GEORGIAN OPULENCE:
Archaeological Investigations of the Gibbes House
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OF THE GIBBES HOUSE

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CHAPTER I
INTRODUCTION

In 1984, the William Gibbes House at 64 South Battery was offered for sale by Mr. and Mrs. Ashby Farrow. Believing that the house was of such historic significance that it should be retained as a single family residence and restored, rather than be subdivided or made into condominiums, Historic Charleston Foundation purchased the house and offered it for sale with protective covenants. The house was purchased in February 1986 by Mr. and Mrs. Jefferson Leath. As part of their extensive renovations, the Leaths planned to construct a modest swimming pool. Realizing that such activity might adversely impact the archaeological record of the site, Historic Charleston Foundation arranged for The Charleston Museum to conduct controlled excavations in this vicinity prior to pool construction.

The area of pool construction measured 25 feet by 25 feet; excavations were confined to this area and the project was designed to examine as much of this 25 foot area as possible. During one week of excavation, three 5 foot squares were excavated to sterile soil. The small sample retrieved from the Gibbes House contained a quantity of material, and is a valuable addition to ongoing archaeological research in Charleston.

Background

The double house of Georgian design at 64 South Battery was constructed by William Gibbes, a merchant and planter, in 1772. At that time, the site was on a strip of high land located between two areas of marsh and was the last one on the street; the neighborhood was considered peripheral to the late eighteenth century commercial core. At the time of construction the house overlooked the Ashley River and Gibbes constructed a large wharf directly in front of his house.

Gibbes did not enjoy his dwelling for long; because he was a patriot, his loyalties led to his eviction when the British occupied the city from 1780 to 1782. During this time, the house was used as a hospital. After this, the house passed to the Smith and Grimke families, and much of the house interior was renovated in the popular Adam style. Mrs. Washington Roebling acquired the house in 1928. She also made extensive improvements to the house, and laid out the large classic gardens. The house remained in the Roebling family until Mr. Farrow sold it in 1984.

Because of the extensive documentation available for the site, and the fact that it represents a single building episode, the site represents an excellent addition to the archaeological data base of the city.
Urban Archaeology in Charleston

The development of archaeology in Charleston parallels the development of urban archaeology in much of the country. Investigations began with a few small-scale, isolated projects, and these were essentially descriptive in nature. A number of research efforts were initiated in 1981, and served to bring the city into the mainstream of urban archaeology. This included initiation of large scale, federally sponsored excavation at the Charleston Center site (Honerkamp et al. 1982), expansion of artifact studies (Herold 1981; Singleton 1982, 1984), and the initiation of long term archival research sponsored by the City (Zierden and Calhoun 1982, 1984a, 1984b; Calhoun and Zierden 1984; Calhoun et al. 1982).

The archival research served as an archaeological survey of the city. This two year project was funded by Community Development Grants from the City and matching Historic Preservation grants, administered by the South Carolina Department of Archives and History. Based on the length and density of human occupation of the urban center, the entire peninsular city below the cross town was considered a vast, contiguous archaeological site (Figure 1). Survey of the city has been limited to this area, so far.

An anthropological approach was taken to the archival record. The documents with the greatest relevance are those that give insights into the formation of adaptive patterns, the way in which they are manifested in the community, and the way in which they are reflected in the ground (Deagan 1983:13-14). Based on Deagan's (1983) model, these include:

1) Information relevant to an understanding of social variability in the city. This includes population demography, occupation, income ranges, social and ethnic classes.

2) Information relevant to the material world and economy of Charleston. This includes studies of Charleston's economic system, her position in the world economy, range of activities of the commercial sector of Charleston's population, description of the range of imports available to Charleston's citizens, local production of goods, and the mechanisms and manifestations of distribution and exchange in the city.

3) Information relevant to the physical formation of the archaeological record. This includes information on the physical landscape of Charleston, such as patterns of growth and development in the city, location of different activity areas, and the nature of the physical environment prior to intensive utilization. This also includes such physical contributions to the record as architectural and building construction methods, cultural and natural disasters, disposal and sanitation practices, and public works.

Research, then, focused on delineating general trends, rather than enumerating specifics. This general information forms the background for more specific research on individual sites. The problems in making archaeological inferences from purely documentary sources was partially alleviated by incorporating information from concurrent excavation projects. From these projects, information about stratigraphic depth and integrity, feature presence and clarity, and general site conditions were utilized to predict site data in various parts of the city.
Figure 1: The South Carolina coast, showing the Charleston peninsula.
Since the initiation of this unified research approach, nine sites have been examined within the city; the majority of these projects have been small in scale. Well formulated research questions facilitate meaningful integration of the data from such small projects into a comparative framework. The majority of these projects have been located within the commercial core of the colonial city, on sites that were used for both residential and commercial purposes. These sites experienced multiple building episodes, property line changes, and numerous owners and/or tenants. The Gibbes site is only the second site to be investigated which is located in a suburban, residential neighborhood (see Figure 1). The property line, standing structures, and general site configuration have remained the same since the site was first occupied in 1772. Therefore, the Gibbes site presents an excellent data base for investigation of a number of issues.

Proposed Research Questions

The research questions proposed for the Gibbes site in particular and Charleston in general approach investigation of the city on a variety of levels. Urban archaeology is a relatively new field of study, and many of the processes responsible for the formation of the urban archaeological record are poorly understood. For this reason, some of the research issues are formative, addressing such issues as site formation processes, site function, artifact patterning, and lot element patterning. Another aspect of these more basic questions are descriptive studies, including the examination of new or poorly documented artifact types.

Such research serves as a background for ongoing research on the processual issues of human behavior. These questions, classified as adaptive, include investigation of social and ethnic variability. Data from rural as well as urban sites are used to investigate the issues of subsistence strategies, municipal responses to basic needs, rural-urban contrasts, spatial patterning, and the role of the city in the regional social and economic milieu. Results from these studies have most recently been utilized in an ongoing examination of urban adaptive strategies. The Gibbes data was appropriate for the investigation of several issues.

1) Spatial patterning - The demands of the urban environment are reflected in the spatial patterning of the urban compound. During the eighteenth and nineteenth centuries, most of the structures found dispersed across the rural plantation site were cramped onto the constricted urban lot (Castille et al. 1982:5; Wade 1964:61). Urban compounds, particularly those located within the commercial core, were organized to make the most efficient use of available land. Lots were deep and narrow, to maximize the street frontage available. Houses fronted directly on the street, with the narrow end facing the road. The southern side was complete with piazzas while the northern side was devoid of large openings. Behind the main structure, auxiliary structures were arranged within a fenced compound. The back yard was the focus of many activities, including commercial as well as domestic enterprises.
Figure 2: Location of sites excavated in Charleston; the Gibbes House is #10.
The Gibbes house is expected to diverge from this model. With his wealth, and location in the suburban area of the city, Gibbes was less sensitive to the expense and constrictions which were so much a factor in the central core of the city. This, combined with the domestic-only function of the site, should produce a more dispersed spatial pattern than exhibited at more central sites. The Gibbes site is an excellent data base for expanding the model of urban spatial patterning; all of the structures are extant, and considerable details on site activities are available.

The Gibbes site will also serve as an example for the continued examination of city-wide spatial patterning. Studies have suggested that Charleston's physical growth and development was a patterned response to certain conditions (Calhoun et al. 1982, 1985; Calhoun and Zierden 1984; Zierden and Calhoun 1986). The development of the Gibbes site will be used to examine growth and development in the late eighteenth century.

2) Socioeconomic status - A recent focus of historical archaeology in general and urban studies in particular has been the delineation of socioeconomic status (Cressey et al. 1982; Deagan 1983; Spencer-Wood 1987; Wise 1984). Using the documentary record as a control, the socially stratified urban center can serve as an appropriate data base for recognizing socioeconomic status and consumer choices in the archaeological record.

A problem with status studies in Charleston has been the lack of specific documentary information on site inhabitants, and the inability to associate individual site contexts with specific occupants. A recent exception to this was the Aiken-Rhett site, an antebellum suburban townhouse owned and occupied by a wealthy planter-merchant; the high socioeconomic status of William Aiken and his family was strongly reflected in the archaeological record (Zierden et al. 1986). The Aiken-Rhett house and the Gibbes house share several characteristics; the Gibbes site is therefore expected to reflect the high status of the occupants. The site is expected to provide some direct correlations between status and patterns of material culture, diet, housing and site location. Each of these aspects will be examined in detail.

3) Subsistence strategies - Increasing attention is being focused on the study of subsistence strategies in historic populations, using faunal and floral remains recovered from historic sites (Reitz and Scarry 1985). Faunal and floral remains have been used to address a variety of questions concerning historic subsistence strategies. These include cultural conservatism, adaptation to local environments, ethnicity, and social variability. Faunal and floral remains have been recovered and examined in a consistent manner, resulting in the formation of several models; data from the Gibbes site will be used to examine these models.

Recent urban investigations suggest a rural-urban dichotomy on historic sites in the southeast, based on the ratio of wild to domestic fauna (Reitz 1986). This is believed to be the result of an increased dependence on the market system for meat, and the reduced availability of wild species (Calhoun et al. 1984).
Although these differences seem to crosscut temporal and social parameters, the diet of the wealthy, whether urban or rural, seems to have been more varied. This was supported archaeologically at the Aiken-Rhett house; although heavily dependent on domestic meats, the small sample nonetheless exhibited considerable diversity, and contained a number of wild and domestic birds, turtles, and a large variety of fish, including two offshore species. The Gibbes samples are expected to exhibit similar trends.

4) Rural-urban contrast - Charleston's growth as a marketing center was concommitant with the growth of its surrounding hinterlands. The focus on rice as a profitable staple crop spurred Charleston's growth as a port and trade center. Because the economic emphasis of the city was on the marketing of staple crops, the urban economy was dependent on that of the plantation, and vice versa. Thus, the city of Charleston was intimately linked with the lowcountry plantations, both socially and economically. In fact, it has been suggested that southern cities in general were more closely linked with, and influenced by, their agricultural hinterlands than were northern cities (Goldfield 1982:3). As part of this study, contrasts between rural and urban adaptive strategies have been examined most successfully.

An assumption underlying most anthropologically oriented archaeological investigations is that human culture develops in response to environmental conditions, at both the natural and cultural levels. Based on research at rural sites, small frontier settlements, and, more recently, large urban centers, archaeologists are beginning to discern major and subtle differences between rural and urban lifestyles. Studies of rural-urban contrast have focused on three areas:

1) artifact patterning and site function
2) spatial patterning
3) site formation processes

Within each setting, residents developed adaptive strategies to cope with environmental possibilities as well as limitations. The present study will focus on rural-urban contrasts among the upper class, using the Gibbes data as an example.
The Development of Charleston

A group of patriotic and profit-seeking English noblemen founded the Carolina colony in 1670. Ten years later, the Lords Proprietors, eager to establish a port city in Carolina, relocated their first town from a marshy area on Albemarle Point to the more defensible and commercially suitable peninsula formed by the confluence of the Ashley and Cooper rivers (Earle and Hoffman 1977). The area of relatively high bluffs and narrow marsh was best suited for shipping, and the English settled the area along the Cooper River bounded by present-day Water, East Bay, Cumberland, and Meeting streets. The planned city, known as the Grand Model, encompassed the high land from Oyster Point to Beaufain Street. The town was laid out around a central square and divided by wide streets into deep, narrow lots, a plan characteristic of seventeenth 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 peninsula was ideally suited for trade. In 168C, an enthusiastic observer marvelled:

The situation of this Town is so convenient for public Commerce that it rather seems to be the design of some skilfull Artist than the accidental position of nature (Mathews 1954:153).

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 decided to take advantage of the abundance of deer in the Carolina forests.

The colonists readily appreciated the value of this multitude of deer. The earliest trade in skins was a secondary, small-scale pursuit of individual planters (see Zierden et al. 1986b). 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 trade network was radically altered by the success of the colonists in the Yemassee War (1715-1716). Though it resulted in increased safety for the settlers, the defeat of the Indians caused the tribes to retreat inland. 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 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. The recognition, respect, and wealth which many of these merchants 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).

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 Afro-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 was black. Negro bondsmen and women worked the crops in the country and provided labor for building and maintaining the city.

The decade of the 1730s witnessed Charles Town's transformation from a small frontier community to an important mercantile center. When royal rule replaced an inefficient Proprietary government in 1729, following a revolt by the settlers, Charleston entered the mainstream of the colonial economy. The development of outlying communities, following the Township Plan of 1730, brought an influx of products from the backcountry. Meanwhile, as rice became more profitable, lowcountry plantations rapidly expanded. During this period, the 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. This strong tie to the country is an important theme in the city's history (Goldfield 1982).

Charleston's economic expansion in the 1730s was matched by physical expansion. By 1739 the city had grown well beyond the original city walls and development was primarily to the west (Roberts and Toms 1739). 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. The area that would become William Gibbes' property was at this time a narrow peninsula of high land surrounded by marsh (Figure 3).

As the eighteenth century advanced, Charles Town expanded in economic importance and in 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.
Figure 3: Charleston in 1739, showing the future location of William Gibbes' property.
Charleston was the economic, political, and social center of the surrounding region.

By the late eighteenth century, the population of the city had increased dramatically; physical growth proceeded more slowly. Instead, the areas already occupied in the early eighteenth century were subject to more intensive occupation. The already narrow lots in the center of town were increasingly subdivided, and buildings expanded vertically and into the interior of blocks. Areas of marsh were filled to reduce health hazards and create new real estate. By the time William Gibbes purchased his Ashley River property, much of the marsh behind the narrow peninsula had been filled; Gibbes evidently continued this process (Figure 4).

The William Gibbes House

William Gibbes was born January 8, 1723, and baptised in the Parish of St. Andrews. Though the Gibbes family is traditionally associated with Colleton County, William Gibbes had strong ties to Christ Church Parish through his marriages. He married Mary Benison in 1744, and she bore him two daughters. Mary Benison Gibbes died in 1747, and a year later Gibbes married Elizabeth Hasell. They had five children. His third wife, Mary Cook, bore him two sons (Edgar and Bailey 1977:274).

Gibbes moved to Charles Town in the 1760s and achieved success as a merchant and factor. When he built his own home, he eschewed the crowded central city favored by many merchants, and instead chose to build in the developing suburbs. On September 19, 1772 he purchased a large plot of land on the west end of South Bay Street, in partnership with Robert Mackenzie, Edward Blake, and George Kincaid. A portion of this property was transferred to Samuel Legare, merchant (CCRMCO P4:151-156). On the same day, Legare sold to William Gibbes, for £ 2000 "lawful money of said province,"

All that piece, parcel, or lot of land situate on White Point in Charles Town, being part of the land lately walled and filled in jointly by Robt. Mackenzie, Edward Blake, George Kincaid, and the said William Gibbes, as tenants in common" (CCRMCO R4:306-310).

The property bounded south on the wall fronting the Ashley River," 135 feet, and on South Bay Street, 138 feet, East on Edward Blake's land 424½ feet, North on a new street called Gibbes Street, 180 feet, and westerly on Robert Gibbes and part on said William Gibbes land."

Gibbes immediately began to build on the portion of his property north of South Bay Street. He built an imposing Georgian double house. It is thought to be designed by Charleston's first domestic architect, Robert Fullerton (Gibbes House files, Historic Charleston Foundation). The house features two and one half stories of wooden frame rising above a high masonry basement. Large elaborate pediments grace the front door and the windows are framed with tabernacles, the signature of Fullerton. The finely carved interior woodwork is based on English prototypes.
Figure 4: Charleston in 1788, showing William Gibbes’ wharf and house.
Gibbes also commenced construction of a large wharf across the street, on the Ashley River. In January, 1773, he requested,

"to be delivered to any convenient landing in the country or at the subscribers new wharf on South Bay: 500 cords of pine wood, 200 large hickory posts, 5,000 split rails for fencing" (South Carolina Gazette, January 6, 1773).

In February, he advertised for sale,

"fifteen lots of land on White Point, pleasantly situated near the Ashley River, all fronting good, airy streets, foundations in stiff clay, has a good a water as any in Charleston" (South Carolina Gazette February 16, 1773).

On May 30 he was soliciting for the discharge of any kind of ballast at his wharf (South Carolina Gazette, May 30, 1773). In September he advertised that he had completed his wharf on the Ashley and

"has some convenient, safe stores...and...will build scales at the head of the wharf. All vessels, for their ballast, shall be entitled to their wharfage and water free, with liberty to clean"

He also again advertised his fifteen lots for sale (South Carolina Gazette September 14, 1773).

Two years later, Gibbes again advertised his wharf. His scale house "for weighing rice" was now complete. He was still soliciting ballast and offering his fifteen lots. Purchasers would be able to land, gratis, their building materials on his wharf (South Carolina Gazette, April 3, 1775).

Though he was the farthest west, Gibbes was not the only merchant to construct a wharf along this portion of the Ashley River. His former partners, Edward Blake and Robert Mackenzie, also built wharves here. The frenzy of wharf construction in the late eighteenth century called for regulation of wharfage and storage charges, which, according to grand jury findings, soared beyond reason. This bore heavily on both "trading and planting interests" until, finally in 1768, the Assembly set legal rates (Bridenbaugh 1955:246-247). Though the waterfront enterprises of Gibbes and his neighbors were successful, wharves along the shallow, shoal-ridden Ashley River were few. Most waterfront activity remained along the Cooper, which was navigable for twenty miles (Rogers 1980; Weir 1983) (Figure 5).

In addition to his wharf, William Gibbes was part owner of two trading vessels and sole owner of two schooners. Though the majority of his fortune was derived from his mercantile enterprises, Gibbes was also a planter. He owned a "very valuable" plantation fronting the Stono River on Johns Island. At its peak, the 916 acre plantation was worked by 68 slaves (City Gazette and Daily Advertiser, April 23, 1789; Gibbes House files, Historic Charleston Foundation). The plantation featured a good landing, main dwelling, orchard, approximately seven slave quarters, and three additional outbuildings (McCrady Plat 4617).
Gibbes's Wharf, at South-Bay.

Being now capable of admitting Vessels of any Burthen, to load or unload at it, the Subscriber will be obliged to all those Persons who will favour the said Wharf with their Business, as he has been at great Expence and Trouble in making it convenient, especially to Boats that pass down Ashley River; which, by unloading there, will avoid all the many Risks and Inconveniences they are exposed to by going round White-Point, and which are very obvious to every discerning Person, more particularly open Boats. And, as it is of Public Utility, by being a Security to the South-West Side of the Town, he hopes for the Public Patronage.

His Friends, the Planters, need not be under any Apprehensions of Rice not selling as well there as at any other Wharf, as has been experienced during the last and present Year, as very little Rice has been stored there from the quick Sale of what has been landed there. And having had Assurances from many respectable Gentlemen, both in the Planting and Mercantile Interest, of their friendly Intentions to send Vessels there to load, being convinced of the Safety of that River, and the Convenience of the Wharf and Stores, with the Dispatch they meet with; he likewise flatters himself, that the many Persons that use it as a Ferry, and do not land their Crops there, will not have any Objections to contribute to the Support of it, by an annual Subscription.

He has fixed a Scale-House at the Head of the Wharf, for the more convenient weighing of Rice that may be sold on landing and to be immediately shipped, and will, as soon as it is necessary, add to the Number of Stores.

From the Quantity of Lumber already shipped from thence, it is evident no Place in Town is more proper for that Article, as well as for Naval Stores.

All Vessels shall, for their Ballast, be entitled to their Wharfage and Water, with Liberty to have down and clean, as a proper Place is fixed for that Purpose, and to which the Pilot-Boats are always welcome.

WILLIAM GIBBES.

Fifteen very convenient, pleasant and well-situated Lots of Land, contiguous to the Wharf, on a good Clay Foundation, and have as good Water as any in Town, to be disposed of by private Contract, upon easy Terms, and the Purchasers shall have the Privilege of landing at the Wharf, gratis, their Materials for building thereon.
Gibbes was active in the political and social affairs of the colony. He was a member of the Charleston Library Society, an officer in the South Carolina Society, and a Mason. He was a member of the first vestry of St. Michael's Parish (1761-1762), and represented St. Johns Colleton in the 29th Royal Assembly and as a justice of peace (Edgar and Bailey 1977: 275).

William Gibbes and the American Revolution

Enjoyment of his financial success was short-lived, for William Gibbes was an early and avid supporter of the rebellion against the King. He represented St. Johns Colleton in the first (1775) and second (1775-1776) Provincial Congresses, and was a member of the Committee of Secret Service (1775), created to gather war material. During the war, he provided generous financial support to South Carolina, contributing more than £250,000 (Edgar and Bailey 1977:275).

This ardent support for the rebel cause did not go unnoticed by the British. When they captured Charleston in 1780, they evicted Gibbes and his family from their South Bay home and sequestered his estate. The townhouse was subsequently used as a hospital by the British (Edgar and Bailey 1977:275). His plantation may also have served as a hospital, for Captain Ewald recorded the following passage in his diary on March 6, 1780:

"The 2nd Battalion of the 71st left us again. They crossed the river at Mathews' and went into camp at Hamilton's where Huyn's and the 64th were encamped. The 63rd was quartered in Gibbes' house, since two thirds of the regiment were sick. It had made the voyage from New York in a former hospital ship. Ever since we have been at this post our brigade has sent out daily foraging parties into Johns Island; thus a great quantity of livestock has been driven in" (Uhlendorf 1938:197).

The British occupation evidently 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 (Royal Gazette 1780-1782). The occupation forces also worked to clean up the city. In July 1780, they proclaimed,

"As there will be an absolute Necessity for keeping the Town and Suburbs as clean as possible, a Regulation will take Place for Waggons to go round the respective Districts, every second Day, in order to carry off all Filth and Soil; and it is earnestly recommended to the Inhabitants upon no Account to throw any of it in the Streets, but to collect it within Doors till the Carts come to receive it from the several Houses. -No Dirt or Filth is to be thrown into any of the vacant Lots."
As the Health of the Inhabitants, as well as that of the Garrison, will depend very much upon the Order and Cleanliness of the Town, it is hoped it will be unnecessary to issue any further Proclamations upon the Subject" (Royal Gazette, July 6, 1780).

Much of the rubbish was hauled to the "British Dump", whose location is unknown. Their efforts must have been somewhat successful, for in September, 1780, the Commissioners of Streets gave notice that,

"as streets are now clean and put in good condition, people are to avoid throwing out dirt, rubbish, or other offensive matter into any part of the streets or vacant lots but are to carry such rubbish &c to such parts of the town as the Commissioners now use for that purpose; Also, do not put anything in the streets that may obstruct the way or endanger the safety of passengers" (Royal Gazette, September 19, 1780).

During the War, William Gibbes was imprisoned by the British for his rebel activities. He was sent to St. Augustine, along with 67 other patriots, and was the last survivor of this exiled group (Smith Family Genealogy). During her husband’s absence, Mrs. Gibbes petitioned the British to return her house, but found them unsympathetic.

"Upon reading Mr. Wm. Hasell Gibbes' letter (on behalf of his mother Mrs. Gibbes) representing the distressed situation of Mrs. Gibbes and Family by being deprived of her Dwelling House, which is occupied by the Army, and praying possession of the same, the Board remarked that they are unacquainted with the particular Circumstances of Mrs. Gibbes and Family, and they may very probably be sharers in the General Calamity but beg to opine that Mr. Gibbes as one of the Continental Treasurers has abandoned his House and is still out with the Rebels" (British Public Records Office, #510, SC 1780-81:7-8).

After the War, Gibbes was released from prison and returned to Charleston. He immediately petitioned the British for losses sustained against his estate. His petition presents a vivid picture of materials used by the invading forces (Figure 6). These included 70 head of cattle, 60 of sheep, horses and other work animals, linen, dishes, wine, sugar, coffee, and other provisions. Gibbes also lost "21 Negroes, carried or enticed away, 3 of which have since returned to me". After the surrender in the town, Gibbes lost a number of boats, including a canoe, two flats, a schooner, as well as,

"Toney, a very valuable boathand, patroon of the above schooner, and a good coasting pilot...Ned a good boat hand...Richmond and Cooper still in town with them...and Hannah, a young mulatto woman, a very fine seamstress and her daughter Amey"
Two of my largest stores on South Bay in Charles Town, pulled down the late 4th with a great deal of other lumber which
10 11. 11. 1 8... 1 100.145

To Amount brought forwards ---- 3200

My Crop of Rice taken at Goose Creek
At order of Gen. Stuart 25th Nov. 1781. £150

Received in part 70 80

To rent of my large house on South Bay
Occupied as a Gen. Hospital from 13 May 1780 till in their possession together with my Wharf and my Stores, Cloth House etc.
Worth at least 1,500. Summer ... 1000

Received in part 397 603

To rent of another house in Gibbes Street, as a Guard House for 

To damages done my house by fire (to repair which I think it will take

To the loss of the work of brother Piggotts, which have been all in store with them, of which are still in jeopardy

Equal to 17,200 Silver Spanish Milled Dollars.

This is to certify that the above amount

Mounting to £2100, shall be as sworn

to by William Gibbes this 25th Day of November 1782. Before me

Figure 6
William Gibbes' petition to the British
Patrick Henry, the Virginia statesman, in the Virginia Gazette, May 5, 1782, wrote this account of the combined losses sustained by the British troops and the Virginia militia since the commencement of the present war. He did this to impress the British with the cost of continued opposition, 22 May 1782.

About 70 Head of Cattle at 70s. .......................... 50

About 60 Acres of Sheep at 15s. ....................... 900

2 Chests of Table & Tea China, Glass etc. ........... 20

A very valuable Chest of Linen &c. .................. 150

A Chest of Books ........................................ 30

Household Furniture, Bedding &c. .................. 50

My Crop of Rice, Provisions &c. .................. 150 - 1450

About 50 Barrels of Rice a hogshead .......................... 150

Casks of Rum, Sugar, Wine, Coffee &c. .......................... 50

3 Horses, Mares, &c. in I Penn's Island, 1779 .......................... 50

About 10 Head of Cattle, some Horses, Mares &c. taken from my Plantation in Five Fork Parish, before the Surrender of the Town. ........................................ 50

A large Canoe ........................................... 20

Two flats destroyed at my lot ............................. 60

In Schooner, now then 136 bbls. Rice which cost one above £200 Sterl. &c. which price was asked me for her after my return to Charles Town by the person who had her before ..................... 300

Jone a very valuable Boat & Land, a Galloon of the above Schooner, &c. good Coasting fisher .......................... 150

Red a good Boat & Land ................................ 100

Richmond & Cooper still in Town with them .......................... 150

Hannah a young Mulatto Woman, a very fine Seamstress, whose daughter Aney, about 3 years old ........................................ 150

Total Losses .............................................. 930
He also asked for compensation for two of his largest stores on South Bay, "pulled down and with a great deal of other lumber which (was used in the) building of public works" along with rent on his large house on South Bay, "occupied as a general hospital", and another house on Gibbes Street, as well as damage done to his stores, for a total of £4060.

The American Revolution and its attendant chaos disrupted the commercial life of Charleston but did not halt the growth of the city. In 1783 the town was incorporated, renamed Charleston, and divided into wards for better control. Peace and security stimulated a people tired of war. After a period of economic readjustment, Charleston returned to a period of unbridled prosperity. The invention of the cotton gin in 1795 paved the way for the ascent of cotton as another immensely profitable staple.

Charleston's "Golden Years"

William Gibbes returned to public life after the Revolution, serving as Master in Equity. He also continued his business ventures. His success was short-lived, however, for William Gibbes died in 1789. He was warmly eulogized, for "his benevolence and philanthropy endeared him to all" (Charleston City Gazette, February 24, 1789). The inventory of his estate at the time of his death reveals the tremendous wealth of the man. His town estate housed 22 slaves, including 7 children. His plantation included 39 adult slaves, plus an unspecified number of children. Negroes and stock were valued at £3242.12.4. The estate was valued at £27,297.11 currency. (Table 1).

In 1794, the Executors of William Gibbes' estate (including his wife, sons, and Charles Warham) sold the South Bay Street house to Sarah Moore Smith, a widow, for £2500 sterling (CCRMCO Y6:44-46). Mrs. Smith was also allowed the use of stores on the adjoining lot to the east of the house for a carriage house, while the lot was owned by the estate (lands to the west, north, and east of the lot all remained in the Gibbes estate.) Sarah Rhett Moore, born in 1728, married Thomas Smith, a banker, in 1744. The couple had seven children, plus five more who died in infancy. Thomas Smith died in 1770; Mrs. Smith resided on South Bay from 1794 until her death in 1799. The property was held in trust as part of her estate by her son, Peter Smith. Peter Smith lived at #2 South Bay until his death in 1826 (City Directories 1796-1816). During his tenure, Peter Smith evidently remodeled the house in the newer Adam style (Gibbes House files, Historic Charleston Foundation).

After Smith's death in 1826, a claim was made against the estate of Sarah Smith, and the house and property, now known as #38 South Bay, was sold for $10,000 to Thomas Smith Grimke, Sarah Smith's grandson. The property was described as,
Table 1

Inventory of the Estate of William Gibbes
(Roll#21, Inventories, Appraisements, and Sales, volume B)

20
<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Chamber</td>
<td></td>
</tr>
<tr>
<td>Bedstead, bed, curtains, etc.</td>
<td></td>
</tr>
<tr>
<td>Large bed, etc.</td>
<td></td>
</tr>
<tr>
<td>Sack, etc.</td>
<td></td>
</tr>
<tr>
<td>Towels, 224 ELS.</td>
<td></td>
</tr>
<tr>
<td>Sheets, 224 ELS.</td>
<td></td>
</tr>
<tr>
<td>Blanket, 224 ELS.</td>
<td></td>
</tr>
<tr>
<td>Pillow, 224 ELS.</td>
<td></td>
</tr>
<tr>
<td>Washbasin, 224 ELS.</td>
<td></td>
</tr>
<tr>
<td>Snuff box, 224 ELS.</td>
<td></td>
</tr>
<tr>
<td>Aloe vera, 224 ELS.</td>
<td></td>
</tr>
<tr>
<td>Coffee mill, 224 ELS.</td>
<td></td>
</tr>
</tbody>
</table>
25

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25
"All that elegant Mansion, house and lot, together with its outbuildings, now in the possession of Arthur Middleton, situated on South Bay, in the City of Charleston, and lately the residence of Peter Smith... (Charleston Courier, January 24, 1826).

An inventory of Peter Smith's estate revealed considerable wealth, though not as much as that of William Gibbes. His estate, valued at $11,300, contained, among other items, quantities of wine and "blue china". (Table 2).

Thomas S. Grimke was the son of John Faucheraud Grimke, a wealthy and influential lawyer, and brother to Sarah Moore and Angelina Emily Grimke, famous for their abolitionist efforts (Johnson and Malone 1960:636). Thomas S. Grimke became a lawyer, and practiced with partner Robert Y. Hayne. He served as state senator from 1826 to 1830, and was a pioneer in the causes of temperance and world peace. Grimke died in 1835, en route to Columbus, Ohio, and was buried there. He was survived by his wife, Sarah Daniel Drayton, and six sons (Johnson and Malone 1960:636).

Grimke left his entire estate to his wife (Charleston County Wills vol 40:131-133); she survived him by 33 years. In 1859, Mrs. Grimke paid taxes on real estate valued at $20,000, interest at $6,230, 22 slaves, 1 carriage, and 2 horses. A year later, her interest and bonds were reduced to $2,954 and she paid taxes on only 21 slaves (List of Tax Payers 1859, 1860). Mrs. Grimke left her estate to her two sons, Theodore Drayton Grimke and John Grimke Drayton (Charleston County Wills, vol 51:784). Her second son was born John Drayton Grimke, but changed his name to inherit Magnolia Plantation from his mother's family. In the 1840s he married a Philadelphia woman, Julia Ewings, and settled on the estate. Though a holder of 300 slaves, he was influenced by the teachings of his aunts, and worked to educate his bondsmen. He was devastated by the Civil War, and forced to sell all properties except Magnolia.

John Grimke Drayton was not alone in his financial devastation. Charleston entered the nineteenth century at the forefront of civic competition, but ended the century far behind its rivals. The city began the century economically viable due to the development of cotton as a major export, but it began to experience commercial stagnation by the middle of the century. Although a vocal segment of the city's leaders pressed for a railroad, for industry, and for diversification, the ultimate failure of these efforts left Charleston, a trade city, vulnerable to the effects of market fluctuation. The Civil War dealt only the final economic blow to the city, and Charleston remained economically depressed until after World War II.

In 1885, John Grimke Drayton and his brother sold the South Bay Street house to J.B.E. Sloan for $15,000 (CRRMCO G19:21; K20:123). Sloan evidently made his money in the fledgling phosphate industry, for in 1891 he is listed as treasurer and general agent of the Edisto Phosphate Company, residing at 64 South Bay (City Directory 1891). He, his brother, and his son also operated a partnership as cotton factors and commission merchants (City Directory 1889, 1891). His corporation, Edisto Phosphate, was founded in 1881, with a relatively large amount of capital (Shick and Doyle 1985:26).
Table 2

Inventory of Peter Smith's Estate, 1826

28
1 Iron Oil lamp 3/15 2. Oil Lamps 2 1 Flannelette 25.0
1 pair soft cushion 1 cover 3/8 1 set of Drawers 35.0
1 Green Wood 4/15 11. Pianoforte 3 old pianos 14.0
3 glass Mugs W. Small dish 14 2. Chamber Mugs 2.0
2 Lamp Cherries 5/7 2 R. Bed trinket W. Small dish 2.0
4 M. ash tray 1 stool 2 1/4 G. tray 3/4 Writing desk 19.0
24 small Workk and School books 28 pair curtains 2.0
15 each 1/3 2 Risks 18 cent 1 1/2 1 white Premium
of different sizes 7 Large Humbley 4 pair Dictionaries
of different sizes 3 Condol. Dictionaries
2 Old 5 cent Large and Small 1 Lamp Shades
2 1/2 glass Salt Shakers 4 Covered Lamps 1 Star
12 half 1/2 Butter Boat 1 pair glass Sandwich sticks
1 Large pair of shelf
5 Oblongs 1/16 8 Risks head bars 11 W. china glass 12 cups
12 Decanter Stands 25 3 1/2 plated Salt Shakers 12 1/2
2 Shaving dishes 38 1 workhand bars 1 fish platter
2 China Fruit baskets 10 Soup Tureens 2 Fruit
basket platters 3 Vegetable dishes 5 Small Blue
China Plates 6 Medallion Dishes 1 1/2 age Bottles
9 Blue China Ware platters 3 Sauce Dishes
1 Sauce Tureen 3 Small Blue china Dishes
18 Large Soup Dishes 3 Large Watteau Dishes
13 1/2 in. China Vegetable dish 14 China plates
1 set of 11 Chinese and 11 sake
3 1/2 white mugs 1 China tea pot 1 1/8 feet
10 annette 1/2 2 old Cups of China 16 in
3 pair of 11 1/2 in. fish 3 plates 10 cups
1 small 15 1/2 C. horseman 1 fish plate
1 set of dish 6 cups 11 different sizes 3 Spurtles
13 Ames 1 Fine candle 1/2

29
8. M. C. M. unknown 1 cask 2 wine barrels
22. Jacob Wise 2 casks and 4 barrels
3. M. Wise unknown 1 old keg
7. Thomas Wise 25 wine unknown
4/18 13 casks 4 ½ hogsheads at $1.25
1 box containing 3 bottles of 6 red wine
1 box Rum Shilt 1 1/4 gals 1 bottle of Rum
1 box empty bottle 2 1/2 casks 1/2 cask liquors unknown
1 bottle of brandy 12 bottles of wine unknown 1 box
black disparage 6 casks 1/2 bottle of 44 1 bottle of claret
2 bottles containing brandy and wine 2 demijohns
containing liquor unknown 6 casks
2 cases in barrels 21 1/2 hogsheads of wine unknown
1 case 3 7/10 bushels 1/2 cask of 3/4 wine unknown
1 case 1 half ton 250 3/4 bu 2 casks Rum unknown
1 box 200 1/2 bu containing the following books
Old Law of Customs offices Paul D. Maine
Memorandum book 2 1/2 boxes 2 boxes in landscape
Study of Nature 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.
Kinds and Height of Trees building brick
Plumb. Lines 1 1/2 board feet of him
14 cases 1/2 of drawers 3/4 box 1/2 cask
Don't give Queen of France $75 building brick
Plumb. Lines 1 1/2 boxes 3/4 box 1/2 cask
Memorandum book 2 1/2 boxes 2 1/2 boxes in landscape
1 1/2 boxes of To 2 1/2 boxes of

Dear Best Friend!

Skein of hemp 1/2 4 1/2. Velas Lewis 2 1/2.
Element of Heraldry Books 1/2 box 1/2 2 1/2.
Wine of Sarsenot 1 1/2 box 1 1/2.
Heads of drawers 1 1/2 boxes 1 1/2 box 1 1/2.
2 drawings L. Topography of Soil 1/2 box
Dimensions Lines 1 1/2 box on Landscape
Art of Painting American elementary 1/2 box
The new phosphate industry was the only bright spot in an otherwise depressed postbellum economy. Phosphate rock, found just below the ground surface, was the principal ingredient of the new fertilizer industry, essential to the depleted cotton soils of the south. Throughout the 1870s and 1880s, nearly twenty local companies were formed. The shallow deposits were soon depleted, and more accessible veins were discovered in Tennessee, Florida, and other countries. By the beginning of the twentieth century, the industry had collapsed (Shick and Doyle 1985).

J.B.E. Sloan died in 1906 without a will. In 1922, his widow, Mary Seaborn Sloan established a trust, with herself and her son, Earle Sloan, as trustees. The trust was distributed to Mrs. Sloan's children and grandchildren. Earle Sloan and his family lived in the house at 64 South Bay with his mother (Gibbes House files, Historic Charleston Foundation).

Earle Sloan was born at Cherry Hill Plantation, near Pendleton, South Carolina. In college and graduate school he majored in chemistry and geology, and like his father was a leader in the phosphate industry. As state geologist and assistant United States geologist, he investigated the earthquake of 1886. Politically, he firmly believed in white supremacy (Hempill 1908:390).

Mary Seaborn Sloan and her son Earle both died in 1926. Earle left his estate to his wife, Alice Witte Sloan. In 1928 she sold the property to Cornelia W. Roebling for $45,000. Mrs. Roebling, whose husband built the Brooklyn Bridge, made extensive improvements to the house and added the classic gardens. Mrs. Roebling died in 1942, and left her property, including 64 South Battery, to her son, John B. Farrow, and her grandsons, John Ashby Farrow and Thomas Ferguson Farrow (Probate file 834-179). John Ashby Farrow acquired the undivided property from the First Mechanics National Bank of Trenton, trustees, in 1944 for $65,000. Mr. Farrow died in 1984, leaving the property to his wife. In order to protect this historic property from abuse or destruction, the house was purchased by Historic Charleston Foundation. It was resold with protective covenants in 1985 to the current owners, Mr. and Mrs. Jefferson Leath.

By the post-World War II period, Charleston began to experience economic revitalization that continues to the present day. The stagnation of the previous period resulted indirectly in the preservation of many historic buildings, as new construction was minimal. With the growth of tourism as a major industry, the city recognized the value of historic architecture and was the first municipality to enact protective legislation. The preservation movement has been active since 1931, and Historic Charleston Foundation has been a leader in this movement for several decades.

Interpretations

The Gibbes House is an early example of a residential-only, elite townhouse built in the city's suburbs. The lot is extremely spacious by Charleston standards, and has remained undivided throughout its 200 year history. All of the owners of the property were wealthy, influential community members; they held valuable, extensive real estate and were politically and socially active. Further, the neighborhood around South
Battery was increasingly identified as an upper class residential area as the nineteenth and twentieth centuries progressed. These data suggest that the Gibbes site is an appropriate data base to expand our investigation of upper status suburban sites.
CHAPTER III
EXCAVATIONS

Site Setting

The Gibbes house is located at 64 South Battery, between Legare Street and Lenwood Boulevard. The site was originally a strip of high land between two areas of marsh (presently Murray Boulevard and Gibbes Street, respectively), when William Gibbes built his double house in 1772. At the time, his house was the last one on South Battery (Figure 3).

The Gibbes House contains a large yard area, relative to other residential units south of Broad Street. The lot measures 140 feet by 268 feet. The double house fronts directly on the street, and measures 51 by 53 feet. The house is 2½ stories, plus an above ground basement. The upper stories are wood frame with a slate roof, on a masonry basement. The house exterior has elements of Palladian design, while the interior reflects three distinct periods; Georgian, Adam, and post-World War I (Figure 7).

To the rear of the house, on the west side are the kitchen and stables, with slave quarters above. These structures are constructed of Bermuda stone, a sea shell reef type of material which was carved as ballast from Bermuda. The roof is tile (Figure 8). A brick privy is located directly behind these structures.

Aside from these outbuildings, the remainder of the yard is formal gardens. While much of the gardens were designed by Mrs. Roebling in 1928, some features original to Gibbes' occupancy remain, including the gazebo along the rear wall and the rose garden along the east side of the yard. Significant features added by Mrs. Roebling include a large patio on the rear of the house, a slate paver walkway leading from the patio to the gazebo, and a cement fish pond east of the walkway. A fenced vegetable garden and compost heap is located in the northwest corner of the yard, behind the stable building. The remainder of the yard is covered by grass and shrubbery. The entire yard is enclosed by a brick wall.

Excavation Methodology

Excavations at the Gibbes house were conducted for one week, February 24 to 28, 1986. Excavation was limited to the area where the swimming pool was to be constructed. The pool replaces a portion of the slate walkway, and these paving stones had been removed prior to initiation of the excavation. The area of pool construction measured 24 feet by 24 feet, with an additional 5 feet on each side for a walkway.
Figure 7a: The William Gibbes House, showing the spacious side yard, facing northwest
Figure 7b: View of the excavated area, facing southeast.
Because of the limited and predetermined nature of the excavations, no Chicago grid was established. Instead, the area of pool construction was divided into 5 foot squares. Initially, grid points were established in the center of the pool area, and in the center of each of the four walls, dividing the pool into 12 foot quadrants. Five foot squares there then established along this east/west center line, and three five foot squares were excavated within this area (Figure 12b). The southeast corner of Unit 1 was 5 feet south of this center line, and 5 feet west of the eastern edge of the pool. Unit 2 was located directly north of Unit 1. The southeast corner of Unit 3 is 5 feet north of the center line and 15 feet west of the eastern pool edge.

Excavation began with the removal of a lime mortar foundation, used for the slate pavers. This was accomplished with large picks. After these were removed, grid points for each unit was established in the top of zone 1. All subsequent excavation was accomplished by hand, using shovels and trowels. All profiles and features were mapped and photographed prior to excavation. All units were photographed in black and white and color.

All excavated materials were water screened through 1/4 inch mesh (see Figure 12b). All materials were bagged and tagged separately, and a field specimen log was maintained. In addition to cultural materials, faunal and ethnobotanical materials were retained. Soil samples, flotation samples for ethnobotanical analysis, and coal samples were retained for each organically rich provenience (Zones 3 and 4, and all features).

Vertical control was maintained with the use of a transit. Relative elevations taken on a daily basis were tied into mean sea level through a datum point established by the A.Z. Johnson surveying company. This datum point consists of a railroad spike at an elevation of 10.0 feet above mean sea level, set in the telephone pole located adjacent to the driveway of the Gibbes House. All elevations in this report are listed in absolute terms as feet above mean sea level (MSL).

In addition to maps and photographs, considerable field notes were maintained. Narrative notes were recorded on a daily basis, and were augmented by feature forms, excavation unit forms, photographic logs, and field specimen logs.

Description of Excavated Proveniences

The location of unit 1 was arbitrarily chosen. The dark grey brown sandy loam located beneath the mortar foundation was designated zone 1. This zone appears to represent accumulated topsoil from the twentieth century garden. The zone was .25 feet deep. Two features were encountered at the base of zone 1. Feature 1 was a linear area adjacent to the west wall of the unit. The fill was similar to zone 1, but contained quantities of mortar flecks. The feature was encountered in all three units, and is interpreted as additional foundation for the walkway. Feature 2 was a ceramic waterpipe and associated builder's trench, also constructed in the twentieth century.
Zone 2 was a relatively shallow deposit of compacted red clay and brown soil. This zone was also relatively shallow, at .2 feet. The zone contained no cultural materials. A sample of zone 1 was screened, and the remainder was discarded. All of zone 2 was discarded after visual inspection.

The first deposit predating the twentieth century was zone 3. This deposit consisted of dark grey loamy soil with coal and mortar inclusions. The soil was somewhat hard and compact. The zone was .9 feet deep, and was excavated in two arbitrary levels. Artifacts in this zone were relatively small and sparse.

Zone 4 was by far the most productive deposit encountered. Zone 4 was a medium gray loamy soil, and was excavated in three arbitrary levels. The zone was 1.0 feet deep and sterile yellow sand was encountered at 2.98 ft. MSL. The unit initiated at 5.21 ft. MSL. A large feature was encountered intruding into sterile subsoil. Feature 3 was a roughly circular trash pit of dark gray soil. The feature contained quantities of material, but excavation was hampered by ground water, which was encountered at 2.6 ft. MSL. The feature occupied roughly half of the unit, and intruded into the north wall (Figure 10).

Because of the wealth of material contained in it, and the suspected early age of feature 3, the unit was expanded 5 feet to the north. This was designated Unit 2. Stratigraphy in Unit 2 was identical to that of Unit 1, the exception being zone 2, which was only intermittently present in this unit. Feature 1 was also present. Zones 1 and 2 were discarded, and only a portion of zone 3 was sampled. All of zone 4 was screened and retained. Zone 3 was once again excavated in two arbitrary levels and zone 4 was excavated in three levels. Several features were present at the base of zone 4. The remainder of feature 3 was present in the southern portion of the unit. A brick foundation was present along the north wall of the unit. This feature consisted of two courses of brick, the lower stepped out. A narrow builder's trench was present. The feature continued along the entire length of the northern wall (Figure 10).

Three rectangular postmolds were also present. Postmold 1 intruded into feature 4, the brick foundation. Postmolds 1 and 3 had straight sides and flat bottoms. Postmold 2 also had square sides, and contained a preserved portion of the square post. This post measured 4 by 4 inches, and had a flat bottom. The feature continued beneath the water table, and was not totally excavated (Figures 10 and 11).

Unit 3 was located 5 feet west of unit 2, with the south wall parallel to the north wall of unit 2. This was done to intersect the north side of feature 4. Because time for the project was limited, zones 1 through 3 were discarded. Zone 2 was not present, and zone 3 was somewhat shallower than in the more easterly units. Zone 4, which was screened in its entirety, was also much shallower, and was excavated in two arbitrary levels. Sterile soil was encountered at 3.43 ft. MSL. Zone 4 initiated at 3.85 ft. MSL and zone 1 initiated at 5.23 ft. MSL.

Excavation revealed the remainder of the brick wall, which proved to have an unusual configuration. Feature 4 consisted of two courses of brick, the top stepped over the bottom. There was a narrow area of dark, loose soil adjacent to it, followed by a second brick foundation, built in the same manner,
Figure 9a: North Profile, Test Pit 1

Figure 9b: North Profile, Test Pit 2
Figure 10: Test Pit 2, Zone 4, facing north. The southern half of Feature 3, located in Test Pit 1, has been excavated.
Figure 11
Planview, units 1-3; profile, unit 1.
42
Figure 12a: Test Pit 3, base Zone 4, facing south.
Figure 12b: Volunteers Harriett Goldenberg and Maggie Jacobs screening Feature 3.
but in reverse. This was designated feature 5. Therefore, the top courses of features 4 and 5 sloped in towards each other. It was later learned that a top course of bricks, uniting the two, was missing. Features 4 and 5 were therefore a single feature, consisting of bricks stacked to form a pyramid.

The dark soil on the interior of this feature was designated feature 6. This was dark loamy soil that was quite wet. The soil contained quantities of coal and small pine lighter knots. This soil overlay square "bricks" of unfired natural clay. This clay seemed to form the bottom of the feature. Features 4 through 6 have been interpreted as a drain, although it is different in configuration and construction than other drains encountered in the city, in that it does not have a brick bottom (see Zierden et al. 1986). Feature 6 is similar in consistency to other drain fill (Figures 11 and 12a).

Following completion of the excavations, pool excavation was monitored by The Charleston Museum staff. Due to the nature of excavation, it was impossible to recover materials from undisturbed contexts. It was possible, however, to record profiles along the north and east walls of the pool. This stratigraphy aided greatly in site interpretation. Features 4, 5, and 6 were present in this profile, and this is how it was learned that the top course of bricks was missing. Evidently, the drain continues past the limits of the pool (Figure 13). Given the currently low nature of the lot, and the presence of a modern yard drainage system, the presence of such a feature is not unexpected.

The profiles also revealed that the site does slope to the east, being shallower in the western end. This may relate to the original presence of a marsh and creek in the rear yard area, corresponding with present day Gibbes street. Finally, the profiles revealed two discrete "dumps" of brick and mortar rubble. These were located in the northeastern and southeastern corners of the pool, and were not encountered in any of the excavation units. Such pockets of brick fill are a common component of sites in Charleston, and was informative to record such features in a larger context. Also present was a large pit of gray soil in the southwest corner, which appeared to be sterile except for oyster shell. This may be a natural feature.

Dating of the Proveniences

Proveniences were dated on the basis of the Terminus Post Quern (TPQ) and stratigraphic point of initiation. Terminus Post Quern is the date after which a provenience must have been deposited, and is determined by the initial date of the latest dating item in the provenience. Proveniences spanned the entire range of occupation, dating from the late eighteenth through the twentieth centuries.

Zones 1 and 2 and features 1 and 2 were deposited in the twentieth century. These probably are associated with Mrs. Roebling's remodeling of the yard. Zone 3 had TPQs ranging from 1820 to 1850. This suggests that the zone was deposited between 1820 and 1860; the majority of the materials contained in these proveniences are antebellum. TPQs for zone 4 range from 1780 to 1830, suggesting that zone 4 was deposited between these dates, with the majority of items deposited between 1790 and 1820. Zone 4 also contained a number of eighteenth century materials.
Figure 13
East Profile, limits of Swimming Pool
A TPQ of 1780 was provided for feature 3 by a coin bearing that date. Feature 3 was deposited in the 1780s, and is probably associated with William Gibbes' occupation. A TPQ of 1820 for postmold 1 suggests that the post was deposited shortly after this date. The intrusion of postmold 1 into feature 4, and the presence of a sherd of shell edged pearlware in the builder's trench suggests that feature 4 was constructed after 1780, but before 1820. Postmold 3 was deposited after 1770, and postmold 2 was deposited after 1795 (provided by transfer printed pearlware). All three posts may be contemporaneous.

Finally, feature 6 contained a sherd of yellow ware, providing a TPQ of 1827. This suggests that the drain was abandoned in the middle of the antebellum period. TPQs and dates of deposition for all proveniences are shown in Table 3.
Table 3
Provenience Guide

<table>
<thead>
<tr>
<th>FS#</th>
<th>Provenience</th>
<th>Function</th>
<th>TPQ</th>
<th>Date of Deposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>*TP1, zone 1</td>
<td>zone</td>
<td>1820-whiteware</td>
<td>20th century</td>
</tr>
<tr>
<td>2</td>
<td>TP1, feature 1</td>
<td>walkway bed</td>
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* collected
CHAPTER IV
ANALYSIS OF THE MATERIALS

Upon completion of excavation, all materials were removed to The Charleston Museum, where they were washed, sorted, and analyzed. Materials were identified using the Charleston Museum type collection, Noel Hume (1969), Stone (1974), Brown (1982), and other sources. Materials were then grouped by functional categories, according to South's (1977) methodology. Under this methodology, artifacts are grouped by their function in the daily affairs of the site occupants, rather than by material. Under this method, all materials are counted and given equal weight. This methodology has been used for all sites in Charleston (Zierden and Calhoun 1986), as well as by numerous other historical archaeologists. Thus the results of the present study are directly comparable with those from other urban projects.

Proveniences included in the present analysis include all samples from zones 3 and 4, and all features initiating within these zones. Materials from zones 1 and 2 and features 1 and 2 were identified (see Table 3), but are not included in the present analysis. This is due to the relatively small size of this sample (n=70). Also, hand collected samples are not included in the present discussion (see Table 4).

Kitchen

Kitchen materials comprised 51.4% of the assemblage. Of this, 58% were ceramics, while the remaining 42% were glass. Late eighteenth to early nineteenth century ceramic types dominated the ceramic assemblage, but this group also included some mid-nineteenth century wares. Interestingly, several late seventeenth to mid-eighteenth century types were also present. While some of these wares were manufactured for only a short period of time, others were manufactured into the early nineteenth century. European wares (English and German) comprised the majority of the materials, with minor amounts of Spanish and locally manufactured wares.

Ceramics were further divided into table and utilitarian wares. Since the majority of the ceramics were fragmentary, this was determined by ceramic type rather than vessel form. Tablewares comprised 73% of the ceramics, and included delft, white saltglazed stonewares, creamwares, pearlwares, and whitewares. The earliest tableware was Delft (Figure 14a-e). This ware was manufactured until about 1800, although it rapidly declined in popularity after about 1740. Delft was available in a variety of table and chamber ware forms; a major problem with Delft was that it was soft and was easily damaged. It was replaced in the 1740s by White Saltglazed Stoneware (Figure 15g-i), which was more durable. These molded vessels included the white tablewares and scratch blue varieties. Manufacture of this ware ceased after 1775. Delft and White Saltglazed Stoneware are present in minor amounts, comprising 12.2% of the ceramics.
### Table 4

**Quantification of the Assemblage**

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| Pipes                        | 34       | 78    |

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Figure 14: Ceramics from the Gibbes Site: a-e) blue on white delft, f-l) blue transfer-printed pearlware with overglaze decoration, m-q) combed and trailed slipware, 4) seventeenth century Majolica, s) ud earthenware, t-u) Spanish olive jar.
Figure 15: Ceramic Artifacts: a-b) Westerwald stoneware, c-d) black lead-glazed earthenware, e-f) Colono ware, g-i) white saltglazed stoneware, j-k) North Devon sgraffito slipware.
A revolution occurred in ceramic manufacture in the 1750s, when Josiah Wedgwood developed his cream colored earthenware, a refined earthenware that was durable and inexpensive. It was readily available in a wide variety of vessel forms and in matched sets. Creamware was very popular, and is a common component of historic sites after 1750 (Deagan 1975). Creamware continued to be produced throughout the nineteenth century, but after about 1820 is more prevalent in large, utilitarian forms such as bowls and chamber pots, and is considered an inexpensive ware (Miller 1980). In the eighteenth century, however, creamware was popular as an everyday ware among the upper class (Figure 16a-e).

Creamware comprises 20% of the ceramics from the Gibbes site; this relative proportion supports the 1770 to 1840 date range for the assemblage. Creamware is present in a variety of forms, and much of it is the delicate tablewares characteristic of the eighteenth century. The most complete vessel from the site is a small bowl with a rolled rim (Figure 17a). Other tablewares include the common feather edged and royal pattern place settings (Figure 16e and 16d). Another pattern present at the site are vessels with a rouletted edge (Figure 16a). Although creamware was most often undecorated, the Gibbes sample contains four examples with a hand painted decoration (Figure 16c) and two with a mocha decoration.

The next step in the evolution towards a white tableware was pearlware, developed in 1780 (Noel Hume 1973). By adding cobalt to the lead glaze, the vessel took on a bluish-white caste. By 1795, pearlware was available in a variety of decorative motifs, some of them associated with specific vessel forms and price scales. These include shell edging, transfer printing, hand painting, and no decoration (Miller 1980; Otto 1977). Annular ware, with its stripes of many colors, was often available in bowl or mug forms, while transfer printed wares were available in matched sets with a variety of flatware and service styles. Predominance of these wares has been associated with low and high status, respectively (Otto 1977). During the 1820s to 1830s, the manufacturing process was refined, and pearlware was gradually replaced by whiteware; the same decorative motifs continued on whiteware vessels. Prior to 1830, transfer printed designs were available only in blue; after this date they were available in a variety of colors.

Transfer printed pearlware and whiteware comprised 7% of the Gibbes ceramics; the majority of these were blue transfer print (Figure 17b). Several examples were recovered which exhibited red and gold hand painting over the glaze (Figure 14f-1). It is possible that this decorative touch was added to the European wares by a local craftsmen. In 1770, Mr. Lessley advertised that he "paints on china and cream colored ware Gentlemen's coats of arms or any other pattern they might choose" (SCG 1770, October 23). Several examples of overglazed hand painted wares have been recovered in the city, and most of these appear to be of local design (Brad Rauschenberg 1982, personal communication). Undecorated pearlwares and whitewares comprised 11.0% of the ceramics, followed by shell edged, 1.2%, hand painted, 2.9%, and annular, 3.9%. The relative prominence of transfer printed earthenwares supports the presumed high status of the Gibbes house occupants.
Figure 16: Ceramic tablewares: a-c) creamware, f-j) oriental porcelain, k-l) Elers ware, m) Astbury ware, n-o) Nottingham stoneware, p) Agate ware, q) Whieldon ware, r) Jackfield ware.
Figure 17a: Creamware bowl, probably William Gibbes' everyday china.

Figure 17b: Transfer printed pearlware, probably used by Peter Smith's family.
Porcelain is a component of historic assemblages from the sixteenth through the nineteenth centuries. Up until the nineteenth century, Chinese porcelain was a very fine, thin ware, often in tea forms, and its presence is considered an indicator of high status (Stone 1970:88). During the nineteenth century when porcelain was directly imported into the United States in enormous quantities, the ware was inexpensive and the quality deteriorated sharply. The recovery of porcelain from a nineteenth century site is not a totally reliable indicator of high financial status (Herman et al. 1975:66; Lewis 1978:104).

Porcelain comprised 10.6% of the ceramics at the Gibbes site; this is one of the highest percentages noted in the city, once again suggesting high status (Figure 16f-j). The porcelain collection included a fragment exhibiting a blue on white hand painted interior, with a brown exterior. Such porcelain became common after 1750.

In addition to these tablewares, a number of eighteenth century wares are present in minor amounts. These wares are often in the form of small bowls, tea pots, and other specialized ware. These include stonewares such as Nottingham (Figure 16n-o), Black Basalte, and Elers ware (Figure 16l), and earthenwares such as Jackfield (Figure 16r), Astbury ware (Figure 16m), and Agate ware (Figure 16p). These types comprise 1.3% of the ceramics. Included in the group from the Gibbes site is the handle to an Elers ware teapot (Figure 16k).

Ceramic types considered to be utilitarian in nature (used in food preparation and storage) comprised 23% of the assemblage. These include stonewares and coarse earthenwares. Stonewares present at the Gibbes site include brown and grey saltglazed stonewares manufactured in the eighteenth and nineteenth centuries (Figure 15a-b). These wares were initially manufactured in Europe, principally Germany. By the middle of the nineteenth century, these types were replaced with a variety of stoneware types which were the products of small regional potteries in the United States.

Utilitarian earthenwares include lead glazed and unglazed wares from the eighteenth and nineteenth centuries in a variety of colors. The predominant type at the Gibbes site is black lead glazed redware. Among the many fragments recovered were the bases of two small bowls (Figure 15c-d). North Devon Gravel Tempered ware, a crude green lead glazed ware of the late seventeenth/early eighteenth century was also present.

Two examples of Spanish ceramics were recovered from the site. Two sherds of Olive Jar were recovered (Figure 14t-u). This is an unglazed or lead glazed storage vessel used in shipping (Goggin 1960). Olive jar is a small, but consistent component of Charleston sites. More unusual was a sherd of red bodied, tin enameled majolica. Majolica is the Spanish counterpart to English Delftware. This sherd exhibited a red paste, yellowish-cream finish, with green and black hand painted designs (Figure 14r). It is similar to seventeenth century types, specifically Aucilla Polychrome (Goggin 1968; Russell Skowronek, personal communication 1986). These Spanish ceramics may have arrived in Charleston through illicit trade.
The predominant type of coarse earthenware was slipware. The most common type was the combed and trailed ware, manufactured from the late seventeenth through the early nineteenth centuries (Figure T4m-q). The ware is present in crude tableware forms, such as mugs, cups, and candlesticks, as well as large utilitarian pans and bowls. Earlier, seventeenth century types of slipwares present include six sherds of North Devon Sgraffitto slipware (Figure T5j-k).

Locally manufactured utilitarian wares consisted of colono-Yaughan wares and River Burnished wares (Anthony 1986; Ferguson 1985; Wheaton et al. 1983). These wares comprised 3.6% of the ceramics (Figure V5e-f). These are low fired unglazed earthenwares, of local manufacture. These wares are believed to be the product of historic Indian groups, black slaves, or both. The wares are a major component of eighteenth century lowcountry, particularly plantation slave, sites, but decline rapidly in the early nineteenth century. These colono wares are also a minor, but consistent component of urban sites, averaging 5% of the ceramics. Recently, researchers have recognized two distinct types (Wheaton et al. 1983), while others have recognized two additional intermediate varieties (Anthony 1986). A variety of names have been proposed for these wares (Anthony 1979, 1986; Ferguson 1980, 1985; Trinkley et al. 1982; Wheaton et al. 1983). For the purposes of this report, the examples of Ferguson and Anthony will be followed. The finer, more micaceous, burnished ware will be called River Burnished. The cruder ware is referred to as colono-Yaughan. River Burnished is believed by some to be the product of historic Indians, later the Catawba Nation, while the Yaughan wares are believed to be the products of slave potters. Still others have suggested that ethnic differences are impossible to distinguish.

Although they are much more common on slave sites, these colono wares are also a common component of planters' sites. These may represent use of these wares in the planter's kitchen, or simply the use of these items by domestic slaves. Since master and slave lived and worked in close proximity to each other in the city, it is equally difficult to ascribe users to the wares in the city. Yaughan and River Burnished wares are present in relatively equal amounts at Gibbes. Included in the assemblage are examples of River Burnished ware which exhibit red painting.

Glass artifacts comprised 42% of the assemblage. The most common type of glass were hand blown or dip molded vessels. Free blown glass bottles were manufactured from the mid seventeenth century through the early nineteenth century. Contact molded green, or black, glass, manufactured with a pontil, was most likely manufactured in a dip mold, or later a three piece mold. Used on wine bottles from 1790 to 1810, the contact mold process gradually replaced the free blown method. Dip molded glass has no mold seams, as it was manufactured in a one piece mold, open at the top. After the base and body were formed, the shoulder, neck, and lip were hand finished. This was used primarily for wine bottles (Teague 1980:81). Later, molded bottles included raised lettering and recessed panels (Lorraine 1968).

The overwhelming majority of the Gibbes assemblage glass was hand blown dark green wine bottles (Figure 18e-f), which comprised 22% of the kitchen group. Other container glass included fragments of clear, aqua, and light green glass. Nineteenth century glass included fragments of milk glass, brown
Figure 18: Glass artifacts: a-b) pharmaceutical glass, c-d) decanter base and neck, e-f) dark green bottle glass.
Two fragments of handblown pharmaceutical glass were recovered (Figure 18a-b). These were of a style popular between 1760 and 1780. Fine table glass comprised 1.14% of the kitchen group. This included fragments of tumblers and goblets (Figure 19). The goblet stems included a portion of an air twist stem, popular between 1735 and 1775, and a baluster stem with a teardrop bubble, popular between 1710 and 1740 (Noel Hume 1969: 191). Other table glass included a neck and basal portion to a decanter.

Other kitchen items include fragments of tin cans. Tin cans for preserving and storing food were patented in 1810, but were not common until 1860 (Fontana and Greenleaf 1962:69). The final kitchen item was a portion of a knife or fork. The implement was iron with a carved bone handle (Figure 21c).

Architecture

Architectural items comprised 41.3% of the Gibbes assemblage. Common building rubble such as brick, mortar, and slate were not retained. The architecture group consisted almost entirely of nails and window glass. The majority of the nails were too corroded to identify method of manufacture, but all appeared to be machine cut or hand wrought nails (Figure 22). Machine cut nails were developed in 1780. One wire nail was recovered; these nails were developed after 1850. Other architectural items include sixteen spikes, a fragment of clay paving tile, a fragment of bermuda stone, and eight fragments of roofing tile. These materials are those used in construction of the kitchen and stable.

Arms

Surprisingly, no arms materials were recovered from the site. Although arms have always been a relatively small percentage of urban assemblages, they have always accounted for at least .1% of the assemblage. Therefore, it was surprising to recover no arms materials, especially from a site occupied during wartime.

Clothing

Clothing items comprised .53% of the assemblage. The most common items were buttons (Figure 20a-f). Two five-hole bone buttons were recovered; these were developed in the late eighteenth century. Others included a four-hole porcelain button, common after 1800, and a plain brass disc, which became popular in the late eighteenth century, Other items include two fragments of small brass buckles (Figure 20g-h).

Eight glass beads were recovered (Figure 20i-n). The most common were tube beads of blue glass. Most of these were in very poor condition. Other beads include a white tube bead with red stripes, and a Cornaline D'alleppo bead. This last bead is of green glass with an opaque red glass exterior. These beads were manufactured between 1600 and 1800.
Figure 19: Table glass: a-c) goblet stems, d-e) tumbler rim and base, f) goblet base.
Figure 20: Clothing items: a-c) bone buttons, d-f) brass buttons, g-h) buckle fragments, i-n) glass beads.
Personal

Personal items comprised .16% of the assemblage. These included a portion of an oval eyeglass lens and a fragment of mirror glass (Figure 21e). One of the most interesting items was a folding pocket knife with a bone handle (Figure 21a). A single coin was recovered from Feature 3, and was dated 1780 (Figure 21b). The coin is from West Frisia, which was a province of Holland (Krause and Mishler 1985:1397). There are several ways in which such a coin could have made its way to Charleston. Dutch soldiers often preferred the merchant service of other nations. Also, the Dutch colony of St. Eustasius was a haven of refuge for American rebels during this period (Newton 1978:42-43). The date of the coin corresponds with both of these events.

Furniture

Furniture items comprised .28% of the assemblage. This included four brass upholstery tacks (Figure 22f-g), and a small brass lock mechanism. Other items included a folded strip of brass and a fragment of decorative brass.

Pipes

Pipes comprised 4.71% of the assemblage. This group included only fragments of white kaolin pipes in highly fragmentary condition (Figure 22i). The bore diameters of these were measured to determine a mean date of occupation. Two formulae have been developed to determine a mean date, based on the principal that the size of the pipe bore decreased through time. The Heighton-Deagan formula (1975) yielded a mean date of 1745.8 while the Binford (1962) formula yielded a date of 1744.4; both dates are much too early for actual site occupation.

Activities

Activities items comprised 1.61% of the assemblage. Most of these items related to daily domestic activities, and did not indicate any kind of specialized craft activity. The most common artifact were iron strap fragments, bands from wooden storage barrels. Other items included three scraps of lead, a brass nail, and a fence staple. The most interesting items were twelve fragments of clay flower pots (Figure 22a-d). One large rim fragment is identical to a fragment recovered from a 1785 context in Williamsburg, Virginia (Noel Hume 1974:44). Two bases with central holes were also recovered. The presence of these fragments reflect the presence of well tended gardens at the house since William Gibbes' occupation. It is curious that no toys or other children's items were recovered from the site.
Figure 21: Personal items: a) pocket knife, b) cutlery handle, c-d) coins, e) brass cap.
Figure 22: Miscellaneous artifacts: a-d) flower pot fragments, e-f) iron nails, g-h) brass furniture tacks, i) pipe bowl.
Summary

The Gibbes assemblage appears to have been deposited principally between ca. 1775 and 1840. The assemblage contains a variety of materials, and suggests a basically domestic occupation. Several categories of materials were conspicuous in their absence, including arms and toys. A number of unusual ceramics were recovered. Research issues utilizing these data are presented in the following chapter.
CHAPTER V
INTERPRETATIONS

The data generated from the Gibbes house excavations are an important addition to the Charleston data base for several reasons. The Gibbes site represents a well-documented residence of a wealthy and prominent family. Initially, historical archaeology concentrated on such sites; in recent years, though, there has been a tendency to instead concentrate on the poor, disenfranchised, and poorly documented (Brown 1978; Deetz 1977; Worrel 1980). This focus is not necessarily appropriate to the urban situation; our knowledge of status differentiation and urban adaptive processes are limited due to a lack of empirical evidence concerning the elite as well as the poor. Although the documentary record is biased toward the elite, there still remains gaps that the archaeological record can fill. Studies such as the Gibbes project are therefore important for comparative purposes, rather than as a celebration of "gracious living" (Mrozowski 1985:47).

The data generated from the present investigations are useful in investigating several issues. The site is only the second south of Broad Street to be excavated, and the first in a Revolutionary period suburban area. The Gibbes site is also the second suburban home of a wealthy Charlestonian to be investigated; the first was the Aiken-Rhett mansion, built in 1817 in the Charleston Neck subdivision of Wraggsborough. The house was acquired by William Aiken in 1831, and retained by the family until 1976. Research at the site focused on the period of William Aiken, Jr.'s occupancy, 1831-1882 (Zierden et al. 1986a). Data from the Aiken-Rhett site will be utilized for comparative purposes in the present discussion.

The two sites in question are similar in many respects. Both sites are located on relatively large lots, enclosed by high brick walls. Both sites exhibit the original property lines and all original structures. This makes it possible to assess the location of excavation units relative to other site features. The retention of original, clearly marked property boundaries suggests that refuse recovered was generated by that household, and was not discarded here from other households. While this may seem elementary, such a situation cannot be taken for granted in the city. Disposal of refuse onto a given site from another activity area is not at all uncommon (see Garrow 1985; Zierden et al. 1983b; Zierden and Calhoun 1986). Both sites served as residential units only, and both sites were occupied by well documented families. Finally, both owners were extremely wealthy merchant/planters whose imposing townhouses were testaments to their wealth. Ironically, both properties were occupied by military forces during a war; the Gibbes house during the Revolutionary War and the Aiken-Rhett house during the Civil War. The major difference between the sites is the periods during which the sites were occupied and for which archaeological data were retrieved. The Gibbes site is primarily a Federal period assemblage (1780-1830), while the Aiken-Rhett house was built 45 years later and is primarily an antebellum assemblage.
In addition to this directly comparable site assemblage, data from other Charleston sites will be used in the present discussion. These include McCrady's Longroom, a tavern which catered to a primarily elite clientele (Zierden et al. 1982); Lodge Alley, a dank narrow roadway occupied by lower class citizens (Zierden et al. 1983a); First Trident, initially occupied by poorer workers and later by a wealthy merchant (Zierden et al. 1983b); and Charleston Place, a block which was increasingly subdivided and utilized for businesses and residences in the nineteenth century (Zierden and Hacker 1986). These sites are discussed in more detail in the section on status.

Artifact Patterning

To date, all of the Charleston assemblages have been quantified by grouping the artifacts into functional categories, according to South's methodology (South 1977). Under this technique, artifacts are grouped by their presumed function in the daily affairs of the site occupants. By utilizing data from a number of British colonial sites, South proposed a range of variability that can be expected for the frequency percentages of artifact classes and groups. He named this range of variability the Carolina Artifact Pattern; this pattern is presumed to represent an averaging of domestic behavior. By establishing the range of normal variation, it should be possible to recognize aberrant activities as variations from these ranges.

Relative frequencies for both the Gibbes site and the Aiken-Rhett site are shown in Table 5, as is the mean for Charleston sites in the commercial core and for the Carolina Pattern. Both sites fit the pattern expected for urban domestic-only sites. The Activities class, which is higher for Charleston dual-function sites, conforms to the expected range for the Carolina Pattern. Although arms materials are usually a minor component of the urban site, it is unusual that no arms items at all were recovered from Gibbes. Other artifact categories are discussed in detail in the section on socioeconomic status.

Artifact patterning for the Gibbes site, then, in combination with the Aiken-Rhett site, provide an additional measure of site function in the city. By more closely conforming to the Carolina Pattern, they strengthen previous interpretations of site function from the dual residential-commercial sites.

Spatial Patterning

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

Comparison of Suburban Residential Sites to Dual-Function Sites

<table>
<thead>
<tr>
<th></th>
<th>Gibbes House</th>
<th>Aiken-Rhett</th>
<th>Dual-Function</th>
<th>Carolina Pattern</th>
</tr>
</thead>
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<tr>
<td>Kitchen</td>
<td>51.4</td>
<td>64.24</td>
<td>63.1</td>
<td>63.0</td>
</tr>
<tr>
<td>Architecture</td>
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<td>32.49</td>
<td>25.03</td>
<td>25.5</td>
</tr>
<tr>
<td>Arms</td>
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<td>.30</td>
<td>.20</td>
<td>.5</td>
</tr>
<tr>
<td>Clothing</td>
<td>.53</td>
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<td>3.0</td>
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<td>Personal</td>
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<td>.32</td>
<td>.14</td>
<td>.2</td>
</tr>
<tr>
<td>Furniture</td>
<td>.28</td>
<td>.17</td>
<td>.08</td>
<td>.2</td>
</tr>
<tr>
<td>Pipes</td>
<td>4.71</td>
<td>.72</td>
<td>5.97</td>
<td>5.8</td>
</tr>
<tr>
<td>Activities</td>
<td>1.61</td>
<td>.76</td>
<td>4.14</td>
<td>1.7</td>
</tr>
</tbody>
</table>
Lots were deep and narrow, to maximize the available street frontage. Houses fronted directly on the street, with the narrow end facing the road. The southern side was open and complete with piazzas, while the northern side was devoid of large openings; this allowed residents to take full advantage of prevailing breezes while maintaining maximal privacy. Two English architectural styles adapted to semi-tropical conditions in the Caribbean proliferated in the city and became famous as the Charleston single house and the Charleston double house (Calhoun 1986; Weir 1983). The single house received its name from its one room width. Typically, the single house contained two rooms on a floor, with a hall between containing the staircase, and a piazza to the south or west. The gable end fronted the street, and entrance was through a false front door onto the piazza. Later, this plan was modified slightly; the entrance was placed on the northern side of the house, resulting in a suite of rooms along the south side (Rogers 1980:66). As its name suggests, the double house contained four rooms to a floor, with a central hall, and was often grander than the simpler single house. The larger Charleston houses, particularly the double houses, were often elevated, with an above ground basement; the second floor was then the first living floor. This served to catch prevailing breezes, and to "distance" the occupants from the public streets (Coclanis 1985:612; Weir 1983). The first floor of these structures often housed a business, while residents lived on the upper floors; this is particularly true of the commercial core.

Behind the main house, auxiliary structures were arranged within a fenced compound, and often included slave quarters, kitchen, stables, well at mid-lot, and privy in the rear corner. Gardens, both ornamental and functional, might be planted and livestock might be kept. While there was some variation in the size, content, and arrangement of these structures, they were considered basic functional components of urban life, and were present in some form.

Spatial patterning on suburban sites is expected to be somewhat different than in the commercial core. Many of the sites in these areas served only as residences, with site occupants commuting to work in the commercial core or, in the case of wealthier citizens, deriving income from plantations and a variety of enterprises. The lots of the suburban areas were often more spacious, and indeed were specifically chosen for this attribute. For example, lots within the Charleston Place block, central to the nineteenth century business district, while quite narrow initially, were continually subdivided to a point where they measured 30 feet in width, but were over 200 feet long. In contrast, the Aiken-Rhett lot is 82 feet wide and 288 feet deep. The Gibbes site is even more spacious, measuring 140 feet by 268 feet, and is currently one of the largest in the peninsular city. This suggests that lots in Charleston tended to be a standard depth; street frontage was the valued commodity, and the width of a lot reflected the buying power of the owner (see Rosengarten et al. 1987:chapter 2).

The Gibbes house is a double house fronting directly on the street and measuring 51 by 53 feet. This allowed a generous side as well as rear yard. Access to the rear yard was through a gate at the west side of the house. Located in the rear yard along the western side of the
property was a kitchen building, and a stable with slave quarters on the second floor. Instead of being located in the back corner, a brick privy building was located immediately behind the stable.

Despite the fact that the Gibbes site contains all of the common lot elements, the rear yard featured a large open area (assuming that no structures other than the present ones were built here). While much of the present formal garden was constructed in the 1920s, at least some elements appear to be original to the house, including a rose garden area on the east side and the gazebo along the rear wall. It is not known if the remainder of the yard area functioned as an ornamental garden, a vegetable garden, or in some other capacity.

The Gibbes site, then, is similar to the model proposed for lot element patterning in Charleston, in that it contains the same elements in a more or less similar spatial arrangement. The major difference is the orientation of the main house parallel to an expanded street frontage, a much more spacious yard, and the presence of a formal garden. This pattern, while more common in suburban areas, is expected only on the lots of wealthier citizens.

The location of the Gibbes house reflects some of the general trends in the growth and development of the city. The earliest settlement was located within East Bay, Cumberland, Meeting and Water streets. Commercial activity focused on the waterfront, and this portion of the peninsula was best suited for commerce. During the eighteenth century, the city expanded principally to the west, and south along the Cooper riverfront. The major commercial arteries were the three east-west streets - Broad, Tradd, and Elliot. Except for this westward growth toward the Ashley, physical expansion during the eighteenth century was minimal (Figure 23; see Figure 3). The numerous creeks and strips of marsh bisecting the peninsula seem to have inhibited expansion to the north (Calhoun et al. 1982). Instead, the areas already occupied were subject to more intensive occupation; lots were further subdivided and buildings were expanded vertically and into the center of the lots.

St. Michael's Church, built in 1752, became the social and psychological center of town, and it was considered essential to live within sight and sound of the steeple (Radford 1974:192). Thus the wealthy tended to cluster in the center of the city, specifically in the area south of Broad Street. This is particularly true of the merchants, who tended to cluster in the city's core (Zierden and Calhoun 1984:79-83). Planters, in contrast, were more dispersed, often choosing the more spacious lots on the Neck rather than commercially important central lots. However, one of the locations favored by these planters was the Battery and the southern fringes of the city (Radford 1974; Rosengarten et al. 1987).

By the late eighteenth century, an increased population forced the physical expansion of the city. Large blocks of land outside the city, either functioning as farms or held for speculation, were subdivided and sold. Gibbes' lot, while technically within the boundaries of the Grand Model (Figure 24), was on the southwestern periphery of town, in an area not settled until the late eighteenth century. His choice of a high ground lot adjacent to the waterfront was obviously made for personal and professional.
Figure 23: Patterns of growth and development in Charleston, 1700-1852.
Figure 24: Area of the Grand Model, and location of later subdivisions.
reasons. The high land was most desirable, and proximity to the waterfront in a relatively unconstricted portion of the city ensured that Gibbes enjoyed the prevailing breezes from the harbor. Proximity to the waterfront meant that Gibbes could supervise the activities on his Ashley River wharf from his home.

The fact that the marshy areas behind, beside, and particularly in front of, the Gibbes house were gradually filled and then built upon is also typical of later development trends (Figure 25). This later construction obliterated both the view and much of the breezes from the house. It also resulted in a neighborhood in which lot size and house size were somewhat mixed; this trend is much more pronounced in the Charleston Neck suburbs than in the south Battery area, however (Rosengarten et al. 1987). The result of these trends were socioeconomically integrated neighborhoods, particularly in the Neck. Such a phenomenon is typical of preindustrial cities in general, and North American colonial cities in particular (Radford 1974; Sjoberg 1960).

Generally, the Gibbes site reflects general settlement trends of elite Charlestonians, on both a site-specific and city-wide level. The large, imposing double house, spacious lot, and arrangement of auxiliary structures are all typical of this class. Such behavior is also reflected in a location of the house that was peripheral, but also a comfortable distance from the center of the city.

Socioeconomic Status

The investigation of class differences, or socioeconomic status, has been a central concern of historical archaeologists in recent years (Binford 1972). Pioneering investigations of the archaeological manifestations of status have focused on southern plantation sites (Otto 1975, 1977; Lewis 1985; Drucker 1981) and Spanish colonial sites (Deagan 1983), where occupants of the site, and their social and ethnic affiliations, were known.

Urban centers are characterized by distinct social groups living and interacting within a proscribed area. For this reason, status studies are an important aspect of urban archaeological studies (Spencer-Wood 1987). A major problem with status studies in Charleston has been the lack of specific documentary information on site inhabitants, and the inability to associate individual site contexts with specific occupants (Zierden and Calhoun 1987). A recent exception to this was the Aiken-Rhett site, an antebellum suburban townhouse owned and occupied by an extremely wealthy planter-merchant. Excavations at this site have provided baseline data for the study of status in Charleston (Zierden et al. 1986). The Aiken-Rhett and Gibbes sites share several characteristics, and therefore the Gibbes site is expected to reflect the high status of the site occupant in a similar manner. Taken together, these two sites can be used to construct a preliminary model of high status in Charleston.
Figure 25: Areas of former marsh.  
(From Stoney 1976).
In addition to Aiken-Rhett, Lewis' (1985) work at Drayton Hall plantation will be utilized for comparative purposes. This plantation was owned by the extremely wealthy Drayton family (related by marriage to John Grimke-Drayton), and was used as a winter retreat. Lewis' extensive excavations resulted in a very large data base, from which she inferred patterns of high status. The Drayton Hall data base is relevant to the present study because of its proximity to Charleston, the interconnected nature of plantation and city in the Lowcountry, and the comparable excavation and analysis methods used by Lewis.

In addition to the Aiken-Rhett site and Drayton Hall, data from previous Charleston excavations are used for comparative purposes. All of these sites are located in the eighteenth century commercial core; they served as both businesses and residences, sometimes as rental property; they changed hands several times and experienced a number of rebuilding episodes. While the probable socioeconomic status of the inhabitants was inferred from general demographic data and available documentation, these deductions remain tenuous. The delineation of a model for high status from the present study can therefore be used to strengthen, or alter, conclusions about these sites.

Status is expected to be reflected in four aspects of the archaeological record; patterns of material culture, diet, housing, and site location. Housing and site location have been discussed in detail in the previous section. The location and size of the lot, and the size and imposing nature of the house were all visible statements of William Gibbes' wealth and social position. Comparative data suggests that site location in Charleston was a conscious, value-laden choice, deliberately made for a number of reasons, one of them being status-related. House and lot size choices were also made on the basis of buying power.

The importance of architecture as a status indicator may also be reflected in the relative proportion of architectural materials recovered from sites. Recently, Lynn Lewis (1985) has suggested that a relatively high proportion of architectural materials reflects the high status of the site occupant, indicating more substantial housing and more episodes of improvement. Research in Charleston and surrounding plantations suggest that the relative proportion of architectural material may be more strongly influenced by site formation processes (i.e., whether a building was razed, decayed in place, or is still standing) than by such factors as status of the inhabitants (Zierden et al. 1985). With these cautions in mind, it is interesting to note that both Gibbes and Aiken-Rhett contained relatively high percentages of architectural items. Such items comprised 41 percent of the Gibbes assemblage and 32 percent of the Aiken-Rhett assemblage, despite the fact that both sites contain original, standing structures. All previously examined Charleston sites contained less than 30 percent architectural items, with the exception of the antebellum First Trident at 30.2 percent. (This assemblage is also believed to be from a high status occupation.) Unlike Gibbes and Aiken-Rhett, all of these sites experienced at least one rebuilding episode. While it is undoubtedly true that a number of outside factors affected the architectural group, the present data do support a correlation between the architecture group and status.
Socioeconomic status should be reflected in patterns of material culture, particularly in items that were expensive, difficult to obtain, or in personal, highly curated objects. Research on low status, slave sites suggests an emphasis on subsistence and shelter, reflected in an overwhelming abundance of kitchen and architectural items, with a dearth of personal or luxury items (Singleton 1980; Trinkley and Caballero 1983; Zierden and Calhoun 1983). High status sites, in contrast, should contain relatively large proportions of these items. The clothing, personal and furniture groups at the Gibbes site comprised .53, .16, and .28 percent of the assemblage, respectively, totalling .97 percent. The Charleston mean is 1.18 percent, .14 percent, and .18 percent, for a total of 1.64 percent. The Aiken-Rhett assemblage contained .96, .32, and .17 percent, totalling 1.45 percent. These groups are less reflective of high status at the Gibbes site than they were at the Aiken-Rhett site. This may be due to the relatively small and spatially limited sample from the site. Nonetheless, status was not strongly reflected in these groups.

Certain aspects of the kitchen group are expected to reflect status; specifically, it has been suggested that the relative percentage of particular artifact types is indicative of socioeconomic status. High status may be reflected in the presence of large amounts of decorative table glass and oriental porcelain, particularly overglazed varieties. In the nineteenth century, porcelain as a status marker was replaced by transfer printed pearlware and whiteware. Likewise, variety in vessel form has been demonstrated to vary positively with income and status.

Porcelain comprises 10.6 percent of the ceramics, while transfer printed wares comprise 7 percent of the ceramics at Gibbes, totalling 17.6 percent. While the proportions vary in the somewhat later Aiken-Rhett assemblage, 4.6 and 12.3 percent, respectively, the total is comparable at 16.9 percent. This stands in contrast to the low status Lodge Alley (9 percent total), but is once again comparable to the suspected high status antebellum First Trident (16.2 percent). The relative proportions of these wares support the expected high status of the Gibbes assemblage. Lewis (1985) suggests that an additional aspect of high status is variety within these artifact classes, as well as total numbers. Particularly, a preponderance of overglaze decorated porcelain should reflect the high status of the inhabitants. While the majority of the porcelain at Gibbes was blue on white, overglazed porcelain comprised 11 percent of the type; at Drayton Hall it comprised 29 percent of the porcelain, while the planter's house at Archdale Hall contained 7.2 percent overglazed porcelain (Zierden et al. 1985). Even more diverse at the Gibbes site is the transfer printed pearlware group. Included in this group were several examples which exhibited overglazed red and gold hand painting, in addition to the underglaze transfer printing. This particular set of china may have been specially ordered from England, or the overglaze decoration could have been added by local artisans at a later date. In either case, the process represents an extra step, and thus a more expensive ware.

Decorative table glass is another indicator of status; these items comprised 1.04 percent of the kitchen group, compared to .74 percent at antebellum First Trident and .04 percent at Lodge Alley. The Aiken-Rhett site was even more strongly supportive, containing 4.06 percent table
Table 6

Relative Percentages of Sociotechnic Artifacts and Groups

<table>
<thead>
<tr>
<th>Location</th>
<th>% porcelain</th>
<th>% transfer-print wares</th>
<th>% table glass</th>
<th>% architecture</th>
<th>% clothing, personal, furniture</th>
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<td>Lodge Alley</td>
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<td>17.8</td>
<td>.88</td>
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<tr>
<td>First Trident colonial</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>23.5</td>
<td>.15</td>
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<tr>
<td>McCrady's Longroom</td>
<td>11.0</td>
<td>-</td>
<td>.25</td>
<td>25.8</td>
<td>.53</td>
</tr>
<tr>
<td>First Trident Antebellum</td>
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<td>.74</td>
<td>30.2</td>
<td>3.80</td>
</tr>
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<td>Aiken-Rhett</td>
<td>4.6</td>
<td>12.3</td>
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<td>.97</td>
</tr>
<tr>
<td>Drayton Hall</td>
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<td>-7.8</td>
<td>7.0</td>
<td>45.6</td>
<td>1.5</td>
</tr>
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</table>
glass. Lewis (1985) also suggests that variety in the table glass category may indicate high status. The Gibbes site contained a decanter neck and base, as well as a variety of goblet and tumbler fragments. The Aiken-Rhett glass assemblage is also quite varied. The material culture of the Gibbes site, particularly food consumption items, therefore reflects high status in both quantity and variety.

High status is expected to be reflected in a diet that was varied, expensive, or difficult to maintain. Domestic fauna appear to be the mainstay of the urban diet, while wild game provided variety. Urban faunal collections are typically less diverse than rural ones, most likely reflecting a greater dependence on the market system (Calhoun et al. 1984). In both cases, greater diversity is indicative of high status; in the case of urban residents, this may indicate that they were able to afford the services of a hunting or fishing specialists. Menus for dinner parties discussed by nineteenth century Charlestonians always feature a variety of wild game (Trinkley et al. 1985; Zierden et al. 1986). Other clues to high status may be found in the relative abundance of caprines and sawed bone (Reitz 1987a).

The Aiken-Rhett data conformed to this proposed model. This small sample was quite diverse, and contained a variety of fish, including offshore taxa, and wild birds (Ruff 1986). The Gibbes data mirrored these trends. Though the fish group was composed entirely of estuarine species, the group was nonetheless quite diverse. The MNI percentages of fish are identical at Gibbes and Aiken-Rhett, and are relatively high, especially for a small sample. The Gibbes sample also contained a number of turtles, considered a delicacy, and wild birds.

While the wild game did not contribute significantly to the biomass at Gibbes and Aiken-Rhett, they did contribute variety. The similarity of these two samples strengthen the model proposed for upper status diet.

While the archaeological signature of high socioeconomic status remains somewhat elusive, it is now possible to propose certain indicators of status within an urban setting. The tentative model of high status proposed from the Aiken-Rhett study was mirrored in data from the Gibbes house, thereby strengthening the model. It appears that high status is reflected in housing size and type, in site location, in diet, and in the quantity and variety of certain artifact classes. Relatively large percentages of, and variety within, the porcelain, transfer printed ware, table glass, and to a lesser extent, clothing and personal groups appear to reflect high status. High status is also reflected in the presence of expensive or rare foods and dietary diversity. High status is reflected in house location, lot size and configuration, and possibly in the relative percentage of architectural items. This model will be refined in the future, as additional data is obtained from well documented sites; presently, it can serve as a guide for studies on poorly documented urban sites.
Subsistence Strategies

Investigation of subsistence strategy has been an important aspect of archaeological research in Charleston. Since 1982, consistent methods have been applied to the recovery and analysis of faunal and floral remains. These have been used to address a number of issues, including cultural conservatism, adaptation to local environments, resource utilization, ethnicity, and social variability.

Research on subsistence practices on the southeastern coastal plain has been aimed at delineating a regional pattern of animal utilization, using the vertebrate remains from a variety of sites (Reitz 1979; Honerkamp and Reitz 1982; Reitz and Honerkamp 1983, 1984; Reitz and Scarry 1985). This pattern is characterized by a heavy dependence on beef, and utilization of a variety of wild species indigenous to the local environment. In contrast, the use of domestic pig and caprines is quite limited. This archaeological model is in contrast to the documentary evidence, which suggests a heavy dependence on pork (Genovese 1974; Hilliard 1972; Gray 1933). The model is also in contrast to the traditional Old World English diet (Anderson 1971; Reitz and Honerkamp 1983). The Charleston data fit the model of resource utilization for the southeastern coastal plain (Reitz and Honerkamp 1984).

Recently, subsistence research has focused on two topics, with promising results. The first is rural-urban contrasts. Based on research on a number of sites, it appears that there are basic dietary differences between rural and urban sites which cross-cut temporal, ethnic, and social boundaries (Reitz 1986). Urban citizens relied more heavily on domestic fauna - mammals and birds - than did their rural neighbors. This may be due to the function of the market in the urban setting. Domestic meats may have been more available to urban citizens because of the market. In contrast, wild game would have been more difficult to obtain for the average urban citizen. Data from recently excavated sites, including Aiken-Rhett (Ruff 1986), Charleston Place (Carder 1986), and the Gibbes site (Ruff, this volume) all conform to the model. Although data is less extensive, similar trends are noted in floral remains. Wild plants are extremely rare in urban samples, while cultigens such as corn and wheat have been noted (Trinkley, this volume; Trinkley et al. 1985).

Another trend emerging from this recent research involves indicators of socioeconomic status (Schultz and Gust 1983; Ruff 1987). It appears that the diet of the wealthy, whether urban or rural, was more diverse than those of the lower class. Research at Gibbes and Aiken-Rhett has supported this model of diversity. While domestic fauna formed the mainstay of the diet, wild taxa contributed variety to the menu. The variety was enhanced by the consumption of fish (including offshore species at Aiken-Rhett), turtles, alligator at Aiken-Rhett, and wild birds. All of these were relatively expensive, and turtle flesh was considered a delicacy. Basically, wealthy Charlestonians enjoyed a diet that was expensive. Expense may be considered in terms of time invested, as well as money invested (Reitz and Cumbaa 1983).

Clearly, the study of subsistence strategies through the analysis of faunal and floral remains has provided considerable data on urban adaptive strategies.
Table 7
Relative Percentages of Faunal Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Gibbes (%) MNI</th>
<th>Gibbes (%) Biomass</th>
<th>Aiken-Rhett (%) MNI</th>
<th>Aiken-Rhett (%) Biomass</th>
<th>Beef Market (%) MNI</th>
<th>Beef Market (%) Biomass</th>
<th>Dual-function sites (%) MNI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic mammal</td>
<td>29.6</td>
<td>95.7</td>
<td>43.1</td>
<td>94.7</td>
<td>42.3</td>
<td>94.1</td>
<td>28.9</td>
</tr>
<tr>
<td>Domestic bird</td>
<td>14.8</td>
<td>.5</td>
<td>12.3</td>
<td>1.6</td>
<td>9.0</td>
<td>.3</td>
<td>19.7</td>
</tr>
<tr>
<td>Wild mammal</td>
<td>3.7</td>
<td>1.1</td>
<td>7.7</td>
<td>.8</td>
<td>15.4</td>
<td>4.3</td>
<td>8.1</td>
</tr>
<tr>
<td>Wild bird</td>
<td>18.5</td>
<td>.9</td>
<td>6.2</td>
<td>.9</td>
<td>9.0</td>
<td>.3</td>
<td>7.6</td>
</tr>
<tr>
<td>Aquatic reptile</td>
<td>7.4</td>
<td>.8</td>
<td>9.2</td>
<td>1.3</td>
<td>2.6</td>
<td>.1</td>
<td>5.5</td>
</tr>
<tr>
<td>Fish</td>
<td>18.5</td>
<td>1.0</td>
<td>18.5</td>
<td>.5</td>
<td>19.2</td>
<td>.8</td>
<td>19.7</td>
</tr>
<tr>
<td>Commensals</td>
<td>7.4</td>
<td>.1</td>
<td>3.1</td>
<td>.2</td>
<td>2.6</td>
<td>.03</td>
<td>10.4</td>
</tr>
</tbody>
</table>
Rural-Urban Contrasts

An area of increasing interest in historical archaeological studies in the southeast has been the relation of urban center to the surrounding hinterland. Charleston's growth as a marketing center was concomitant with the growth of its surrounding hinterland. The focus on rice, and later cotton, as a profitable staple crop spurred Charleston's growth as a port and trade center. Because the economic emphasis of the city was on the marketing of staple crops, the urban economy was dependent on that of the plantation, and vice versa. Thus, the city of Charleston was intimately linked with the lowcountry plantations, both socially and economically. In archaeological terms, the examination of contrasts between rural and urban adaptive strategies have been examined most successfully.

An assumption underlying most anthropologically oriented archaeological investigations is that human culture is affected by environmental conditions, both natural and cultural. Based on research at rural sites, small frontier settlements, and, more recently, large urban centers, archaeologists are beginning to discern major and subtle differences between rural and urban lifestyles. Urban citizens faced many environmental challenges not shared by their rural neighbors. The residents of the city were forced to adapt to a rapidly growing commercial center in which the common problems of everyday life were exacerbated by environmental conditions. The production and distribution of goods became increasingly complex and regulated. The necessarily more intensive utilization of land for a variety of purposes resulted in highly constricted residential and commercial areas in the urban core. This limitation of available space created a need for both formal and informal regulation of activities, as reflected in land values, legislation, and locational trends. Archaeological manifestations of these differences have been noted in four areas: spatial patterning, site formation processes, subsistence strategies, and patterns of material culture. Rural-urban contrasts in subsistence strategies have been discussed in detail in the previous section; the other three topics will be discussed below.

Site Formation Processes

Investigation of site formation processes has been central to ongoing archaeological research in Charleston. In order to properly interpret an archaeological site, it is first necessary to understand the processes responsible for the development of that data base. Cultural materials are introduced into the ground by three basic methods; discard, loss, and abandonment (Schiffer 1977). Once in the ground, they can be redistributed, or they can be removed (Ascher 1968; Binford 1981; Honerkamp and Fairbanks 1984; Schiffer 1983). While the method of introduction is of primary concern to researchers, redistribution is also a common occurrence on urban sites.

Continuing research suggests that sheet midden, or zone deposits, are characteristic of rural sites, particularly farm or plantation sites. This pattern has been noted on plantation sites in Georgia, as well as South Carolina (Singleton 1980; Drucker and Anthony 1979; Zierden and Calhoun 1983; Zierden et al. 1985; Zierden et al. 1986). More specifically, refuse
appears to have simply been carried a convenient distance from the house and dumped, and the use of swamps, marshes, and other lowlying areas for this purpose was prevalent. Features, while present at these sites, usually contained sparse materials. While this pattern was most prevalent, large subsurface features, when available, were secondarily used for refuse disposal. The extensive excavations at two plantations at Daniels Island revealed a well and abandoned brick foundation used for refuse disposal, as well as extensive sheet deposits. The numerous other features at the site, however, contained only sparse material (Zierden et al. 1986b).

Although there is considerable overlap, reuse of subsurface features for refuse disposal appears to be more common on urban sites. Although some refuse was scattered on the ground as sheet midden, much of it was deposited into features such as abandoned wells and privies. Another recently noted feature of the urban site is varying artifact density within the sheet deposit (Zierden et al. 1986a). An additional feature of urban refuse disposal practices, and the one most difficult to deal with archaeologically, is the off-site disposal of refuse.

Scavengers served the city from the early eighteenth century on, although the magnitude of their efforts and location of their dumping is unknown. Crowded conditions and health considerations also resulted in the deposition of refuse into any convenient space in the city. Open lots, unpaved streets and alleys, and spaces between buildings were likely candidates (Calhoun et al. 1984; Zierden et al. 1983a; Zierden and Hacker 1987). Quantities of material were also dumped into creeks and lowlying marshy areas, creating viable real estate (Rosengarten et al. 1987; Zierden and Calhoun 1986). The net result is that refuse deposits in the city cannot always be associated with specific occupants (Zierden and Calhoun 1987). Later, municipal services in the areas of water procurement, sewage disposal, and garbage pickup resulted in radical alteration of the archaeological record at urban sites (Honerkamp and Council 1984; Rosengarten et al. 1987).

The Gibbes data support the model proposed from previous research. Although the total excavated area at the site was very small, and restricted to a small area, observation of the 50 feet (25 feet on two sides) profile provided by the pool excavations revealed additional information on this issue. Excavation of the three 5 foot squares revealed that zone deposits were the principal means of refuse disposal in this portion of the site, seemingly in contrast to the proposed model. However, the feature deposits, particularly Feature 3, contained far denser materials than did the zone deposits. Further, the pool profile (Figure 13) reveals that these zones may have been deliberately deposited to fill lowlying areas. Also evident in this profile are deposits of materials which, if encountered in a small excavation unit, would have been classified as zones; they actually represent shallow, extensive features. In reassessing the proposed model, it appears that zone deposits are more prevalent in the urban archaeological record than previously expected; however, the nature and origin of urban zone deposits is different from their rural counterpart in that they appear to represent a more deliberate effort to dispose of refuse satisfactorily and to improve the landscape.
Although it appears that the relative proportions of feature to zone deposits on rural and urban sites is less distinct, there still do appear to be differences in the behavior resulting in these refuse deposits. Refuse disposal was a complex process, based on location, convenience, regulation, and environmental setting. Urban residents, because of the constrictions and health problems of the urban environment, were forced to be more deliberate in their refuse disposal habits.

**Spatial Patterning**

The same activities necessary to sustain domestic life on the plantation were also necessary for contemporary urban life. Therefore, many of the same structures and activity areas found dispersed through the plantation complex were also crammed onto the urban lot (Castille et al. 1982; Zierden and Calhoun 1986). Urban sites, regardless of the social status of the inhabitants, tended to be characterized by long, narrow lots, houses fronting directly on the streets, privy location in a back corner, and well and various outbuildings at mid-lot (Honerkamp et al. 1982).

The long, narrow urban lots allowed maximal utilization of street frontage; the narrow ends of the houses often fronted the street. Behind the main dwelling, auxiliary structures were arranged within a fenced compound. The number, size, and function of these buildings varied, but often included kitchen, stables, and - for those who could afford them - slave quarters (Wade 1964). The urban back yard was the locus of diverse activities, often including commercial as well as domestic affairs, and even included the maintenance of livestock and gardens, both functional and ornamental.

This pattern stands in sharp contrast to plantation sites, which often featured expansive front and back yards, dispersed buildings and activity areas, and slave communities geographically discrete from, but often contiguous to, the main house complex. Housing style and size varied considerably on lowcountry plantations (Lane 1984; Baldwin and Iseley 1985; Stoney 1955), but a consistently recurring pattern on rural sites, in contrast to those in Charleston, was the orientation of the main house. Rural dwellings were oriented so that the long side, or front exposure, faced the river, the carriage approach to the house, or both. This was probably done, as in Charleston, to catch prevailing breezes; it also presented a more expansive view without the spatial constrictions of life in the city.

The Gibbes site and the Aiken-Rhett site both revealed a variation in this model. Both of these sites exhibited more spacious lots, and houses oriented parallel, rather than perpendicular, to the street. Such an arrangement, probably more desirable, was affordable only by the wealthy, and available only in the suburbs. Although this spatial arrangement more closely approximates that of the plantation, even the larger urban lots were much more constricted than their rural counterparts.
One parallel seen in the settlement patterning of both rural and urban sites is that certain criteria were used to determine the habitability of space; once settled, sites were then subject to continuous occupation, even when other land was available. The Daniels Island project demonstrated that those characteristics that made land desirable in the seventeenth century - deep water and high ground (South and Hartley 1980) - remained important through the nineteenth century, as reflected by the rebuilding and reoccupation of the same sites (Zierden et al. 1986b). The fact that other land was readily available was evidently less important.

In a similar vein, locations desirable in eighteenth century Charleston were those in the core of the city, close to the commercial activities of the waterfront. As discussed in the previous section, physical expansion under urban conditions tended to be vertical rather than horizontal. Instead of moving to the periphery, urban citizens subdivided their already small lots in the oldest section of the city, built multi-story structures that housed both businesses and residences, and expanded into the center of inner-city blocks.

This is amplified by locational trends in the nineteenth century. Planters, who did not need commercially prime real estate, built their townhouses along the waterfront or on the more spacious lots of the Neck. Merchants, in contrast, continued to choose the expensive real estate in the commercial core of the city on wide, major thoroughfares (Calhoun and Zierden 1984; Radford 1974:211).

Though William Gibbes' choice of location appears to refute this model, it is actually only a variation of it. Gibbes viewed the Ashley River frontage as ideally suited for construction of a profitable wharf. He then simply constructed his home adjacent to his place of business. These data suggest that dwelling sites, whether urban or rural, were deliberately selected on the basis of both cultural and physical criteria; further, these criteria influenced functional choice for over two centuries, despite economic, demographic, and technological changes.

Patterns of Material Culture

When urban archaeological research was initiated in Charleston, it was suggested that differences in the material culture of urban and rural residents would be discernable, especially among the upper class. It was expected that the elite, who often owned both a townhouse and a plantation dwelling, would be more ostentatious in their urban daily affairs.

It was suggested that the presence of a large urban center such as Charleston, and the presence of an established society of successful planters exhibiting diversified economic interests, made the interaction sphere of the South Carolina lowcountry somewhat unique. The planters of the lowcountry often divided their time between their business interests in the city and the overseeing of staple crop production on their plantations (Rogers 1980). The distinctions between rural and urban citizens of the upper class were further obscured by the fact that
successful merchants also invested their earnings in land, and often became absentee planters as well (Calhoun et al. 1982; Stumpf 1971; Zierden and Calhoun 1984a).

Successful planters often diversified their commercial interests by investing in additional plantations, or by investing in more urban-based enterprises, such as shipping. The socioeconomic position of the planter thus appears to be a more critical factor in determining the extent of a particular plantation's ties to the city than is geographic distance from the urban center.

Charleston thus became the lowcountry's social center, as well as its economic center. The townhouses built by planters were often designed to be a testament to their wealth (Rogers 1980). The city and its calendar of social activities served as the backdrop for this ostentation. For these reasons, the urban site of the planter was expected to contain a higher percentage of high status, or sociotechnic, items than his respective plantation site. In order to adequately investigate this issue, it will be necessary to investigate a townhouse and plantation house of the same individual; to date this has not been possible. Such research will also need to address the possibility of specialized uses for plantation houses. For example, Drayton Hall, one of several plantations owned by the wealthy Drayton family, was used as a winter showplace. Others may have been owned simply for investment purposes, and the modest main house rarely occupied by the owner.

While such research still holds promise, present research on upper status urban sites and plantation sites in the lowcountry reflects little difference in the status-related material culture of these two types of sites (Lewis 1985; Zierden et al. 1986a; 1986b). Urban and rural free citizens appear to have enjoyed more or less equal access to both imported and locally produced goods. Access to a variety of goods would certainly be expected for the upper class. With their extensive ties to the city, it follows that these people were able to purchase supplies and furnishings for their plantations directly from Charleston, and order directly from Europe through factors.

There have been some differences noted when comparing urban and rural assemblages to the Carolina Artifact Pattern (South 1977), but once again these differences appear to reflect phenomena other than rural/urban differences. The Charleston data from sites in the urban core contain a higher percentage of activities items than seen on plantation sites or reflected in the Carolina pattern. It is believed that this reflects the dual function of these sites. The Gibbes and Aiken-Rhett sites, both residential-only, do not contain high percentages of activities items.

Another difference initially noted between rural and urban settings was the reduction in the importance of arms items at urban sites (Honerkamp et al. 1982; Zierden et al. 1983b). The Charleston mean is .2 percent, compared to .5 percent in the Carolina pattern. More recent examination of lowcountry plantation sites, particularly Daniels Island, reveals an equally low percentage of arms items. It has been suggested that after the Yemassee War in 1715, the Indian threat was considerably reduced in the lowcountry, compared to other
colonies. Thus, a reduction in arms-related materials at both rural and urban lowcountry sites may be expected (Brad Rauschenberg, personal communication, 1985). Thus, while examination of rural and urban sites owned by specific individuals might reveal rural/urban sociotechnic differences, on a general level there appears to be little difference in the material culture of urban and rural sites.
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Zierden, Martha, Jeanne Calhoun, and Debi Hacker


Zierden, Martha, Lesley Drucker, and Jeanne Calhoun

Zierden, Martha, Elizabeth Reitz, Michael Trinkley and Elizabeth Paysinger
APPENDIX I
ETHNOBOTANICAL ANALYSIS OF SAMPLES FROM THE GIBBES HOUSE,
CHARLESTON, SOUTH CAROLINA

by
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Introduction

During February 1986 archaeologists with The Charleston Museum conducted test excavations at the Gibbes House on South Battery in downtown Charleston, South Carolina under contract with Historic Charleston Foundation. This structure, built in 1772 by William Gibbes, is a lavish example of a Charleston townhouse which has always been owned by wealthy individuals. The only nondomestic use of the structure occurred during the Revolutionary War when Gibbes, a patriot, had his house confiscated by the British and used as a hospital.

The tests, which consisted of the excavation of three 5 foot squares (75 square feet), were conducted within a 25-foot square block slated for the construction of a swimming pool. These excavations were conducted in the rear yard, about 125 feet from the main house and 60 feet from the stables and slave quarters. Deposits investigated range from about 1775 to 1840, spanning the bulk of the antebellum period. Zone 3 is a dark grey-brown sand which dates from the late antebellum (ca. 1820 though 1840), while zone 4 is a medium gray sand which lays immediately above sterile soil. The zone 4 artifacts suggest deposition from about 1775 to 1820. Both zones were divided into arbitrary levels during the fieldwork, but these levels have been combined in this study for analytic purposes.

Only two features were recovered and included in this study. Feature 3, found in units 1 and 2, is a large, shallow pit filled with domestic refuse with a TPO of 1780. A volume of soil equivalent to 7 gallons was collected and floated. Feature 6 represents a brick yard drain which had filled with soil. Although no flotation sample was collected from this drain, materials were handpicked for analysis.

Charcoal was handpicked from the excavations and the 1/4 inch waterscreen. A series of five such samples were collected and submitted for analysis. In addition, a series of nine soil samples, which range in size from 3 to 5 gallons, were collected for flotation. These samples were floated by the Museum staff in April 1986. Flotation samples were submitted from Unit 1, zones 3 (levels 1 and 2) and 4 (levels 1 and 2); Unit 2, zone 4 (levels 1 and 2); Unit 3, zone 4 (level 1) and Feature 3 (Units 1 and 2, representing the north and south halves). In addition, a series of nine samples from 0.5 cubic foot blocks were taken in order to study the ratio of wood to coal. These samples were taken from Unit 1, zones 3 (levels 1 and 2) and 4 (levels 1 and 2); Unit 2, zones 3 (level 2) and 4 (levels 1 and 2); Unit 3, zone 4 (level 1); and Feature 3.

The major issues to be investigated involve evidence of subsistence resources, the presence of non-food plants in the assemblage, and the use of fuels in antebellum Charleston. Although the Gibbes House, like the Aiken-Rhett structure (Trinkley 1986), belonged to wealthy individuals, the yard remains probably represent a mixing of both owner and slave refuse. Therefore, the effects of status on the ethnobotanical record must be cautiously considered.
Procedures and Results

The nine flotation samples were prepared in a manner similar to that described by Yarnell (1974:113-114) and were examined under low magnification (7 to 30x) to identify carbonized plant foods and food remains. Remains were identified on the basis of gross morphological features and seed identification relied on United States Department of Agriculture (1948, 1971), Martin and Barkley (1961), and Montgomery (1977). All float samples, except for those from Feature 3, consisted of 5 gallons; the two float samples from Feature 3 consisted of 7 gallons combined. In retrospect these samples were too small and should have been at least four times as large. The results of this analysis are provided in Table 1.

Excluding zone 3, which had a very high percentage of debris (60 to 62%), wood charcoal is the dominant component, ranging from 67.6 to 82.5% in the zone 4 sample and up to 91.8% in the Feature 3 sample. The high percentage of debris in the zone 3 sample is unusual, but is consistent in both levels 1 and 2. Coal, by virtue of its weight, is a rare constituent of the flotation samples and is found only in Unit 1, zone 4, level 1 and Feature 3. In both cases it accounts for less than 1% of the sample. The only food remains identified consist of two seeds, one each in the Unit 1, zone 4 level 1 and Feature 3 samples. The seeds are of wheat (Triticum aestivum), and while they do not account for a significant portion of the samples, it is unlikely that this cultigen is an accidental inclusion in the archaeological record.

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

The wood charcoal from the site is primarily pine (Pinus sp.), although small quantities of maple (Acer sp.) and poplar (Populus sp.) are also identified. Coal, while not a wood species, is as common as pine, and is the only constituent in the upper zones of Unit 3 and from within Feature 6 (brick yard drain). Additional information on coal use may be obtained from the nine coal samples. Table 3 tabulates weights of coal and wood charcoal in a series of 0.5 cubic foot samples waterscreened through % inch mesh. Levels within zones have been combined to simplify the results.

Discussion

The ethnobotanical remains from the Gibbes site are not particularly revealing, but as previously noted the flotation samples are quite small and much of the dearth of information must be attributed to this problem. The average sample size is just over 3.8 grams from an average soil sample of 5 gallons. At the comparable Aiken-Rhett House, the average sample size was 18.8 grams from 10 gallons (or 9.4 grams of charcoal from 5 gallons), about three times that found at the Gibbes site. These inter-site differences cannot be explained given the limited available data, although they demonstrate
<table>
<thead>
<tr>
<th>Provenience</th>
<th>wood charcoal wt</th>
<th>wood charcoal %</th>
<th>Uncarb. organic wt</th>
<th>Uncarb. organic %</th>
<th>stone/soil wt</th>
<th>stone/soil %</th>
<th>coal wt</th>
<th>coal %</th>
<th>bone wt</th>
<th>bone %</th>
<th>seeds wt</th>
<th>seeds %</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1, Z3, L1</td>
<td>1.25</td>
<td>40.2</td>
<td>1.86</td>
<td>59.8</td>
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<td></td>
<td></td>
<td></td>
<td>3.11</td>
</tr>
<tr>
<td>Unit 1, Z3, L2</td>
<td>0.70</td>
<td>38.5</td>
<td>1.12</td>
<td>61.5</td>
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<td></td>
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<td>1.82</td>
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<tr>
<td>Unit 1, Z4, L1</td>
<td>2.89</td>
<td>80.7</td>
<td>0.62</td>
<td>17.3</td>
<td>0.04</td>
<td>1.1</td>
<td>0.02</td>
<td>0.6</td>
<td>0.01</td>
<td>0.3</td>
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<td>70.3</td>
<td>0.89</td>
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<td>2.98</td>
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<td>3.55</td>
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<tr>
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<td>0.35</td>
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<td>67.6</td>
<td>1.43</td>
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<td>4.40</td>
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<tr>
<td>Feature 3</td>
<td>12.02</td>
<td>91.8</td>
<td>0.91</td>
<td>7.0</td>
<td>0.02</td>
<td>0.1</td>
<td>0.13</td>
<td>1.0</td>
<td>0.01</td>
<td>0.1</td>
<td></td>
<td></td>
<td>13.09</td>
</tr>
</tbody>
</table>

Seeds are *Triticum aestivum*

Table 1. Flotation sample components, weight in grams.
<table>
<thead>
<tr>
<th>Provenience</th>
<th>Pinus sp.</th>
<th>Acer sp.</th>
<th>Populus sp.</th>
<th>Coal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 2, Z3, L1</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit 2, Z4, L3</td>
<td>+ t</td>
<td>p</td>
<td></td>
<td>+</td>
</tr>
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<td></td>
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</tr>
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<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Feature 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

+ = abundant, p = present, t = trace

Table 2. Analysis of handpicked charcoal samples.

<table>
<thead>
<tr>
<th>Provenience</th>
<th>Coal</th>
<th>Wood</th>
</tr>
</thead>
<tbody>
<tr>
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<td>182.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Zone 4</td>
<td>6.4</td>
<td>0.1</td>
</tr>
<tr>
<td>Unit 2, Zone 3</td>
<td>23.3</td>
<td>0.1</td>
</tr>
<tr>
<td>Zone 4</td>
<td>18.2</td>
<td>0.8</td>
</tr>
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<td>Unit 3, Zone 4</td>
<td>57.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Feature 3</td>
<td>26.6</td>
<td>1.5</td>
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</tbody>
</table>

Table 3. Coal and wood weights, in grams, from 0.5 cubic foot samples. Weights are rounded off to the nearest 0.1 gram.
the need for adequate samples. The procurement of such samples is a problem which all archaeologists must face. The most forthright solution, of course, is the flotation of soils in the field so that sample size may be immediately adjusted to ensure adequate collection. As this is frequently not possible, it is necessary to establish, based on available data, a minimum soil sample size, especially since it is always easier to subsample a large flotation sample than to go back to a closed site and collect more soil. This study suggests that future work in Charleston should anticipate collecting 25 gallons of soil per provenience or feature. The soil may be processed until a minimum flotation sample of 10 grams has been achieved, although a sample of up to 30 grams may be more representative.

The only plant food remains found in these samples are two seeds of wheat (*Triticum aestivum*). Wheat is a common cereal grain, grown chiefly for its use as flour, although it may be fed to livestock and the plant is useful as pasturage and hay. The typical variety grown in the South is winter wheat, which is sown in the fall. The wheat will be harvested when the grains are soft enough to be indented by the fingernail, but too hard to be easily crushed, usually in May or June (Duggar 1921:40-59).

Hilliard (1972:6, 161-162) notes that while corn was the major Southern cereal crop, wheat was common. He notes that "long before the end of the eighteenth century, an embryonic wheat belt had developed with its axis running southwest from the lower Hudson River valley into North Carolina" (Hilliard 1972:6). Its principal area during the antebellum period was the Piedmont of Georgia, the Carolinas, Virginia, and Maryland. Wheat production in Charleston District, and along the entire South Carolina coast, however, remained below one bushel per capita and less than 15 bushels per acre from 1840 through 1860 (Hilliard 1983:59-62).

The emphasis by Southern farmers on corn, rather than wheat, may be related to environmental factors. The annual rainfall in Charleston County is about 49 inches a year. When rainfall approaches 50 inches a year wheat is heavily affected by a rust fungus, greatly lowering its yields (Duggar 1921:60-61; Taylor 1982:21). Hilliard (1972:162), however, notes that corn was easier and less expensive to grow, that corn found a more stable market than did wheat, and that wheat required labor for harvesting at the same time that "King Cotton" required attention (Hilliard 1984:57).

In spite of this, Reese notes that wheat is far superior to corn and that "it is always chosen (as a bread flour).... where .... the poverty of the country has not constrained the inhabitants to be contented with cheaper food" (Reese 1847:734). Olmsted noted that during his southern travels he found "no bread (for corn pone - let me assert, in parenthesis, though possibly as tastes differ, a very good thing of its kind for ostriches - is not bread)" (Olmsted 1953:520). Although it may be reasonable that Gibbes, because of this wealth, was using wheat, finding it as seed in the rear yard at an urban site is unusual.

The wood charcoal samples examined from the Gibbes rear yard are small, but continue to document a reliance on pine as the major fuel wood in use.
in Charleston. Unlike the Aiken-Rhett House, better burning hardwoods are uncommon at the Gibbes site. Since Reese (1847:116) clearly notes that hardwoods, while costing more, provide a superior fire, it is unusual that they are uncommon in the archaeological record at the Gibbes House. It is, however, necessary to also consider the role which wood depletion played in colonial and antebellum Charleston. Weir notes that,

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

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

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

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

Accounts of coal use in Charleston are less well researched, although there are numerous advertisements for peach orchard red ash, orrel, Liverpool, New Castle, "Stone Hinge," and Smith's coal in the Charleston newspapers during the mid-nineteenth century (Jeanne Calhoun, personal communication 1985). At least three coal yards were in business and prices at this time were from $6 to $7 per ton.

The coal found archaeologically from the Gibbes House is primarily anthracite, represented by small, unburned waste fragments, although some caking or bituminous coal may also be present. Reese notes that,

when coals are dug they are liable to be broken more or less; hence there is always a quantity of fragments, which constitute the small coal. When the coal is bituminous and of the best kind, this small coal is useful, as it will cake together . . . ; but when the coal is little bituminous . . . this small coal does not cake, and it is then of little value. It is customary . . . to separate the large from the small by screening; and the small is sold at a much lower rate, under the name of slack. It is no uncommon thing for dishonest dealers to mix some of this slack with good coals, though some of it is scarcely combustible (Reese 1847:120).
The study of coal and wood use at the Gibbes House suggests that coal was present in considerable quantities early in the antebellum period and that Gibbes' use of wood was minimal. By the mid-nineteenth century coal was almost exclusively used (see Table 3). This reliance on coal is almost certainly an indication of Gibbes' wealth and status in antebellum Charleston.

Summary

This ethnobotanical study, while hampered by small samples, has provided several indications of Gibbes' wealth and status, including the presence of wheat and the heavy use of coal (with a concomitant decrease in the use of wood). Less satisfactory has been its contribution to a study of diet and subsistence. Regardless of flotation sample size, urban sites have generally produced fewer plant remains than rural sites (Trinkley 1983, 1985), probably because of both preparation and preservation factors. The work at the Gibbes site suggests that features may be a better source of plant foods than strictly non-midden proveniences.
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Trinkley, Michael


United States Department of Agriculture


Weir, Robert M.


Yarnell, Richard A.

APPENDIX II
ZOOARCHAEOLOGICAL ANALYSIS OF THE VERTEBRATE FAUNA
FROM THE GIBBES HOUSE

Barbara L. Ruff
and
Elizabeth J. Reitz
University of Georgia
Abstract

The vertebrate fauna from the Gibbes House, Charleston, South Carolina, was excavated in 1986 by Martha Zierden of The Charleston Museum. The materials date to 1775 through 1840. Documentary evidence identifies the site as the residence of William Gibbes, a wealthy merchant who built the house in 1772 on South Battery. Research focused on examination of urban, in contrast to rural, subsistence patterns, identification of socioeconomic status markers, and influence of site function as reflected in the archaeological fauna. The resulting data were compared with those from both contemporaneous and slightly later residential and mixed residential/commercial sites. Faunal analyses suggest that high status urban subsistence strategies emphasize a variety of domestic taxa and a diverse diet.

Introduction

Subsistence strategy analysis has been a focus of recent historical archaeology research in the urban archaeology of Charleston. These investigations have addressed such traditionally problematic questions as the identification of social status markers and the delineation of characteristically urban and rural subsistence patterns among temporally and environmentally equivalent sites. An increasing number of studies (Carder 1986; Reitz 1984, 1986; Reitz and Honerkamp 1983; Reitz et al. 1985; Zierden and Trinkley 1984) suggest that consistent differences perceived in urban and rural archaeological deposits are site location dependent. In the absence of documentary evidence, faunal analysis data is often inadequate for determination of socioeconomic status. Urban sites dating from the mid-eighteenth to mid-nineteenth century are particularly perplexing in this respect. Typically, these sites were functionally mixed, incorporating both commercial and residential activities; identification of status markers in such archaeological contexts is not feasible.

The Gibbes House is an urban Charleston site for which there is ample documentary evidence. This evidence has clarified the identity and social status of both the original and subsequent owner-occupants. Functionally, Gibbes House was a domestic site. Investigation of subsistence patterns for a household of known socioeconomic status and restricted function may provide tentative models for identification of these parameters in faunal assemblages recovered from comparable sites.

Materials

Gibbes House, an urban domestic site built in 1772 by William Gibbes, a wealthy merchant, was excavated in 1986 by Martha Zierden of The Charleston Museum. The archaeological sample was obtained from three 5 foot squares. All materials were water screened through ¼ inch mesh. The
deposits analyzed in this study date from 1775 to 1840; all features date to
the late eighteenth century. No functional differences were perceived among
these analytical units. Since the excavated squares were adjacent, temporally
comparable, and functionally identical, faunal component units were aggregated
into a single analytical unit. A list of proveniences examined in this study
is provided in Appendix A.

Methods

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

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

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

110
\[ Y = aX^b \]

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

\[ \log Y = a \log X + \log b \]

develops a rectilinear plot for such variables on logarithmic coordinates where \( a \) represents the slope of such a plot and \( b \) represents the \( Y \) value at \( X=1 \).

As a result of the allometric nature of growth, biomass can be predicted by a given quantity of bone, or a specific skeletal dimension.

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

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

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

Both MNI and biomass calculations (and consequently interpretation of subsistence practices) are affected by sample size bias. Grayson (1979, 1981) and Wing and Brown (1979) have shown that samples of fewer than 200 individuals or 1400 bones do not reliably represent either resource diversity or utilization. Twenty-seven indviduals were identified from the Gibbes House faunal assemblage; bone count is 1,109 (Table 2). As discussed above, the manner in which analytical units are aggregated affects MNI determination. Analysis of the Gibbes House fauna as a single unit certainly was a factor in the resultant MNI estimate. Although the Gibbes House assemblage is small, the site represents a functionally discrete entity with documented high status ownership and occupancy. Therefore, subsistence patterns emerging from analysis of the site's faunal remains may
provide a basis for recognition and identification of social status markers in comparable assemblages.

The age of identified species was estimated by observing the degree of epiphyseal fusion for diagnostic elements. For mammals, degree of epiphyseal fusion is a sign of maturity. Proximal and distal ends of long bones (such as the humerus) fuse in a regular temporal sequence (Silver 1963; Schmid 1972; Gilbert 1980) as centers of ossification merge. When growth is complete the ends (epiphyses) are fused with the shaft of the element. This process occurs in vertebrae, ribs, scapulae, etc, as well as in long bones. Rates of fusion are affected by domestication and environmental factors (Watson 1978). Unfused epiphyses that normally fuse in the first year or so of life may be interpreted more reliably than fused elements. The latter may represent animals that died just after, or years after fusion was complete. To alleviate this ambiguity the majority of age categories listed in Table 3 (Number of Elements identified for Selected Age Categories) are given for upper age limits. The number of elements on which these age categories are based is also presented.

As a further step in analysis, identified species were summarized into faunal categories (Table 4). The domestic mammal category includes pig (Sus scrofa), cow (Bos taurus) and caprines. Since osteological differences between sheep and goats are often difficult to determine, both taxa are included in the term "caprine". The white-tailed deer (Odocoileus virginianus), is the only non-commensal wild mammal identified in the assemblage. Chickens (Gallus gallus) are considered domestic birds; ducks (Anas spp.), Canada Geese (Branta canadensis), and turkey (Meleagris gallopavo) are considered wild species. Aquatic resources include diamondback terrapins (Malaclemys terrapin) and loggerhead turtles (Caretta caretta). Marine fish identified include the following taxa; stingrays (Dasyatidae), hardhead catfish (Ariopsis felis), gafftopsail catfish (Bagre marinus), black drum (Pogonias cromis), and red drum (Sciaenops ocellatus). Inasmuch as it lives in close association with human residences, the rat (Rattus norvegicus) is considered a commensal inclusion in the deposits rather than a food item. Biomass summaries of these faunal categories utilize only those taxa for which MNI was calculated. Taxa such as unidentified mammal are not included in the tabulations of Table 4.

Results

The relatively small Gibbes House faunal assemblage consists of 27 individuals. In terms of both individuals and biomass, domestic mammals comprise the dominant taxa. Cattle (Bos taurus) are represented by three individuals and 52% of the biomass. Pigs (Sus scrofa) are represented by two individuals and 11% of the biomass; caprines by three individuals and slightly more than 6% of the biomass. These domestic animals comprise 30% of the individuals identified and nearly 96% of the biomass (Table 4). Based on size and thickness of the cortex, many of the long bone fragments assigned to the unidentifiable artiodactyl category may well represent cattle, but in the absence of diagnostic landmarks, such identifications are equivocal. The wild mammal component of the fauna, a white tailed deer, comprises only
1.0% of the total biomass. Domestic birds are slightly less numerous than wild birds; MNI percentages are 14.8% and 18.5%, respectively. The biomass contributed by wild birds (0.9%) is nearly twice that of domestic birds (0.5%). Aquatic reptiles contributed 7.4% of the individuals and 0.8% of the biomass. Although fish provided only 1% of the biomass, they represent 18.5% of the individuals identified and constitute a moderately diverse resource.

Analysis of age categories for domestic mammals based on epiphyseal fusion as described above indicates that the range of age categories for cattle includes juvenile, sub-adult, and adult animals. Although mammalian tooth eruption sequences are less reliable age indicators for domestic species than for wild, the present of two relatively unworn deciduous premolars presents additional evidence for a juvenile cow. For the same taxon, a very young individual is represented by diaphyses of a femur and a metatarsal and a fragmentary innominate with immature bone texture and very small size. Pigs are represented by two sub-adult animals. Caprine elements indicate the presence of a juvenile and two adult animals; no sub-adult caprines were identified. Based on epiphyseal fusion data, the juvenile individual was under ten months old. The white-tailed deer was an adult animal. For the avian species, one juvenile chicken was identified.

The sex of an animal is difficult to assess in the archaeological record. Where present, such diagnostic features as antlers in deer and tarsometatarsal spurs in galliform birds are diagnostic. Among the avian elements, tarsometatarsi with spurs were identified for both chickens and wild turkeys. Medullary bone was present on one-fourth of the chicken elements and on one duck element. Since the presence of medullary deposits on bird bone indicates females in laying condition (such deposits provide a source of calcium, Rick 1975), the chickens in the assemblage were probably laying hens. This assumption, however, may not be valid for ducks (see discussion below).

Comparison of wild and domestic species (Table 4) indicates that in terms of biomass the Gibbes household relied on domestic species considerably more than wild. The total biomass contribution of domestic species is 96.2%; the total for all non-commensal wild species is 3.8%. This contrast is not apparent in terms of MNI (44.4% domestic species; 48.1% wild species). However, two aspects of this comparison merit consideration. First, the wild component of the fauna includes a variety of small species. As discussed above, MNI estimates tend to emphasize small species over large. Additionally, wild birds pose a problem in faunal analysis; it is not always apparent which species is actually wild. It is possible that the turkeys, Canada goose, and duck were tamed or captive birds. The turkey, a native North American bird found wild by early colonists, was eventually domesticated (American Poultry Association 1874). Most turkeys, however, were probably wild until late in the nineteenth century. Similarly, records indicate that by the late 1800s, at least some mallards and Canada geese were tamed. Sprunt (1977) states that the Canada goose is not common in South Carolina; as a winter resident, however, it is fairly common. If these species do indeed represent tamed or domestic animals, then the MNI percentage of the wild component of the fauna is reduced to 24%. Both wild turkeys and Canada geese are consistently abundant in historic sites of the southern Atlantic coast. Given the reputed evasive tactics of the wild turkey and the ease with which Canada geese and many species of ducks are tamed -- indeed Ripley (1957) refers to "feral" Canada geese -- it is
possible that many of these birds represent, if not domestic, at least tamed populations. As more historic sites of this region are studied, perhaps the equivocal position of these species will be clarified.

Turtles constitute a small percentage of the wild component of the assemblage (MNI of 2; 7.4% of the biomass). The diamondback terrapin, an abundant reptile in coastal sites, inhabits estuaries. As its meat is considered a delicacy, this species has been heavily exploited in historic times (Carr 1952). Loggerhead turtles are found in moderately deep coastal bays, sounds, and estuaries; their meat is similarly valued. The identified fish are inshore species, often caught in estuaries; they are commonly found in historic sites of the southern Atlantic seaboard. Although the MNI percentage calculated for fish (18.5%) is relatively high, a significant dietary contribution by this class of vertebrates is not implied; estimated biomass contributed by fish is only 1.0%. Since a variety of taxa are represented by this resource, fish apparently added more to the diversity than to the biomass of the Gibbes House menu. Estimation of the dietary importance of fish, however, poses interpretive problems. Fish purchased and consumed as filets leave no archaeological record. Similarly, salt-preserved fish which are generally at least partially boned, are practically invisible archaeologically (Reitz 1986). Thus scarcity of fish in the faunal sample cannot be strictly equated with actual consumption of this dietary component.

Evidence for butchering in the Gibbes House collection includes bones that were sawed, hacked (by a cleaver or axe), cut, and sliced (Table 5). The term "sliced" describes clean, planar cuts lacking the striations produced by saws. Typically these modifications are observed on epiphyses. Twenty five percent of the cow remains showed such modifications. Sawing and hacking were the most common bone modification observed; the majority of sawed and hacked bones (88%) were from cattle. Innominate bone cuts representing both rump and sirloin portions of the carcass were common. Separation of the femur from the acetabulum was accomplished by slicing the femoral head. Cuts that typically separate the forelimb from the scapula -- across the head of the proximal humerus and across the glenoid fossa -- were evident. Sawed portions of the scapula posterior to the glenoid fossa are also represented. Such cuts are sold today as pot roasts (Zeigler 1966). Most of the vertebra are from the short loin, reportedly the most expensive portion of the carcass (Gust 1980). Cervical vertebra may represent soup bones or stew meat cuts. Butchering patterns for this taxon indicate that both individual cuts such as steaks or chops and units representing roasts were brought to the table in the Gibbes household. Teeth are the most common head elements represented; their abundance suggests in situ butchering but does not eliminate alternative procurement of beef cuts through the prevailing market system. Six percent of the pig remains and sixteen percent of the caprine elements show evidence of butchering.

Additional bone modifications identified in the sample include gnawing by rodents (4 elements), by carnivores (1 element) and the presence of a small quantity of burned bone (1.2% of the total bone count).
To ascertain the relative abundance of cuts of meat utilized, Table 6 groups the skeletal elements identified for artiodactyls according to portions of the carcass. In this table, head elements include teeth, mandible, maxilla, and skull fragments. Forequarters include the scapula, humerus, radius, and ulna. Forefeet include metacarpals and carpals. Hindquarters include the sacrum, innominate, femur, patella, tibia, and fibula. Hindfeet, the metatarsals and tarsals, and "feet", those bones which could not be assigned to their foot categories -- phalanges and metapodial fragments. Ribs and vertebra are assigned to separate categories. The general pattern of distribution of elements for all domestic artiodactyls indicates that the hindquarter section of the carcass is more abundantly represented (20%) than the forequarter (14%). The hindfeet (8%) and forefeet (5%) identified are primarily from cattle. The head category is most abundantly represented (22%); the majority of these elements are teeth. White-tailed deer is represented by hindquarter, forequarter, and forefoot elements. In contrast to the distribution of these mammalian elements, all parts of the skeleton are abundantly represented in the domestic avian fauna.

Measurements (Table 7) are provided as a basis for future work.

Discussion

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

Comparative studies of archaeological faunas from a variety of southern Atlantic coastal plain sites (Reitz 1986) reveal distinct patterns that characterize urban and rural sites. Where documentary evidence of status is available, these urban/rural contrasts appear to take precedence over socioeconomic factors. Late eighteenth to middle nineteenth century urban diets differed from rural diets in a notably greater reliance on domestic meat sources, both mammal and bird. Although such domestic meats were derived from a wider variety of taxa than those of rural diets (the differences undoubtedly reflecting the function of the market systems), cattle and chicken were by far the most abundantly utilized resources. Wild mammals (primarily deer) and birds (primarily Canada geese and turkeys) formed a minor component of the urban diet. Typically, aquatic reptiles and fish were exploited to a lesser extent in urban than in rural households. On the whole, urban diets were less varied than their rural counterparts, which depended more on wild resources. These studies suggest that affluence is also associated with a varied diet. The degree of taxonomic diversity in a given archaeological sample, then, may be indicative of site location or of status.

The broad faunal categories summarized in Table 4 indicate that the Gibbes House fauna typifies the urban pattern in its reliance on a variety of domestic resources. As discussed above, beef provided the major percentage of biomass utilized in this household. Pigs and caprines were utilized to a lesser
extent, but comprised a significant part of the diet. Wild mammals and birds were minor components of the sample in terms of biomass but evidently added a significant degree of variety to the diet. As outlined above, the dietary contribution of fish in terms of biomass is small (it approximates that of wild mammals). However, the five taxa identified certainly added variety to the Gibbes household menu. A comparison of the Gibbes House utilization of this resource with that of other Charleston sites is presented in Table 8. Charleston Place, Lodge Alley and McCrady's Longroom are mixed residential-commercial sites. Aiken-Rhett and Gibbes House faunas are comparable in size; both are urban, high status domestic sites. The Aiken-Rhett materials date from the 1820s through the 1860s. The strictly commercial Charleston Beef Market was excluded. Charleston Place, Lodge Alley, and Lesesne Plantation are significantly larger than either Gibbes House or Aiken-Rhett in terms of both sample size and biomass. McCrady's Longroom is somewhat smaller. The tabular data demonstrate that the fish inventory for Gibbes House was equivalent in diversity to the much larger Charleston Place site, but not as diverse as that of Aiken-Rhett. The MNI percentages of fish, however, are identical for Gibbes House and Aiken-Rhett (18.5%). These percentages are significantly higher than those of the other tabulated sites with the exception of the low status Lodge Alley. In summary, the diversity of utilized fish for both of these high status assemblages is higher than expected for small samples.

In most respects, the Gibbes House fauna typifies the urban subsistence pattern described by Reitz (1986). The Gibbes House faunal inventory, however, is relatively diverse. Aquatic reptiles and fish substantially enhanced this diversity. These resources constitute 26% of the individuals identified; their biomass contribution is 1.8%. The Aiken-Rhett fauna is also atypically diverse (Ruff 1986). For this site, aquatic reptiles and fish constitute 28% of the individuals identified and 1.8% of the biomass.

In their study of foodways in eighteenth century Spanish St. Augustine, Reitz and Cumbaa (1983) found a correlation between high diversity and affluence. High status households of St. Augustine utilized a wide range of food sources, possibly because they valued dietary variety and could afford to augment standard fare by hiring the services of a hunting or fishing specialist. High diversity, however, also characterized low status households in St. Augustine. For these sites, diversity was associated with the necessity to utilize a wide variety of local, readily obtainable resources.

The utilization pattern that emerges from analysis of the Gibbes House vertebrate fauna is, in many respects, similar to that of Aiken-Rhett. Subsistence strategies of both assemblages are similar to that of the Block-Catts house (Stewart-Abernathy and Ruff 1986). As this Arkansas site is in a different environmental zone, the inventory of available natural resources differs somewhat from that of the southern Atlantic coastal plain. The Block-Catts house, however, is a documented high status, functionally domestic urban site, contemporaneous with the Aiken-Rhett house. For this household, the subsistence pattern was also one of reliance primarily on domestic mammals and birds; wild resources provided dietary variety, but constituted a minor component of the fauna in terms of biomass.
While the Gibbes House and Aiken-Rhett faunas typify the general urban pattern, both are more diverse than the average urban fauna. Aquatic reptiles and fish contribute substantially to that diversity. These faunas differ, however, in their utilization of wild animals. The wild component of the fauna (mammals and birds combined) for Gibbes house is more abundant than for Aiken-Rhett (22% and 14% of the MNI, respectively). Atypically, wild birds are not only more numerous than domestic, but they contributed nearly twice the biomass in the Gibbes House fauna. At Aiken-Rhett, the reverse is true. This contrast is perhaps the most striking when the combined wild mammal and bird and the combined domestic mammal and bird MNI percentages are compared for each site. For Gibbes House, the wild mammal and bird MNI percentage (22.2%) is one-half that of the domestic mammal and bird percentage (44.4%); for Aiken-Rhett these percentages are 13.9% and 55.4%, respectively -- the wild mammal and bird percentage is one-quarter that of these domestic classes. As the earlier Gibbes House is located in the old South of Broad district and the Aiken-Rhett house is located in what was formerly a more suburban setting, this contrast may be indicative of subtle status-related traditions within the Charleston social structure, or may simply reflect the difference in temporal setting between these otherwise analogous sites.

Conclusions

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

As an urban site of known socioeconomic status and function, the Gibbes House assemblage was examined for indications of subsistence representing urban strategies, for identification of social status markers, and for characteristics indicative of site function. The data reviewed here indicate that in general, the Gibbes House vertebrate fauna conforms to the urban coastal plain historic sites. Domestic taxa form the mainstay of the urban diet; wild taxa contribute variety to the menu. While urban diets are typically less diverse than rural ones, a varied menu appears to be valued in high status households. In addition to wild mammals and birds, this variety is enhanced by consumption of fish. Further, the wild component of the diet varies in both number of taxa and degree to which these species are utilized in analogous urban sites. Whether such variations are site specific or reflect wider cultural preferences can only be determined as the comparative data base enlarges.

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

I appreciate the opportunity to analyze the Gibbes House faunal remains provided by Martha Zierden and the generous help and encouragement of Betsy Reitz throughout the project. Thanks are extended to Greg Kitchens for rough-sorting the fauna and helping with identifications and to Jim Greenway for weighing the sample.
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Gould, Stephen


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Zierden, Martha, Jeanne Calhoun and Elizabeth Paysinger


Zierden, Martha and Michael Trinkley

Table 1. Allometric Values Used in this Study.\(^a\)

<table>
<thead>
<tr>
<th>Faunal Category</th>
<th>N</th>
<th>log a</th>
<th>b</th>
<th>r(^2)</th>
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<tr>
<td>Biomass, kg, from Bone Weight, kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Mammal</td>
<td>97</td>
<td>1.12</td>
<td>0.90</td>
<td>0.94</td>
</tr>
<tr>
<td>Bird</td>
<td>307</td>
<td>1.04</td>
<td>0.91</td>
<td>0.97</td>
</tr>
<tr>
<td>Turtle</td>
<td>26</td>
<td>0.51</td>
<td>0.67</td>
<td>0.55</td>
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<tr>
<td>Osteichthyes</td>
<td>393</td>
<td>0.90</td>
<td>0.81</td>
<td>0.80</td>
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<tr>
<td>Chondrichthyes</td>
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<td>1.68</td>
<td>0.86</td>
<td>0.85</td>
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<td>Siluriformes</td>
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<td>1.15</td>
<td>0.95</td>
<td>0.87</td>
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<tr>
<td>Sciaenidae</td>
<td>99</td>
<td>0.81</td>
<td>0.74</td>
<td>0.73</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Species</th>
<th>Count</th>
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<th>Wt. g</th>
<th>Biomass</th>
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<td></td>
<td></td>
<td>#</td>
<td>%</td>
<td>kg.</td>
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<td>2</td>
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<td></td>
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<td></td>
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<td>481.24</td>
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<td>Odocoileus virginianus</td>
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<td>1</td>
<td>3.70</td>
<td>25.67</td>
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<td>White-tailed deer</td>
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<td>Bos taurus</td>
<td>128</td>
<td>3</td>
<td>11.1</td>
<td>2618.34</td>
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<td>Cow</td>
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<td></td>
<td></td>
<td></td>
</tr>
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<td>Caprine</td>
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<td>259.98</td>
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<td>Sheep/Goat</td>
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<td></td>
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<td></td>
</tr>
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<td>Anas spp.</td>
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<td>Duck</td>
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<td></td>
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<tr>
<td>Branta canadensis</td>
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<td>1</td>
<td>3.7</td>
<td>2.90</td>
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<tr>
<td>Canada goose</td>
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<td></td>
</tr>
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<td>Gallus gallus</td>
<td>12</td>
<td>4</td>
<td>14.8</td>
<td>12.09</td>
</tr>
<tr>
<td>Chicken</td>
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<td></td>
<td></td>
<td></td>
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<td>Meleagris gallopavo</td>
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<td>7.4</td>
<td>18.78</td>
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<td>Turkey</td>
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<td></td>
</tr>
<tr>
<td>Phasianidae</td>
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<td>1</td>
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<td>Pheasant</td>
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125
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<th>UID</th>
<th>Type</th>
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<th>Height</th>
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<th>BL</th>
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<td>Turtle</td>
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<td></td>
<td>Diamondback terrapin</td>
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<td></td>
<td><em>Caretta caretta</em></td>
<td>2</td>
<td>3.7</td>
<td>1</td>
<td>11.38</td>
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<td>0.26</td>
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<td></td>
<td>Loggerhead turtle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Fish</td>
<td>10</td>
<td></td>
<td>3.74</td>
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<td>0.09</td>
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<td></td>
<td><em>Dasyatidae</em></td>
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<td>3.7</td>
<td>1</td>
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<td>0.07</td>
<td>0.11</td>
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<tr>
<td></td>
<td>Stingrays</td>
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<td><em>Ariopsis felis</em></td>
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<td>0.006</td>
<td>0.01</td>
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<td>Hardhead catfish</td>
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<td><em>Bagrre marinus</em></td>
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<td>1.53</td>
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<td></td>
<td>Gafftopsail catfish</td>
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<td></td>
<td><em>Pogonias cromis</em></td>
<td>5</td>
<td>3.7</td>
<td>1</td>
<td>14.78</td>
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<td>0.48</td>
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<tr>
<td></td>
<td>Black Drum</td>
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</tr>
<tr>
<td></td>
<td><em>Sciaenops ocellatus</em></td>
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<td>3.7</td>
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<td></td>
<td>Red drum</td>
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<tr>
<td>Bone</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>5.81</td>
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<tr>
<td>TOTALS</td>
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<td>27</td>
<td>4393.73</td>
<td>60.88</td>
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Table 3. Gibbes House: Number of Elements Identified for Selected Age Categories.

<table>
<thead>
<tr>
<th>Age Category</th>
<th>PIG</th>
<th>COW</th>
<th>CAPRINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 2 years of age</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>At least 2 years of age</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Less than 3 years of age</td>
<td>5</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>3 years of age or older</td>
<td>0</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>5</td>
<td>23</td>
<td>6</td>
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Table 4. Gibbes House: Summary of Species List.

<table>
<thead>
<tr>
<th>Summary Group</th>
<th>MNI</th>
<th>%</th>
<th>Biomass</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Mammals</td>
<td>8</td>
<td>29.6</td>
<td>42.10</td>
<td>95.7</td>
</tr>
<tr>
<td>Domestic Birds</td>
<td>4</td>
<td>14.8</td>
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<td>0.5</td>
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<tr>
<td>Wild Mammals</td>
<td>1</td>
<td>3.7</td>
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<tr>
<td>Wild Birds</td>
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<td>18.5</td>
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<tr>
<td>Aquatic Reptiles</td>
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<td>0.8</td>
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<tr>
<td>Fish</td>
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<td>18.5</td>
<td>0.44</td>
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<tr>
<td>Commensal Taxa</td>
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<td><strong>TOTALS</strong></td>
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<td>44.01</td>
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Table 5. Gibbes House: Modifications Observed.

<table>
<thead>
<tr>
<th>Taxon</th>
<th>Cut</th>
<th>Hacked</th>
<th>Sliced</th>
<th>Sawed</th>
<th>Burned</th>
<th>Rodent</th>
<th>Carnivore</th>
<th>Gnawed</th>
<th>Gnawed</th>
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<td>Artiodactyl</td>
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<td>2</td>
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<td>1</td>
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<td>Cow</td>
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<td>11</td>
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<td>3</td>
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Table 8. Gibbes House: Comparison of Fish MNI and Taxa. a

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<tr>
<th>Gibbes House</th>
<th>Aiken-Rhett</th>
<th>Charleston Place</th>
<th>Lodge Alley</th>
<th>McCrady’s Longroom</th>
<th>Lesesne Plantation</th>
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<tbody>
<tr>
<td>Total MNI for Site</td>
<td>27</td>
<td>65</td>
<td>293</td>
<td>44</td>
<td>39</td>
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<td>Total Biomass for Site</td>
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<td>35.24</td>
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<tr>
<td>Total Bone Count for Site</td>
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<td>11,105</td>
<td>3,070</td>
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<tr>
<td>Total Number of Taxa for Site</td>
<td>17</td>
<td>23</td>
<td>51</td>
<td>20</td>
<td>16</td>
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</tbody>
</table>

which MNI was estimated

| Number of Fish Individuals | 5 | 12 | 40 | 8 | 5 | 9 |
| (MNI) for Site |
| % Fish MNI for Site | 18.5 | 18.5 | 13.7 | 18.2 | 15.4 | 14.3 |
| Fish Biomass for Site | 0.44 | 0.19 | 1.10 | 0.48 | 0.41 | 0.31 |
| % Fish Biomass for Site | 1.0 | 0.5 | 0.5 | 0.6 | 2.1 | 0.5 |
| Number of Fish Taxa | 5 | 8 | 15 | 7 | 5 | 4 |

for which MNI estimated

| % of Fish Taxa for Site | 29.0 | 35.0 | 29.0 | 35.0 | 31.0 | 18.0 |

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