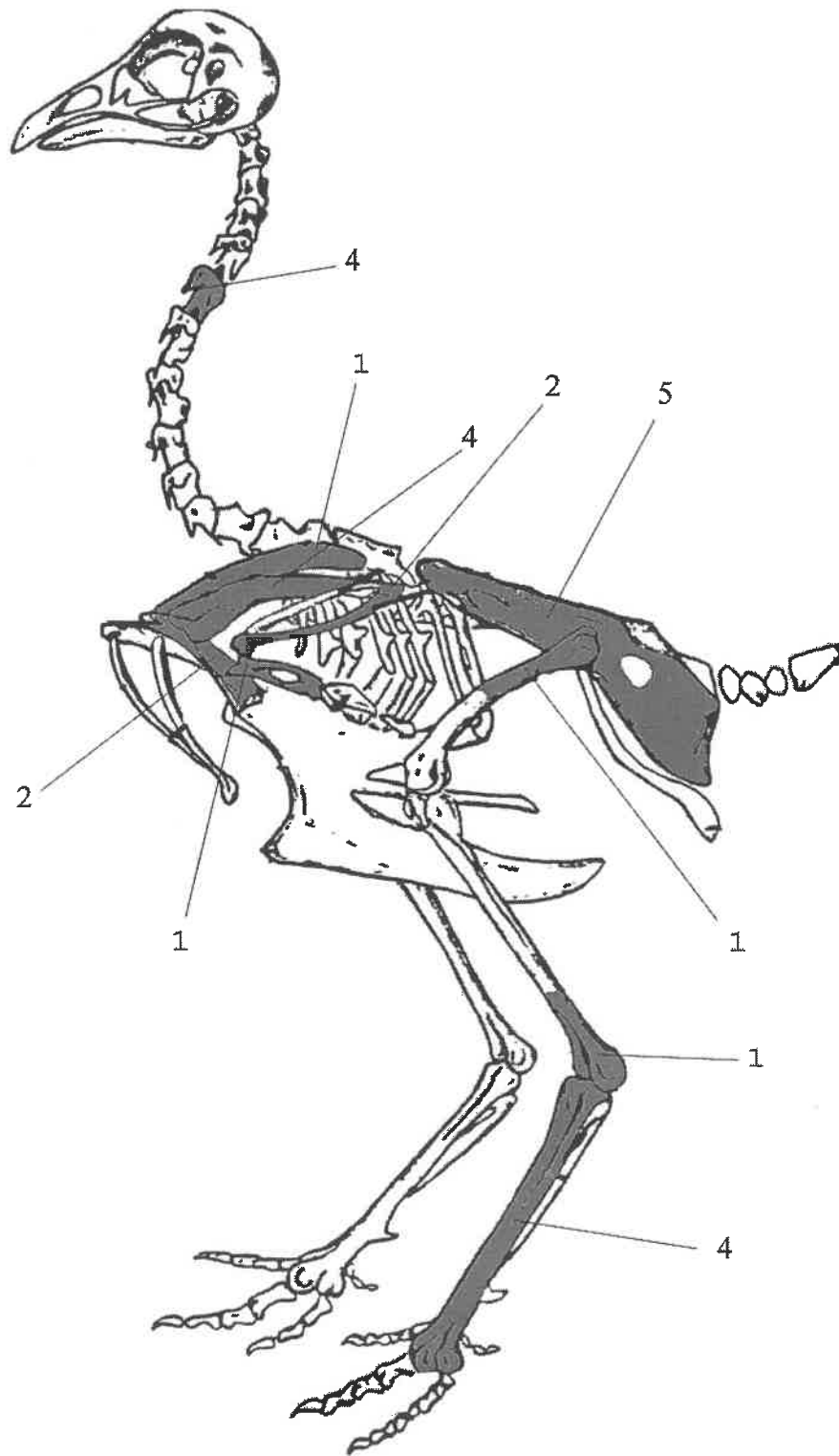


Figure 12. Aiken-Rhett, 2003: 1870-1900: Chicken Elements Identified. NISP=25.

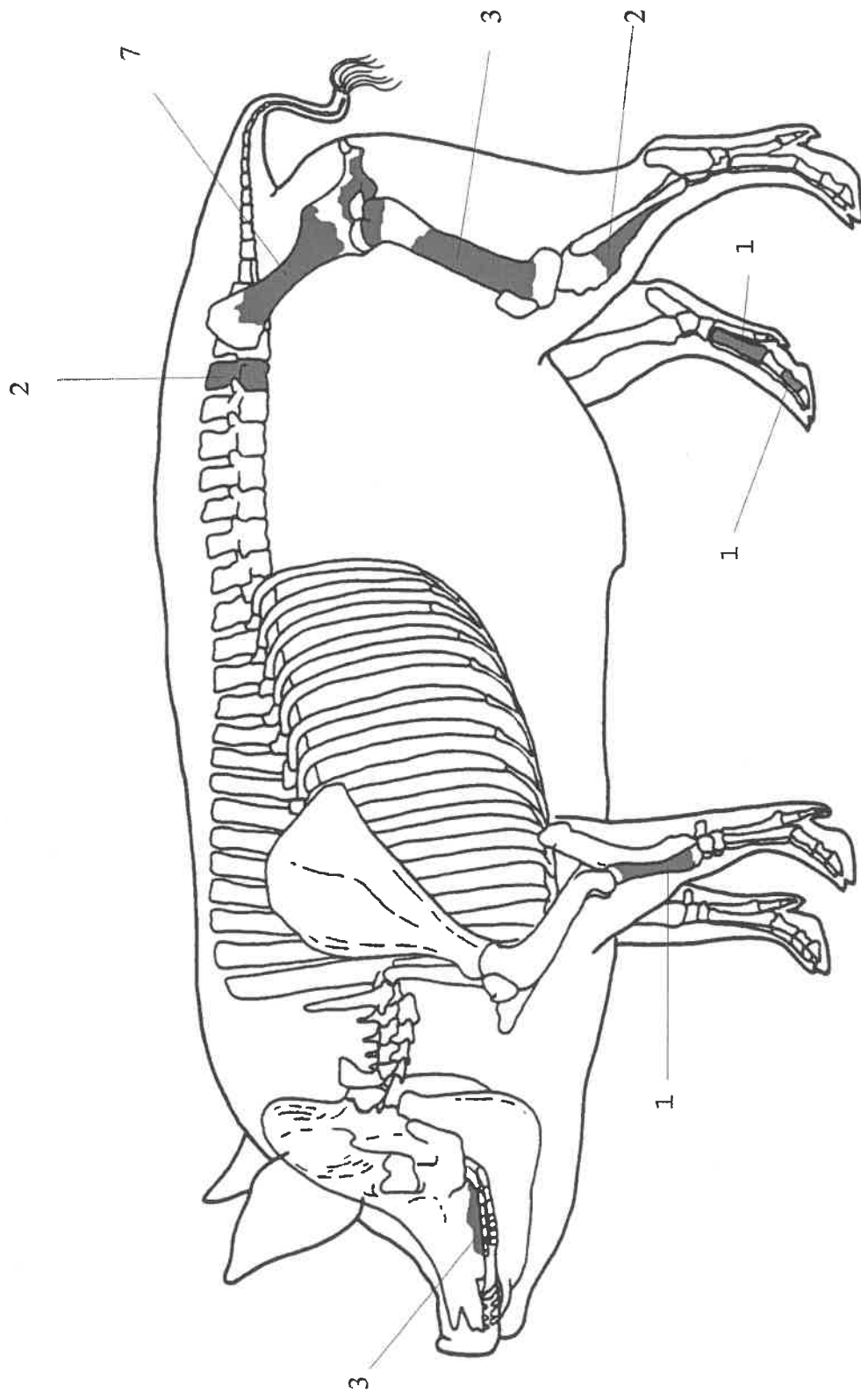


Figure 13. Aiken-Rhett, 2003: 1870-1900: Pig Elements Identified.
Not Shown: 5 teeth and 3 skull fragments. NISP=28.

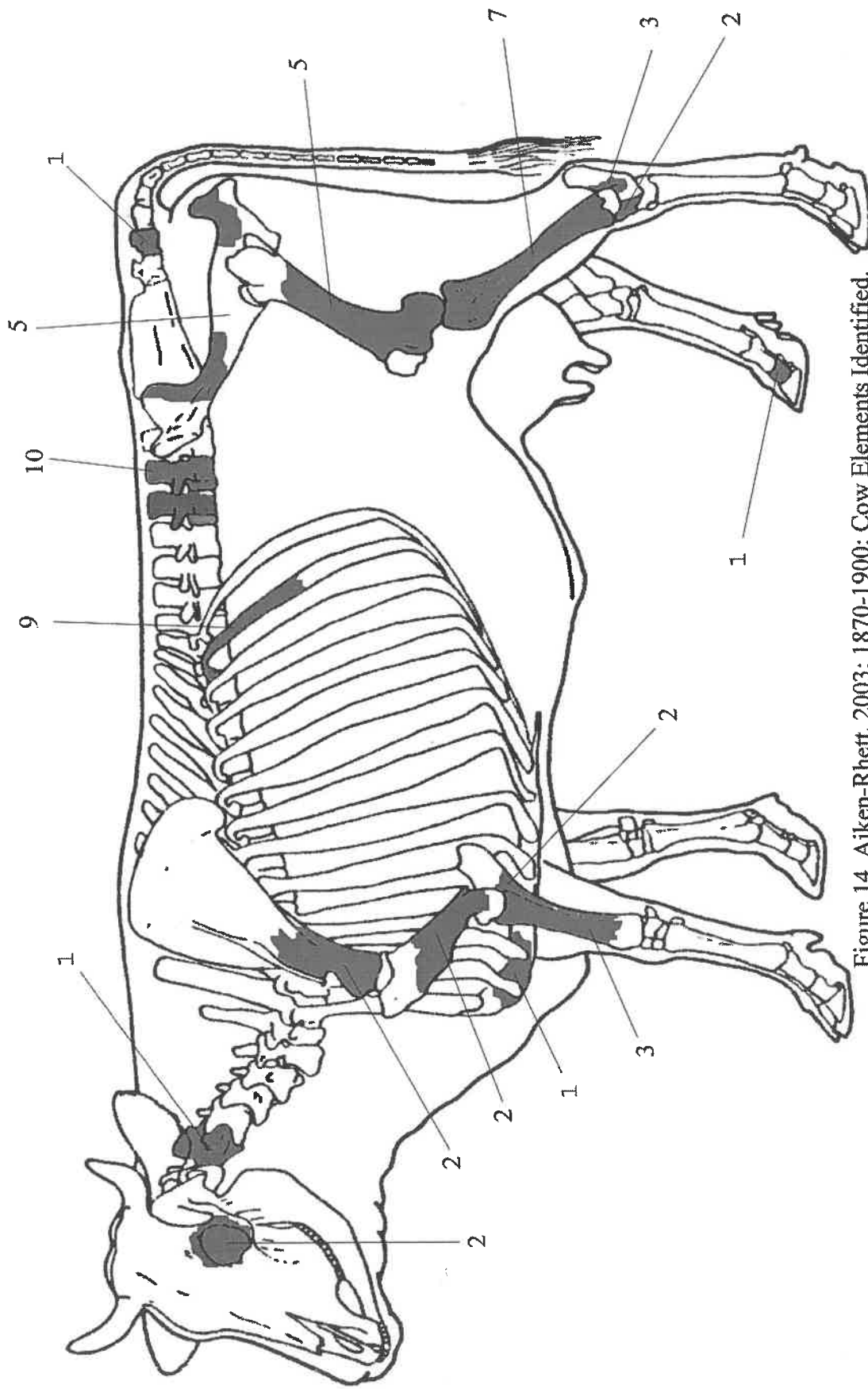


Figure 14. Aiken-Rhett, 2003: 1870-1900: Cow Elements Identified.
 Not Shown: 13 teeth, 4 skull fragments, 1 unknown post-cranial specimen,
 1 sesamoid, and 2 fibula epiphyses. NISP=78.

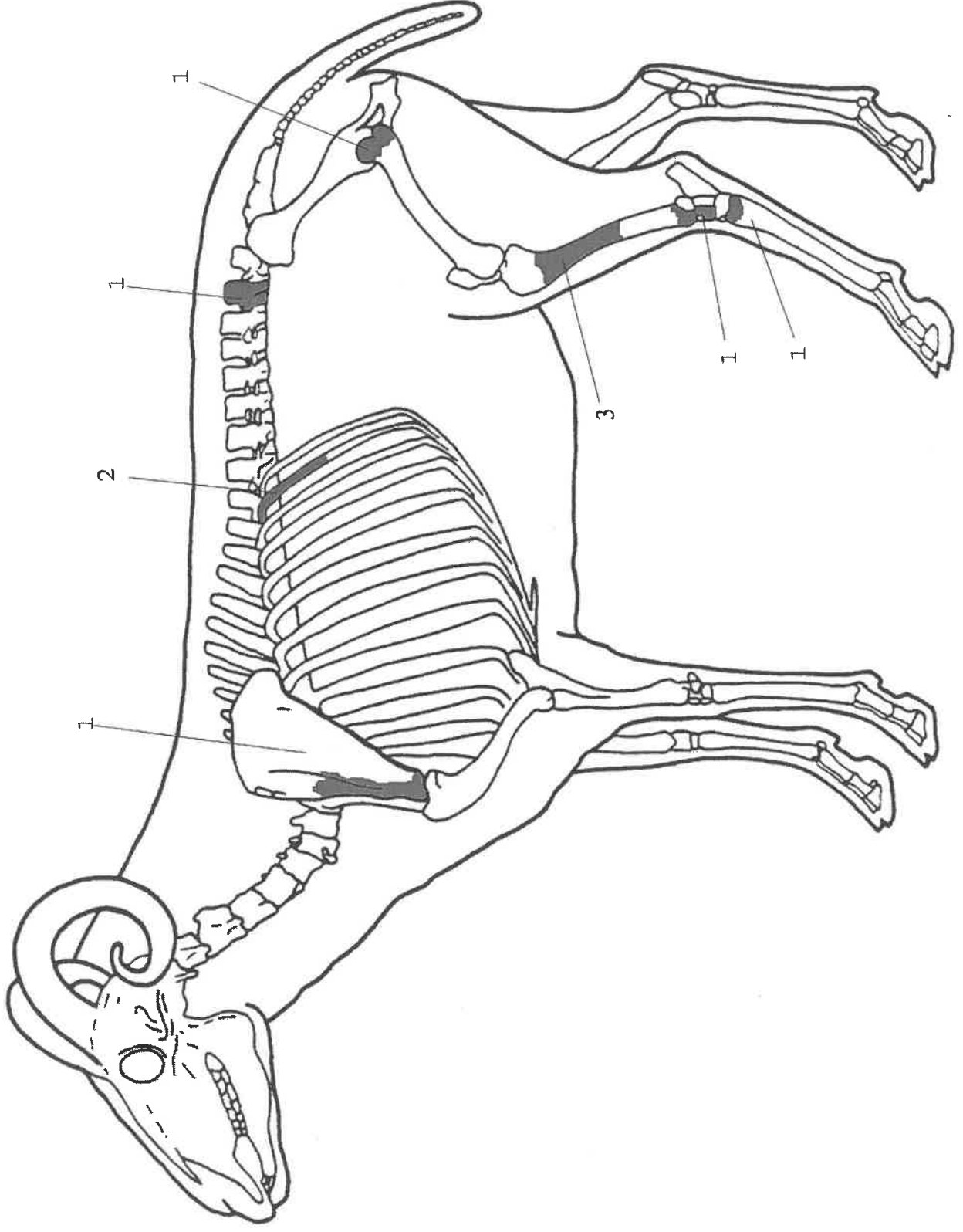


Figure 15. Aiken-Rhett, 2003: 1870-1900: Caprine Elements Identified. NISP=10.

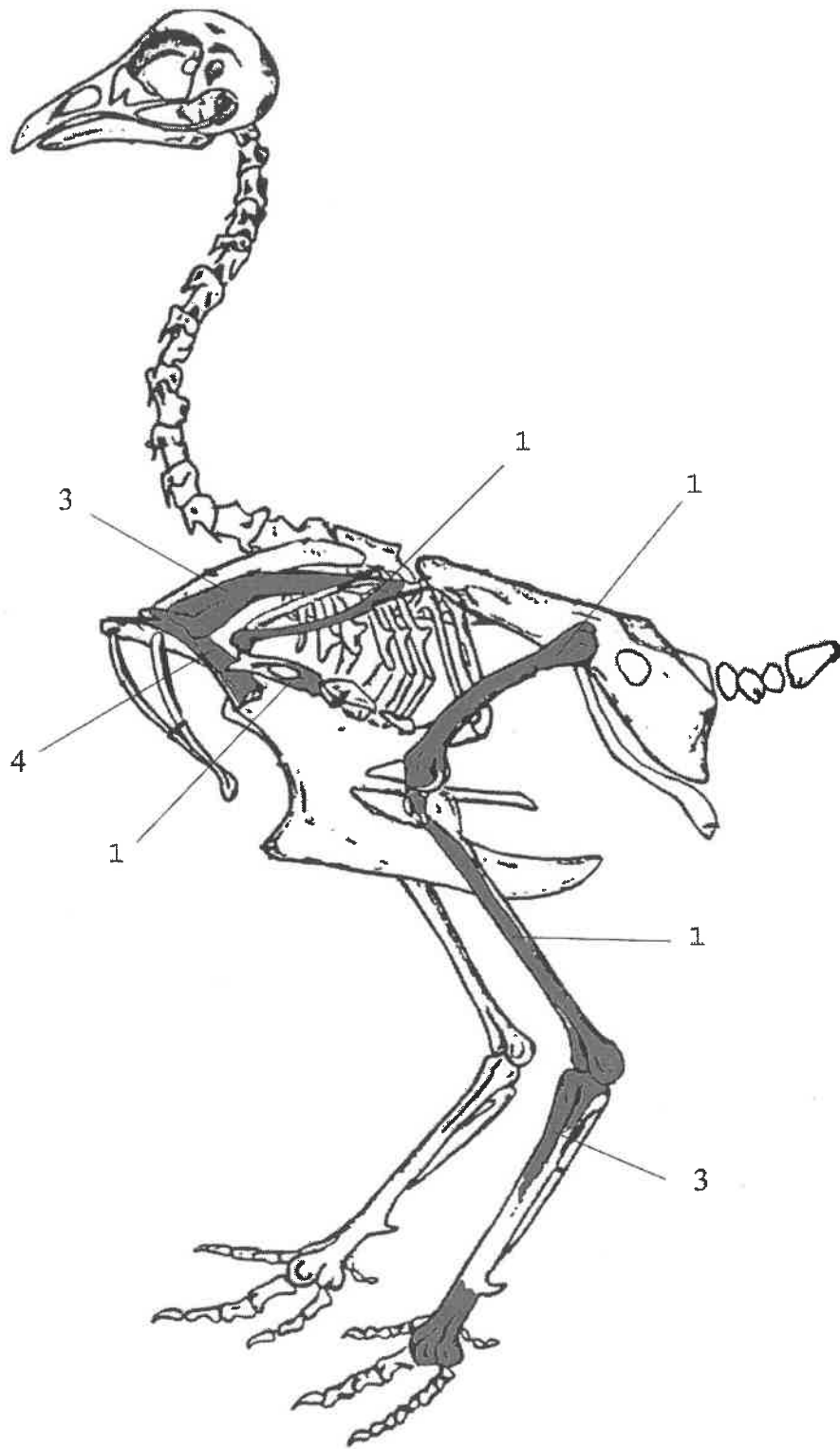


Figure 16. Aiken-Rhett, 2003: 20th Century:
Chicken Elements Identified. NISP=14.

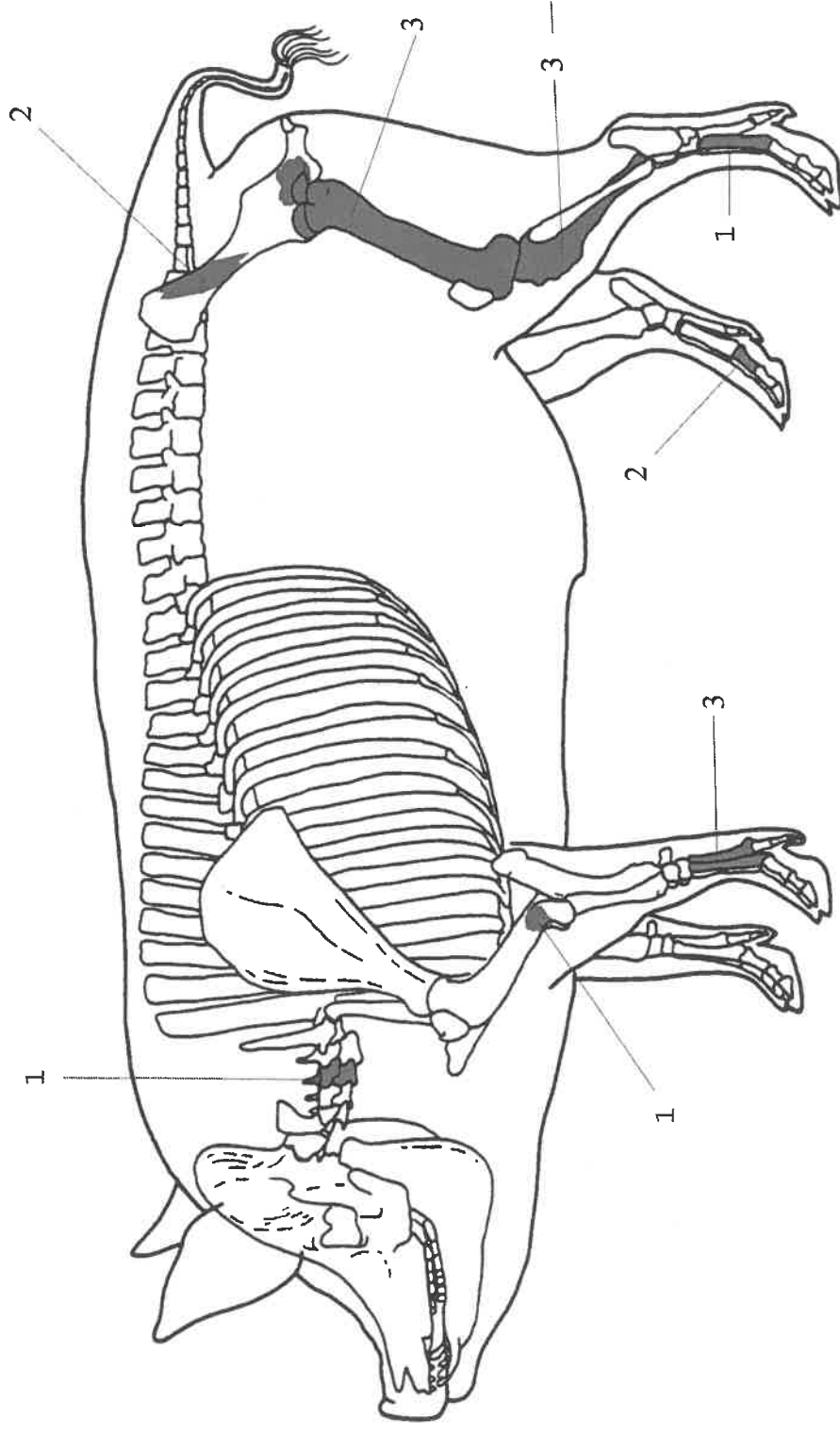


Figure 17. Aiken-Rhett, 2003: 20th Century: Pig Elements Identified. Not Shown: 3 teeth. NISP=19.

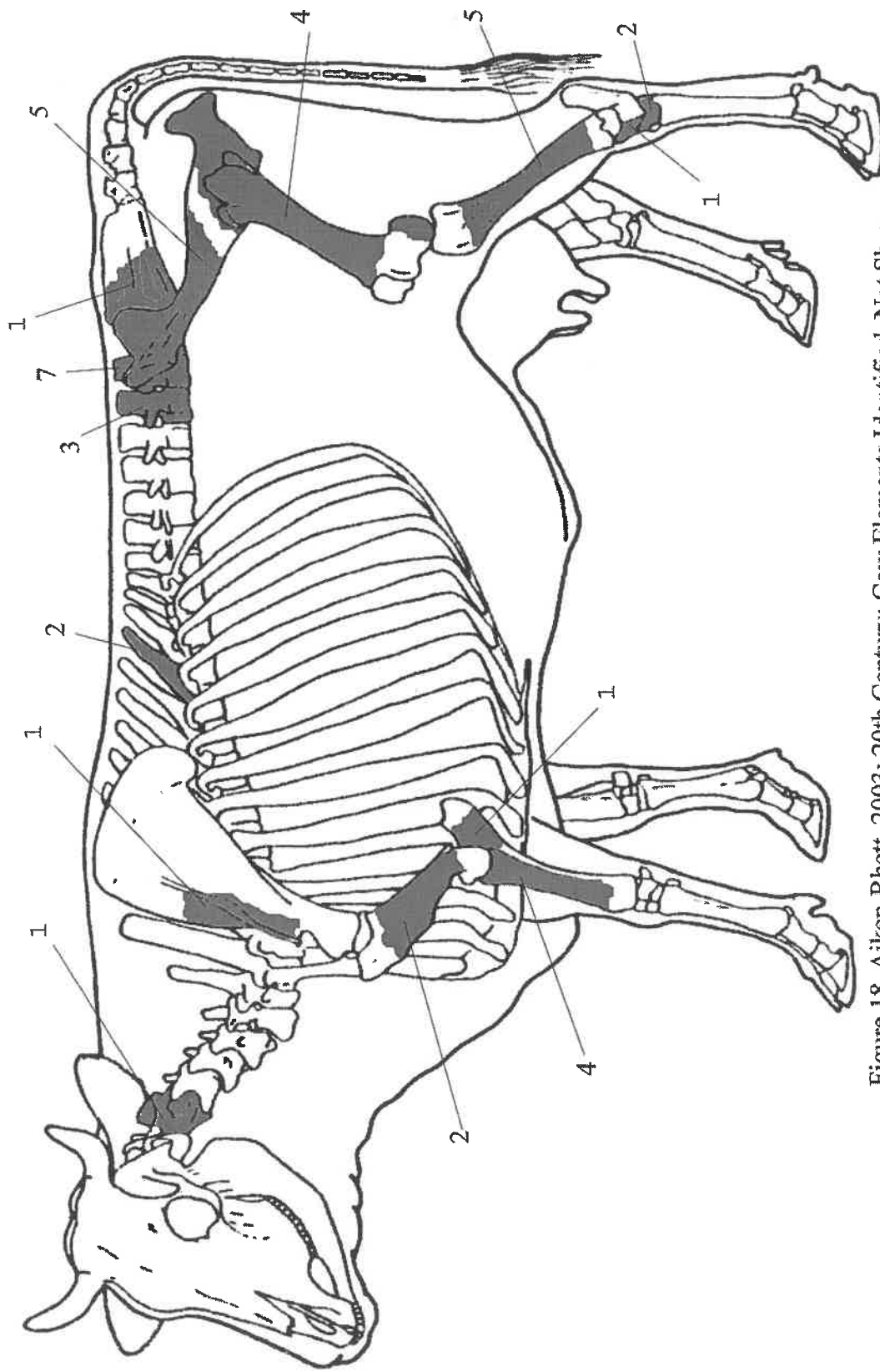


Figure 18. Aiken-Rhett, 2003: 20th Century: Cow Elements Identified. Not Shown:
2 teeth and 2 unknown post-cranial specimens. NISP=43.

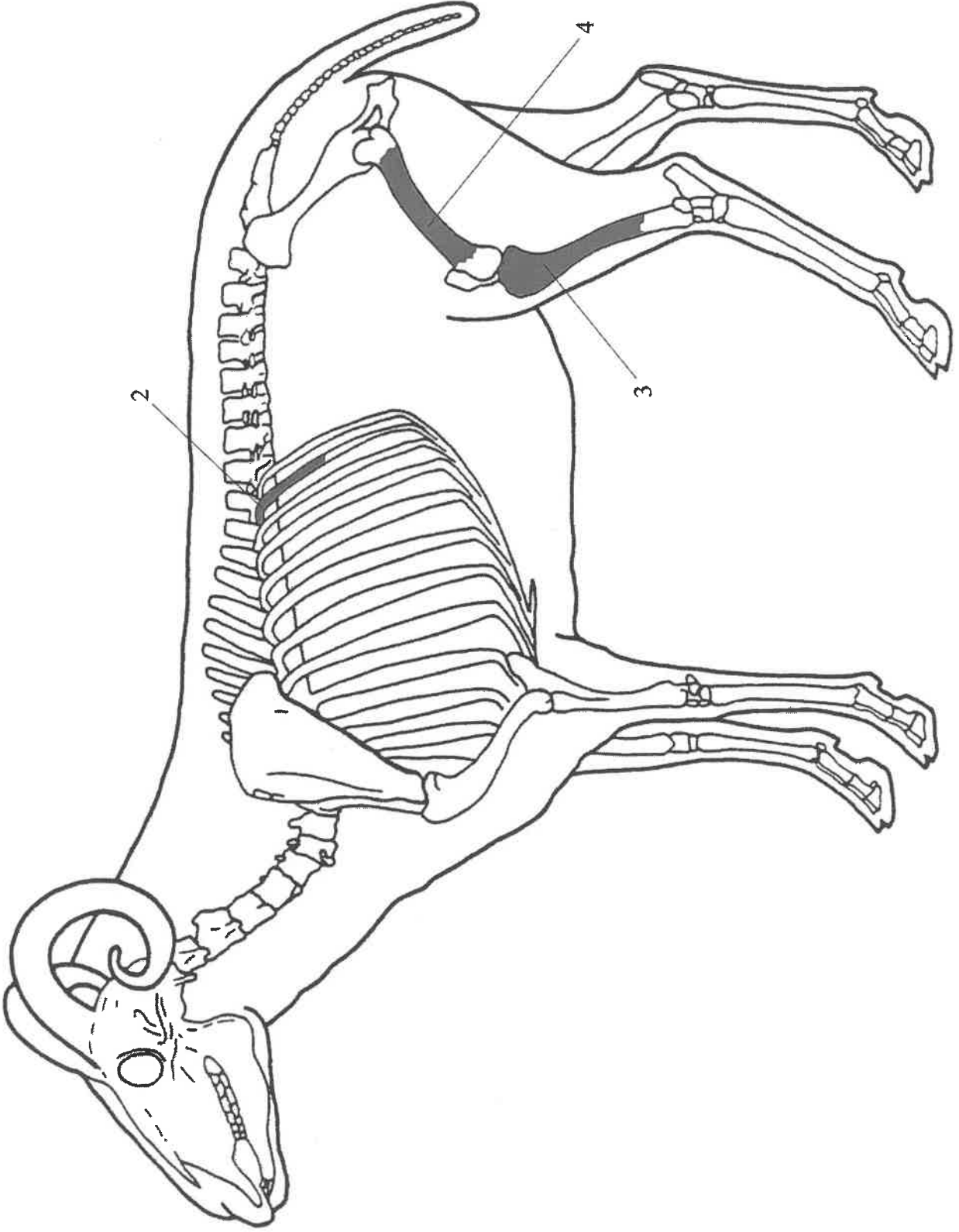


Figure 19. Aiken-Rhett, 2003: 20th Century: Caprine Elements Identified. Not Shown: 3 teeth. NISP=12.

Figure 20: Aiken-Rhett, 2003: Pig Log Difference.

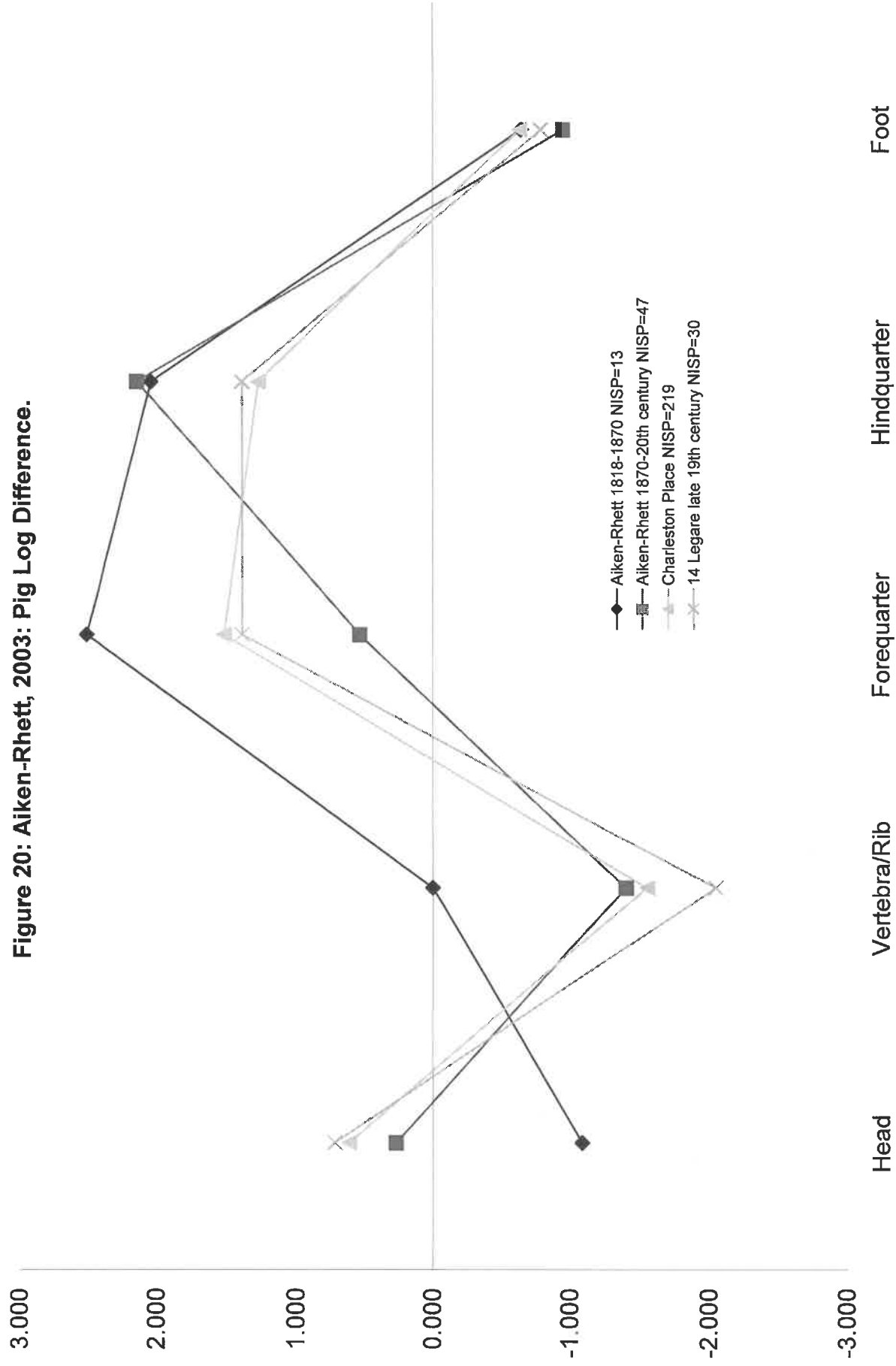


Figure 21: Aiken-Rhett, 2003: Cow Log Difference

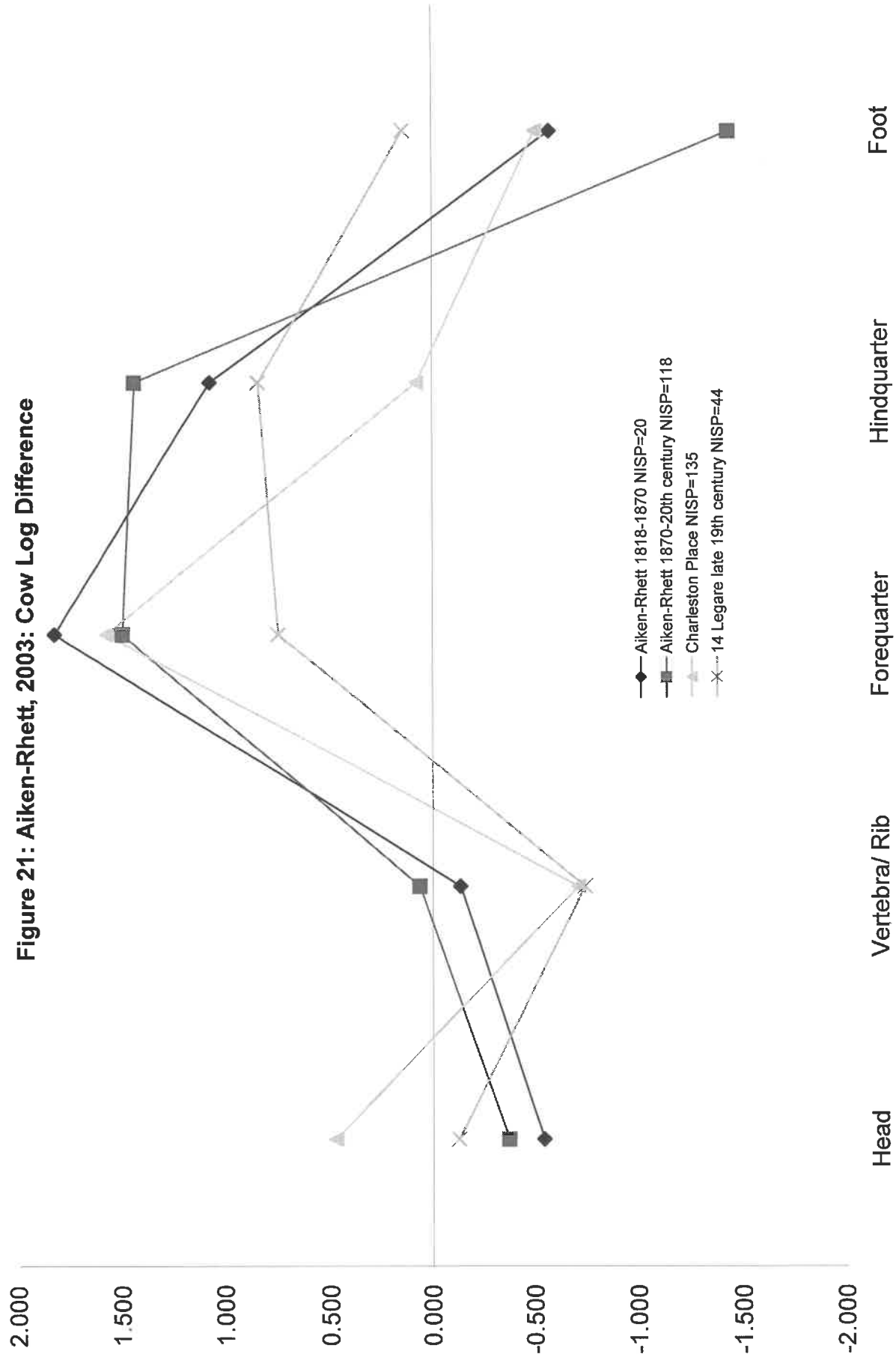


Table 1. Summary of Some Charleston Data.

Modifications	1720-1760	1720-1760	1860s-1900	1860s-1900
	#	% of Mod. NISP	#	% of Mod. NISP
Burned/Calcined	126	12.1%	102	10.3%
Cut	190	18.2%	156	15.8%
Hacked	673	64.6%	99	10.0%
Sawed/Clean-cut	39	3.7%	515	52.0%
Rodent-gnawed	5	0.5%	74	7.5%
Carnivore-gnawed	<u>9</u>	0.9%	<u>44</u>	4.4%
Total	1042		990	
Specific Taxa	1720-1760	1720-1760	1860s-1900	1860s-1900
	MNI	MNI%	MNI	MNI%
Rat	10	5.0%	23	8.8%
Domestic Individuals	93	46.5%	132	50.6%
Wild Terrestrial Individuals	31	15.5%	32	12.3%
Wild Aquatic Individuals	64	32.0%	60	23.0%
Deer	10	5.0%	2	0.8%
Canada goose/turkey	13	6.5%	13	5.0%
Pig	25	12.5%	27	10.3%
Sheep/goat	10	5.0%	14	5.4%
Cow	35	17.5%	25	9.6%
Chicken	20	10.0%	63	24.1%

Table 1. Summary of Some Charleston Data (cont.).

Summary Categories	1720-1760	1720-1760	1860s-1900	1860s-1900
	MNI	MNI%	MNI	MNI%
Domestic Mammal	70	35.0%	66	25.3%
Domestic Bird	23	11.5%	66	25.3%
Wild Mammal	11	5.5%	7	2.7%
Wild Bird	20	10.0%	25	9.6%
Aquatic Reptiles	14	7.0%	14	5.4%
Sharks, Rays, Fishes	50	25.0%	46	17.6%
Commensal Taxa	<u>12</u>	6.0%	<u>37</u>	14.2%
Total	200		261	

Richness	1720-1760	1720-1760	1860s-1900	1860s-1900
	# of Taxa	% of Taxa	# of Taxa	% of Taxa
Domestic Mammal	4	8.5%	3	5.6%
Domestic Bird	3	6.4%	2	3.7%
Wild Mammal	2	4.3%	4	7.4%
Wild Bird	5	10.6%	10	18.5%
Aquatic Reptiles	8	17.0%	8	14.8%
Sharks, Rays, Fishes	20	42.6%	17	31.5%
Commensal Taxa	<u>5</u>	10.6%	<u>10</u>	18.5%
Total	47		54	

Note: The sites included in the 1720-1760 list are: Beef Market (Calhoun et al. 1984), Brewton (Zierden 2001a), Exchange (Reitz 1988, Zierden and Hacker 1986), First Trident (Zierden, Calhoun, and Pinckney 1983b), Lodge Alley (Zierden, Calhoun, and Paysinger 1983a), McCrady's Tavern (Zierden, Reitz, Trinkley, and Paysinger 1982), Powder Magazine (Zierden 1997), Rutledge (Zierden and Grimes 1989), and Russell (Zierden 1995). The sites included in the 1860s-1900 list are: Aiken-Rhett (this report), Powder Magazine (Zierden 1997), President Street (Wood 1988), Russell (Zierden 1995), 14 Legare (Zierden 2001b), 70 Nassau Street privy (Ruff and Reitz 1992), and 72 Anson Street (Reitz and Dukes 1993). The 70 Nassau Street well data are not included (Reitz 1990).

Table 2. Aiken-Rhett 2003: Allometric Formulae Used in Study.

Faunal Category	N	Y-Intercept (a)	Slope (b)	r ²
<u>Bone Weight (kg) to Body Weight (kg)</u>				
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
Turtle	26	0.51	0.67	0.55
Bird	307	1.04	0.91	0.97
Mammal	97	1.12	0.90	0.94

Note: Key to abbreviations: Formula is $Y = ax^b$; where Y is biomass or meat weight, X is bone or shell weight, a is the Y-intercept, and b is the slope; N is the number of observations (Reitz and Wing 1999:224-228; Reitz et al. 1987; Wing and Brown 1979).

Table 3. Aiken-Rhett 2003, 1818-1830: Species List.

Taxa	NISP	#	MNI		Biomass	
			%	Weight, g	kg	
Osteichthyes	1			0.10	0.005	
Indeterminate bony fish						
<i>Sciaenops ocellatus</i>	1	1	25.0	0.10	0.007	
Red drum						
Aves	3			1.10	0.022	
Indeterminate bird						
Mammalia	5			8.80	0.186	
Indeterminate mammal						
Artiodactyla	2			3.40	0.079	
Even-toed ungulate						
<i>Sus scrofa</i>	1	1	25.0	15.75	0.314	
Pig						
<i>Bos taurus</i>	3	1	25.0	112.80	1.850	
Cow						
Caprinae	1	1	25.0	14.20	0.286	
Sheep/goat						
Total	17	4		156.25	2.749	

Table 4. Aiken-Rhett 2003, 1818-1830: Summary Table.

	MNI		Biomass	
	#	%	kg	%
Fishes	1	25.0	0.007	0.3
Domestic mammals	3	75.0	2.450	99.7
Total	4		2.457	

Table 5. Aiken-Rhett 2003, 1818-1830: Element Distribution.

	Pig	Cow	Sheep/Goat
Head		1	
Vertebra/Rib		1	
Forequarter	1		
Hindquarter		1	1
Forefoot			
Hindfoot			
Foot			
Total	1	3	1

Table 6. Aiken-Rhett 2003, 1818-1830: Epiphyseal Fusion for Cow (*Bos taurus*).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal			
Scapula, distal			
Radius, proximal			
Acetabulum			
Metapodials, proximal			
1st/2nd phalanx, proximal			
Middle Fusing:			
Tibia, distal		1	1
Calcaneus, proximal			
Metapodials, distal			
Late Fusing:			
Humerus, proximal			
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal			
Femur, distal			
Tibia, proximal			
Total		1	1

Table 7. Aiken-Rhett 2003, 1818-1830: Epiphyseal Fusion for Sheep/Goat (Caprinae).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal			
Scapula, distal			
Radius, proximal			
Acetabulum			
Metapodials, proximal			
1st/2nd phalanx, proximal			
Middle Fusing:			
Tibia, distal		1	1
Calcaneus, proximal			
Metapodials, distal			
Late Fusing:			
Humerus, proximal			
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal			
Femur, distal			
Tibia, proximal			
Total		1	1

Table 8. Aiken-Rhett 2003, 1818-1830: Modifications.

Taxon	Carnivore gnawed	Cut	Sawed
Indeterminate bird	1		
Indeterminate mammal		1	
Even-toed ungulate		1	
Pig			1
Cow		1	
Total	1	3	1

Table 9. Aiken-Rhett 2003, 1830-1850: Species List.

Taxa	NISP	MNI		Biomass	
		#	%	Weight, g	kg
Osteichthyes	89			3.83	0.088
Indeterminate bony fish					
<i>Bagre marinus</i>	2	1	3.4	0.15	0.003
Gafftopsail catfish					
<i>Centropristis</i> spp.	1	1	3.4	0.20	0.003
Sea bass					
<i>Pomatomus saltatrix</i>	1	1	3.4	0.10	0.004
Bluefish					
<i>Archosargus probatocephalus</i>	2	1	3.4	1.90	0.029
Sheepshead					
<i>Cynoscion</i> spp.	2			0.10	0.007
Sea trout					
<i>Cynoscion nebulosus</i>	1	1	3.4	0.10	0.007
Spotted seatrout					
Anura	1			0.10	
Frogs and toads					
<i>Bufo terrestris</i>	1	1	3.4	0.10	
Southern toad					
<i>Scaphiopus holbrookii</i>	1	1	3.4	0.10	
Eastern spadefoot					
Testudines	1			0.10	0.007
Turtles					
<i>Malaclemys terrapin</i>	1	1	3.4	1.10	0.034
Diamondback terrapin					
Aves	52			22.27	0.344
Indeterminate bird					
Anatidae	2			0.40	0.009
Swans, geese and ducks					

Table 9. Aiken-Rhett 2003, 1830-1850: Species List (cont.)

Taxa	NISP	#	MNI		Biomass	
			%	Weight, g	kg	
<i>Anas</i> sp.	3			2.70	0.050	
Ducks						
<i>Anas discors</i>	1	1	3.4	0.30	0.007	
Blue-winged teal						
<i>Anas platyrhynchos</i>	4	1	3.4	4.80	0.085	
Mallard						
<i>Branta canadensis</i>	2	1	3.4	1.60	0.031	
Canada goose						
<i>Gallus gallus</i>	36	6	20.7	50.80	0.728	
Chicken						
<i>Meleagris gallopavo</i>	2	1	3.4	9.70	0.161	
Turkey						
Mammalia	251			314.20	4.651	
Indeterminate mammal						
<i>Didelphis virginiana</i>	3	1	3.4	2.10	0.051	
Opossum						
<i>Rattus</i> spp.	30	4	13.8	12.00	0.246	
Rat						
<i>Castor canadensis</i>	1	1	3.4	0.90	0.024	
Beaver						
Artiodactyla	15			71.55	1.228	
Even-toed ungulate						
<i>Sus scrofa</i>	10	2	6.9	66.65	1.152	
Pig						
<i>Odocoileus virginianus</i>	1	1	3.4	4.60	0.104	
Deer						
<i>Bos taurus</i>	13	1	3.4	170.97	2.689	
Cow						

Table 9. Aiken-Rhett 2003, 1830-1850: Species List (cont.)

Taxa	NISP	#	MNI		Biomass	
				%	Weight, g	kg
Caprinae	1				9.60	0.201
Sheep/goat						
<i>Ovis aries</i>	1	1		3.4	10.70	0.222
Sheep						
Vertebrata					4.00	
Indeterminate vertebrate						
Total	531	29			767.72	12.165

Table 10. Aiken-Rhett 2003, 1830-1850: Summary Table.

	MNI		Biomass	
	#	%	kg	%
Fishes	5	17.2	0.046	0.8
Turtles	1	3.4	0.034	0.6
Wild birds	4	13.8	0.284	5.1
Domestic birds	6	20.7	0.728	13.0
Wild mammals	3	10.3	0.179	3.2
Domestic mammals	4	13.8	4.063	72.8
Commensal taxa	6	20.7	0.246	4.4
Total	29		5.580	

Note: Anurans are included in the MNI calculation, but are not included in the biomass calculation because allometric values are not currently available for the Anurans.

Table 11. Aiken-Rhett 2003, 1830-1850: Element Distribution.

	Pig	Deer	Cow	Sheep/Goat
Head	1		1	
Vertebra/Rib			3	
Forequarter	3		3	1
Hindquarter	5	1	3	
Forefoot				
Hindfoot	1		3	1
Foot				
Total	10	1	13	2

Table 12. Aiken-Rhett 2003, 1830-1850: Epiphyseal Fusion for Pig (*Sus scrofa*).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal		1	1
Scapula, distal			
Radius, proximal			
Acetabulum			
Metapodials, proximal			
1st/2nd phalanx, proximal			
Middle Fusing:			
Tibia, distal	1		1
Calcaneus, proximal			
Metapodials, distal			
Late Fusing:			
Humerus, proximal			
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal			
Femur, distal			
Tibia, proximal			
Total	1	1	2

Table 13. Aiken-Rhett 2003, 1830-1850: Epiphyseal Fusion for Deer (*Odocoileus virginianus*).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal			
Scapula, distal			
Radius, proximal			
Acetabulum		1	1
Metapodials, proximal			
1st/2nd phalanx, proximal			
Middle Fusing:			
Tibia, distal			
Calcaneus, proximal			
Metapodials, distal			
Late Fusing:			
Humerus, proximal			
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal			
Femur, distal			
Tibia, proximal			
Total		1	1

Table 14. Aiken-Rhett 2003, 1830-1850: Epiphyseal Fusion for Cow (*Bos taurus*).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal			
Scapula, distal			
Radius, proximal		1	1
Acetabulum			
Metapodials, proximal			
1st/2nd phalanx, proximal			
Middle Fusing:			
Tibia, distal			
Calcaneus, proximal			
Metapodials, distal			
Late Fusing:			
Humerus, proximal	1		1
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal			
Femur, distal			
Tibia, proximal			
Total	1	1	2

Table 15. Aiken-Rhett 2003, 1830-1850: Modifications.

Taxon	Rodent gnawed	Carnivore gnawed	Metal stained	Burned	Calcined	Cut	Hacked	Clean cut	Sawed
Indeterminate turtle					1				
Indeterminate bird	3	1	1	1		3			
Swans/geese/ducks		1							
Ducks	1								
Mallard		1							
Canada goose	1								
Chicken	1	2				1			
Turkey						1			
Indeterminate mammal	12	1		4	3	10			12
Even-toed ungulate	1				1	1	2		4
Pig	1	3			1		1		3
Deer				1					
Cow	1					2		1	6
Sheep/goat						2			
Total	21	9	1	6	6	20	3	1	25

Table 16. Aiken-Rhett 2003, 1850-1870: Species List.

Taxa	NISP	MNI		Biomass	
		#	%	Weight, g	kg
Osteichthyes	5			0.30	0.011
Indeterminate bony fish					
<i>Pogonias cromis</i>	1	1	16.7	0.10	0.007
Black drum					
Testudines	1			0.35	0.016
Indeterminate turtle					
<i>Malaclemys terrapin</i>	1	1	16.7	1.45	0.041
Diamond-back terrapin					
Aves	2			0.58	0.012
Indeterminate bird					
<i>Gallus gallus</i>	1	1	16.7	1.35	0.027
Chicken					
Mammalia	26			13.67	0.277
Indeterminate mammal					
Artiodactyla	10			13.91	0.281
Even-toed ungulate					
<i>Sus scrofa</i>	2	1	16.7	3.45	0.080
Pig					
<i>Bos taurus</i>	4	1	16.7	85.40	1.440
Cow					
Caprinae	3	1	16.7	7.80	0.167
Sheep/goat					
Vertebrata				0.68	
Indeterminate vertebrate					
Total	56	6		129.04	2.359

Table 17. Aiken-Rhett 2003, 1850-1870: Summary Table.

	MNI		Biomass	
	#	%	kg	%
Fishes	1	16.7	0.007	0.4
Turtles	1	16.7	0.041	2.3
Domestic birds	1	16.7	0.027	1.5
Domestic mammals	3	50.0	1.687	95.7
Total	6		1.762	

Table 18. Aiken-Rhett 2003, 1850-1870: Element Distribution.

	Pig	Cow	Sheep/Goat
Head		1	1
Vertebra/Rib		1	
Forequarter		1	
Hindquarter			2
Forefoot			
Hindfoot	1	1	
Foot	1		
Total	2	4	3

Table 19. Aiken-Rhett 2003, 1850-1870: Epiphyseal Fusion for Pig (*Sus scrofa*).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal			
Scapula, distal			
Radius, proximal			
Acetabulum			
Metapodials, proximal			
1st/2nd phalanx, proximal			
Middle Fusing:			
Tibia, distal			
Calcaneus, proximal	1		1
Metapodials, distal	1		1
Late Fusing:			
Humerus, proximal			
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal			
Femur, distal			
Tibia, proximal			
Total	2		2

Table 20. Aiken-Rhett 2003, 1850-1870: Modifications.

Taxon	Burned	Calcined	Cut	Hacked	Sawed
Indeterminate mammal		1	1	1	
Even-toed ungulate	1	1			1
Cow					1
Sheep/goat				1	
Total	1	2	1	2	2

Table 21. Aiken-Rhett 2003, 1870-1900: Species List.

Taxa	NISP	MNI		Biomass	
		#	%	Weight, g	kg
Osteichthyes	52			6.60	0.136
Indeterminate bony fish					
Siluriformes	1			0.04	0.001
Catfishes					
Ariidae	1			0.71	0.014
Sea catfishes					
<i>Arius felis</i>	1	1	3.6	0.20	0.004
Hardhead catfish					
<i>Bagre marinus</i>	2	1	3.6	0.62	0.013
Gafftopsail catfish					
<i>Centropristis</i> sp.	3			0.27	0.005
Sea Bass					
<i>Centropristis striata</i>	1	1	3.6	0.08	0.001
Black sea bass					
<i>Caranx</i> sp.	1	1	3.6	0.85	0.034
Jack					
<i>Lutjanus</i> sp.	1	1	3.6	0.20	0.007
Snappers					
<i>Archosargus probatocephalus</i>	4	1	3.6	0.52	0.016
Sheepshead					
<i>Pogonias cromis</i>	1	1	3.6	0.70	0.030
Black drum					
<i>Sciaenops ocellatus</i>	6	1	3.6	2.57	0.078
Red drum					
Testudines	10			8.20	0.129
Indeterminate turtle					
Emydidae	4			3.16	0.068
Pond turtles, terrapins					

Table 21. Aiken-Rhett 2003, 1870-1900: Species List. (cont.)

Taxa	NISP	#	MNI		Biomass	
			%	Weight, g	kg	
<i>Chrysemys</i> sp. Painted turtles	4	2	7.1	7.87	0.126	
<i>Deirochelys reticularia</i> Chicken turtles	3	1	3.6	8.30	0.131	
<i>Malaclemys terrapin</i> Diamond-back terrapin	4	1	3.6	5.20	0.095	
Aves Indeterminate bird	71			15.05	0.241	
Anatidae Swans, geese and ducks	1			0.35	0.008	
<i>Anas platyrhynchos</i> Mallard	1	1	3.6	0.70	0.015	
<i>Branta canadensis</i> Canada goose	2	1	3.6	5.22	0.092	
<i>Gallus gallus</i> Chicken	25	2	7.1	23.69	0.364	
<i>Meleagris gallopavo</i> Turkey	3	1	3.6	6.10	0.106	
<i>Columba livia</i> Rock dove	1	1	3.6	3.50	0.064	
Mammalia Indeterminate mammal	670			413.31	5.952	
<i>Didelphis virginiana</i> Opossum	2	1	3.6	1.47	0.037	
<i>Rattus</i> spp. Rat	8	1	3.6	1.85	0.046	
Artiodactyla Even-toed ungulate	119			264.06	3.977	

Table 21. Aiken-Rhett 2003, 1870-1900: Species List. (cont.)

Taxa	NISP	#	MNI		Biomass	
			%	Weight, g	kg	
<i>Sus scrofa</i>	28	2	7.1	170.42	2.682	
Pig						
<i>Odocoileus virginianus</i>	5	2	7.1	12.05	0.247	
Deer						
<i>Bos taurus</i>	78	3	10.7	1406.88	17.924	
Cow						
Caprinae	10	1	3.6	60.24	1.052	
Sheep/goat						
Vertebrata				2.30		
Indeterminate vertebrate						
Total	1123	28		2433.28	33.695	

Table 22. Aiken-Rhett 2003, 1870-1900: Summary Table.

	MNI		Biomass	
	#	%	kg	%
Fishes	8	28.6	0.183	0.8
Turtles	4	14.3	0.352	1.5
Wild birds	3	10.7	0.213	0.9
Domestic birds	3	10.7	0.428	1.8
Wild mammals	3	10.7	0.284	1.2
Domestic mammals	6	21.4	21.658	93.5
Commensal taxa	1	3.6	0.046	0.2
Total	28		23.164	

Table 23. Aiken-Rhett 2003, 1870-1900: Element Distribution.

	Pig	Deer	Cow	Sheep/Goat
Head	11	2	19	
Vertebra/Rib	2		23	3
Forequarter	1		9	1
Hindquarter	12	2	17	4
Forefoot				
Hindfoot			7	2
Foot	2	1	2	
Unknown			1	
Total	28	5	78	10

Table 24. Aiken-Rhett 2003, 1870-1900: Epiphyseal Fusion for Pig (*Sus scrofa*).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal			
Scapula, distal			
Radius, proximal			
Acetabulum			
Metapodials, proximal			
1st/2nd phalanx, proximal		1	1
Middle Fusing:			
Tibia, distal			
Calcaneus, proximal			
Metapodials, distal	1		1
Late Fusing:			
Humerus, proximal			
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal	1		1
Femur, distal			
Tibia, proximal			
Total	2	1	3

Table 25. Aiken-Rhett 2003, 1870-1900: Epiphyseal Fusion for Deer (*Odocoileus virginianus*).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal			
Scapula, distal			
Radius, proximal			
Acetabulum			
Metapodials, proximal			
1st/2nd phalanx, proximal	1		1
Middle Fusing:			
Tibia, distal			
Calcaneus, proximal			
Metapodials, distal			
Late Fusing:			
Humerus, proximal			
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal			
Femur, distal			
Tibia, proximal			
Total	1		1

Table 26. Aiken-Rhett 2003, 1870-1900: Epiphyseal Fusion for Cow (*Bos taurus*).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal			
Scapula, distal			
Radius, proximal			
Acetabulum			
Metapodials, proximal			
1st/2nd phalanx, proximal			
Middle Fusing:			
Tibia, distal	4		4
Calcaneus, proximal	3		3
Metapodials, distal			
Late Fusing:			
Humerus, proximal			
Radius, distal			
Ulna, proximal			
Ulna, distal	1		1
Femur, proximal			
Femur, distal	2		2
Tibia, proximal	1		1
Total	11		11

Table 27. Aiken-Rhett 2003, 1870-1900: Epiphyseal Fusion for Sheep/Goat (Caprinae).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal			
Scapula, distal			
Radius, proximal			
Acetabulum			
Metapodials, proximal			
1st/2nd phalanx, proximal			
Middle Fusing:			
Tibia, distal	2		2
Calcaneus, proximal			
Metapodials, distal			
Late Fusing:			
Humerus, proximal			
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal	1		1
Femur, distal			
Tibia, proximal	1		1
Total	4		4

Table 28. Aiken-Rhett 2003, 1870-1900: Modifications.

Taxon	Rodent gnawed	Carnivore gnawed	Metal stained	Burned	Calcined	Cut	Hacked	Clean cut	Sawed
Indeterminate bony fish					1				
Indeterminate bird		1			1				
Mallard		1							
Chicken		2				2			
Indeterminate mammal	3	1	6	12	9	10	6	1	14
Even-toed ungulate		1				6		1	16
Pig						3		1	4
Deer						1			1
Cow						9	6	3	20
Caprinae	1					1	2	1	
Total	4	6	6	12	11	32	14	7	55

Table 29. Aiken-Rhett 2003, 20th Century: Species List.

Taxa	NISP	#	MNI		Biomass	
			%	Weight, g	kg	
Osteichthyes	37			2.58	0.064	
Indeterminate bony fish						
<i>Archosargus probatocephalus</i>	1	1	5.0	1.10	0.033	
Sheepshead						
Anura	1	1	5.0	0.50		
Frogs and toads						
Testudines	1			0.20	0.011	
Indeterminate turtles						
<i>Deirochelys reticularia</i>	2	1	5.0	3.10	0.067	
Chicken turtle						
Aves	48			25.25	0.386	
Indeterminate bird						
Anatidae	1			1.00	0.020	
Swans, geese and ducks						
<i>Anas</i> sp.	1			0.70	0.015	
Ducks						
<i>Anas platyrhynchos</i>	1	1	5.0	0.90	0.019	
Mallard						
<i>Gallus gallus</i>	14	4	20.0	21.70	0.336	
Chicken						
<i>Meleagris gallopavo</i>	7	2	10.0	31.85	0.476	
Turkey						
Emberizidae	2	1	5.0	0.10	0.003	
Warblers and allies						
Mammalia	213			267.89	4.029	
Indeterminate mammal						
<i>Rattus</i> spp.	16			3.80	0.087	
Rat						

Table 29. Aiken-Rhett 2003, 20th Century: Species List. (cont.)

Taxa	NISP	#	MNI		Biomass	
			%	Weight, g	kg	
<i>Rattus norvegicus</i>	1	1	5.0	0.69	0.019	
Norway rat						
<i>Felis domesticus</i>	1	1	5.0	1.10	0.029	
Domestic cat						
Artiodactyla	41			100.49	1.667	
Even-toed ungulate						
<i>Sus scrofa</i>	19	3	15.0	215.02	3.306	
Pig						
<i>Bos taurus</i>	43	2	10.0	1405.01	17.903	
Cow						
Caprinae	12	2	10.0	169.28	2.665	
Sheep/goat						
Vertebrata				10.85		
Indeterminate vertebrate						
Total	462	20		2263.11	31.135	

Table 30. Aiken-Rhett 2003, 20th Century: Summary Table.

	MNI		Biomass	
	#	%	kg	%
Fishes	1	5.0	0.033	0.1
Turtles	1	5.0	0.067	0.3
Wild birds	1	5.0	0.019	0.1
Domestic birds	6	30.0	0.812	3.3
Domestic mammals	7	35.0	23.874	96.0
Commensal taxa	4	20.0	0.051	0.2
Total	20		24.856	

Note: Anurans are included in the MNI calculation, but are not included in the biomass calculation because allometric values are not currently available for the Anurans.

Table 31. Aiken-Rhett 2003, 20th Century: Element Distribution.

	Pig	Cow	Sheep/Goat
Head	3	2	3
Vertebra/Rib	1	13	2
Forequarter	1	8	
Hindquarter	8	15	7
Forefoot	3		
Hindfoot	1	3	
Foot	2		
Unknown		2	
Total	19	43	12

Table 32. Aiken-Rhett 2003, 20th Century: Epiphyseal Fusion for Pig (*Sus scrofa*).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal			
Scapula, distal			
Radius, proximal			
Acetabulum		1	1
Metapodials, proximal			
1st/2nd phalanx, proximal	2		2
Middle Fusing:			
Tibia, distal			
Calcaneus, proximal			
Metapodials, distal	3		3
Late Fusing:			
Humerus, proximal			
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal		3	3
Femur, distal		1	1
Tibia, proximal	1	1	2
Total	6	6	12

Table 33. Aiken-Rhett 2003, 20th Century: Epiphyseal Fusion for Cow (*Bos taurus*).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal			
Scapula, distal			
Radius, proximal		1	1
Acetabulum		1	1
Metapodials, proximal			
1st/2nd phalanx, proximal			
Middle Fusing:			
Tibia, distal			
Calcaneus, proximal			
Metapodials, distal			
Late Fusing:			
Humerus, proximal			
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal		1	1
Femur, distal			
Tibia, proximal			
Total		3	3

Table 34. Aiken-Rhett 2003, 20th Century: Epiphyseal Fusion for Sheep/Goat (Caprinae).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal			
Scapula, distal			
Radius, proximal			
Acetabulum			
Metapodials, proximal			
1st/2nd phalanx, proximal			
Middle Fusing:			
Tibia, distal			
Calcaneus, proximal			
Metapodials, distal			
Late Fusing:			
Humerus, proximal			
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal	1		1
Femur, distal	1		1
Tibia, proximal		1	1
Total	2	1	3

Table 35. Aiken-Rhett 2003, 20th Century: Modifications.

Taxon	Rodent gnawed	Carnivore gnawed	Metal stained	Calcined	Cut	Hacked	Clean cut	Sawed
Chicken turtle					2			
Indeterminate bird		1						
Mallard		1						
Chicken		2						
Turkey	1	1			3			
Indeterminate mammal	1	1	1	2	2	1		14
Two-toed ungulate					1			4
Pig	4				4			3
Cow	5	1			2	4	1	20
Sheep/goat	2	1			3			1
Total	13	8	1	2	17	5	1	42

Appendix A. Aiken-Rhett 2003: Faunal Samples Studied.

FS#	Time Period
3	1870-1900
4	1850-1870
5	1870-1900
6	1870-1900
7	1850-1870
8	1870-1900
9	1870-1900
10	1850-1870
15	1870-1900
16	1870-1900
17	1870-1900
18	1830-1850
19	1850-1870
20	1830-1850
21	20th Century
22	20th Century
24	1870-1900
26	1870-1900
27	1870-1900
28	1850-1870
33	1870-1900
35	1870-1900
40	20th Century
41	1870-1900
43	1870-1900
44	1818-1830
46	1870-1900
47	1830-1850
48	20th Century
49 WSP	20th Century
49 W.C.	20th Century
50	1830-1850
51	1830-1850
52	1830-1850
53	1830-1850
54	1830-1850
55	1830-1850
57	1818-1830
58	1830-1850
59	20th Century
77	20th Century
79	20th Century
80	1870-1900
81	20th Century
83	1870-1900
85	20th Century
88	20th Century
90	20th Century
91	1870-1900

Appendix A. Aiken-Rhett 2003: Faunal Samples Studied.(cont.)

FS#	Time Period
95	1870-1900
96	20th Century
97	1870-1900
98	20th Century
99	1870-1900
100	1870-1900
101	20th Century
102	1830-1850
104	1870-1900
106	20th Century
107	20th Century
109	1870-1900
112	1830-1850
113	1870-1900
114	1870-1900
115	1830-1850
117	1870-1900
118	1870-1900
119	20th Century
121	20th Century
127	1818-1830
128	20th Century
133	1870-1900
137	20th Century
141	20th Century
142	1830-1850
143	1830-1850
144	20th Century
147	20th Century
151	1830-1850
153	20th Century
154	1870-1900
155	1870-1900
156	1870-1900
158	1870-1900
159	20th Century
162	1830-1850
164	1830-1850
169	1818-1830
174	1830-1850
177	1850-1870
180	1818-1830
187	1818-1830
207	1818-1830
Found on Landing in Quarters	20th Century

**Appendix B. Aiken-Rhett 2003.
1818-1830: Measurements.**

Taxon	FS#	Element	Dimension	Measurement, mm
<i>Bos taurus</i>		187 Tibia	Bd	72.92
			Dd	50.74
Caprinae		127 Tibia	Bd	28.50
			Dd	19.59

1830-1850: Measurements.

Taxon	FS #	Element	Dimension	Measurement, mm
<i>Gallus gallus</i>	58	Femur	SC	8.19
<i>Gallus gallus</i>	58	Coracoid	Bb	12.45
			BF	10.87
<i>Gallus gallus</i>	55	Femur	SC	8.98
<i>Gallus gallus</i>	55	Ulna	Dip	13.25
			Bp	8.86
<i>Gallus gallus</i>	55	Ulna	SC	5.72
<i>Gallus gallus</i>	55	Coracoid	Bb	13.59
			BF	12.99
<i>Gallus gallus</i>	54	Femur	SC	6.79
<i>Gallus gallus</i>	54	Femur	SC	5.39
<i>Gallus gallus</i>	54	Humerus	SC	5.85
<i>Gallus gallus</i>	53	Dentary	GL	48.39
			LaF	47.03
			LS	6.21
			GL	135.17
<i>Gallus gallus</i>	53	Tibiotarsus	LaF	129.44
			Dip	25.17
			SC	7.86
			Bd	14.54
			Dd	14.52
<i>Gallus gallus</i>	53	Tibiotarsus	SC	7.93
			Bd	13.71
			Dd	12.55
<i>Gallus gallus</i>	52	Coracoid	GL	50.71
<i>Gallus gallus</i>	52	Radius	GL	61.28
			SC	3.12
			Bd	6.58
			GL	64.73
<i>Gallus gallus</i>	52	Radius	SC	3.29
			Bd	7.30
			Dd	10.61
<i>Gallus gallus</i>	51	Ulna	SC	5.12
<i>Gallus gallus</i>	51	Tarsometatarsus	SC	5.96
<i>Gallus gallus</i>	51	Radius	SC	3.17
<i>Gallus gallus</i>	142	Tarsometatarsus	SC	6.05
<i>Gallus gallus</i>	142	Tarsometatarsus	SC	6.50
<i>Meleagris gallopavo</i>	55	Tibiotarsus	SC	8.86
<i>Meleagris gallopavo</i>	54	Acetabulum	DiA	15.50
<i>Sus scrofa</i>		55 Humerus	Bd	49.40
			BT	38.93

**Appendix B. Aiken-Rhett 2003.
1830-1850: Measurements.**

Taxon	FS #	Element	Dimension	Measurement, mm
<i>Sus scrofa</i>	54	Astragalus	GLI	33.71
			GLm	30.77
			DL	17.98
			Dm	19.18
			Bd	20.62

1850-1870: Measurements.

Taxon	FS#	Element	Dimension	Measurement, mm
<i>Gallus gallus</i>	19	Coracoid	GL	61.60
			Lm	58.50
			BF	12.80
			Bb	15.70
<i>Bos taurus</i>	19	Astragalus	GLm	58.05
			GLI	63.00
			Bd	42.20
			DI	0.00
			Dm	0.00

1870-1900: Measurements.

Taxon	FS#	Element	Dimension	Measurement, mm
<i>Gallus gallus</i>	118	Coracoid	GL	54.52
			Lm	51.97
			Bb	15.20
			BF	12.95
<i>Gallus gallus</i>	99	Ulna	GL	77.95
			Dip	14.73
			Bp	9.28
			SC	4.22
			Did	10.78
<i>Gallus gallus</i>	95	Humerus	SC	7.34
<i>Gallus gallus</i>	41	Tarsometatarsus	Bp	17.00
<i>Gallus gallus</i>	33	Tibiotarsus	Bd	10.60
			Dd	10.40
<i>Gallus gallus</i>	16	Humerus	Bd	14.80
<i>Gallus gallus</i>	16	Femur	Bd	12.90
			Dp	8.40
<i>Gallus gallus</i>	5	Scapula	Dic	11.70
<i>Sus scrofa</i>	158	Phalanx	GL	26.90
			Bp	21.30
			SD	17.02
			Bd	18.34

20th Century: Measurements.

Taxon	FS#	Element	Dimension	Measurement, mm
<i>Gallus gallus</i>	137	Humerus	Bp	19.40
			SC	7.08
<i>Gallus gallus</i>	128	Humerus	SC	4.76
<i>Gallus gallus</i>	49 WSP	Tarsometatarsus	Bd	13.65
<i>Gallus gallus</i>	49 WSP	Tarsometatarsus	Bd	16.51
<i>Gallus gallus</i>	49 WSP	Tarsometatarsus	Bp	16.66
<i>Gallus gallus</i>	49 WSP	Ulna	SC	4.50

**Appendix B. Aiken-Rhett 2003.
20th Century: Measurements.**

Taxon	FS#	Element	Dimension	Measurement, mm
<i>Gallus gallus</i>	98	Carpometacarpus	Did	7.39
<i>Gallus gallus</i>	49 w.c.	Coracoid	Lm	55.50
			Bb	14.64
<i>Gallus gallus</i>	49 w.c.	Tibiotarsus	GL	121.06
			SC	6.98
<i>Gallus gallus</i>	48	Humerus	GL	58.12
			SC	5.22
<i>Gallus gallus</i>	48	Femur	SC	5.69
<i>Meleagris gallopavo</i>	59	Humerus	GL	130.42
			Bp	38.64
			SC	13.89
			Bd	28.53
<i>Meleagris gallopavo</i>	49 WSP	Tibiotarsus	Bd	19.90
			Dd	18.73
<i>Meleagris gallopavo</i>	49 WSP	Humerus	SC	10.87
<i>Meleagris gallopavo</i>	49 WSP	Coracoid	BF	24.39
<i>Sus scrofa</i>	141	Metacarpal	GL	73.77
			LeP	71.01
			B	14.10
			Bd	18.46
<i>Sus scrofa</i>	101	Metacarpal	GL	76.03
			LeP	16.18
			B	13.69
			Bd	17.25
<i>Sus scrofa</i>	98	Phalanx 1	GL	33.61
			Bp	17.08
			SD	14.55
			Bd	16.79
<i>Sus scrofa</i>	96	Phalanx 1	SD	15.11
			Bd	17.17
<i>Sus scrofa</i>	77	Metatarsal	Bp	15.82
			B	20.72
<i>Sus scrofa</i>	48	Tibia	SD	28.69
<i>Sus scrofa</i>	48	Femur	GL	166.14
			GLC	164.61
			Bp	42.94
			DC	19.34
			SD	15.51
			Bd	34.03
<i>Sus scrofa</i>	48	Femur	Bp	44.51
			DC	19.96
<i>Bos taurus</i>	48	Tibia	SD	42.81
		Sacrum	BFcr	48.86
			HFcr	22.56
Caprinae	48	Femur	SD	19.53
		Femur	SD	16.33