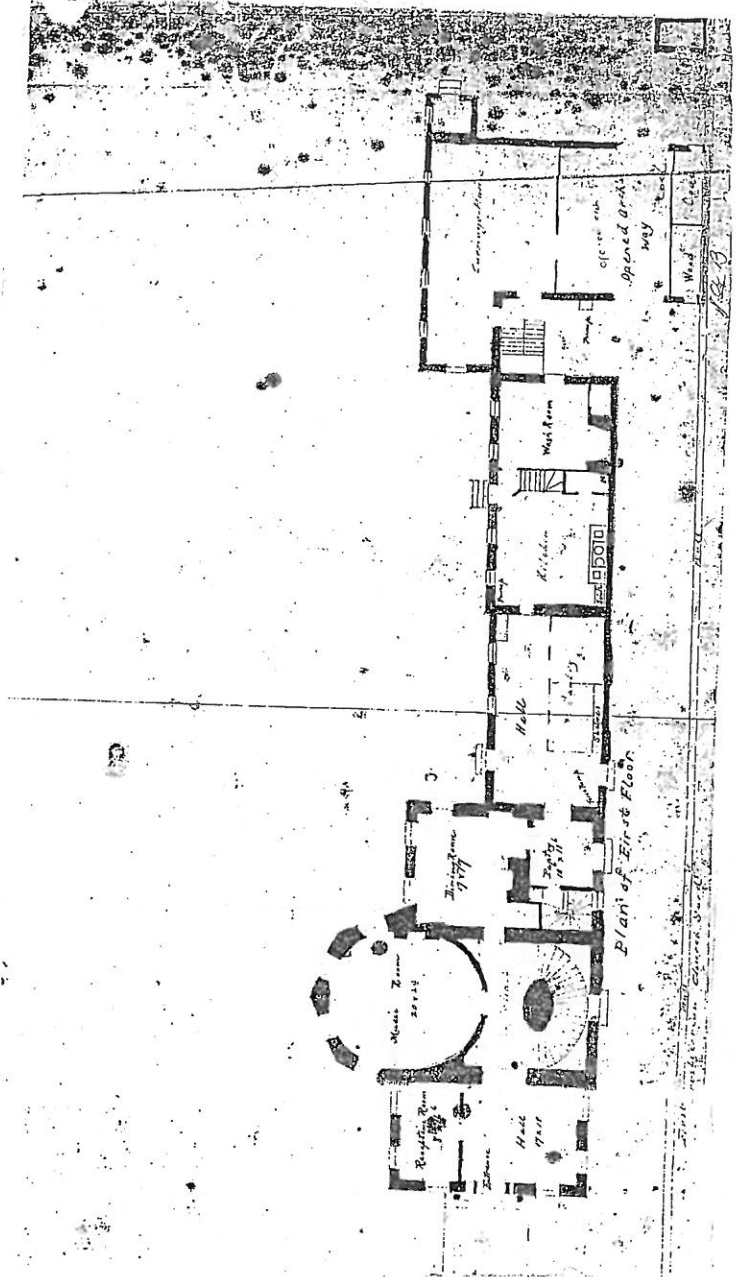


the Nathaniel Russell House

**Initial
Archaeological
Testing**



**Archaeological Contributions 24
The Charleston Museum**

Initial Archaeological Testing:
the Nathaniel Russell House

by

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Archaeological Contributions 24
The Charleston Museum

prepared for
Historic Charleston Foundation

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Acknowledgments

In a moment of levity, and great insight, a colleague once remarked, "Archaeology is fun, or it is nothing." Archaeology at the Russell House has been fun. The archaeological project at the Nathaniel Russell house has been an interdisciplinary project in every sense, and as such has been one of the most enjoyable in my career. The daily interaction with students, Foundation staff, and experts in other fields has added greatly to the success of the project; it has also resulted in unrestrained enthusiasm for continued work.

Field School students did the bulk of the hard work at the site this summer, and they brought great depth to the project. Mary Heyward Belser, Annabelle Javier, Kimberly DeAmicis, Camp Davis, Tony Eustis, Rusty Clark, Monaca Wiggers, Thomas Oliver, Kristen Roberts, Brett Nachman, Rhonda Varallo, and Kevin Sandifer all worked hard in the heat and the rain, and provided a cheerful explanation to the many site visitors. Virginia Pierce, a graduate of the College of Charleston field school, served as field supervisor, and she worked above and beyond the call of duty. Another anthropology graduate from Charleston, Randall Turner, volunteered throughout the summer. She inspired the students with tales of her field school, where they found nothing. In November, Ron Anthony and I were ably assisted by another Charleston archaeologist, Martha Middleton. She conducted all of the analysis and conservation for the November project, and she and Virginia processed all the materials from the summer. Martha, Virginia, and Randall were the "backbone" of this project, and I enjoyed their company, good humor, and hard work.

A number of volunteers joined us this summer; I thank Lee Tippett, Neils Taylor, Lilla Lane, and Ann Middleton for their help. In November, Lary Cadigan, Sandy Just, and Holly Farallay-Plourde volunteered with us. Field School graduates enrolled in College internships also helped with fieldwork: Molly Matlock, Rhonda Varallo, Rusty Clark, and Brett Nachman.

Special thanks go to Fred Andrus of the University of Georgia. His salvage work for the Foundation in 1990 provided the basis for the present project; we subsequently consulted his notes, report, and photographs on several occasions. He was always willing to discuss the site by phone, and his on-site visits were a great help. His continued interest in the site is appreciated.

Members of The Charleston Museum exhibit team designed and constructed the exhibit for the Russell House kitchen, and I thank them for taking time from their grueling schedule. Jan Heister, Jo Fetzer, Dana MacBean, Brad Watson, and especially Peter Coleman make working at The Charleston Museum a pleasure. Thanks are also due to John Brumgardt, Director, Brien Varnado, Assistant Director, and Faye Brownlee, business office manager, for keeping the project on track.

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The entire staff at Historic Charleston Foundation made this project a pleasure. First to be thanked are Dr. Carter Hudgins and Mr. Thomas Savage for their confidence in archaeology to provide valuable insights, their support and insight. Judy Middleton, Kristy Varn, Renee LaRue, and the entire Russell House staff made us feel welcome, even when our shoes were dirty, and made our stay pleasurable. But my undying gratitude must go to Robert Leath. His great enthusiasm, his daily visits to the units, his careful, thorough, and more-than-prompt documentary research, and finally his administrative assistance cannot be equalled. The interpretations in this document are as much his as they are mine, and I look forward to working with Robert in the future.

CHAPTER I

Introduction

The Nathaniel Russell House, completed in 1808, is Historic Charleston Foundation's historic house museum, and as such acts as an important educational resource for the organization. A National Historic Landmark and a nationally recognized icon of neoclassical taste in America, the Russell house was last restored in 1955. Historic Charleston Foundation has embarked on a 1.5 million dollar state-of-the-art restoration of the house. The first step, preparation of a historic structures report, has been funded by an Architectural Conservation Grant from the J.P. Getty Foundation. This project includes ongoing documentary research by the Foundation's curatorial division, archaeological testing, and a detailed analysis of the building's structure and its decorative elements. The project will also serve as a training program for students of architecture, archaeology, museum work, and preservation craftsmanship (figure 1).

The Charleston Museum was invited to conduct the archaeological work. The Charleston Museum has sponsored an ongoing research program in urban archaeology for nearly 20 years. As part of that program, the Museum has performed numerous archaeological studies for Historic Charleston Foundation, and has enjoyed a mutually beneficial relationship with the Foundation. The Museum was therefore very pleased to be part of this prestigious grant-funded project.

Based on the monies allotted for the archaeological phase (\$20,000) the Museum proposed a testing project involving three weeks of fieldwork and entailing the excavation of ten dispersed 5 foot squares (Zierden 1994). These units would target specific features for investigation. They would principally provide an overall, preliminary assessment of the nature, depth, condition, clarity, and temporal affiliation of the archaeological resources at the Russell house. In addition, the excavations were planned to coincide with the annual field school in historical archaeology, a senior-level, 8-hour credit course taught jointly by the Anthropology department at the College of Charleston and Charleston Museum archaeologists. The archaeological project would therefore contribute to the training goal of the overall grant project. Twelve students participated in the 8-week course, and worked at the Russell house for over three weeks. Graduates of the program were hired as project field and laboratory assistants.

Scope of the Present Project

The present archaeological project was designed to provide a preliminary assessment of the depth, range, clarity, content, and temporal affiliation of the site's archaeological component. As



Figure 1

Meeting Street facade of the
Nathaniel Russell House, 1808

part of the Getty Grant, it was also designed to assist in architectural analysis of the property. Ultimately, the project is planned as a guide for future, more comprehensive excavation projects.

Under the present project, ten dispersed 5 foot units were to be excavated during a 3 week field project. Proposed placement of these units was decided in consultation with Historic Charleston Foundation and Russell House staff. Each was designed to investigate several issues simultaneously. Proposed unit locations were as follows:

1. The front yard, adjacent to the southeast corner of the house. This unit exposed the foundation of the house for viewing by the architects, and was also designed to investigate the function of a front yard, a relative rarity in Charleston.

2. A unit adjacent to the small structure in the far northwestern corner of the property, shown on the 1870s plat (figure 5). This to ascertain the presence of the structure, the condition of the foundation, and the possible use of the structure. Suggested uses include privy, livestock shed, or garden shed.

3. A unit adjacent to the small room or structure shown on the rear of the carriage house, as depicted on the 1870s plat. Reasons are the same as no. 2.

4. Testing along the very back of the property to ascertain function and test stratigraphy. This area may have been a livestock/work/kitchen garden area.

5. Testing along the surrounding walls to refine dates of construction and possible alteration.

6. Two units in the flower bed adjacent to the south side of the kitchen to test the proposal that intensive midden and work yard accumulations will be near the kitchen. Choice of the bed was to minimize impact on the landscaping of this highly visible area.

7. Testing in the wide garden beds along the south side of the property to test for the presence of late 18th century structures or activity areas.

8. Testing in the middle of the yard to give even coverage of the site.

9. Units adjacent to the foundation to answer architectural questions, as directed.

10. Testing along the rear wall to verify presence of the outbuildings shown on the 1888 and 1902 Sanborn maps (figures 6 and 7).

Excavations were conducted by hand using shovels and trowels. A Chicago-style site grid was established, and elevations were tied into mean sea level. Soils were both dry- and water-screened, depending on site conditions.

The nature of site conditions and stratigraphy, however, meant that excavation of each unit required more time than anticipated. Despite the efforts of a Principal Investigator, a paid assistant, two trained volunteers, and an average of six students working for nearly four weeks, only 7 units were excavated. The remaining three were excavated in November.

Other conditions affecting work at the site focused on water. The elevation of the Russell property ranges from 7.0 to 8.6 feet above mean sea level and, even with an extremely dry spring and early summer, the water table was encountered in four of the seven units prior to sterile subsoil. This problem was aggravated by a sudden bout of torrential rain the last week of the

project. Three units were filled with over two feet of standing water and had to be bailed continuously as profiles were recorded.

Visitor traffic and maintenance of the garden were additional considerations. Although Thomas Savage and Historic Charleston Foundation staff assured us that maintenance and restoration of the garden was secondary to the goals of the archaeological project, every effort was made to avoid any unnecessary damage to the garden, particularly to shrubs and perennial plants. A greater concern was the extensive underground sprinkler system, timed to run every evening, and filling units with water on more than one occasion. Finally, visitor safety and access affected precise placement of units and screening stations. Despite considerable effort, we did make some messes, and the entire Russell House staff was most accommodating in repairing this damage.

Previous Research

The present project represents the first controlled archaeological excavations at the Russell house, and the first attempt to conduct excavations under a multi-level research design. It is not, however, the first effort to recover archaeological remains in a meaningful context. Previous efforts by Russell house staff, particularly Thomas Savage, to salvage archaeological remains from ground-disturbing house renovations resulted in two valuable collections. These were reanalyzed prior to the present excavations, and are discussed in some capacity in this document.

In January 1982, Thomas Savage, Jeff Parker, Bill Hunt, and Linda Sloan spent a weekend sampling soil from trenches excavated to lay the new Favretti-designed garden. The team screened soil from a trench parallel to the south wall as well as random samples of dirt from other trenches. In order to inspect site stratigraphy, the team excavated a 2 by 2 foot unit, located 39 feet east of the central circle of the garden. This unit was excavated in three natural zones to a depth of 28 inches. The first 9 inches was described as topsoil; this was followed by zone 2, a dark grey loam 9 inches in depth. Zone 3 was a mottled grey and orange sand. Artifacts from these three zones were bagged separately. In his one-page report, Mr. Parker provided a soil profile and noted that the soil in the bottom of the unit was not sterile.

In 1991, installation of a new HVAC system following Hurricane Hugo entailed extensive trenching for ductwork and conduit lines (Andrus 1991). Fred Andrus, a graduate student at the University of Georgia, monitored the excavation of these trenches by workers from James Meadors Construction. He located each trench on blueprint maps, and recorded features and stratigraphy on maps. He also screened as much soil as possible from each of the trench sections through 1/4 inch mesh.

In addition to this salvage work, Andrus excavated a 5 by 5 foot test square in the crawl space beneath the kitchen. Trenching in this area revealed a very dense concentration of artifacts and other debris. In addition to artifacts and great quantities of animal bone, the zones contained quantities of coal. Fred Andrus' report is included here as Appendix II.

All of the material recovered in 1982 and 1991 were analyzed during the present project. These data provided guidance for present unit placement and general ideas about site stratigraphy. The kitchen unit excavated by Andrus was dug in a controlled manner, comparable to the present, and so these materials will be included in the present analysis. The zone 1 materials date to the Allston occupation, while zones 2 through 4 are associated with the Russell family. In particular, the great quantities of bone recovered from this unit seem to be a special resource, and have been included in the faunal analysis.

Research Issues at the Russell House

Research at the Nathaniel Russell House derives meaning from comparison with numerous previously studied sites in Charleston, and elsewhere. The twenty archaeological sites considered in this research differ in many respects, but can be grouped into two categories: residential only and dual residential-commercial (figure 2). The latter are located in that portion of the city that has been intensely utilized from at least the early eighteenth century through the present day. The dual residential-commercial sites include retail, craft, and service enterprises (Charleston Place, First Trident, Lodge Alley, 38 State Street, Visitor's Center, McCrady's Longroom and Tavern); public sites containing some residential debris include the Beef Market and two waterfront dumps (Exchange building, Atlantic Wharf), and the 1712 Powder Magazine (Zierden and Hacker 1987; Zierden et al. 1983b; Zierden et al. 1983a; Grimes and Zierden 1988; Zierden et al. 1982; Calhoun et al. 1984; Zierden and Hacker 1986; Zierden n.d.; Zierden 1994c).

The nine residential sites are, with two exceptions, located in what were suburban areas in the late eighteenth or early nineteenth century and contain standing structures dating to those periods. Their continuous use as residential property to the present facilitates study of the domestic evolution of the property. All properties retain their residential landscape characteristics; six were the homes of elite, the homes of middle class residents. David Smith (1987) has argued that a heavy dependence on trade with Britain and on slaves for every kind of labor from domestic seritude to fine carpentry led to a lack of growth of a sturdy middle class in Charleston. The few successful small proprietors employed slaves and invested their earnings into their own land and slaves; most merchants were also planters. Charleston's elite was the richest society in colonial America; Peter Coclanis (1989) has suggested that in 1774 Charleston's wealth per (free) capita was 416, compared to 38.2 for New England and 45.2 for mid-Atlantic colonies. 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 are those with houses in excess of 7000 square feet and urban lots larger than 18,000 square feet. The middle class houses averaged 4600 square feet on lots of 6000 square feet. These men often rented these properties, and earned a living elsewhere in the city (Jones 1980).

Homes of the urban gentry that were built in the eighteenth and nineteenth century suburbs include those of William Gibbes (1772), Miles Brewton (1769), John Rutledge (1763), Thomas Heyward (1772), Joseph Manigault (1803), and William Aiken (built by John Robinson

SITES EXCAVATED IN CHARLESTON

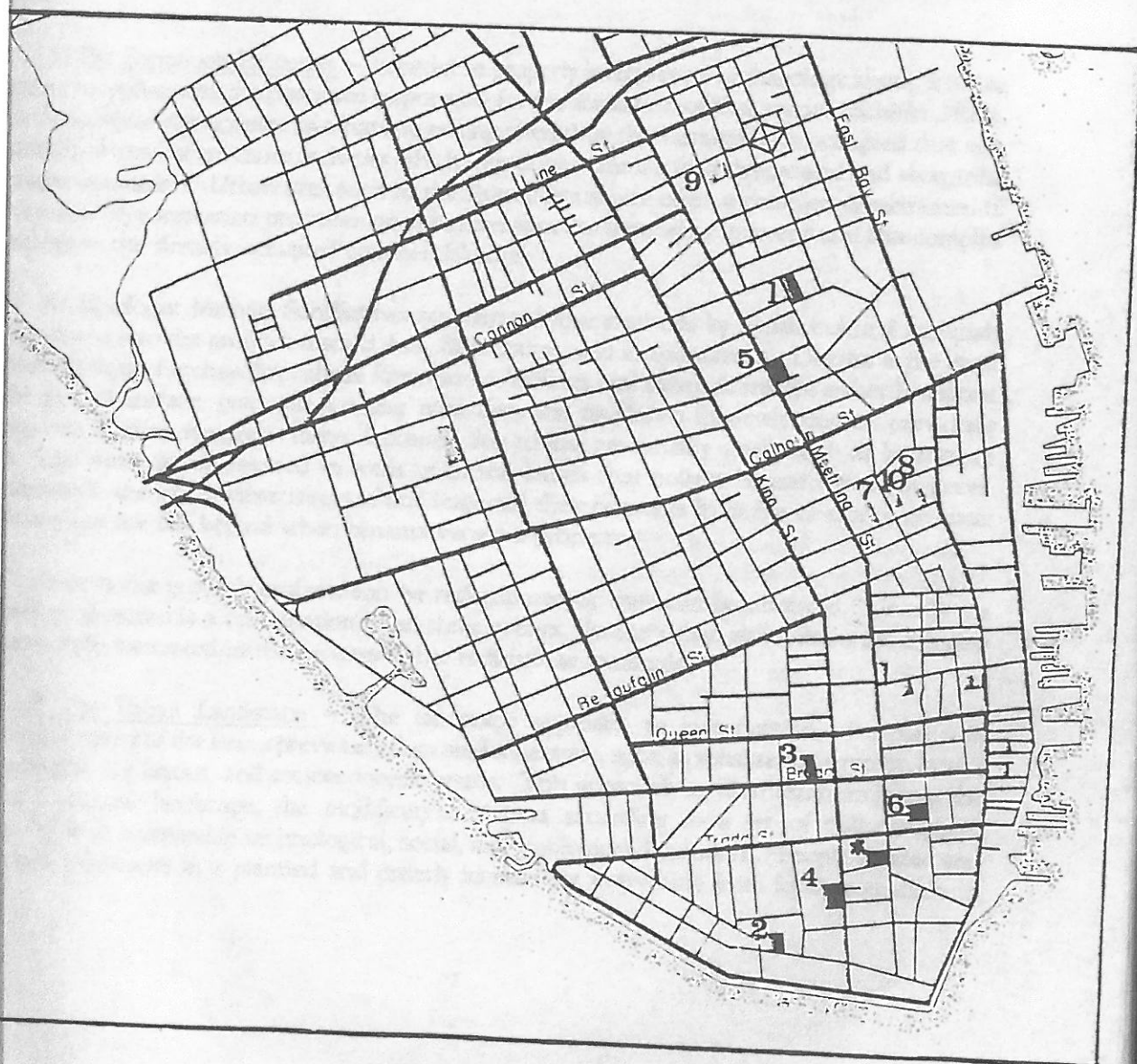
Gentry sites:

1. Aiken-Rhett house
2. William Gibbes house
3. John Rutledge house
4. Miles Brewton house
5. Joseph Manigault house
6. Heyward-Washington house

Middle class sites:

7. 66 Society Street
8. 40 Society Street
9. 70 Nassau Street
10. 72 Anson Street

* Nathaniel Russell house



in 1817), as well as the Nathaniel Russell house. The Rutledge and Heyward lots were occupied in the early eighteenth century, prior to construction of the present houses. The remainder of the houses were among the first in their respective neighborhoods. The three middle class sites include 66 and 40 Society streets and 72 Anson Street, rebuilt on Ansonborough lots after the 1838 fire, and 70 Nassau Street, built in the Charleston Neck in the 1840s. More extensive and more recent archaeological work has been conducted at the residential sites, and this work has produced the core of information on the Charleston landscape; however, the commercial sites have also informed the interpretations presented here (Zierden et al. 1987; Zierden 1990a; Zierden and Grimes 1989; Zierden 1993a; Zierden 1992; Zierden et al. 1985; Zierden et al. 1988; Zierden 1989; Zierden and Anthony 1993; Zierden 1990b).

Specific questions to be addressed in the present study include site formation processes, development of the urban landscape, and artifact patterning and consumerism. Interpretations will be based on the data base retrieved during the present project and comparative data from previous projects.

1) Site Formation Processes – In order to properly interpret an archaeological site, it is first necessary to understand the processes responsible for the formation of that record (Schiffer 1977). An archaeological site consists of a natural setting altered by the humans who occupied that site. Specifically of interest are those activities which introduce materials into the ground and reorganize them after deposition. Urban sites such as the Russell house are often a complex combination of such events. Site formation processes on suburban sites are somewhat different and less complex than those in the densely occupied commercial core.

Archaeologist Michael Schiffer has enumerated four methods by which cultural materials are introduced into the ground: discard, loss, destruction, and abandonment. Discard is the most common method of archaeological site formation. Artifacts and other debris are either broadcast on the ground surface, gradually forming zone deposits, or placed in newly dug or previously existing pits, forming features. Items deposited due to loss are usually small, such as buttons or coins. Lost items are discovered in wells or in soil lenses that collect beneath wooden floors. Abandonment can follow destruction of buildings and their contents from fire or storm, or result when artifacts are left behind when tenants vacate a property.

Once in the ground, artifacts can be redistributed or they can be removed. Usually the archaeological record is a combination of all three events. In the urban situation, archaeologists are particularly interested in the processes that redistribute materials.

2) The Urban Landscape – The landscape approach to investigation of urban sites encompasses many of the issues previously discussed separately, such as subsistence strategy, health and sanitation, lot layout, and socioeconomic status. This approach in Charleston embraces the idea of a cultural landscape, the modification of land according to a set of cultural plans, embodying often inseparable technological, social, and ideological dimensions. People created and used these landscapes in a planned and orderly manner for everything from food production to

formal design to explicit statements about their position in the world (Kelso and Most 1990; Stilgoe 1982; Jackson 1984).

Archaeological evidence for evolution of the landscape may generally be divided into two categories: material culture and stratigraphy. It is the latter that is the most informative for landscape evolution; in fact, the recovered artifacts assume their importance from their position in the stratigraphy and their role in determining the source of those soil deposits. A third category of data includes plant and animal remains such as seeds, pollen, and bone fragments. Archaeological research on the landscape has been interdisciplinary in nature, employing the expertise of zooarchaeologists, ethnobotanists, palynologists, geographers, historians, and architects. Landscape studies to date have explored six issues: alteration of the terrain, deforestation, the role of the work yard, health and sanitation, urban diet, and segmentation and privatization.

3) Artifact Patterning – Artifact assemblages from each of the sites investigated to date have been subdivided temporally. These temporal subdivisions are based on both specific site activities and general trends in Charleston's development. The three general subdivisions are 1710–1750, 1750–1820, and 1820–1880. The early period corresponds to Charleston's role as a frontier outpost and emerging port. The second marks Charleston's "golden years" as a leading seaport and center of wealth, and the third corresponds with Charleston's economic decline and stagnation. These periods also correspond to changes in ceramic and glass technology. The early period is that of relatively scarce and expensive material culture; the second corresponds to the rise of the British pottery industry and the development of refined earthenwares, and the third to a decline in new ceramic types and the ascendancy of mass-produced glassware.

The data are then organized by functional groups according to Stanley South's (1977) categories for the Carolina Artifact Pattern. These results are used to investigate the refinement of society and the rise of consumerism (Bushman 1992). In the 18th century, gentility was the visible expression of gentry status, the most sharply defined social class in the colonies. Gentility gave expression to universally acknowledged social divisions. By the end of the 18th century, many middle class folks had acquired some of the aspects of gentility. Basic to the present discussion is the contention that the genteel life depended on the creation of proper environments. As refinement spread to more and more folks, the need for refined objects created an unprecedented mass market for individual items. Archaeological assemblages from early and late 18th century Charleston sites are used to investigate the refinement, in material terms, of Charleston society. As an acknowledged bastion of finery, the Russell house is an ideal data base to expand these studies.

CHAPTER II

Documentary Background

The Settlement of Charleston

Colonies in the New World were the prize in the 16th century European battle for naval supremacy. Spain dominated this contest during this era, growing rich by her exploitation of colonies in central and South America and establishing a claim on the North American continent; la Florida included South Carolina and was anchored by the settlement of St. Augustine and Santa Elena on Parris Island, and a chain of missions along the south Atlantic coast and the Florida gulf coast. By the 17th century, Spain was increasingly threatened by English sea power; in 1588 the Spanish armada was defeated off the coast of England.

In the 17th century, possession of Carolina was disputed by Spain, France and England. The English, who viewed Carolina as a southern extension of Virginia, proceeded to establish a colonial settlement in Charleston, in the "very chaps of the Spaniards." All three countries were motivated not so much by the desire for land as by the need for raw materials which were unavailable or insufficiently produced in their native land. England was eager to free herself from dependence on southern Europe for silk and wine. She needed hemp and naval stores to support her sea power, and foodstuffs to allow her West Indian colonists to concentrate on the production of sugar. Although the English government did not encourage the development of rice as a staple crop, the Carolina colonists persevered and were rewarded by unimagined riches. Indigo, the other major agricultural export, directly contributed to England's commercial development, as well as to her domination of the European market, by releasing her from reliance on the French and Spanish west Indies for the dyes needed in her textile industry. But before these profitable staples took hold, trade in deerskins obtained from Indians and provisions such as lumber, beef, and naval stores led to Charleston's development as a port city, home to merchants engaged in the transatlantic trade (Crane 1981).

A group of eight patriotic English noblemen were granted the colony as a political reward; these profit-seeking men established Carolina in 1670. The earliest settlement was up the Ashley River at Albemarle point. Agriculture and commercial prosperity demanded security, however, and this was the first concern of the colonists. Oyster point proved attractive to the colonists and, after some exploration, increasing numbers of them left Albemarle for the peninsula formed by the confluence of the Ashley and Cooper rivers. The leaders of the settlement sanctioned this trend, and they further instructed the Governor,

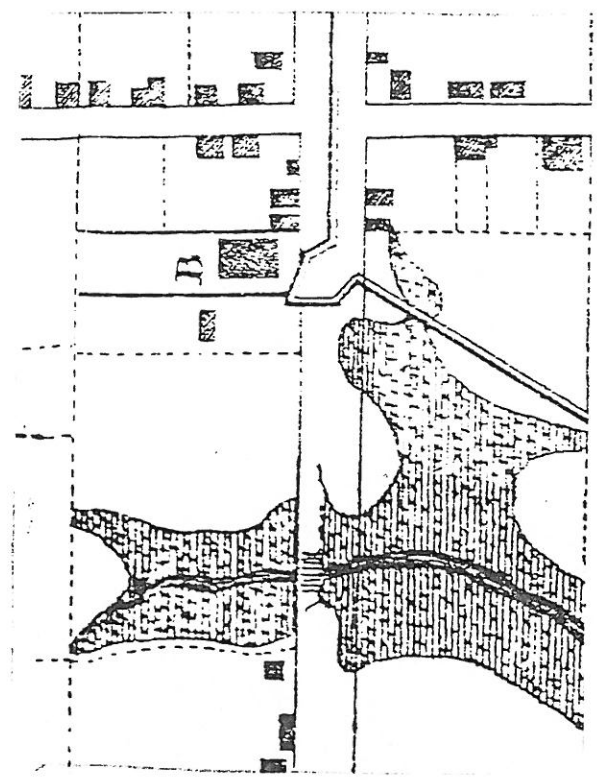
to take care to lay out the Streets broad and in straight lines and than in your Grant of the Towne lotts you doe bound every ones Land towards the Streets in an even line and suffer no one to incroach with his buildings upon the streets whereby to make them narrower than they were first designed (Salley 1928:95-96).

The area of relatively high bluffs and narrow marsh along the Cooper was best suited for shipping and in 1680 the settlers founded a walled city bounded by present-day Water, East Bay, Cumberland, and Meeting streets. This planned city, known as the Grand Modell, encompassed the high land from Oyster Point to Beaufain Street (Earle and Hoffman 1977). The town was laid out around a central square and divided by wide streets into deep, narrow lots, a plan characteristic of 17th century Irish towns colonized by the British (Reps 1965). While the new Charles Towne was a renaissance city in many ways, the surrounding town wall and steep roofs gave it a decidedly medieval atmosphere (Coclanis 1984).

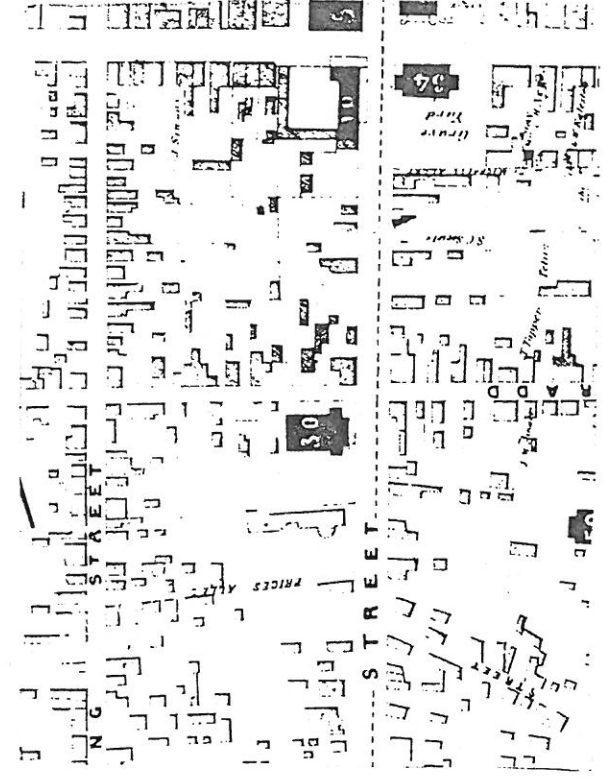
The Nathaniel Russell house occupies lot 247 of the Grand Modell (figure 3a). Most of the city's Grand Modell lots, including those outside the walls, were granted in the 17th century. Many were re-granted as individuals were unable to maintain their claim. However, many were not improved until well into the 18th century. Lot 247 was granted to Andrew Percival in 1694; around 1723 it was sold to William Dunning, and around 1732 purchased by John Fraser. His family owned it until 1779. Currently available documentary and archaeological information indicates that Fraser was the first to improve the property, but exactly when this happens is unclear. The 1739 city map (Roberts and Toms 1739) shows the lot still unoccupied, with a large expanse of marsh extant in the southern portion of the property (figure 3b); when his son, Alexander Fraser, sold the property in 1779, it contained "houses, etc." No more precise dating for construction on the property has been determined.

The early colonists had some trouble in determining what staple crop could best prosper. Early experiments in the cultivation of such valued commodities as wine, silk, and oranges proved disappointing. While experiments in husbandry continued, many of the settlers took advantage of the abundance of deer in the Carolina forests.

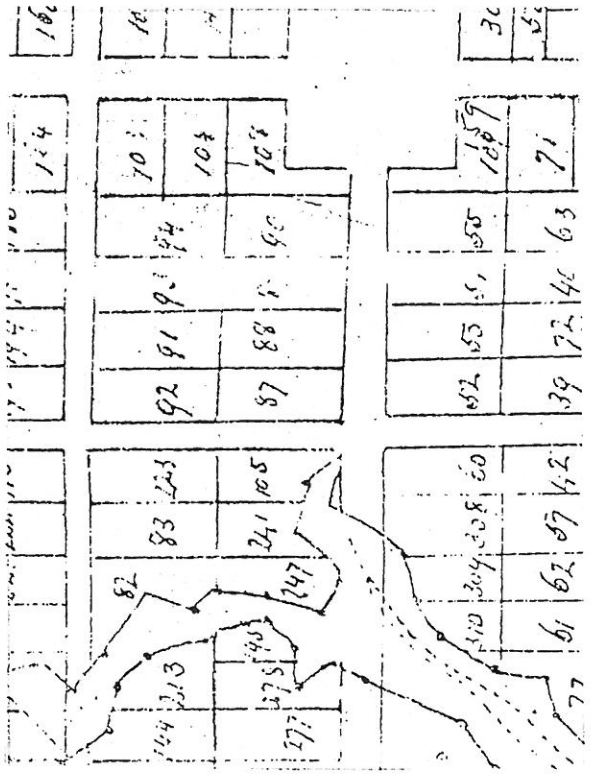
The colonists readily appreciated the value of this multitude of deer, and the Indians' ability to gather them. Native Americans had long managed the south Atlantic forests for deer and agriculture by selectively clearing and burning portions of the longleaf pine and hardwood forests (Silver 1990). The earliest trade in skins was a secondary, small-scale pursuit of individual planters. Some of these aspiring entrepreneurs hired an Indian hunter to supply them with skins while others traded with whomever wandered by (Crane 1981:118). This informal network was radically altered by James Moore's raid of Spanish missions in 1704 (Hann 1988) and the Yemassee War of 1715. Though these skirmishes resulted in increased safety for the settlers, the final defeat of coastal Indians caused the remnant tribes to retreat inland, culminating two centuries of movement, dislocation, and realignment sparked by the first European contact (DePratter 1990; Hartley 1989). Those settlers involved in the fur trade found it more difficult to obtain skins and were forced to invest in extensive storage facilities. Soon the trade was transformed from one operated by a number of individuals on a small scale to a capital intensive industry controlled and dominated by the burgeoning mercantile community in Charleston. These merchants established credit relations with the British businessmen, enabling them to procure and finance the trading goods necessary for the primarily barter exchange carried on with the Indian hunters (Merrell 1989; Braund 1993). The recognition, respect, and wealth which many of these merchants



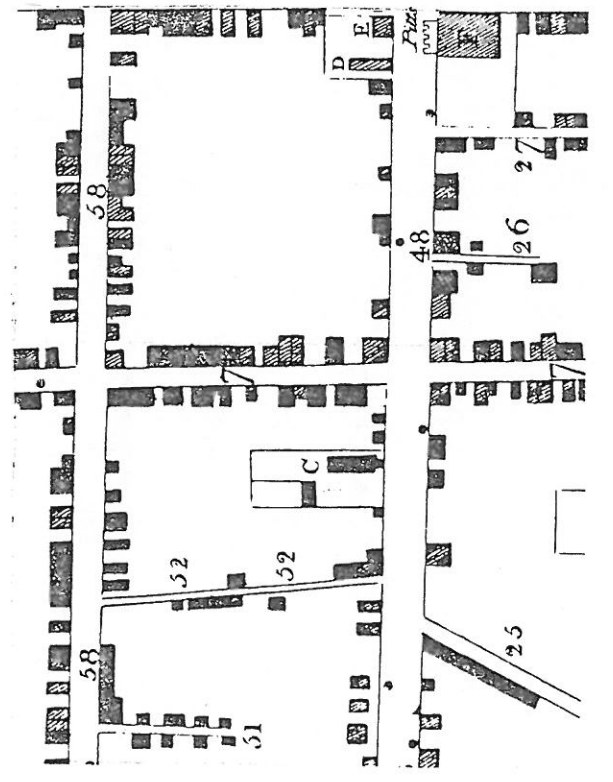
b) Roberts and Toms, 1739



d) Bridgens and Allen, 1852



a) Grand Modell, 1680



c) Petrie, 1788

Figure 3
The Russell lot on various city maps

achieved made it possible for them to become involved in other increasingly important trades — slaves, naval stores, provisions, and rice (Calhoun et al. 1982:2; Earle and Hoffman 1977:37).

John Fraser came to Carolina about 1700 from Scotland, and was a trader with the Yemassee Indians, living near Coosawatchie. He married Judith Warner of Rhode Island and had four children. He died in Charleston in 1754 (Salley 1983). He left "all that lott of Land on which I now Live" to his wife for her natural life and thereafter the lot was subdivided between his daughter Judith and his son Alexander (Record of Wills, vol. 7:190–193). Current scholarship suggests that Fraser was residing at this house on the Meeting Street lot when he died, but this is not certain. Fraser's wife Judith died in 1772. After her death, Alexander Fraser evidently acquired the Meeting Street property, for in 1779 he and his wife Mary Grimke sold to Nathaniel Russell and William Greenwood (CCRMCO C6:526),

"All that town lot piece of land situate and being on the west side of old Church or Meeting Street in Charles Town aforesaid containing from north to south on the east side therof fronting the said Street 123'3" of assize or near thereabouts, then runs from south to north on the west side thereof 150' of assize or near thereabouts and then returns from west to east on the northside thereof 231'6" of assize be the same a little more or less and is butting and bounding to the east on the aforesaid Street to the south on Price's Alley aforesaid, to the west on lands partly of Joseph Dill and partly of Thomas Eveleigh, and to the north on lands of the Presbyterian Church not in the occupation of William Glen the elder together with all and singular the houses outhouses ways passages fences lights easements hereditaments and appurtenances whatsoever to the sd. town lot of land..."

The increased cultivation of rice throughout South Carolina created a voracious demand for slave labor. Although the Carolina colonists were unfamiliar with this crop, many of the Africans brought to the lowcountry came from rice producing areas of Africa. Rice itself was introduced to South Carolina from Madagascar, and many African slaves possessed skills in rice cultivation and other tasks essential to the plantation economy (Littlefield 1981; Wood 1974). Significant continuities between African and Carolinian methods of planting, hoeing, winnowing, and pounding the rice persisted until these techniques were no longer economically feasible (Joyner 1984:13–14). By 1708, the majority of lowcountry residents were black. African bondsmen and women worked the crops in the country and provided labor for building and maintaining the city.

Rising Wealth

The decade of the 1730s witnessed Charleston's transformation from a small frontier community to an important mercantile center. When royal rule replaced an inefficient Proprietary government in 1729, Charleston entered the mainstream of the British mercantile economy. The development of outlying communities, following the Township Plan of 1730, brought an influx of products from the backcountry. Meanwhile, lowcountry plantations rapidly expanded. During this period, merchants emerged as a distinct group; further, they began to invest their earnings in the

local economy, instead of returning to England after making their fortunes (Rogers 1980; Stumpf 1971). As the colony prospered, the merchants and planters emerged as the leaders of society; indeed, the two groups often overlapped, for planters engaged in mercantile endeavors, and merchants invested their earnings in land, becoming planters themselves, establishing a centuries-long tie between country and city (Goldfield 1982).

Charleston's economic expansion in the 1730s was matched by physical expansion. By 1730 the city had grown well beyond the original city walls and development was primarily to the west (Calhoun et al. 1982; Roberts and Toms 1730). The city spread west to the banks of the Ashley River and south to the tip of the peninsula, though much of the peripheral area was only sparsely occupied. As the 18th century advanced, Charles Town expanded in economic importance and the relative affluence of its citizens. White per capita income was among the highest in the colonies (Weir 1983). As the planters and merchants gained in prosperity, they began to demand goods more appropriate to their elevated station in life. The clink of silver reverberated throughout Britain and the colonies, attracting factors, merchants, and craftsmen. Personal wealth poured into the colony from Europe in the form of furniture, silver, tableware, clothing, and paintings; imports were matched by a rise in local craftspeople and their slaves producing this finery, particularly cabinetmakers and silversmiths. This ascendancy of personal and collective wealth continued after the Revolution, peaking in the early 19th century.

Personal wealth was matched by a rise in imposing public and domestic architecture. The devastating fire of 1740 cleared the way for construction of large structures in new styles. Public architecture on a grand scale is embodied in St. Michael's church, built in 1761, the State house on the opposing corner, and the Exchange building at the foot of Broad, built in 1769. On the domestic front, large Georgian houses were constructed on still-spacious city lots, in some cases replacing earlier, more modest structures on the same lot. These changes are part of a general shift in architectural style and land use which occurred in the third quarter of the 18th century (Herman 1993; Zierden and Herman 1996).

The government of Carolina was also centered in Charleston until 1788, making it imperative for those involved in any sort of legal transaction or position in government to come to the city. Poor inland communication, lonely stretches between plantations, and bad roads made it virtually imperative for a planter interested in society to reside in Charleston at least occasionally, while the danger of fevers made it desirable during the summer months for even the most resolute recluse. Some planters were only able to rent quarters. Others indulged their taste for the grandiose and built large, striking residences for their families. Although these planters generally chose lots near the rivers for their reputed health benefits, they were also influenced by wealth and taste in their decisions. Some, particularly the rice planters of the mid 1700s, situated themselves along the battery while others, preferring more spacious lots on which gardens and pleasure pavillions were possible, spread along the banks of the Ashley and Cooper rivers.

Factors appeared to handle the problems of customers whose actual wealth was determined by the seasons. To enable the planters to maintain their high standard of living throughout the year, factors issued advances based upon the estimated value of the crops at relatively high rates

of interest. Goods bought on credit by the planter also bore significantly higher prices than those commanded by cash. Increasingly, the commercial pursuits of the factor and commission merchant did not convey the same societal respect as in more northern climes. By the mid-19th century the planters emerged as society's elite where merchants did not.

During the first decades of Charleston's existence, the captains of ocean-going vessels had to use lighters to carry their goods to the town's docks. In the 1690s, however, those areas deep enough for large ships were converted into wharves (Green 1965:12), while other areas along the bay became fashionable residential quarters. The development of wharves and streets significantly lowered lightering and hauling charges for the merchants. Buildings were erected upon the wharves and proved to be ideal locations for both the storehouses needed by the colony's exports and outlets for the sale of imports. The Charleston merchants clustered on major east-west thoroughfares adjacent to the wharves. East Bay and Broad streets, two of the principal streets delineated in the Grand Modell, were highly valued for their proximity to the waterfront. In the 1730s, twenty percent of the city's advertising merchants were located along Broad. The thoroughfare retained this level of prominence throughout the colonial period (Calhoun et al. 1982).

Nathaniel Russell was born in 1738 in Bristol, Rhode Island, the second son of Joseph Russell, Chief Justice of Rhode Island Supreme Court and Sarah Paine. Attracted to the burgeoning wealth and commercial bustle of the port city, he arrived in Charleston in 1765 as an agent for Providence merchants (Savage 1989:3). Clearly an astute and highly successful businessman, he advertised in the South Carolina Gazette,

"Nathaniel Russell has just imported, in the sloop Defiance, from Rhode Island, a parcel of good Horses, Northward Rum, cheese, sperma-coated candles, onions and a few barrels of Apples, which he will sell cheap at his store in Colonel Beale's wharf."

Between 1769 and 1773 he participated in the slave trade, importing two cargoes. Russell maintained business contacts with New England and European merchants throughout his career. By 1790 he was able to subscribe \$36,610 of the state debt; in 1800 he owned 18 slaves. At his death he owned a host of Charleston real estate, besides his mansion, and various bank stock in Rhode Island and Massachusetts (Standard Biographical Dictionary of South Carolina Legislators 1981).

Revolutionary Changes

On July 4, 1776 the American colonists proclaimed their independence from the British Empire. Tensions between the mother country and her North American colonies had been building over the years, centered around payment of the national debt. The first attempt to conquer the province of Carolina came in 1776 when the Royal Navy attacked Fort Sullivan, later Fort Moultrie. They struck again in 1780 and were successful. The British occupation of

Charleston was to last two years. The loss of Charleston was considered by many Americans to be their greatest defeat in the Revolution.

During the occupation, many Carolinians suffered sequestration of their property, the quartering of troops in their homes, imprisonment in the "dungeon" of the Exchange or on warships in the harbor, and exile. They were also plundered of "enormous wealth." Systematic and official looting is estimated to have resulted in a loss of goods and slaves totalling 300,000 pounds sterling (Wallace 1961). The British occupation also brought many changes to the city. There was a great deal of movement and change among the city's merchant class, and a variety of new products, particularly foodstuffs, were imported. The occupation forces also worked to clean up the city. Much of the rubbish was hauled to the "British Dump" whose location is unknown (Zierden et al. 1986).

At the beginning of the American Revolution, Russell supported the Whigs; he lent money to the state government and served in the Charleston militia and the third General Assembly. After the fall of Charleston in 1780, however, he wavered in his loyalty and departed the city. His property was confiscated, and when he returned from Charleston to London in 1783 he was not allowed to disembark. Russell was one of many tories who repatriated and reestablished themselves in local society, however. He remained on ship in the harbor for several months, and eventually received a special exemption from the earlier ordinance. His property was returned in 1784, and he purchased William Greenwood's share of the Meeting Street property. (Standard Biographical Dictionary 1981:624). He soon became involved in state politics, and for the next thirty years held a number of political and philanthropic offices.

The development and increased prosperity of Charleston resulted in a rise in the cost of renting and buying real estate within the commercial core of town. Significant portions of the artisan community dispersed throughout Charleston as all but the more affluent craftspeople were driven from the highly desirable locations. Many small businessmen attempted to combat rising real estate prices by sharing buildings, while artisans made increasing use of the more peripheral thoroughfares. Craftspeople who derived their livelihood from such trades as the slaughtering of livestock, soap making, and tallow chandlery needed space, while the unsanitary conditions and danger of fire made these activities the subject of nuisance persecution.

Russell's business association with William Hopton, a successful Charleston merchant, and his later marriage to Hopton's daughter Sarah no doubt enhanced his status, both economically and personally. They were married in 1788 when Russell was 50, and the marriage produced two daughters, Alicia in 1789 and Sarah in 1792 (Savage 1985:5).

His social and financial position now secure, Russell set out to proclaim his position by constructing a grand townhouse on his large Meeting Street lot, filling it with beautiful appointments, and surrounding it with a memorable garden. Russell's use of his Meeting Street property between purchase in 1779 and house construction in 1808 has been a source of much speculation and research. The 1779 deed indicates that the lot contained houses, etc; the 1788 city map shows large structures along Meeting Street and Price's Alley (figure 3c). But in 1808

discovered by researchers on February 23, 1995 shed new light on use of the Meeting Street property during this time; and 1804 advertisement in the Charleston Courier lists:

To Be Let,
That Large and airy SCHOOL HOUSE, situated in Price's Alley near Meeting Street, with Desks, Benches, and every necessary proper to accommodate a large school. Possession will be given the 15th inst. Apply to:

Nathaniel Russell

Review of the 1802 City Directory lists the following residents of Price's Alley:

- #1 John Frederic, National Bank Guard
- #2 Thomas Pinckney, Planter
- #3 David Clark, watchmaker
- #4 John Palmer, Seargent, City Guard
William Stewart, school master
- #5 Watson and Woodill, cabinetmakers
- #6 Edward McCan, clerk of fish market
- #7 Sarah Hinson, seamstress
- #8 Diane Holland, seamstress
- #9 Jane Dill, widow

Such a list of mostly middle class artisans and professionals is typical for occupation of an alley in the 18th century. Throughout the 18th and 19th century, Charleston was a highly integrated city. Rather than living in separate "neighborhoods," the wealthy lived on large lots on wide streets or major thoroughfares. The middling or poor, black and white, often lived around the corner on side streets or narrow alleys; others lived above stores or in rental accommodations in the rear of large properties (Calhoun et al. 1982; Zierden et al. 1983a). The 1802 listing for Price's Alley, then, reflects a typical working class enclave or small neighborhood of the early 19th century. That the alley retained this character is indicated in Elizabeth Allston Pringle's story of the 1850s:

"It was spring and all the windows were open, and the third night I was awakened by shrieks from Price's Alley, which ran along beside our garden wall! It was just as distinct as if it had been in the next room. I fled to Della's room and never again attempted to sleep in my own room. The next morning we heard it was a drunken man beating his wife; some Irish families occupied a house together there."(Pringle 1922:167)

This, plus careful reexamination of the 1788 map suggests the large, oddly subdivided building on the south side of the property was a series of working class tenements, none of them the home of Russell. A respected marchent married to a society belle, he evidently resided at "the 3 story Brick House on the Bay" among folks of similar status; next door was Governor Arnoldus

By the 19th century, the town had expanded and there were shifts in the location of Charleston's mercantile community. As the town spread northward up the peninsula, retail merchants followed their customers. King Street, a relatively insignificant thoroughfare throughout the 18th century, rapidly gained commercial importance. As the town spread, its growth shifted from an east–west to a north–south axis. The waterfront remained important, and the wharves attracted wholesalers, factors, and commission merchants (Calhoun and Zierden 1984).

In the antebellum period, residential and work places became increasingly differentiated. As Charleston expanded, the central business district evolved with a relatively small intrusion of residential areas (Goldfield 1982:86). This segregated land use was also reflected in the development of residential districts, including areas south of Broad Street and on the Neck, that area north of Calhoun Street (Radford 1984:155; Rosengarten et al. 1987).

Russell's grand house on a large lot, just outside the heart of the business district, fits this trend. The Russell house was much discussed throughout the 19th century, the gardens attracting as much attention as the mansion. Tragedy struck soon after the house was complete, in the form of a tornado in 1811,

"The new and large Mansion–House of Nathaniel Russell, esq. together with his extensive Back Buildings, entirely unroofed; the windows broken in, and his furniture, (for the most part) entirely ruined – his loss, it is said, will not fall short of \$20,000" (Charleston Courier, September 11, 1811).

The Russell garden, whose layout and content is unknown and the subject of much current research, was the subject of much comment in the 19th century. At least the front portion must have been formal, geometric beds and walkways (Barbara Sarudy, personal communication). In 1818, the Reverend Abiel Abbot dined with Russell and commented, "examined the garden again – delighted with the flowers." In 1819, William Faux, an English visitor, writes:

"called on the venerable Nathaniel Russell, Esq., residing in a splendid mansion, surrounded by a wilderness of flowers, and bowers of myrtles, oranges and lemons, smothered with fruit and flowers...living in a nest of roses...I saw and ate ripe figs, pears, apples and plums, the rich productions of this generous climate." (Faux 1969).

Russell's garden was evidently tended by the locally famous gardener Philip Noisette, who lived on one of Russell's 8 acre farms at Romney. Noisette came to Charleston from Santo Domingo in the early 1800s. He was well known for his roses. He also advertised in 1814 from his "garden at Romney Village ... a great variety of FRUIT TREES, grafted by himself, of the best kinds from Europe; such as different kinds of Peaches, Nectarines, Apricots, Plumbs, Pears, Apples, Figs, and Grapes; as well as many foreign, Ornamental Trees, Shrubs, and plants. Also for sale, a collection of garden SEEDS, FLOWER SEEDS, AND FLOWER ROOTS."

Already in his later years when his house was complete, Russell spent only a few decades in his mansion before his death in 1820. When he died, his widow Sarah, her children and

grandchildren remained in the mansion until 1857, and maintained the garden throughout the antebellum period. In 1827, Mrs. Russell wrote to her grandson Nathaniel Russell Middleton, "your Balm of Gilyard tree is now most Beautiful..."

When he died, the Charleston Courier described Nathaniel Russell as "an upright, honorable man, a philanthropist, and a fervent and exemplary Christian." However, it was Mrs. Russell and her daughters who were best known for their benevolence. In 1824 Mrs. Russell provided land and money for the Female Domestic Missionary Society to establish St. Stephens Free Chapel, first church exclusively for the poor.

Nathaniel Russell's daughters each continued the social ascendancy begun by their father by marrying well. Alicia married Arthur Middleton of Bolton Plantation on the Stono River, and namesake of Arthur Middleton of Middleton Place; she bore four children. In 1814, Sarah married the Right Reverend Theodore Dehon, second Episcopal Bishop of South Carolina, who had come from Rhode Island. They had three children.

Mrs. Russell died in 1832 at the age of eighty, and ownership of the house passed to Sarah Russell Dehon, whose husband had died in 1817. Figure 4 shows the division of Russell's extensive real estate holdings at this time. The following year her daughter Sarah married the Reverend Paul Trapier, future rector of St. Stephens and St. Michaels churches. They and their twelve children lived in the house until Mrs. Dehon's death. Bishop and Mrs. Dehon continued their charitable work. In 1847 her son-in-law Reverend Trapier resigned from St. Michaels and established Cavalry Church as a place of worship for African American slaves. When Sarah Russell Dehon died in 1857 at the age of 66, her obituary called her a "mother in Israel." Her room by room inventory lists a host of elaborate furnishings, including 355 ounces of silver, a variety of cutlery, tea wares, "Blue India China Plates;" an infinite variety of specialized serving pieces, glassware, "gold and white Desert" ware, as well as a host of bonds and bank shares (Inventory box 109, no. 24, 1857)

Charleston's commercial bonanza years of 1795–1819 were a victim of the national depression which began in 1819 (Greb 1978:18). The depression brought a halt to the commercial expansion of the city. Although the economy of Charleston stabilized thereafter, the city had begun a then-imperceptible decline. These forces were not yet visible to antebellum residents, however; during this period, the city launched many improvement efforts, embodied in its public architecture (Severens 1988:267).

Though Charleston's economy was irrevocably linked to cash crops and the plantation system, progressive citizens encouraged diversification and industrialization. Many of these enterprises were located in Charleston's burgeoning suburbs on the Neck. The two antebellum railroads, the South Carolina Railroad and the Northeast Railroad, were built between King and Meeting streets, and along East Bay street, respectively. Open spaces, lower real estate values, relaxed building codes, as well as the railways attracted large-scale manufacturing enterprises. In less than half a century, the Neck was transformed from the "country" to the center of

A

We the undersigned appointed by Arthur Middleton Esq. and Mrs Sarah Dehon to appraise the real estate of the late Nathaniel Russell Esq. deceased, & value the same as follows viz

A lot & 3 story Brick House on East Bay & Longitude Lane	7,000
Do. on East Bay continued with a 3 story tenement	5,000
Store No 5. Crafts South Wharf	1,200
A three story Brick House No Teadd Street	2,000
A Lot and wooden building adjoining	1,500
A shop corner of Meeting and Ellery Streets	1,500
Adjoining Do. on Meeting St. 3 two story tenements	3,000
Old Brick House on Ellery St. & 3 two story wooden building	4,000
A Carpenters shop and lot on Euguard Street	700
A lot corner of Maiden Lane and Pinckney Street with a tenement wooden house and small building	1,500
A lot corner of Church Street and Longitude Lane and a two story brick house in Do.	2,500
A lot 50 ft. by 100 on Church Street continued, with a small wooden building occupied by one Cain	600
Crafts North Wharf	15,000
One lot of 8 acres not improved in Romney	400
one do. with a house	1,000
one do. occupied by Nozette	800
22 acres of land near the Ship Yard	700
100 acres of land in Sumter District	800
\$38,000	
<p>Charleston 17th February 1839. Signed D. Crocker Wm. A. Hayes Jas. Harlitt Munson & Co. valued by the will at \$38,000</p>	

Figure 4

Real Estate owned by Nathaniel Russell

(Division of Nathaniel Russell Estate, Sarah Dehon et al. vs. Arthur Middleton, Charleston District Court of Equity Bills, 1837, #61, South Carolina State Archives.

Charleston's industrial future. These efforts were ultimately unsuccessful, however, as Charleston failed to live up to their proclaimed dedication to modernization. An increasing fear of the black population and perceived threats from northern states drove Charlestonians to embrace the past and ultimately be bypassed by the expanding rail network (Pease and Pease 1985:223–224). Personal, rather than institutional, ties remained the fabric of Charleston's commerce.

In Charleston, slavery was synonymous with labor. Most slaves were field hands, laborers, servants, or porters, but on plantations and in the city, some served as coopers, blacksmiths, brickmakers, millwrights, carpenters, seamstresses, barbers, fishermen, pastry cooks, and in many other skilled occupations. Owners routinely "hired out" their slave artisans. A few won their freedom by buying it; masters "manumitted" others, especially house servants, in recognition of special services, or in response to sometimes familial affection. The emerging class referred to as "free persons of color" congregated in Charleston. All social and ethnic classes lived side-by-side in the 18th and early 19th century city; in general, wealthy Charlestonians built on main thoroughfares, while those of lesser means clustered on alleys, side streets, or the backs of large lots.

Nathaniel, Sarah, Alicia and Sarah Russell were not the only residents at 21 Meeting Street. Sarah Hopton brought a large dowry to the marriage (Marriage Settlements vol. 1:402–414), including 25 slaves. These twelve were enumerated in Hopton's inventory, five of whom had special skills:

Ben, blacksmith	\$120
Diego, carpenter	\$40
Andrew, carpenter's apprentice	\$70
Pickle, fisherman	\$70
George, fisherman	\$50
Suky, and John, her child	\$100
Chloe	\$30
Dorcas	\$50
Judy, her children, Tib and Renche	\$170
Old Simon	\$5

(Inventory of William Hopton, 15 December 1786, Charleston County Inventories, Book B:485; Marriage Settlement of Sarah Hopton and Nathaniel Russell, 3 March 1789, vol. 1:402–414). Russell also owned several slaves, so it is likely that the extensive backbuildings houses at least a dozen people at any given time during the antebellum period.

The widespread employment of slaves in a variety of services for one's master and others prevented any real development of the mechanic arts among whites. The psychological conflict in white and black artisans competing for, and performing, identical tasks led to a deep aversion between the two groups. Many artisans came to scorn their work and hired out or bought slaves to carry on their business (Nevins 1947; 491; Starobin 1970; Wade 1964). Others migrated to northern colonies where wages were lower but their social status higher (Sellers 1970:103). This

led to a dependence on slave labor which proved detrimental to the technological and industrial development of Carolina. In a situation where labor intensive methods were often not merely feasible but actually desirable, there was a disincentive to modernize the agricultural sector. Industry suffered from the same handicap, with the result that the South in general lagged significantly behind other areas in manufacturing techniques and results. Thus the withdrawal of mercantilistic laws following the Revolution, which had governed the productive capabilities of the colonies, had little effect on the economy of Charleston. Instead, the city continued to rely heavily on raw materials, at this point primarily agricultural, for its prosperity. The development of Charleston as a social center had stabilized its urban economy, but offered few opportunities for expansion. The economic well-being of the town depended on the monetary success of the country society for which it was the center (Powers 1972:15).

Vague fears of slave retaliation reached a fevered pitch in 1822 with the discovery of the Denmark Vesey affair. Reportedly, Denmark Vesey masterminded a slave revolt to overthrow white authority and establish black control over the city. Born either in Africa or the West Indies, Vesey was brought to Charleston in the service of a sea captain. Purchasing his freedom with winnings from a lottery, he worked for more than twenty years as a carpenter in the city. According to testimony at the trials of Vesey and his lieutenants, members of the African church in Hampstead concocted the rebellion (Killens 1970).

Besides Vesey, four of his principal associates, Gullah Jack, Monday Gell, Ned Bennett, and Peter Poyas were said to belong to the Hampstead congregation. Slaves from the country and some from the Neck were to meet at Bulkley's farm the night of the uprising. Another band, under Ned Bennett's leadership, was to seize control of the federal arsenal on the Neck. A third company, under Rolla Bennett, would gather at Bennett's Mills in Cannonsborough. Gullah Jack would meet his men at Boundary Street and King, then seize some 500 muskets and bayonets stored at Duquercron's, as well as weapons belonging to the militia company called the "Neck-Rangers." These were kept in an unguarded building on King Street Road, where Baccus Hammett slept on the night of the revolt (Lofton 1964:140-141).

An additional convicted conspirator was blacksmith Tom Russell, owned by Sarah Russell, and executed on July 26. He kept a blacksmith shop on East Bay Street, and was reportedly Gullah Jack's "armourer." His part in the conspiracy was confined to the making of pikes and spears, "which it appears he did on a very approved model." (Hamilton 1822:25). A slave named Pierault testified that Tom had joined Gullah Jack's band, and had been at Vesey's house on June 16. Mrs. Russell submitted testimony through attorney Grey that "Gullah Jack was constantly with Tom at breakfast, dinner, and supper, and that she cautioned Tom not to have so much to do with Jack or he would be taken up." A white witness, 16 years old, testified that Gullah Jack was frequently at Tom's shop, and they frequently talked together in Gullah. The Court unanimously found Tom guilty, and passed on him the sentence of death. (Killens 1970:82).

Several witnesses testified that between six and nine thousand slaves had been recruited to the cause, some from as far away as Santee River plantations. Most of those accused, however, were from Charleston and its environs. Conspirators named in the Official Report of the Trials

included "Negroes hired or working out, such as Carters, Draymen, Sawyers, Porters, Laborers, Stevedores, Mechanics, and those employed in lumber yards and rice mills along the edge of the peninsula" (Killens 1970:3). In contrast to these recruits, who tended to be manual laborers, the leaders of the conspiracy were mainly skilled artisans and preachers: Vesey was a carpenter; Peter Poyas, a "first rate" ship carpenter; Mingo Harth, a mechanic, Tom Russell, a blacksmith, and Monday Gell, identified as an Ebo harnessmaker who hired out his own labor and kept a workshop on Meeting Street. Gullah Jack had been "a conjurer and a physician" in his native Angola, a witness testified, and had "practiced these arts in this country for fifteen years, without it being generally known among the whites" (Rosengarten et al. 1987:63).

The owners of the defendants, and the magistrates, expressed surprise and disbelief that "Negroes of such character and condition" would rebel. Except for Gullah Jack, all the leaders had been known for exemplary behavior. A clue to why these men joined the plot — in fact, the only clue the magistrates could find — came from a witness who heard Vesey say that he had several children who were slaves and "wished to see them free." The insurgents had hoped to take Charleston by setting the city on fire and killing all the white people and any blacks who did not join the rebellion. After that the plan was less clear.

One immediate consequence of the aborted uprising was the sentencing of 35 of the 131 accused to death. More long range consequences was a persecution of free persons of color, an expanded police department, and increasing restrictions on the manumission of slaves and various other "privileges" such as education and religion.

By the middle of the antebellum period, most American cities were showing the effects of industrialization. Urban environments underwent radical changes between 1820 and 1860, as a national economy replaced local and regional economies (Goldfield 1977:52). Industrialized cities began to replace chaos with order; they featured a central business district, functional differentiation in the use of space (separate areas for industries, businesses, and residences), innovations in intra-city transportation (the appearance of horse cars), rapid in-migration (Charleston became the terminus of Irish and German immigrants), increased specialization among the mercantile class, and centralized improvements (street paving, sidewalks, lighting, drainage). Some cities moved faster in these directions than others. During the early years of the industrial movement, Charleston kept pace with the rest of the country; by the end of the 19th century, however, the city lagged behind other commercial centers in many areas of development.

As cities grew, more attention was paid to municipal services, planning, and promotion. Cities competed fiercely with one another for commerce, and urban promotion developed into a fine art (Goldfield 1977:52, 1979:235). Civic leaders emerged as a key social group, working to make their cities the best. The ideal city would be efficient, attractive, orderly, modern, clean, and above all, healthy. The goals ushered in an era of internal improvement, which required increasingly strong municipal governments; centralized, public projects replaced private, individual ones.

Physical improvements and services ultimately determined whether or not cities would attract new businesses and residents. Basic services such as fire fighting, police protection, water, lighting, and disease prevention were necessary if a city was to grow or prosper. Few visitors or customers would be attracted to a fire-prone, disease-ridden city (Goldfield 1977:67). The safe and efficient movement of people and goods depended on road improvement and street lighting. Lighting of the major thoroughfares, including Meeting, first by oil and later by gas, was a top priority. By 1837, the lower city contained 1,722 lamps, maintained by private contract.

Civic improvements were small protection from the natural disasters that ravaged the city with frightening regularity throughout its history. Recovery and rebuilding from hurricanes, fires, tornados, and even earthquakes all shaped the city. Situated on a narrow peninsula, traversed by marshes and creeks, this low-lying area was surrounded by the sea, and vulnerable to sickness and floods. The city's residents spent time on Sullivans island, in the pine flats, and in the mountains, hoping that the breezes would cure the lowcountry's many diseases. These efforts to guard against infection proved ineffective, as did efforts to protect the city from the ravages of ocean-borne storms. The city's lack of elevation made it vulnerable to flooding during the many hurricanes, and the floodwaters rushed up the numerous creeks. Debris and wreckage gradually filled these areas and transformed the city's terrain, but storms continued to plague the city and leave their mark on the town's architecture (Calhoun 1983:2).

Though the fires which gutted major sections of the city in the colonial and antebellum periods indirectly offered opportunities for urban planning and improvement, these plans were rarely realized. Fear of fire and attempts to prevent it are a major theme in Charleston's history. Major fires devastated the city in 1740, 1778, 1796, 1835, 1838, and 1861. Crowded streets filled with wooden buildings were seen as a major source of trouble, and legislative attempts to end building with wood appeared after each disaster. Within a few years, however, enforcement of these restrictions lapsed. Fires struck the city year after year, and produced in the citizenry a paranoia concerning arson. This fear was inevitably focused on the slave population (Pease and Pease 1978).

Civil War Disruptions

After Mrs. Dehon's death in 1857, her children sold the mansion to Governor Robert W. Allston for \$38,000. In a letter to Mrs. Allston, Henry Deas Lesesne described the house as "beyond all comparison, the finest establishment in Charleston." Governor Allston's brief tenure in the house saw a period of quiet finery before the fury of the Civil War. Allston continued the gardening traditions of the Russells. He hired a new gardener, Mr. Webb to tend the garden, and brought a trusted slave, Daddy Moses, from the country to work in the garden. In a move that tantalizes archaeologists, he paid Mr. Webb for 48 loads of earth in 1859. In 1860 he paid Walter Webb \$176.50 for "One year's gardening...one Double red Japonica...one dozen Peach trees...garden seeds...Garden spade...three loads of shell...Six Poinciana Gillissii (Brazil Mamosa)...Six Spirea Double and Single...4 Citrina."

The Allston household included a number of servants besides Daddy Moses. Elizabeth Allston Pringle listed Nelson, a house servant, William Barron, who later became a caterer and cook, Steven Gallant, Joe Washington, the cook, Phoebe, Nanny, Nelly (Nelson's wife), and a boy, Harris. The Civil War interrupted the flow of life in the Allston household, and indeed all others in Charleston. As the city fell under siege, the family beat a hasty retreat to Society Hill, leaving the faithful Daddy Moses in charge. Elizabeth Allston Pringle describes the departure in the following manner,

"It was a terrible undertaking to pack all that big, heavy furniture and get it away under stress. We found afterward that we had left many things of great value. At this moment I remember especially two blue china Chinese vases, urn shaped, which stood two feet high and were very heavy. It seemed impossible to get boxes and material to pack them and they were left. Daddy Moses remained alone to take charge of the house and garden."

Daddy Moses died shortly thereafter of a stroke while tending the garden. Governor Allston remained in Georgetown county attempting to manage his plantations and send his crops to market. After this struggle, he died on April 7, 1864. In his will, Governor Allston left the house in Charleston and its furniture to his widow, along with carriages and horses, the house servants and their families. To each of his five children was left a plantation and 100 slaves. His inventory lists a variety of "China and Glassware" in his house in Charleston, including French China, tea service, coffee service, wine glasses, etc.

Though the 1861 fire dealt a much harsher physical blow to the city, the Civil War dealt the final economic blow. The city's economy had become dependent on the cotton market, and the local economy became vulnerable to international market fluctuations. The prosperity of Charleston was irrevocably linked to that of the agrarian system it served. Although antebellum Charleston remained the most important port in the south Atlantic, the success of railroads and steam exacerbated the economic recession and encouraged the growth of rivals. Charleston slowly withdrew into itself and became a "closed" city (Rogers 1980). By the 1850s, Charleston's dreams of civic destiny were waning (Severens 1988:265). The cotton economy was a credit economy, and this, coupled with the loss of the labor force following emancipation, forced a new order of things (Rosengarten 1986).

For several months following the firing on Fort Sumter, soldiers freshly mustered into Confederate camps around the city found it "hard to realize we are engaged in warfare." The light-hearted mood did not last. After the fall of Port Royal and Beaufort in November, refugees from coastal islands crowded into Charleston. The city was blockaded and placed under siege, and repeated bombardments threatened the southern end of the peninsula. Charlestonians moved into the upper wards, or to summer resorts in the piedmont and mountains. Although the damage caused by these shells was limited, the impact of the War on the city was nonetheless profound. Charleston's economy, debilitated by the War, remained stagnant throughout the postbellum period. This was embodied in a lack of construction and expansion. While the Neck experienced

a building boom, the lower city, particularly the burnt district of 1861, stayed in ruins for many years.

Decline in Defeat

The Allston inheritance lost its value with the defeat of the South in 1865. Mrs. Allston returned to Charleston and had the Meeting Street mansion repaired. The empty house was shelled during the siege, and three shells went through the roof. In order to make ends meet, Mrs. Allston then opened a girl's school. Her daughter Elizabeth Allston Pringle described the preparations in the following manner:

"Preparations for the school are going on apace. We have moved into our house and it is too beautiful. I had forgotten how lovely it was. Fortunately, the beautiful paper in the second floor, the two drawing rooms, and Mamma's room, has not been at all injured. The school is to open Jan. 1st and, strange to say, Mamma is receiving letters from all over the State asking terms, etc. I thought there would be no applications every one being so ruined by the War, but Mamma's name and personality make people anxious to give their daughters the benefit of her influence; and, I suppose, the people in the cotton country are not so completely ruined and without money as we rice planters of the lowcountry are. Be it as it may, the limit Mamma put of ten boarding pupils is nearly reached already."

All over the city, Charlestonians patched their houses, moved back in, and made do. Many took in boarders or other strangers. Refurbishing, rebuilding, and new appointments would wait decades. Charleston had entered the 19th century at the forefront of civic competition, but ended the century far behind its rivals. This lack of progress was not without good reason; a fixation on cotton and rice in the antebellum period was followed by economic collapse. The phosphate boom of the 1870s provided only temporary relief to the city's economic stagnation (Shick and Doyle 1985). Natural disasters in the postbellum period, notably the earthquake of 1886 and a series of hurricanes around the turn of the century, struck devastating blows. By the early 20th century, the Board of Health was demanding municipal improvements; this time it was lack of funds, rather than lack of interest, that kept Charleston's civic leaders from moving ahead.

By 1869, her school a success, Mrs. Allston decided to return to the country and allow her son to plant rice. With her meager funds, she restored Chicora Wood, the family plantation near Georgetown. The Charleston mansion was sold to the Sisters of Charity of our Lady of Mercy for \$19,000. Current research suggests that the Sisters purchased the building with funds petitioned from the Federal government. The Order had arrived in Charleston in 1829, and had been housed in various locations throughout the city. With the purchase of the Russell house in 1870, they expanded the role of their school, the Academy of our Lady of Mercy. The number of students ranged from 85 to 120, and there were eight teachers living in the house (figure 5).

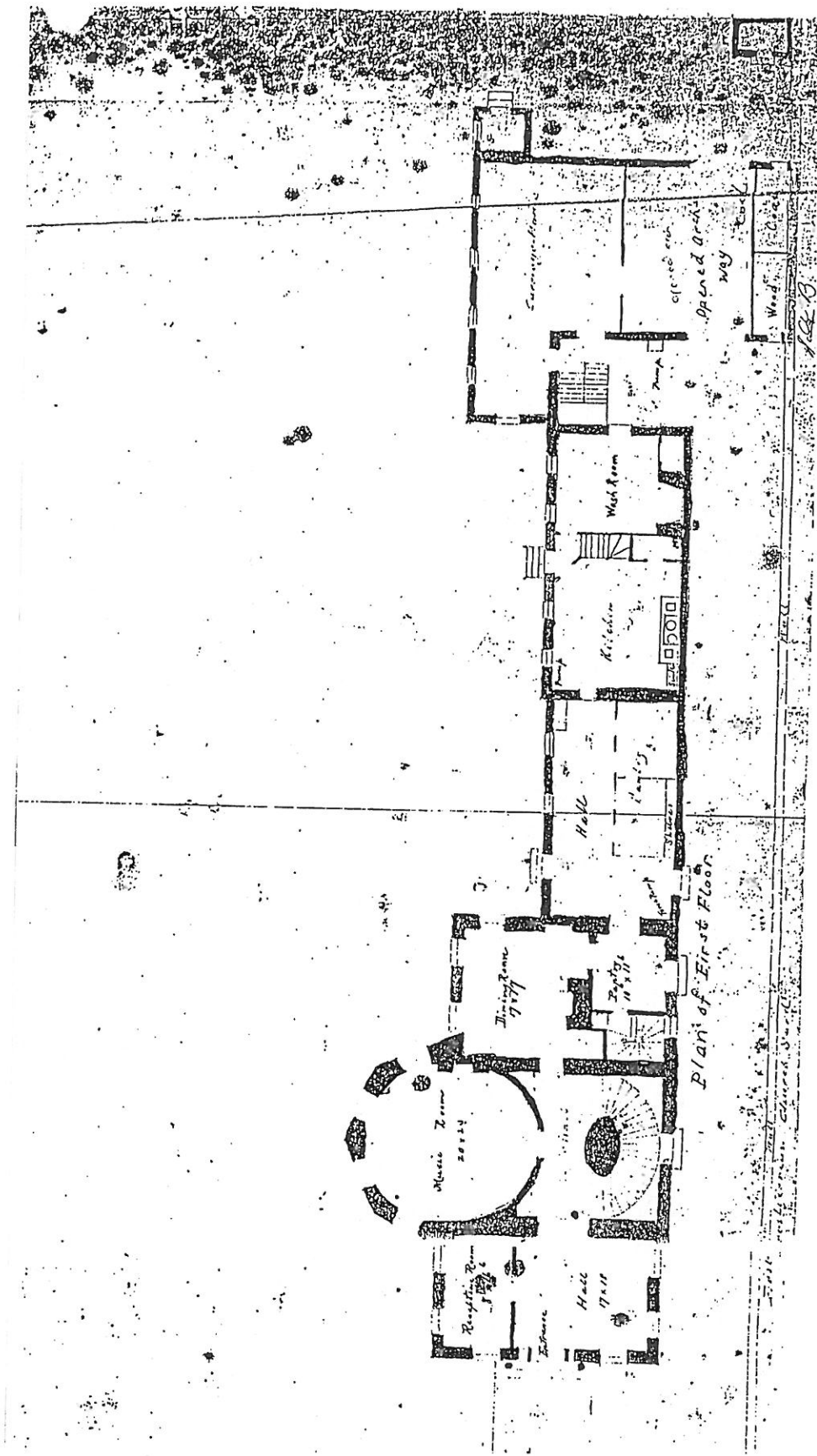


Figure 5

Layout of the Russell house after purchase
by the Sisters of Charity
(Original in possession of the Sisters of Charity; copy on file, Historic Charleston Foundation)

The Sisters were living in the house during the earthquake of 1886. Though the house was described as "badly sprung," damage was relatively light. The stable was described as "badly cracked"; the buildings were anchored and bolted, and the outbuildings underwent a series of changes during the Sisters' tenure (figures 6 and 7). They also maintained the gardens. In 1939, E.T.H. Shaffer wrote that,

"the patterned beds of flowers are separated from the kitchen garden by a thick hedge of altheas, giving beauty to both. Tall oleanders reach up to the curious iron balconies that are woven into the monogram of the builder. From the gate the path is bordered with English box; just inside the gate, looking over the wall, are large crepe myrtles. A few years ago the gardens were dotted with large orange and grapefruit trees that once flourished throughout the winters both in Charleston and Beaufort, but that have now, owing to a colder weather cycle, disappeared. The garden is lovely with pomegranites, with spikenard, the pale shadowy tamarisk, and everywhere the blue sky caught to earth in pools of blue larkspur" (figures 8 and 9).

In 1901 the Academy moved to Calhoun Street, and the mansion served as the motherhouse until 1908. The Sisters sold the house to Dr. and Mrs. Lane Mullally, returning the house to the role of a private residence. The Mullallys made extensive changes to the house, and maintained the garden. Their daughter described the garden in the following manner:

"The garden was divided into three sections. The front of the house and around side to terracotta room was a formal garden; from there to kitchen was informal and play space for the children; at the rear was a third divided into smaller thirds and used as kitchen garden, for a cow, a pony and chickens, etc."

Many of the grand houses of the 18th and 19th centuries suffered from neglect, if not abuse, during this period. Ironically, many old dwellings avoided razing because of Charleston's lack of progress. Nonetheless, it was misuse and neglect of such structures as the Joseph Manigault house that resulted in the birth of historic preservation in Charleston in the 1930s. Charleston continues to be at the forefront of a complex and challenging preservation movement.

In 1913 the house was sold to Mr. and Mrs. Francis Pelzer. They continued use as a private dwelling, and further altered the building to suit modern conveniences. Historic Charleston Foundation purchased the house in 1955 with locally raised funds. It served as the Foundation's headquarters and center of the preservation movement for the next 37 years. It was also opened to the public in 1956. The house was designated a National Historic Landmark in 1974, and Curator J. Thomas Savage was hired in 1981. Hurricane Hugo dealt yet another heavy physical blow to the house in 1989, and emergency repairs were undertaken. The present project represents a synthesis of a variety of restoration efforts, designed to return Nathaniel Russell's mansion to its original architectural distinction.

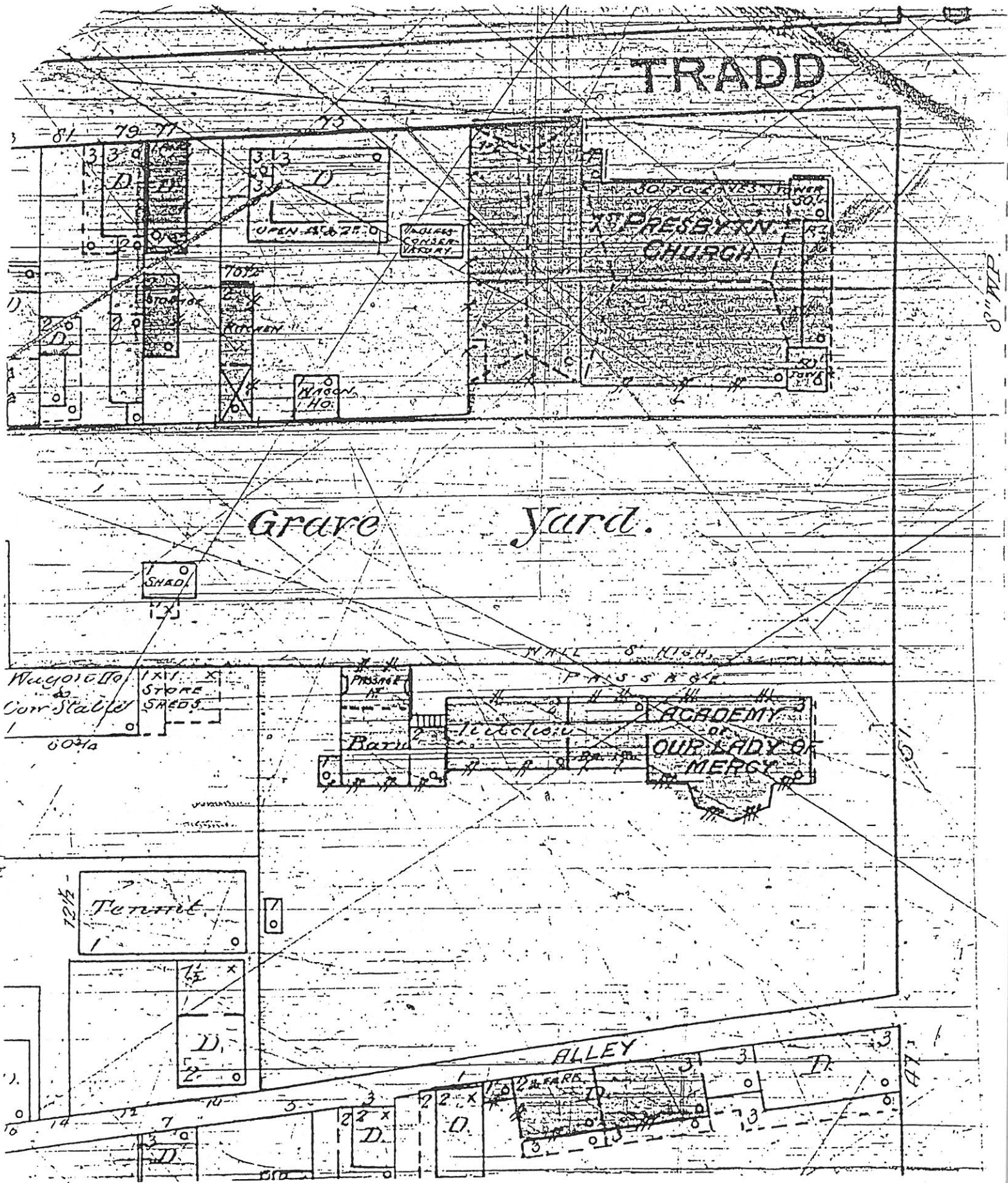


Figure 6

Sanborn fire insurance map, 1888

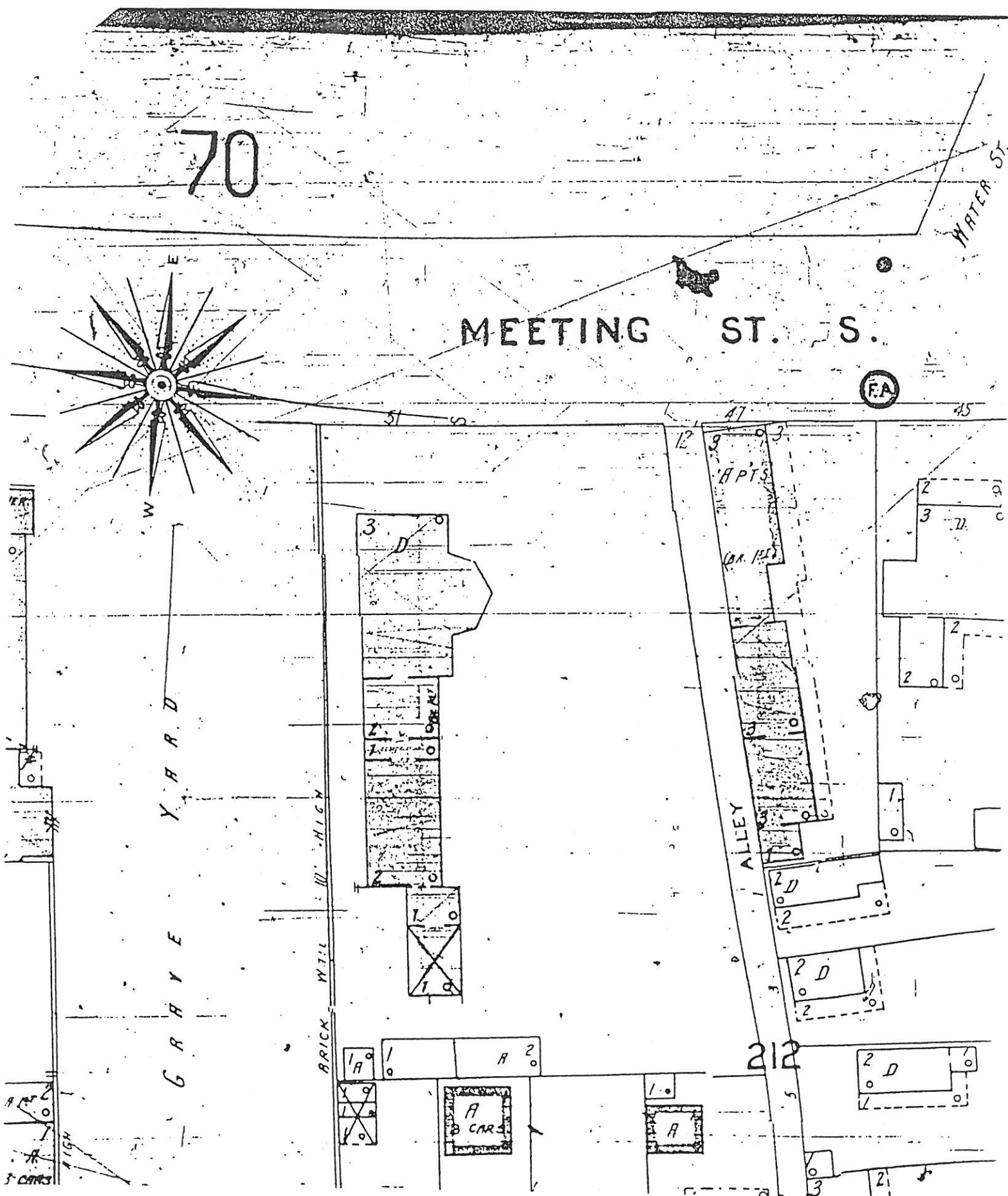


Figure 7

Sanborn fire insurance map, 1902

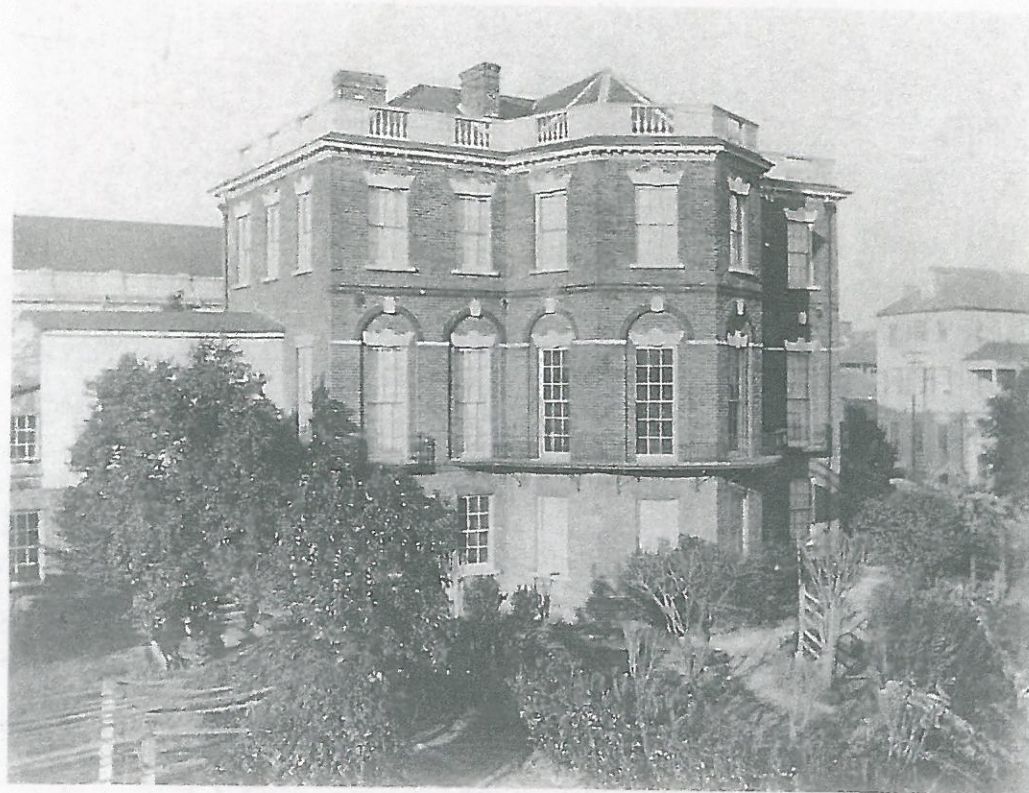


Figure 8

a) Front portion, Russell house garden, before 1898 (MK 9756)

b) Rear portion, Russell house garden, 1898 (MK 15395)

Collections of The Charleston Museum.

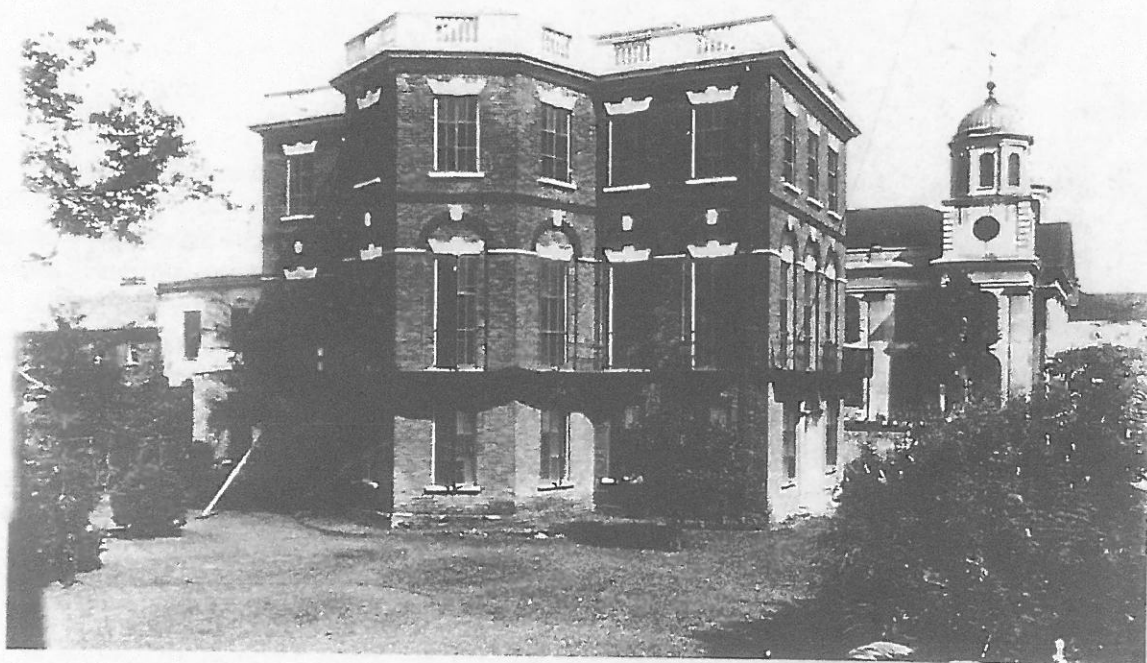
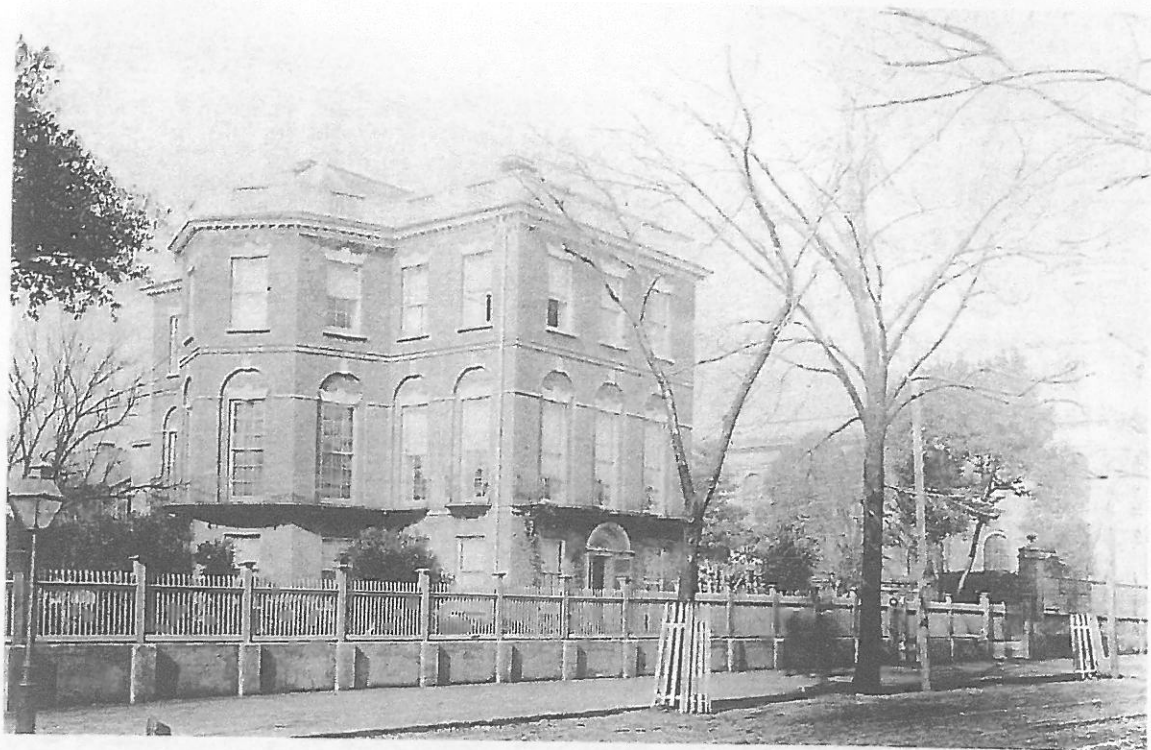


Figure 9

- a) Front view, Academy of the Sisters of Charity, c. 1898 (MK 15329)
b) Russell House, 1930 (MK 7003)
Collections of The Charleston Museum. 32

CHAPTER III

Fieldwork

Site Description

The property numbered 51 Meeting Street was built on lot 247 of the Grand Modell, Charleston's 1680 town plan. The lot retains original dimensions and has never been subdivided. It measures 123 feet across the front by 231 feet. Three sides of the property, the east, north, and west, are perpendicular; these front Meeting Street, First Scots Presbyterian, and the back of King Street properties. The south boundary fronts Price's Alley, a former creek, and is at an angle, making the rear property line 147 feet long.

The 1808 Adam-style house fronts, but does not abut, Meeting Street. Directly behind it, and extending almost to the rear property line, are a series of service buildings. These include a two-story kitchen and slave quarters, a two-story infill which connects the main house and kitchen, and portions of a brick stable building, later converted to storage with wooden infill. The Russell house structures are separated from the northern property line by a shell-lined driveway. The entire southern portion of the property is occupied by a formal garden. While the documentary record suggests that at least the front third of the yard has always served as a formal garden, the present garden configuration dates to 1981 and was designed by Rudy Favretti. The garden is marked by a number of large, old trees and, with the exception of an oval grass area in the rear third of the yard, is quite shady and contains dense vegetation of all types. Though lovely, the garden greatly reduced visibility for grid layout and access for excavation.

Field Methodology

In order to prepare the site for future, long-term study, the project began with the establishment of a Chicago grid over the site. The key stake, arbitrarily designated N100E100, was placed in the inside southwest corner of the garden, adjacent to the corner of the enclosing brick walls. From the first stake onward, dense vegetation posed problems. Vegetation near the ground made it difficult to pull a tape straight and taut, while tall vegetation greatly obscured visibility with the transit. The establishment of units in various parts of the site entailed several transit moves to get around large trees. Further, the vegetation often required that nails be set in by lining up on the plumb bob string, rather than actually viewing the nail and the ground surface. For these reasons, it is possible that the grid point locations may not be completely accurate. To minimize this problem, the locations of dispersed test units were also measured relative to permanent landmarks on the site. Also, a number of impermeable site features — paved areas, large trees and their root systems, etc., meant that unit location was often inflexible. For these reasons, location/coordinates of many of the units are odd numbers. Figure 10 shows the

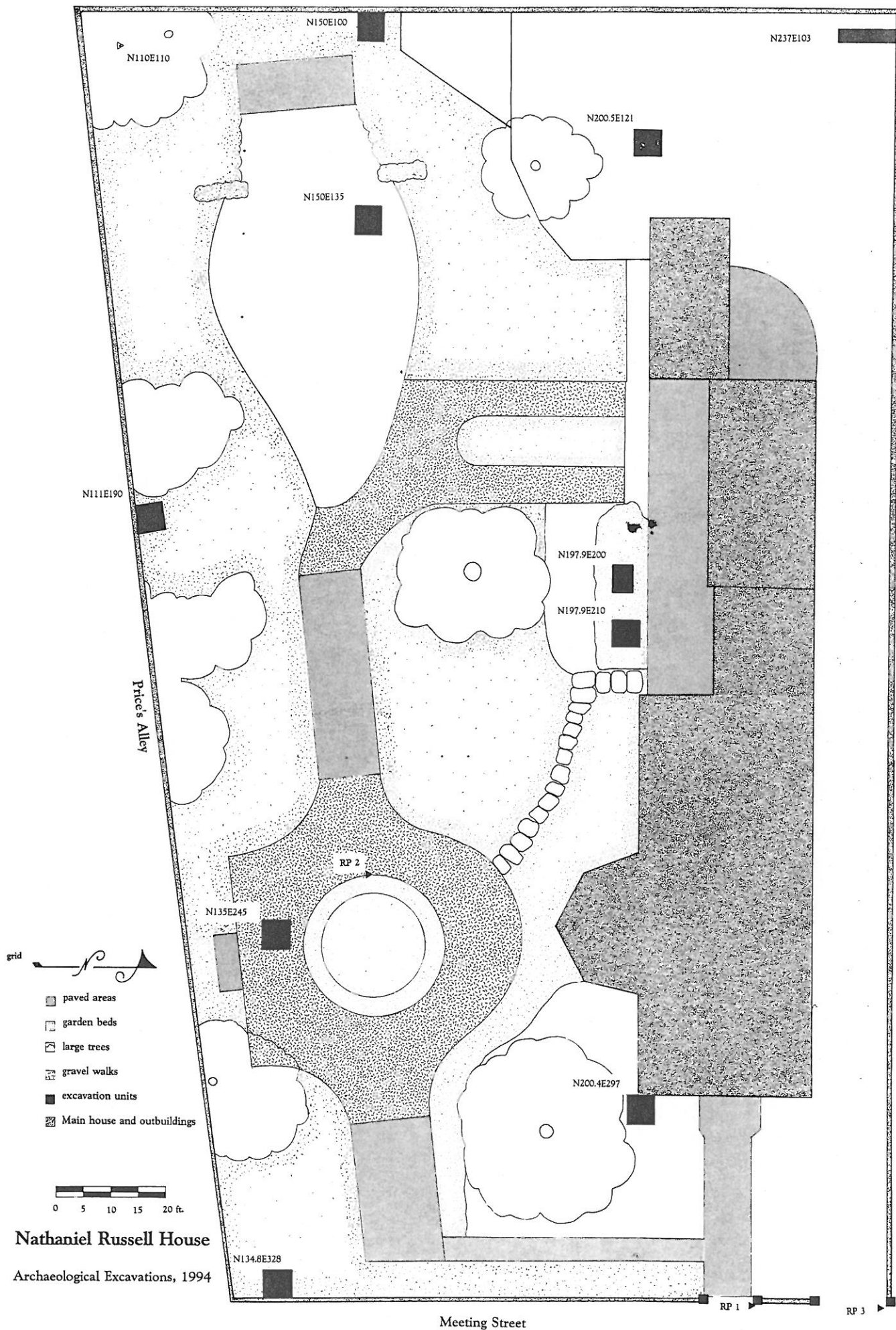


Figure 10

buildings, garden, and surrounding walls, as well as grid markers, excavation units, and elevation reference points.

Vertical control was somewhat easier to maintain. Two temporary datum points were established during the course of the summer project. Reference point 1 was a mark placed on the sidewalk adjacent to the southeast corner of the northern gatepost leading to the front door. Reference point 2 was a small X placed on the westernmost point of the brick edging around the circular garden bed (see figure 10). All measurements on site were taken with a transit and stadia relative to one of these points. These were, in turn, tied into the U.S.G.S. marker located in the doorway of the U.S. Post Office at the corner of Meeting and Broad streets. The absolute elevation of RP1 is 8.37 feet and of RP2 is 7.86 feet above mean sea level (msl). All elevations in this and subsequent reports are listed as feet above mean sea level (msl). Measurements at the site, both horizontally and vertically, were taken in feet and tenths of feet, to correspond with historic measurements. To facilitate the November excavations, a third reference point was established on the sidewalk adjacent to the southeast corner of the northernmost driveway gate post. The absolute elevation of this point is 8.49' msl.

All excavations were conducted by hand using shovels and trowels. Excavations followed natural zones, and deep zones were subdivided into arbitrary levels. All materials were dry-screened through 1/4 inch mesh until soil dampness hampered visibility. These were then water screened. Given the water table problem, at least half of the proveniences received some water screening. Soil samples were recovered from all natural proveniences (figure 11).

Record keeping entailed narrative notes and completion of a variety of forms. Planview and profile maps were made for each unit, as appropriate. Material from each were bagged and tagged separately; a field specimen number (FS#) was assigned to each provenience in ordinal fashion. Photographs were taken in black and white (T-max 100) and color slide (Kodachrome 200 professional film).

Dating the Proveniences

All encountered archaeological deposits were dated on the basis of stratigraphic point of initiation and Terminus Post Quem. Terminus Post Quem, or TPQ is the principal which states that no provenience can be deposited earlier than the newest (or latest) artifact contained in it. The TPQ date is thus equal to the initial manufacture date of the latest dating item in the provenience. A provenience can be deposited any time after that date; therefore, date of deposition is rarely the same as the TPQ date.

Stratigraphic point of initiation is based on the Law of Superimposition, the geological principal that soils gradually accumulate on sites of human occupation. Therefore, the deepest deposit is the earliest, with deposits occurring later as one approaches the top of the ground.



Figure 11
a) excavating N150E135
b) water screening wet samples

Relative dates are therefore assigned according to the profile map and the level of the top (or point of initiation) of each deposit. Thus the date of deposition assigned to each archaeological provenience in Charleston is based on both techniques and is determined by considering each provenience relative to those around it.

On sites such as Russell where dispersed test units are excavated, an additional emphasis is placed on recognizing related stratigraphy, in terms of dating, depth, artifact content, and physical characteristics, across broad areas of a site. To minimize confusion, the proposed date of deposition for each deposit is discussed unit by unit, at the end of each unit description. More involved discussion of related stratigraphy and temporal assemblages will follow in subsequent chapters.

Description of Excavated Proveniences

The seven units excavated during the summer project each exhibited distinct stratigraphy and yielded significant artifact assemblages. The rationale for their location varied, as did the precise methodology of their excavation. Each unit, the rationale for location, and the reasons for specific methodology, will be described separately. Determined dates of deposition for proveniences within each unit will be discussed in preliminary fashion for each unit.

N197.9E200 and N197.9E210: These units were located in the same area of the site and exhibited similar stratigraphy, so they can be described together. The two units were located adjacent to the kitchen building, in anticipation of a dense and complex stratigraphic record of work yard activities. Such deposits have been recorded in comparable locations as other townhouse sites in Charleston (Miles Brewton, John Rutledge, Heyward–Washington, and even Aiken–Rhett). Two units were planned for this location, in anticipation of extensive, artifact-laden deposits; such was not the case, however.

The alcove area behind the main house, adjacent to the hall and the kitchen, and in front of the stable house is paved in modern brick. The units were located south of this brick, in a planting bed of impatiens and crape myrtle, bordered with maidenhair fern. The units were located relative to several grid points established north and east of the N100E100 unit. Nails were originally located with the transit at N198.5E200, at 5 foot intervals to N198.5E215. However, when we triangulated these units with tapes, the northern edges intruded on the brick paving, so the southern corners of these units were moved .6 feet to the south. The two units were laid out within the confines of the planting bed, and screening took placed in a grassed area immediately to the south. The impatiens were removed by the gardeners and stored in the shade; they were replaced with little ill-effect after the units were backfilled. N197.9E200 was further truncated into a 3.5 by 5 foot unit to avoid the roots of a crape myrtle tree.

Zone 1 in both units was a very dark grey loamy sand, most likely an imported topsoil. Zone 1 was virtually sterile, supporting the idea that these soils were not generated on-site. The depth of this zone varied, depending on the depth of particular plantings. At a depth of .6 feet

b.s. in N197.9E210, several modern garden features were encountered. First was a pvc pipe and sprinkler head to the modern sprinkler system. The narrow, irregular trench for this feature was designated Feature 1. In the center of the unit was a section of iron pipe set vertically into a section of ironstone sewer pipe. The construction soil around it was designated feature 2. The function of these pipe sections remains unclear, as it was not connected to anything. There was also a narrow iron water pipe running northwest/southeast through the northeast section of the unit. The soil beneath these features was designated zone 2, but it was highly disturbed and was screened with zone 1.

Unit N197.9E200 was not as complex. Beneath .6 feet of topsoil was a homogenous zone of medium grey granular sand, full of slag, some glass, and other small artifacts. At a depth of .9 feet this granular sand was mottled with pockets of red clay. At this point zone 3 was defined as medium grey-brown soil mottled with red clay. This zone contained, for the first time, larger sherds, a more varied artifact assemblage, and larger bone fragments. This zone was only .2 feet deep, bottoming onto solid red clay. A small pocket of mottled yellow, brown sand and orange clay in the east wall of the unit was designated feature 4; it proved to be a small, irregular pit.

Returning to N197.9E210, zone 3 in this unit was a medium tan-brown sand; like the previous unit, this zone contained a more typically domestic artifact assemblage and larger fragments of bone. It was also comparable in depth at .2 feet, much shallower than expected for this area of the site. Visible in profile directly beneath the iron water pipe was a well-defined posthole. It appears to initiate within zone 3, and was filled with similar soil - medium brown sand with mottles of yellow sand and orange clay. Feature 3 was well defined and 1.3 feet deep. It intruded into a pocket of yellow sand which, like the surrounding red clay, was sterile.

Zones 3 in each unit dated to the antebellum period, while zones 1 and 2 all dated to the early 20th century. Zone 3 was the type of deposit expected in this area of the site; what was surprising is that it was so shallow. The lack of artifacts in the overlying 20th century zones would argue against these activities merely disturbing the antebellum kitchen midden deposits. Fred Andrus likewise indicated that the trench in this portion of the yard, leading to the kitchen basement, was virtually sterile. Evidently, refuse from 19th century kitchen activities was deposited somewhere else.

N150E135: The next unit laid out was designed to randomly test the rear third of the garden, that portion purportedly used for animals and work yard. The unit was arbitrarily placed in the grassy area in the middle of the garden, avoiding the sprinkler system and the large yard drain. Zone 1 was a deep (.8') deposit of granular charcoal-grey sand with a highly unusual artifact assemblage (7.5yr2/0). Zone 1 was full of slag and was similar, but not identical, to zone 2 in N197.9E200. Domestic artifacts were sparse, but the provenience contained several children's toys.

At the base of this deposit, zone 2 was defined as black loamy sand (10yr3/1), absent the granular characteristics of zone 1 and absent the slag. The zone did contain quantities of wall plaster with a yellow mortar; this was concentrated principally in the northern half of the unit.

Beneath this lense of plaster the artifacts increased in number. At about 1.3 feet below surface, a concentration of bermuda stone and whole bricks was encountered, again in the northern half of the unit. This was designated feature 5. The soil beside and beneath this was mottled brown and grey loamy soil (10Yr3/3). This was excavated in three arbitrary levels. The soil around the brick contained pockets of orange sand, while the zone 3 soil in the south side of the unit contained a good bit of oyster shell and an increasing concentration of artifacts.

The soils in the south half of the unit were excavated as zone 3 level 2, while the soils of feature 5 were excavated separately. Feature 5 contained whole brick, mortar, plaster, roof slate, and black-glazed pantile. None of the materials were articulated, although there seemed to be a distinct line to the brick at this level. The same soil continued beneath feature 5, and this was excavated as zone 3 level 3. This zone also contained a large amount of whole and half brick. Excavations continued to the water table, and were halted there for a week due to the rain, and then only continued an addition .3 feet to the point of the water table, at 2.6 feet below surface. Presumably, the brick and dark soil continue beneath this point.

From bottom to top, dates of deposition are as follows: Zone 3 level 3, the deepest provenience excavated, has a TPQ of 1851, provided by white porcelain. The above feature 5 likewise contained white porcelain. This suggests deposition of these soils in the 1860s–70s. Zone 3 levels 1 and 2 contained milk glass, providing a TPQ of 1870. These deposits may thus postdate the feature 5 soils by a decade or so, or they may have accumulated more rapidly. Likewise, zone 2 has a TPQ of 1880, based on the recovery of blue soda water bottle glass. The unit thus evidences deposition of trash and building rubble throughout the second half of the 19th century (figure 12a).

N111E190: This unit was located adjacent to the south property wall. It was deliberately located to date the brick wall by exposing the builders trench. Likewise, its east–west location was designed to intersect possible trash deposits behind the 18th century structure suggested on the 1788 city map. On a practical level, the unit was placed to avoid trees, roots, and other plantings. For ease of excavation, the unit was oriented parallel to the south wall, rather than parallel to the grid. The coordinates of the southwest corner of the unit are, however, true to the grid. The unit was laid in by simply pulling a tape along the south wall and placing pins at 90 and 95 feet.

Zone 1 was a dark grey, almost black topsoil, possibly imported into the site (10yr2/2). It varied in depth from .8 to 1.1 feet, and was riddled with roots. Zone 1 was only excavated to a depth of .7 feet below surface, with the remainder of the deposit excavated with zone 2 level 1. Zone 2 was a medium brown–grey sand with some gold mottling (10yr4/2). This continued to 1.6 feet below surface, and was excavated in four arbitrary levels. Zone 2 contained large pieces of white mortar, brick, roof tile, bone and ceramics. After this point the soil appeared to be slightly darker and loamier (10yr4/1) and so was designated zone 3. Zone 3 was as much as 1.5 feet deep, and was excavated in six arbitrary levels. A number of roots from the adjacent live oak tree were left intact in the unit; these plus the large amount of brick rubble made only trowel excavation possible. For this reason, the arbitrary levels of zone 3 were only 2.5 inches thick.

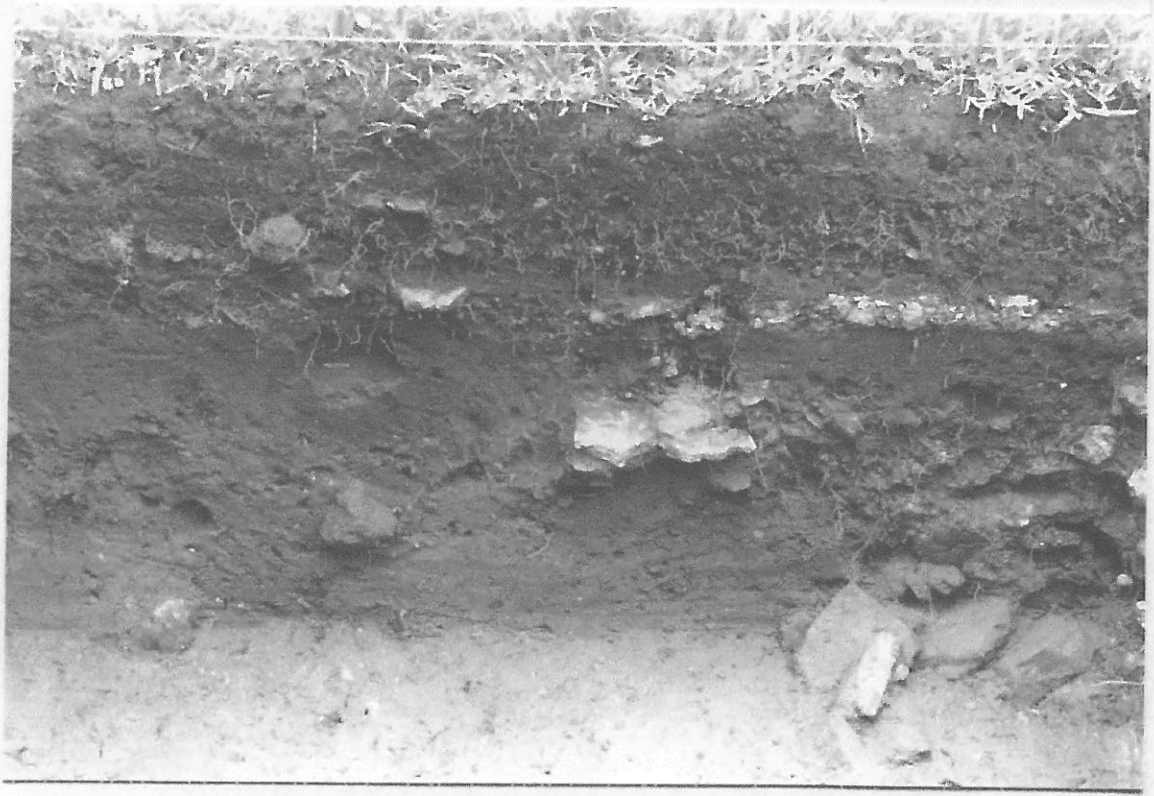


Figure 12
a) west profile, N150E135
b) west profile, N200.4E297 (exposing s.e. corner of main house)

This was done to ensure that no temporal or physical changes in the soil were missed in the poor light and high moisture.

Feature 12 was encountered at the top of zone 3. This was a square brick pier, adjacent to the south property wall. Associated with this in the south wall was a patched area in the brick and a series of brick stretchers stepped out one-half brick. The feature was fully exposed, defined, and photographed at this point. Based on its orientation to the south wall and association with the patch, it has been interpreted as part of a now-demolished buttress for the garden wall, or possibly a foundation for an internal wall running across the garden. The base of the pier was encountered at the base of zone 4 level 1 (figure 13a).

At 2.3 feet below surface, a soil change was finally noted. Zone 4 was a highly mottled orange clay and dark grey-brown sand. This soil was immediately on top of a jumble of whole bricks. The water table was encountered at this point, so excavations ceased. The south brick wall continued below this level, and so the builders trench was not encountered. The date of deposition for zone 4 and for the lower levels of zone 3 suggest that at least the lower portions of the wall predate the Russell house and may have been part of the previous landscape. A seam was visible in the wall approximately 30 inches from the present ground surface, running horizontally; this suggests rebuilding or remodeling of the upper sections of the wall.

Zone 4 level 1 contained annular pearlware, providing a TPQ of 1795. The jumble of whole brick and this TPQ of 1795 suggests that the brick deposit may date to destruction of the Fraser house, at the time of construction of the Russell house. Since the south property wall continues beneath this deposit, it must predate this activity and, presumably, predate construction of the Russell house (figure 13b).

There was some temporal differences in the six defined levels of zone 3. Levels 5 and 6 contained blue transfer printed pearlware, first manufactured in 1795, and undecorated whiteware, providing a TPQ of 1820; therefore it appears that this soil accumulated in the 1820s to 30s. Pale blue transfer printed whiteware in levels 3 and 4 would suggest deposition in the 1830s to 40s. Levels 1 and 2 contained mould-blown bottles with hand-applied necks, suggesting deposition at mid-century. The four levels of the above zone 2 appear to date to the 1890s. Level 4 had a TPQ of 1830, provided by transfer printed whiteware. Levels 3, 2 and 1 all contained gilded white porcelain. Zone 1 contained modern bottle glass, evidence of recent disturbance and use.

N150E100: This unit was located adjacent to the rear property wall, and was located to encounter its building trench for dating purposes. The north/south location of the unit was an additional effort to encounter evidence of a small outbuilding shown on the 1880s Sanborn map. The map suggested that this unit might encounter the southern wall of the feature, but that the bulk of the building might be below the HVAC unit. We also hoped to recover additional evidence for use of the rear third of the garden for workyard activities.

The unit was located by simply pulling a tape along the rear wall from the N100E100 point. Nails were placed at 50 and 55 feet, and a unit was triangulated to the east. This was the



Figure 13a
N111E190, feature 12 and south property wall

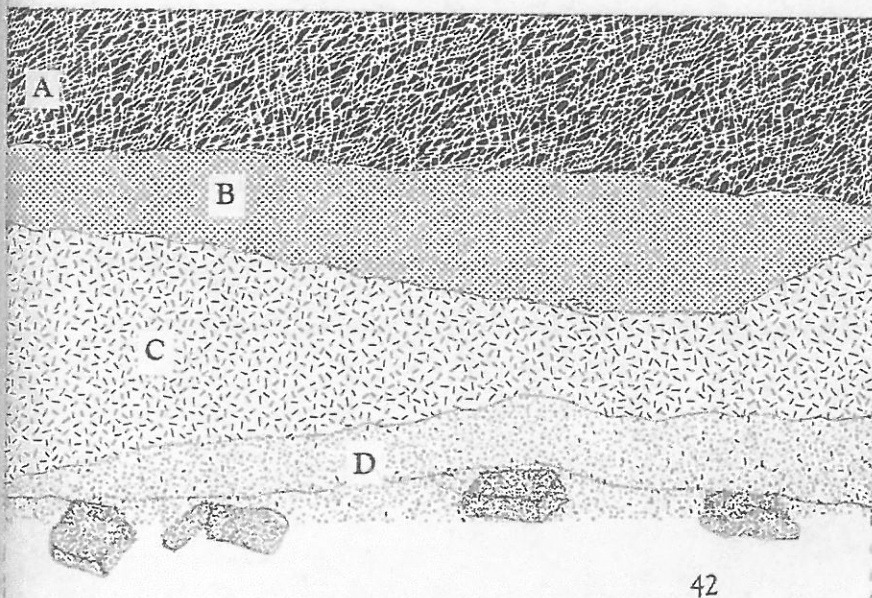


Figure 13b
N111E190, west profile

- a) granular black topsoil, zone 1
- b) medium brown-grey sand, zone 2
- c) dark brown-grey loam with clay mottles, zone 3
- d) mottled orange clay and dark brown sand, zone 4

(1" = 1')

northernmost unit possible relative to location of the HVAC unit. Excavation began with a thick deposit of granular black topsoil, designated zone 1 (2.5yr2/0). At the base of this zone was a concentration of whole brick. Some appeared to be articulated, but fallen in place, in linear fashion about 1.0 feet away from the wall.

Zone 2 was a dark grey–brown loam soil (10yr2/2); the soil remained homogenous for the next 1.4 feet, and so four levels of zone 2 were excavated. At this point there was a linear area of mottled gold, sterile–appearing clay along the eastern wall of the unit, suggesting the edge of a rather large feature. The soil at this point was a dark grey–brown loamy sand (10yr3/1). In the center of the unit, extending in linear fashion north/south throughout the unit, was a concentration of oyster, brick, mortar, and coal in dark soil. The soil adjacent to the brick wall was similar in color and texture (just slightly lighter), but it lacked the artifact density. This soil was defined as zone 3, while the dense artifact concentration was defined as feature 11. Feature 11 intruded into zone 3, a slightly lighter grey–brown sand (10yr4/1), excavated in two separate levels.

At the base of zone 3, the next level of soil was a mottled light grey and tan sand. This zone 4 soil was contiguous over the whole unit (10yr4/3), with the exception of an oval area intruding into the south wall, which consisted of dark grey soil with brick and oyster shell inclusions. This was designated feature 14. It is possible that feature 14 was residual feature 11, but the two were defined and excavated separately.

Beneath feature 14, zone 4 was contiguous across the unit, and was relatively shallow (.2'). At the base of this zone, sterile yellow sand was encountered across the unit. Three features intruded into sterile subsoil; the fill of all three was identical to the above zone 4. These three features were mapped and excavated quickly, in order to complete them by the end of a Friday workday, in case of rain over the weekend. And the weekend did witness torrential rain which filled all the unit with water to within 6 inches of the top.

Features 16 and 17 were small, irregular, roughly oval areas of light grey sand. They were each about .3 feet deep and contained sparse artifact assemblages. Feature 15 was the builders trench for the wall. It was filled with soil similar to zone 4 and features 16 and 17, with a higher percentage of gold sand in the mottling. The builders trench ranged in width from .45 to .7 feet and was .3 feet deep to the base of the brick wall (figure 14a).

Though small, features 15, 16, and 17 contained datable artifacts and reflect 18th century activity in this portion of the yard. Feature 16 has a TPQ of 1740, provided by white saltglazed stoneware, while feature 17 has a TPQ of 1670, provided by a single sherd of combed and trailed slipware. Feature 15, the most critical of the three features, contained undecorated pearlware, providing a TPQ of 1780. Despite this disparity in suggested dates, it is likely that the three features occurred within a more narrow time frame, and most likely in the 1780s. This is supported by the artifacts contained in the overlying zone 4; this deposit also has a TPQ of 1780, provided by blue handpainted pearlware. Taken together, these features suggest that construction



Figure 14a
College of Charleston student Rhonda Varallo cleaning unit
N150E100; note builders trench on left side of photo.

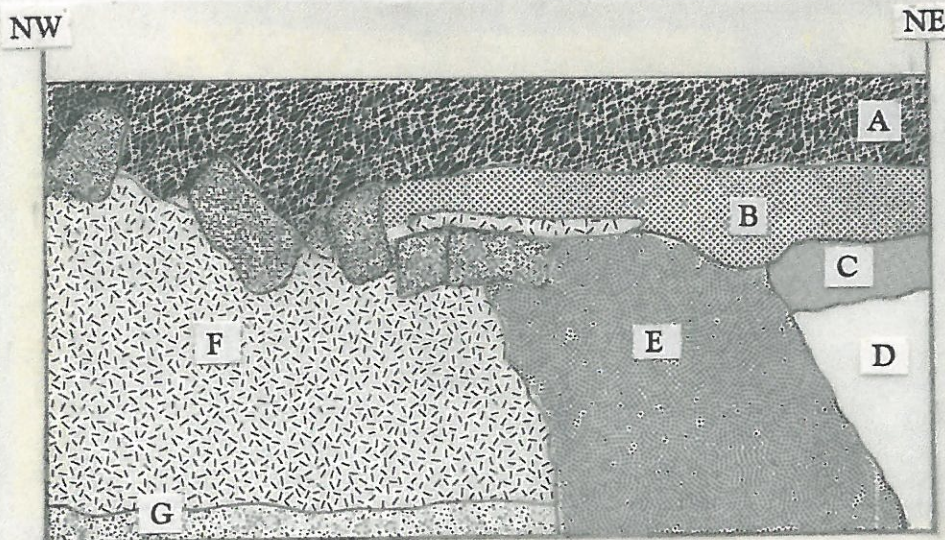


Figure 14b
N150E100, north profile

- a) granular black topsoil, zone 1
- b) dark grey-brown soil mottled with gold sand
- c) dark grey-brown soil, zone 2
- d) yellow sand
- e) dark grey-brown loamy sand, feature 11, feature 14
- f) lighter grey/brown sand, zone 3
- g) medium brown and gold mottled sand, zone 4

(1" = 1')

of the brick wall precedes construction of the Russell house, though it is possible that all of these proveniences were deposited somewhat later.

Feature 14 and the above levels of zone 3 appear to date to the 1860s, based on the presence of white porcelain (TPQ of 1851), transfer printed whiteware (1830), and a fragment of hard rubber comb (1861). Feature 11 and the above levels of zone 2 date to the 1890s. They contain South Carolina dispensary bottle fragments, a white porcelain furniture caster, lettered panel bottle fragments, and milk glass, all manufactured in the 1870s–1880s. The dispensary bottle dates after 1893. Zone 1 and the upper levels of zone 2 were subsequently disturbed and impacted by 20th century activities, including installation of the sprinkler system (figure 14b).

Work on Friday, June 24 focused on completion of excavation, at least to the water table, of units N150E100, N150E135, and N111E190. The base of these excavations was photographed in at least "in progress" condition. This was a fortuitous situation, inasmuch as heavy rains over the three day weekend filled all of these units with over 2 feet of water. In order to photograph and map these profiles, it was necessary to bail water during the entire wall cleaning process. The photos therefore suggest that these units had standing water, and that excavations took place beneath the water table. Such was not the case, however, and the profiles were thus recorded under less than ideal conditions.

Water retention was not nearly so greivous a problem in the two units located in the front portion of the yard. Likewise, the front two units revealed remarkably different stratigraphy. For all their differences, the zone 3 deposits in the rear yard were comparable in depth, color (10yr4/1 or 3/3), texture, and date of deposition (mostly the mid–19th century). Depositions in the front yard were shallower, and generally earlier than those further back.

N200.4E297: This unit was deliberately located to intersect the southeast corner of the main house, and open the foundation for inspection by the architects. A second goal was to search for any evidence for fencing or other boundaries between the front entranceway and the garden to the side.

As mentioned earlier, moving the grid system from the southwest corner of the site to the eastern edge proved extremely challenging. For this reason, the unit was triangulated relative to the structure itself, and then tied into the grid system, hence the odd number designation. Zone 1 was a dark grey–black topsoil, and was relatively shallow. Zone 2 was a dark tan–grey sand (10yr3/2) mottled with some gold soil, with flecks of mortar and coal. A large root from the adjacent magnolia tree extended through the unit; in fact the unit was riddled with roots, hampering both visibility and excavation speed.

At the base of zone 2 level 1, a small posthole was encountered. This shallow posthole of light grey granular sand was excavated as feature 6. Excavation then continued with a second level of zone 2. At this point two more shallow, amorphous features were encountered. Feature 7 appeared to be from a tree root. The central portion was filled with granular grey and white sand (similar to zone 2 in N197.9E200), while the surrounding sand was a medium brown–grey

with oyster, similar to zone 2. Feature 8 was an irregular area of dark grey–brown loamy sand. Neither feature was well enough defined to be called deliberate, or defined as a posthole.

Excavation then resumed with zone 3, a medium tan–brown sand (2.5yr4/4) with inclusions of building material, particularly brick and slate. At the base of this zone two additional features were encountered. Feature 9 was a small round area of medium grey–brown sand located in the northwest corner of the unit. This feature was approximately .7 feet deep and may have been a deliberate posthole. Feature 10, intruding into the south wall of the unit, was more substantive. This was a large round pit of light tan–grey sand, full of large brick fragments and crumbled mortar. The feature was just over 1.0 feet deep and exhibited a shallow, rounded bottom. Its primary function appears to have been the discard of construction debris.

The remaining soil in the unit was a highly mottled yellow and orange clay–sand with moderate brick and mortar inclusions. The soil exhibited the characteristics of a builders trench, but because it was contiguous over the whole unit it was designated zone 4. The deposit contained small pockets of darker tan sand and very sparse artifacts which pre–date construction of the house. Because of time constraints, the unit was subdivided north/south at the base of zone 4 level 1. Excavation continued in the western half of the unit, adjacent to the house. At a depth of .3 feet below this level, a lense of homogenous light grey–brown soil was encountered adjacent to the house. This was segregated and defined as feature 13, though it most likely was an arbitrary lense of the larger builders trench. Feature 13 was only .2 feet deep, and bottomed onto mostly yellow mottled sand; all of these soils were virtually sterile. The yellow mottled sand at the base of feature 13 was excavated to the base of the house foundation (figure 12b), a depth of .6 feet below the base of zone 4 level 1. Because of the virtually sterile nature of zone 4, excavations were halted at this point (figure 15).

The deepest deposits, Feature 13 and zone 4 levels 1 and 2, contained very few artifacts; datable ceramics include creamware (1760) and pearlware (1780). These soils, though are the builders trench for the house, and thus must date to the first decade of the 19th century. Zone 3 and the two features associated with it, 9 and 10, were deposited between the 1820s and the 1840s. They contain undecorated pearlware, transfer printed whiteware, and yellow ware (TPQs of 1780, 1820, and 1817, respectively). Their stratigraphic position relative to the building foundation indicate that these deposits must postdate the house. Zone 2 and features 6, 7, and 8 were probably deposited between c. 1870 and 1890; this is based principally on stratigraphic position and overall artifact assemblage, rather than presence of any tightly datable artifacts.

N135E245: In many ways, the final unit excavated in June was the most intriguing. This square was deliberately located in an open area of the front third of the garden, in an attempt to encounter physical evidence of the Russell–period garden (figure 16a). Later reminiscences and general site history would suggest that this portion of the site has always served as a formal garden. Close examination of the 1788 city map would also suggest that this unit was located within the footprint of the 18th century structure shown adjacent to the south property boundary. In terms of the present landscape, the unit was located in the gravel path surrounding the formal circular bed. Additional logistics were necessary to ensure the safety of visitors and minimize impact to the

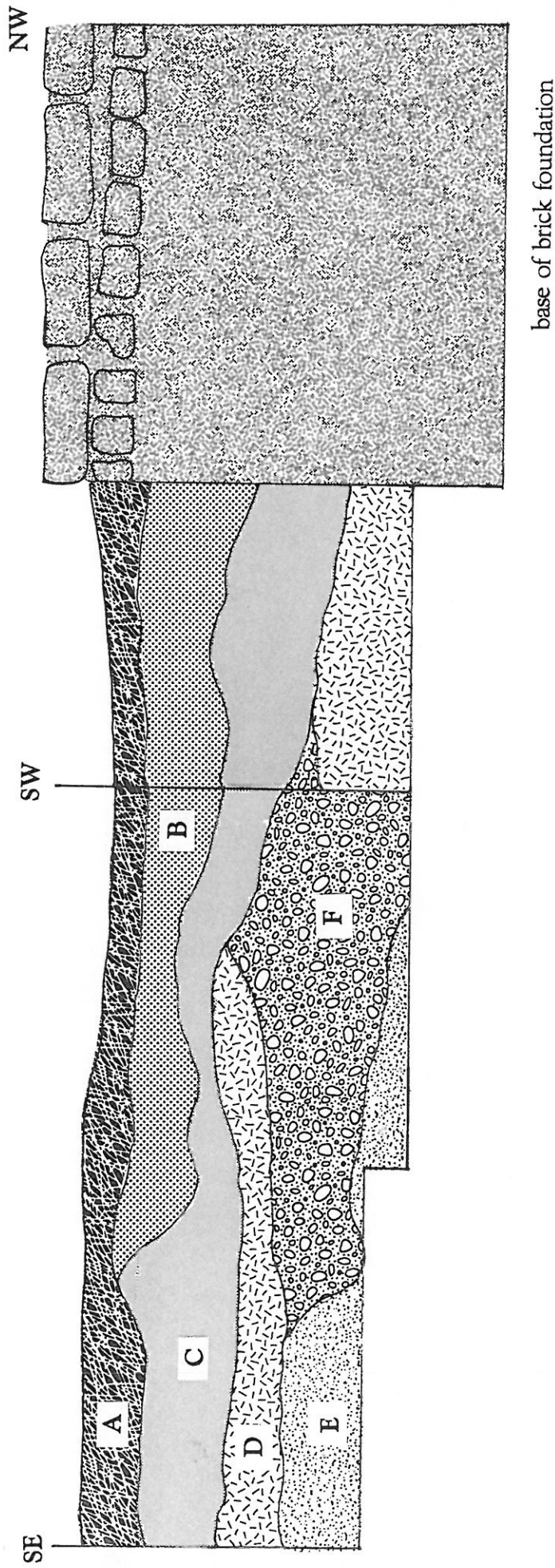


Figure 15
N200.4E297, south and west profiles

- a) black topsoil, zone 1
- b) dark tan-grey sand with bits of mortar, excavated as zone 2
- c) dark grey-brown sand with shell flecks, zone 2
- d) medium tan-grey sand with gold mottling, zone 3
- e) highly mottled gold, yellow and tan sand with charcoal flecks, zone 4/fea 13
- f) tan sand with mortar and large brick fragments, feature 10

(1" = 1')

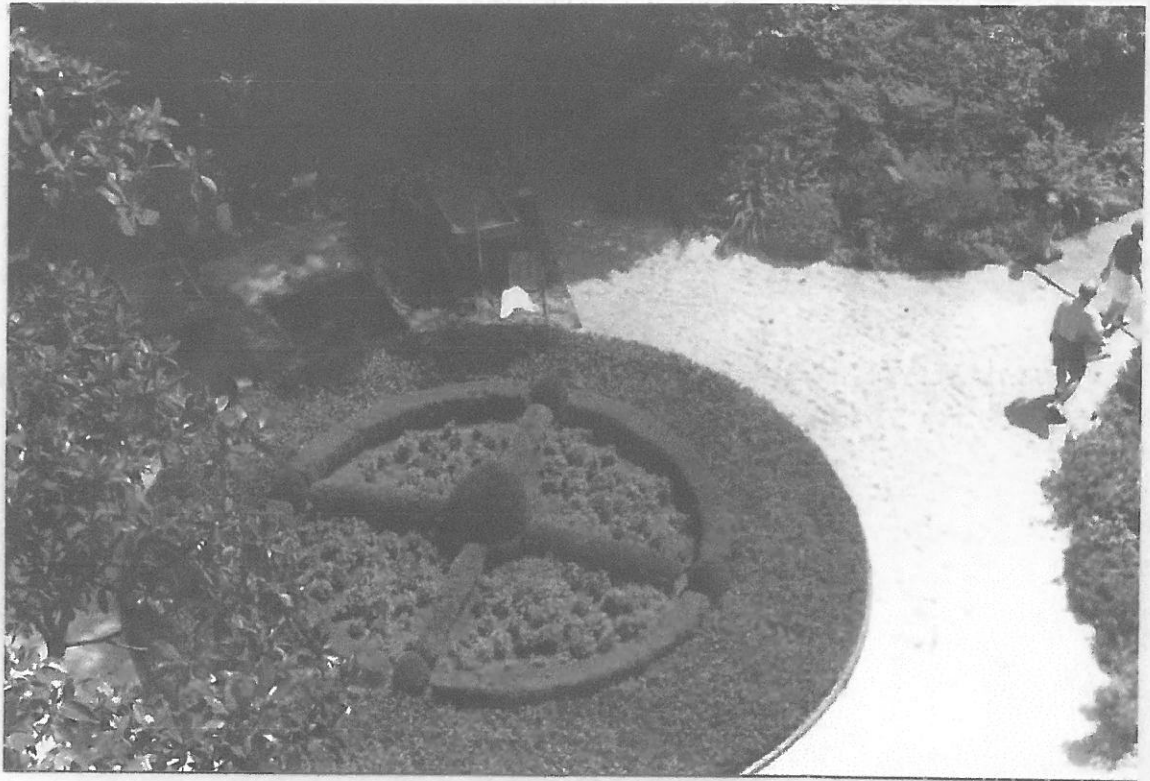


Figure 16
a) rooftop view, excavation of N135E245
b) horn core in situ, N134.8E328, fea. 26

garden. Visual rope barriers were set up on either side of the unit, and sheets of plastic were put down on top of the gravel for the backdirt and screening operation.

Excavation of the 5 foot square began by raking the overlying gravel to a safe pile. Excavation then began with zone 1. The gravel had been placed in a bed of light grey sterile sand. Beneath this was a relatively shallow deposit of dark grey–black sand with brick and oyster, and relatively sparse artifacts. At a depth of .3 feet below surface, a mostly tan, but highly mottled and swirled sand level was encountered. This was labeled zone 2. It was troweled and photographed in attempt to discern any distinct garden deposits, but none were readily discernable. Therefore, the swirled sand was excavated as zone 2 in two levels. At the base of this deposit, the sands remained quite swirled, but there were few distinct outlines. The southeastern two thirds of the unit were filled with a deposit of granular orange–tan sand and brick rubble. This was designated feature 18. Elsewhere in the unit, the soil was a mottled and swirled grey, white, and orange–tan sand. Excavation of feature 18, which was 1.3 feet deep, suggested that this sand deposit is at least that deep. Although there was not definite boundary for these sands contained within the unit, the pattern of the swirling suggests that we are in the northwest quadrant of a large feature, with characteristics highly similar to a well construction pit. For these reasons, the deposit was designated feature 19. As the water table was already a problem (the week's rain had damaged this unit, as well), and the project was running short on time, feature 19 was excavated to a depth of 1.0 feet, stopping well above standing water. The unit, and project, therefore stopped short of absolutely defining feature 19 as a well, and one that dates to the late 18th century, but the unit provides a tantalizing place to resume excavations in the future. The artifact content of features 18 and 19, and even zone 2, was much earlier and quite different from any others encountered on the site, strengthening the interpretation of this as a special feature, predating completion of the Russell house.

Features 18 and 19 each contain early styles of pearlware as the latest artifacts; undecorated and hand painted pearlware provide a TPQ of 1780. The majority of ceramics in these proveniences are earlier, however, suggesting that earlier deposits may have been disturbed and redeposited in the late 18th/early 19th century. The above zone 2 contained primarily creamware, but also some transfer printed pearlware (TPQ of 1795), suggesting that this zone may date to construction of the Russell house and possibly the few decades beyond. The latest artifact in zone 1 was white porcelain (1851) but the contiguous nature of this deposit over the site indicates that it must be a 20th century deposit.

We returned to the field in November to excavate three additional units. Our biggest concern was to encounter sterile subsoil before standing groundwater. The water table in Charleston is usually higher in fall and winter, as deciduous trees enter a dormant period. Further, this fall was very rainy. Therefore, it was quite a surprise that we were able to excavate the units to a considerable depth. The unit in the front corner, in particular, was excavated to a depth of 3.5 msl.

N134.8E328 The first unit excavated in the fall was in the southeast corner of the property. This unit was designed to expose and date the front property wall and to hopefully encounter the foundation for the Fraser house. Rather than place the unit in the exact corner, where stratigraphy might be very complex due to the intersection of so many walls, we decided to focus on the front wall only. Placement of the unit was further complicated by garden plantings: one of the biggest challenges of the Russell project has been finding an open place to work. This includes a 5 foot square, a place for excavators to stand and swing the shovel, and a place for the screen, screeners, and backdirt. In the end, the unit was located flush with the front (east) property wall, 4.8 feet north of the interior southeast corner. Based on our grid coordinates on a map, this unit then received the coordinates of N134.8E328, since the interior southeast corner has a N130 designation. Likewise, the E328 designation was based on the irregular size of the site. The 4.8' location was made to avoid tree trunks in triangulating and excavating the unit. The 5 foot square was flush with the east wall of the property and intersected one of the supporting columns for the fence ironwork.

Zone 1 was the black topsoil found across the site. A sample of the soil was screened; it contained very few artifacts, and so was discarded after the sample was screened. The base of this deposit was uneven, reflecting modern plantings. Also encountered at this level was the base of the present front wall (feature 21). Beneath this was a dark brown–grey homogenous sand (10Yr3/1), designated zone 2. This was excavated in three arbitrary levels for a total of .8 feet. Both the top and bottom of this zone were irregular in depth, and in the northern portion of the unit an area was slightly lighter with slight gold mottling (10Yr3/2, 10Yr5/8). This deposit was excavated with zone 2 level 3. Encountered at the base of zone 2 level 2 was a large concrete foundation for the wrought iron supporting member. A baulk was left around this foundation for the remainder of the unit excavation.

Also at the base of zone 2 level 2 there appeared to be a faintly defined builders trench to the second brick wall (feature 22). This was designated feature 20, and was excavated separately. The soil in this area appeared to be slightly lighter and tanner. Upon excavation, however, the edges lost their shape and it was determined that this was not a separate feature, but part of the zone 2 deposit. (The brick wall and other architectural features encountered in this unit will be discussed in greater detail later.)

At 1.5 feet below surface we encountered a lighter brown–grey sand with an increased proportion of gold mottling (10Yr3/2, 10Yr5/8). This deposit was .6 feet deep and was excavated in two arbitrary levels. This deposit yielded a large number and variety of artifacts, principally from the 18th century, and this artifact density continued into the next zone. Both zone 3 and zone 2 above it were loose, soft and friable, suggesting fill, or at least disturbed and redistributed soil. This interpretation appeared to be correct, as the subsequent deposit, zone 4, was a tan sand with heavy concentration of brick and mortar rubble (10Yr4/3). The deposit was .6 feet deep, as well, though a comparison of the north and south profiles shows that the depth of these deposits varied. Beneath the brick rubble was zone 5, a hard–packed tan sand mottled with lenses of dark grey–brown sand (10Yr5.4). This zone was much deeper along the south wall of the unit.

Excavation of this unit was greatly hampered by quantities of roots in all of the zones. An especially large root with ran southeast/northwest through the unit was left in place, and as such eventually served as a convenient step into the unit. This root, and some above it, actually are from a large oak tree on Meeting street, the roots working their way between the three brick walls described below.

Zones 1–4 totaled 3.4 feet in depth, and with excavation complete, revealed three brick walls along the front property line (the east profile), though none with a distinct builder's trench. The extant wall, feature 21, continued only two courses below present ground surface. The bottom course of headers was stepped out 1/2 brick width, and it was covered with rather sloppy mortar. Zone 1 soil, mixed with zone 2 soil was present beneath it, suggesting that the wall was constructed well into the 20th century (an interpretation verified by documents). Beneath this thin lense of soil was a second, well constructed brick wall, designated feature 22. Mortar on top of this brick suggests that upper courses were demolished or removed at some point, but carefully so. The wall was 5 courses of stretchers, on top of a 6th course of headers, stepped out 1/2 brick length. The exposed brickwork also included an integrated column foundation, in a different location from the columns of the present wall. This wall also had a lense of soil beneath it, in this case zone 4, indicating that this second wall was constructed in the early 19th century. This appears to be a property wall constructed concurrent with the Russell house, and extant through the late 19th century, at least. It appears that this is the wall that is shown in the 1880s–90s photographs of the Russell house; they show a 3 foot brick wall with wooden superstructure.

Beneath this wall and beneath the base of zone 4 was a third brick wall, feature 23. The bricks were bright red and the mortar quite white. The top of this foundation was broken in irregular fashion, suggesting rough demolition of this structure and its foundation to make room for construction of wall #2. Excavation to the base of zone 5 revealed four courses of brick for this wall, but probing suggested that the wall continued much deeper. The date of zones 4 and 5, and their stratigraphic position relative to feature 23 suggest that this wall dates to the late 18th century, and it may be the Fraser house. The top of the foundation may have been deliberately chipped away for the construction of feature 22 (figure 18a).

Three features were present at the base of zone 5. Features 24 and 25 were small, irregular, roughly circular features in the center of the unit. They were beneath the large root, and may be the result of root activity. Feature 24 was dark grey sand with roots, while feature 25 was a mottled medium grey sand and tan sand with bits of shell and mortar. Both features were relatively shallow, and feature 24 intruded into feature 26.

Feature 26 was defined as a linear area of tan sand mottled with gold sand, containing shell and mortar. It was roughly, but not exactly, parallel to feature 23, and was defined as the builders trench to feature 23. The feature was better defined in the southern half of the unit, however. This southern half was excavated to the base of the brick, and revealed several surprises. First, the builders trench contained large cow bones, including an almost complete horn core. These bones were flush against the brick wall and were photographed in situ. When we attempted to remove the rather fragile horn core, it became apparent that it was attached to an undetermined

portion of the skull cap, which was in the south profile (figure 16b). Secondly, the perceived edge of the feature did not prove true, and the remaining tan–yellow sand was all part of the same deposit. Perhaps it is a large builders trench, or builder's area for construction of the Fraser building; such churned, relatively sterile deposits have been encountered under, or near, the foundations of large townhouses before. This soil, which retained the designation of feature 26, was not completely sterile, as it contained some brick and mortar, as well as a surprising quantity of bone. The profile also showed that this was a different sand from the above zone 5; it was more grey in color (10Yr5/2), and the interface was clearly discernable. To our amazement, the unit was still relatively dry and workable, so we excavated this tan sand in the south half of the unit, still labeling it feature 26.

Thirdly, the feature 26 sand, and the brick foundation, overlay a zone of very dark grey sand full of artifacts and oyster shell (10Yr3/1). This was designated zone 6. Since the unit was still dry and workable, we excavated a sample f zone 6 ins the southwest quadrant of the unit. Zone 6 was .3 feet deep and was followed by another cultural zone of grey sand, slightly lighter in color, and possibly a leach zone from zone 6 (10Yr4/1). This was, however, designated zone 7. It was also .3 feet deep and it bottomed, finally, onto white sterile subsoil. This meant that excavation of N134.8E328 initiated at 8.39' msl and continued to a depth of 3.55' msl, remarkably deep for downtown Charleston. In contrast, standing water was encountered at 4.8' msl in the rear drive.

Unit N134.8E328 stands in contrast to the units excavated during the summer, in that it exhibited distinct, datable zones, the type of urban stratigraphy described by archaeologists as "layer cake." These clear–cut zone deposits aided greatly in dating the walls contained in the unit, and in understanding the stratigraphy of the rest of the site. The unit is interpreted as follows, and the reader is encouraged to consult the profile drawing in figure 17. From bottom to top, zones 6 and 7 appear to pre–date the Fraser building, and possibly reflect filling of the creek. Zone 6 contained no datable artifacts, but zone 7 contained a single large sherd of slip–dipped white saltglaze stoneware, providing a TPQ of c. 1720 for these zones. Feature 26 appears to be the builder's trench for the foundation, but it contained no datable artifacts. The above sand of zone 5 must postdate building construction, and a British halfpenny provides a TPQ of 1775 for this zone. These data indicate that the lot was improved before 1775, and after 1720.

The above zone 4 is building rubble, and must reflect demolition of the Fraser house, as it continues on top of of the foundation. Annular pearlware contained in this zone provides a TPQ of 1795, and thus dates feature 22 above it as having occurred after this date. Again, the above zone 3 postdates feature 22, and contains transfer printed whiteware, with a TPQ of 1820. This bracket of dates, 1795 and 1820, strongly indicates that construction of feature 22 is simultaneous with that of the Russell house itself. Zone 2 has a TPQ of 1850, provided by Parian ware porcelain. The presence of zone 1 and zone 1 soils beneath feature 21 provide a TPQ for the present wall.

N237E103: The final two units were located in the parking area at the rear of the house, and were designed to intersect archaeological features indicated on various plats. Unit N237E103

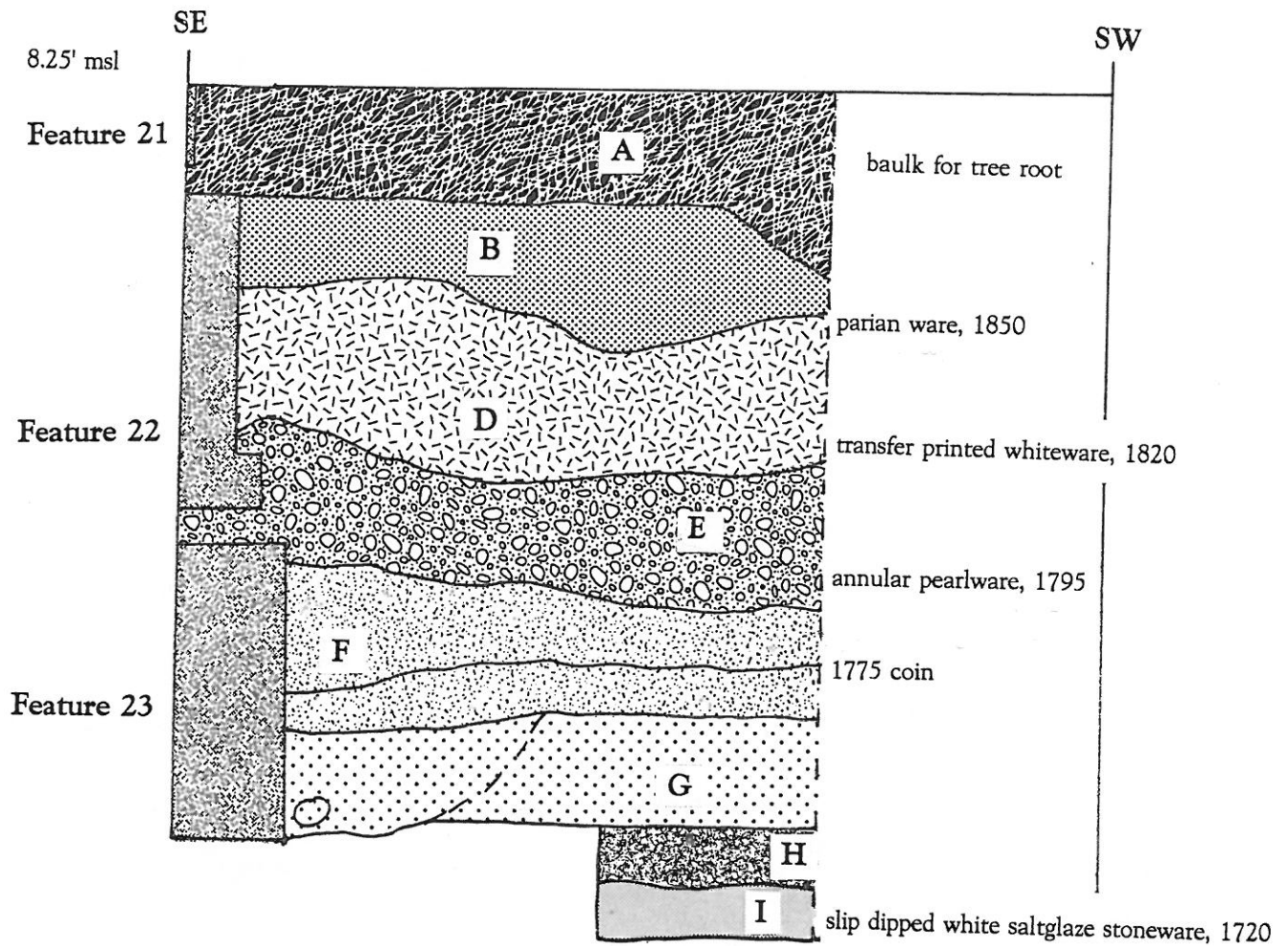


Figure 17
N134.8E328, south profile

- a) black topsoil, zone 1
- b) dark brown-grey homogenous soil, zone 2
- d) medium brown-grey and gold mottled sand, zone 3
- e) tan sand with brick and mortar rubble, zone 4
- f) yellow sand lensed with dark grey sand, zone 5
- g) light grey sand mottled with orange clay, feature 26
- h) dark grey/black loamy sand with whole oyster shell, zone 6
- i) medium grey sand, zone 7

(1" = 1')



a) N134.8E328, east profile
features 21, 22 and 23.



b) N237E103, feature 27.

Figure 18

was located in the extreme northwest corner of the property. (Actually, a large and rather decrepit mulberry tree occupies the immediate corner.) Based on the plat prepared in 1870, the a small building in this location, presumed to be a privy, measured 5 feet east/west by 7.5 feet north/south. To explore this feature and avoid modern obstacles (the mulberry tree and a fenced area for gardening), a 2.5 by 10 foot trench was established. This unit was flush with the repaired portion of the north wall (cinder blocks); the western edge of the unit was 3.0 feet east of the back wall. This unit left the mulberry tree in a small soil baulk against a wall already pushed out of place by the tree.

The unit was laid out by pulling the tape along the north wall and placing pins at 3.0 feet and 5.5 feet. The 2.5 by 10 foot unit was triangulated in two 2.5 by 5 foot sections. Accuracy was checked by measuring the western nails relative to the back wall.

Zone 1 was a black topsoil, directly beneath the crushed oyster paving (7.5Yr2/0). This was virtually devoid of artifacts, was sampled and discarded to a depth of .5 feet. From the beginning of excavation, the ground was very soft in the northern portion of the trench. Beneath zone 1 was a sand layer slightly lighter and more grey, mottled with tan sand and containing oyster shell. Zone 2 was also more compact than the above zone 1. At this level, intact brick became visible in the eastern wall of the unit. Beneath zone 2, at a depth of .8 feet below surface was zone 3, a dark brown sand. A 1903 dime provided a TPQ for this deposit. Also encountered within this zone was the intact south wall of the foundation, designated feature 27. Thus, after zone 3, the soils on either side of the wall were segregated as "building interior" and "building exterior." Also at this point, excavations focused on the southern half (five feet) of the trench (figure 18b).

The deposits designated zone 4 on the building interior consisted of some dark grey-brown dirt (10Yr3/2) but primarily mortar and brick rubble (10Yr5/4). These materials were excavated in three levels to a depth of 2.7 feet below surface. At this point, excavations on the interior of the building were suspended and excavation focused on the small portion of the unit which fell on the building exterior.

Zone 4 on the building exterior consisted of a lensed deposit of tan sand dark grey sand, with deposits of coal ashes. Beneath this was a deep deposit of dark grey soil (10Yr4/2). This soil was very loose and friable, with large air pockets. The soil contained large brick fragments, relatively intact "torpedo" bottles, and whiteware chamber pot fragments. Excavation of this zone continued to 2.6 feet below surface. At this point it appeared that the large brick fragments were decreasing in quantity, but the other artifacts remained constant.

The presence of such a rich organic deposit on what appears to be the outside of the building is most puzzling. Exposure of an intact east and south wall, in a location and configuration that matches the 1870 plat, suggests that we have indeed encountered the privy shown on the plat. The soil and artifacts found in exterior zone 5, however, are typical of privy vault fill - loose organic soil, large artifacts, chamber wares. Why this deposit is on the presumed outside of the building is presently a mystery. The presence of these deposits would suggest that

the building was expanded, or moved, as some point, and that this deposit is inside some walls not yet exposed. All of the interior and exterior zones below zone 3 have artifacts that provide a TPQ of 1860 or 1880, suggesting that the building was abandoned and the vault filled around the turn of the 20th century.

Excavations were halted at this point due to time and safety concerns. The trench was not large enough to determine the exact function of the deposits. The loose, friable dirt and brick rubble adjacent to the large rotten tree seemed quite hazardous. Further, proper excavation of this feature would require removal of the tree and excavation of adjacent units to expose the entire structure. In the event that this is done, excavation of a small deep "hole" would compromise the appearance, if not the integrity, of the excavation.

The brick foundation was defined as feature 27. The brick foundation was of very poor quality, consisting of whole and half bricks, mostly scrap, dry-laid with no mortar. A recycled paving stone was even included in the south wall. Unretouched, it protruded from the exterior of the wall. The brick wall along the east, in particular, slumped to the west, and is probably not stable enough to withstand exposure of both sides simultaneously in future excavation. The present excavations were evidently not deep enough to encounter any builders trenches, so a construction date for the building remains uncertain. The materials on both the interior and exterior were deposited around the turn of the 20th century.

N200.5E121: The final unit was excavated in the center of the parking area, and was designed to encounter foundations to the stable building and small room shown on the 1870 plat (figure 5). At present, the wall of the stable building ends abruptly, and this area is infilled with wooden walls of a more recent vintage. The extant stable wall contains three windows; the 1870 plat suggests that the complete building included a fourth, and that a small room on the rear wall contained a fifth window on the same side, plus a door and entrance steps to the rear, or west.

An excavation unit was deliberately located to intersect this wall. Refinement of the approximate location for excavation was aided by consultation with Robert Leath and Tom Savage. This done, a 5 by 5 foot unit was located precisely in the spot needing testing. The next challenge was to bring the grid to this point and determine the coordinates. Grid points were placed in a southward line at 5 foot intervals from the north wall, 3.0 feet east of the west wall (In line with the west profile of N237E103.) The transit was set up over the nail that was 44 feet south of the north wall. We then turned the transit to the east and placed nails at 16', 21' and 26' east of the west wall. A unit was triangulated to the north, using the two easternmost nails. The precise location of this unit was then checked with tapes from the N100E100 point, measuring around rose vines and the HVAC unit. The southwest corner of this unit had the coordinates N200.5E121.

We quickly excavated and discarded the first .9 feet of fill; all was modern, with no artifacts. The fill consisted of hard-packed lenses of pea gravel, dark soil, and crushed limestone. Contained within this zone was an unexpected brick pier, against the west wall of the unit. This feature was missing at least a top course of bricks, based on the mortar impression on top of the

pier. Further excavation revealed that the pier was set in concrete. This feature, designated feature 28, was pedestaled and left in situ in subsequent excavation.

"Real" dirt was encountered .9 feet below surface, and was designated zone 2. This was a highly mottled deposit of orange and tan sand, grey sand, mortar and rubble (10Yr4/4). At the base of this deposit a linear feature was defined running diagonally through the unit. Designated feature 29, this proved to be a trench for a terra cotta sewer pipe. Though the feature was defined at the base of zone 2, examination of the east profile revealed that it in fact initiated at the top of zone 2, accounting for some of the highly mottled appearance to zone 2. Feature 29 was photographed and excavated to a depth of 2.3 feet below surface. Also visible at the base of zone 2 was a builders trench for feature 28. This builders trench was designated feature 31. This was also mapped and removed, revealing a foundation base of roughly poured concrete. Visible in the profile of both excavated features was at least two more zone deposits.

These two intrusive features removed, excavation of zone deposits continued with zone 3. This was in fact demolition rubble, consisting of crushed yellow mortar and brick, and a hard-packed yellow mortar sand (10Yr7/3). Exposed within this zone was an intact brick wall protruding out of the north profile of the unit. This feature was designated feature 30. Zone 3 appears to be demolition rubble from this structure, with many large brick fragments redeposited in feature 29. The zone 3 deposit was .7 feet thick.

Beneath zone 3, and contiguous over the whole unit, was a lense of dark grey sand (10Yr3/2), designated zone 4. This zone continued beneath feature 29, as well. Excavation of zone 4, which averaged .4 feet deep, revealed two deposits, with a distinct line running east/west through the unit. The soil in the southern portion of the unit was a homogenous grey-brown sand (10Yr4/1). This was designated feature 32. The dirt in the northern portion of the unit consisted of this same soil mottled with orange and yellow sand. This was initially designated zone 5, but later renamed feature 33. The two features were excavated separately, alternating levels of excavation. The segregating line was completely vertical, making it impossible to visually determine which feature was intrusive. The artifact content and TPQ of the proveniences were nearly identical, so artifacts were not helpful in determining sequence of deposition. Meanwhile, the intact brick of feature 30 continued course after course. It was finally determined that feature 32, a rubbish pit, was the earlier deposit, and that feature 33 was in fact a builder's trench for feature 30. Evidently, in construction of feature 30 workers dug through a portion of feature 32, well into sterile, producing the characteristic mottled backfill of feature 33. Further, it is possible that only a very small portion of feature 32 is present in this unit. It may be a large feature that continues to the south, or it may be a zone deposit, truncated by features 30 and 32 (figure 19b, 20).

The soils in the unit were quite moist at this point, so the unit was cleaned, photographed, and mapped 3.5 feet below surface. At this point, the brick wall of feature 30 consisted of 5 courses of brick – headers, followed by three courses of stretchers, and another course of headers. Beneath this, the next course stepped out 1/2 brick width, in a row of stretchers. This was not



Figure 19

- a) N200.5E121, north profile
- b) N200.5E122, east profile

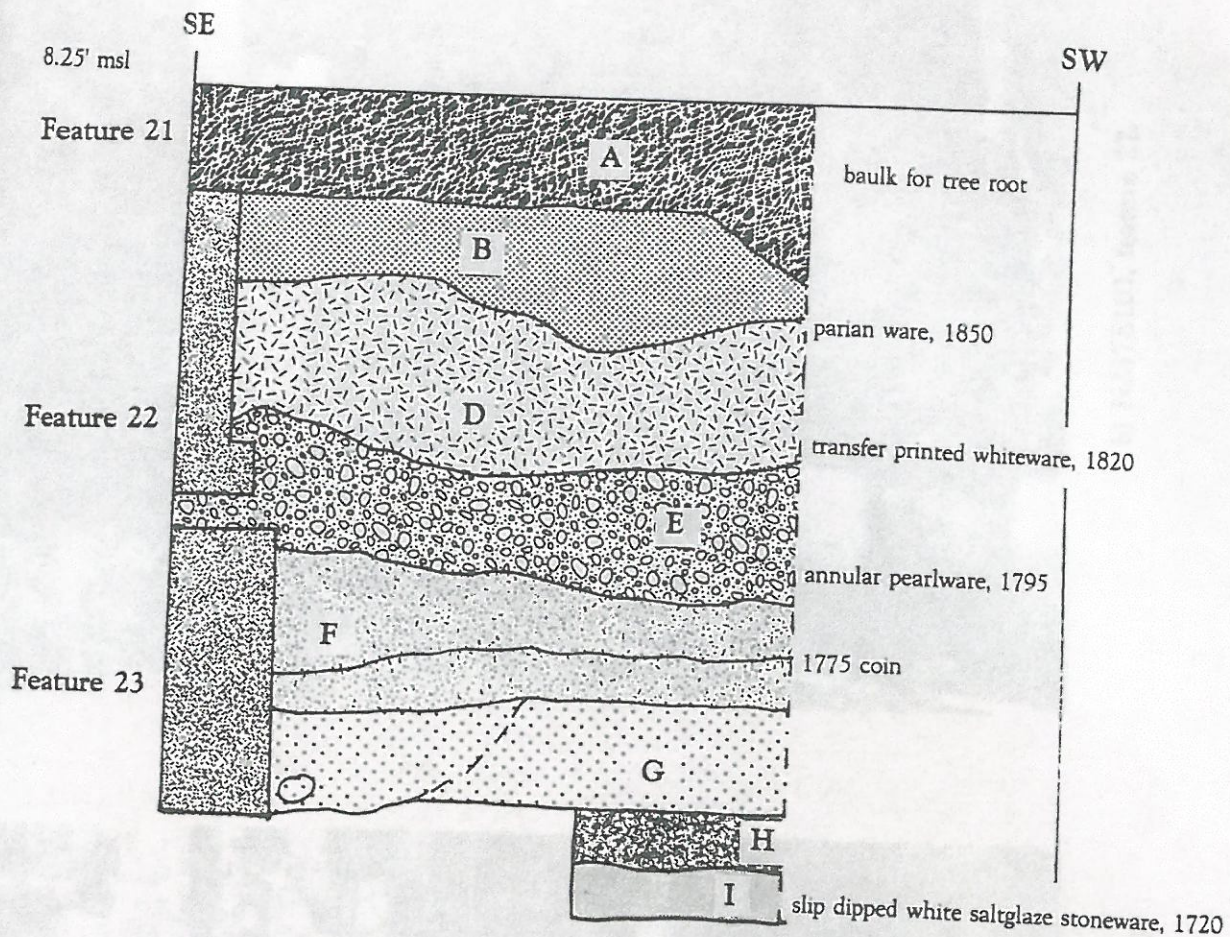


Figure 17
N134.8E328, south profile

- a) black topsoil, zone 1
- b) dark brown-grey homogenous soil, zone 2
- d) medium brown-grey and gold mottled sand, zone 3
- e) tan sand with brick and mortar rubble, zone 4
- f) yellow sand lensed with dark grey sand, zone 5
- g) light grey sand mottled with orange clay, feature 26
- h) dark grey/black loamy sand with whole oyster shell, zone 6
- i) medium grey sand, zone 7

(1" = 1')

the base of the foundation, however; two more courses of stretchers were visible beneath this (figure 19a).

Subsequent to completion of photography and mapping, excavation of feature 33 resumed in an attempt to expose the base of the foundation. Excavation continued another .7 feet, where the digging was halted due to standing groundwater. At this point, 6 full courses of brick below the step footing were exposed. Probing indicated that the brick continued at least two courses below that.

Examination of the north profile of the unit suggests that feature 30 is the outside southwest corner of the small structure represented by feature 30. The large, deep substantial nature of the foundation supports the idea that this small room may in fact be a privy pit, with the deep, well built foundation serving as the vault. The foundation of the main house continued 2.6 feet below the ground surface; feature 30 is at least that deep, and the base of excavations is 1.2 feet deeper than N200.4E297, at the front corner of the main house. Verification of this structural interpretation awaits excavation of the adjacent northern unit, which should encounter the interior of this room.

Artifacts retrieved from this unit have dated the building sequence with some certainty. Both features 32 and 33 have a TPQ of 1795, based on transfer printed pearlware. An exception to this is a small fragment of a toy teapot, which appears stylistically to date to the mid-19th century, recovered from feature 33. This suggests that construction is consistent with the 1807 date of the main house. Artifacts in the upper level of feature 33 (excavated as zone 5) and the above zone 4 include whiteware, white porcelain, and a hard rubber hair comb, suggesting that this midden was deposited after 1860. The demolition rubble contained manganese glass, with a TPQ of 1880, suggesting that the building was demolished shortly after that date. This date of deposition is strengthened by a TPQ of 1890 for the above zone 2, provided by gilded whiteware.

N05-10-E00-05 As part of his 1991 salvage work, Fred Andrus excavated a 5 foot square inside the basement of the kitchen building under controlled conditions. Because this unit contained a significant assemblage of bone and artifacts, it was subject to reanalysis. In particular, faunal analysis focused on this most unusual deposit. Therefore, the following summary is provided from Andrus' 1991 report:

During salvage operations, Andrus noted a dense surface scatter of artifacts, bone, and brick beneath the kitchen building. Fearing that installation of the HVAC system would greatly limit future access of this area, he excavated a 5 foot square. The unit was located relative to the inside southwest corner of the kitchen crawl space, accessed by an opening along the south side of the building. The square was dug by zones and levels. Andrus defined a zone as a distinct soil change, and levels were 3 inches deep, unless precluded by a zone change. He defined four zones and 11 levels. Zone 1 had four levels, with the final level including a transition to zone 2 and measuring 4 inches in depth. Zone 2 had only one level. Zone 3 was excavated in four levels,

and zone 4 in level 2. Standing groundwater was encountered at the intersection of zones 3 and 4. A core sample indicated that the artifacts and dark soil continued another 1.5 inches below the base of excavation and this was followed by a deposit of mottled yellow and orange soil, at least 14 inches deep. The foundation wall continued below zone 4 level 2 to an undetermined depth. Contents of the zones and levels ranged from dense kitchen midden to dense coal deposits.

All of the materials retrieved from this excavation were screened through 1/4 inch mesh. Zone 1 materials date to the Allston era, while zones 2 through 4 are associated with the Russell family. Analysis of these materials is shown in tabular format; analysis of the faunal material is discussed in Dr. Reitz's report.

Provenience Dates and Temporal Affiliation

Dates of deposition for each provenience, based on Terminus Post Quem and stratigraphic point of initiation, have been discussed for each individual provenience. The next step in dating the site is to determine, wherever possible, associated activities and events across the site, based on temporal affiliation. On sites such as Russell where dispersed test units are excavated, an additional emphasis is placed on recognizing related stratigraphy, in terms of dating, depth, artifact content, and physical characteristics, across broad areas of a site. On complex urban sites, this can prove difficult. Nonetheless, some site-wide stratigraphy was recognizable. Units N111E190, N150E100, and N150E135 all shared a dark brown-grey loamy sand (designated zone 3 in each of the units) associated with the Allston occupation. This reflects intensive refuse disposal, and possibly deliberate filling, during and immediately after the Civil War. Likewise, a dark grey-black friable sand, full of slag, was found in zone 1 of N150E135, zone 2 in N197.9E200, and feature 11 in N150E100. These deposits, and their particular concentration in N150E100, in the vicinity of the structure shown on the Sanborn maps, may suggest a blacksmithing operation in the yard during this period, or some other type of specialized deposition.

The soils in the front two units exhibited different stratigraphy from the remaining rear yard units, and they were different from each other. The overriding similarity was that the stratigraphy was generally earlier at a shallower level than those of the rear yard.

A total of 85 proveniences were designated during the four week excavation during the summer, and an additional 41 were retrieved during the November work. These dated to every period of occupation of the site, and were in fact evenly divided among the periods. For the purposes of detailed analysis and intersite comparison, the artifacts were divided into five subassemblages, based on different periods of occupation at the property. They are as follows:

1. The era predating construction of the Russell house, circa. 1750–1808, when structures were located along the south wall of the property, possibly occupied by the Russell family after 1779.
2. Completion of the Russell mansion and occupation by the Russell family, 1808–1857.
3. Ownership and occupation by the Allston family, 1857–1870.
4. Ownership by the Sisters of Charity, 1870–1908.
5. Purchase of the property by the Mulally family and return of the property to single family ownership and occupation, 1908–c. 1940.

Proveniences were fairly evenly distributed among all five periods, both in terms of number of proveniences, as well as bone and artifact density within each provenience. This is particularly true for the Allston and Sisters periods. This stands in contrast to almost every other Charleston townhouse, where artifact density and variability drops considerably for the second half of the 19th century. The average Charleston artifact density for the 1780–1820 period is 159 artifacts per provenience; the pre–Russell and Russell house period assemblages are comparable at 158 and 114 artifacts per provenience, respectively. In contrast, artifact density for most Charleston sites drops to 22 artifacts per provenience for the 1830–1880 period. The Allston and Sisters periods maintain densities of 134 and 184 artifacts per provenience. This suggests different site formation processes at Russell and indicates that the Russell house sample is so far unique among Charleston sites and will serve as a valuable sample for the study of these later periods. This is particularly true for the study of faunal and pollen remains.

Table 1

Provenience Guide

<u>FS#</u>	<u>Provenience</u>	<u>TPQ</u>	<u>Date of Deposition</u>
1	N197.9E210 zones 1 and 2	di-gel tablets	20th cent.
2	N197.9E200 zone 1	manganese glass	20th cent.
3	N197.9E200 zone 2	1911 penny	20th cent.
4	N197.9E200 zone 3	undec. whiteware	1830-1850
5	N197.9E210 zone 3	white porcelain	1830-1850
6	N150E135 zone 1	decaled porcelain	20th cent.
7	N197.9E210 feature 1	annular pw	20th cent.
8	N197.9E210 feature 2	white porcelain	20th cent.
9	N197.9E210 zone 3 sand	green shell edge pw	1810-1830
10	N197.9E200 cleaning	soda water bottle	20th cent.
11	N150E135 zone 2	white porcelain	1870-1890
12	N197.9E210 cleaning	plastic bead	20th cent.
13	N150E135 wall clean	manganese glass	1870-1890
14	N150E135 zone 2	flow blue ww	1870-1890
15	N197.9E200 zone 3 resid.	tr pr pw	1810-1830
16	N150E135 zone 3 lev 2	milk glass	1870-1890
17	N197.9E210 zone 2, n.e.	undec ww	20th cent.
18	N197.9E210 zone 3, n.e.	hard rubber comb	20th cent.
19	N197.9E210 feature 3, n.e.	blue tr pr ww	1830-1850
20	N197.9E210 zone 3 sand	n/a	--
21	N197.9E200 feature 4	slipware	1780-1800
22	N150E135 feature 5	white porcelain	1860s
23	N150E100 zone 1 lev 1	modern glass	20th cent.
24	N150E100 zone 1 lev 2	modern glass	20th cent.
25	N150E135 zone 3 lev 3	lettered panel bottle	1860s
26	N150E135 wall clean	white porcelain	1860s
27	N150E100 zone 2 lev 1	milk glass	1870-1890
28	N150E100 zone 2 lev 2	kerosene lamp chimney	1860s
29	N111E190 zone 1	modern glass	20th cent.
30	N200.4E297 zone 1	plastic	20th cent.
31	N111E190 zone 2 lev 1	gilded white porc.	1870-1890
32	N200.4E297 zone 2	screw-cap bottle	1870-1890
33	N111E190 zone 2 lev 2	white porcelain	1860s
34	N111E190 zone 2 lev 3	gilded porcelain	1880s
35	N200.4E297 feature 6	nail	1870-1890
36	N200.4E297 zone 2 lev 2	brown bottle glass	1870-1890
37	N111E190 zone 2 lev 4	blue tr pr ww	1860s
38	N200.4E297 cleaning	h.p. ww	1870-f1890

39	N200.4E297	feature 7	brown bottle glass	1870-1890
40	N200.4E297	feature 8	table glass	1870-1890
41	N200.4E297	resid. zone 2	milk glass	1870-1890
42	N200.4E297	zone 3	yellow ware	1820-1840
43	N111E190	zone 3 lev 1	undec ww	1860s
44	N200.4E297	floor clean	delft	1820s
45	N111E190	zone 3 lev 2	milk bottle	1860s
46	N150E100	zone 2 lev 3	lettered bottle	1860s
47	N200.4E297	feature 9	undec pw	1820s
48	N200.4E297	feature 10	blue tr pr ww	1830-1840
49	N150E100	zone 4 lev 2	white porcelain wheel	1860s
50	N150E100	feature 11	soda water bottle	1860s
51	N200.4E297	zone 4	pearlware	1780-1800
52	N111E190	zone 3 lev 3	blue tr pr ww	1830-1840
53	N111E190	zone 3 lev 4	lt. blue tr pr ww	1830-1840s
54	N200.4E297	zone 4 lev 2, w.1/2	green bottle glass	1810s
55	N200.4E297	floor clean	shell edge pw	1810s
56	N150E100	zone 3 lev 1	hard rubber comb	1860s
57	N111E190	zone 3 lev 5	blue tr pr ww	1820s
58	N200.4E297	feature 13	iron	1810s
59	N150E135	zone 3 lev 3, clean	undec ww	1860s
60	N150E100	zone 3 lev 2	lt. blue tr pr ww	1860s
61	N111E190	zone 3 lev 6	undec ww	1820s
62	N111E190	zone 4 lev 1	annular pw	1790s
63	N150E100	feature 14	white porcelain	1860s
64	N150E100	zone 4	blue hp pw	1790s
65	N150E100	zone 4a, west	whiteware	1830-1840s
66	N150E135	zone 3 wall clean	whiteware	1860s
67	N150E100	feature 15	undecorated pw	1790s
68	N135E245	zone 1	white porcelain	20th cent.
69	N135E245	zone 2	tr pr pw	1810-1830
70	N150E100	n. wall clean	white porcelain	1870-1890
71	N150E135	zone 3/fea 5	slipware	1850s
72	N135E245	zone 2 lev 2	undecorated pw	1820s
73	N135E245	e. wall clean	poly hp ww	1840s
74	N135E245	zone 2 lev 3	creamware	1820s
75	N135E245	feature 18	undecorated pw	1790s
76	N150E100	feature 16	white saltglaze st.	1790s
77	N150E100	feature 17	slipware	1790s
78	N150E100	wall clean	-	--
79	N200.4E297	base feature 13	-	--
80	N200.4E297	back dirt	-	--
81	N150E135	back dirt	-	--
82	N150E135	zone 3/fea 5 (rain)		1850s

83	N111E190	west wall clean	—	—
84	N135E245	feature 19	hand paint pw	1790s
85	N135E245	wall clean	—	—
86	N134.8E328	zone 1	pepsi bottle	20th cent.
87	N134.8E328	zone 2 lev 1	whiteware	1870–1890
88	N134.8E328	zone 2 lev 2	crown cap	1870–1890
89	N134.8E328	clean base z212	canton porcelain	1870–1890
90	N134.8E328	feature 20	undecorated pw	1870–1890
91	N134.8E328	zone 2 lev 3	parian ware	1850s
92	N134.8E328	zone 3 lev 1	tr pr ww	1830–1850
93	N134.8E328	zone 3 lev 2	tr pr ww	1830–1850
94	N134.8E328	cleaning base z312	tr pr ww	1830–1850
95	N134.8E328	zone 4 lev 1	undec ww	1810s
96	N134.8E328	zone 4 lev 2	annular pw	1810s
97	N134.8E328	zone 5	1775 coin	1780s
98	N237E103	zone 1	7-up glass	20th cent.
99	N134.8E328	wall clean	—	—
100	N237E103	zone 2	plastic wheel	20th cent.
101	N237E103	zone 3	1903 dime	20th cent.
102	N134.8E328	feature 24	green glass	1740–1780
103	N134.8E328	feature 25	delft	1740–1780
104	N134.8E328	feature 26, south 1/2	N. Devon ware	1740–1780
105	N237E103	zone 4 interior	milk glass	early 20th cent.
106	N237E103	zone 4 interior, no.	white porcelain	early 20th cent.
107	N237E103	zone 4 lev 2	milk glass	early 20th cent.
108	N237E103	zone 4 exterior	luster ww	1870s
109	N237E103	zone 5 exterior	torpedo bottle	1870s
110	N237E103	zone 4 lev 3 interior	white porc	1880s
111	N134.8E328	fea 26, s 1/2	N. devon ware	1740–1780
112	N200.5E121	zone 1	modern glass	20th cent.
113	N200.5E121	zone 2	gilded ww	1890s
114	N134.8E328	zone 6	mottled ware	1740s
115	N134.8E328	zone 7	slip dipped wsgs	1740s
116	N200.5E121	feature 29	manganese glass	early 20th cent.
117	N200.5E121	feature 31	molded bottle glass	20th cent.
118	N200.5E121	zone 3	manganese glass	1890s
119	N200.5E121	zone 4 lev 1	whiteware	1870s
120	N200.5E121	zone 4 lev 2	white porcelain	1870s
121	N200.5E121	zone 5	hard rubber comb	1860s
122	N200.5E121	feature 32	tr pr. pw/ tea set	1810s
123	N200.5E121	wall clean	whiteware	—
124	N200.5E121	feature 32 lev 2	tr pr pw	1810s
125	N200.5E121	feature 33	tr pr pw	1810s
126	N200.5E121	feature 33 lev 2	tr pr pw	1810s

Table 2

Feature Guide

<u>Fea. #</u>	<u>Unit</u>	<u>Description</u>	<u>Association</u>
1	N197.9E210	pipe trench for sprinkler	20th century
2	N197.7E210	pipe trench for ironstone pipe	early 20th cent.
3	N197.9E210	square postmold	Russell
4	N197.9E200	irregular square area	late 18th cent.
5	N150E135	concentration of building rubble	Allston
6	N200.4E297	posthole	Sisters
7	N200.4E297	amorphous soil stain	Sisters
8	N200.4E297	amorphous soil stain	Sisters
9	N200.4E297	possible post hole	Russell
10	N200.4E297	small pit w/ building rubble	Russell
11	N150E100	trash pit	Allston
12	N111E190	foundation, garden fence	Russell?
13	N200.4E297	builders trench for house	Russell
14	N150E100	trash pit	Allston
15	N150E100	builders trench to property wall	late 18th cent.?
16	N150E100	small irregular area	late 18th cent.
17	N150E100	small irregular area	late 18th cent.
18	N135E245	small pit w/ building rubble	Russell
19	N135E245	possible well construction pit	late 18th cent.?
20	N134.8E328	poss. builders trench to fea 22	Russell
21	N134.8E328	front brick property wall	20th cent.
22	N134.8E328	brick property wall	Russell
23	N134.8E328	brick house foundation	late 18th cent.
24	N134.8E328	irregular soil stain	late 18th cent.
25	N134.8E328	irregular soil stain	late 18th cent.
26	N134.8E328	poss. builders trench to fea. 23	mid 18th cent.?
27	N237E103	brick foundation to privy?	Sisters?
28	N200.5E121	rectangular brick pier, unknown association	20th cent.
29	N200.5E121	pipe trench, sewer pipe	20th cent.
30	N200.5E121	brick foundation, small room	Russell
31	N200.5E121	builders trench to fea 28	20th cent.
32	N200.5E121	large trash pit?	late 18th cent.?
33	N200.5E121	builders trench to fea 30	Russell

CHAPTER IV

Analysis of Recovered Artifacts

Laboratory Methods

Following excavation, all materials were removed to The Charleston Museum where they were washed, sorted, and analyzed. 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 soluble in acetone. Ferrous materials were separated during washing and stabilized by placing them in successive baths of distilled water to remove chlorides; they will then be oven-dried and bagged separately. Stabilization of iron from downtown Charleston sites usually requires at least one year of soaking. Several ferrous and all non-ferrous metal items were selected for further treatment for 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 materials 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 Dr. Betsy Reitz of the University of Georgia for analysis. Her report appears as Appendix I. Soil samples were inventoried, and portions of select samples were rebagged for shipment to Dr. Karl Reinhard of the University of Nebraska for pollen analysis. Due to an illness, his analysis will be conducted this summer. 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 Russell house materials from 1982, 1991, and 1994 received the accession number 1994.53. 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, labelled, and stored in a climate controlled environment. Field records and photographs are curated in the Museum's archive in acid-free containers in the security section. Archivaly 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), Brown (1982), Ferguson (1992) and Deagan (1987) were the primary sources used. 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 in button identification, and Fontana and Greenleaf (1962) were consulted for nails and tin can fragments.

For basic descriptive purposes, the Russell house 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 routine 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 eastern United States. In Charleston, it is used as an initial organizing tool.

Following this exercise, the relative proportions of a variety of artifact types are examined, based on the work of King (1990, 1992) and many others in the mid-Atlantic. This recent exercise (Zierden 1993, 1994) has provided more details on proportions of consumer goods and how they were used by Charlestonians. These proportions will be described below, and further analyzed in Chapter V.

Over 16,500 artifacts were recovered from 126 proveniences during the 1994 fieldwork. They are fairly evenly divided among the five temporal assemblages described below. These are shown in comparison to each other, to Charleston averages, and to South's Carolina Artifact Pattern in table 7. Each subassemblage will be described separately, in order of functional category, with the exception of the 20th century assemblage. Because this assemblage is small, and principally the result of redeposition, it will be presented in tables 3 and 4. All artifact illustrations and tables are grouped at the end of Chapter 4 for convenient use; references to the various illustrations are found throughout the text.

Late 18th Century Assemblage

The fifteen proveniences which predate construction of the Russell House contain 1,338 artifacts. Kitchen materials comprised 59% of the assemblage, divided between ceramics (52% of kitchen) and glass artifacts (48% of kitchen). Table and teawares (hereafter referred to simply as tablewares) comprised 67% of the ceramics, with the remainder serving a utilitarian function. Tablewares in this assemblage included Chinese export porcelains (8.4% of ceramics), delft

(11.5%), white saltglazed stonewares (3.8%), creamware (5.5%), and pearlwares (11.5%). Combed and trailed slipwares may have also served as tablewares, particularly in the early 18th century.

Chinese porcelain was the most expensive and the most desired of all ceramics. It was relatively scarce in the 17th century and thus indicative of economic status. By the second half of the 18th century, Chinese porcelain had become more readily available in the colonies, particularly in major ports such as Charleston. Chinese porcelain comprises 8.4% of the ceramics; 17% of the porcelain fragments featured overglazed decoration (figure 21a). A single sherd of Canton porcelain, characteristic of the early 19th century, was also recovered from these proveniences.

The earliest English tableware in the assemblage was delft, a tin-enamelled coarse earthenware which comprised 11.5% of the ceramics. The delft came in undecorated vessels, or featured hand painted designs in blue, or a palette of colors (classified by archaeologists as "polychrome"). The tin enamelled earthenwares were not very durable, and rapidly declined in popularity in the second half of the 18th century. Delft was produced in a variety of tea and table wares.

One of the most distinctive products of the 18th century was white saltglazed stoneware. These molded wares were durable and attractive, but expensive. Dipped wares, first manufactured about 1720, are distinguished by the band of brown slip around the rim. The single large sherd of stoneware recovered from zone 7 of N134.8E328 appears to be from this early type, though the fragment did not include any portion of the rim. The elaborately molded white table and tea wares were first developed in 1740. These wares were manufactured into the 1770s, when they were rapidly replaced with refined earthenwares (Martin 1987). White saltglazed and dipped wares comprise 3.8% of the ceramics.

A revolution occurred in earthenware manufacture in the 1740s to 50s, when Josiah Wedgwood developed a refined earthenware with a cream colored glaze which he called cream coloured ware, or creamware. Perfected in the 1760s, creamware rapidly became immensely popular due to its durability, affordability, and availability in a wide variety of vessel forms and matched sets. Wedgwood matched his potting abilities with marketing savvy; by the 1770s creamware was "the rage" and could be found in every corner of the world (Martin 1994). According to Ann Smart Martin, Wedgwood managed to compress the cycle of luxury-to-common consumption into a very short time period. By continually introducing new styles, Wedgwood satisfied both the middle class consumer eager to display their knowledge of manners and the fashionably wealthy who sought to distance themselves from the nouveau. In the 18th century, the upper class often chose creamware for an everyday china. After 1820, it was relegated to large, utilitarian forms such as bowls and chamber pots and was considered the least expensive ceramics. Creamware comprises 5.5% of the late 18th century assemblage. A single sherd of the green or clouded glazed earthenware called Whieldon wares (first manufactured in 1740) was also present (figure 24b).

Josiah Wedgwood continued experimenting with production of a whiter ceramics; in 1779 he introduced "pearl white" china. By adding cobalt to the lead glaze to negate its natural yellow tint, the vessel took on a bluish-white cast. A variety of decorative motifs – hand painting in blue or polychrome, shell edging in blue or green – were introduced in 1780. Still others – transfer printing, annular designs – were introduced in 1795. Thus the presence or absence of various creamware and pearlware types are important in dating archaeological deposits. Some of these decorative motifs are associated with specific vessel forms and relative costs (Miller 1980, 1991; Otto 1979). Transfer printed wares came in a range of hollow and flat forms, and in complete sets for table or tea; these were the most expensive. Annular ware, with its variety of stripes, were always unmatched bowls and mugs. Designed for casual dining and one-pot meals, these were the least expensive decorated wares. The hand painted wares were most often tea wares, and the shell edged wares were predominantly flatware (soup bowls and plates in various sizes). These were moderately priced (Miller 1980, 1991). Pearlwares comprise 11.5% of the late 18th century ceramics, and include 7 blue hand painted, 1 polychrome hand painted, 3 shell edge, 4 annular, and 2 transfer printed fragments. An additional 31 were undecorated; however, completely plain pearlware forms are rare, and these sherds are probably from the undecorated portions of other styles.

Three other table or tea wares occur in minor amounts in the late 18th century assemblage (totalling 1.2% of the ceramics). A single sherd each of the unglazed stonewares were recovered. Elers ware is an elegant unglazed red stoneware, principally in tea ware (figure 26b). It was first manufactured in 1763 and remained popular until c. 1775. The black variety, known as Black Basalte ware, was developed around the same time, but remained popular into the 1820s. Nottingham stoneware was first developed in 1700 and was manufactured until 1810. It features a lustrous brown glaze over a grey paste.

A significant portion of the ceramics are from utilitarian earthenwares and stonewares. Lead glazed coarse earthenwares included some of the earliest artifacts, beginning with North Devon gravel tempered ware. This heavy lead-glazed ware was first developed in the mid-17th century, and its recovery is often heralded as a sign of 17th century occupation. However, North Devon was manufactured into the mid-18th century, and may therefore have been used throughout the colonial period. A single fragment of North Devon was recovered from late 18th century proveniences.

Lead glazed earthenwares from the Staffordshire potteries were recovered. Manganese mottle ware (or Mottled ware) exhibits the speckled, buff colored paste typical of Staffordshire earthenwares. The ware is glazed in a thick dark brown; manganese inclusions give it a speckled or mottled effect. The glaze is rather thin near the top of the vessel and puddles in the bottom of hollow wares. Tankards and mugs in a variety of sizes are the only vessel forms recovered in Charleston to date. The Russell house assemblage includes 5 fragments of Mottled ware. Far more numerous were the Combed and Trailed slipwares, manufactured from the late 17th through the turn of the 19th centuries. These wares have a clear to yellow glaze over a variety of clay slips applied to the typical Staffordshire buff-colored paste. Vessel forms include hollow wares such as mugs and cups; these wares are often glazed on both the interior and exterior, and the exterior

is decorated with brown dots and trailed designs. The large, shallow bowls and plates are glazed only on the interior, and feature combed and trailed slips in a variety of brown and yellow hues. Slipwares comprise 25% of the late 18th century ceramics.

Utilitarian slipwares were also manufactured in the colonies, principally Pennsylvania; these feature a redware paste and simpler slipped designs. These are roughly cataloged as "American" slipware; two sherds were present in the assemblage. Another product of colonial potters were small bowls of lead-glazed redware. The interior of these vessels is often covered in a white slip to which spatters of darker glaze is applied in a variety of patterns. The exterior is usually a plain brown lead glaze; other vessels, some with handles, have a plain lead glaze on the interior, as well. The foot ring of these vessels is always unglazed. Made by a number of potters from Virginia to Massachusettes, these wares are consistently recovered on Charleston sites. In absence of information on these regional potters, they are lumped as "Mid-Atlantic Earthenwares" (Steen 1989).

Other course earthenwares include those with lead glaze in a variety of colors and those that were unglazed. Five exhibited a black lead glaze on a redware body, and 13 others featured orange, green or brown glaze. Lead glazed earthenwares comprise 5% of the ceramics.

A variety of utilitarian stonewares were also recovered. These included brown saltglazed stoneware and the grey-bodied, cobalt decorated Westerwald. Brown saltglazed stoneware was manufactured primarily in England and, in the 18th century, was often in the form of large jugs and wide-mouthed crocks. The Westerwald, or Rhenish, grey stonewares were manufactured in the Germanic region and dominated the stoneware market in the 17th and 18th centuries; they were declining in popularity by the 1760s. Westerwald stonewares of the 18th century were typically jugs and chamber pots. These stonewares comprise 3.1% of the ceramics.

The final ceramic types are the Colono ware, the unglazed low-fired earthenwares of local manufacture. These wares have long been of interest to South Carolina archaeologists, as they are found in great quantity on Lowcountry sites of the 18th century. Most scholars believe that the bulk of these wares were manufactured on plantations by enslaved African Americans (Ferguson 1992). Some of the wares may be the product of itinerant Catawba Indian traders (Crane 1993). The manufacture and distribution network of these wares is poorly understood and is currently receiving some attention (Crane 1993). Colono wares form a major component of 18th century Lowcountry plantation slave sites (as much as 50%) and to a lesser degree planter sites. They are also consistently present on Charleston sites, averaging 5% of the ceramics. They are often more numerous in the early 18th century, and decline rapidly after the turn of the 19th century. Three subtypes, as defined by Ron Anthony (1986) are recognized (figure 26c). Yaughan is the coarsest, and features a porous, crudely smoothed surface with a grainy texture, both interior and exterior. The most common is Lesesne lustered, with a lustrous, well smoothed surface that often has a "waxy" feel. The more finely made River Burnished wares are thinner and harder fired, and the clay is often micaceous. In Charleston, these wares often exhibit surface painting in red or black, presumably from sealing wax. The late 18th century assemblage

contained 12.5% colono wares, including 24 fragments of Vaughan, 23 of Lesesne lustered, and 5 of River burnished.

The remaining 47% of the Kitchen group was composed of glass artifacts. Most numerous were fragments from olive green bottles, used for alcoholic beverages. These hand-blown bottles evolved from squat, "onion" bottles in the 17th century to tall, cylindrical bottles in the early 19th century. Fragments of these container litter every colonial site. Far less common, but present in small amounts, was clear bottle glass. Two small necks could be positively identified as from medicinal bottles. The final category was table glass, fragments of hand blown goblets and tumblers. Table glass comprised .75% of the kitchen artifacts (figure 27c).

Architectural materials comprise 33.7% of the total assemblage. This group was composed principally of window glass and nails; the brick and mortar rubble from the proveniences was sampled and discarded, and thus is not included in the tabulations. The window glass fragments were light green in color. A fair amount of clear flat glass with a frosty white patina was also recovered, for the first time on any Charleston site. Historical architect Willie Graham has suggested they may be from leaded glass panes in the house interior. The other common artifact were nails. The majority of these were too corroded for positive identification, but a number of hand wrought nails could be discerned. No machine cut or wire nails were identified. Other artifacts included a large iron tack and a strap hinge. The most interesting architectural artifacts was fragments of delft tile; more of these were recovered from Russell era proveniences, and they will be described in that section (figure 28a).

A single Arms artifact comprised .07% of the total assemblage. This was a gunflint (figure 28b). Clothing materials numbered seven items and comprised .52% of the assemblage. This group included two bone buttons, two brass buttons, a brass lacing tip or aiglet, and a bone lace bobbin. The final clothing artifact was a small blue tube bead (figure 28c, 29a).

The Personal group included two items, for .14% of the total assemblage. The bone back to a hair brush was recovered (figure 30a). A George III half-penny dated to 1775 (figure 29b). The two Furniture items (.14% of assemblage) consisted of a brass upholstery tack and a small decorative brass hinge fragment (figure 30b). The Tobacco Pipe group consisted of white kaolin bowl and stem fragments, and comprised 2.01% of the assemblage. The Activities group comprised 2.91% of the assemblage. Seven red clay flower pot fragments were recovered, reflecting gardening activities. A single clay marble was the only toy recovered. Storage activities was reflected in the recovery of 18 barrel strap fragments.

Russell Period Assemblage

The Russell family left a greater impression on the archaeological record than did the Frasers, as 5175 artifacts from 37 proveniences are associated with their activities. Contained within

this assemblage, however, are several proveniences which are evidently associated with demolition of the earlier house. Their TPQ, and the interpreted sequence of events, suggest that Nathaniel Russell was indeed responsible for these soil deposits; however, much of their artifact content must be materials discarded by previous occupants, redeposited during early 19th century demolition.

This suspected redeposition is reflected in a number of distinct artifact types found in both the late 18th century and Russell period assemblages, particularly the delft tile fragments and the George III half-pennies (figure 28a, 29c).

Kitchen artifacts comprised 59.16% of the assemblage, and consisted of 45% ceramics and 54% glass artifacts. Tablewares comprised 72% of the ceramics; Porcelain comprised 12.2% of the ceramics; 9% of the porcelain was overglaze decorated. Two special types of porcelain were retrieved from Russell-era proveniences. The most interesting were four large sherds of a porcelain punch bowl in Mazarin Blue (figure 21c). This style of decoration features a dark blue cobalt applied directly to the bisque paste. This enamel is actually absorbed into the glaze, giving the finished vessel a very rich appearance. Such vessels date to the mid-18th century (Fleming and Honour 1977: 518). This is the first recovery of such wares archaeologically, and the first documentation of such ceramics being used in Charleston (Robert Leath, personal communication). The second new type was Parian ware, an unglazed white porcelain with a granular surface. First developed in 1844, it was most commonly used for busts and other figurines, though it was occasionally used for decorative dishes. The 5 fragments recovered from N135.8E328 appear to be from a vase; they have a rather crude blue painted design on the surface.

As would be expected for an early 19th century assemblage, refined earthenwares dominate the ceramic assemblage. Creamware comprised 24.4% of the ceramics, pearlwares 19.8%, and whitewares 3.5%. The creamwares included 4 small fragments exhibiting an overglaze hand painted decoration (figure 24a, 24b). All of these were too small to determine the decorative motif, but two featured red and green decoration, and one exhibited pink and yellow design. The most distinctive was two fragments of a very thin, very fine creamware vessel. This was a small saucer in a scallop motif, without a footring (figure 24b). It is identical to a component of a Leeds creamware centerpiece shown in Towner's book (1978:139-141), dated 1780 (figure 25). Towner calls such pieces "an extraordinary feat of technical achievement." Also included in this collection were four fragments of whieldon wares. One green-glazed piece featured a molded leaf motif; it exhibited a coppery iridescence over the glaze and a white paste (figure 24b); such characteristics were noted on whieldon type wares excavated at the John Bartlam pottery site by Stanley South in 1990 (South 1993). Likewise, a single sherd of combed and trailed slipware exhibited a pale yellow glaze and white paste, which may also be the product of John Bartlam.

The pearlwares were all standard examples from English potters. Pearlwares associated with the Russell family included undecorated, blue hand painted, polychrome hand painted, shell edged, annular, and transfer printed designs. The whitewares were principally undecorated or blue transfer printed. A single sherd of flow blue whiteware, manufactured after 1840, was recovered. Whitewares were the final evolutionary stage in the search for a white ceramic that began with Wedgwood's creamwares. Wedgwood and other potters continued to experiment with the glaze

until the bluish cast was reduced and a true white ceramic resulted. These changes gradually occurred in the 1820s. The same decorative motifs found on pearlwares continue on whitewares – hand painting, transfer printing, annular designs. The choice of colors changes around 1820 to 1830, as the earthtone palette of the late 18th century (blue, sage green, rust, yellow) is replaced by bright colors (black, mulberry, purple, forest green). Transfer print vessels begin to appear in colors other than blue. By mid-century, vessel style changes from the thin, delicate wares characteristic of the 18th century to thicker, often angular or octagonal vessels, preferably undecorated.

The "fine" coarse earthenwares comprise 1% of the ceramics. Included in this group are sherds of Astbury ware and Jackfield ware, manufactured principally in the late 18th century. Astbury is a thin redware with a clear lead glaze, often decorated with sprigs or trailings of white clay. Jackfield exhibits a thin red or dark grey paste and a very fine, almost oily black lead glaze. Two other types date to the early 19th century. Three sherds of agate ware were recovered. This ware exhibits a paste of swirled yellow and red clay with a clear lead glaze, producing an agate-like appearance. This particular vessel is decorated with squares of white clay, producing a checkerboard design (figure 26b). A similar vessel on exhibit at the Museum of Early Southern Decorative Arts in Winston-Salem, NC is dated to the first quarter of the 19th century. The final ceramic was a bowl or teapot base of fine red clay with a dark lead glazed exterior and a white slipped interior, reminiscent of the Portobello wares (figure 26b). Manufactured in Scotland by the Scott brothers from 1810 to 1825, Portobello ware exhibits these attributes, plus an overglaze transfer printed design in yellow (Lindsay 1962). Sherds are routinely recovered in Charleston which feature all of the characteristics minus the transfer printing; these are descriptively classified as "Portobello -like."

A number of other 18th century tablewares are present in minor amounts. These may reflect archaeological redeposition, as 19th century activities disturbed and redeposited 18th century artifacts, or they may have remained in use for a number of decades. Such "antique" wares include Elers ware, Black basalt ware, White saltglazed stoneware, Scratch blue stoneware, and delft. The most diagnostic artifact was a teapot spout of black lead glazed redware. Stylistically, this piece dates to the early 19th century.

Utilitarian wares comprised 23% of the ceramics. Most numerous were fragments of combed and trailed slipware, comprising 10.6% of the ceramics. Westerwald and brown saltglazed stonewares, as well as miscellaneous albany-slipped stonewares of the 19th century comprised an additional 3.8% of the ceramics. Included in this group was a medallion of brown saltglazed stoneware, from a bellarmine type vessel. The crude inscription on the medallion appears to be "G.R." This piece was dated to the 18th century (figure 24c). Nearly 5% of the ceramics were lead glazed earthenwares, in black and other colors, or unglazed earthenwares.

Colono wares comprise 4.1% of the ceramics. Lesesne lustered sherds are the most numerous, but a large number of the colono wares were River burnished, a subtype attributed to the early 19th century. One rim sherd exhibited traces of a red paint trim (figure 26c).

Glass and other artifacts comprised the remaining 54% of the kitchen group. Most numerous were fragments of dark olive green bottle glass, for alcoholic beverages. Other bottle glass was present in clear, brown, and blue. Blue bottle glass is most often associated with mineral or soda water, which became popular by mid-century. Three sherds of milk glass, developed after 1850 were present. Very little pharmaceutical glass was recovered; most notable was a small square bottle base in light green glass. Table glass comprised only .3% of the kitchen group. Identifiable fragments included a tumbler base, and the base of a square decanter, of leaded clear glass (figure 27c). The final kitchen items were two bone handled knife fragments.

Architectural materials comprised 35.8% of the assemblage. Nails and window glass were the principal artifacts. Identifiable nails included 27 machine cut and 9 wire. Five fragments of delft fireplace tiles were recorded from Russell proveniences; these most likely are redeposited from demolition of the Fraser house. The tiles featured a three-line border with a looped floral design in the corners. This pattern has been dated to 1750-1760 by Robert Hunter of Colonial Williamsburg Foundation (personal communication) (figure 28a).

Arms materials comprised .05% of the assemblage, and included three gunflints, two of grey flint and one of honey colored flint. The final arms item was a lead musket ball. Thirty four clothing items comprised .65% of the assemblage. The most numerous item were one-hole bone buttons; such buttons were often manufactured on site, as "blanks," or fragments of longbone scrap are commonly recovered. The Russell buttons came in two sizes, 3/4 inch diameter and 1/2 inch diameter. The assemblage also included several buttons which featured a domed brass top affixed to a bone back. The bone back featured four holes. These also were present in two sizes; 3/4 inch diameter and one inch diameter (figure 28c). Other buttons were plain brass discs with a wire loop eye. The clothing group also included a number of beads. The cornaline d'alleppo beads are green clear glass with an exterior of red opaque glass. All of the examples from Russell were tube beads. Two tube beads of blue glass were also retrieved. Both of these were badly decayed, with individual glass threads prominent (figure 29a). The final bead was a spherical black faceted bead, which appeared to be machine-made. Final clothing items were a brass vest buckle, a brass shoe buckle, and a brass aiglet. A brass thimble reflected clothing construction or repair.

The personal group consisted of 19 items, comprising .36% of the assemblage. Eight of the items were coins, all recovered in N134.8E328. Five were George III halfpennies; two were illegible, and three exhibited clear dates - 1775, 1775, and 1778. Two silver Spanish coins were recovered. A 1-reale piece was dated 1782 and a one half reale was too worn to discern the date. This latter coin was pierced for wearing, and the hole was quite worn, indicating extensive wear. A brass umbrella strut was recovered from N111E190. This piece was badly twisted, and actually tied in a knot. Given the rather substantial nature of the metal involved, this damage is a considerable feat. Two possible pieces of jewelry were recovered. The first was a small oval clear glass setting, from a cuff link or other piece of adornment. The second was a large faceted stone which upon discovery in the field appeared to be jet or black glass; however after washing and drying it began to crack open in parallel lines, and thus appears to be a 19th century synthetic such as hard rubber or bakelite. This piece was stabilized by coating it with B-72 in acetone

(figure 28c). The large "jewel" was drilled in the sides, possibly for stringing on a necklace. The remainder of the personal group consisted of fragments of slate pencils, used for writing on slate tablets.

Furniture items comprised .17% of the assemblage and consisted of nine items. Most numerous were brass upholstery tacks. All of these exhibited a square shank and domed head. A small knob-style drawer pull was also recovered. The final item was a decorative brass "corner" decoration. This consisted of a folded piece of brass which would have been crimped onto paper, leather, or fabric in some fashion.

The Activities group comprised 1.39% of the assemblage and was quite varied. Toys consisted of four clay marbles. Three were standard marbles and one was a large "shooter," capable of inflicting damage on a marble collection. The other toy was the base of a toy tea pot, of white porcelain. Thirty flower pot fragments were recovered, reflecting gardening activities at the site. Nine iron barrel straps. Six fragments of miscellaneous copper included wire fragments. The single tool was a file. The most interesting artifact was a whetstone, or sharpening stone, broken in half. This smooth, dense stone was grey on one side and pinkish-tan on the other, and was rectangular, 2.25 inches across. The final artifact group was associated with Tobacco smoking. Kaolin pipe fragments comprised 2.37% of the assemblage.

Allston Assemblage

The Allston era (1857–1870) assemblage consisted of 2746 artifacts from 16 proveniences. This smaller assemblage and somewhat shorter period of site occupation nonetheless covers a pivotal period in the history of the house and the city in general. Kitchen artifacts comprised 57.8% of the assemblage and consisted of 48% ceramics and 52% glass. Chinese porcelains, principally Canton porcelain, comprised 9.7% of the ceramics (figure 22a).

Allston era proveniences also contained the most notable artifact of the project; seven fragments of a very fine two-handled urn of Chinese export porcelain. The vessel, of pure white porcelain, probably stood about two feet high. The largest sherd exhibits a narrow neck and high shoulder; beneath the shoulder is a central medallion. This medallion is outlined in bands of blue underglaze and red and gold overglazed decoration which are exceptionally well executed. The principal decoration around the medallion features gold grapes and grape leaves. The small portion of the center of the medallion suggests that it was filled with a delicate floral design in blue and gold. The students were offered attractive incentives to find the central medallion, but to no avail. Medallions on either side of the vessel were connected by swags of raised husks decorated in blue and gold, which were separate applications of clay. The vessel dates to circa 1800, and was adapted from late 18th century designs by Josiah Wedgwood (Schiffer et al. 1980; Robert Leath, personal communication) (figure 22b, 23).

Recovery of these unusual ceramics in Allston era contexts is intriguing, and calls to mind the comment made by Elizabeth Allston Pringle in her "Chronicles of Chicora Wood," where she describes the family's hasty departure to Society Hill during the Civil War,

"It was a terrible undertaking to pack all that big, heavy furniture and get it away under stress. We found afterward that we had left many things of great value. At this moment I remember especially two blue china Chinese vases, urn-shaped, which stood two feet high and were very heavy. It seemed impossible to get boxes and material to pack them and they were left. Daddy Moses remained alone to take charge of the house and garden."(Pringle 1922:191).

Refined earthenwares comprised almost 50% of the ceramics, spread among creamware (16.6%), pearlwares (14.5%) and whitewares (18.4%); the increase in relative proportion of whitewares to the earlier creamwares and pearlwares is reflective of the mid-19th century date of deposition, while the overall quantity of these wares relative to other ceramics reflects the increased availability of such wares during the industrial era.

In addition to these, a number of 18th ceramics are also present; these may be redeposited from earlier strata, or discarded after decades of use. At the present time, there is no method for determining the actual source of such ceramics. The stoneware and coarse earthenware table and tea wares comprised 4% of the ceramics; this group includes Black Basalte ware, Nottingham stoneware, White saltglazed stoneware, and Scratch blue stoneware, as well as Astbury ware, Jackfield ware, and Whieldon ware. The latter piece was from a teapot lid in a basketweave motif. Delft wares accounted for an additional 6.4% of the ceramics.

Utilitarian wares comprised 30% of the ceramics. Nineteenth century vessels for food preparation and storage included miscellaneous albany slipped stonewares and yellow ware, the refined earthenware everyone remembers as their grandmother's mixing bowl. Eighteenth century ceramics such as Combed and Trailed slipware, lead glazed redwares, Mottled ware, mid-Atlantic earthenware, and Southern European ware. Colono wares comprised 3.1% of the ceramics; most common were Lesesne Lustered.

Glass artifacts comprised 52% of the kitchen group. Olive green bottle glass was still the most numerous, although clear bottle glass increased in relative proportion. Fragments of blue and brown bottle glass were also present. Table glass comprised 1.4% of the kitchen group. Most notable were two goblet bases with hexagonal stems, and a leaded glass plate which showed heavy ware on the bottom. The final table glass artifact was the neck to a decanter. This straight neck featured an everted lip and two strips of hand-applied glass, semicircular in cross section (figure 27c).

Architectural artifacts comprised 35.3% of the assemblage. Again, window glass and nails comprised the overwhelming majority. An unusual find was flat, presumably window, glass with the frosty white patina characteristic of leaded glass. Consultation with the project architects were

inconclusive, but they did point to the door separating the entrance room from the stair hall; here certain panes exhibit a similar, though not identical, frosty patina. For the present time, then, this glass is counted with the architectural materials. Identifiable nails included 20 wrought nails, 16 cut nails, and 4 wire nails. A single delft tile is likely redeposited from 18th century proveniences.

A single arms artifact was recovered; this was a .22 calibre shell. Clothing items comprised 1.49% of the assemblage and included 41 items. Buttons were of the 1-hole bone variety and the bone-backed brass variety described for the Russell assemblage. An addition was the 4 hole porcelain buttons which were in use throughout the 19th century. The most unusual brass button was a large spherical one, with a flattened side and wire loop eye. Other buttons were brass discs; one of these was silver plated, 3/4 inch in diameter. Three beads were recovered; these include a small oval bead of white glass, a round wire wound bead of translucent white glass, and a dark blue tube bead with rounded ends.

Two buckles were recovered. The most spectacular was a fragment of a silver buckle (figure 29b). This highly carved, but poorly finished artifact featured a maker's mark on the underside, marked "I M." The piece is stylistically associated with the mid-18th century; possible Charleston silversmiths responsible for the piece include John Miott (1773-1791), Jeremiah Morgan (1743-1744), and John Munro (1785-1809), though the style of the buckle suggests it would predate Mr. Munro's work. Other colonial silversmiths working at the appropriate time period include John Moulinar (1744) of New York and Joseph Moulton (1765) of Newburyport, Massachusettes (Burton and Ripley 1991). The other buckle was of brass.

If the Allston assemblage produced the most spectacular artifacts of the project - the urn fragments and the silver buckle - it also produced the ugliest. Recovered from the same context as the urn were four "globs" consisting of 2" long wires arranged in semicircular fashion and joined together by an unknown fibrous, almost hairy substance. These artifacts were the butt of many jokes on site, but they appear to be the remains of women's shoe heels. The wires are in fact nails for a stacked leather heel. Recovered in the same assemblage were 19 small grommets, probably from these same shoes. The final artifact was a small section of copper braid.

Personal items comprised .58% of the assemblage and included 16 items. Three combs were included in this group; one two-sided bone comb and two of hard rubber. The single coin was a 1772 George III halfpenny. As this was also recovered in N134.8E328, it is probably redeposited from late 18th century proveniences. The most unusual artifact was a glass disc and an associated brass setting, possibly from a telescope or some other instrument. Other personal artifacts included slate pencils and bone tooth brush fragments. The most unusual item was a brass finger ring with a molded floral motif on the interior and exterior (figure 29b). It has been dated to the 18th century (Christopher Loeblein, personal communication).

Furniture items comprised .54% of the assemblage and numbered 15 items. These included a white porcelain caster wheel and a hand-cut decorative brass hinge, as well as brass upholstery tacks. Tobacco pipe fragments comprised 1.7% of the assemblage. Activities materials comprised

2.4% of the assemblage. This group included 24 flower pot fragments, 2 marbles, and miscellaneous fragments of iron and brass.

Sisters of Charity Assemblage

The late 19th century occupation by the Sisters of Charity left a surprisingly substantial mark on the archaeological record. A total of 5277 artifacts were recovered from 31 proveniences. Kitchen materials comprised 51.6% of the assemblage. As is typical of late 19th century assemblages, the proportion of glass artifacts increased relative to ceramics; the kitchen group consists of 42% ceramics and 58% glass items.

The overwhelming majority of the ceramics were tablewares, nearly 84%. Chinese export porcelains comprised 8.8% of the ceramics. A great majority of these were Canton style porcelain. American white porcelain, some with gilded decoration, comprised an additional 4.4% of the ceramics. White porcelain is developed in 1851, and gilded decorations are a hallmark of the 1880s–90s. Creamwares continue to dominate the ceramic assemblage, comprising 17.5% of the ceramics. Most of the late 19th century creamwares were too fragmentary to determine vessel form or style, but a majority of the sherds appeared to be from 19th century creamwares, which were less elaborate and less expensive than their 18th century predecessors. Pearlwares comprised 16.5% of the ceramics, and the later whitewares comprised nearly 25% of the ceramics. The majority of the whitewares were undecorated; plain whiteware, much of it in thick, octagonal shapes, peak in popularity in the middle of the 19th century. The assemblage also contained a number of transfer printed whitewares, including a single sherd of flow blue ware. Redeposited 18th century tablewares, particularly delft and white saltglazed stoneware, accounted for the remainder of the tablewares and comprised an additional 9% of the ceramics.

Utilitarian wares comprised only 16.3% of the ceramics, and consisted of various stoneware jugs and crocks, lead glazed earthenwares, and slipwares. Colono wares comprised 1.4% of the ceramics.

Glass artifacts comprised the remaining 58% of the assemblage; a larger proportion of container glass is common for assemblages of this period, as glass manufacture becomes automated and bottling technology more efficient. Still, olive green bottle glass was the most common type (598 fragments) of bottle glass, the majority of these from hand blown bottles. Clear bottle glass increased in popularity during this time, and 525 fragments were recovered. Other late 19th century glass types were brown glass, for beer and a variety of other products, and blue glass, principally from soda water bottles. Bottled water became very popular in the late 19th century, as the groundwater in many cities, including Charleston was deemed unfit to drink. Three medicinal bottles were clearly identified, though a number of the smaller fragments of clear glass are probably from the patent medicines which were popular during this period. Only 3 fragments of table glass were identified; these were from the pressed glass popular in the mid to late 19th century. Three sherds of milk glass, developed in 1870, were also recovered.

Architectural materials comprise 43.6% of the assemblage. Nails were the most common artifact, and the majority of these were too corroded for positive identification, though most appeared to be square shanked. Identifiable nails included 43 hand wrought, 47 machine cut, and 18 wire nails, developed after 1850. Window glass was the other common architectural artifact. In addition to the common clear or light green flat glass from windows, 221 fragments of leaded window glass were recovered. Other architectural artifacts included brass nails for roofing slate, a shutter pintel, and 5 delft tile fragments, no doubt redeposited from the 18th century.

No arms artifacts were recovered from late 19th century proveniences. Clothing items numbered 37 and comprised .7% of the assemblage. The majority of these were buttons of bone, white porcelain, or brass; in addition two shell buttons were recovered. Other clothing items included two straight pins and a glass bead. The bead was of milky clear glass, tear drop shaped and mounted on a brass eye (figure 29b).

Personal items numbered 26 and comprised .49% of the assemblage. The single coin was a badly worn silver Spanish reale; remarkably a date of 1776 was still legible. Other personal items included a tooth brush and a small key from a jewelry box or diary. The majority of the personal items were slate pencils, the strongest reflection of the use of the house as a girl's school. Four furniture items comprised .07% of the assemblage. These included a small brass hinge and two brass curtain rings (figure 30b). Kaolin tobacco pipes, no doubt present as a result of redeposition, comprised 1.19% of the assemblage. Activities items comprised 2.21% of the assemblage. The most notable items in this group related to use of the yard area. A total of 43 flower pot fragments were recovered. Toys included two marbles and a pewter toy plate. The most unusual item was the bottom half of a clay figurine, which appears to be a woman in a floor-length dress, holding a muff (figure 30c). The style of the costume suggests an 1830s date of manufacture (Blum 1978) (figure 31).

20th Century Assemblage

The 20th century assemblage consisted of 1974 artifacts recovered from 21 proveniences. Data relating to this assemblage can be found in the various tables found in this section and in Chapter V. The most notable aspect of this assemblage was the large number of toys recovered, reminiscent of Mrs. Pelzer's memoirs, recalling use of the rear yard for children's play.

Prehistoric Artifacts

A very small number of prehistoric artifacts were recovered at the Russell house, all in historic contexts. The most notable was a finely crafted semicircular scraper of flint or fine-grade chalcedony (figure 28b). Lithic expert William Koob has suggested that this was first a scraper,

reshaped as a spokeshave (William Koob, personal communication). The remaining artifacts were three fragments of undecorated pottery.

Artifacts from 1991 and 1982 salvage projects

Prior to fieldwork in June, artifacts from the 1982 garden project and Fred Andrus' 1991 work were reanalyzed by Museum staff. These analyses were very useful in guiding to the 1994 testing. The 1991 project, in particular, produced a large artifact assemblage. These materials are presented in table 5. While most of these wares are unprovenienced, they can be generally dated by style, and are good examples for exhibition. Further, smaller fragments of each type were recovered in context during the 94 work. Highlights of the project will be summarized here, and a number of artifacts from this project are shown in the various illustrations.

Most remarkable was the recovery of large amounts of Canton (early 19th century) style Chinese Export Porcelain (figure 22a). These fragments include tureen lids and warming plates, as well as individual place settings. Smaller amounts of overglazed porcelain were recovered. The most elaborate were several rim fragments to a platter of overglazed design with a red and gold dart motif (figure 21b). This piece dates to the third quarter of the 18th century. The most unusual ceramic were fragments of royal pattern creamware with an overglaze hand painted design. This graceful set featured swags in brown and black around the rim (figure 24a). Ceramics expert Robert Hunter has suggested a date of 1780s for this pattern, which may be of local design. A large fragment (1/3 plate) of shell edged pearlware featured an unusual moulded rim with feathers and plumes, dating to c. 1810 (figure 27a). Transfer printed pearlwares and whitewares were also common. Three serving vessel lids, in various sizes were recovered; these dated to the 1820s–40s (figure 27b). Annular wares were also common.

The most important discovery during the 91 work was the recovery of large examples of the delft tiles found in fragmentary form in the late 18th century proveniences. These larger examples facilitated the identification and dating by Robert Hunter to 1750–60 (figure 28a).



Figure 21

a) examples of overglazed Chinese Export porcelain, 1994 excavations.

b) examples of overglazed Chinese Export porcelain, 1991 project.

c) examples of Mazarin Blue porcelain.



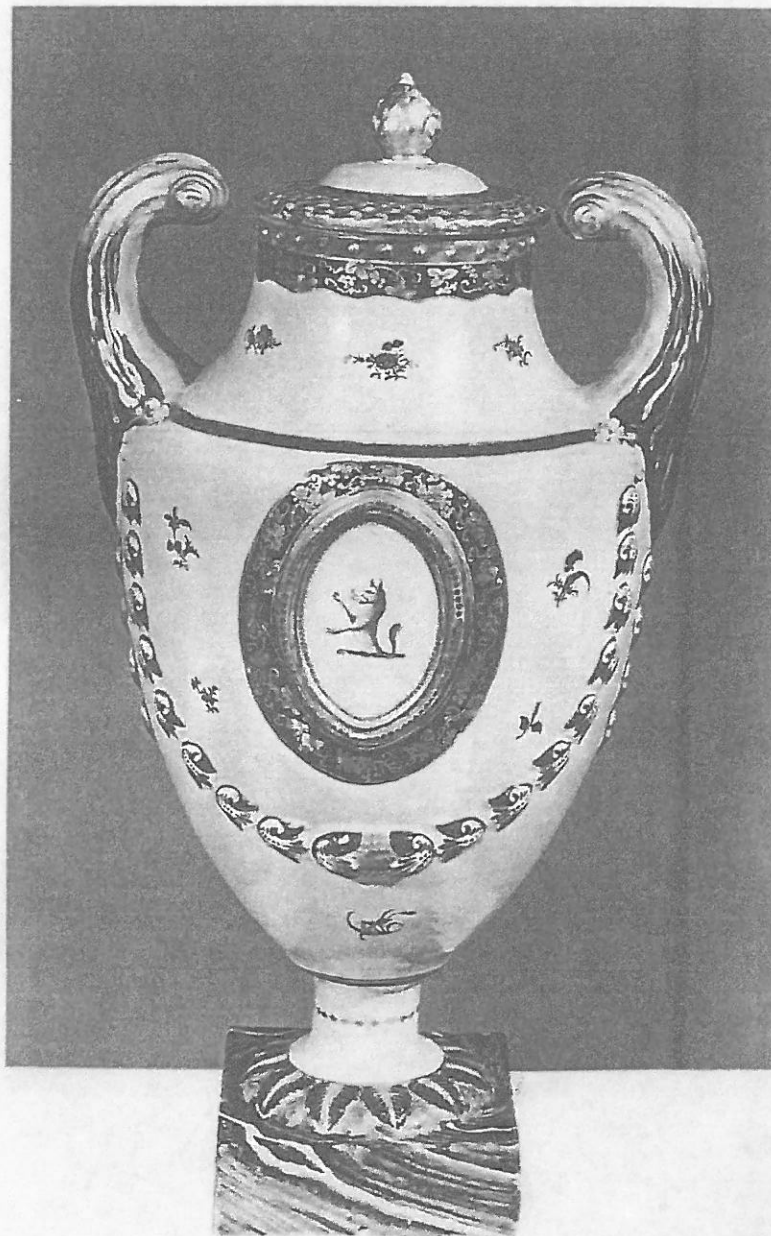


Figure 22

a) examples of Canton porcelain.

b) fragments of Chinese Export porcelain urn, retrieved from mid-19th century contexts.





The two-handled urn (circa 1785–90) bears the coat of arms of James Duane and the initials of his wife Mary Alexander Livingston Duane. James Duane was the first mayor of New York City after the Revolution from 1784 to 1789.

Figure 23

Example of two-handled porcelain urn, with identical decoration to the fragments retrieved at the Russell house. (From *China for America: Export Porcelain of the 18th and 19th Centuries*, by Herbert Schiffer, Peter Schiffer, and Nancy Schiffer, Schiffer Publishing, Ltd., Exeter, Pennsylvania, 1980, pp. 58.)

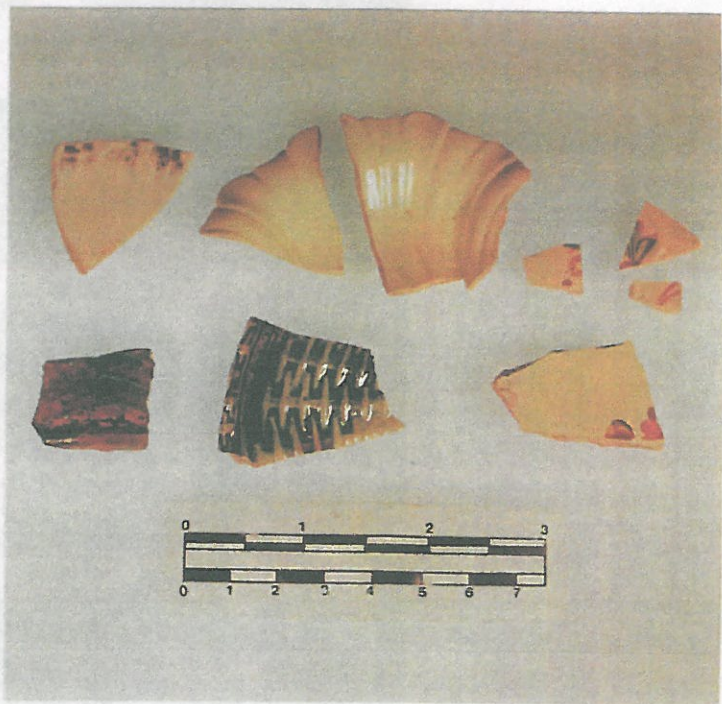
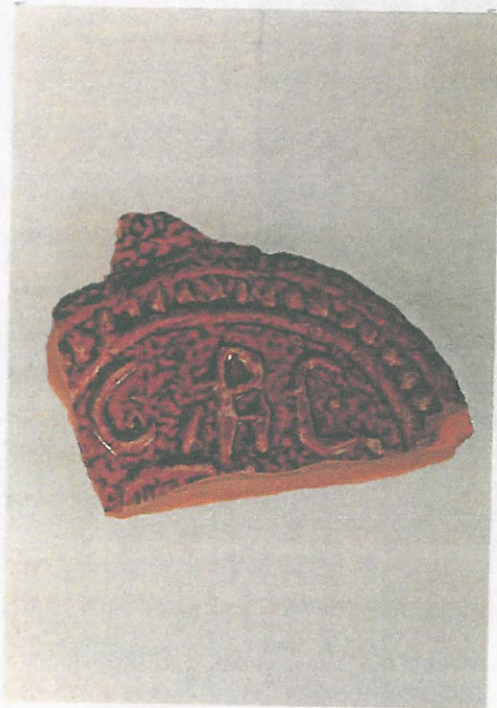
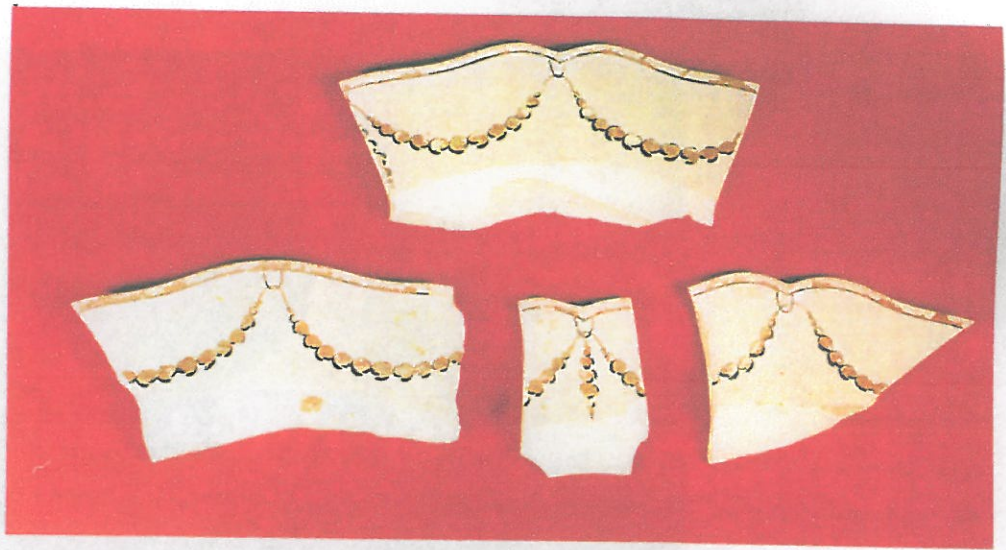
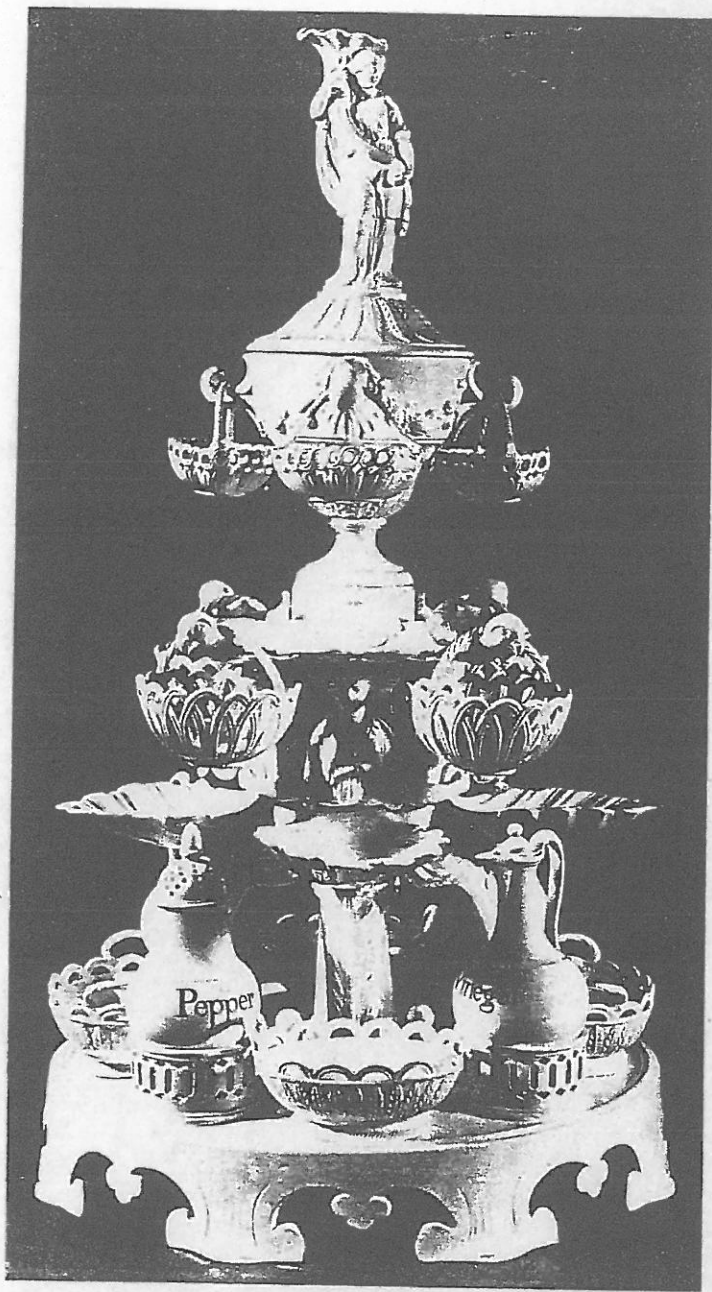


Figure 24

a) examples of hand painted creamware; lower right is from 1994 excavations.

b) hand painted creamware; whieldon ware, possibly from Cain Hoy; creamware condiment dish; whieldon ware lid.

c) brown saltglazed stoneware, bellarmine seal.



70 CENTRE-PIECE, pale cream
LEEDS, about 1780, ht. 25 in (63.5 cm)
Fitzwilliam Museum, Cambridge. See page 139

Figure 25

Example of a creamware centerpiece, c. 1780, with scallop-shaped dishes. (From *Creamware*, by Donald Towner, Faber & Faber, Boston, 1978, p. 141.)

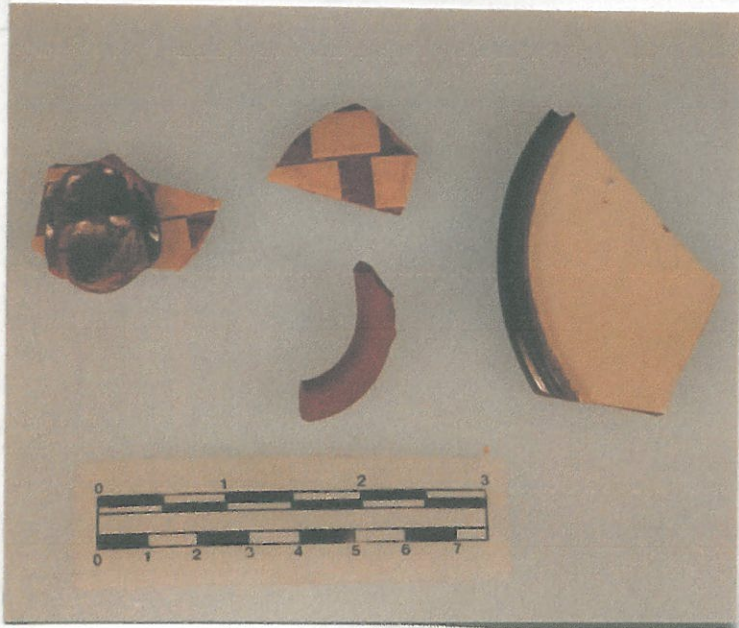


Figure 26

a) teapot spout, black lead glazed redware

b) Agate ware, Elers ware, Portobello ware.

c) Colono ware; lower left example features red paint on rim.



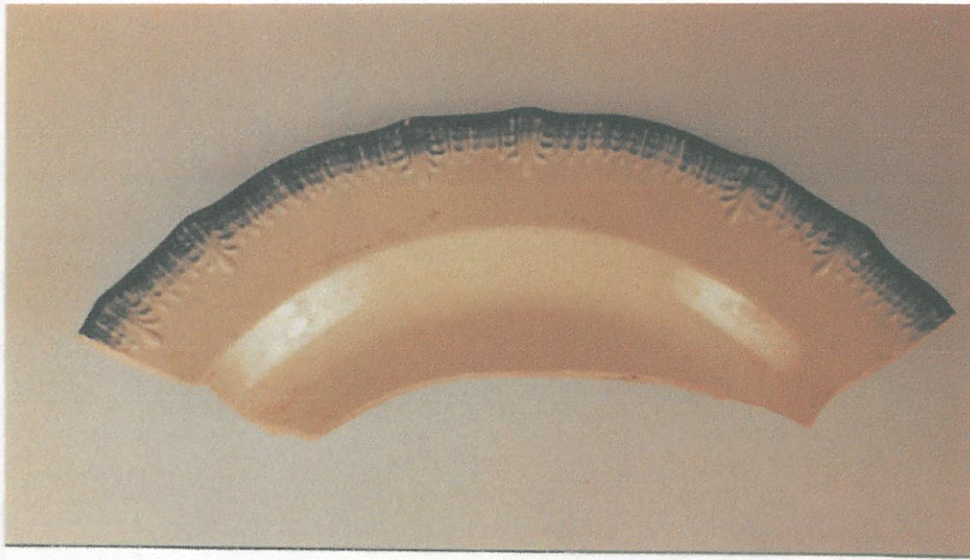


Figure 27

a) shell edged pearlware, c. 1810
(1991 project).

b) transfer printed whiteware, c.
1820 (1991 project).

c) examples of table glass.



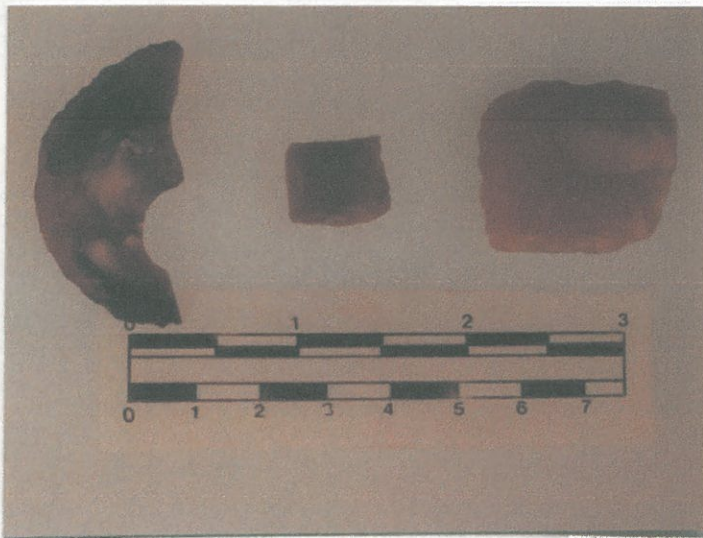
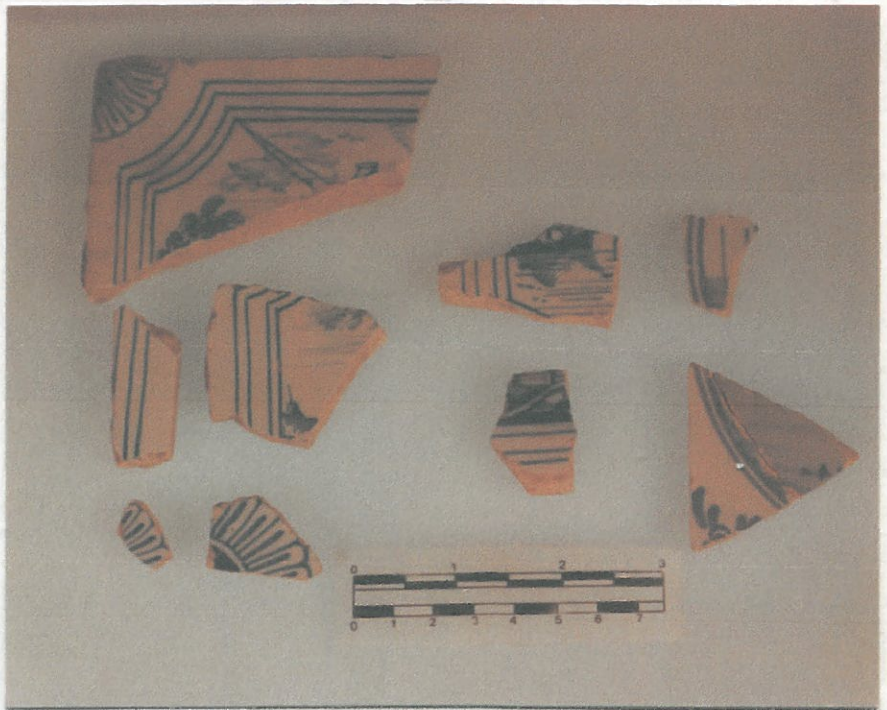
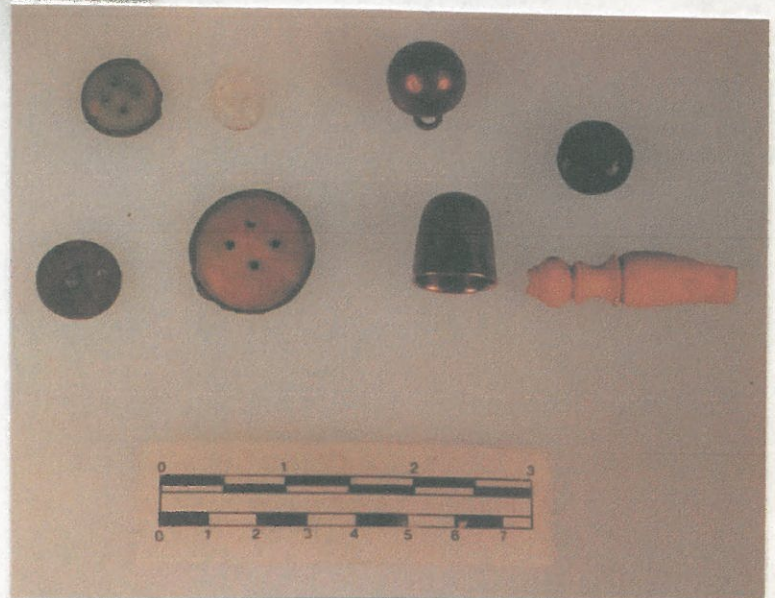


Figure 28

a) architecture: delft tiles recovered from various excavations.

b) arms: scraper, gun flints.

c) clothing: brass buttons with bone backs, glass cufflink setting, domed brass button, brass thimble, vulcanite button, bone bobbin.



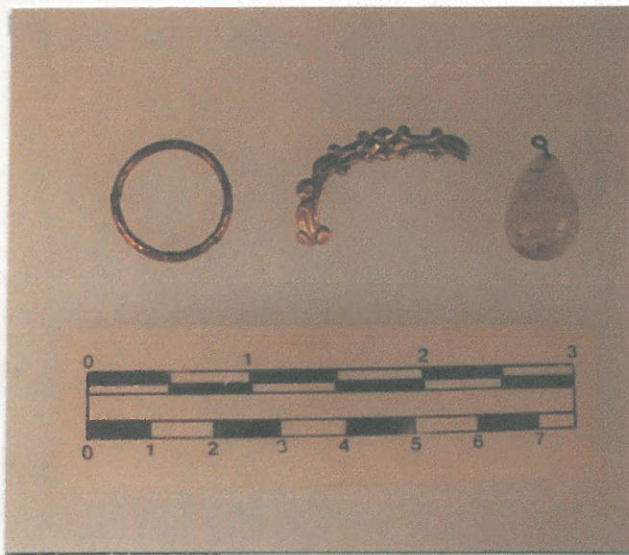
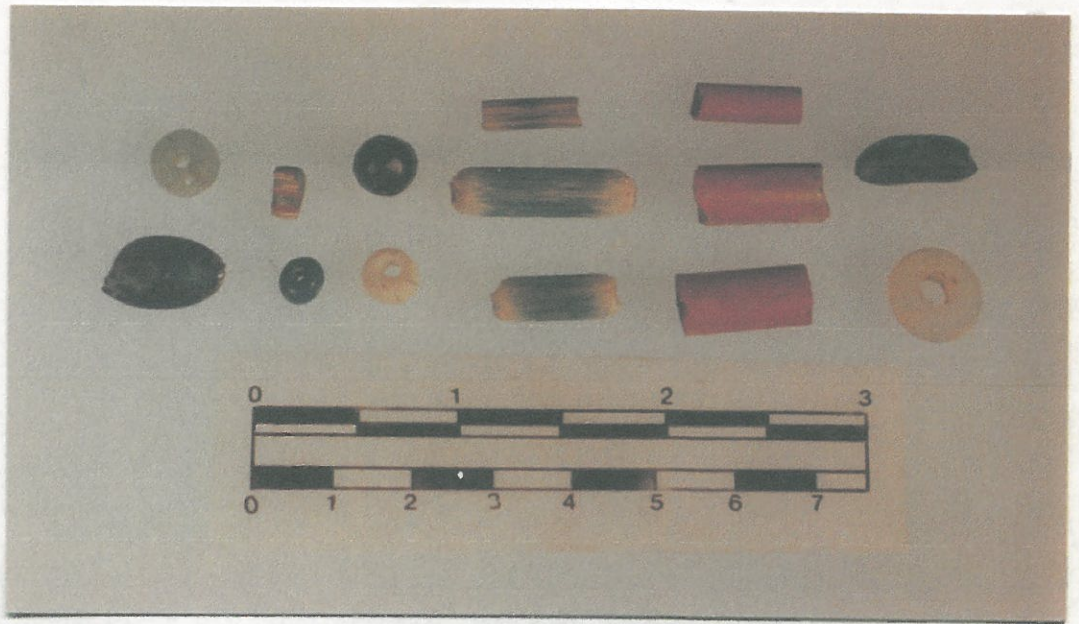


Figure 29

a) beads recovered from excavations.

b) finger ring, silver buckle, glass jewelry fitting.

c) coins recovered from excavations.



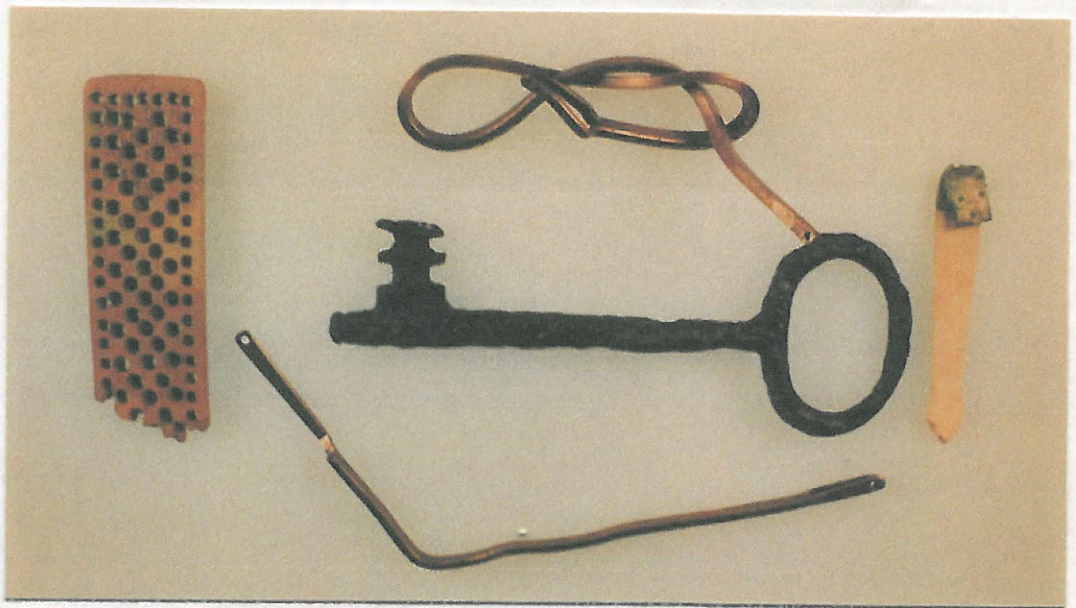
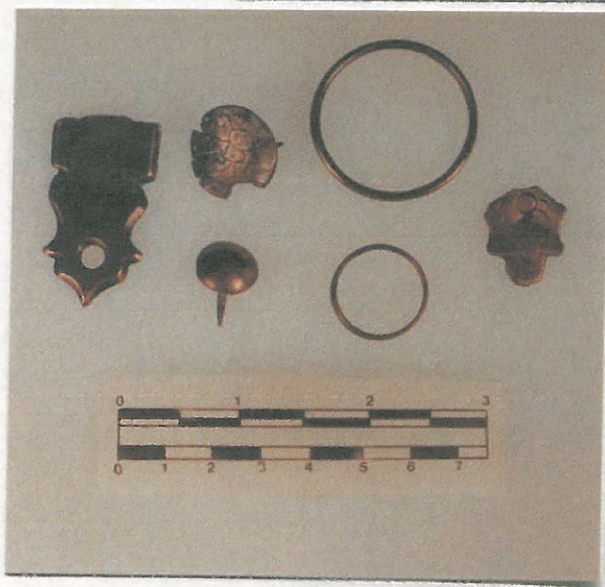


Figure 30

a) personal items: bone brush, umbrella ribs, key, bone fan fragment (from 1991 project).

b) furniture items: small decorative hinge, decorative tacks, curtain rings, book clasp.

c) toys: porcelain tea set, pewter tea plate, whizzer, bone die, earthenware figurine.





CARRIAGE DRESS (1827)

Figure 31

Woman's Carriage Dress, 1827, in a style identical to the recovered figurine fragment. (From Ackermann's *Costume Plates: Women's Fashions in England 1818-1828*, by Stella Blum, Dover Publications, Inc., New York, 1978, p. 80.)

Table 3
Guide to Temporal Subdivision
 (by FS #)

<u>Late 18th Cent.</u>	<u>Russell</u>	<u>Allston</u>	<u>Sisters</u>	<u>20th Cent.</u>
21	4	22	11	1
51	5	25	13	2
62	9	26	14	3
75	15	28	16	6
76	19	49	27	7
77	42	56	31	8
84	44	59	32	10
97	47	60	35	12
99	48	63	36	17
102	52	66	38	18
103	53	90	39	23
104	54	91	40	24
111	55	119	41	30
114	57	120	70	68
115	58	121	87	86
	61		88	98
	65		89	100
	69		101	112
	71		105	116
	72		106	117
	73		107	118
	74		108	
	79		109	
	82		110	
	92		113	
	93			
	94			
	95			
	96			
	122			
	123			
	124			
	125			
	126			

Table 4

Quantification of the Assemblages

<u>Item</u>	<u>late 18th</u>	<u>Russell</u>	<u>Allston</u>	<u>Sisters</u>	<u>20th Cent</u>
(Kitchen)					
porcelain, b/w	28	143	64	86	19
porcelain, o/g	6	14	10	8	4
porcelain, Canton			4	8	5
porcelain, white		6	30	50	21
porcelain, other		9	5	3	
stoneware, 19th cent.	5	8	14	9	3
Edgefield stoneware					
Brown saltglaze stoneware	6	11	5	9	1
Westerwald stoneware	7	35	7	17	3
Elers ware	1	2		1	2
Black basalte ware	1	2	1		
Nottingham stoneware	3	6	3	9	
White saltglaze stoneware	16	55	24	30	6
Scratch blue stoneware		2	2		1
Astbury ware		3	3	1	1
Agate ware		3			
Jackfield ware		3	3	1	2
Whieldon ware	1	4	1	5	1
Creamware, hand painted		4	5	1	2
Creamware	23	340	134	202	71
Pearlware, undecorated	31	116	45	81	31
Pearlware, blue hand paint	7	35	15	12	16
Pearlware, poly hand paint	1	13	7	10	7
Pearlware, shell edge	3	47	6	20	1
Pearlware, annular	4	16	16	19	1
Pearlware, transfer print	2	48	28	49	19
Whiteware, undecorated		36	94	183	53
Whiteware, hand painted			9	4	1
Whiteware, shell edged			1	4	
Whiteware, annular			10	26	
Whiteware, blue tr. pr.		13	32	56	9
Whiteware, tr.pr., other			2	10	2
Flow blue ware		1		1	2
Yellow ware		2	3	8	4
Rockingham					

Canary ware				1	
Portobello ware		4			
Slipware, Combed and Tr.	104	148	68	83	22
Slipware, American	2	12	3	4	
Buckley		1			
Mid Atlantic earthenware		1	4		
Mottled ware	5	6	2	3	5
Southern European ware		2	1		
Lead glazed coarse earth.	13	16	20	37	9
unglazed coarse earth.	3	17	5	13	2
Delft, undecorated	30	56	18	9	12
Delft, b/w	13	41	17	42	8
Delft, polychrome	5	11	15	9	1
Colono ware, Yaughan	24	9	7	7	1
Colono ware, Lesesne lust.	23	29	17	9	2
Colono ware, River burnish	5	19	1	1	
Olive Jar			1		
N. Devon Gravel Tempered	1	2			
Olive green glass	269	1270	410	554	154
lt. olive glass	21	15	31	44	65
greenish-clear glass				1	
blue glass		11	15	23	13
brown glass		3	13	149	78
clear glass	39	176	210	525	296
manganese glass		4		1	2
milk glass		2		64	9
table glass	6	11	23	21	30
pharmaceutical glass		1	1	3	
cutlery		2		1	
tin can		1		1	
(architecture)					
nail, unidentified	216	737	481	751	232
nail, wrought	31	72	23	43	27
nail, cut		27	16	37	11
nail, wire		9	4	18	29
window glass	199	826	541	1401	684
leaded flat glass	39	176	154	221	50
delft tile	1	1	3		3
misc hardware	3	2	2	8	1
brass nail				6	

(arms)

gunflint	1	1				
shot		2				2
shell			1			
(clothing)						
bone button	2	10	4	6		1
porcelain button		1	8	16		3
brass button	2	9	6	7		1
iron button						1
hook & eye		1				1
bead	1	7	2	2		2
shoe buckle		2				
jewel setting		2				
thimble		1				
lace bobbin	2					
pin		1		2		
shell button				2		
grommet			15	2		
shoe heel			4			
copper braid			1			
(personal)						
tooth brush	1		3	2		1
coin	1	8	1			
slate pencil		7	8	23		5
umbrella strut		1	1			
hard rubber comb		2	2			
mirror			1			
key				1		1
(furniture)						
upholstery tack	1	7	5	2		
decorative hardware	1	2		2		
lamp chimney						1
(tobacco)						
bowl	9	24	14	18		5
stem	18	99	32	45		7
(activities)						
flower pot	7	30	24	43		18
marble	1	4	2	2		2
misc. toy	1	1		1		2
barrel strap		9		1		

tool
whetstone

1
1

4

Table 5
Quantification of 1991 Excavation Unit

<u>Artifact</u>	<u>Russell period</u> (zones 2-4)	<u>Allston period</u> (zone 1)
(kitchen)		
Porcelain, b/w	5	4
porcelain, o/g	3	2
porcelain, Canton	24	3
porcelain, white	2	6
stoneware, 19th cent	2	
creamware, hand paint	1	
creamware	30	2
pearlware, undec	12	5
pearlware, shell edge	7	
pearlware, blue h.p.	7	
pearlware, poly h.p.	15	
pearlware, annular	3	5
pearlware, tr pr	13	
whiteware, undec.	2	15
whiteware, hand paint	2	2
whiteware, annular	1	2
whiteware, tr pr blue	2	5
whiteware, tr pr, other		4
Flow blue whiteware		1
yellow ware		1
delft, polychrome	2	
slipware, comb & trail	2	
mid-Atlantic ware	1	
Colono ware, Lesesne	1	
unglazed coarse earth.	8	
lead glazed coarse earth.	18	
Portobello ware	2	
Olive Jar	20	
olive green glass	25	15
clear glass		8
blue glass	1	4
manganese glass		1
amber glass		2
table glass	6	5

(architecture)		
nails	32	24
window glass	43	86
(arms)		
(clothing)		
bone button	1	1
(personal)		
slate pencil		1
(furniture)		
upholstery tack	1	
(tobacco)		
bowls	1	
stems	6	
(activities)		
flower pot		1
barrel strap	6	8
copper ring		2
file	1	

CHAPTER V

Interpretations

Since 1980, archaeological research in Charleston has been guided by a series of long-term research goals. The proposed research topics address a number of issues, both descriptive and processual. Several of these were proposed from archival studies (Rosengarten et al. 1987; Zierden and Calhoun 1984), while others were developed by scholars working in Charleston and other cities (for example, Cressey et al. 1982; Honerkamp and Council 1984; Lewis 1984; Reitz 1986). Data from subsequently excavated sites have been 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 project has a place in the growing comparative data base. The present chapter addresses two descriptive issues, site formation processes and artifact patterning, and two processual issues, development of the urban landscape and material signatures of refinement.

Site Formation Processes

In recent years archaeologists have been concerned with the meaning of archaeological remains; what they meant to the people who made and used them, and what they mean to the people who study and protect them. Since the publication of Leone and Potter's The Recovery of Meaning in 1988, archaeologists have been concerned with discerning the meaning of artifacts to past users, the social and ideological template encoded in the material culture, and how this material culture was used to define and reinforce these social mores to a diverse population in the 18th and 19th centuries.

At the Nathaniel Russell house, and elsewhere in Charleston, archaeologists are concerned with another type of meaning: what does the presence of these artifacts in the ground mean, in terms of formation and alteration of the landscape? More particularly, how and why did they end up in the particular position and association in which we find them? Thorough consideration of these issues is an essential first step in the endeavor to recover past meaning.

Our analysis begins, then, with a consideration of site formation processes, the physical events that form the archaeological record, and then move to issues of redeposition, discerning and dating discrete proveniences, and determining associations, before moving to the more esoteric issues of past meaning.

A basic question guiding archaeological analysis, though one rarely articulated, is, "how did these artifacts get here?" When working with students and volunteers, and in front of the public,

this question is asked repeatedly, engaging the archaeologists in a constant struggle to answer this question clearly, and without hesitation. An often unarticulated assumption prefacing most archaeological studies that the artifacts were discarded, or otherwise deposited, by the previous site residents. On an isolated rural site, this is a relatively safe assumption. On urban sites such as the Russell house, however, this is a real monster under the bed, waiting to undermine our reconstruction of the past. For urban residents clearly moved great quantities of earth and their contents. Such earth moving began at Russell with the filling of the marsh to create Price's Alley and continued beyond Governor Allston's purchase of 48 loads of earth for his lot on Meeting Street in 1859. All of the materials recovered at Russell are considered to be deposited by site residents, but this interpretation was reached after careful consideration of site data and was not simply presumed.

Cultural materials enter the archaeological record by four basic methods: discard, loss, destruction, or abandonment. Discard, the throwing away of refuse, is discussed in detail in the section on urban landscape development. This is the most common form of archaeological site formation. Artifacts and other debris are either broadcast on the ground surface, gradually forming zone deposits, or placed in newly dug (trash pit) or previously existing holes (such as abandoned wells, privy pits, etc.). Items deposited due to loss are usually small, such as buttons, coins, toys, etc. Lost items are discovered in wells, or soil lenses that collect beneath wooden floors. Abandonment includes destruction of buildings and their contents from fire or storm, or the artifacts left behind or thrown out when tenants vacate a property. In some cases it is possible to distinguish proveniences resulting from specific depositional processes.

Once in the ground, artifacts can be redistributed or they can be removed (Ascher 1968; Honerkamp and Fairbanks 1984; Schiffer 1983). Usually the archaeological record is a combination of all three events. In the urban situation, where these processes can become very complex, archaeologists are particularly interested in the processes which introduce and redistribute materials.

The back yard, or the work yard, was the locus of most refuse disposal. Crowded conditions and health considerations also resulted in the deposition of refuse in any convenient space in the city. Open lots, unpaved streets, and alleys were likely candidates (Calhoun et al. 1984; Zierden et al. 1983a; Rosengarten et al. 1987). Quantities of refuse were also dumped into creeks and lowlying marshy areas, creating new real estate (Sapan 1985; Zierden and Calhoun 1986; Zierden et al. 1983b).

Urban archaeological deposits reflect abandonment and loss, as well as discard. Abandonment activities include loss of materials due to fire or storm, and the resulting cleanup activities (Zierden et al. 1983a), and the transfer of a domicile to a new tenant or owner (moving out). The single event filling of large features such as privies sometimes reflect this activity (Lewis and Haskell 1981; Zierden and Hacker 1987). Artifact deposits resulting from loss have been manifested as zones beneath a present or former wooden floor (small items swept through cracks between boards) and in the small artifacts accumulated in drains. Loss and abandonment deposits

can often be distinguished from discarded deposits by the artifact profile, as well as by the physical properties of the artifacts.

Another key aspect of the urban site may be disorganization, the result of continuous occupation and the intrusion of later deposits into earlier ones. Additional factors unique to urban sites are private or municipal collection of refuse, which resulted in the redeposition of refuse in a central location far from its place of origin (Dickens and Bowen 1980), and the replacement of private handling by municipal or corporate management of such basic needs as water procurement and storage, sanitary waste management, and trash disposal (Honerkamp and Council 1984; Zierden and Calhoun 1986).

An additional site formation process might be described as construction, the moving of earth to build the massive structures such as Charleston's urban townhouses. At Nathaniel Russell, and other sites, when the large extant townhouses represent the first major building episode, (though not necessarily the first use of a property) we see principally yellow sand and orange clay mottled with a few pockets of darker midden sand, sparse artifacts, but large brick and mortar fragments. Such soil was noted in N200.4E297, zone 4, and N134.8E328, in zone 5 associated with construction of feature 23. At Russell, such soil was encountered well beyond the probable limits of a typical "builder's trench" suggesting that the massive reorganization may have impacted a large area of the urban lot. Such deposits have been noted at the Heyward Washington house and the Miles Brewton house, as well. As Russell's mansion was actually the second structure on the lot, these construction soils contain greater than normal density of artifacts.

Likewise, destruction is evident in the archaeological record, as Russell evidently demolished the original building along the south property line after his house was completed. This activity resulted in the zone 4 brick rubble in N134.8E328, and the heavy rubble in N11E190. In each case, it also resulted in 18th century trash being redeposited in and around the rubble, along with a few artifacts dating to the early 19th century. So we have zones that date to Russell's occupation, and analyzed as such, but principally containing earlier artifacts. Destruction zones are also seen in N200.5E121, where the rubble of zone 3 indicated destruction of a portion of the carriage building, after 1870. Destruction deposits were also noted in N150E10 and N150E135.

The primary site formation process, however, appears to be discard of rubbish. Although many individual artifacts were probably lost, no entire proveniences could be attributed to such. Disposal of refuse, then, is the principal process operating at Russell, but these processes were not uniform across time and space. As an attempt to measure temporal and spatial differences in refuse disposal, Stanley South's Mean Ceramic Date formula was employed. Stanley South derived this tool in 1972 for averaging the manufacture dates of recovered ceramics based on the concepts of evolution and horizon. Evolution states that each manufactured item, or ceramics, undergoes an evolution in popularity and use, beginning with invention, rise in popularity, peak, declining in popularity, and finally extinction. On occasion, ceramics experience a broad and rapid spread, known as horizon. A good example is Wedgwood's creamware, which was so popular that it literally spread to the four corners of the world in less than a decade, and is found universally on

late 18th century sites. Some of the ceramics have a broad span of manufacture, others a relatively short one.

The mean ceramic date formula (MCD) works in the following manner: the sherd count for each type of datable ceramic is placed in a column beside the median date and these are multiplied, producing a third column, which is a product of the median date times the frequency of occurrence. The sum of the frequency column is divided into the sum of the product column, producing the mean ceramic date for the sample. South has found that this rather broad-ranging manufacture date has a remarkable degree of similarity between the date derived from the formula and the historically known median occupation date.

The MCD formula is used here to measure site formation processes in two broad ways. First, it was visually noted in the reanalysis of the 1982 salvage work in the garden and the 1990 salvage work around the house that there were "more" 18th century artifacts in the garden area. Calculation of MCDs for the two groups of artifacts produced a date of 1784 for the garden materials and a date of 1819 for the house materials, strongly supporting the initial idea and guiding placement of excavation units in the present project. These cursory examinations would suggest some spatial variation in refuse disposal over time.

The MCD formula was then applied to the 1994 work in the following manner: each of the ten units excavated produced closed contexts dating from the mid 18th century through the mid 20th century, but in varying density. A MCD was then calculated for each unit, combining the variously dated proveniences from each unit, producing the results seen in figure 32. Early trash disposal was concentrated in the front of the property and along the south wall. N134.8E328 produced a date of 1774, while N135E245 had the earliest date of 1769. Unit N11E190 along the south wall also had a concentration of early artifacts, producing a date of 1786. In contrast, the units in the back and around the house were the scene of later trash disposal. N197.9E200, N197.9E210, N150E100 and N22.5E121 each produced a date of 1808, while N150E135 produced a date of 1793. The privy unit in the back corner, N237E103, yielded a date of 1842. Figure also shows the number of ceramics used to make these calculations, provide some measure of refuse density in each of these areas. Trash was concentrated along the south wall, from front to back, and lighter around the house.

Because figure 32 proved so illustrative, a second graphic was prepared. This graph shows the individual proveniences by date of deposition, based on strata and TPQ, for each temporal subdivision, by individual unit (figure 33). The units are listed roughly from southeast corner to northwest corner, and these can be used in combination with figure 32 and table 6 to make some statement about refuse disposal through time and space.

Refuse from the late 18th century is concentrated along the south wall and is also found along the back wall. The greatest number of individual proveniences date to the Russell occupation. These are the most broadcast, but are concentrated on the yard peripheries, and along the southern portion of the lot. The Allston trash, in contrast, is not found in the front garden, but is concentrated in the rear half of the yard. The Sisters seem to follow a similar

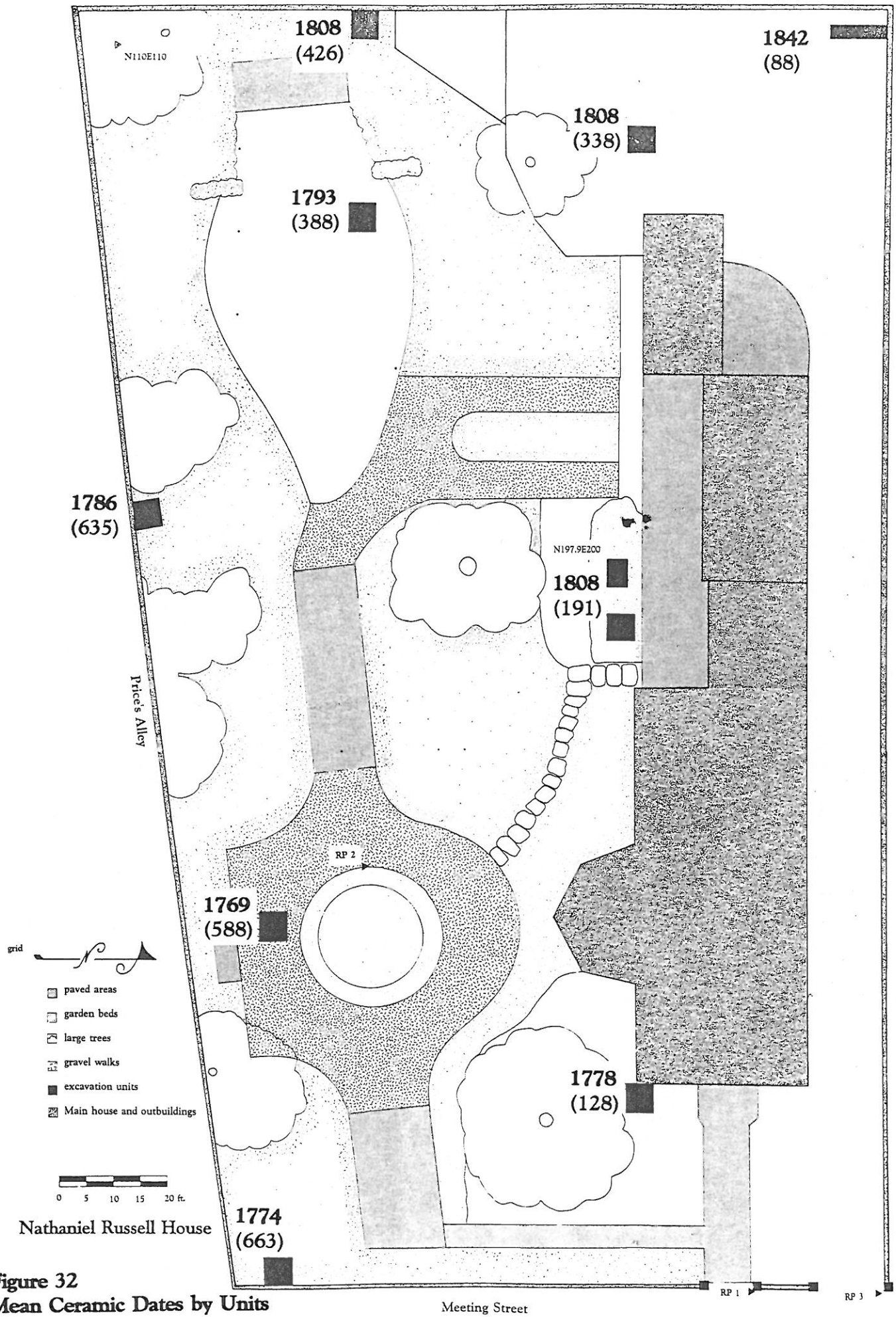
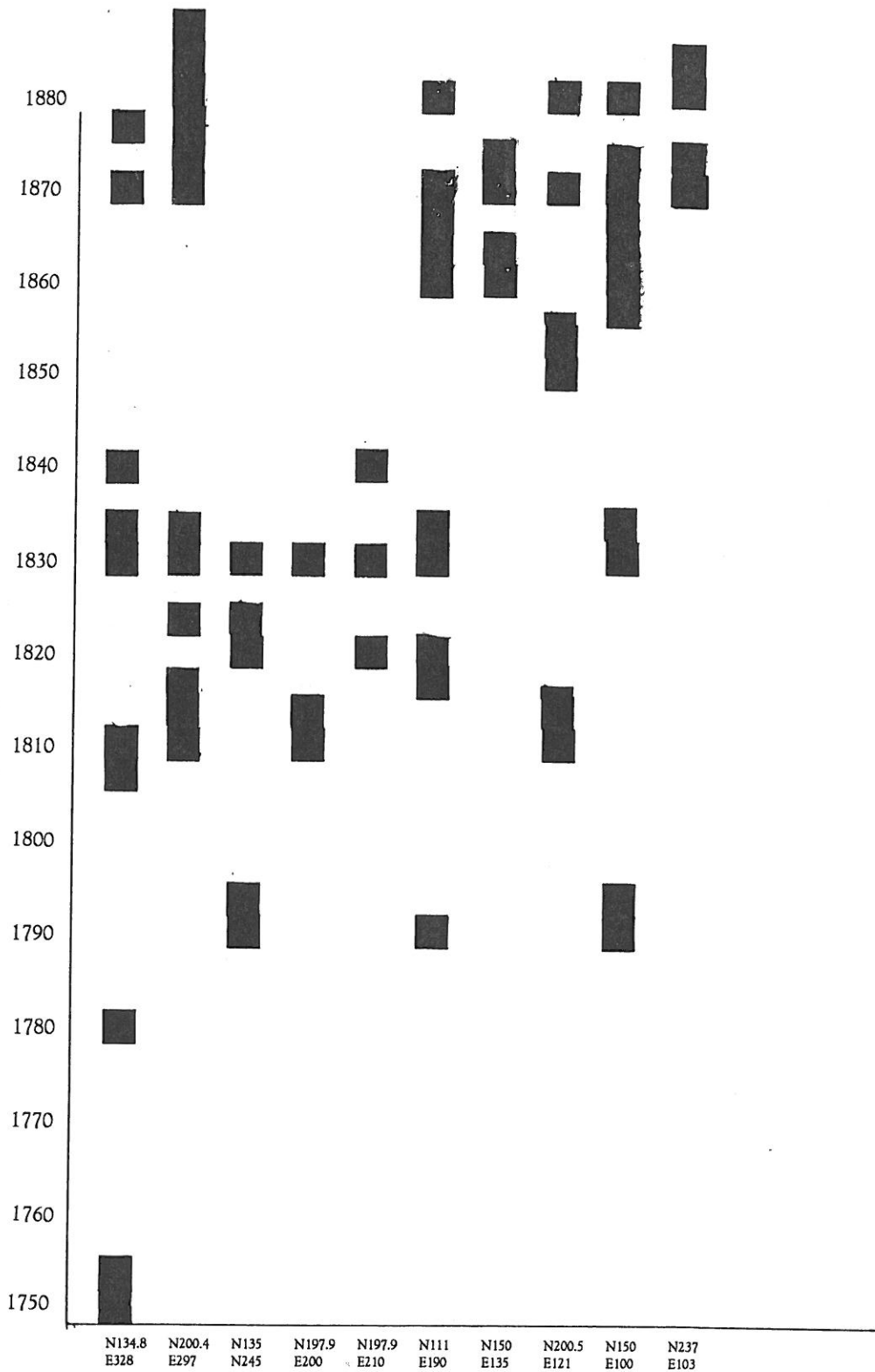


Figure 32
Mean Ceramic Dates by Units



(units are listed from southeast to northwest, roughly in order of Mean Ceramic Date. Dates of deposition are by decade)

Figure 33
Dates of Deposition by Unit

pattern, but they do impact the front yard as well. In terms of total numbers of artifacts, the Russell family and the Sisters of Charity have the greatest impact on the archaeological record.

Returning to the Mean Ceramic Date formula, it can be used to illustrate another problem in analyzing continuously occupied sites like Russell: redeposition. As a mid-19th century resident works and builds on his property, his ground-moving activities disturb earlier deposits, bringing artifacts to the surface and mixing them with later artifacts in their new provenience. Precisely isolating redeposited artifacts is almost impossible, for while we do know when an artifact was manufactured, we cannot say for certain how long it was used and when it was discarded. North Devon gravel tempered earthenware serves as a good example. Manufactured from 1650 to 1775, it is often considered a marker of 17th century sites. Yet when it is recovered from a zone with a TPQ of 1780, is it a 17th century discard redeposited, or a piece manufactured in 1775 and quickly thrown out? In absence of clear evidence, each ceramic encountered in Allston proveniences, for example, has been analyzed as Allston material culture. To illustrate this problem, the Mean Ceramic Date was calculated for each temporal subassemblage, and the result is an ever-widening gap between the MCD and the historically derived median date :

Table 6

	<u>Date Range</u>	<u>mean historic date</u>	<u>mean ceramic date</u>
late 18th century	c.1740-1808	1775	1763
Russell	1808-1857	1833	1777
Allston	1857-1870	1865	1760
Sisters of Charity	1870-1908	1889	1803
20th century	1908-c.1940	1924	1803

This, in particular, suggests that the 20th century assemblage contains little that is relevant to the 20th century. Rather, artifacts from previous occupations have been redeposited through 20th century ground disturbance. Further, each assemblage contains some, undetermined, portion of artifacts from previous layers.

The above discussion has provided some general information on the formation of the archaeological record at Russell, and as such some keys to its analysis. At the same time, it has provided some caveats in the current state of knowledge and analysis.

Temporal Changes in Artifact Patterning

In 1977, Stanley South published the seminal work "Method and Theory in Historical Archaeology." In this work, South proposed an analytical method which classified artifacts by function. The seven functional groups - kitchen, architecture, arms, clothing, personal, furniture,

pipes, and activities — covered the range of domestic activities at British colonial sites. South went on to note that there were broad regularities in the relative proportions of these artifact groups across colonial, and possibly Federal, America, reflecting the "typical" range of activities on domestic sites. He termed this regularity the Carolina Artifact Pattern. Any deviation from the pattern should reflect different activities at the site.

Since 1977, South's pattern recognition approach has been widely used, and in some cases abused, by historical archaeologists. South himself (1988) has argued that pattern recognition should only be first step in studying cultural processes responsible for behavior reflected in artifact patterning. Subsequent researchers have suggested changes in the placement of certain artifact types (Garrow 1982). Others have named a variety of patterns, designed to elucidate variation in the material culture on rice plantations, cotton plantations, yeoman farm sites, urban, public, and industrial sites (see Jackson in Zierden, Drucker and Calhoun 1986).

South's methodology has always been used as an organizing tool for the Charleston artifact assemblages, allowing for direct intersite comparison. In the past decade, it has become apparent that a variety of factors influence artifact patterning, ranging from human behavior to the physical site formation processes to technological developments and marketing trends in the material culture itself. Julia King (1990) has proposed a different classification scheme for the analysis of intersite spatial patterning at colonial site in the Chesapeake region; she has recently applied this technique to a lowcountry plantation site (King 1992). This technique considers domestic artifacts and architectural materials separately. Following her example, various classes and types within the kitchen and architecture group are considered separately.

Throughout the past decade, the material culture of Charleston sites have been subdivided temporally for sites occupied throughout the city's 300 year history. These temporal subdivisions are based on specific site events and general trends in Charleston's development. Charleston proveniences and their materials have generally been separated into three temporal subdivisions: 1670 to 1750, 1750 to 1830, and 1830 to 1900. The early period corresponds to Charleston's role as a frontier outpost and emerging port city. The second marks Charleston's "golden years" as a leading seaport and center of wealth, and the third corresponds with Charleston's economic decline and stagnation. These periods also correspond to changes in ceramic and glass technology. The early period is that of relatively scarce and expensive material culture; the second corresponds to the rise of the British pottery industry and the development of refined earthenwares, and the third to a decline in new ceramic types and the ascendancy of mass-produced glassware.

These temporal subdivisions are more or less comparable for a number of Charleston sites. Development of baseline data for this analysis began with excavations at the Heyward—Washington house in 1991 (Zierden 1993). At that point, five to six assemblages were available for each of the three temporal periods. In each case, the majority of the samples were from elite townhouse sites, but at least two were from other types of sites: middle class residential, mixed residential/commercial, or public. That analysis will be recapped here, and comparisons made with the Russell house data. Though the dates do not correspond exactly, the late 18th century and Russell assemblages will be compared to the 1750–1830 data, and the Allston and Sisters

assemblages will be compared to the 1830–1900 data. The latter group is particularly important, for the Russell site produced rather substantial assemblages for this period, a situation that has not been true for other Charleston sites. This will provide an opportunity to more closely examine the material culture of this period.

Organization of the data begins with the broad categories proposed by South. The relative proportions of these categories remain more or less consistent through time, and remarkably similar to the Carolina Pattern, supporting South's original contention that this pattern reflects typical behavior on a domestic site. The Carolina Pattern does not appear to be particularly sensitive to variables such as status and ethnicity; the relative proportions are instead affected by site formation processes and technological changes.

Kitchen artifacts dominate the assemblages and remain rather consistent through time, although relative proportions of various artifact types change. Kitchen materials average 50% of the assemblage, and tend to drop in relative proportions in the post-1830 period. This is not true for the Russell house assemblages, as the kitchen group fluctuates through time between 50% and 59% of the assemblage. Architectural materials, the other major category, demonstrates a consistent increase through time on most Charleston sites, no doubt reflecting the accumulation of architectural debris as lots were rebuilt upon and standing structures renovated, enlarged, or demolished. Architectural materials average 25% of Charleston assemblages in the early 18th century, and increase to 33% in the late 18th century and 41% in the 19th century. This assemblage, of course, does not include the volumes of brick, mortar, and slate rubble recovered on Charleston sites. This significant increase through time suggests that factors other than the activities of daily life affect the relative presence of architectural material. The Russell house materials generally follow this trend. They average 33.7% of the late 18th assemblage, mirroring the average Charleston proportion for this period. Architectural materials rise slightly to 35.8% in the Russell period, and remain at this level during the Allston tenure. Architectural materials again increase in proportion in the late 19th century, rising to 44%, reflecting demolition by intent or by neglect of some of the service structures.

Arms and furniture materials comprise relatively minor components of the artifact assemblages, and remain consistent through time. The arms items average .3% through time; this suggests that the use of arms remained relatively consistent through the study period. Likewise, furniture artifacts comprise about .2% over the two hundred year period, suggesting little variation in the accumulation and loss of furniture (bearing in mind that very little furniture would be cycled into the archaeological record.) The Russell assemblages are remarkable for their consistent lack of arms materials in all the periods. They are most common in the late 18th century assemblage, and here represent only .07% of the assemblage. Furniture items are slightly more common; they are nearly .2% of the 18th century and Russell assemblages, and jump to .54% during the Allston era. This may reflect discard of pieces damaged during the War. Furniture then declines to .07% in the late 19th century.

Table 7

Quantification of Temporal Artifact Assemblages
(in relative percentages)

	<u>18th cent.</u>	<u>Russell</u>	<u>Allston</u>	<u>Sisters</u>	<u>Carolina Pattern</u>
Kitchen	59.04	51.16	57.86	51.60	60.3
Architecture	33.78	35.80	35.36	43.69	23.9
Arms	.07	.05	.03	0	.5
Clothing	.52	.65	1.49	.70	3.0
Personal	.14	.36	.58	.49	.2
Furniture	.14	.17	.54	.07	.2
Pipes	2.01	2.37	1.71	1.19	5.8
Activities	2.91	1.39	2.40	2.21	1.7
no. artifacts/provenience	158	114	134	184	

Charleston Averages

	<u>1760-1830</u>	<u>1830-1880</u>
Kitchen	58.47	43.63
Architecture	33.64	48.32
Arms	.30	.24
Clothing	1.13	3.52
Personal	.45	.61
Furniture	.20	.18
Pipes	4.45	1.39
Activities	1.31	2.05
no. artifacts/provenience	159	22

Clothing and personal items also form minor components of the assemblage, but these increase in number through time. This suggests that such items are increasingly available, and perhaps that the Charleston populace was increasingly able to afford them through time. Clothing items increase from .6% in the early 18th century to 1.2% in the late 18th and 1.8% in the 19th century. Personal items also increase from .2% to .5%. These two groups also increase in variety during the study period. These trends are mirrored at the Russell house. Personal items increase from .14% in the late 18th century to .58% in the Allston period; they then drop slightly to .49% in the late 19th century. Clothing items are generally fewer in number at Russell, but they also gradually increase through time, from .52% to 1.49% in the Allston period. They then decline precipitously in the late 19th century to .7%.

The greatest variation occurs in the pipe group, suggesting dramatic changes in tobacco smoking habits and popularity, or at least in the accoutrements. The ubiquitous white clay pipes comprise 15% of the early 18th century component for the city, but decline precipitously by the late 18th century, dropping to 5%. Though white clay pipes were manufactured throughout the 19th century, the further decline in popularity to 1.6% in the mid-19th century. Though fewer in number for all periods, the Russell house pipes present a similar trend. They comprise 2% of the late 18th century assemblage, increase slightly for the Russell period, and decline to 1.7% and 1.2%, respectively, as the 19th century continues.

Finally, there is a slight decline in popularity of artifacts related to activities. Such artifacts comprise 4% in the early 18th century and about 1.5% in the late 18th and 19th century assemblages. This general trend would suggest a greater segregation of home and work place as the study period progresses, or at least a narrowing of the range of activities conducted on domestic sites. It must be noted, however, that the average of 4% for the early 18th century masks a tremendous range among the sites of this period, from .4% to 16%. It may be that the percentage of activities is generally consistent through time, but highly variable from site to site. The activities group remains relatively consistent through time at Russell, averaging 2% of the assemblage.

Specific artifact types and groups provide a more detailed picture of the archaeological signature for different temporal periods. A variety of artifact types and classes in the kitchen group were compared and contrasted. The relative percentage of ceramics to glass remains consistent through the 18th century (ceramics are 62% and 57% of the kitchen group), but declines rapidly after 1820 to 38%; during the 19th century, technological innovations led to mass production, and thus discard, of glass containers. This is mirrored in the glass category itself, where olive green bottle glass gradually declines in popularity (29% to 26% to 16%) and clear bottle glass, the hallmark of machine made glass, increases from 6% to 7% in the 18th century, and then to 20% of the kitchen group in the 19th century. These trends were mirrored in the Russell assemblage. Ceramics are 52% of the late 18th century assemblage, and decline to 45% of the Russell assemblage, 48% of the Allston assemblage, and 42% of the Sisters group; glass artifacts rise proportionately, from 48% of the kitchen items to 58%. Olive green glass is 34% of the kitchen

group in the 18th century, and declines to 20.3% in the late 19th century; clear bottle glass increases from 4.9% to 19.2%

Specific aspects of the ceramics group are temporally sensitive, as well. Tablewares gradually increase through time, relative to most utilitarian wares. This is no doubt due to mass production of refined earthenwares, most of which were tablewares, and the mass production of glass containers, which partially replaced utilitarian ceramics. One problem with this particular analysis is that some of the refined earthenwares of the 19th century were utilitarian – large bowls, chamber wares – that are difficult to discern in fragmentary form and so are counted with the tablewares. Nonetheless, the types counted as tablewares comprise 61% of the ceramics in the early 18th century, 80% in the late 18th century, and 91% in the 19th century. This trend follows for the Russell house, as well. Tablewares are 67% of the late 18th century ceramics; they jump to 82.8% of the Russell assemblage, fall to 78% of the Allston, and jump to 96% of the Sisters assemblage.

The relative percentage of specific ceramic types were also examined for temporal variation. Some of these are temporal markers anyway; the percentages were calculated as a baseline for additional work, in hopes that such a profile may aid in dating proveniences for the future. The first type was Colono ware. Previous researchers have associated this ware primarily with the 18th century (Ferguson 1992; Anthony 1986) and the Charleston data support this. Further, scholars have noted variation in the amount of colono ware relative to the distance from Charleston (Anthony 1989). Colono ware sometimes comprises over 50% of the ceramics on outlying plantation sites; closer to the city, the ware can be as little as 10%. In early 18th century Charleston, colono wares average 17% of the ceramics. By the late 18th century they are only 5%, and by the 19th century only .7%. In fact, the bulk of the 19th century examples are believed to be the result of redeposition. The Russell data mirror this trend, but in generally colono wares are more common at Russell. They are 12.5% of the late 18th century ceramics, 4.1% of the early 19th century, 3.1% in the mid-century, and still 1.4% of the late 19th century ceramics.

Chinese porcelain has been considered a marker of elite socioeconomic status, particularly for the 17th and 18th centuries, and the Charleston data appear to support this suggestion. Porcelain jumps from 10% in the early 18th century to 18% in the late 18th, a period encompassing Charleston's economic apex. This proportion declines only slightly, to 14% in the 19th century, suggesting some continuation of this ceramic as a popular item in elite households. Somewhat surprisingly, porcelain is not as common at the Russell house. It comprises 8.4% of the late 18th century, and jumps to 12.2% for the Russell period, reflected primarily by the large number of Canton blue china fragments. Porcelain declines to 9.7% in the Allston era and 8.8% in the Sisters era. Nonetheless, the Russell house did yield a large number of fairly unusual porcelain pieces.

What the Russell assemblages do contain in relatively large numbers are creamwares. In previous studies, the relative percentage of two temporally sensitive ceramics were calculated for baseline data. Creamware was developed in the 1750s and by the 1770s had become the most

popular type of tableware. By the 1820s the ware had declined somewhat in popularity, the delicate tablewares replaced with heavier pieces of a more utilitarian nature. Creamwares comprise nearly 20% of Charleston's late 18th century ceramics and 15% of the 19th century ceramics. At Russell, Creamware is only 5% of the late 18th century assemblage, but jumps to nearly 25% for the Russell family era. It remains between 16 and 17% throughout the 19th century. Pearlware, developed in the 1780s and manufactured through the 1820s, comprises 16% of Charleston's late 18th century and 15% of the 19th century components. At Russell, it is 11.5% of the late 18th century ceramics, and 19% of the Russell family's discards. It remains between 14% and 16% throughout the 19th century.

The final area of comparison was a measure of the relative density of artifacts per provenience for the three periods. This should measure the level of discard activity in the work yard, as ideas about sanitation and the landscape changed through the 19th century. Other archaeologists have noticed that the urban archaeological site "disappears", or at least changes form, as the 19th century progresses; wholesale discard of the refuse of daily life is replaced with off-site municipal trash disposal, and the kitchen sheet midden is replaced by a few toys and pet burials. Relative artifact density, and relative bone density, then, should measure the level of use of the site for the affairs of daily life. A variety of proveniences were available for each of the three periods, including zone deposits of variety depths and features of a variety of sizes and functions. A more accurate measure, artifact density per cubic foot of excavated soil, is only available on a general site level.

Though somewhat arbitrary, the present measure by number of proveniences did reveal some interesting trends. Early 18th century deposits contained 122 artifacts per provenience (67 proveniences) and the late 18th century assemblage contained 159 artifacts per provenience (205 proveniences). Nineteenth century proveniences, in contrast, contain only 22 artifacts per

Table 8
Temporal Changes in Charleston Artifact Assemblages

	<u>C. 1720–1760 *</u>	<u>C.1760–1830#</u>	<u>C. 1830–1880@</u>
Kitchen, % total	55.81	58.47	43.63
Architecture, % total	26.0	33.64	48.32
Arms, % total	.19	.30	.24
Clothing, % total	.64	1.13	3.52
Personal, % total	.29	.45	.61
Furniture, % total	.25	.20	.18
Pipes, % total	11.25	4.45	1.39
Activities, % total	5.47	1.31	2.05
Ceramics, % kitchen	59.2	58.59	35.68
Glass, % kitchen	41.0	41.46	50.44
Tableware, % ceramics	58.42	81.98	88.09
Utilitarian, % ceramics	41.57	18.01	11.90
Colono ware, % ceramics	22.36	4.97	1.27
Oriental porcelain, % ceramics	6.07	20.38	15.34
Creamware, % ceramics		20.61	11.24
Pearlware, % ceramics		12.99	7.43
Olive green glass, % kitchen	32.52	27.29	18.59
Clear bottle glass, % kitchen	5.46	6.65	22.04
Window glass, % architecture	22.90	39.21	43.92
Total # artifacts/provenience	122	159	22
total # proveniences	67	205	84
total # artifacts	8229	32,746	18,670

* assemblage composed of **six** sites: Heyward–Washington, John Rutledge, Miles Brewton, Beef Market, First Trident, McCrady's Longroom.

assemblage composed of **six** sites: John Rutledge, Miles Brewton, William Gibbes, Beef Market, First Trident, 66 Society St.

@ assemblage composed of **five** sites: Miles Brewton, Aiken–Rhett, John Rutledge, Heyward–Washington, 66 Society.

Table 9
Temporal Changes in Russell House Assemblages

	<u>late 18th</u>	<u>Russell</u>	<u>1760-1830</u>	<u>Allston</u>	<u>Sisters</u>	<u>1830-1880</u>
Kitchen, % total	59.04	59.16	58.47	57.86	51.6	43.63
Architecture, % total	33.80	35.80	33.64	35.36	43.69	48.32
Arms, % total	.07	.05	.30	.03	.00	.24
Clothing, % total	.52	.65	1.13	1.49	.70	3.52
Personal, % total	.14	.36	.45	.58	.49	.61
Furniture, % total	.14	.17	.20	.54	.07	.18
Pipes, % total	2.01	2.37	4.45	1.71	1.49	1.39
Activities, % total	2.91	1.39	1.31	2.40	2.21	2.05
Ceramics, % kitchen	52.0	45.0	58.6	48.0	42.0	35.7
Glass, % kitchen	48.0	54.0	41.5	52.0	58.0	50.5
Tableware, % ceramic	67.0	82.0	82.0	78.4	96.8	88.0
Utilitarian, % ceramic	58.0	23.0	18.0	30.0	16.3	11.9
Colono ware, % ceramic	12.5	4.1	5.0	3.1	1.4	1.27
C.Porcelain, % ceramic	8.4	12.2	20.38	9.7	8.8	15.34
Creamware, % ceramic	5.5	24.4	20.61	16.6	17.5	11.24
Pearlware, % ceramic	11.5	19.8	12.99	14.5	16.5	7.43
Olive glass, % kitchen	34.05	41.47	27.29	25.99	20.33	18.59
Clear glass, % kitchen	4.93	5.74	6.65	13.2	19.27	22.04
Window glass, % arch.	42.03	44.57	39.21	45.4	60.75	43.92
Table glass, % kitchen	.75	.30		1.4		
Total Artifacts/prov	89.2	139	159	171	170	22
total proveniences	15	37	205	16	31	84
total artifacts	1338	5175	32,746	2746	5277	18,670
grams bone/prov	161	205		356	186	

provenience (84 proveniences). This reflects a tremendous shift in refuse disposal practices. The sparse 19th century assemblage suggests that much less refuse was cycled into the individual archaeological site during this era, and was probably deposited more selectively. By the end of the antebellum period, off site refuse disposal appears to be the norm. In contrast, the Charleston yards were intensely utilized for refuse disposal in the late 18th century; moreover, the yard was utilized for a number of purposes, reflected in both the artifact density and the large number of proveniences. The early 18th century yards, in contrast, exhibited less alteration, though refuse disposal might be equally intense.

The Russell site stands in contrast to this trend. The late 18th century proveniences contain 89 artifacts per provenience (15 proveniences); this jumps to 139 per provenience in the early 19th century (37 proveniences), and to 171 and 170, respectively, in the mid to late 19th century. While this presents an excellent opportunity to study these later periods, this relatively dense archaeological record is unexpected at such a grand house. On a general level, bone density compares favorably with other Charleston sites for whom this measure has been calculated. The Russell site contained 34 grams of bone per cubic foot of dirt, in contrast to the Powder Magazine, which contained 31.8 grams per cubic foot of soil. The relative value of Fred Andrus' kitchen excavation is then reflected in this statistic; his excavations revealed 173 grams of bone per cubic foot of soil.

It is only with the completion of over twenty archaeological projects that the above analysis is possible. This discussion has been decriptive in nature, but it has demonstrated that the archaeological record is temporally sensitive to a variety of technomic, social, and physical phenomena. These statistics are more broadly interpreted in the following section.

Artifact Patterning and the Refinement of Charleston

The layers of earth on archaeological sites such as the Nathaniel Russell house have produced assemblages of material culture that reflect the purchasing power of Charleston's elite, which was the greatest of any colonial city. The 18th century witnessed Charleston's transformation from a small frontier settlement to a flourishing metropolis, the wealthiest city per capita in the colonies. The material culture recovered from archaeological contexts reflects this transformation, defines the characteristics of daily life in the city, and prescribes a language of shared beliefs among the planter-merchant elite. At the same time, it presents the somewhat muffled voices of the colony's middling and poor, free and enslaved residents who understood this language of artifacts, even if they did not share its rewards. The Charleston data reflect the "refinement of America" so eloquently argued by Richard Bushman in his 1992 publication.

As a merchant grown wealthy through trade in staples and slaves, Nathaniel Russell understood the symbols of refinement all too well, as he built the grandest of neoclassical mansions, embellished with a wrought iron balcony bearing his monogram. The idea of gentility began in the

1690s, and involved only the elite. Gentility followed from new stylish houses. In the 18th century, it was the visible expression of gentry status, the most sharply defined social class in the colonies. Gentility gave expression to universally acknowledged social divisions. By the end of the 18th century, many middle class folks had acquired some of the aspects of gentility, what Bushman has termed "vernacular gentility." Most germane to the present discussion is the contention that the genteel life depended on the creation of proper environments. Gentility elevated old activities by surrounding them with a beautiful environment. As gentility spread to the middle class, the need for refined objects created an unprecedented mass market for individual items. People wanted carpets, mahogany furniture, tableware, fine fabrics, candlesticks, buckles and buttons, hats, and a host of other signifying objects.

Such a list reminds the reader that the archaeological record contains only a small fraction of such objects, as the archaeologist deals only with what was discarded, lost, or abandoned. Comparison of archaeological assemblages to the advertisements of Charleston merchants (Calhoun et al. 1982) reveal such a disparity. "Just Imported" the colonial newspapers chime, "and available at Mr. _____ store." The average ad then lists an extensive range of everyday needs and exotic luxuries. As Ann Smart Martin found in her research on Virginia merchants (1995), fabrics dominate the lists of goods touted by Charleston merchants. Others listed fashion accessories, large and small household furnishings. Tools and building hardware were commonly enumerated, as were exotic foodstuffs, beverages, and spices. Merchants often reminded their customers of their stock of rum, sugars, and teas. Local craftsmen, who advertised their work as "good as any from England" hinted at the desired goods and services of aspiring gentlemen: portraiture, silver appointments, clocks and cabinetry, luxurious dresses, china painted with "gentlemen's coats of arms."

The artifacts that dominate archaeological assemblages, such as ceramic and glass containers, are infrequently mentioned and rarely enumerated. On the other hand, a variety of items mentioned find their way into the archaeological record after use, some of it in by-product form. Nails, building hardware, bits of personal items such as fans, small decorative touches from household furnishings, are there only occasionally, but in consistent enough fashion for meaningful quantification. At the same time, Charleston's archaeological record contains not the idiosyncracies and personalized objects of specific individuals, but artifacts of a sameness found on sites across eastern North America, from the refined seaport cities to struggling backcountry towns (Faulkner 1993; Zierden 1993b). The ceramics and other artifacts archaeologists excavate were part of a global language of behavior; what was proper, what was not, who owned the required tea service, who did not. These artifacts signify the global connectedness of small frontier towns, bustling colonial seaports, and England's industrial centers, and underscore the role of the world economy.

The ascendancy to gentry status and accumulation of wealth by Charleston's merchants and planters is reflected in Charleston's archaeological record, and in comparison of the three temporal assemblages discussed above. Differences between the early 18th century and the late 18th century, reflecting Charleston's accumulating wealth and its taste for new consumer goods, is perhaps best demonstrated in absolute numbers. For all of the sites occupied from the early

18th century on, there were 118 early proveniences, 251 from the second half of the 18th century, and 84 from the nineteenth century. Moreover, there were 11,028 artifacts from the early period, or 93 artifacts per provenience, and 35,705 from the late 18th century, or 251 artifacts per provenience. Given that these materials are recovered from the same sites and the same excavation units, these figures graphically demonstrate the explosion of goods available to, used by, and discarded by Charlestonians in the latter part of the century. The 19th century proveniences, in contrast, averaged only 22 artifacts per provenience, reflecting the rise in off-site refuse disposal and the demise of the site-specific archaeological record.

Returning to the artifact data presented above, we find that the Carolina Artifact pattern and its eight components reflect a similarity of site activities across Charleston, and across British North America. It also reflects what material culture was available, and what material culture was considered for daily life and proper for one's station. Changing proportions of specific artifacts, though, reflect Charleston's rising wealth and attention to consumerism.

The first group of artifacts to consider are those related to architecture. Architectural materials rise in proportion throughout the 18th and 19th centuries, even on sites with a single main house building episode. This suggests that instead of outright rebuilding, owners of townhouses such as the Russell house engaged in continual renovation, modification, and modernization to existing compounds, as new backbuildings were added, existing ones expanded, and the main houses themselves modified and improved, for functional and stylistic purposes. Bushman has noted, for example, that the first artifact of gentility was a new and stylish house. In addition to a general increase in architectural materials, the architecture group exhibits more diversity in the later assemblages. Another interesting statistic is the rise in the proportion of window glass during the periods (from 22% to 43% of the architecture group for Charleston in general, and from 44% to 64% for the Russell house).

Returning to the kitchen group, we find that a variety of fine wares for food serving, consumption, and entertaining explode on the scene in the late 18th century. The proportion of utilitarian wares for Charleston drops from 41% of the ceramics to only 18%, and at Russell from 33% to 4%. However, it appears that the actual number and range of types remains fairly consistent; instead, quantities of new tablewares and tea wares are added to the assemblage. On elite sites in Charleston, these wares include Chinese export porcelains, transfer printed earthenwares, creamwares in a variety of styles, and less common ceramics such as Ebers and black basalt stoneware, and Astbury and Jackfield earthenwares.

In the mid 18th century, tea drinking was properly a prerogative of the elite (Roth 1961). The tea ceremony occurred in people's houses, a private affair or one that slightly stretched the family circle (Carson 1990:28). By the Revolution, many families came to share aspirations for ornamental luxuries. By the end of the century, tea equipage included a tea table, tray, tea pot, cream jug, sugar bowl and tongs, cups, saucers, and teaspoons. Additional items might include a tea urn, a small stand for the urn or pot, a slop bowl, a canister, strainer, spoon tray, and plates for bread or cakes.

The Russell house assemblage contains a number of examples of fine Chinese porcelain for tea and for dining, including fine overglazed examples, Russell's set of Canton porcelain and the fragments of Mazarin Blue punch bowl. More common at Russell, however, are creamwares, including a number of very fine forms. These refined earthenwares, perfected by Josiah Wedgwood, combined durability, affordability, and stylishness. Like other members of the colonial gentry, and those aspiring to such, Charlestonians evidently swarmed to the new wares. Creamwares comprise 20% of Charleston's late 18th century ceramics, and 24% of Russell's ceramic discards. Wedgwood moved from his green glazed Whieldon type wares of the 1740s to the cream colored wares by the 1760s. In less than ten years, these wares could be found in the four corners of the colonial world. In her study of 18th century consumerism, Ann Smart Martin has commented that Wedgwood himself marveled how quickly creamware "spread over the whole globe and how universally it is liked." What is remarkable in Martin's view is that Wedgwood managed to compress the cycle of luxury-to-common consumption into a very short period. By continually bringing out new styles, Wedgwood satisfied both the middle class consumer eager to display their knowledge of manners and the fashionably wealthy who sought to distance themselves from the nouveau. Like porcelain, creamware came in highly decorated and expensive, or relatively plain and inexpensive, forms. The Russell collection contains excellent examples of the former, including the hand-painted dinnerware in the Royal pattern, and the small scallop saucer from an elaborate centerpiece.

Though present in smaller numbers, leaded table glass also increases in quantity and diversity through the 18th century and into the 19th century, as table manners take their place alongside tea manners as a measure of one's refinement. Among the elite, attention to formal dining began with allocation of domestic space, and was followed by purchases of furniture and tableware as prescribed in the literature. The plan and execution of the Russell house itself was carefully conceived to guide guests through a series of public rooms and spaces. Furnishings for such spaces included not only basic tables and chairs, but decorative elements such as carpets, window hangings, and elaborate lighting. Tablewares were in matched sets and of sufficient number and variety to serve at least ten guests (Carson 1990). Careful spacing, symmetrical arrangement, and ordered appearance were important in food service.

Richard Bushman has noted that the elite ate more meat than folks of lesser means, but otherwise there was little difference in the foods consumed. The difference was in presentation. The faunal data collected from Charleston sites strongly supports this contention. Dr. Betsy Reitz has searched carefully among the various site assemblages for dietary differences through time, and across status lines, but has found only minor variation. The major difference is that the elite ate a more varied diet and this variety was provided by wild game. The cuts of meat and quantities of beef, pork, and chicken are remarkably similar for the elite and middling sort, and remarkably stable through the two centuries considered here. Additional aspects of meat consumption by Charlestonians and by Russell house residents are discussed further in the following section, and in Dr. Reitz' report.

Just as the ceramic assemblage from the Russell and from other Charleston townhouse sites speaks volumes about the accumulating wealth of some Charlestonians, it more mutedly reflects

the presence of other groups, and trade with still others. While the English ceramics of the Staffordshire potteries dominated the world's pottery market during this period, the Charleston assemblages contain artifacts of Spanish, French, and Caribbean origin. Moreover, nearly half the coins recovered on colonial and early 19th century Charleston sites are Spanish reales. Three such coins were recovered at Russell, along with eight British halfpennies. Widely circulated in the New World, silver Spanish coins remained legal tender in the United States until 1857 (DiNoto 1978:135).

One of the Spanish coins recovered had been pierced to be worn as jewelry, probably around the neck. A number of these have been associated with African slave sites in Virginia and Georgia. Archaeologists have debated the meaning of these artifacts; interpretations range from charms associated with African religion to simple adornment, from the sparse material culture available to people of limited means (Singleton 1991:164). More clearly associated with African-Americans in Carolina is colono ware, the unglazed pottery ubiquitous on Lowcountry sites. Originally attributed to the historic Indian trade, the wares are currently believed to be primarily, but not exclusively, the products of African slaves, but more particularly the material evidence for a creolized society, in which Native, European, and African techniques and forms were blended, as oppressed peoples sought mechanisms for cultural expression.

Colono wares are most commonly found in globular jars and open bowls, the former a common African vessel form, particularly for making medicines, rather than food (Ferguson 1995). Occasionally, the wares mimic European forms, such as footed bowls, and even melon-shaped tea pots. The thin, fine wares of the early 19th century are often decorated with red and black sealing wax, and are attributed to itinerant Catawba potters, documented as selling their wares in the Charleston market (Crane 1993; Calhoun et al. 1984).

Colono ware is principally recovered from plantation sites, particularly their slave communities. Archaeologists have further noted that the relative abundance of colono ware varies temporally and geographically. Colono ware declines precipitously in the late 18th to early 19th century. Further the wares decrease in frequency on colonial plantations as proximity to Charleston increases; colono ware are far scarcer on James Island plantations than they are on those of upper Berkeley County (Anthony 1989, 199?),

That colono wares are ubiquitously present on downtown Charleston sites speaks to the presence and significance of an urban African American population and the highly connected nature of plantation and city in Lowcountry society. Colono wares are consistently present on Charleston sites, averaging 5% of the ceramics. They play a far more significant role in the cultural expression of early inhabitants, however, as they account for over 20% of early 18th century ceramics, compared to 5% of late 18th century and only 1.3% of 19th century ceramics. Compared to the Charleston average, the Russell site contains a larger number of colono wares in 19th century contexts; they comprise 12.5% of the late 18th century ceramics and 4.1% of the Russell assemblage. They still comprise 3.1% of the Allston ceramics and 1.4% of the Sisters assemblage.

Just as colono wares decline in numbers as the 19th century progresses, so to most of the artifacts of daily life. The explosion of consumer goods in the 19th century, mass produced in the industrial era, means that the discards of daily life begin to lose some of their shared meaning. The archaeological record begins to get "noisy" and disorganized as population pressure mounts in Charleston. Sanitation and public health become critical issues, and the archaeological record on most sites literally disappears, as off-site disposal replaces on-site accumulation. More and more, the artifacts symbolic of aristocratic life do not make it to the archaeological record in quantifiable amounts. The Allston's fine porcelain urn is a rare exception. A more detailed consideration of what the technological and sociological changes of the 19th century do to the archaeological record is found in the following section.

The Urban Landscape

The principal focus of archaeological research in Charleston for the past five years has been the evolution of the urban landscape. This broadly based study has encompassed architectural, photographic, cartographic, documentary, botanical, zoological, and ecological data to investigate a range of specific topics. This overarching approach encompasses data and issues relating to diet, terrain alteration and site formation processes, health and sanitation, and even socioeconomic status. While all of the topics are interrelated, and not doubt encompass cause and effect not explicit here, seven specific issues have been examined through the accumulation of data from Charleston sites. Though the landscape approach has only been explicitly discussed since 1989, the topic encompasses all of the previously discrete research topics listed above. The current synthesis of data is discussed elsewhere (Zierden 1995; Zierden and Herman 1996); what is presented in this report is a succinct discussion of six somewhat separate aspects of the overall study.

1. Alteration of the peninsular terrain: To the twentieth century eye, the Charleston peninsula is level, with perhaps a gradual rise along King Street, as one moves north. When first encountered by Europeans, the peninsula featured more relief (Akin 1809; Roberts and Toms 1739). Alteration of the terrain to better suit the economic and social needs of town residents began almost immediately. Major changes such as the filling of creeks and marshes along the Ashley River and the creation of "made" land along the Cooper riverfront began in the late 17th century and continued into the early 20th. Deliberate, large-scale filling has been encountered at diverse sites, such as the Exchange and Atlantic Wharf along the Cooper River (Herold 1981; Zierden n.d.), President Street on the Ashley River (Zierden and Raynor 1988) and First Trident, located on one of the creeks which cross-cut the peninsula (Zierden et al. 1983b). These trends can be seen in the series of city maps drawn between 1704 and 1872.

More subtle, and noted primarily through archaeology, is the filling of small strips of marsh and low areas to improve the "yards" of Charleston houses. This type of filling has been seen at

the Miles Brewton and Aiken–Rhett houses. Archaeological evidence for terrain alteration has been amplified by the seeds and pollen recovered from the layered earth. Analysis of pollen from the two sites (Reinhard 1989, 1990) revealed a gradual decrease in the plants associated with marshes and lowlands. This was mirrored in the seeds recovered from the First Trident and Beef Market sites (Trinkley in Zierden et al. 1983; Trinkley in Calhoun et al. 1984).

The Russell lot is just such an example. Granted in 1694, the large lot included a marshy area along its southern perimeter. This marsh is still extant in 1740, as evidenced by the Robert and Toms map. By 1788, the marsh had been filled, Price's Alley created, and buildings constructed on this portion of the lot. Unit N134.8E328 contained evidence of this filling, in the zone 6 soils beneath the house foundation. The small sample excavated revealed black soil and oyster shell beneath a clean yellow sand fill.

More difficult to isolate archaeologically are the "48 loads of Earth" hauled in to Governor Allston's "lot in Meeting Street" enumerated in the 1859 receipt. Governor Allston also paid for a half day's work in the garden at the same time. This tantalizing reference does not really indicate how much soil was contained in a load, and exactly where this soil was placed. It is possible that it was carefully selected topsoil for improving planting beds. Or it may have been large loads of soil for filling low areas of the lot. Certainly the Russell yard still has a drainage problem. It is tempting to suggest that the homogenous dark grey–brown soil found in the three dispersed units (N150E100, N150E135, N111E190), all dating to the mid–19th century, is the result of Allston's purchase of earth. Most interesting of all is that this evidently common urban practice is documented at all.

2. *Deforestation*: Palynological and ethnobotanical studies have also documented a dramatic deforestation of the Charleston peninsula in the second half of the 18th century. Pollen studies at the Rutledge and Brewton houses show a decrease in the amount of oak and pine during this period, and a dramatic increase in the "weed" species which colonize open, or disturbed, habitats (Reinhard 1989, 1990). While some of this change through time reflects individual lot clearing for townhouse construction, the pollen spectrum reads a much larger range, and reflects general deforestation of the Charleston surrounds, ostensibly for lumber and firewood. The documents hint at this deforestation through a dramatic rise in firewood prices during the colonial period (Weir 1983:44). The ethnobotanical samples from the Charleston sites are dominated by weedy plants (Trinkley in Zierden and Grimes 1989). "Reforestation" of the urban center is a largely 20th century phenomenon; when compared to present views, photographs from the second half of the nineteenth century show more trees along streets, but far fewer on individual lots.

This is reflected in the available historic photographs of the Russell house, where the thick vegetation of the late 19th century is replaced with an open lawn in the early 20th century. Due to a lengthy illness, palynologist Karl Reinhard was unable to analyze pollen samples from the Russell house prior to completion of this report. When his study is completed this summer, it will no doubt add to our knowledge of gardening and environmental alteration at Russell.

3. The Work Yard: Gradual changes in the urban landscape received impetus from a series of mid-18th century natural disasters. The fire of 1740 and the hurricane of 1752 cleared major portions of the city for rebuilding (Calhoun 1983; Rogers 1980). At the same time, successes with staple agriculture created an urban gentry composed of merchants and planters whose new status required appropriate homes (see Chaplin 1992). Many grand townhouses and public structures were constructed during this period (Coclanis 1989; Herman 1993). Equally important, but currently underestimated, are the support structures and activity areas which, in conjunction with the main house, formed the urban compound. These included kitchen, slave quarters, stables, carriage house, livestock sheds, privy, well, cistern, drainage system. The maintenance of gardens might require additional features. While variation in the size, content, construction method, arrangement, and specialization of these structures existed, they were present in some form at all sites, not just those of the elite.

The support structures were often aligned along one or both walls to the rear of the house. In larger lots that could afford such spatial segregation, the work yard was separate from formal gardens. Within these large lots, archaeology has consistently underscored the highly specialized and intensively utilized nature of the work yards, that area around, between, and beneath the work structures. These seemingly spacious yards quickly became cramped as a townhouse owner, his family, a retinue of 10-20 slaves, horses, and other livestock lived and worked within a circumscribed area.

Extant buildings and late 19th century plats suggest that the Russell compound contained a host of highly specialized, well constructed service buildings, aligned along one side of the property, behind the main house. This evidently left the side yard for formal garden and work area, though how this space was divided and used is the subject of current study. Mrs. Laurence Ladue's 1969 recollection of the early 20th century garden has it divided into thirds, with the front third a formal garden, the middle third an informal yard and play space for children, and the rear third further subdivided and "used as kitchen gardens, for a cow, pony, and chickens, etc." The antiquity of this layout is unknown, but it is possibly a lot usage left from the early 19th century; such a subdivision is common for townhouse lots. It is also likely that the formal garden so often referenced in the documents would be segregated from the work yard visually as well as physically. The footing in N111E190 and anchor bricks in the south wall at this location may be the first tangible evidence for functional segregation of yard space.

The work yard was the scene of the activities of daily life, including food preparation, livestock maintenance, cleaning and laundering. The archaeological record reflects the butchering and cleaning of fish in these areas, for example. The work yard was also the locus of refuse disposal, one of the most critical problems of urban life and one most visibly reflected archaeologically. Archaeological research at Charleston townhouses has consistently demonstrated that refuse deposited in the yards, either deliberately for disposal or secondarily in fill dirt, was not broadcast across the entire yard but was instead concentrated in particular areas. At the Miles Brewton house, for example, debris was concentrated in the work yard adjacent to the outbuildings from the time of initial occupation of the property in 1769. Over the next 75 years, 2 1/2 feet of

refuse accumulated in this area in a series of sheet deposits and small trash pits. A significant portion of the animal bone from these deposits exhibited rodent-gnawing; this indicates that the bones lay on the ground surface for a period following their disposal (Reitz 1989).

Somewhat surprisingly, the Russell lot varied significantly from this pattern. The two units excavated immediately south of the kitchen building yielded shallow stratigraphy and very few artifacts. It is possible that more extensive deposits lie underneath the 20th century brick paving adjacent to the structure, but Fred Andrus' monitoring of trench excavation in this vicinity revealed a comparable dearth of artifacts. In contrast, the area beneath the kitchen was loaded with debris, suggesting that much of the kitchen refuse was deposited here. Betsy Reitz's analysis of the quantities of cow bones excavated here has clearly demonstrated that these are the remains from on-site butchery. Kitchen refuse from the 19th century was also generally scattered across the yard, and concentrated in the south side of it. This may suggest that work activities were dispersed across a relatively large work yard, or simply that refuse was discarded away from the work buildings.

4. Health and Sanitation: 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 the 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 mid-18th century urban 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).

Refuse disposal, for example, must have reached critical proportions in the city in the early 1800s. Many of the townhouse workyards were evidently paved in the early 19th century. The Miles Brewton yard serves as a good example. The upper zones of refuse were first covered with irregular lenses of tabby mortar, and then paved with brick and slate. Datable ceramics indicate that the mortar paving occurred after 1800 and the brick paving between 1830 and 1840. Refuse was then evidently disposed of elsewhere, for soil accumulation in the next 150 years amounted to one half foot (compared to 2 1/2 between 1770 and 1830). And, as we have seen, artifact density was low for this post-paving period. Interestingly, no paved yard areas have been encountered at Russell to date, but this may reflect small sample size rather than a lack of paving.

Another vehicle for a more sanitary yard was a drain system. Such features have been encountered at most of the townhouses excavated to date. While a few are earlier, most are antebellum improvements. While some of them facilitated stormwater runoff, their presence on high lots suggest other functions as well. The accumulation of small artifacts and animal bone, particularly fish scales, suggest that the drains were used primarily for the disposal of waste water.

Though not explored during the present project, the Russell house features an elaborate brick drain running the length of the driveway, encountered during the 1990 salvage work.

Wells were the principal source of water, including drinking water, in 17th and 18th century Charleston. Due to the city's low elevation, potable water may be encountered no deeper than ten to twelve feet below surface. Wells in the city were first wood or barrel lined, and then built in brick. Because of their open top and shallow nature, they were subject to contamination. This ranged from stray rats and kittens who fell in to foul substances which seeped in from the sides. Contaminated wells were often abandoned and another constructed in close proximity. Others, particularly public wells, remained open as a source of water for fire fighters. No wells were identified during the present excavation, though there should be several on the property.

Cisterns to collect and store rainwater are another sanitation feature added to Charleston lots. As the 19th century progressed, Charlestonians became increasingly concerned with health problems that plagued the city and began to relate them to poor sanitation and increased population pressure. Specifically, increasingly large numbers of wells and privies resided on increasingly small lots in all-too-close proximity to each other (Honerkamp et al. 1982; Honerkamp and Council 1984). The result was contamination of the groundwater, described in graphic language in 1880s reports by the Public Health officer (Rosengarten et al. 1987). Cisterns, designed to collect rainwater via gutter systems from roofs, provided an alternate source of drinking water. They were first constructed in the early 19th century and became a standard feature by the 1850s. These were newly-constructed rectangular vaults or converted wells whose openings had been narrowed and sealed with a stone slab. Either way, they were designed to be free of contamination; the archaeological signature is often a clean sand fill with no artifactual material. All of the townhouses studied to date have at least one cistern.

Analysis of the faunal remains recovered from drain fill, trash pits, and other workyard midden proveniences has also provided information on urban sanitation. Zooarchaeologist Elizabeth Reitz has determined that such animals as rats, mice, toads, cats and dogs comprise 4.3% of rural faunal assemblages and 10.6% of urban ones, suggesting that vermin were more closely associated with human activity in the city. The urban elite sites contain a lower percentage of vermin, 7.7%, possibly indicating some success in sanitizing the urban environment (Reitz 1986). Reitz has further noted a general increase in the quantity of vermin in the city as the 19th century progresses. Reitz attributes this to the amount of food stored on site, or the amount of waste discarded on the property. In general, maintenance of townhouse lots seems to decline after the economic devastation of the Civil War. The Russell site maintains a relatively high percentage of rats throughout the study period. They are 9% of the MNI in the Russell period and 11% for the Allston/Sisters period. Interestingly, they are only 2.8% of the MNI underneath the kitchen.

The antebellum period witnessed major changes in the social, economic, and technological systems of the United States. Industrial and railroad development was a key factor, and cities were the center of these changes. This was manifested in fierce competition between cities; in order to capture the burgeoning commerce and industry, cities strove to be modern, clean, and attractive.

Municipalities took control of such services as lighting, disease prevention, drain and street maintenance, and ultimately piped water and sewer systems (Goldfield 1977). In Charleston, however, fierce individuality and staunch belief in cotton monoculture by a majority of political leaders dominated attempts by others to attract railroads and new industries. Charleston's leaders remained committed to a volunteer government bolstered by a belief in public service. Historians have suggested that this was "a conscious rejection of modernization already setting new scientific and professional standards, as it was also a reflection that no clear distinction should exist between public and private life" (Pease and Pease 1986). A city that was the home of the first railroad in 1831 was, by the 1850s, bypassed by major railroad lines. After the Civil War, poverty was the main reason for lack of modernization. Despite the pleas of the Commissioner of Public Health, Charleston did not receive a water-bourne sewerage system until the 20th century. Municipal handling of drainage and trash disposal also lagged behind such efforts in more northern cities. Nineteenth century Charlestonians continued their own, highly varied efforts to improve their homesites (Rosengarten et al. 1987).

5. The Urban Diet: The urban townhouse sites evidently needed special cleanup efforts, as the faunal record also indicates that the maintenance and butchering of cattle was commonplace on these properties. This is seen in the distribution of carcass elements recovered at residential sites when compared to those at the market and at sites traversed by the general public. Further, these data suggest that on-site butchery was more common on elite sites than on those of the middle class (Reitz and Zierden 1991; Reitz 1989). Documentary sources suggest that the maintenance of livestock, particularly cattle, by Charleston residents persisted into the 20th century (Pease and Pease 1986; Rosengarten et al. 1987). William Aiken even constructed an elaborate brick shed for these urban dwellers. The Russell house data strongly support this interpretation.

In general, the Charleston diet relied heavily on beef and other domestic animals, while a variety of wild game provided diversity. Urban citizens relied more heavily on domestic meats – beef, pork, and chicken – than did their rural neighbors. Two other birds commonly consumed – turkey and Canada goose – may have been domesticated, or at least penned for a while. In general, the diet of all urban citizens, whether rich or poor, merchant or slave, were more similar to each other than they were to the diet of rural residents. In the city, the markets made domestic meats more readily available (Reitz 1986), particularly for middle class citizens, while wild game would have been more difficult for the average urban citizen to obtain (Reitz 1987). As a result, wild game may have assumed a distinctive urban social prestige. Fish, a variety of wild birds, and some venison are often listed on dinner party menus. But as Bushman has noted, the elite and the middling sort ate the same meats; the difference was in presentation.

6. Segmentation and Privatization: Archaeological evidence, spurred by architectural research, points to the increasing segmentation and enclosure of urban lots with brick walls. This process accelerated throughout the antebellum period, as ideas about individualism and privacy changed (Pease and Pease 1985, 1986; Rosengarten et al. 1987). Intellectual development during this period was designed to keep a diverse community close-knit and to avoid confrontation. While Charlestonians were proud of their differences from northern cities, they also suffered self-

doubt. At the same time, Charleston became increasingly defensive of the institution of slavery; the rise of abolitionism in the north and heightened sectional strife ultimately led to secession of the southern states and the Civil War. Even as the South defended slavery, Charlestonians became more and more fearful of both the enslaved and free African-American population. After 1820, increasingly harsh restrictions were applied to black Carolinians, but these laws did nothing to assuage white Charlestonians' fear of arson, poisoning, and insurrection (Rosengarten et al. 1987:59-62). The Russell compound was home to Tom Russell, convicted as a conspirator in the Denmark Vesey insurrection of 1822, an event that confirmed white Charlestonian's deepest fears (Killens 1970). Social pressure from without as well as within, coupled with a floundering economy, encouraged an attitude of withdrawal manifested in changes to the landscape. This is reflected archaeologically and architecturally in forms of urban enclosure. Domestic space in the city became more segmented and partitioned into discrete areas. Open walls and fences were rebuilt in brick, yards were subdivided into discrete areas with walls and fences, and exterior windows in second floor slave quarters were sealed (Zierden and Herman 1996).

At the Miles Brewton house, for example, internal and external boundaries were first marked with wooden post-and-rail or picket fences, later replaced with solid brick walls. Artifacts in builders trenches date these walls to the antebellum period. While post-and-rail fences are no longer a feature of Charleston, their existence and the more open nature of the urbanscape are captured in Charles Fraser's watercolors of the late 18th century (Huger Smith 1959). Like many of the downtown lots, the Russell house is presently surrounded by brick walls; portions of them show evidence of alteration or repair. It is interesting to note that the archaeological data suggest these walls were already in place when the house was built, and may have been constructed with the previous house.

Segmentation (Castille et al. 1982:5; Herman 1993) enabled householders to "refine and signify the socially efficient use of available land" (Zierden and Herman 1996). The grand townhouses such as Russell may be viewed as "architectural pronouncements of social order" comparable to the great plantation houses built throughout the 18th and 19th century South (Isaac 1982:39). The larger houses were often elevated with an above ground basement which cooled the house, gave protection from flooding, raised the main living quarters above street level, and provided the image of social distance. The sense of distance was further enhanced by the presence of formal entrances and forbidding brick walls or wrought iron fences that often stood between the double houses and the streets (Coclanis 1989:8; Weir 1983). While the Nathaniel Russell house sits close to the ground, the front room, with its leaded glass interior doors, served as a buffer from the rest of the public areas of the house. The front yard encompassed formal gardens that also proclaimed Russell's status, while the work yards and service buildings were hidden from view in the rear of the property. Additional research by the entire Russell House team will be necessary to fully develop our understanding of Nathaniel Russell's manipulation of his landscape and the social message encoded in it.

CHAPTER VI

Summary and Recommendations

Summary

The initial archaeological testing conducted in 1994 was successful on several fronts. The ten excavation units produced 126 proveniences and 16,510 artifacts. The artifacts were retrieved from proveniences dating from the mid-18th century through the mid-20th century. Stratigraphy at the site averaged three feet in depth to sterile subsoil, exhibiting as many as seven superimposed zone deposits. While there was some general stratigraphic agreement among units, they were each unique, reflecting the complexity of the urban archaeological record, and the presently small sample size. The 250 square feet excavated is less than 1% of the total site area.

Architectural Discoveries

The present project revealed several architectural features, and has provided information on the function, date of construction, and date of demolition for some of them. All of the features, though, warrant further exploration. Dating the surrounding brick property walls was a major goal of the project. A builders trench for the rear wall was encountered, and artifacts contained in this feature suggest that it could have been constructed as early as the 1780s. Excavations adjacent to the south wall failed to uncover the base of the foundation, but dates of deposition for zone deposits adjacent to it indicate that this wall may also be an 18th century feature. The front wall was more fully exposed, and the clear-cut stratigraphy in N134.8E328 date this wall to the early 19th century, concurrent with the Russell house. The current front wall is a 20th century rebuilding.

The third, deepest brick wall in this unit appears to be the foundation to the 18th century house or building. Builders sands, the base of this foundation, and earlier zones were all isolated and explored, but tightly datable artifacts were not recovered. At this point, archaeology can say nothing definite about a date of construction for this structure, other than that it occurred between 1720 and 1775. At the present time, the documentary record dates this structure more precisely – between 1740 and 1779.

Excavation of N200.4E297 revealed the base of the main house 2.5 feet below the present ground surface. This was exposed and recorded for architectural purposes. Excavations in the rear revealed several outbuildings no longer extant. Unit N237E103 revealed a crude foundation, most likely to a privy. The feature was filled in the early 20th century. Excavations were curtailed for safety and aesthetic reasons before a builder's trench was encountered, so a date of construction was not determined. The limited archaeology suggests possible addition or renovation to the building. Unit N200.5E121 revealed the foundation to the small building at the rear of the

stable. A feature that may be the builder's trench was explored, and the artifacts suggest a date of construction concurrent with the main house, although this conclusion is tentative. The depth of this wall would suggest a privy pit or some other special function, but this awaits further excavation. Units N150E100 and N150E135 revealed building rubble possibly associated with structures shown on the 1888 and 1902 Sanborn maps. No intact foundations were encountered in either unit, and additional research is warranted.

These rear yard buildings, combined with extensive refuse deposits, have provided good baseline data for exploring the Russell house work yard. Additional work is needed to delimit the work yard area, changes in this through time, and the types of activities conducted there. Efforts to discern garden features was less successful. The only clue to garden layout encountered during the present project was feature 12 in N111W190, probably the foundation to an internal dividing wall. This feature warrants further study, as does the entire garden area.

The recovery of datable proveniences from all time periods has allowed a relatively even exploration of site continuum. The Frasers, and later Russell's tenants, left a strong mark on the archaeological record. So, too, did the Allstons and the Sisters of Charity. While the Russell occupation is the focus of site interpretation, it is also important that archaeology can inform on all periods of site use. In addition to general comparative data, the project produced a number of unusual artifacts, recovered in Charleston for the first time, and broadening our knowledge of 19th century material culture.

Recommendations

With less than 1% of the site excavated, the present project can only be considered a beginning to broader exploration of the Russell site. Still, the project has provided a great deal of information for restoration and reinterpretation. Guided by the research questions explored in this document, and the restoration issues confronting Historic Charleston Foundation, future excavations can center on three general areas:

1. Additional dispersed testing: Every effort was made during the present project to give even coverage to the site while exploring a range of specific issues, and a review of the site map will indicate that this effort was fairly successful. Yet, there are large areas of the site that remain unexplored. While excavations should further explore features already noted, it is important that additional units be placed in random, intuitive fashion to explore other areas of the site.

2. The garden: Exploration and delineation of Russell's garden is a major endeavor of the restoration team. With guidance from Barbara Sarudy, excavations could focus in the front of the property. Historic Charleston Foundation should consider employing the services of a garden archaeology specialist, working with the author, to explore these often ephemeral features. Pollen analysis by Karl Reinhard is expected to provide a wealth of information; additional analyses, such as macrobotanicals and phytoliths should be considered; again, the author should work with

Foundation staff and Restoration team members to select the most appropriate consultants for this work.

3. The Work Yard: Archaeology in Charleston has been most successful in delineating the role of the work yard in the daily life of city residents, its layout, function, and range of activities. Further, these explorations have been integrated into public interpretation at a number of sites in Charleston. Further exploration of this portion of the yard, including architectural features, trash deposits, internal boundaries, and activity areas will provide new information for public interpretation; further, archaeology is often the best source for this seemingly mundane information. Associated with this topic is archaeological exploration of enslaved residents of the Russell property, and their impact on the archaeological record.

In addition to these general topics, future excavations should further explore a number of site features encountered in 1994, through the excavation of adjacent units. In particular, the unit immediately south of N134.8E328 should reveal the interface of the south and east property walls, and the corner of the 18th century structure. Additional units along the front wall should further delimit the dimensions of the 18th century building. Also, the zooarchaeologist is very interested in retrieval of the horn core and other early faunal deposits from this unit! A unit immediately north of N200.5E121 is necessary to better understand the nature and date of the small room to the rear of the stable. If this is a privy pit, as proposed by some researchers, then it may contain a large and significant artifact assemblage, as well. Finally, the garden enclosing wall or fence suggested by feature 12 warrants further exploration. Plats of Charleston gardens indicate that while their placement varied, their segregation from the work yard by some sort of fencing remained constant. Delineation of this feature is key to exploring both the garden and the work yard.

The present project has demonstrated that the Nathaniel Russell site contains an archaeological record of remarkable depth, clarity, continuity, and complexity. Further exploration of the topics considered here all require additional excavation to answer the questions proposed, and to no doubt raise new ones.

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Appendix I

Vertebrate Fauna from the Nathaniel Russell House

Elizabeth Reitz and Daniel Weinand

Although there is substantial interest in subsistence strategies practiced by people living in and around Charleston, South Carolina, patterns of vertebrate use have been difficult to define due to variables such as urban or rural location; socio-economic and ethnic status; as well as temporal, functional, and taphonomic differences. As zooarchaeological studies in the Charleston area are conducted, many of these aspects of life in the region are becoming more fully understood; however, the full range of variables has not yet been adequately studied. One reason is that most of the Charleston vertebrate data are from exposed deposits at residential or mixed residential/commercial sites from the late eighteenth and early nineteenth centuries.

Recent archaeological investigations at the Nathaniel Russell house provide an opportunity to explore two of the understudied variables that are important for our understanding of the economy of the city. Few data exist for occupations in the early 1700s or in the late 1800s. Consequently, it is difficult to develop a model for change in animal use in the city from its foundation in the early eighteenth century to the end of the nineteenth century. While both of these understudied time periods have been present in faunal samples excavated from Charleston, these have been small and hence not comparable to the larger samples from the late eighteenth-/early nineteenth-century. The Russell site provides an opportunity to examine a late nineteenth-century component that is equivalent in size to the late eighteenth-/early nineteenth-century component from the same site. Thus it is possible to examine change in animal use through time at a site where sample sizes are roughly equivalent.

In addition, excavations on the property by Charles F. T. Andrus in 1991 produced a large faunal sample from a deposit located underneath a kitchen on the site. Assuming this deposit may have been more protected from site formation processes than more exposed contexts, this deposit may provide a standard against which to measure the degree of disturbance faunal assemblages elsewhere in Charleston have experienced.

In order to identify aspects of animal use at the Nathaniel Russell house that might reflect the site's early function or changes in subsistence through time, data from other Charleston area collections will be summarized. Although biomass has been estimated for all of these samples, the summaries will focus on estimates of Minimum Numbers of Individuals (MNI), a quantification technique discussed in the methods section below. Emphasis will be placed in this survey on upper status households compared to a General Charleston pattern of animal use. For comparison, however, data from the eighteenth-century Charleston Beef Market will also be summarized.

Data from the late eighteenth and early nineteenth centuries are combined into what is called a General Charleston Pattern that will be used here as an example of animal use in Charleston (Table 1; Reitz 1986, 1987, 1990). Many of the sites used to construct the General Pattern are high status sites (MNI=231) but the single largest component of the General Pattern is the mixed residential/commercial site known as Charleston Place (MNI=289; Reitz 1990; Zierden and Hacker 1987). All of the General Pattern collections are from the Antebellum period. In the General Pattern, almost half of the individuals are domestic animals (Table 1). Domestic mammals constitute a third of the estimated individuals. They are primarily cattle, but also include pigs and a few sheep or goats, generally referred to as caprines (Reitz 1986; 1987). Domestic birds are also commonly identified from Charleston sites. The principal birds are chickens, but muscovy ducks and rock doves are found as well. Wild mammals are almost exclusively deer, although opossums, rabbits, squirrels, beavers, muskrats, or minks are minor components in several collections. Wild birds are almost exclusively Canada geese and turkeys. Canada geese and turkeys are interpreted as wild birds since morphological changes characteristic of domestication have not been observed in the bones. The high percentage of these "wild" birds has suggested that perhaps they may be at least captive if not domestic animals.

Resources of the nearby harbor and marshes are also identified in Charleston collections. These include turtles, alligators, and a variety of inshore fishes. One of the surprising aspects of Charleston collections is that fishes constitute 18% or less of the estimated individuals in most Charleston collections, including those from both lower and upper status sites.

By way of comparison, summary data from the Charleston Beef Market site (Calhoun et al. 1984), deposited between 1739 and 1796, are also included. The Beef Market was the official site for a public market that functioned at this location until the end of the eighteenth century (Calhoun et al. 1984). In this collection, domestic animals contributed over half the individuals. Although most of the collection was contributed by cattle, some pigs and caprines were also present (Calhoun et al. 1984:78). Interestingly, a wide variety of other animals are also present in the Beef Market assemblage. The term "Beef Market" clearly does not reflect the full range of commercial activities that took place on the property. It is probably better to think of the Beef Market as a commercial venue where meats such as beef, pork, fish, venison, and poultry were sold.

Four collections represent vertebrate remains from late eighteenth-/early nineteenth-century, upper class households (Table 2). The materials used here from the John Rutledge house were deposited between 1750 and 1770 (Zierden and Grimes 1989); the Brewton-Motte-Alston deposits date from 1769 to 1830 (Reitz 1990); the Gibbes house materials were deposited from the 1770s to the 1840s (Zierden et al. 1987); and the Aiken-Rhett materials were deposited between the 1820s and 1860s (Zierden et al. 1986). None of these samples are very large and many of the characteristics observed in them may reflect sample size.

Efforts to define differences in subsistence behavior in Charleston based on socio-economic status distinctions have had limited success. In terms of taxa identified, there are few

characteristics which correspond with socioeconomic status in the urban setting. Only two slight differences have been suggested. Collections from upper status sites appear to contain a slightly more diverse range of species, both wild and domestic (Reitz 1987); although this may be a function of sample size. Upper status collections occasionally have a slightly higher percentage of fish individuals than middle or lower status ones (Table 2; Reitz 1986, 1987); although this could be a function of preservation. Both of these distinctions are minor and have not been observed in all upper status collections. In terms of change through time, there is limited evidence that use of domestic animals may have increased. Two of the highest percentages of domestic mammals for Charleston are found in the Charleston Post Office collection, a high-status deposit dating to the period 1725 to 1769 (52 percent; Bastian 1987), and in the 1750–1770 deposit at the John Rutledge house (50 percent; Zierden and Grimes 1989).

In order to carry the comparison through to the end of the nineteenth century, data from the residential Pringle–Frost occupation at the Brewton House (Reitz 1990) are also considered (Table 2). The Pringle–Frost materials were deposited between the 1840s and 1880. Although the Pringle–Frost family was important in Charleston society, it had limited financial means and lived in genteel poverty after the Civil War. In the Pringle–Frost collection domestic animals contributed less than a third of individuals. Wild animals were primarily fishes and wild birds. Fish use was uncharacteristically high in the Pringle–Frost collection. The high number of fish in the Pringle–Frost sample may either reflect enhanced preservation of fish remains at the Brewton site, the impoverished character of the Pringle–Frost household, or it may simply reflect a preference for fish by the household (Reitz 1990).

The high number of commensal taxa in the Pringle–Frost collection may be another explanation of the relatively low percentages of the other taxonomic groups in this assemblage. However, commensal animals, primarily Old World rats (MNI=10), contributed 24 percent of the individuals. This frequency of rats is even higher than was found in the eighteenth-century Beef Market. The relatively high number of commensal taxa may indicate that vermin, especially rodents, increased through time in the city.

Two other characteristics need to be examined in that they provide evidence for change in economic activity through time. One of these is element distribution. When the data for cattle elements recovered from Charleston archaeological sites are plotted against a Standard cow using a technique based on ratio diagrams three distinct patterns are observed (Figure 1; Reitz and Zierden 1991). These patterns seem to reflect site function rather than status.

One of the patterns is clearly a residential one and is found both at upper and middle status sites (Figure 1; Reitz and Zierden 1991). While fragments from both the head and foot are recovered from residential sites, fragments from the hindquarter and especially the forequarter are more abundant than fragments from the head or foot. Forequarter bones were more common than hindquarter bones regardless of status. All residential sites, regardless of whether they were associated with middle or upper status occupants, conform to this pattern.

The non-residential patterns (Figure 1) can be divided into two categories based on

function: public facilities associated with marketing and disposal of meat (Beef Market and Atlantic Wharf) and entertainment facilities (McCrary's Tavern and Lodge Alley). In the Beef Market pattern, fragments from the head are more common than in the residential pattern. Bones from the forequarter were underrepresented compared to residential sites. Hindquarter and foot fragments are found in similar proportions in the market and residential patterns.

The pattern for entertainment-related collections is a mirror image to the market pattern yet distinct from the residential pattern (Figure 1). At sites whose primary function was public entertainment fragments from the head were more common than at residential sites. In fact, the market and entertainment patterns have identical ratios of head fragments compared to the Standard cow. Bones from the forequarter were overrepresented in a mirror image to the pattern described by market sites although somewhat below that described for residential sites. Fragments from the upper hindquarter were rare or absent, also in a mirror image to the market pattern. Fragments from the foot were slightly more common in the entertainment pattern than in the residential one. The percentage of entertainment-related fragments from the forequarter and the lower hindquarter, however, fall within the residential range. Entertainment facilities may have obtained meat exclusively through purchase at the market, thereby removing bones from the market.

The bones recovered from residential sites do not compliment those missing from the Beef Market. This suggests that the market was not the only source of bones for most residential sites. One interpretation of these data is that faunal remains from residential sites probably became part of the archaeological record through a combination of on-site butchery, meat purchased from vendors, and salted meats. Another source of meat, one which might contribute elements from the entire skeleton, would be on-site butchery. Since the residential pattern is also unlike the unmodified distribution of elements in a cow skeleton, on-site butchery, however, does not appear to be the only source of meat/bones at residential sites. Instead, a combination of on-site butchery and market purchases seems indicated. The ratio diagrams suggest that residential customers rarely purchased cuts which contained teeth or other skull fragments. Instead they were likely to purchase cuts from the forequarter which contained bone. At home, consumers may have discarded these market bones with ones from the head, hindquarter, and foot which originated from their own slaughter activities.

It might be expected that toward the end of the nineteenth century element distributions more indicative of meats purchased from a butcher might be found. At this later time, elements more closely resembling those in standard cuts of meat illustrated by USDA manuals might be found in Charleston faunal assemblages. The other characteristic that should be considered is the presence of sawed bones. Sawing 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, this may also be indicative of common use of commercially prepared meats at the Nathaniel Russell house.

Sawing has been found to increase somewhat through time at Charleston sites, and is especially common in collections associated with nineteenth-century, middle-class occupations.

Less than 1 percent of the modified bones in the eighteenth-century First Trident Tannery (Zierden et al. 1983), pre-Brewton (Reitz 1990), and Beef Market (Calhoun et al. 1984) collections had been sawed, although sawed bone was present at all three sites. In upper status collections less than 1 percent of the Brewton-Motte-Alston bones had been sawed (Reitz 1990); 1 percent of the Gibbes bones had been sawed (Zierden et al. 1987); but 6 percent of the Aiken-Rhett bones had been sawed (Zierden et al. 1986). However, sawing was found on only 1 percent of the bone in the Pringle-Frost collection (Reitz 1990). Sawed bone was more common in middle-class, nineteenth-century collections. Between 8 percent and 15 percent of the bones in the 66 Society Street (Frank 1988) and President Street (Wood 1988) collections were sawed; sawed bones also constituted 8 percent of the 40 Society Street collection (Reitz and Dukes 1993). On the other hand, only 4 percent of the 72 Anson Street collection was sawed (Reitz and Dukes 1993). In general, while sawing does appear to increase, it appears to be related to middle-class households and may suggest that it was those households which were most likely to make use of butcher-meats.

It is interesting that Charleston sites share so many characteristics regardless of function, time period, or occupant's status. However, these data suggest that domestic animal use may have increased between the eighteenth century and first half of the nineteenth century, and that fish use may have declined over that time. After the Civil War, some wealthy households may have experienced a decline in the use of domestic meats. A higher percentage of sawed bones, such as found in the nineteenth-century, middle-class deposits, would be consistent with purchase of at least some meat from markets. At the same time, increased use of butcher-meats may be reflected in bones associated with modern cuts of meat. There is also the likelihood that vermin increased in the city through time. These possibilities will be explored using vertebrate remains from the Nathaniel Russell house.

MATERIALS AND METHODS

Vertebrate faunal materials from the Nathaniel Russell house, Charleston, South Carolina, excavated in 1994 under the direction of Martha A. Zierden, The Charleston Museum, were studied. The materials were divided into four temporal subdivisions. The property was purchased by Nathaniel Russell and William Greenwood in 1779, although Russell purchased Greenwood's share in 1784 (Zierden, personal communication 1994). Nathaniel Russell was one of Charleston's wealthiest merchants. The 1780-1810 component includes those materials associated with a house located on the property and occupied, perhaps by the Russell family, prior to the completion of the Russell mansion in 1808. The second temporal subdivision is the Russell family occupation of the mansion from 1808 to 1857. The third period is that of Governor Robert F. W. Allston occupation of the house from 1857 to 1870. Prior to 1863, the household was a wealthy one; however, after the Civil War the Allston's family fortunes faded and Mrs. Allston took in boarders and opened the house as a female academy. In 1870 the property was purchased by the Sisters of Charity of Our Lady of Mercy, who used the house as a home and convent school until 1908. The 1870-1908 deposits may have been redepositions from earlier time periods. Faunal samples

from these four time periods were too small to be analyzed individually, so the two earliest time periods (1784–1857) and the two later ones (1857–1908) were combined for this study. There were, therefore, four analytical components based on temporal identifications, but these are presented as only two analytical units. Appendix A lists the FS#s from each temporal component.

A fifth analytical unit was excavated by Fred Andrus in 1991 from underneath the kitchen building (Andrus 1991). This unit was designated N05–10–E00–05 with the datum point the southwest corner of the crawl space under the kitchen. Four zones with several three inch levels were excavated. The temporal span was estimated to be from the Russell and Allston occupations (1820–1870). Due to the sheltered location of this unit under the kitchen, it was separated from the other materials which may include bones from earlier or later occupations. As with the other Russell house faunal materials, the materials were recovered using a 1/4–inch mesh screen. Appendix A also includes the Andrus samples studied.

Vertebrate remains were identified using standard zooarchaeological methods. All identifications were made by Daniel C. Weinand using the comparative skeletal collection of the Zooarchaeological Laboratory, Museum of Natural History, University of Georgia. All bones were grouped into one of the five analytical units before the aggregation of data. Bones of all taxa were counted (NISP) and weighed (Wt, gm) to determine the relative abundance of the species identified. A record was made of identified elements. Age, sex, and bone modifications were noted when observed. Where preservation allowed, measurements were taken following the guidelines established by Angela von den Dreisch (1976). These data are presented in Appendix B. In calculating MNI, faunal materials recovered from each time period were considered discrete analytical units.

While MNI is a standard zooarchaeological quantification medium, the measure has several problems. MNI emphasizes small species over larger ones. This is easily demonstrated by a hypothetical sample which consists of four rats and only one cow. While four rats represent a larger number of individuals, one cow will supply substantially more meat. A further problem with MNI is the assumption that the entire animal was utilized at the site. From ethnographic evidence we know that this is not necessarily the case, particularly in regard to larger individuals and for animals utilized for special purposes (Thomas 1971; White 1953). This is an especially relevant issue when dealing with historic samples where marketing of processed meat products was substantial, but the exact extent unknown. Additionally, MNI is influenced by the manner in which the data from archaeological proveniences are aggregated during analysis. The aggregation of separate samples into one analytical whole (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. Furthermore, some elements are simply more readily identifiable than others and the taxa represented by these elements may appear more significant in the species list than they were in the diet.

Biomass estimates attempt to compensate for problems encountered with MNI. Biomass provides information on the quantity of meat supplied by the animal. The predictions 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 materials, in this case, bone. The relationship between body weight and skeletal weight is described by the allometric equation:

$$Y=aX^b$$

(Simpson et al. 1960:397). Many biological phenomena show allometry described by this formula (Gould 1966, 1971). In this equation, X is the skeletal weight, Y is the quantity of meat or the total live weight, b is the constant of allometry (the slope of the line), and a is the Y -intercept for a log-log plot using the method of least squares regression and the best fit line (Casteel 1978; Reitz and Cordier 1983; Reitz et al. 1987; Wing and Brown 1979). A given quantity of bone or a specific skeletal dimension represents a predictable amount of tissue due to the effects of allometric growth. Values for a and b are obtained from calculations based on data at the Florida Museum of Natural History, University of Florida, and the University of Georgia's Museum of Natural History. The allometric formulae used here are presented in Table 3. Biomass was estimated using the same analytical units defined when estimating MNI.

Biomass and MNI are subject to sample size bias. Casteel (1978), Grayson (1979), and Wing and Brown (1979) suggest a sample size of at least 200 individuals or 1400 bones for a reliable interpretation. Small 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.

In order to summarize the data, the species list was reduced to several categories based on vertebrate class and husbandry practices. Domestic mammals include pigs (*Sus scrofa*), cows (*Bos taurus*), and sheep or goats (Caprine). Sheep and goats are generally combined into the subfamily category of Caprinae (Caprine) due to difficulties in distinguishing between them osteologically. Domestic birds were chickens (*Gallus gallus*). Wild mammals included only deer (*Odocoileus virginianus*). Wild birds include duck (Anatidae), turkey (*Meleagris gallopavo*), and rail (Charadriiformes). Turkeys may actually belong in the category of domestic birds. According to the American Poultry Association (1874) standards of excellence for these two species had been established by the mid-eighteenth century. Turtles included yellowbelly slider (*Trachemys scripta*) and softshell turtle (*Apalone* spp.). Commensal taxa included Old World rats (*Rattus* spp.) and cat (*Felis domesticus*). While these animals might have been consumed, they are also common around human residences either intentionally as pets and work animals, or unintentionally. Some of the other animals not included in the commensal category might also have been commensal, such as the duck and rail. It should be noted that only biomass for those taxa for which MNI had been determined is included in the summary tables.

The presence or absence of elements in an archaeological sample provides data on butchery and animal husbandry practices. The mammalian elements identified were summarized into categories by body parts. The term "Head" refers to skull and mandible fragments as well as teeth. The vertebra/rib category includes ribs and vertebrae, including the atlas and axis. The forequarter category includes the scapula, humerus, ulna, and radius. Carpals and metacarpals are record as

forefoot. The hindfoot includes the tarsals and metatarsals. The foot contains bones identified only as metapodials and phalanges which could not be assigned to one of the other categories. The hindquarter category includes the innominate, sacrum, femur, and tibia. In an unmodified, complete cow skeleton (NISP=248), these categories constitute the following percentages: Head, 25.8 percent; Vertebra/rib, 28.6 percent; Forequarter, 3.2 percent; Hindquarter, 6.9 percent; Forefoot, 5.7 percent; Hindfoot, 5.7 percent; and Foot, 24.2 percent (Reitz and Zierden 1991). The term "Body" refers to a combination of vertebra/rib, forequarter, and hindquarter elements. The term "Foot" used in the context of "Body" refers to the combination of forefoot, hindfoot, and foot elements. In the unmodified skeleton, "Body" elements contribute 39.0 percent of the elements and "Foot" elements contribute 35.0 percent. The term "foreleg" refers to forequarter and forefoot while the term "hindleg" refers to the hindquarter and hindfoot.

In order to indicate the number of elements and their location in a carcass, most elements identified for domestic mammals were illustrated. Unillustrated bones are noted in the legends accompanying each figure. Although the atlas and axis are accurately depicted, other cervical vertebrae, as well as thoracic, lumbar, and caudal vertebrae, and ribs are placed approximately on the illustrations, with the last lumbar location used to illustrate vertebrae which could be identified only as vertebrae. Bones identified only as sesamoids, metapodials, or phalanges are illustrated on the right hindfoot.

Relative age of the species identified was noted based on observations of the degree of epiphyseal fusion for diagnostic elements, as well as the presence of deciduous teeth. When animals are young their bones are not fully formed. Along the area of growth the shaft and the end of the bone, the epiphyses, are not fused. When growth is complete the shaft and 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; Schmid 1972; Silver 1963). During analysis, bones identified were recorded as either fused or unfused; the bones were then placed into one of three general categories based on the age in which fusion generally occurs. This is more informative for unfused bones which fuse in the first year or so of life and for fused bones which complete growth at three or four years of age than for other bones. An element which fuses before or at eighteen months of age and is found fused archaeologically 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 evaluating each element under the oldest category possible.

Evidence of sex was also noted if present. Spurs on the tarsometatarsus of Galliformes such as turkeys, chickens, and quails indicate male birds. Hens in laying condition are indicated by medullary deposits on bones (Rick 1975). Medullary bone is a source of calcium for females while laying eggs.

Modifications were classified as sawed, clean-cut, burned, cut, hacked, carnivore and rodent gnawed, as well as worked. The presence of parallel striations on the outer layer of compact bone was used as evidence that a bone had been sawed, presumably before the meat was cooked. Clean-cut designates modifications that are straight, as would be produced by a saw, but lack the

striations and therefore might actually represent a hack mark. Burned bone may result from the exposure of the end of a bone to fire while a cut of meat is roasted. Burns may also be inflicted if bones are burned intentionally or unintentionally after discard. Cuts are small incisions across the surface of bones. These marks were probably made by a knife as meat was removed from bone before or after the meat was cooked. Cuts may also be left behind if attempts are made to disarticulate the carcass at joints. Some marks that appear to be made by human tools may actually be abrasions inflicted after the bones were discarded, but distinguishing this source of small cuts requires access to higher powered magnification than was available during this study (Shipman and Ross 1983). Hack marks closely resemble cut marks in their shape and irregularity but are deeper and wider. They may indicate use of a cleaver or hatchet rather than a knife to dismember the carcass. The use of a large chopping tool would result in bone splinters and probably larger cuts of meat than a knife.

Several modifications are indicative of taphonomic processes and of non-subsistence uses of animal bones. Gnawing indicates that bones were not immediately buried after disposal. While burial would not insure an absence of gnawing, exposure of bones for any length of time might result in gnawing. Gnawing by carnivores and rodents would result in loss of an unknown quantity of discarded bone. Carnivores could include a variety of animals, such as dogs, foxes, raccoons, and cats, while rodents might be mice, rats, or squirrels. Worked bones include those with marks inflicted by humans, not associated with butchery practices and will be described in greater detail below.

RESULTS: 1780–1857

The 1780–1857 component was a small assemblage consisting of 968 bones weighing 4,555.22 gm and containing the remains of at least 33 individuals (Table 4). The 1780–1810 component was smaller than the 1808–1857 one (Table 5) and was therefore less varied.

Domestic animals dominated the 1780–1857 assemblage. Domestic mammals contributed 98 percent of the biomass of taxa for which MNI was estimated (Table 6). The principle domestic mammal was cow (*Bos taurus*). Cows contributed 19 percent of the non-human individuals and 77 percent of the biomass for which MNI was estimated (Table 6). Pigs (*Sus scrofa*) contributed 16 percent of the individuals and 14 percent of the biomass. Caprines (sheep/goat) contributed only 9 percent of the individuals and 7 percent of the total biomass. Chickens (*Gallus gallus*) were the only domestic birds identified. Chickens contributed 6 percent of the individuals, but less than 1 percent of the total biomass.

Wild, non-commensal taxa contributed 34 percent of the individuals although only 1 percent of the biomass in the 1780–1857 component (Table 6). The only wild mammal identified was a deer (*Odocoileus virginianus*). Wild birds included a duck (Anatidae), a turkey (*Meleagris gallopavo*), and a rail (Charadriiformes). The remains of a single softshell turtle (*Apalone* spp.) was also present. The most significant group of wild, non-commensal taxa was fish. Fish contributed 19 percent of the individuals, although a small percentage of the biomass. Further,

a wide range of fishes were identified, including hardhead catfish (Arius felis), gafftopsail catfish (Bagre marinus), sea bass (Centropristis spp.), black drum (Pogonias cromis), and red drum (Sciaenops ocellatus). These fish are all present in Charleston's estuarine waters.

Commensal taxa in the 1780–1857 component included a human (Homo sapiens), three Old World rats (Rattus spp.), a cat (Felis domesticus), and a toad (Bufo spp.). The human, found in FS# 62, was omitted from the summary table (Table 6). The cat was found in FS# 64.

The mammalian elements identified in the 1780–1857 component are presented in Table 7, with the domestic mammal elements visually presented in Figures 2–4. The human was identified from a 5th metatarsal. The rats were represented by elements from the hindquarter while the cat was identified from a dentary fragment. The deer was identified from a phalanx. The most skeletally complete mammal was the cow, although post–cranial elements were more common than cranial elements. When divided into Head (10 percent), Body (36 percent), and Foot (54 percent) elements, the Head category is extremely underrepresented from an undisturbed skeleton while the Foot category is overrepresented. The Body elements are present in the 1780–1857 component in percentages roughly similar to those of the unmodified skeleton. The pig was represented primarily by elements from the head and the caprine primarily by post–cranial elements.

There was some evidence for age at death for the animals in the 1780–1857 component (Tables 8–10) and some indicators of sex. Although three of the pigs were of indeterminate age, two other individuals were less than 18 months of age at death. One of the pigs was a male and one was a female. The juveniles were identified from two, left, deciduous fourth premolars. The deer phalanx was fused, so this individual was at least a subadult at death. Relative ages for the four cows was determined from tooth eruption sequences and epiphyseal fusion. One of the caprines was a juvenile and two were probably subadults. One of the chickens was a female based on the observation that a tarsometatarsus lacked a spur.

Modifications were present on 7 percent of the 1780–1857 bone (Table 11). The three primary modifications were sawing and burning. Saw marks were found on a third of the modified bones and 2 percent of bone assemblage. One sawed bone was found in the 1780–1810 component (FS# 84) and the rest were in the 1808–1857 component. Burns occurred on a quarter of the modified bones. Four worked bones were observed. Three of these were UID Mammal bones. Two appeared to be handle fragments (FS# 57, 62) and one was grooved (FS# 53) for some purpose. This groove does not appear to be part of a groove and snap procedure. The deer phalanx (FS# 48) appeared to be hollowed out and has a hole drilled through it from the proximal articular surface and emerges at the distal anterior surface. Less than 1 percent of the bones from the assemblage had been gnawed by carnivores and none had been gnawed by rodents.

RESULTS: 1857–1908

The 1857–1908 component was composed of two relatively similar assemblages from 1857–1870 and 1870–1908 (Table 5). Together they contained 1,203 bones weighing 8,981.44 gm and the remains of at least 34 individuals (Table 12).

Domestic animals dominated the 1857–1908 assemblage. Domestic mammals contributed 44 percent of the individuals and 98 percent of the biomass of taxa for which MNI was estimated (Table 6). The principle domestic mammal was cow (Bos taurus), which contributed 18 percent of the individuals and 82 percent of the biomass for which MNI was estimated (Table 6). Pigs (Sus scrofa) contributed 15 percent of the individuals and 7 percent of the biomass. Sheep/goats (Caprine) contributed 12 percent of the individuals and 9 percent of the biomass. Chickens (Gallus gallus) were the only domestic birds identified. They contributed 18 percent of the individuals and 1 percent of the biomass.

Wild, non-commensal taxa contributed 23 percent of the individuals although less than 1 percent of the biomass in the 1857–1908 component (Table 6). No wild mammals were identified. Wild birds included two ducks (Anatidae) and two turkeys (Meleagris gallopavo). A single yellowbelly slider (Trachemys scripta) was identified. Three estuarine fishes were identified: a gafftopsail catfish (Bagre marinus), a black drum (Pogonias cromis), and a mullet (Mugil spp.). Although these fish contributed 9 percent of the individuals, they constituted less than 1 percent of the biomass (Table 6).

The only commensal taxa identified in the 1857–1908 component were four Old World rats (Rattus spp.) and a cat (Felis domesticus). Rats are commonly found in close association with humans, and it is assumed they were not part of the diet. The cat was found in FS# 60.

The mammalian elements identified in the 1857–1908 component are presented in Table 13, with the domestic mammal elements visually presented in Figures 5–7. Although most of the rat elements were from the hindquarter, some mandibles and forequarter elements were also present. The cat was identified from an ulna fragment. The most skeletally complete mammal were cows, which were represented by mostly equal numbers of elements from all post-cranial skeletal categories. Nonetheless, cattle remains do not represent an unmodified element pattern. Head elements contributed 7 percent of the elements, Body elements 51 percent, and Foot elements 42 percent. The pigs were represented primarily by elements from the head, although elements from the hindquarter were common. No cranial elements were identified for the caprines, which were represented entirely by post-cranial fragments.

There was some evidence for age at death for the animals in the 1857–1908 sample (Tables 14–16) and one indicator of sex. At least two of the pigs were juveniles when they died and the other three were subadults. Two of the cows were juveniles, two were subadults, and two were adults. Three of the caprines were subadults and one was an adult. One chicken was a female based on the observation that a tarsometatarsus lacked a spur.

Modifications were found on 12 percent of the 1857–1908 bone (Table 17). The most common modifications were the result of sawing and burning. Sawing was observed on bones from

both the 1857–1870 (N=38) and the 1870–1908 (N=45) components; 7 percent of the total assemblage had been sawed. Burns occurred on 57 percent of the modified bones, and 17 percent of the modified bones were burned. The three worked bones were all UID Mammal. One was a brush head (FS# 60) and one appeared to be a handle or inlay fragment (FS# 34). The third worked bone (FS# 59) has a deep groove which appears to be a natural part of the bone, except that the groove is too long and straight to be natural. Less than 1 percent of the bone had been gnawed by carnivores and none had been gnawed by rodents.

RESULTS: ANDRUS (1820–1870)

The Andrus (1820–1870) component contained 836 bones weighing 12,656.54 gm and the remains of at least 36 individuals (Table 18).

Domestic animals dominated the Andrus assemblage. Domestic mammals contributed 69 percent of the individuals and 98 percent of the biomass of taxa for which MNI was estimated (Table 19). The principle domestic mammal was cow (*Bos taurus*), which contributed 50 percent of the individuals and 94 percent of the biomass for which MNI was estimated (Table 19). Pigs (*Sus scrofa*) contributed 8 percent of the individuals and 1 percent of the biomass. Sheep/goats (*Caprine*) contributed 11 percent of the individuals and 3 percent of the biomass. Chickens (*Gallus gallus*) were the only domestic birds identified. They contributed 11 percent of the individuals and less than 1 percent of the biomass.

Non-domestic animals were rare in the Andrus collection. Wild, non-commensal taxa contributed 17 percent of the individuals and 1 percent of the biomass (Table 19). A single deer (*Odocoileus virginianus*) individual was identified. Wild birds included a duck (*Anatidae*) and two turkeys (*Meleagris gallopavo*). A single yellowbelly slider (*Trachemys scripta*) was identified and one estuarine fish, a sea bass (*Centropristis* spp.). The only commensal taxa identified was an Old World rat (*Rattus* spp.).

The mammalian elements identified in the Andrus component are presented in Table 20, with the domestic mammal elements visually presented in Figures 8–10. The rat was identified from an ilium and the deer from a femur shaft fragment. None of the domestic mammals were skeletally complete, although cows were represented by a large number of bone fragments. Head elements constituted 1 percent of the cattle fragments, Body elements 47 percent, and Foot elements 52 percent. The pigs were represented primarily by post-cranial elements, with but a single tooth identified. The cow also was represented primarily by post-cranial elements and no caprine cranial elements were present. The slider was represented by an almost complete plastron.

There was some evidence for age at death for the animals in the Andrus component (Tables 21–23) but no indicators of sex. At least one of the pigs was a juvenile when it died and the other two were subadults. One of the cows was a juvenile, ten were subadults, and seven were adults. One of the caprines was a juvenile at death, two were subadults, and one was an adult. Two of the chickens were young birds when they died and the other two were mature.

Modifications were found on 8 percent of the bone excavated by Andrus (Table 24). The most common modifications were the result of sawing and clean-cuts. Saw marks were found on 25 percent of the modified bones, and 2 percent of the total amount of bone. An additional 36 percent of the modified bones were clean-cut. Less than 1 percent of the bones in the sample had been gnawed by carnivores or rodents.

DISCUSSION

Study of urban faunal assemblages raises interesting questions about site formation processes, the mechanisms by which animal products were distributed in Charleston, and changes in the city's economy during the nineteenth century. The Nathaniel Russell collection also provides interesting information about cattle sizes in the city.

When the summary tables from the two temporal units are considered (Table 6), the remarkable thing about them is their similarity. The decline in domestic animals suggested in Table 2 by the Pringle-Frost data is not reflected in the 1857-1908 Nathaniel Russell materials. Perhaps the similarity of the faunal samples from the two Nathaniel Russell temporal components indicates that materials from the 1857-1908 deposits are in fact mixed with those from the 1780-1857 occupation. It is also possible that the economic activities that took place on the property during the later part of the nineteenth century (boarding house, convent, school) enabled the household at the Nathaniel Russell site to enjoy larger quantities of beef than the Pringle-Frost household could afford. Also intriguing is the high percentage of vermin in both time periods.

Although wild mammals, turtles, alligators, fishes, and birds were sold in Charleston via markets and vendors, it was anticipated that households relying primarily upon purchased meats probably produced assemblages of discarded animal bones dominated by refuse from pigs, cows, caprines, and chickens. It has been found that high prestige households tend to have more wild animals in their deposits, perhaps because of a desire to set a diverse table and/or because they could obtain foods from their plantations or directly from hunters and fishers (Reitz 1987). On the other hand, when sample sizes are small, as they are in this study, the variety of taxa is usually limited. Hence, the limited range of wild animals in the Nathaniel Russell collection could simply be a reflection of small sample size rather than of acquisition of meat as rations or from markets. On the other hand, reduction in the amount of wild fauna in the diet might be evidence of limited use of outlying plantations and/or increased use of commercial outlets within the city for food.

The Andrus component, however, provides an important note of caution to this interpretation (Table 19). There are differences between the 1780-1857 component and the Andrus materials which are best explained by considering site formation processes. Clearly the dominance of cattle bones in the Andrus assemblage reflects the unique character of that deposit. Interpretations of archaeological materials is always subject to the vagaries of deposition. Decisions about where to excavate substantially impact our knowledge of animal use in Charleston. Much

of our knowledge about animal use may be biased by where excavation has taken place on each property and by other depositional characteristics such as protection from carnivores, weathering, and trampling. This aspect of Charleston faunal assemblages should be carefully explored.

Two other interesting aspects of the Nathaniel Russell collection are related to the types of cow bones identified and the presence of sawed bones. It has been argued in other contexts that many households, particularly affluent ones, slaughtered on their own property some if not much of the meat they consumed (Reitz and Zierden 1991). This interpretation is based on the observation that elements from the entire carcass are found in faunal assemblages from many prestigious households. It is likely that these households could draw upon their own herds for meat. In many cases, they also had enough dependents that they could use most of the meat before it spoiled. For example, when Russell moved into his new house in 1808, he had a wife, two daughters, and 18 slaves to feed (Zierden, personal communication 1994). It might be more economical for him to slaughter his own animals than it would be to purchase meat. A smaller household might not have its own herds and might have difficulty disposing of meat before it spoiled. Sawing 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, this may also be indicative of commercial butchery and sale of meat.

An assemblage representing purchase of meat from a butcher shop, therefore, should have two characteristics. These would be a high percentage of bones from the Body (the ribs, vertebrae, forequarters, and hindquarters) and a high percentage of sawed bones. On-site butchering would be characterized by bones from the entire skeleton and a low percentage of sawed bones.

In order to evaluate whether a faunal assemblage has a high percentage of bones from the body, we can compare the archaeological assemblage with the normal distribution of elements. Because of the complexity of this analysis, only cattle bones will be considered. Table 25 summarizes element distributions from the Russell house compared to the undisturbed Standard cow and to the Beef Market. There is a strong tendency for elements to be from the Body or Foot, with elements from the Head most likely to be underrepresented. This suggests there was a great deal of post-mortem disturbance. This would be consistent with purchase of some butchered meats; although it would also be consistent with primary butchering taking place on the property beyond the excavated area.

What is not shown in this table is the equally strong tendency for elements to be from the distal humerus through the carpals of the foreleg and from the distal femur through the tarsals of the hindleg (Figures 3, 6, and 9), which suggests on-site butchery. This is particularly pronounced in the Andrus component, where carpals and tarsals constituted 47 percent of the cattle bones. A similar pattern was found at the Rutledge house, where 23 percent of the cattle bones were carpals and tarsals from a single deposit (Unit 3, Zone 5) associated with the 1770–1820 occupation (Zierden and Grimes 1989).

The Rutledge deposit was interpreted as evidence of primary butchery or discard associated

with the nearby kitchen; an interpretation which might also apply to the Andrus assemblage from the Russell house. Both collections provide good reason to doubt that high-status households might be distinguished by high percentages of elements from the more meaty Body, as many have assumed. Clearly high-status households may be more typically characterized by elements from the Foot than from the Body. This aspect of animal use in Charleston warrens further attention.

Sawing is another line of evidence that might be more closely examined. Higher percentages of sawed bones found in middle-class deposits are thought to be consistent with purchase of meat from markets (Reitz 1990). Sawing, although present at other types of sites from all time periods, has been common (4–15 percent) only in middle-class deposits. In this respect, the 1857–1908 component from the Nathaniel Russell house is more similar to middle-class deposits than to the earlier Russell component.

An unexpected outcome of this study is a rich deposit of cattle bones which could be measured (Appendix B). A recent study of cattle measurements found that early Charleston cattle are relatively smaller than cattle from St. Augustine, Florida (Reitz and Ruff 1994). The amount of cattle refuse on the Nathaniel Russell property offers a special opportunity to continue this study. This site is particularly important because the bone is not only in very good condition, but appears to be common in deposits from the early and late part of the nineteenth century. With such a stratified sample, it might be possible to see if improved animal husbandry techniques in the post-war era resulted in increased cattle body size. There are some indications that such might be the case. For example, the mean of the cubonavicular dimension GB for pre-1850 Charleston cattle was 56.58 mm in a sample of 5 bones (Reitz and Ruff 1994). The mean GB cubonavicular dimension for the 1820 and 1870 time period (including the Andrus assemblage) is 59.77 mm in a sample of 10 bones (Appendix B). At the moment, the sample from the Russell house, while large, is not large enough to pursue this comparison. Further opportunities to expand the sample size, especially for the late nineteenth century, would be welcomed.

Another aspect of the Russell collection that could be explored further relates to the issue of public health. There is strong evidence that the quantity of vermin, particularly rats, increased in the city during the nineteenth century. Rats could have been extremely common on some properties, perhaps associated with the amount of foods stored on the site or the amount of waste discarded on the property. While this evidence had been considered previously (Reitz 1990; Zierden et al. 1983), the Russell site provides additional strong evidence of this trend.

CONCLUSIONS

Although the opportunity to study the Nathaniel Russell faunal materials was a valuable addition to understanding the faunal assemblages from Charleston, it appears to have raised more questions than it has answered. There appears to be little evidence for patterned change through time in animal use within the city, although site formation processes may have obscured the pattern. Further, the association of specific types of cattle elements and butchering marks appears only weakly correlated with time period. It appears there may have been so many differences

among households within the city that a general trend is will be difficult to detect. However, it seems apparent that the subsistence strategy at the Nathaniel Russell site, even in the late nineteenth century, was consistent with other residential collections from Charleston. Perhaps the most interesting aspect of the collection is the suggestion that cattle body size and the number of vermin both increased during the later part of the century.

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Figure 1. Ratio diagram of identified cow body parts to the Standard cow for Charleston (Reitz and Zierden 1991).

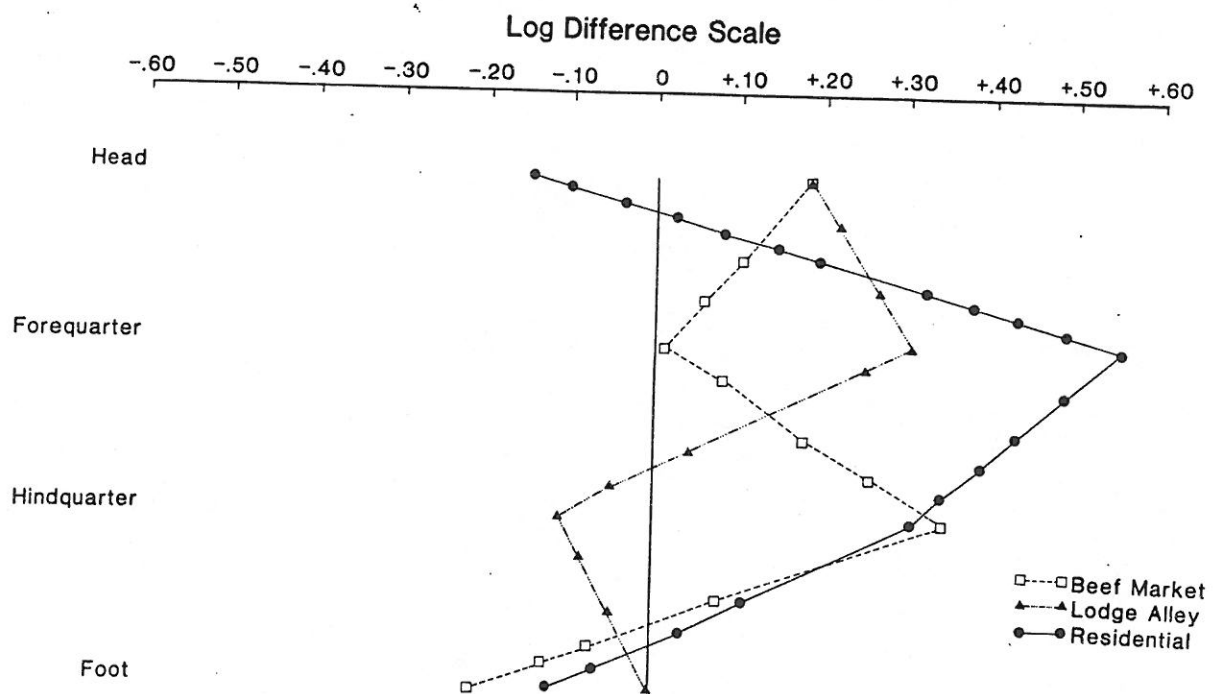


Figure 2. Nathaniel Russell (1780-1857), Pig Elements Identified.
Not illustrated are 22 teeth and 1 skull fragment. N=33.

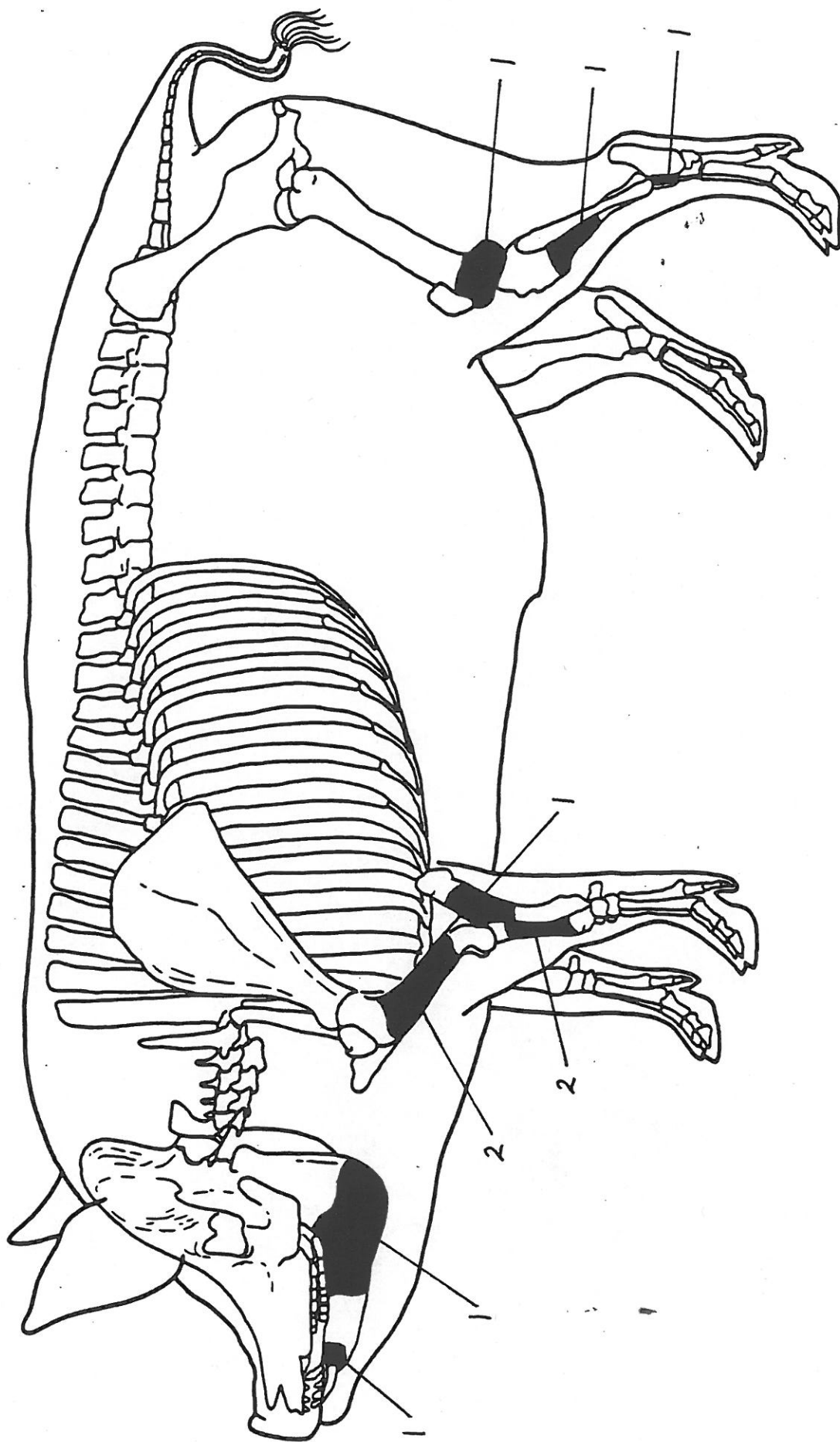


Figure 3. Nathaniel Russell (1780-1857), Cow Elements Identified.
Not illustrated are 1 skull fragment and 4 teeth. N=50.

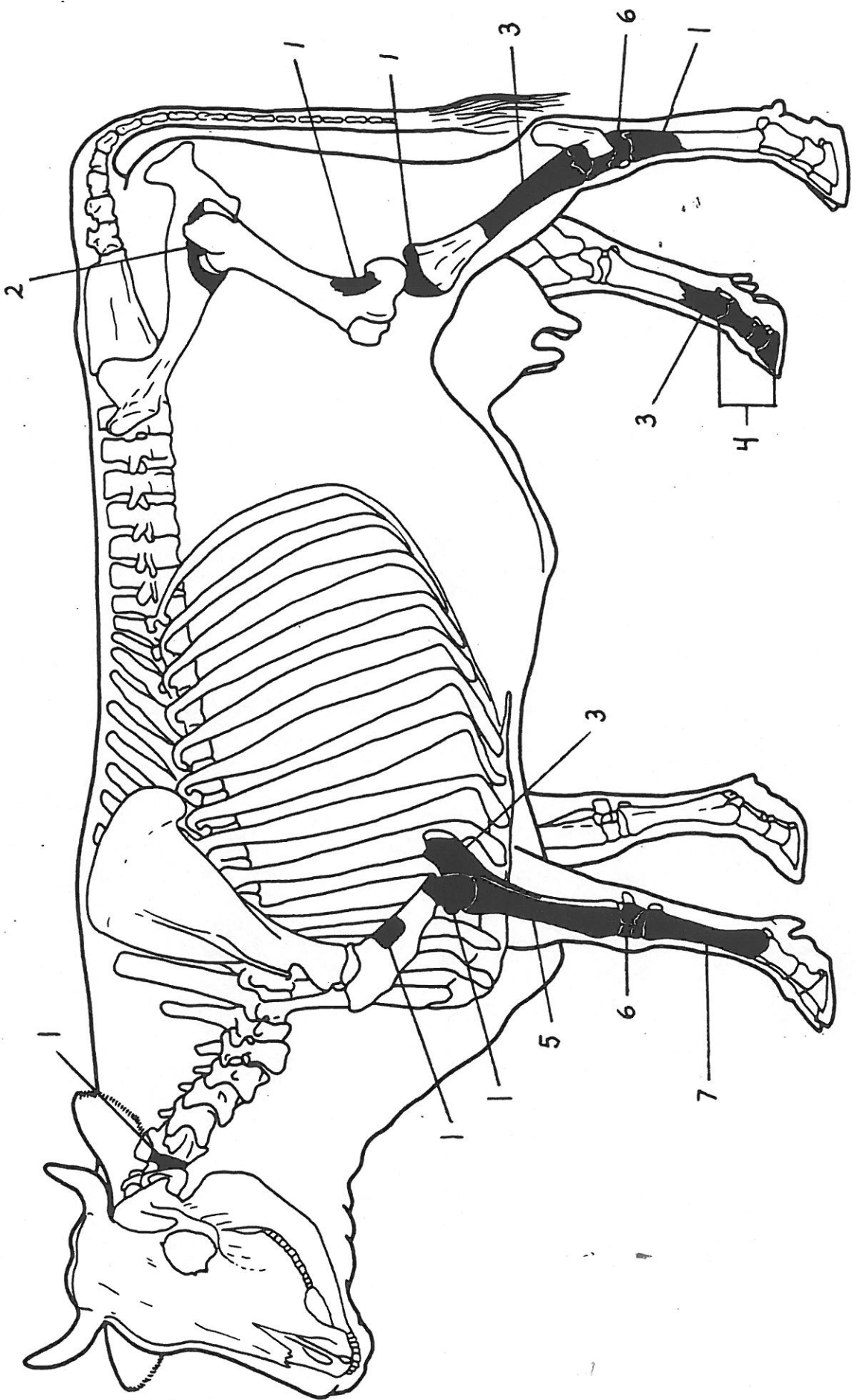


Figure 4. Nathaniel Russell (1780-1857), Caprine Elements Identified. Not illustrated are 4 teeth. N=12.

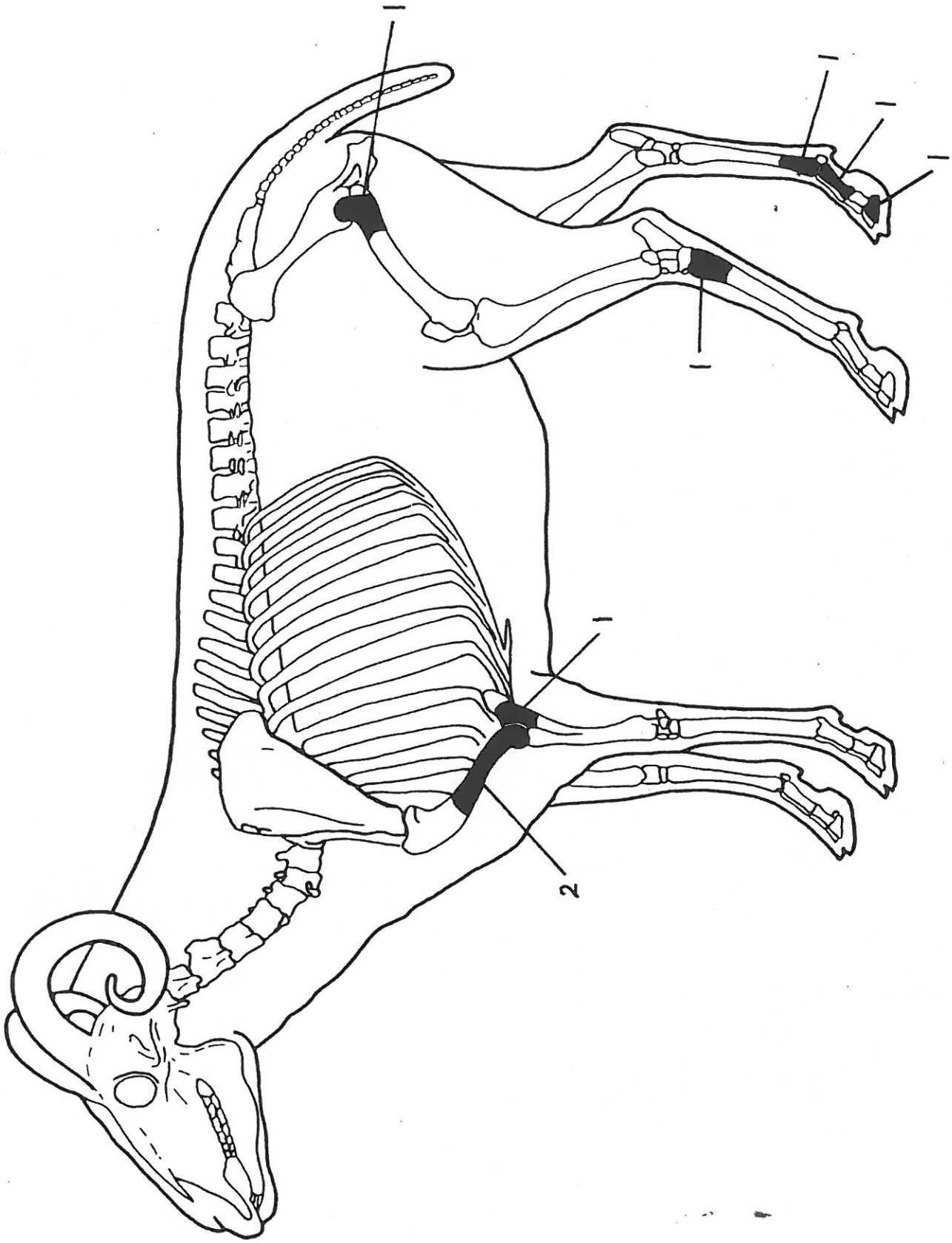


Figure 5. Nathaniel Russell (1857-1908), Pig Elements Identified.
Not illustrated are 9 teeth. N=32.

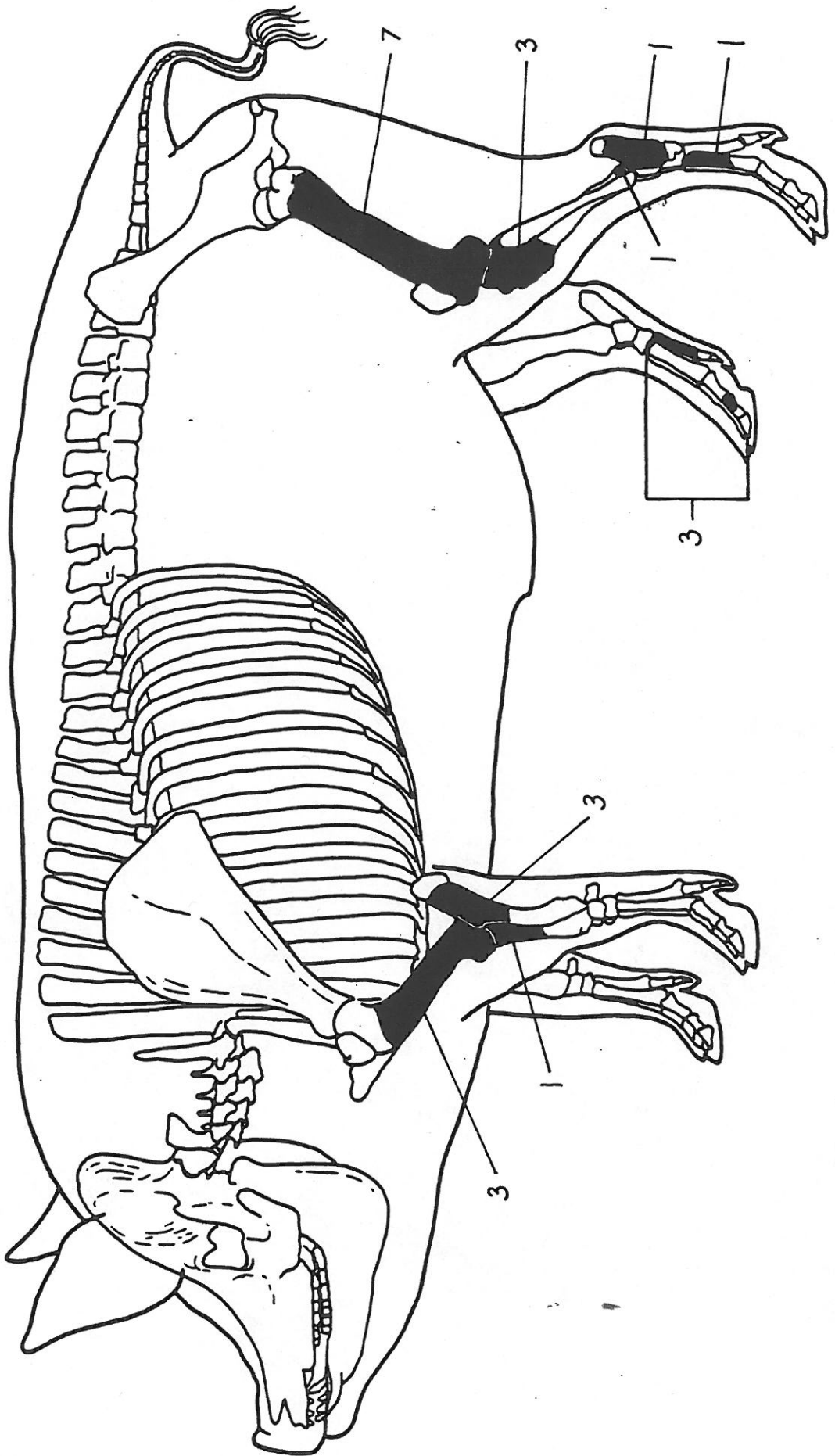


Figure 6. Nathaniel Russell (1857-1908), Cow Elements Identified.
Not illustrated are 8 teeth. N=108.

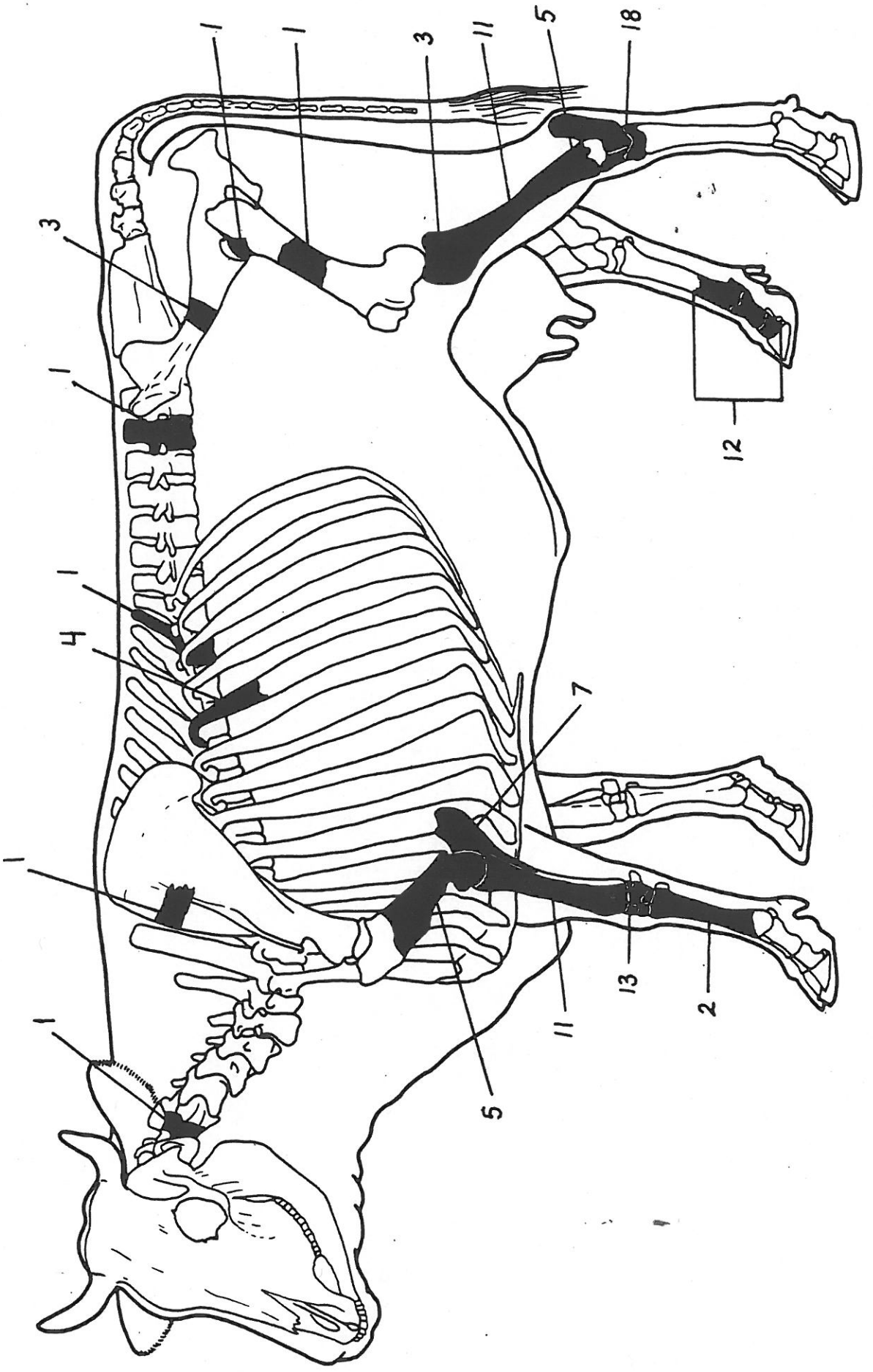


Figure 7. Nathaniel Russell (1857-1908), Caprine Elements Identified. N=25.

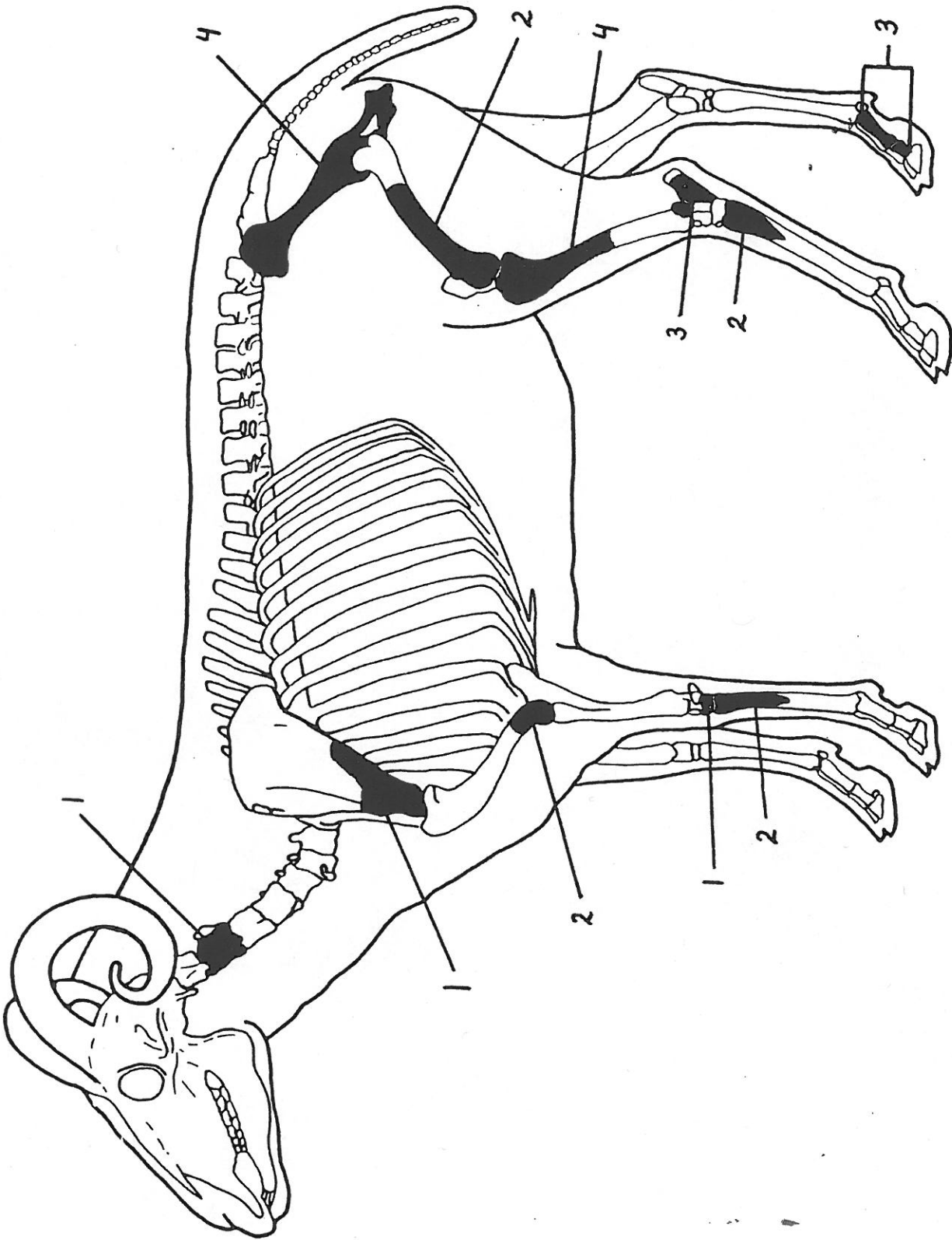


Figure 8. Nathaniel Russell (Andrus), Pig Elements Identified.
Not illustrated is 1 skull fragment. N=10.

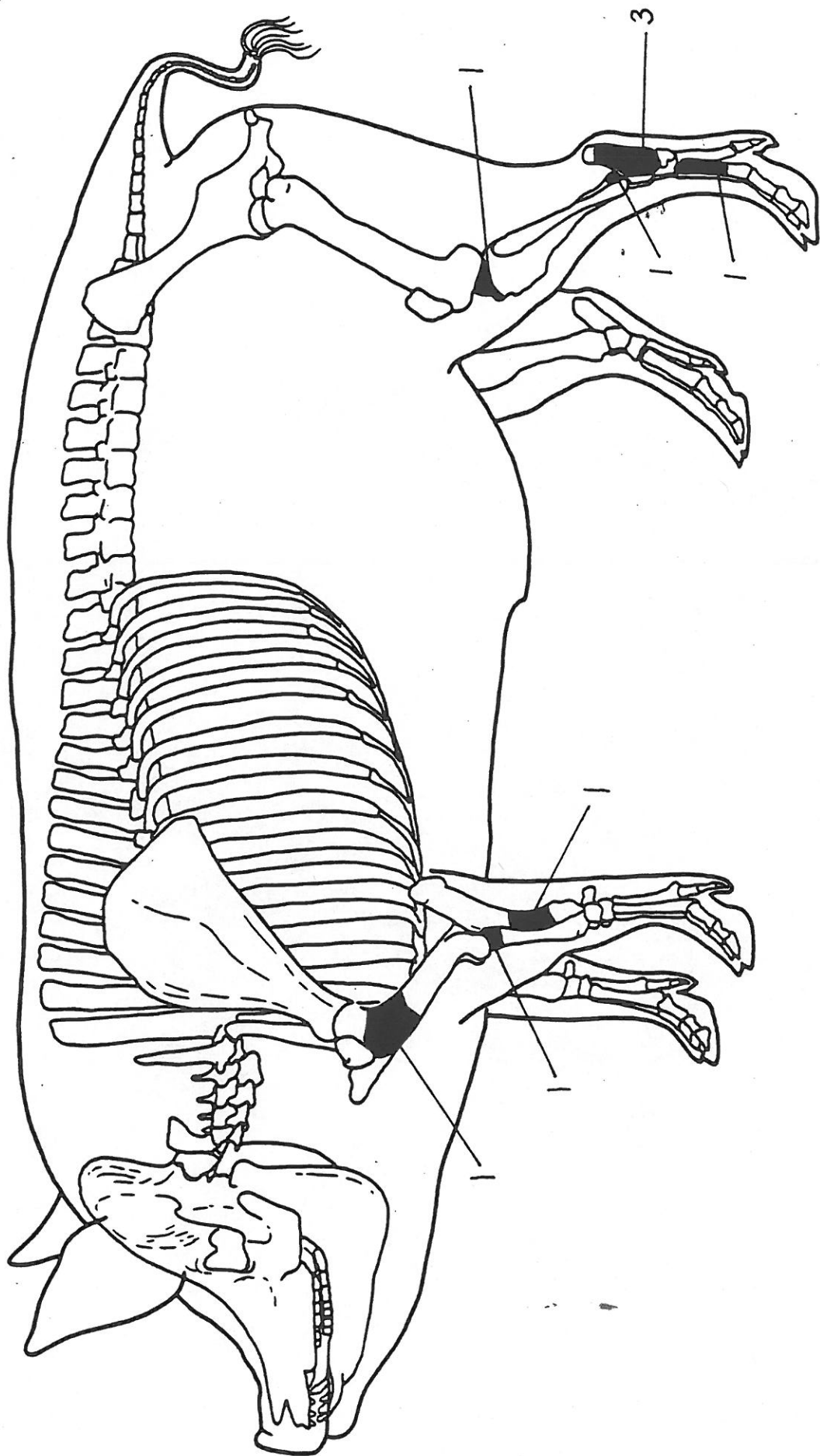


Figure 9. Nathaniel Russell (Andrus), Cow Elements Identified.
Not illustrated are 3 teeth and 1 hyoid. N=305.

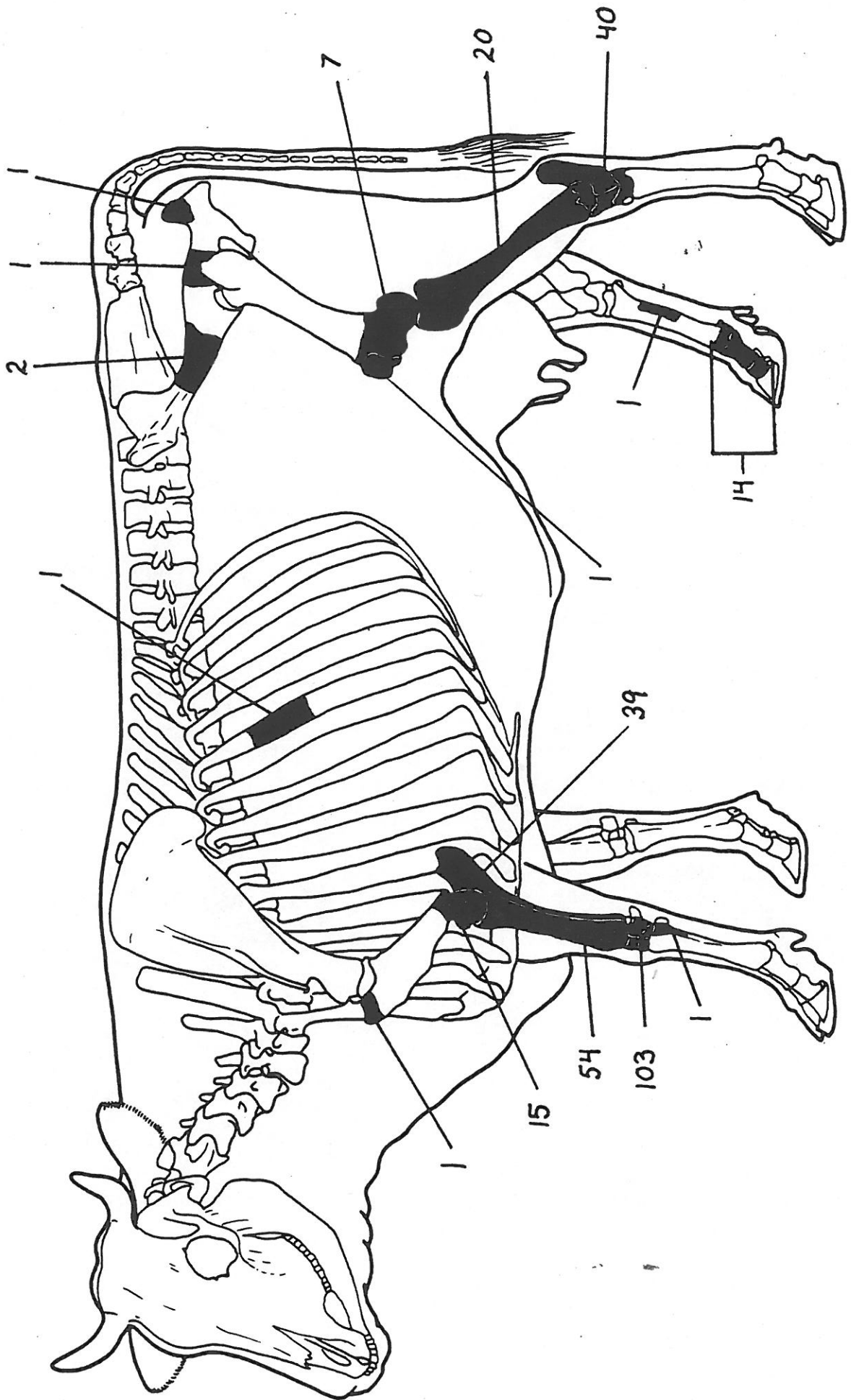


Figure 10. Nathaniel Russell (Andrus), Caprine Elements
Identified. N=20.

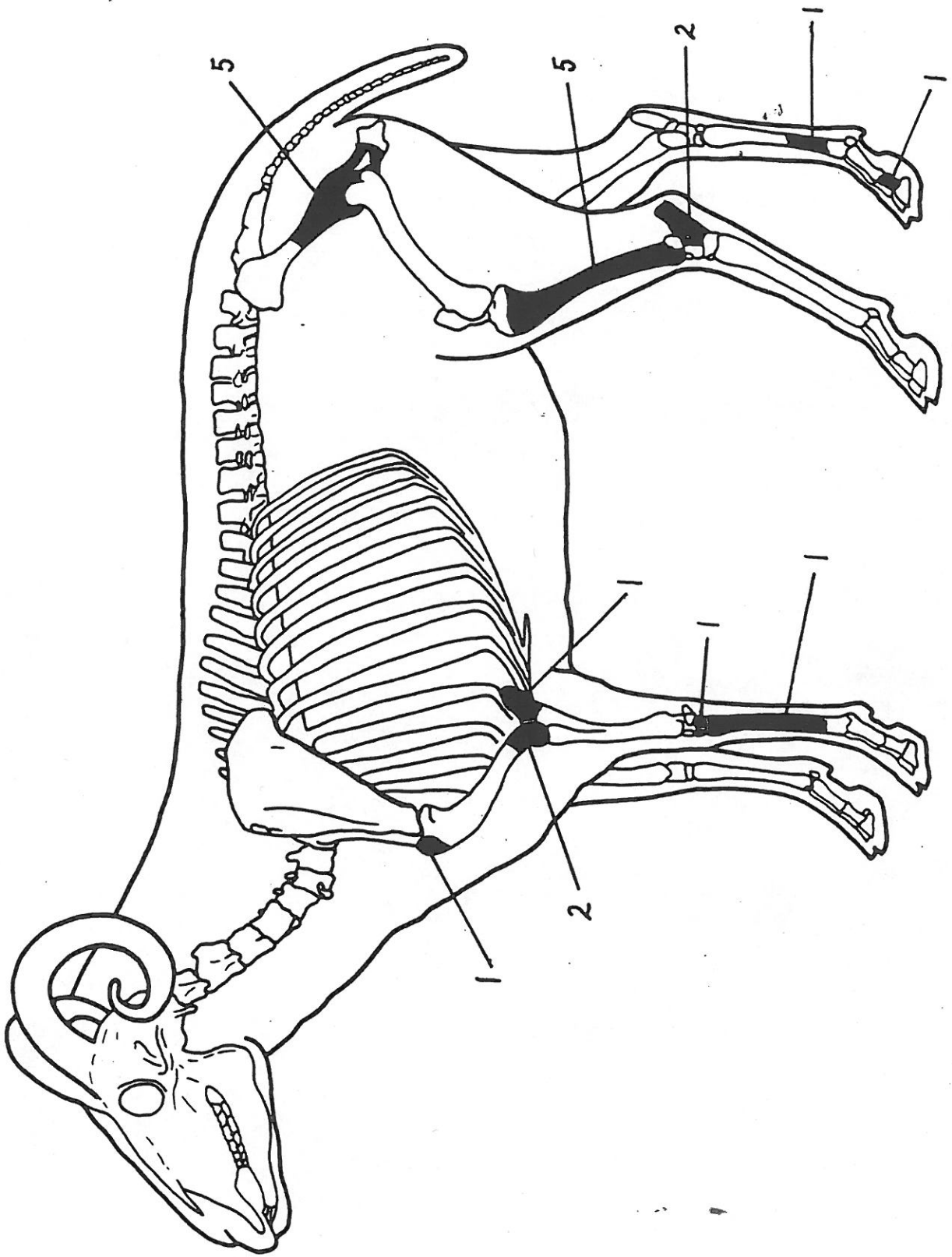


Table 1. Charleston Summaries, General and Beef Market.

	General		Beef Market	
	MNI	%	MNI	%
Domestic Mammals	250	31.4	33	42.3
Domestic Birds	118	14.8	7	9.0
Wild Mammals	67	8.4	12	15.4
Wild Birds	80	10.1	7	9.0
Reptiles	39	4.9	2	2.6
Sharks and Fishes	145	18.2	15	19.2
Commensal Taxa	<u>97</u>	12.2	<u>2</u>	2.6
Total	796		78	

Note: General Pattern from Reitz (1990); Beef Market from Calhoun et al. (1984).

Table 2. Charleston Summaries, Upper Class.

	Rutledge		Brewton-Motte-Alston		Gibbes		Aiken-Rhett		Pringle-Frost	
	MNI	%	MNI	%	MNI	%	MNI	%	MNI	%
Domestic Mammals	6	50.0	14	22.6	8	29.6	28	43.1	10	12.5
Domestic Birds	1	8.3	5	8.1	4	14.8	8	12.3	5	6.3
Wild Mammals	1	8.3	2	3.2	1	3.7	5	7.7	4	5.0
Wild Birds	1	8.3	7	11.3	5	18.5	4	6.2	8	10.0
Reptiles			3	4.8	2	7.4	6	9.2	3	3.8
Sharks and Fishes	2	16.7	18	29.0	5	18.5	12	18.5	31	38.3
Commensal Taxa	<u>1</u>	8.3	<u>13</u>	21.0	<u>2</u>	7.4	<u>2</u>	3.1	<u>19</u>	23.8
Total	12		62		27		65		80	

Note: Rutledge data are from Zierden and Grimes (1989:144); Brewton-Motte-Alston data from Reitz (1990); Gibbes data from Zierden et al. (1987); Aiken-Rhett from Zierden et al. (1986); Pringle-Frost data from Reitz (1990).

Table 3. Allometric Values Used In Study.

Faunal Category	N	Y-Intercept (a)	Slope (b)	r ²
<u>Bone Weight (kg) to Body Weight (kg)</u>				
Mammal	97	1.12	0.90	0.94
Bird	307	1.04	0.91	0.97
Turtle	26	0.51	0.67	0.55
Osteichthyes	393	0.90	0.81	0.80
Siluriformes	36	1.15	0.95	0.87
Perciformes	274	0.93	0.83	0.76
Serranidae	18	1.51	1.08	0.85
Sciaenidae	99	0.81	0.74	0.73

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 Cordier 1983; Reitz et al. 1987; Wing and Brown 1979).

Table 4. Nathaniel Russell: Sample Characteristics.

	NISP	MNI	Wt, gm
1780-1810	260	10	1183.97
1808-1857	708	23	3371.25
1857-1870	601	18	4710.37
1870-1908	602	16	4271.07
Andrus (1820-1870)	<u>836</u>	<u>36</u>	<u>12656.54</u>
Total	3007	103	26193.20

Table 5. Nathaniel Russell (1780-1857): Species List.

	NISP	MNI		WT, GM	BIOMASS	
		#	%		Kg	%
UID Mammal	756			2101.52	27.457	47.40
<u>Homo sapiens</u>	1	1	3.03	4.77		
Human						
<u>Rattus spp.</u>	6	3	9.09	1.97	0.052	0.09
Old World rat						
<u>Felis domesticus</u>	1	1	3.03	3.50	0.081	0.14
Domestic cat						
Artiodactyl	10			18.21	0.375	0.65
<u>Sus scrofa</u>	33	5	15.15	249.31	4.032	6.96
Pig						
<u>Odocoileus virginianus</u>	1	1	3.03	2.43	0.058	0.10
Deer						
<u>Bos taurus</u>	50	6	18.18	1739.53	22.501	38.85
Cow						
Caprine	12	3	9.09	126.74	2.185	3.77
Sheep/goat						
UID Bird	47			22.46	0.354	0.61
Anatidae	5	1	3.03	3.14	0.058	0.10
Ducks						
<u>Gallus gallus</u>	8	2	6.06	7.71	0.139	0.24
Chicken						

Table 5. Nathaniel Russell (1780-1857): Species List (cont.).

	NISP	MNI		WT, GM	BIOMASS	
		#	%		Kg	%
<u>Meleagris gallopavo</u>	2	1	3.03	5.71	0.100	0.17
Turkey						
Charadriiformes	1	1	3.03	0.12	0.003	0.01
Rails						
UID Turtle	12			9.40	0.142	0.25
<u>Apalone</u> spp.	1	1	3.03	0.89	0.029	0.05
Softshell turtle						
<u>Bufo</u> spp.	1	1	3.03	0.17		0.00
Toad						
UID Fish	14			8.98	0.197	0.34
<u>Arius felis</u>	2	2	6.06	1.06	0.021	0.04
Hardhead catfish						
<u>Bagre marinus</u>	1	1	3.03	0.94	0.019	0.03
Gafftopsail catfish						
<u>Centropristis</u> spp.	1	1	3.03	0.12	0.002	0.00
Sea bass						
Sciaenidae	1			2.04	0.066	0.11
Drums						
<u>Pogonias cromis</u>	1	1	3.03	0.35	0.018	0.03
Black drum						

Table 5. Nathaniel Russell (1780-1857): Species List (cont.).

	NISP		MNI		WT, GM	BIOMASS	
	#	%	#	%		Kg	%
<u>Sciaenops ocellatus</u>	1	1	3.03		0.91	0.036	0.06
Red drum							
UID Vertebrate	—	—			<u>243.24</u>	—	—
Total	968	33			4555.22	57.925	

Table 6. Nathaniel Russell: Summary.

	1780-1857				1857-1908			
	MNI		Biomass		MNI		Biomass	
	#	%	Kg	%	#	%	Kg	%
Domestic Mammals	14	43.8	28.718	97.9	15	44.1	69.088	97.8
Domestic Birds	2	6.3	0.139	0.5	6	17.6	0.874	1.2
Wild Mammals	1	3.1	0.058	0.2				
Wild Birds	3	9.4	0.161	0.5	4	11.8	0.429	0.6
Turtles	1	3.1	0.029	0.1	1	2.9	0.066	0.1
Sharks & Fishes	6	18.8	0.096	0.3	3	8.8	0.024	0.03
Commensal Taxa	<u>5</u>	15.6	<u>0.133</u>	0.5	<u>5</u>	14.7	<u>0.167</u>	0.2
Total	32		29.334		34		70.648	

Note: Human MNI has been omitted from this table.

Table 7. Nathaniel Russell (1780-1857): Elements Identified.

	Human	Rat	Cat	Pig	Deer	Cow	Caprine
Head			1	25		5	4
Vertebra/Rib						1	
Forequarter				5		10	3
Forefoot						13	
Foot					1	7	3
Hindfoot	1			1		7	1
Hindquarter	—	<u>6</u>	—	<u>2</u>	—	<u>7</u>	<u>1</u>
Total	1	6	1	33	1	50	12

Table 8. Nathaniel Russell (1780-1857): Epiphyseal Fusion, Fig.

	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			
FEMUR, DISTAL	1		1
TIBIA, PROXIMAL	-		-
TOTAL	1		1

Table 9. Nathaniel Russell (1780-1857): Epiphyseal Fusion, Cow.

	UNFUSED	FUSED	TOTAL
EARLY FUSING:			
HUMERUS, DISTAL		1	1
SCAPULA, DISTAL			
RADIUS, PROXIMAL		1	1
ACETABULUM		1	1
METAPODIALS, PROXIMAL		5	5
1ST/2ND PHALANX, PROXIMAL		4	4
MIDDLE FUSING:			
TIBIA, DISTAL		2	2
CALCANEUS, PROXIMAL			
METAPODIALS, DISTAL	2	2	4
LATE FUSING:			
HUMERUS, PROXIMAL			
RADIUS, DISTAL	1		1
ULNA, PROXIMAL	1		1
ULNA, DISTAL			
FEMUR, PROXIMAL			
FEMUR, DISTAL		1	1
TIBIA, PROXIMAL	<u>1</u>	—	<u>1</u>
TOTAL	5	17	22

Table 10. Nathaniel Russell (1780-1857): Epiphyseal Fusion, Caprine.

	UNFUSED	FUSED	TOTAL
EARLY FUSING:			
HUMERUS, DISTAL		2	2
SCAPULA, DISTAL			
RADIUS, PROXIMAL			
ACETABULUM			
METAPODIALS, PROXIMAL		1	1
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		6	6

Table 11. Nathaniel Russell (1780-1857): Modifications.

	Sawed	CC	Burned	Cut	Hacked	C. Gnawed	Worked
UID Mammal	15		11	4	3		3
Pig		2		2			
Deer							1
Cow	6	3			5		
Caprine				2	1	1	
Turkey				1		1	
UID Turtle			1				
UID Vertebrate	—	—	<u>3</u>	—	—	—	—
Total	21	5	15	9	9	2	4

Note: CC refers to Clean-cut and C. Gnawed to Carnivore-gnawed.

Table 12. Nathaniel Russell (1857-1908): Species List.

	NISP	MNI		WT, GM	BIOMASS	
		#	%		Kg	%
UID Mammal	892			3146.66	39.630	35.55
<u>Rattus spp.</u>	13	4	11.76	4.30	0.105	0.09
Old World rat						
<u>Felis domesticus</u>	1	1	2.94	2.61	0.062	0.06
Domestic cat						
Artiodactyl	1			4.39	0.100	0.09
<u>Sus scrofa</u>	32	5	14.71	321.60	5.089	4.57
Pig						
<u>Bos taurus</u>	108	6	17.65	4784.31	57.756	51.82
Cow						
Caprine	25	4	11.76	404.36	6.243	5.60
Sheep/goat						
UID Bird	48			22.79	0.371	0.33
Anatidae	6	2	5.88	6.51	0.120	0.11
Ducks						
<u>Gallus gallus</u>	36	6	17.65	58.25	0.874	0.78
Chicken						
<u>Meleagris gallopavo</u>	6	2	5.88	18.58	0.309	0.28
Turkey						
UID Turtle	4			12.85	0.219	0.20

Table 12. Nathaniel Russell (1857-1908): Species List (cont.).

	NISP	MNI		WT, GM	BIOMASS	
		#	%		Kg	%
Emyidae	14			34.31	0.412	0.37
Box and Water turtles						
<u>Trachemys scripta</u>	1	1	2.94	2.97	0.066	0.06
Yellowbelly slider						
UID Fish	13			3.09	0.082	0.07
<u>Bagre marinus</u>	1	1	2.94	0.33	0.007	0.01
Gafftopsail catfish						
<u>Pogonias cromis</u>	1	1	2.94	0.25	0.014	0.01
Black drum						
<u>Mugil</u> spp.	1	1	2.94	0.08	0.003	
Mullet						
UID Vertebrate	—	—		<u>153.20</u>	—	
Total	1203	34		8981.44	111.462	

Table 13. Nathaniel Russell (1857-1908): Elements Identified.

	Rat	Cat	Pig	Cow	Caprine
Head	4		9	8	
Vertebra/Rib				7	1
Forequarter	3	1	7	24	3
Forefoot				15	3
Foot			3	12	3
Hindfoot			2	18	5
Hindquarter	<u>6</u>	-	<u>11</u>	<u>24</u>	<u>10</u>
Total	13	1	32	108	25

Table 14. Nathaniel Russell (1857-1908): Epiphyseal Fusion, Fig.

	UNFUSED	FUSED	TOTAL
EARLY FUSING:			
HUMERUS, DISTAL	2		2
SCAPULA, DISTAL			
RADIUS, PROXIMAL		1	1
ACETABULUM			
METAPODIALS, PROXIMAL			
1ST/2ND PHALANX, PROXIMAL	2		2
MIDDLE FUSING:			
TIBIA, DISTAL			
CALCANEUS, PROXIMAL	1		1
METAPODIALS, DISTAL			
LATE FUSING:			
HUMERUS, PROXIMAL			
RADIUS, DISTAL			
ULNA, PROXIMAL	2		2
ULNA, DISTAL			
FEMUR, PROXIMAL	1		1
FEMUR, DISTAL	4		4
TIBIA, PROXIMAL	<u>3</u>	—	<u>3</u>
TOTAL	15	1	16

Table 15. Nathaniel Russell (1857-1908): Epiphyseal Fusion, Cow.

	UNFUSED	FUSED	TOTAL
EARLY FUSING:			
HUMERUS, DISTAL	1	1	2
SCAPULA, DISTAL			
RADIUS, PROXIMAL		5	5
ACETABULUM			
METAPODIALS, PROXIMAL		1	1
1ST/2ND PHALANX, PROXIMAL		2	2
MIDDLE FUSING:			
TIBIA, DISTAL	2	3	5
CALCANEUS, PROXIMAL	2	1	3
METAPODIALS, DISTAL	5		5
LATE FUSING:			
HUMERUS, PROXIMAL			
RADIUS, DISTAL	2	1	3
ULNA, PROXIMAL	1	1	2
ULNA, DISTAL			
FEMUR, PROXIMAL	1		1
FEMUR, DISTAL			
TIBIA, PROXIMAL	<u>4</u>	<u>1</u>	<u>5</u>
TOTAL	18	16	34

Table 16. Nathaniel Russell (1857-1908): Epiphyseal Fusion, Caprine.

	UNFUSED	FUSED	TOTAL
EARLY FUSING:			
HUMERUS, DISTAL		2	2
SCAPULA, DISTAL		1	1
RADIUS, PROXIMAL			
ACETABULUM			
METAPODIALS, PROXIMAL		4	4
1ST/2ND PHALANX, PROXIMAL		1	1
MIDDLE FUSING:			
TIBIA, DISTAL			
CALCANEUS, PROXIMAL	2		2
METAPODIALS, DISTAL			
LATE FUSING:			
HUMERUS, PROXIMAL			
RADIUS, DISTAL			
ULNA, PROXIMAL			
ULNA, DISTAL			
FEMUR, PROXIMAL			
FEMUR, DISTAL	1	1	2
TIBIA, PROXIMAL	—	<u>1</u>	<u>1</u>
TOTAL	3	10	13

Table 17. Nathaniel Russell (1857-1908): Modifications.

	Sawed	CC	Burned	Cut	Hacked	C. Gnawed	Worked
UID Mammal	57	2	12	2	2	1	3
Pig	2	1	1	3	2		
Cow	23	5	4	4	6	1	
Caprine	1		1	2			
UID Bird			1				
Chicken				1			
UID Turtle		1		1			
Water turtle					1		
Mullet			1				
UID Vertebrate	—	—	<u>5</u>	—	—	—	—
Total	83	9	25	13	11	2	3

Table 18. Nathaniel Russell (Andrus): Species List.

	NISP	MNI		WT, GM	BIOMASS	
		#	%		Kg	%
UID Mammal	430			2767.83	32.955	23.7
<u>Rattus</u> spp.	1	1	2.8	0.15	0.005	tr
Old World rat						
Artiodactyl	16			61.08	1.065	0.8
<u>Sus scrofa</u>	10	3	8.3	80.71	1.368	1.0
Pig						
<u>Odocoileus virginianus</u>	1	1	2.8	24.49	0.468	0.3
Deer						
<u>Bos taurus</u>	305	18	50.0	9306.8	98.157	70.7
Cow						
Caprine	20	4	11.1	217.84	3.344	2.4
Sheep/goat						
UID Bird	16			18.29	0.287	2.0
Anatidae	2	1	2.8	2.05	0.039	tr
Ducks						
<u>Gallus gallus</u>	20	4	11.1	28.96	0.437	0.3
Chicken						
<u>Meleagris gallopavo</u>	9	2	5.6	23.37	0.359	0.3
Turkey						

Table 18. Nathaniel Russell (Andrus): Species List (cont.).

	NISP	MNI		WT, GM	BIOMASS	
		#	%		Kg	%
<u>Trachemys scripta</u>	2	1	2.8	36.7	0.353	0.3
Yellowbelly slider						
UID Fish	3			0.68	0.022	tr
<u>Centropristis spp.</u>	1	1	2.8	0.37	0.006	tr
Sea bass						
UID Vertebrate	—	—		<u>87.22</u>	—	
Total	836	36		12656.54	138.865	

Table 19. Nathaniel Russell: Summary of late 18th Century/early 19th Century.

	<u>1780-1857</u>				<u>Andrus</u>			
	MNI		Biomass		MNI		Biomass	
	#	%	Kg	%	#	%	Kg	%
Domestic Mammals	14	43.8	28.718	97.9	25	69.4	102.869	98.4
Domestic Birds	2	6.3	0.139	0.5	4	11.1	0.437	0.4
Wild Mammals	1	3.1	0.058	0.2	1	2.8	0.468	0.4
Wild Birds	3	9.4	0.161	0.5	3	8.3	0.398	0.4
Turtles	1	3.1	0.029	0.1	1	2.8	0.353	0.3
Sharks & Fishes	6	18.8	0.096	0.3	1	2.8	0.006	tr
Commensal Taxa	<u>5</u>	15.6	<u>0.133</u>	0.5	<u>1</u>	2.8	<u>0.005</u>	tr
Total	32		29.334		36		104.536	

Note: Human MNI has been omitted from this table.

Table 20. Nathaniel Russell (Andrus): Elements Identified.

	Rat	Pig	Deer	Cow	Caprine
Head		1		4	
Vertebra/Rib				1	
Forequarter		3		109	4
Forefoot				104	2
Foot				15	2
Hindfoot		4		40	2
Hindquarter	<u>1</u>	<u>2</u>	<u>1</u>	<u>32</u>	<u>10</u>
Total	1	10	1	305	20

Table 21. Nathaniel Russell (Andrus): Epiphyseal Fusion, Pig.

	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	2		2
METAPODIALS, DISTAL	1		1
LATE FUSING:			
HUMERUS, PROXIMAL	1		1
RADIUS, DISTAL			
ULNA, PROXIMAL			
ULNA, DISTAL			
FEMUR, PROXIMAL			
FEMUR, DISTAL			
TIBIA, PROXIMAL	<u>1</u>		<u>1</u>
TOTAL	6		6

Table 22. Nathaniel Russell (Andrus): Epiphyseal Fusion, Cow.

	UNFUSED	FUSED	TOTAL
EARLY FUSING:			
HUMERUS, DISTAL		13	13
SCAPULA, DISTAL			
RADIUS, PROXIMAL		16	16
ACETABULUM	1		1
METAPODIALS, PROXIMAL			
1ST/2ND PHALANX, PROXIMAL		4	4
MIDDLE FUSING:			
TIBIA, DISTAL		4	4
CALCANEUS, PROXIMAL	5	7	12
METAPODIALS, DISTAL	1		1
LATE FUSING:			
HUMERUS, PROXIMAL			
RADIUS, DISTAL	22	12	34
ULNA, PROXIMAL	15	3	18
ULNA, DISTAL		2	2
FEMUR, PROXIMAL			
FEMUR, DISTAL	4	2	6
TIBIA, PROXIMAL	<u>10</u>	<u>3</u>	<u>13</u>
TOTAL	58	66	124

Table 23. Nathaniel Russell (Andrus): Epiphyseal Fusion, Caprine.

	UNFUSED	FUSED	TOTAL
EARLY FUSING:			
HUMERUS, DISTAL		2	2
SCAPULA, DISTAL			
RADIUS, PROXIMAL			
ACETABULUM	1	2	3
METAPODIALS, PROXIMAL			
1ST/2ND PHALANX, PROXIMAL		1	1
MIDDLE FUSING:			
TIBIA, DISTAL		3	3
CALCANEUS, PROXIMAL		1	1
METAPODIALS, DISTAL	2		2
LATE FUSING:			
HUMERUS, PROXIMAL	1		1
RADIUS, DISTAL			
ULNA, PROXIMAL		1	1
ULNA, DISTAL			
FEMUR, PROXIMAL			
FEMUR, DISTAL			
TIBIA, PROXIMAL	<u>1</u>	—	<u>1</u>
TOTAL	5	10	15

Table 24. Nathaniel Russell (Andrus): Modifications.

	Sawed	CC	Burned	Cut	Hacked	C. Gnawed	R. Gnawed
UID Mammal	12	5					
Artiodactyl							1
Pig			1	1			
Deer				1			
Cow	5	19	2	1	8	1	
Caprine				1	4	1	1
UID Bird						1	
Chicken							1
Turkey							1
Slider	—	<u>1</u>	—	—	—	—	—
Total	17	24	3	4	12	3	4

Note: CC refers to Clean-cut, C. Gnawed to Carnivore-gnawed, and R.

Gnawed to Rodent-gnawed.

Table 25. Nathaniel Russell: Skeletal Distributions.

	Head	Body	Foot
Standard Cow	26%	39%	35%
Beef Market	51%	28%	21%
Rutledge	11%	33%	56%
Russell (1780-1857)	10%	36%	54%
Russell (Andrus)	1%	47%	52%
Russell (1857-1908)	7%	51%	42%

Appendix A. Nathaniel Russell House: Samples Studied.

1994 FS Numbers by Time Period:

1780-1810	1808-1857	1857-1870	1870-1908
21	4	22	11
51	5	25	13
62	9	26	14
75	15	28	16
76	19	46	27
84	42	49	31
	48	56	32
	52	59	33
	53	60	34
	54	63	36
	55	66	37
	57		38
	61		41
	64		43
	65		45
	67		50
	69		70
	72		
	73		
	74		
	82		

Fred Andrus Proveniencies (N05-10, E00-05):

Zone 1 Level 1
 Zone 1 Level 2
 Zone 1 Level 4
 Zone 2 Level 1
 Zone 3 Level 1
 Zone 3 Level 2
 Zone 3 Level 3
 Zone 3 Level 4
 Zone 4 Level 1
 Zone 4 Level 2

Appendix B. Nathaniel Russell House: Measurements.

SPECIES	ELEMENT	DIMENSION	MEASUREMENT, MM
<u>Sus scrofa</u>	1st Molar, lower	L	17.2, 22.6
		B	10.6, 14.8
	2nd Molar, lower	L	18.6
		B	11.9
	3rd Molar, upper	L	36.2
		B	18.6
	4th D Premolar, lower	L	17.9, 19.3
		B	8.9, 8.9
	Radius, epi.	Bp	32.9
	4th Metatarsal	Bp	15.2
<u>Bos taurus</u>	2nd Molar, upper	L	27.8
		B	18.9
	2nd Molar, lower	L	24.9
		B	13.3
	3rd Molar, upper	L	28.2
		B	16.1
	3rd Premolar, up.	L	19.2, 20.0
		B	14.5, 14.5
	Humerus	Bd	86.4, 74.5, 75.9, 81.9, 83.5
		BT	86.5, 82.9, 84.0
	Radius	Bp	86.6, 84.4, 76.0, 87.4, 83.4, 83.0, 76.7, 80.7, 76.9
		Bd	75.7, 77.5,
	Radius, epi.	Bd	74.8, 74.3, 80.3, 78.9, 66.8, 74.6
		SDO	61.2
	Ulna	GB	46.4
	Inter. Carpal	GB	45.5, 51.1, 47.9, 48.1, 47.6, 41.8, 42.7, 44.8, 46.8, 48.1, 51.5, 52.0, 51.0, 48.2, 46.7, 47.3, 39.0, 47.1, 49.3, 50.1, 49.6, 48.9, 48.3, 47.0, 54.4, 43.8
	Radial Carpal	GB	41.4, 43.6, 40.5, 32.3, 36.1, 36.1, 40.2, 35.1, 36.8, 34.6, 38.0, 37.8, 31.5, 39.1, 33.3, 35.8, 37.0, 36.8, 34.7, 38.3, 38.2, 36.1, 34.4, 38.4, 36.7, 38.6, 37.6, 46.0, 34.8, 35.9
	Carpals 2+3	GB	

Appendix B. Nathaniel Russell House: Measurements (cont.).

SPECIES	ELEMENT	DIMENSION	MEASUREMENT, MM	
<u>Bos taurus</u> (cont.)	Metacarpal	Bp	61.2, 55.8	
	Femur, epi.	Bd	98.8	
	Tibia	Bd	61.9, 74.4, 75.1, 67.8, 62.2, 65.1	
	Os Malleolare	GD	34.3, 35.3	
	Cubonavicular	GB	65.6, 61.5, 65.7, 57.0, 58.5, 52.4, 55.7, 56.4, 60.8, 64.1	
	Astragalus	Bd	44.3, 43.6, 45.2, 38.6, 48.4	
		GLm	62.9, 61.1, 65.7, 61.2, 44.8, 41.0, 64.6	
		GLl	67.0, 67.1, 71.0, 65.3, 68.2, 70.6, 66.5	
	Calcaneus	GL	124.0, 143.7, 132.0, 145.0, 148.3, 148.5, 135.2	
	Tarsals 2+3	GB	40.3, 37.8, 37.5, 34.1, 36.6	
	Caprine	2nd Molar, lower	B	7.6
		Humerus	L	16.7
			BT	34.1, 30.1
		Ulna	Bd	31.9, 33.1, 30.8
			LO	48.5
		Carpals 2+3	GB	16.8
		Metacarpal	Bp	25.7, 23.7, 23.5
		Acetabulum	LA	31.1, 28.3
		Femur	Bd	39.0
Tibia		Bd	39.9, 28.7, 27.3	
Os Malleolare		GD	16.1	
Astragalus		GLl	32.5	
		GLm	31.3	
		Bd	21.0	
Calcaneus		GL	65.7	
Metatarsal	Bp	21.9, 21.1, 19.2		
Carpometacarpus	Bp	13.4		
Femur	Bp	10.4		
	Lm	49.9		
<u>Gallus gallus</u>	Scapula	Dic	11.2, 13.0	
	Coracoid	Bp	13.5, 12.8	
		GL	58.4, 59.9, 50.9, 50.8	
		ML	55.5	
		BF	11.3, 11.6, 10.2	
		Bb	13.5, 13.8	
		Lm	49.2, 48.1	

Appendix B. Nathaniel Russell House: Measurements (cont.).

SPECIES	ELEMENT	DIMENSION	MEASUREMENT, MM	
<u>Gallus gallus</u> (cont.)	Humerus	Bp	19.7, 12.4, 20.2, 20.3, 17.9, 17.9,	
		GL	72.8, 53.6, 75.0, 71.5, 66.2, 66.1	
		Bd	14.8, 10.3, 15.0, 15.8, 14.2, 14.3	
	Radius	SC	8.3	
		GL	59.0	
		Bd	4.9	
	Ulna	GL	69.8, 65.2, 64.6	
		Bp	9.0, 11.4, 7.6	
		Did	8.9, 8.8	
		Dip	11.4, 11.8	
	Carpometacarpus	Bp	17.1, 10.9	
		GL	57.3, 35.8	
		Did	6.1	
	Acetabulum	DiA	8.9, 19.6, 8.2	
	Femur	Bp	12.9, 20.1, 16.2, 16.6, 14.5, 14.2	
		GL	74.9, 74.6	
		Dp	9.4, 14.6, 11.9, 10.5, 10.1	
		Sc	7.3	
		Bd	13.4, 13.5, 17.2	
		Lm	70.4, 70.2	
		Tibiotarsus	Dd	18.5, 15.8, 12.5, 16.0
			Bd	13.6, 12.2, 8.8, 12.2
			GL	102.9
			Did	12.2
	Dip		18.1, 18.0	
	Tarsometatarsus		Bp	12.9, 12.6
	<u>Meleagris gallopavo</u>	Humerus	Bd	12.0, 14.7
Bp			42.9	
Femur		Bd	18.6	
1st Phalanx(man.)		GL	21.5	
Tibiotarsus		Dd	17.6	
Tarsometatarsus	Bd	0.89		