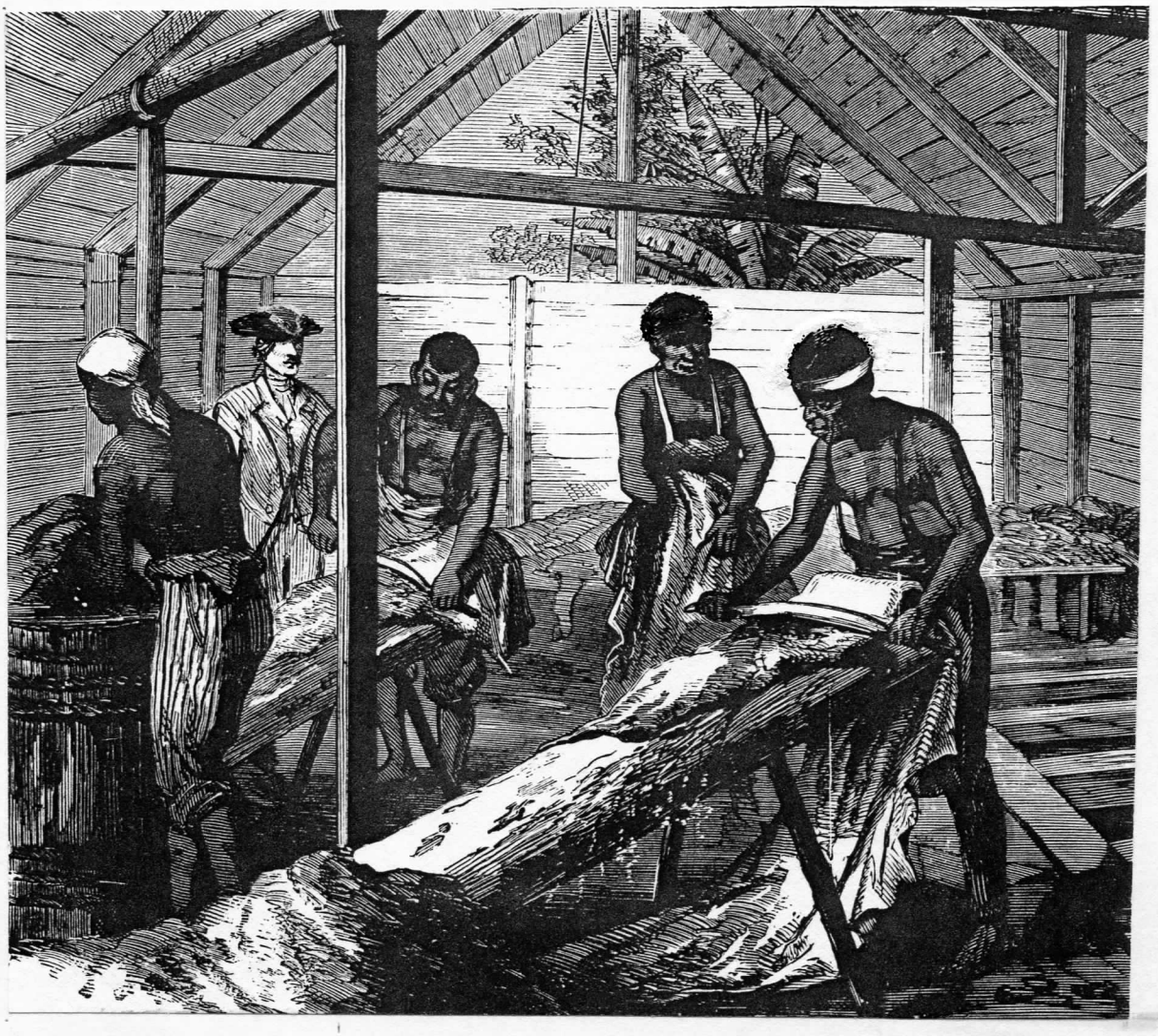

an archaeological study of the

First Trident Site

by

Martha Zierden
Jeanne Calhoun
Elizabeth Pinckney

Charleston Museum Archaeological Contribution 6

AN ARCHAEOLOGICAL STUDY OF THE FIRST TRIDENT SITE, CHARLESTON, SOUTH CAROLINA

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THE CHARLESTON MUSEUM
ARCHAEOLOGICAL CONTRIBUTIONS 6

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Abstract

In August 1983 the Charleston Museum conducted limited excavations at the First Trident site in downtown Charleston, South Carolina. Two units were excavated at this shallow, historically artificial site. During the early eighteenth century the site was on the periphery of the city, an area favored by lower status craftsmen for business and residential purposes. By the nineteenth century the location was central to the retail business district of the city and was the site of business/residences occupied by primarily middle class citizens. Three research questions were emphasized during the study. An examination of site formation processes focused on processes affecting the formation of the urban archaeological record in general and specifically on the effect of major ground disturbing activities on the research potential of collections. Studies of site function and social variability utilized data from previous studies as well as from two temporally distinct assemblages at the site. The study provided new insights into subsistence strategies, colonial craft activities, and social variability in an urban setting.

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Acknowledgements

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The logistical problems of the fieldwork were eased considerably by the interest and assistance provided by the developers. Charleston is indeed fortunate to have developers who are sensitive to the history and architecture of the city. We would like to thank Mr. Jay Keenan of Keenan and Hewitt for his assistance. Thanks also to the County of Charleston for permission to conduct excavations. Thanks also to the law office of Mrs. Ruth Cupp for use of their water for screening.

Several City offices and employees also eased the problems of fieldwork. These included Mr. Louis Baker, Department of Streets and Sidewalks and Mr. George Aul, Department of Public Services for use of power equipment. Mr. Howard Chapman, Department of Traffic and Transportation, Mr. Jack Redman, City Parking Garages, and Mr. Albert Glass, Cumberland Street Garage, also assisted and made our work easier.

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We would like to acknowledge once again the assistance and expertise of Michael Trinkley, who performed the ethnobotanical analysis and Betsy Reitz, who performed the faunal analysis. Their continued involvement in the Charleston research considerably elevate the quality of this work.

Finally, we would like to thank the staff of the Charleston Museum for their cooperation and assistance. Special thanks go to Mr. W. E. Freeman, Interim Director, and Ms. Karen Watts, Comptroller, for their continued support. We are indebted to Ms. Myrtle Brown and Ms. Susan Bonney for their typing assistance. Ms. Cindy Commins and Ms. Jo Fetzer designed the cover.

The completion of this project is testament to the interest and enthusiasm of the above individuals. Despite our debts to them, we assume full responsibility for any errors contained herein.

CHAPTER I

Introduction

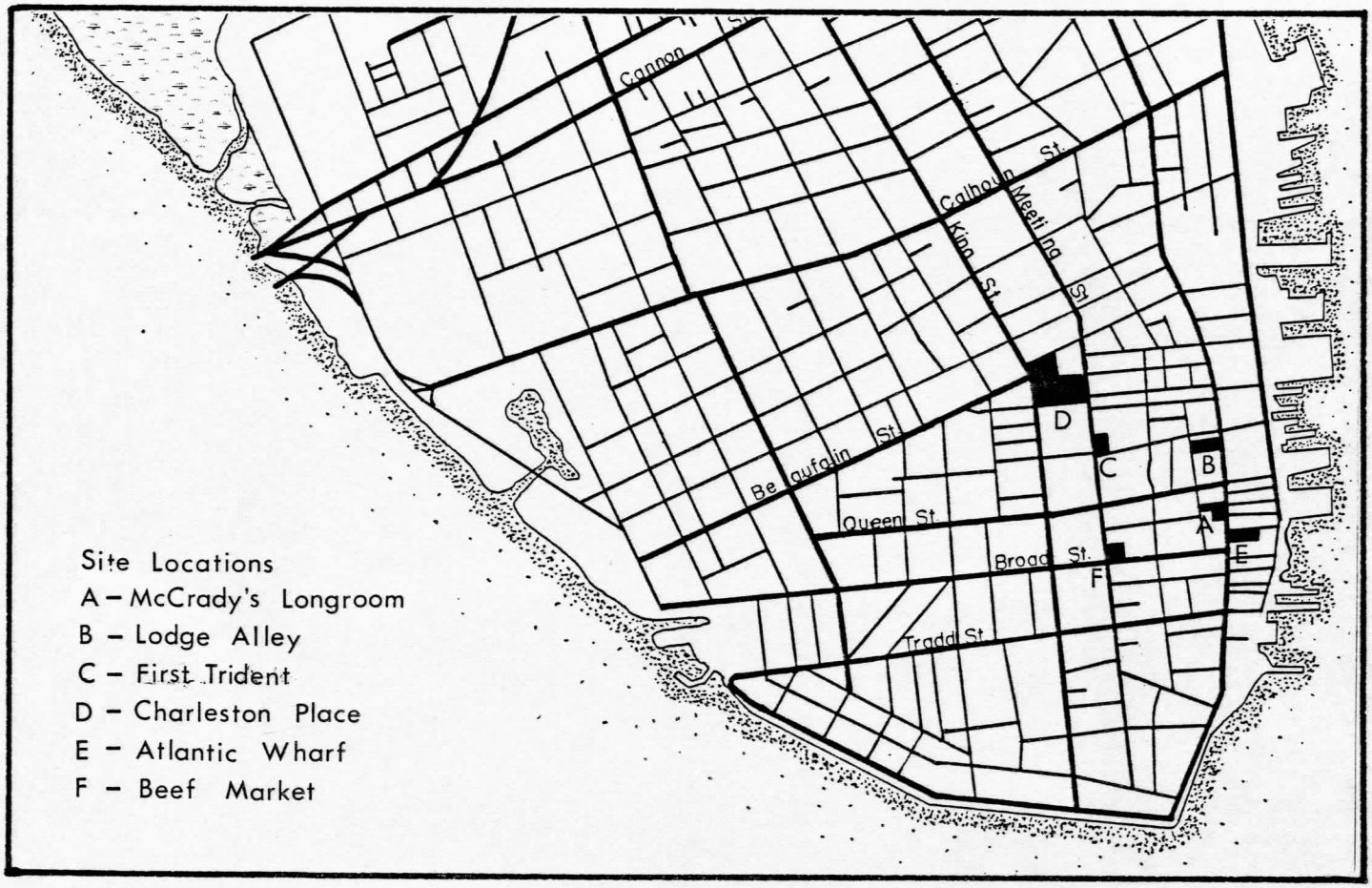
In August 1983, the City of Charleston contracted with the Charleston Museum to conduct limited archaeological investigations at the First Trident site in downtown Charleston. The lot at the northeast corner of Cumberland and Meeting Streets is the site of the new First Trident Savings and Loan Building. The developers, Keenan and Hewitt of Charleston, received limited federal funds for the project in the form of an Urban Development Action Grant to the City of Charleston. The City, realizing the potential archaeological value of the site and the importance of archaeological research to the elucidation of certain aspects of the history of the city, made a generous portion of the grant available for an investigation of the site. A total of seven days were spent in the excavation of two 7 foot squares. The following report contains a summary of these investigations and the contribution of these data to the general research goals of the Charleston Museum's historical archaeology program.

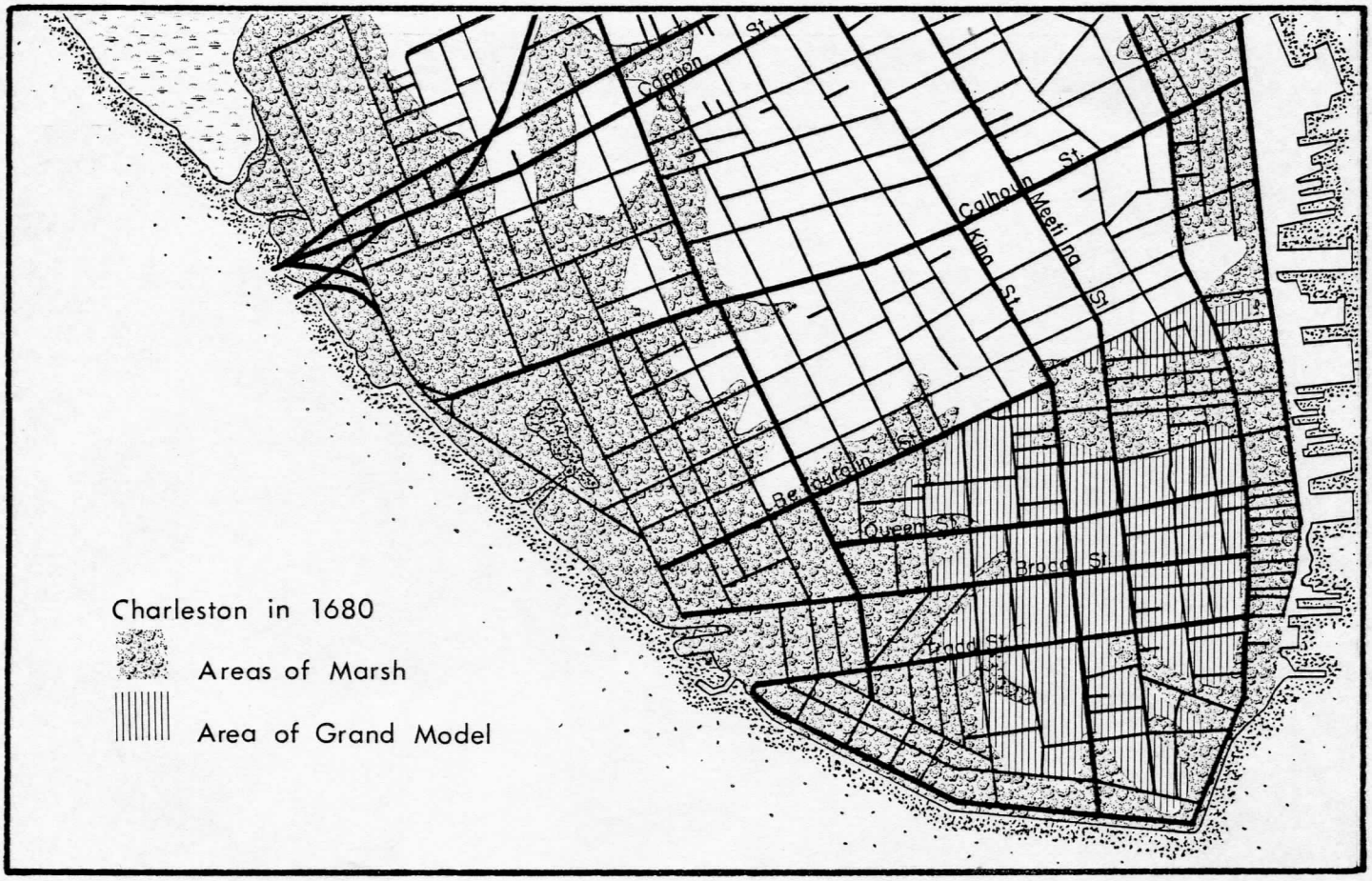
Archaeology in Charleston

Archaeological investigations in Charleston are oriented to meet several goals simultaneously. An important goal of the Charleston Museum's research program is public interpretation and education. Because archaeology can demonstrate details not available in historical sources, it is seen as an important vehicle for providing a more complete picture of the history of the city and the many groups who contributed to its development. Historical studies were the earliest thrust of historical archaeology. Gradually such studies shifted from an examination of shrines of national importance to studies of the "anonymous" citizen of varying ethnic and social affiliations (Deagan 1982; Singleton 1980; Otto 1975; Fairbanks 1972, 1983; Schuyler 1980; Trinkley 1984). Such studies in Charleston can result in a more objective view of American history.

In addition to providing historical data, research in Charleston is aimed at generating data useful in addressing questions of anthropological interest (Cleland and Fitting 1968). Based on the quantification and pattern recognition espoused by South (1977), archaeological data from Charleston and other areas are used to address the issues of ethnicity, status variability, settlement and land use patterns, and adaptation to first frontier, and then changing urban, conditions (Zierden and Calhoun 1984).

In an attempt to efficiently integrate the preservation and/or recovery of archaeological resources with the development goals of the City, the Charleston Museum initiated the preparation of a city-wide research design. The project utilized the skills of an archaeologist and an historian in a selective study of the documentary record. This study examined information relevant to the understanding of ethnic and social variability, diversity of site function, economy, and material


Cannon St.
Calhoun St.
Meeting St.
King St.
Beaufain St.
Queen St.
Broad St.
Tradd St.
A
B
C
D
E
F
Site Locations
A – McCrady's Longroom
B – Lodge Alley
C – First Trident
D – Charleston Place
E – Atlantic Wharf
F – Beef Market


Cannon St.
Calhoun St.
Meeting St.
King St.
Beaufain St.
Queen St.
Broad St.
Tradd St.
Charleston in 1680
Areas of Marsh
Area of Grand Model

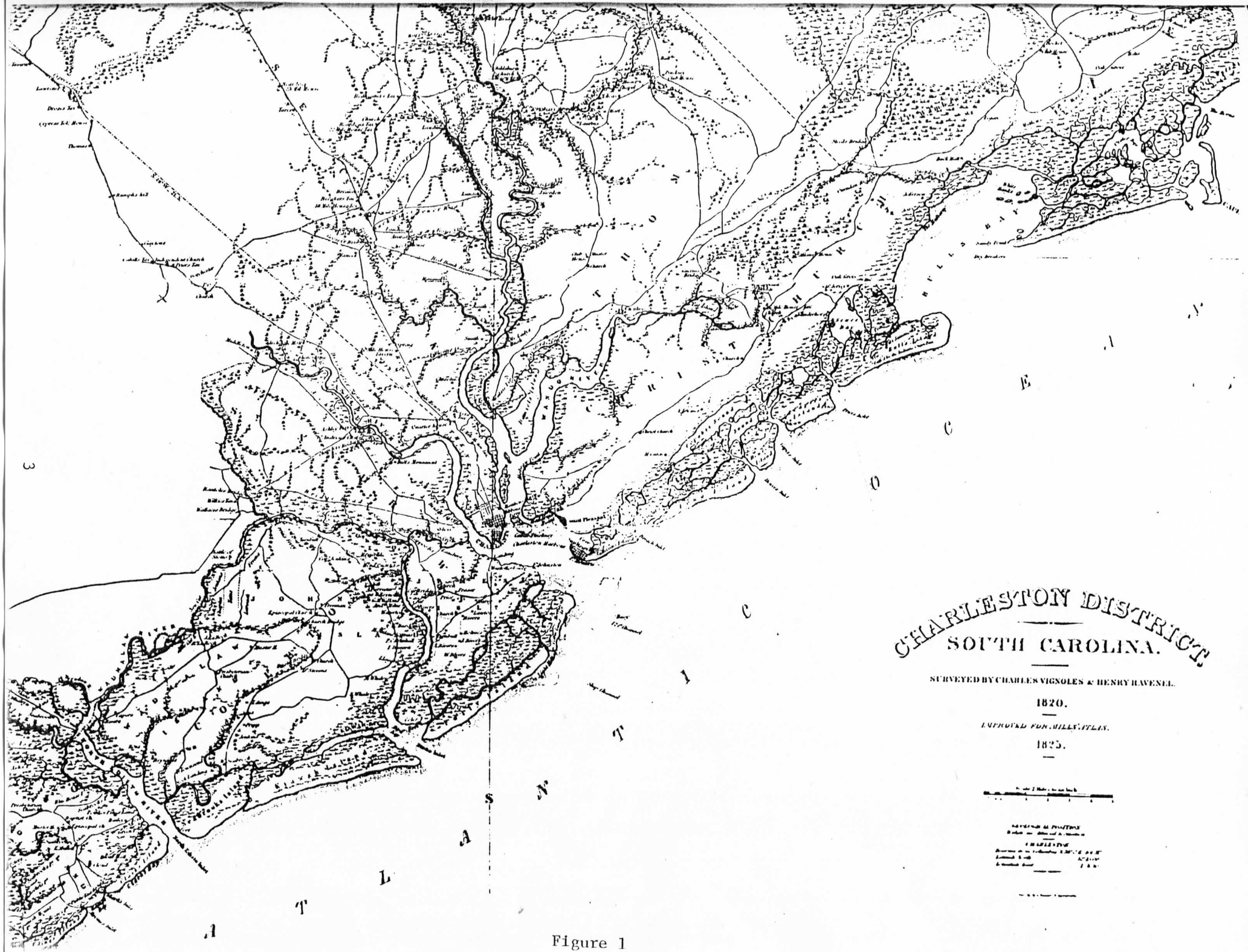

CHARLESTON DISTRICT,
SOUTH CAROLINA.
SURVEYED BY CHARLES VIGNOLES & HENRY RAVENEL.
1820.
IMPROVED FOR MILLS'S ATLAS.
1825.

Figure 1

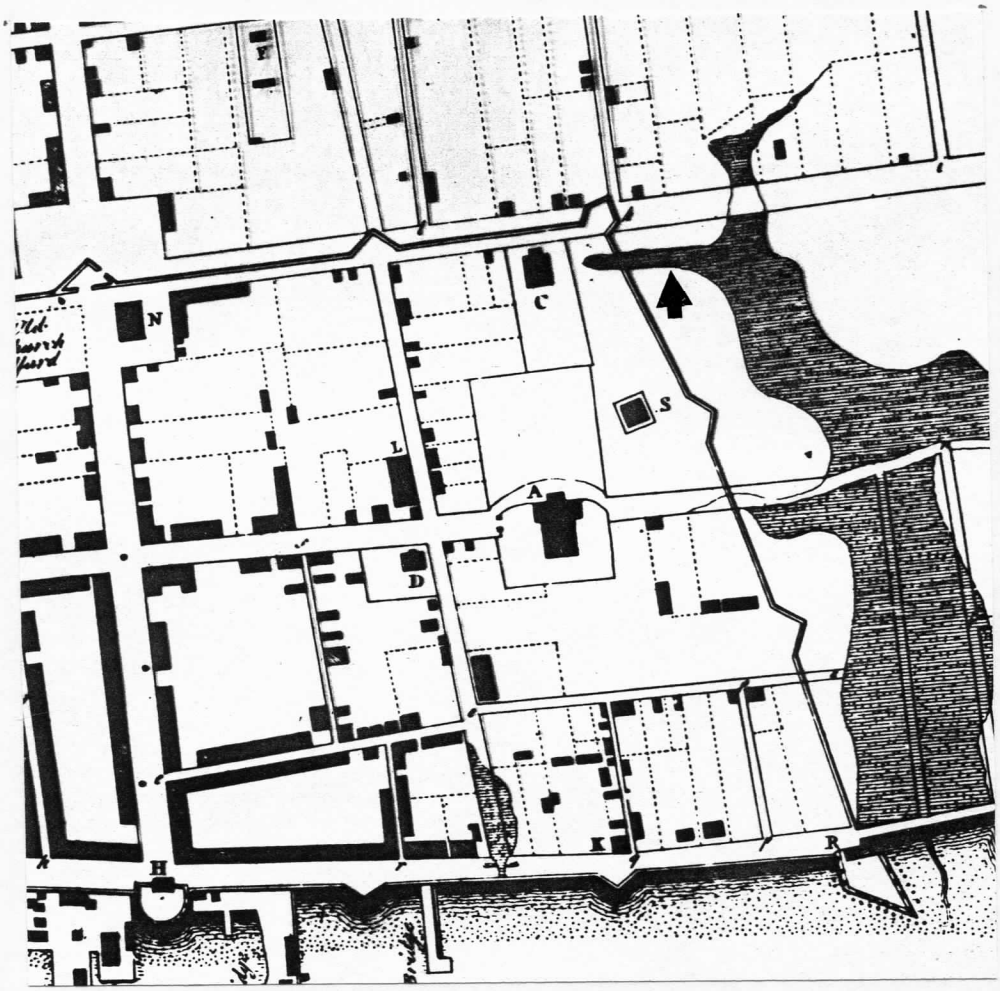


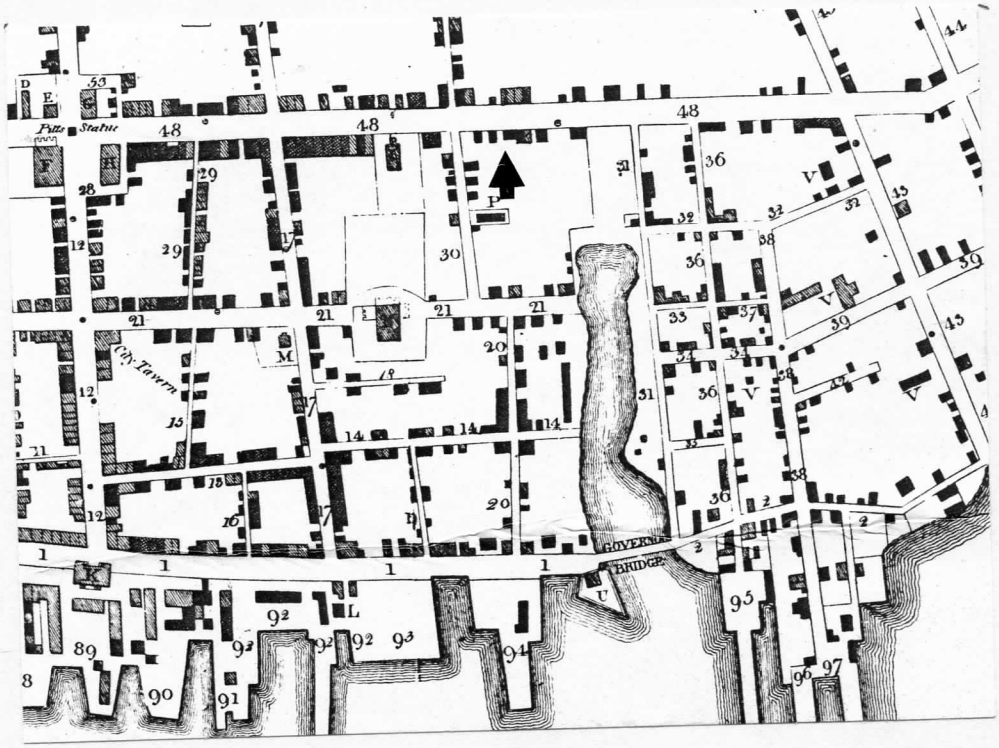
Figure 3

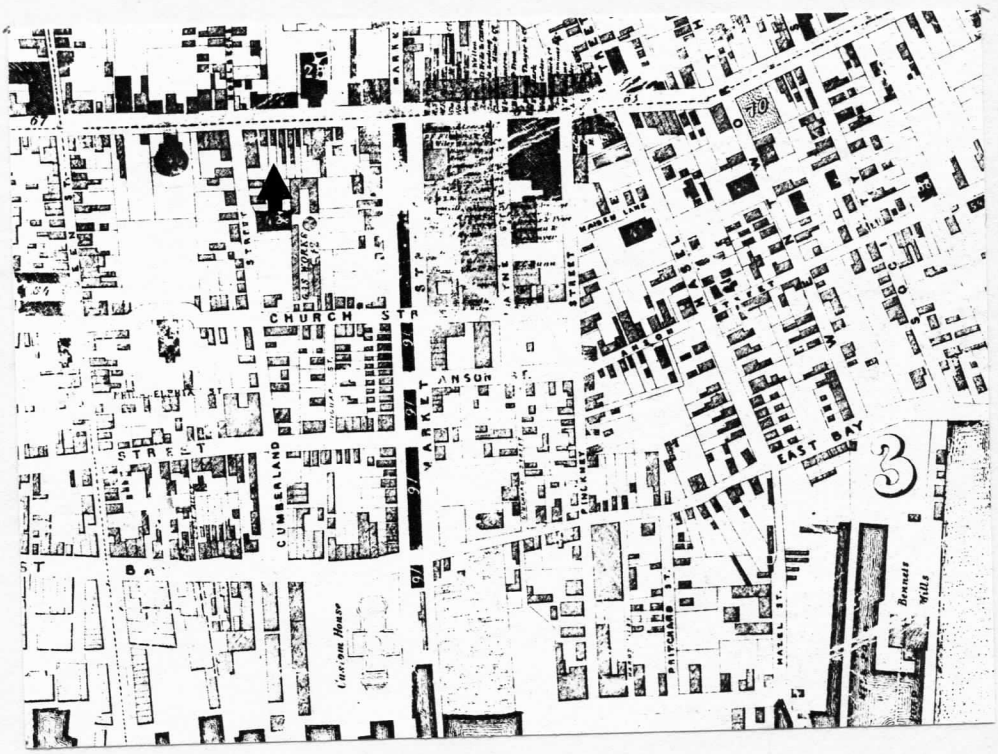
Changing Land Use Patterns for the First Trident area.

a) The Roberts and Toms map of 1739 shows a narrow strip of high land adjacent to a large expanse of marsh.

b) the marsh had been filled by the time of the 1788 Petrie map, and the block contained the traditional long, narrow lots.

c) by the mid nineteenth century, the area was intensively occupied as indicated on the 1852 Bridgens and Allen map.


Pitt Statue
City Tavern
GOVERNMENT BRIDGE


CHURCH ST
MARKET ST
CUMBERLAND STREET
EAST BAY
Custom House

culture, as well as that relevant to the physical formation of the archaeological record. The preparation of such a document results in a community focus, rather than a site-specific focus, for excavation projects, as a result of the formulation of broad research goals (see for example Cressey and Stevens 1982).

This is essential for the development of anthropological archaeology in Charleston, in that the program was developed under a cultural resource management orientation; sites are most often selected for testing and excavation on the basis of impending construction activity, rather than their ability to provide data for specific studies. Moreover, samples obtained from these excavations are often quite small, and are more meaningful within a larger framework. The small sample excavated from the First Trident site was utilized in comparative studies on socioeconomic status and site function.

The First Trident Site

The First Trident site is located between Broad Street and the Market area, just outside the original walled town (Figures 1 and 2). The site is located just north of the presumed location of the Carteret bastion, which formed the northwest corner of the walled town. The precise location of the city wall and the Carteret bastion is unknown; excavations at the Liberty National Bank site and the First Trident site, and monitoring of the construction of the Cumberland Street Garage failed to yield evidence of the wall (Herold n.d.; 1981a).

Although all but the east walls were demolished in 1717 to allow for the rapid expansion of Charleston, development to the north lagged behind growth to the south and west. The town grew first to the banks of the Ashley River, and then south to fill the area between Water Street and White Point. As the town grew, the commercial activity of the city became concentrated in the area between Broad and Tradd Streets, primarily along the waterfront (Calhoun et al 1982, 1984). Portions of the old city above Queen Street were peripheral to merchants throughout the colonial period. Although most of the city's artisans kept their businesses within the same commercial area, the colonial craftsmen were more dispersed than the merchants. Some noxious or dangerous activities were located on the edge of town, the First Trident site being such a location. The 1739 map of the city (Roberts and Toms 1739) suggests that settlement of this northern area remained sparse throughout the colonial period (see Figure 3a).

By the beginning of the nineteenth century, growth, especially residential growth, had spread north to Calhoun Street, and much of the marshy area associated with present day Market Street had been filled (Figure 3b). Following this residential development, retail merchants located along Meeting and King Streets, moving away from the commercial core of the earlier century. Nineteenth century Meeting Street was the

location of a cross section of Charleston's society, reflecting the spatial integration that characterized the community (Radford 1974); the prosperous merchant often lived next to a struggling white artisan or, further up the street, a middle class free black. The First Trident site characterizes this trend, as does the Liberty National Bank site across the street (Herold 1981a; Zierden 1984). Located near the new market stalls, the area of Meeting Street near Cumberland was in the center of this retail area that flourished through the nineteenth century (Figure 3c). The construction of the First Trident building, along with the Liberty National Bank building, the Cumberland Street Garage, and the Charleston Convention Center, along with the restoration of numerous historic structures along Meeting, is part of the current efforts towards revitalization of downtown Charleston, in an attempt to restore the economic vitality of the city's historic commercial district.

Focus of Research

Although a number of research questions have been proposed for Charleston (Zierden and Calhoun 1984; Zierden et al 1984; Honerkamp et al 1982), the Museum's comparative research to date has focused on two subjects, site function and social variability. These two questions were addressed in the First Trident project. In addition, the First Trident data were utilized in a further examination of urban site formation processes.

Hypothesis 1: A recent focus of historical archaeology in general and urban studies in particular has been the delineation of social status (Deagan 1983; Spencer-Wood and Riley 1981; Cressey et al 1982). Using the documentary record as a control, the socially stratified urban center can serve as an excellent data base for recognizing social status in the archaeological record. Previous studies in Charleston have examined an eating establishment utilized by upper class citizens during the late eighteenth century (Zierden et al 1982), a low status residential area (Zierden et al 1983), and business-residences occupied by presumably middle class citizens during the nineteenth century (Herold 1981a; Honerkamp et al 1982; Zierden et al 1983). These data will be utilized in a comparative study of the socioeconomic status of the residents of First Trident.

Historical research suggests that during the eighteenth century, the First Trident site was peripheral to the commercial district of Charleston, and that this peripheral area was generally a less desirable location, and thus occupied by lower status citizens. By the nineteenth century, the site was more centrally located, resulting in the location being more desirable, and more expensive. Therefore, the socioeconomic status of the later site residents is expected to be higher than those of the colonial period

Proposition 1-ā : These status differences should be reflected in diet and related kitchen artifacts. Previous studies indicate that diet

may be sensitive to ethnic (Cumbaa 1975) and environmental (Reitz 1981), as well as status affiliations (Otto 1975; Schultz and Gust 1983; Reitz and Cumbaa 1983). Associated with diet is the choice of appropriate artifacts used in food preparation, consumption and storage (Otto 1977).

Proposition 1-b: Status should be reflected in material items functioning in sociotechnic (Binford 1962) capacities, specifically in personal, highly curated objects. These include items of clothing, personal possession, and personal adornment. It is expected that artifacts most sensitive to social status would be those containing more highly curated objects, rather than those items used in the more mundane affairs of daily life. In addition to items of personal possession and adornment, certain types of kitchen artifacts, such as glass and ceramic tableware, are expected to be sensitive to social status (Stone 1974).

Hypothesis 2: A second focus of archaeological research in Charleston, and of archaeological research in other cities, has been the delineation of site function through analysis of archaeological materials (Lewis 1977; Honerkamp 1980; Honerkamp et al 1982; Zierden et al 1982, 1983). Revitalization projects in Charleston, and thus archaeological excavations, have been located in sections of Charleston associated with a dual residential-commercial occupation (see Calhoun et al 1982; Zierden 1984). Recognition of this dual function archaeologically has been a problem in the past. A better understanding of this phenomenon is important to future studies in Charleston, in that future revitalization projects requiring archaeological investigation will be located within the area of the city historically associated with this dual occupation.

Proposition 2-a: Researchers have suggested that site function may be revealed by a comparison of empirical artifact profiles with the Carolina Artifact Pattern (South 1977). According to South's methodology, artifacts are classified according to assumed function. An underlying assumption is that quantification of these functional groups will reveal a patterned regularity which, in turn, represents patterned behavior of the population being studied. The Carolina Artifact Pattern, as devised by South, reflects regularities of domestic behavior at British Colonial sites; deviations from the mean of the Carolina Artifact Pattern should reflect specialized site activity.

Recent research has suggested that retail commercial activity will be poorly represented in the archaeological record. Such businesses engaged in the transfer, rather than production, of goods; such activities are unlikely to generate byproducts to be discarded (Lewis 1977; Honerkamp et al 1982). In contrast, residential/craft sites are more likely to contain at least some byproducts of the craft activity. A comparison of the artifact profiles from the First Trident site with those from other urban sites, and to the documentary record, should provide information on site function in certain cases.

Proposition 2-b: Previous research indicates that in certain cases commercially related materials may be present in the archaeological record as a result of different types of site formation processes (see Schiffer 1977). Studies indicate that deposits that are the result of abandonment activities, such as those resulting from fires and major clean ups, may contain evidence of commercial activities. In contrast, deposits resulting from discard or loss at dual function sites are likely to be overwhelmingly domestic.

Hypothesis 3: A third area of research is a continuing examination of site formation processes (Schiffer 1977). In order to interpret the remains of human activity present in the urban site, its is first necessary to understand the cultural and natural processes responsible for the formation of the archaeological record. The byproducts of human activities undergo a number of cultural and natural transformations as a living site becomes an archaeological site. Although all archaeological sites result from some of the same processes, these processes are often amplified at the urban site, resulting in increased complexity. An important part of interpreting the urban archaeological record is a more complete understanding of the processes responsible for the formation of the site. The proveniences from the First Trident site will be examined and compared to those from other sites.

In addition to addressing these questions, the First Trident data will provide information on the daily life and activities of eighteenth and nineteenth century Charlestonians. The data will also provide information on early crafts and industries. Such information will be utilized in the Charleston Museum's various public information programs.

CHAPTER II

Historical Background

In the 17th and 18 centuries, England ruled a vast commercial network. Spread throughout the world, her colonies were intended to fulfill two purposes - provide raw materials for the industries of the mother country and serve as a market for her manufactured goods. The accomplishment of these two gaols was not left to chance;legislation was passed in London to regulate the economic development and trade of the colonies.

In the case of Charleston, English policy and environmental factors meshed well. Although early experiments in the cultivation of such items as wine, silk and oranges were largely unsuccessful, the abundance of deer in the Carolina wilderness provided the province with her first major export, thus easing her development in to an agricultural center.

The main game animal of the Indian tribes which populated Carolina was the white-tailed deer. These animals are estimated to have provided 50% of the animal protein in the diet of the Indians. The Indians artificially increased the number of deer in the area by firing the woods, a procedure which cuts down on the amount of underbrush and promotes the growth of grass. As a result, deer sometimes ranged throughout these man-made savannahs in herds of up to two hundred head (Weir 1983: 16-17).

The early English settlers of Carolina readily appreciated the value of this multitude of deer. The earliest trade in skins was a secondary, small-scale pursuit of individual planters. Some of these aspiring entrepeneurs hired an Indian hunter to supply them with skins while others traded with whomever wandered by (Crane 1981:118). In a promotional pamphlet written in 1682 by Thomas Ashe, the author marvelled,

> Deer, of which there is such infinite Herds, that the whole Country seems but one continued Park, insomuch, that I have often heard Captain Matthews, an ingenious Gentleman, and Agent to Sir Peter Colleton for his Affairs in Carolina, (tell) that one hunting Indian has yearly kill'd and brought to his Plantation more than a 100, someitmes 200 head of Deer (Salley 1939:149-150).

This report was very probably the truth. Thousands of deerskins were collected annually through trade with the Indians;between 1699 and 1715, approximately two hundred traders sent, on the average, more than 53,000 skins annually to England (Weir 1983:143). Most of the skins exported were heavy buckskins which weighed, on the average, almost two pounds when "half-dressed" or cured by the Indian method of smoking. The lighter skins, unsuited for either the English domestic market or re-export to Germany, were either used in the province itself or sold in the northern colonies (Crane 1981:111-112). By the mid 18th century, dressed deer skins were sixteen percent of the colony's exports to the mother country and, prior to 1760, tanning was the only important industry in Charleston (Bridenbaugh 1955:76). The necessity for extensive

storage facilities for these furs occurred simultaneously with the inward movement of Carolina Indians in the 1720s. These developments transformed the Indian trade from a secondary pursuit of various individuals to a capital-intensive industry dominated and controlled by Charleston's mercantile community. These merchants developed efficient outlets for the skins and the credit relationships necessary to finance the inland flow of trading goods. The respected and dominant position many of these merchants achieved enabled them to involve themselves in other types of South Carolina commerce, such as rice, slaves, nalal stores, lumber and foodstuffs (Earle and Hoffman 1977:37;Calhoun et al 1983:2). The disruption in the availability of skins caused by the Yamassee War (1715 - 1716) and the rise of other commodities resulted in a relegation of this trade to a secondary role in the economy of Charleston and the lowcountry (Weir 1983: 143). Nevertheless, deerskins remained an important factor in the commerce of the colony;an economist in the mid 18th century attributed the prosperity of Carolina to,

> its Soil and Climate...and...a neighboring vast Indian Country affording large Quantities of Deer-Skins (Crane 1981:10-11).

The stability of the area surrounding Charelston following the Yamassee War encouraged the colonists in their search for a staple crop. In the early 18th century, rice was recognized as a potentially lucrative crop for the Carolinians. By the 1730s, rice had become the predominant export of South Carolina. For the period 1724 - 1774, the rice shipped from the colony accounted for from one-half to two-thirds of the total value of the exports of the province. Indigo, following a late start in the 1740s, was second and the products of the backcountry - provisions, lumber and naval stores - were third (Earle and Hoffman 1977:38).

The ready demand for South Carolina's staple crops soon made the province the richest society in colonial America (Weir 1983:213-214). The expanded economic base of the town stimulated growth in population and a corresponding increase in the numbers of merchants and craftsmen. Although intermingled throughout the town, merchants and craftsmen in colonial Charleston tended to concentrate in different areas. The merchants preferred proximity to the waterfront. A study of advertisements inserted in the South Carolina Gazette for the period 1732 - 1767 reveals that Charleston merchants clustered on major east-west thoroughfares adjacent to the wharves (Calhoun et al 1983:4). Artisans had a different criteria than that of merchants for their choices of locations. Although access to raw materials was important, a more serious consideration was proximity to customers. There were some, such as coopers and sail makers, who preferred sites on or as close to the waterfront as possible. Others spread throughout the city. This lack of clustering continued throughout the colonial period, with the addition of King Street as an important area for artisans (Calhoun et al 1983:6).

The development and increased prosperity of Charleston resulted in a rise in the cost of renting and buying real estate within the commercial core of the town. Significant portions of the artisan community dispersed throughout Charleston as all but the more affluent craftsmen were forced from the highly desirable locations. Many small businessmen attempted to combat rising real estate prices by sharing buildings while artisans made increasing use through time of the more peripheral

King and Meeting Streets, two thoroughfares largely ignored by merchants. Craftsmen who derived their livelihood from trades such as the slaughtering of livestock, soap making and tallow chandlery, needed space. The lack of sanitation and the danger of fire made these activities the subject of nuisance persecution. Artisans plagued by these complaints and worried about the increased cost of land within the commercial core tended to move from the economic center of the town to less crowded areas on the periphery (Calhoun et al 1983:6). Another result of the congestion of the commercial core in colonial Charleston was the diversified nature and multiple use of buildings. Few buildings were specialized. Merchants and craftsmen often lived above their shops, rented out cellars for storage and provided room and board for those needing a place to stay. For example, in 1745, Francis Corbin advertised that she would be opening a school at the "House known as the Tanyard" and would also board children (South Carolina Gazette Dec. 2, 1745).

The institutional importance of Charleston as Carolina's mercantile, judicial and governmental center made it an important focus of colonial life. Poor inland communications and travelling conditions made it virtually imperative for a planter interested in society to reside in Charleston at least occasionally, while the danger of fevers made an in-town residence desirable during the summer months for even the most resolute recluse. As a meeting center for the surrounding country gentry, Charleston served to fulfill much the same purpose as London. The traditional London townhouse and absentee estate proprietorship with occasional visits to the country were emulated by the Carolinians. Some planters were only able to rent quarters. Others indulged their taste for the grandiose and built large, striking residences for their families. Although these planters generally chose lots near the water for the reputed health benefits, they were also influenced by wealth and taste in their decisions (Zierden and Calhoun 1982:16). Some, particularly the rice planters in the mid 1700s, situated themselves along the Battery (Oakes 1982:10) while others, preferring more spacious lots on which gardens and pleasure pavilions were possible, spread themselves along the Ashley and Cooper Rivers.

The grand scale of living enjoyed by these wealthy residents created work for a wide variety of artisans (Bridenbaugh 1955:146). Initially, most finished goods were imported from England. In March of 1741, however, Robert Pringle, a Charleston merchant, explained in a letter to John Smith, a saddler in London,

> There are now Severall of your Trade Sett up in this Town and some of them have very Good Business So that there is not now the Encouragement to Import Sadlery from England that has been formerly as they make Saddles, &c. in Town, Especially for Country people cheaper than they can be Imported (Edgar 1972:305).

Although Carolinians retained their penchant for English goods, there were many who either could not afford, did not want, or preferred not to wait for imported articles. These residents created a market for local products which Charleston craftsmen happily supplied.

Artisans in Charleston ran the gamut from fairly poor men to wealthy individuals employing slaves who, as one contemporary noted, "bear nothing more of their Trade than the name." Seamstresses and tailors were often among the poorest of the craftsmen (Weir 1983:215) while saddlers were

generally some of the wealthiest (Walsh 1959:126). One characteristic common to almost every artisan in Charleston, however, was ambition - so much so, that one historian has noted that they were "consciously on the make" (Bridenbaugh 1950:165). These craftsmen usually branched out into whatever happened to be profitable at the time. John Laurens, a saddler in colonial Charleston and patriarch of the prominent Laurens family, augmented his earnings by selling the leather buckets used to fight fires (Hamer and Rogers 1968:3n). Thomas Nightingale, a saddler in the revolutionary period, owned and managed the Newmarket Race Course, at which were inaugurated the famous "Charlestown Races" (Bridenbaugh 1955:167), conducted cock fights, loaned money at interest, rented wagons for cartage and "entertained Indians" for the province (Mohl and Betten 1970:81).

As Charleston prospered and the population grew, King and Meeting Streets began to assume more importance as the locations of both businesses and residences. King Street was the main road from Charleston to the backcountry and ran through town and up along what was later referred to as the Neck. On the Neck, which during the 18th century was primarily the site of plantations and small farms, merchants sometimes built stores outside of the city gates to cater to the backcountry trade (Sellers 1970:35). King Street on the Neck served as the backcountry's artery to Charleston. By the 1770s, approximately 3,000 wagons came annually to Charleston (Earle and Hoffman 1977:36) and, throughout the late 18th and early 19th centuries, wagon yards were a common site on this section of King Street (Charleston City Directories 1790 - 1816). At this same time, many of the small farms on the Neck which were located on or close to King and Meeting were beigg divided and converted into residential areas. Meeting Street, from its beginning on the Bay and along its extension on the Neck, was a diversified thoroughfare throughout the colonial and antebellum periods. On the section near the Bay were many of the homes of the leading families of Charleston. The 1861 City of Charleston Census reveals that, midway through the city and after passing through the commercial district, there was a mixture of brick and wooden houses of successful merchants, upwardly-mobile tradesmen and white collar workers. As Meeting Street progressed towards the city line, the houses decreased in size and solid rows of wooden wtructures, homes of artisans, day laborers, newly arrived immigrants and slaves "living-out" lined the road (1861 City of Charleston Census;Berlin 1974:255-256).

The First Trident excavation site was at the corner of Meeting and Cumberland Streets. During the colonial period, this was not a part of the commercial core but rather on the periphery, an area which attracted primarily those artisans who could not afford the cost of real estate in the core, needed space, or were engaged in activities considered offensive of dangerous by the residents of the town. The archaeological evidence indicating the early 18th century presence of a tanning and/or leather working operation on the site fits in well with this evidence.

The population growth of Charleston and the corresponding expansion of the commercial center of Charleston resulted in a more intensive utilization of Meeting Street throughout the late 18th and 19th centuries (See Figure 3). Rental property on Meeting, obviously a profitable investment, was common. Unfortunately, this makes it very difficult to determine the actual inhabitants of the property in question.

Two lots were researched, the one on the corner up until 1839 (Lot A), at which time at least a portion of the lot was used to widen Cumberland Street, and the adjoining lot (Lot B). The results are listed below.

Lot A

1694	Henry LeNoble was granted Grand Model Lot #174 (Smith 1909:21);following the death of LeNoble, his wife Catharine probably inherited this property
3/13/1744	Land of Thomas Kenning, merchant, deceased, sold by Sam. Hurst, Provost Marshall, to Samuel Perkins, for 1,525 pounds current money;the lot was bounded on the north by land late of Johnathan Tubb and currently in the possession of Mary Hext, bounded on the south by the lands of Dr. Jacob Martin, east by Meeting House Street, and west by land formerly in the possession of Samuel West now in the possession of Mrs. Booth and the said Samuel West (RMCO Book GG:336-337)
1764	Samuel Perkins left his estate to his wife and his son John (Record of Wills Book B10:477-478)
1770	John Perkins divided the lot and sold a portion to Matthew Hutchinson (RMCO Book R3:330-331)
9/30/1829	Jean Marie Etienne Louis Lefevre and Marie Eliz. Julienne Aubert Lefevre, his wife, sold the lot to Sophia Messervey for $3,000;the lot had 55 feet front, on the east side of Meeting and 42 1/2 feet on the back; depth of the lot was 109 feet and 6 inches;the lot was bounded on the east by lands of Jeremiah Hutchinson, on the north by a lot of Joshua Lockwood, west by Meeting Street, and south by Cumberland Street (RMCO Book X9:385-386)
1833	Dr. John W. Schmidt, Jr., bought at public sheriff's auction for $2,020 the lot which formerly belonged to Sophia Messervey;the lot had 55 feet frontage on the east side of Meeting Street, 52feet and 6 inches on the back line, and 109 feet and 6 inches in depth;the lot was bounded by land to the east, now or late of Jeremiah Hutchinson, to north by lot now or late of Joshua Lockwood, to the west by Meeting Street and south by Cumberland Street (RMCO Book E10:304-306)
4/6/1839	Dr. John W. Schmidt, Jr., exchanged the northeast corner of Meeting and Cumberland Streets to the City Council; the City Council used this lot to widen Cumberland Street; following this transaction, the northeast corner lot of Meeting and Cumberland Streets was bounded to the north by a lot belonging to John W. Schmidt, Jr., east by a lot belonging to the City Council, south by Cumberland Street, and west by Meeting Street.

Lot B

1810	the heirs of Amarinthia Lockwood sold the lot at public outcry to Theophilus Elsworth (RMCO Book C8:214)
1811	Theophilus Elsworth almost immediately sold the lot back to the Master in Equity (RMCO Book D6:26)
9/30/1829	Joshua Lockwood owns the lot (RMCO Book X9:385-386)
9/14/1844	Dr. John Schmidt, Jr., of New York, sold the lot to Christopher Werner for $4,500 (RMCO Book Q11:36)
12/30/1844	Christopher Werner mortgaged the lot to John W. Schmidt, Jr. (RMCO Book Q11:15)
1859	Christopher Werner sold the lot to Benj. Mordecai (RMCO Book A14:247)
1861	Mill Supplies and Machines business of Cameron and Barkley burned on this lot by the fire of 1861 (Charleston Daily Courier Dec. 12, 1861)
3/13/1868	Benjamin Mordecai sold the lot to Cameron, Barkley and Co. (RMCO Book E15:575)

Unfortunately, there are large gaps in the chain of title and, where the owner is known, seldom is the occupant. In fact, a search made in the Charleston City Directories (1790 - 1860) revealed only one match, Jno. Kennedy who, although his residence was 87 Market, kept a Billiard Saloon on the northeast corner of Meeting and Cumberland Streets (Charleston City Directory 1860). This is the only instance in which there is agreement between the owner revealed by deeds and the actual occupant as listed in the City Directories. The other owners were either not listed in the directories or gave a different address. Despite the lack of documentary evidence, the late 18th and 19th century location of the lot within the commercial center of Charleston and four blocks down (towards town) from the Charleston Center site, a well-documented mixture of commercial and residential, indicates that the First Trident site was characterized by this same dual occupancy pattern.

CHAPTER III

Excavation Techniques

Site Description

The First Trident site is located on the northwest corner of Cumberland and Meeting Streets. The site is relatively small, measuring roughly 50 feet by 150 feet, with the long axis along Meeting Street (Figure 4). The site is bounded to the north by the E. F. Hutton building, to the east by the Cumberland Street Garage, to the south by Cumberland Street and to the west by Meeting Street. The southern two thirds of the proposed site is covered by a thin cap of asphalt, and was the site of a temporary bank structure until construction of the Liberty National Bank building was complete. This portion of the site was enclosed by a fence of concrete blocks. The northern one third of the proposed site is currently used for parking for the E. F. Hutton building. The current ground surface of the site is relatively level and is roughly 10 feet above sea level. A large storm drain is located in the northwestern portion of the site.

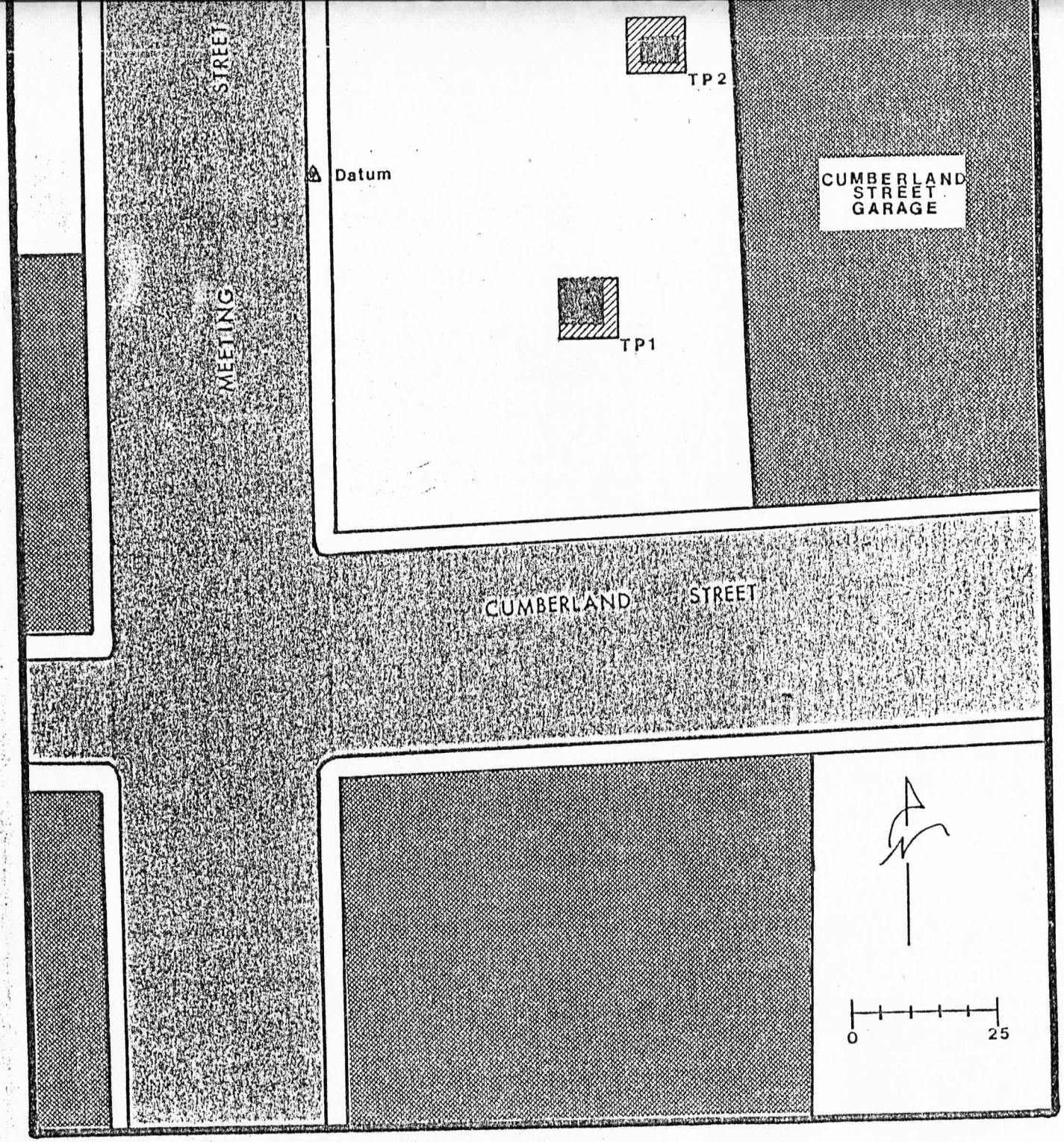
The southern two thirds of the site proved to be the most accessible for archaeological investigations, in that excavations here did not interfere with the daily traffic flow. In addition, historical investigations indicated that this area might be of the most interest to the proposed research questions, given the time limitations of the project. Excavation units were located to test two adjacent nineteenth century lots (Figure 5). Units were also stragegically placed in an attempt to avoid obvious modern disturbances such as the storm drain and parking garage foundations.

The relatively shallow nature of the present site boundaries is inconsistent with the traditional lot patterning of sites within the commercial core of the city. Such lots are usually characterized by extreme depth in relation to the width. This narrow, linear arrangement of properties and structures, plus frontage of the structure directly on the street, maximized the economic potential of relatively expensive real estate. Associated with this pattern is an extensive use of the rear portion of the lot for domestic activities, including refuse disposal. Recovery of these deposits, in contrast to the exposing of structural foundations, has become the major focus of historical archaeological investigations (Fairbanks 1977). It was expected that the present shallow configuration of the site would preclude recovery of refuse deposits from the intensive nineteenth century occupation of the site.

Early eighteenth century cartographic sources, however, indicate that much of the central portion of the block was a lowlying marsh associated with the creek that is now present day Market Street (Figure 3a). If the Meeting Street frontage was occupied during the early eighteenth century, occupation would have been limited to the fifty

Figure 4

General view of the First Trident site, looking south towards Cumberland Street.


MEETING STREET
TP2
Datum
CUMBERLAND STREET GARAGE
TP1
CUMBERLAND STREET
0
25

foot strip of high land; therefore it is possible that areas of "backyard activity" would be located within the present site boundaries. By the late eighteenth century, much of the marsh had been filled, and the traditional long, narrow lots had been laid out. Backlot activities areas from this period would therefore probably be located beneath the Cumberland Street Garage (Figure 3b, 3c). Excavation units were located in an attempt to target architectural features from the nineteenth century and, at the same time, recover backyard refuse deposits.

Excavation Techniques

Because of the congested nature of the urban site, and the temporal and spatial limitations of the project, a Chicago grid was not established over the site; instead, a trench-unit grid was used. Excavation units were designated as test pits and were numbered consecutively in order of excavation. Each test pit was located in reference to the true corner of Cumberland and Meeting.

Vertical control was maintained with the use of a transit. Elevations were taken in reference to a datum point established during the initial building survey. This datum point consisted of a railroad spike in the telephone pole at Meeting Street. This point, 10.52' MSL, was in turn taken in reference to the permanent USGS survey marker in the steps of the U.S. Post Office on the corner of Meeting and Broad. All elevations in this report are expressed as feet above mean sea level (MSL).

Two ten foot squares were established on the surface of the asphalt. The asphalt and first two zones, consisting of sterile fill sand, were removed from both units with a backhoe. Following this operation, the units were hand shoveled to remove the overburden. A smaller excavation unit was then placed within this area, creating a stepped unit for safety precautions. All units were oriented parallel to Cumberland Street. Beginning with Zone three of both units, all subsequent proveniences were hand excavated using shovels and trowels (Figure 6). All proveniences were water screened through ¼" hardware cloth, using a standard garden hose and nozzle. A .5 gallon soil sample was retained from each provenience for comparative purposes. In addition, a 4 gallon soil sample was retained from each organically rich deposit for soil flotation. All proveniences were bagged and tagged separately and each provenience received a field specimen number. Narrative notes, field record forms, and photographic documentation were maintained during all phases of the fieldwork.

Description of Excavated Proveniences

Test Pit 1 was placed in an attempt to target the lot line between the first and second lots along Meeting Street. An 1861 plat suggested that this lot line would be located 37.5 feet north of Cumberland Street. The original southwest corner of the 10 foot square was 42.2 feet east

Figure 6

Excavation of Test Pit 2 in progress.

of the corner of Meeting Street and 35 feet north of the north edge of Cumberland Street. Following removal of the asphalt and Zones 1 and 2, a 7 foot square was laid out. The southwest corner of this square is 42.2 feet south of the corner of Meeting Street and 37 feet north of Cumberland Street. The original ground surface of the square was 10.54' MSL.

Following removal of the two sterile fill zones, hand excavation began with Zone 3 at 8.99' MSL. Zone 3 consisted of a dark grey-brown loamy soil containing quantities of architectural rubble. Directly beneath the surface of this zone, a brick wall was encountered running east-west, parallel to Cumberland Street. The wall initiated at 8.8' MSL (Figure 7). The feature will be described in more detail later.

Excavation continued along the south side of the wall, Feature 1. Zone 3 continued to a depth of 5.4' MSL, at which point excavation of the unit was halted. The zone represents bulldozed material, probably deposited at the time of construction of the Cumberland Street Garage in 1980. The soils contained artifactual material spanning the second half of the eighteenth century through the present, and the majority of the artifacts were very small, suggesting extensive disturbance after deposition. The deposit also contained such elements of modern material culture as rubber bands, cellophane from cigarette packs, and styrofoam. Also located in the deposit were a number of large sections of concrete pad, situated at vertical or oblique angles, suggesting rapid filling of a deep hole, probably with power equipment. Consultation with local imformants indicates that the most recent structure on this lot had a semisubterranean cellar; it is suggested that this cellar hole may have been filled at the time that the structure was razed (Figure 8).

This information suggests that the brick wall, Feature 1, may represent the northern wall of this structure. Although the date of the structure is uncertain, it probably post dates the 1861 fire which razed the block. The wall began with a width of 2.2 feet, gradually widening for four courses of brick to a width of 2.6 feet. At a depth of 2.0 feet below the initiation point of the feature, a brick step increased the width of the feature to 3.8 feet. The massiveness of this foundation suggests that it supported an exterior wall. The matrix of Zone 3 suggests that Feature 1 represents the northern wall of a structure fronting Meeting Street.

The depositional nature of Zone 3 and the lack of evidence of a builder's trench makes dating of the feature difficult. Historical evidence suggests that the wall was constructed in the second half of the nineteenth century. The small portion of the unit to the north of Feature 1 was not excavated.

Test Pit 2 was located in the northeast quadrant of the site. The 10 foot square was 56.6 feet east of the corner of Meeting Street and 80 feet north of Cumberland Street. Cartographic sources indicate that during the nineteenth century, this area was within the second lot on

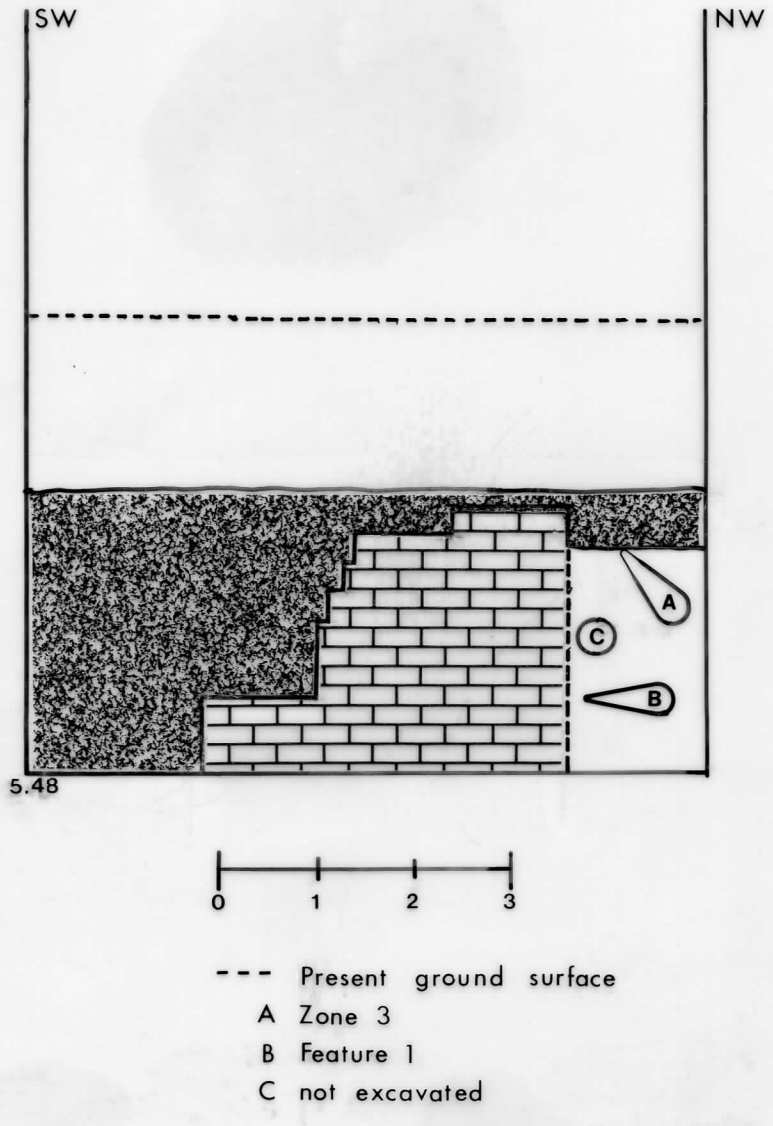


Figure 7

West Profile, Test Pit 1

the block, and during the latter portion of the century this lot was vacant, making it a possible location for refuse disposal. The asphalt and Zones 1 and 2 were removed with a backhoe. The top of the asphalt was located at 9.7' MSL. At the top of Zone 3, 8.49' MSL, a 5 foot by 7 foot square was laid out and hand excavation commenced. The square was oriented parallel to Cumberland Street, with the long axis running east-west. The southwest corner of the unit is 58.6 feet east of Meeting Street and 81.0 feet north of Cumberland Street.

The stratigraphy of Test Pit 2 was characterized by a series of shallow zones containing organic refuse, interspersed with shallow, refuse filled features. The multilayered stratigraphy of Test Pit 2 stands in sharp contrast to the stratigraphy represented in Test Pit 1.

Zone 3 of Test Pit 2 represents the results of the same activity as Zone 3 in Test Pit 1, although the artifactual content was somewhat different; the zone showed some evidence of bulldozing and contained some brick rubble and concrete slab sections. Zone 3 was much shallower in this square, however, measuring .89 feet. Although the zone was deposited in the late twentieth century, the provenience contained primarily mid-nineteenth century material.

Beneath Zone 3 was a zone of medium brown-grey sand containing quantities of charcoal, small fragments of mortar and brick, and organic refuse. The zone initiated at 7.6' MSL and continued to 7.22' MSL, sloping to the east. Initiating at the top of Zone 4 was a circular trash filled pit designated Feature 2 (Figure 8). This shallow pit was composed of soil identical in color and texture to the surrounding zone; it was distinguished by a lack of mortar fragments and the presence of quantities of bone and oyster shell. The feature certainly represents the deliberate underground deposition of offensive refuse. Feature 2 measured 2.6 feet in diameter and was .3 feet deep.

Located at the base of Zone 4 was an L-shaped feature intruding into the south and east walls (Figure 9). The feature was relatively shallow along the south wall and was deepest along the east wall of the unit, continuing to 6.6' MSL. The feature was filled with the same matrix as the above zone.

These deposits were followed by three zones of sandy soil containing relatively little architectural rubble. These three zones did contain quantities of charcoal and faunal material, suggesting that they contained quantities of organic refuse. Zone 5 initiated at 7.22' MSL and was composed of mottled gold and brown soil with charcoal flecks. The zone was excavated in three arbitrary levels. The mottled soil was followed by a zone of medium grey char-flecked soil, initiating at 6.2' MSL. This was excavated as a single provenience, and arbitrarily halted at an inconsistent layer of yellow clay which was present over most of the square. The deposit of medium grey sand beneath this clay was designated Zone 7, based on its separation from the above zone by the clay. Zone 7

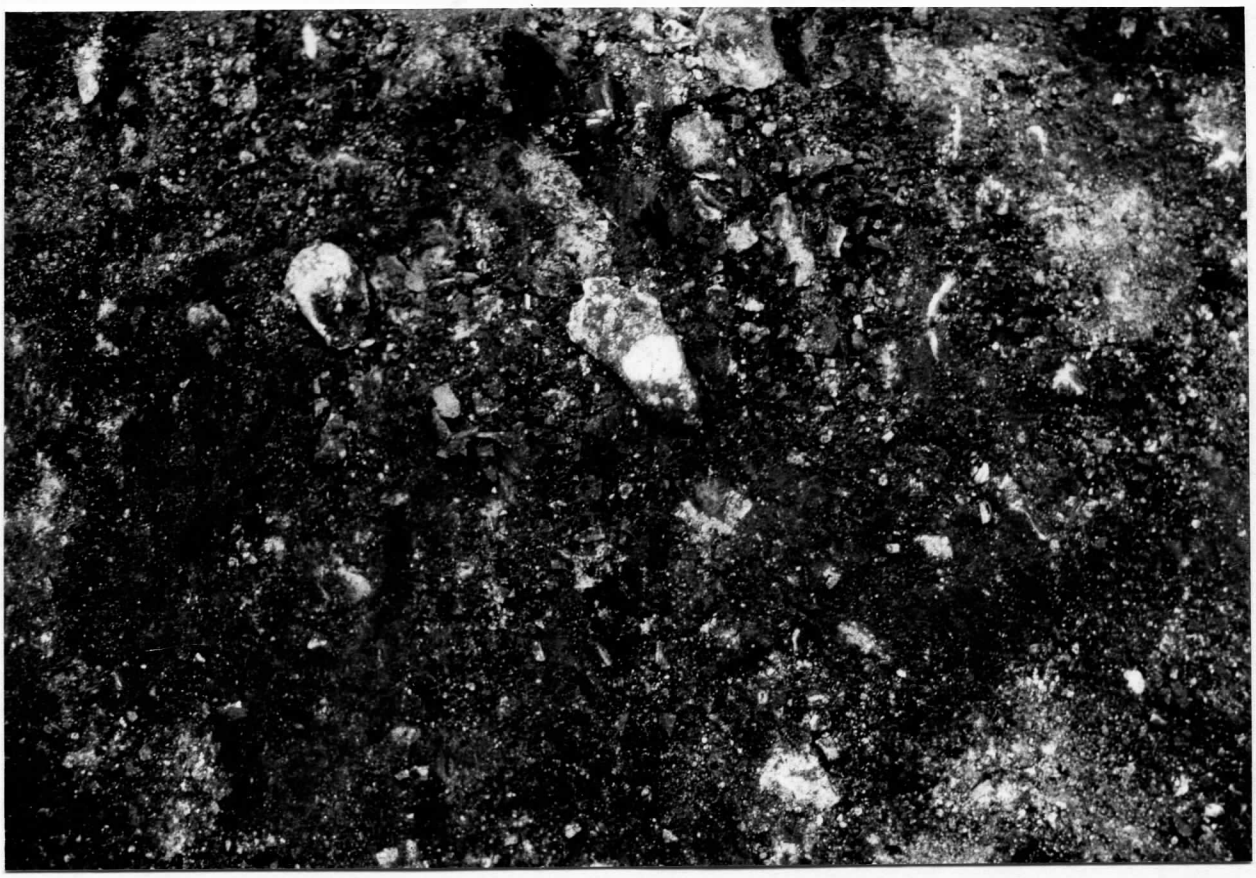
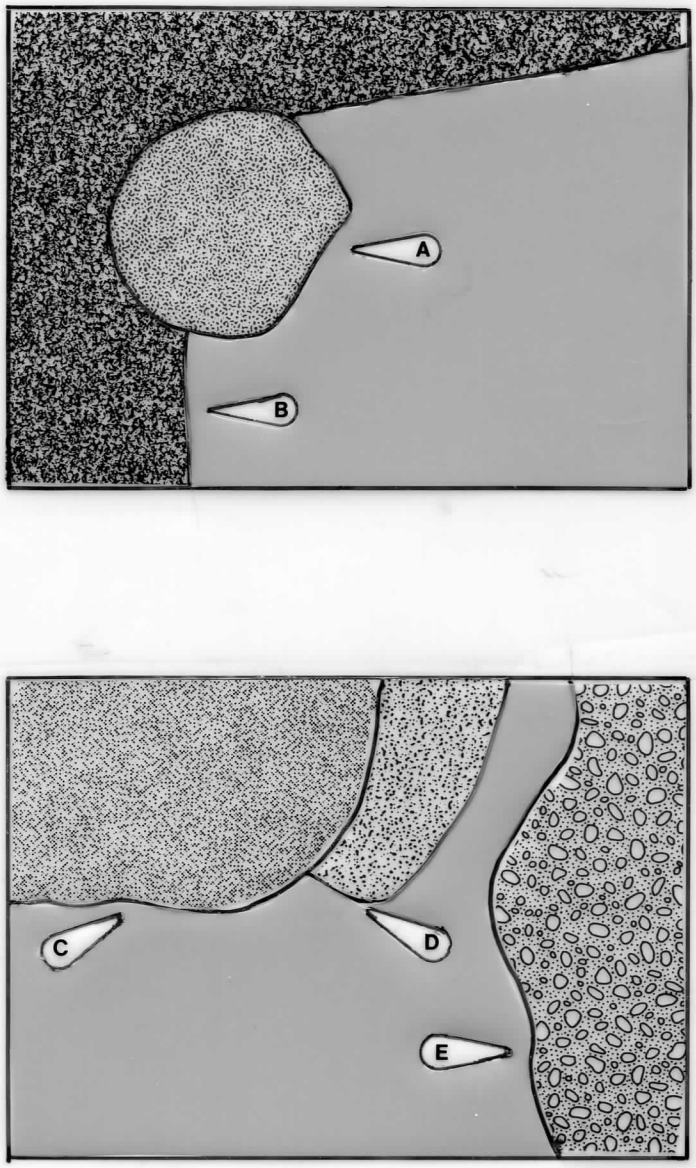


Figure 8

Feature 2



- PLANVIEW - TEST PIT 2

A Feature 1
B Feature 2
C Feature 3
D Feature 4
E Feature 5

0 1 2 3

initiated at 5.9' MSL and was excavated in three arbitrary levels. The base of Zone 7 was encountered at 5.41' MSL. Like the above zones, these sloped to the east.

Located at the base of Zone 7, intruding into the following zone, were two circular pits intruding into the south wall, and intrusive into one another (Figure 9). Feature 4 was a circular pit of dark grey-brown soil mottled with yellow sand. It initiated at 5.39' MSL and was .8 feet deep. The pit intruded into Feature 5 and was composed of a similar matrix, containing slightly less yellow sand. The base of Feature 5 was encountered at 5.17' MSL.

Features 4 and 5 intruded into Zone 8, a deposit of mottled yellow and tan sand with char and shell flecks. The zone initiated at 5.41' MSL and was .4 feet deep. The final zone encountered was a deposit of dark grey sand initiating at 5.0' MSL. Zone 9 was excavated in two levels, based on the presence of Feature 6 within the zone (Figure 9). Feature 6 initiated at 4.7' MSL and was a shallow (.2 feet) circular feature intruding into the west wall. The feature was distinguished from the surrounding matrix by the presence of quantities of coal and charcoal in the feature fill. Feature 6 may represent a primary deposit of burned refuse, or a secondary deposit of hearth refuse.

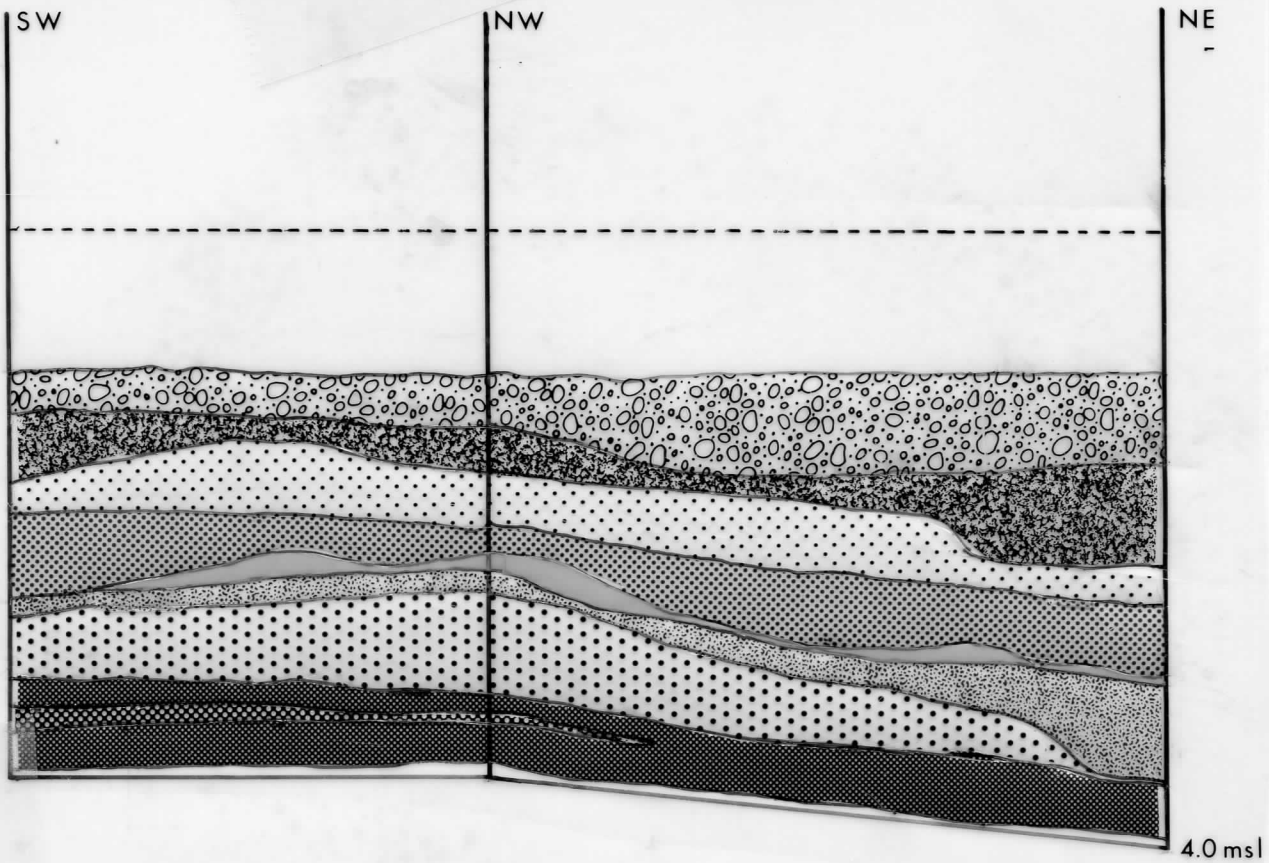
The first level of Zone 9 contained quantities of cow bones, while the second level was composed almost entirely of leather scraps. These possible interpretation of this deposit as the remains of leather tanning activities will be discussed more fully in following chapters. Zone 9 initiated at 5.02' MSL and was 1.0 feet deep. White sterile sand was encountered at 4.08' MSL.

The general stratigraphy of Test Pit 2 suggests that the area was the locus for the deposition of refuse for over 100 years (Figures 10 and 11). Deposits range in date from ca. 1740 for Zone 9 to ca. 1840 for Zone 4. All of the superimposed zone deposits slope to the east, suggesting that some of the original contours of the block remained throughout this period. The sterile base of white sand suggests that this area was high ground adjacent to the extensive marsh, although the slope to the east indicates that the marsh was nearby.

The proveniences excavated, their dates of deposition, and location are summarized in Table 1. Description of the artifacts recovered follow in Chapt. 4 while an interpretation of the behaviors resulting in these deposits is contained in Chapter 5.

Figure 10

North Profile, T.P. 2



Zone 3,

Zone 4, Feature 3

Zone 5

Zone 6

clay

Zone 7

Zone 8

Feature 6

Zone 9

Figure 11

North Profile, Test Pit 2

Table 1

Provenience Guide

FS#	Provenience	Top	Base	Terminus Post Quem	Date of Deposition
2	Test Pit 1, Zone 3	9.0	6.77	rubber band	1980
3	Test Pit 1, Zone 3, level 2	6.77	5.48	rubber band	1980
6	Test Pit 1, Zone 3, n. side of wall	9.0	8.78	floor tile	1980
5	Test Pit 2, Zone 3	8.49	7.6	plastic	1840's, disturbed
7	Test Pit 2, Zone 4, level 1	7.6	7.22	brown transfer print	1830's
11	Test Pit 2, Feature 3	7.22	6.6	brown transfer print	1830's
9	Test Pit 2, Feature 2	7.42	7.15	brown transfer print	1830's
8	Test Pit 2, Zone 5, level 1	7.22	6.9	transfer print p.w.	1790's
12	Test Pit 2, Zone 5, level 2	6.9	6.4	annular ware	1790's
15	Test Pit 2, Zone 5, level 3	6.4	6.2	creamware	1790's
17	Test Pit 2, Zone 7, level 1	5.9	5.75	white saltglaze	1760's
18	Test Pit 2, Zone 7, level 2	5.75	5.6	white saltglaze	1760's
19	Test Pit 2, Zone 7, level 3	5.6	5.41	creamware	1760's
20	Test Pit 2, Feature 4	5.39	4.59	creamware	1750's
21	Test Pit 2, Feature 5	5.42	5.17	white saltglaze	1750's
23	Test Pit 2, Zone 8	5.41	5.0	white saltglaze	1740's
24	Test Pit 2, Feature 6	5.02	4.21	nottingham	1740's
25	Test Pit 2, Zone 9, level 1	5.0	4.21	agate ware	1740's
26	Test Pit 2, Zone 9, level 2	4.21	4.08	agate ware	1740's
14	Test Pit 2, Zones 3-4 interface			transfer print p.w.	1830's
22	Test Pit 2, Feature 3, level 2			transfer print p.w.	1830's

CHAPTER IV

Analysis of Materials

Approximately 5647 artifacts were recovered during excavations at the First Trident site. The first step in the analysis of materials was the identification of the artifacts. Noel Hume (1969) and Stone (1974) were the primary sources used. Coysh (1974, 1980) was used in the identification of nineteenth century ceramics. Kidd and Kidd (1974) was used for bead identification.

Following identification, the materials were grouped according to functional categories, based on South's (1977) model for the Carolina and Frontier Artifact Patterns. Under this method, artifacts are organized into different types, groups and classes, based on their function. South's technique has been widely adapted by historical archaeologists, allowing for direct intersite comparison. This methodology has the potential for providing general anthropological, rather than narrow historical, interpretations, in that the archaeological rather than the historical record is stressed (Honerkamp1980:28). In addition, South's categorization is an extremely useful heuristic device in that it allows complete quantification of the assemblage.

The First Trident assemblage was divided into three subassemblages, based on temporal and spatial associations. These include colonial (ca. 1740-1765) and antebellum (ca. 1790-1840) assemblages from Test Pit 2 and the bulldozed assemblage from Test Pit 1. Proveniences were assigned to one of these three assemblages on the basis of the date of deposition, which was determined by stratigraphic point of initiation and Terminus Post Quem. Each of these assemblages will be discussed separately. Research questions utilizing these data, and those from other sites, are discussed in the following chapter.

Antebellum Assemblage - Test Pit 2

Kitchen

Kitchen-related artifacts comprised 59.56% of the antebellum artifact assemblage; ceramic artifacts comprised 57% of this group. As is typical of sites of this period, the relatively new and inexpensive refined earthenwares comprised the majority of the ceramics, 55%. Other components of the ceramic assemblage include a variety of utilitarian stone and earthen wares; the utilitarian wares comprised 29% of the ceramic assemblage. Like the tablewares, the utilitarian wares were primarily imported, European materials. The exception to this was Colono Ware, a low fired earthenware of local origin (Ferguson 1980,

Table 2

Quantification of the Assemblages

Artifact type	Test Pit 2 Colonial	Test Pit 2 Antebellum
Kitchen		
Porcelain, blue on white	30	31
Porcelain, overglaze	3	10
Porcelain, plain	11	35
Porcelain, white		1
utilitarian stoneware	16	146
Elers ware		3
Black basalte		
White Saltglaze	32	33
White saltglaze, dipped	1	
Brown saltglaze	8	2
Westerwald	4	7
Scratch blue	1	4
Nottingham	4	8
Elers ware, lead glazed		
Grey saltglaze	3	4
blacking bottle		1
ud refined earthenware	13	68
Creamware, plain	13	229
Creamware, hand paint		2
Creamware, transfer print	2	
Whieldon ware		6
Pearlware, plain		142
Pearlware, blue hand paint		17
Pearlware, poly hand paint		26
Pearlware, annular		26
Pearlware, shell edge		29
Transfer print, blue		118
Transfer print, other		11
Mocha ware		3
Whiteware, plain		8
Buckley	1	3
Colono ware	89	66
lead glazed earthenware	8	11
North Devon	2	
Tortoise shell glaze	10	
unglazed earthenware	4	5
Astbury		1
Agate ware	5	11
Jackfield		1

Table 2, cont.

Slipware, yellow	113	78
Slipware, white	2	6
Delft, bisque	5	5
Delft, poly	4	3
Delft, blue on white	46	26
Delft, plain	43	41
Yellow tin enamel	3	6
Black lead glazed earthenware	5	6
Brown faience		4
blue glass		2
olive green glass	409	367
brown glass		3
amber glass		1
aquamarine glass		12
clear bottle glass	76	510
unknown glass		14
bottle seal		1
tumbler	1	6
goblet		4
glass tableware	5	16
pharmaceutical bottle	1	3
decanter	1	
cutlery	1	2
iron kettle frag	2	
Architecture		
window glass	53	379
hinge	2	2
nail	412	698
brick	1	
mortar		
green floor tile		6
roof tile		4
slate	1	
door lock		1
stake	3	9
delft tile	1	4
Arms		
lock plate		1
pan cover		1
side plate		1
flint	1	2
shot	1	4
flint flake		4

Table 2, cont.

Furniture		
brass tack		5
handle		3
Clothing		
straight pin	3	77
hook & eye		2
mother of pearl button	1	2
porcelain button		3
bone 1-hole button	1	16
brass button	2	10
bead	9	2
wire ring		1
shoe buckle		2
lacing tip		3
clothing buckle	1	1
Personal		
fan slat		1
pencil lead		2
folding knife		1
coin		2
bone tooth brush		1
cross		1
ivory container frag	1	1
Pipe		
4/64 diameter stem	40	21
5/64 diameter stem	128	68
6/64 diameter stem	6	2
7/64 diameter stem	6	4
aboriginal/colono ware stem		1
kaolin bowl frag	31	49
Activities		
Toy marble		11
unknown tool	2	4
strap fragment	24	23
wire	1	6
coke	18	15
slag	52	5
bale seal	1	1
lead strip	3	
brass tool	2	
leather frags	217	
coupling		1
gaming disc		1
ud stone		2
brass rivet		3
harness buckle		1
shovel		1

Table 2, cont.

Artifact type	Test Pit 1
Kitchen	
porcelain, blue on white	14
porcelain, overglaze	2
porcelain, plain	10
porcelain, white	10
utilitarian stoneware	25
White saltglaze	9
Creamware, plain	101
Pearlware, plain	80
Transfer print, blue	30
Pearlware, shell edge	15
Pearlware, blue hand paint	6
Pearlware, poly hand paint	14
Whiteware, plain	29
Annular ware	7
Mocha ware	2
Yellow ware	1
Whieldon ware	2
Delft	1
Colono ware	3
lead glazed earthenware	3
Slipware	17
unglazed earthenware	7
Jackfield	5
Buckley	2
black lead glazed	9
brown glass	9
blue glass	6
olive green glass	117
clear glass	368
stemware	3
Architecture	
concrete	5
marble	1
green floor tile	29
clay tile	25
door knob	1
window glass	103
nail	365
brick	1

Table 2, cont.

Clothing	
bead	1
straight pin	1
porcelain button	4
bone button	2
brass button	2
Personal	
Pipes	
4/64 stem	6
5/64 stem	8
6/64 stem	4
bowl frag	6
Activities	
coke	10
slag	35
barrel strap	7
Modern material culture	
sprite green glass	1
pull tab	1
cellophane, cigarette pack	1
plastic fork	3
electric tape	2
cream tube	1
plastic drink top	2
string	4
rubber tubing	28
tin foil	1
insulator	3

Anthony 1978). This ceramic, resembling prehistoric pottery, is of uncertain origin. It has been suggested that the ceramic is the product of black slave potters (Ferguson 1980), although evidence at this point is far from conclusive. Evidence is stronger for black slaves being the primary users of Colono Ware (Drucker and Anthony 1979; Wheaton et al 1983). Colono Ware comprises 5.3% of the ceramic assemblage.

Of special interest among the refined earthenwares was partially reconstructed vessels from two sets of pearlware. The first was a set of brown transfer print ware with a blue stripe around the rim. Vessels recovered from this set include a shallow bowl or saucer, a cup with a slightly flared rim, and two small mugs (Figure 12a). The second set was of polychrome hand painted pearlware and included a bowl and a cup. This set featured a crude landscape design within a yellow circular outline, and a yellow and two brown stripes around the interior rim (Figure 12b). Other refined earthenwares of note include a pearlware plate with a double gilt stripe around the rim.

An examination of ceramic vessel form suggests that the antebellum assemblage contained a variety of ceramic vessels (Table 3). Plates were the most common, comprising 34% of the recognizable vessels. Other specialized talbewares included saucers (10%), mugs (12%), cups (17%), soup bowls (3%) and bowls (6%). Serving vessels were represented by tea pots and pitchers (7%), serving dishes (3%) and platters (1%). Vessels associated with hygiene include ointment jars (2%) and chamber pots (5%). Vessel form was estimated by examining the formal attributes of reconstructed vessels and examining all sherds exhibiting discernable formal attributes.

Stanley South's (1972) Mean Ceramic Date formula was applied to the antebellum assemblage, and a mean date of occupation of 1870.5 was obtained (Table 4). This is in close agreement with the estimated date of 1812, and is probably earlier due to the presence of earlier, redeposited ceramics.

Glass artifacts comprised the majority of the remaining 43% of the Kitchen artifacts. Most of the glass represents sherds from dark green (17%) or clear (23%) bottles. Also included were fragments of pharmaceutical bottles. Decorative glass tableware included four stemware fragments and six tumbler fragments. The final Kitchen artifacts included a bone handled knife and a spoon bowl.

Architecture

Architectural artifacts comprised 30.24% of the antebellum assemblage. The most numerous artifacts in this group were window glass (34%) and iron nail fragments (63%). Other architectural artifacts include the box portion of a door lock and two hinge fragments. Four fragments of delft tile suggest a certain elegance to the structure.

Table 3

Ceramic Vessel Form

Vessel form	Colonial		Antebellum	
	#	%	#	%
saucer	1	4.3	11	9.5
plate	3	13.0	39	33.9
mug	3	13.0	14	12.1
cup	6	26.0	19	16.5
bowl	4	17.3	7	6.09
soup dish	-		4	3.4
tea pot, pitcher	1	4.3	8	6.9
serving dish	1	4.3	4	3.4
utilitarian bowl	3	13.0	-	
ointment jar			2	1.7
chamber pot			6	5.2
child's			1	.8
platter	1	4.3	-	
TOTAL	23		115	

Figure 12

a) matched set, brown transfer print pearlware

b) matched set, polychrome painted pearlware

Miscellaneous

The Arms category comprised a higher percentage of the antebellum assemblage than is typical of other Charleston sites (Honerkamp et al 1982; Zierden et al 1982;1983). The assemblage was also more varied. In addition to four flint flakes, four lead shot and two gun flints, the assemblage included a number of gun parts. Among these were a small brass powder pan cover, an iron side plate, a brass butt plate, and a piece of decorative brass hardware. The final arms artifact was an iron bullet mold (Figure 13). The number and variety of arms-related artifacts suggest that guns may have been repaired or sold on the property.

The Furniture category was represented by five brass tacks, a brass drawer pull, and two fragments of decorative brass hardware. The Furniture category comprised .27% of the total assemblage, which is a relatively large percentage when compared to other Charleston sites. (Figure 14).

The antebellum assemblage also contained an unusually large and varied clothing and personal possession categories. The Personal possession category comprised .27% of the total assemblage, and included a fragment of a bone fan slat and two slate pencil fragments. Also included were a bone-handled folding knife, a bone tooth brush, and the lid to a tiny ivory container. Two coins were recovered, including an unidentifiable penny and a German pfennig dating to 1670. Of special interest was a small brass cross. The loop at the top of the cross suggests that it was meant to be work as a necklace. The final item was a brass umbrella strut (Figure 14).

Artifacts in the Clothing group were especially numerous and varied. Of particular interest was the collection of 77 straight pins. The unusually large number of pins suggests that a tailor or milliner may have been present at the site during this period. Alternately, the pins could have been lost or discarded during household sewing activities. A variety of buttons were recovered; these include three 4-hole porcelain buttons typical of the early nineteenth century. All three of the porcelain buttons are small, and may have come from undergarments. More elaborate buttons from outer garments include two mother of pearl buttons with brass wire shanks. One of these was quite elaborate, with a carved surface. Ten brass buttons of various sizes were recovered; most likely, all of these were from outer garments. Of special interest was a small, spherical button, probably from a woman's garment. The small hole in the top may have been set with a synthetic jewel of some sort. The other brass buttons were plain discs of various sizes, with wire eye attachments. In addition to these more elaborate buttons, 16 bone buttons were recovered. All but one were the hand made variety with a single central hole. They range in size from 3/8 inch to 3/4 inch diameter. Although these buttons are

Figure 13

Arms artifacts from antebellum assemblage

a) butt plate, side plate, flints

b) bullet mold

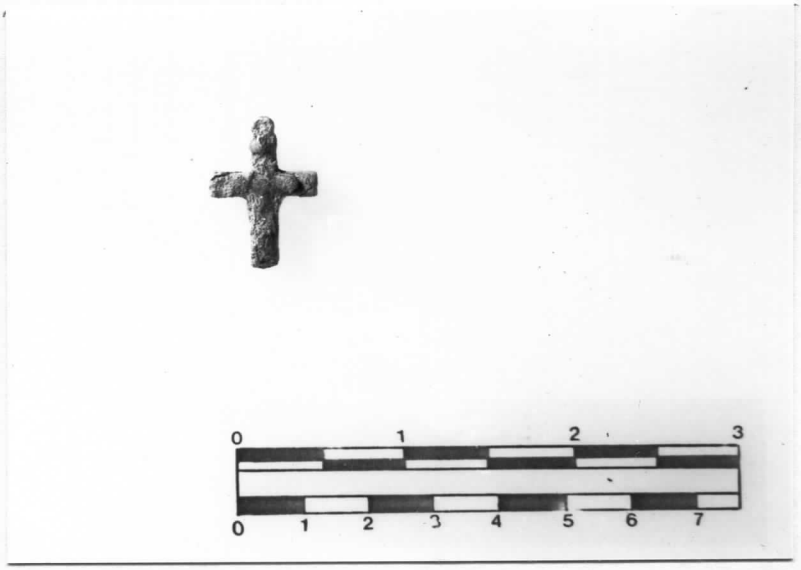


Figure 14

Furniture and Personal items from the antebellum assemblage

a) miscellaneous furniture hardware

b) brass cross

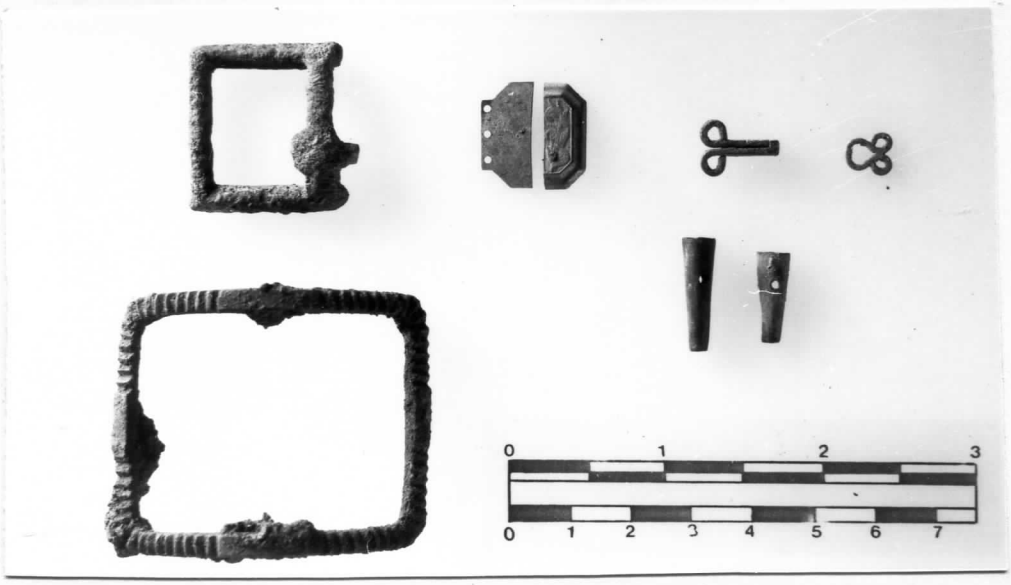
common on North American colonial sites, they have been conspicuous in their absence at the McCrady's and Lodge Alley sites (Zierden et al 1982, 1983). A number of bone buttons were recovered, however, from the Charleston Center (Honerkamp et al 1982) and Atlantic Wharf (Zierden et al n.d.) sites. Such buttons were probably of local manufacture and were covered with cloth (South 1974:188). Other clothing fasteners included a brass hook and a brass eye.

Other clothing related items bear special interest. Three conical brass fragments, with a hole in the side, were contained in the antebellum collection. These are alternately called lacing tips (Deagan 1978:45) or tinkling cones (Stone 1974:131). These brass tips were attached to the ends of strips of leather, and were used to fasten, or simply adorn, clothing. Another unusual clothing fastener was a small brass fastener similar to one South (1974:200) describes as a collar fastener. As with the brass tips, the small fastener would have been attached to the end of the collar fabric. Final items of personal adornment include two buckles, possibly from shoes, belts, or other outer garments and two glass beads. Both beads were tube beads with longitudinal stripes (Figure 15).

Tobacco pipes comprised 3.87% of the antebellum assemblage, and consisted primarily of stem and bowl fragments from American and British white kaolin pipes. Of special interest was the short stem fragment what appears to be a stub-stemmed pipe made of Colono ware. The paste is somewhat sandier than most Colono Ware, and it is possible that this item is a prehistoric artifact. No other prehistoric materials were recovered, however.

The final artifact category was the Activities group, comprising 2.14% of the antebellum assemblage. Several notable artifacts are included in this group. The toys class included a small gaming disc of delft and 11 marbles (Figure 16). Eight of the marbles were clay, and several featured incised decorations, often quite elaborate. Other marbles included one of white clay with hand painted decoration and one of hand blown glass. The stable and barnyard class included 3 brass rivets from leather saddlery and a brass buclke from some type of strap (Figure 16). Construction tools included a square, flat bladed shovel, two triangular files, and two unidentified iron tool fragments (Figure 17). The trade class consisted of a lead bale seal with L 7 scratched into the surface. The storage class consisted of 23 fragments of barrel straps. The miscellaneous class was the most enigmatic, containing 4 small pieces of smooth, worked stone (Figure 18).

In summary, the antebellum assemblage generally conformed to the Carolina Artifact Pattern, denoting domestic occupation. A large percentage of arms related artifacts, and a notable number of straight pins suggest certain craft activities. The large number of toys suggest the presence of children, while the number and variety of clothing and personal items and tablewares indicate that the site was the residence of a family of relative affluence. These ideas will be discussed further in the following chapter.



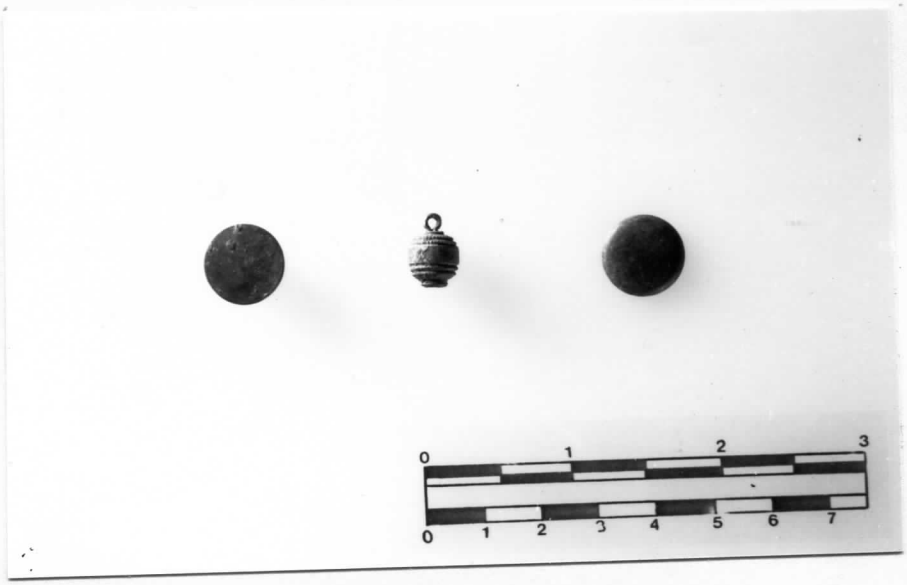


Figure 15

Clothing items from the antebellum assemblage.

a) clothing buckles, collar fastener, lacing tips, hook and eye

b) brass buttons

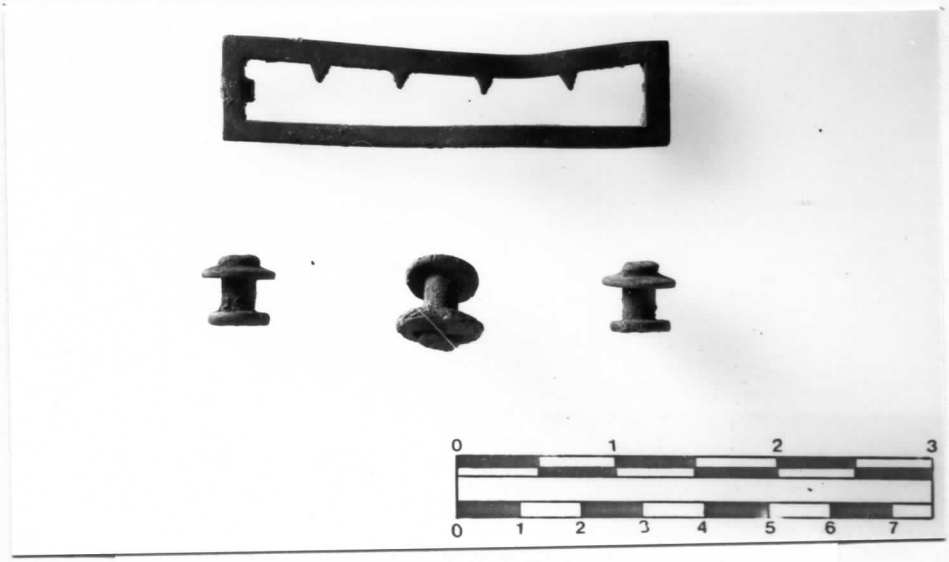


Figure 16

Activities items from antebellum assemblage.

a) clay and glass marbles

b) saddlery items

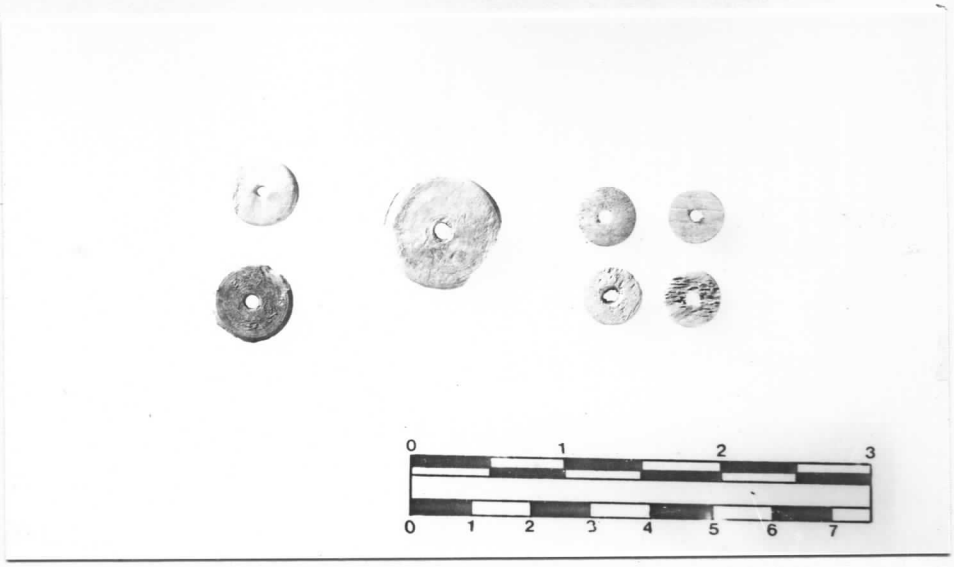


Figure 17

Clothing and activity items from antebellum assemblage

a) bone buttons

b) shovel

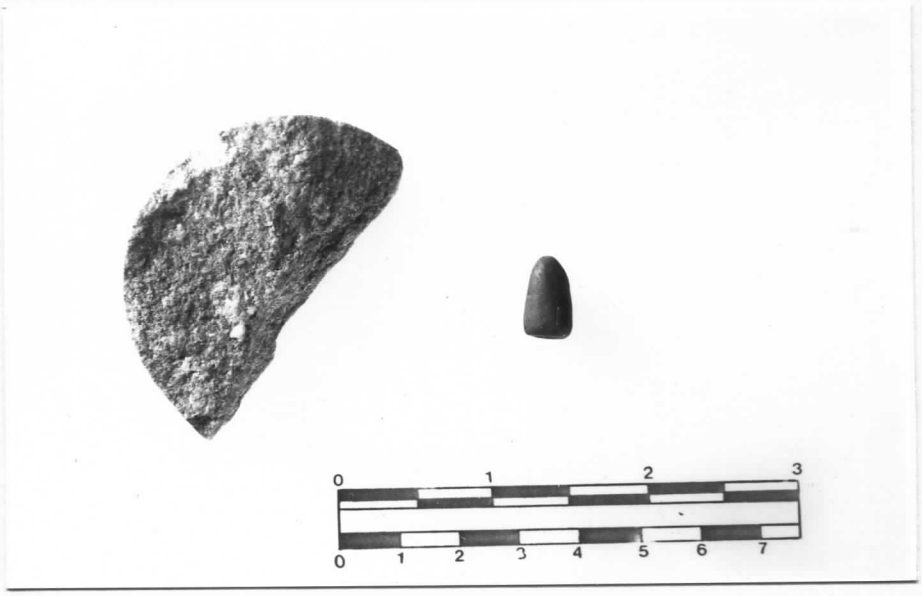


Figure 18

Activity items from colonial and antebellum assemblages

a) bale seals

b) ud stone items

Colonial Assemblage - Test Pit 2

Kitchen

Kitchen related artifacts comprised 47.75% of the colonial assemblage. Ceramic artifacts comprised 48% of the Kitchen group, consisting of 459 sherds. Refined tablewares comprised 44.2% of the ceramics, while utilitarian wares accounted for 55.8% of the ceramics. It is interesting to note that Colono Ware alone comprised 19% of the ceramic assemblage, a much higher percentage than is found on other sites in Charleston, regardless of temporal association. (The placement of Colono Wares in the Kitchen group, a major exception to South's stated pattern, has become an accepted practice among historical archaeologists (Deagan 1983; Wheaton et al 1983; Lees 1980)). Slipware comprised an additional 25% of the ceramic assemblage; these two ceramic types comprise the majority of the utilitarian wares.

Refined tablewares, comprising 44.2% of the ceramics, include creamware, 7.3%, stonewares, 18.7%, earthenwares, 7.4%, delft, 48.2%, and porcelain, 21.6%. The high percentage of delft in relation to the stoneware and creamware supports the early estimated date of deposition, 1740-1760. Stanley South's Mean Ceramic Date formula (1972) yielded a mean date of deposition of 1750.29.

An analysis of discernable vessel form indicates less diversity than in the antebellum assemblage. Vessels associated with hygiene were absent. In the food consumption category, cups and bowls comprised 39% of the vessel forms. Serving vessels comprised 13%, while plates accounted for 13% and saucers 4.3%. Utilitarian bowls comprised the remaining 13% (see Table 3).

Glass items comprised the majority of the remaining 57% of the Kitchen group. Green bottle glass alone comprised 42% of the Kitchen group, followed by clear bottle glass at 7.9%. Identifiable pharmaceutical glass was virtually absent, as was decorative glass tableware at .7%. The final Kitchen items were a spoon bowl and two fragments of iron kettle.

Architecture

Architectural artifacts comprised 23.6% of the total assemblage. The most numerous artifact were nails, comprising 87% of this group. Window glass was relatively sparse, comprising only 11% of the group. Other architectural artifacts of note include two hinge fragments and a delft tile.

Miscellaneous

When compared to the antebellum assemblage, the miscellaneous categories are rather small and unvaried, with the exception of the Activities group. The Arms group comprised .1% of the assemblage and consisted of a spall variety gunflint and a lead shot. Furniture artifacts consisted of 20 brass tacks, comprising 1% of the assemblage. After further examination, the tacks were moved to the Activities category, based on the assumption that they were associated with the leatherworking activities at the site. If this is done, then no Furniture artifacts were recovered.

The Personal possission group was quite small and was composed entirely of an unidentified ivory knob. The Personal group comprised .05% of the total assemblage. The Clothing group was also relatively small and unvaried, comprising .9% of the assemblage. The Clothing group contained two brass buttons and one bone button. Other items included three straight pins, a buckle fragment, and 9 glass beads (Figure 19). These beads include three Cornaline d'alleppo, two white tube beads and a small medium blue tube bead. Other beads included a clear oval bead with white stripes, commonly called a "gooseberry bead" and a dark blue bead of identical size, shape, and construction. The final example was a tube bead of white glass with longitudinal red stripes.

Tobacco pipes comprised 10.55% of the assemblage and consisted entirely of stem and bowl fragments from white kaolin pipes. Binford's (1961) pipe stem dating formula yielded a mean date of 1745.1.

The Activities group was exceptionally large and varied and comprised 17% of the total. Unlike the antebellum assemblage, no toys were recovered from these proveniences. Twenty four fragments of barrel straps suggested storage activities at the site, and a bale seal indicated trade of bulk materials (Figure 17). Fifty two fragments of slag were also recovered.

The most remarkable artifact in the Activities group was a quantity of leather scraps, recovered from Zone 9. Two hundred seventeen recognizable leather fragments were recovered; all of these had been altered in some manner. One hundred forty one pieces of scrap leather exhibited at least one straight, cut edge. An additional four exhibited pinked edges. Thirty one scraps had rows of hand punched holes for stitching the leather. Much of the leather scraps consisted of multiple layers of thin leather; twenty one such fragments were recovered. The most "finished" product consisted of four semicircles of leather and twenty four fragments of belts or straps. These belts were 2½ inches wide and exhibited stitching or stitching holes along the edges. Some of the strap fragments consisted of multiple layers of leather.

Two small tools were associated with this deposit, and may be leather working tools (Figure 20). The first, of brass, is 4 inches

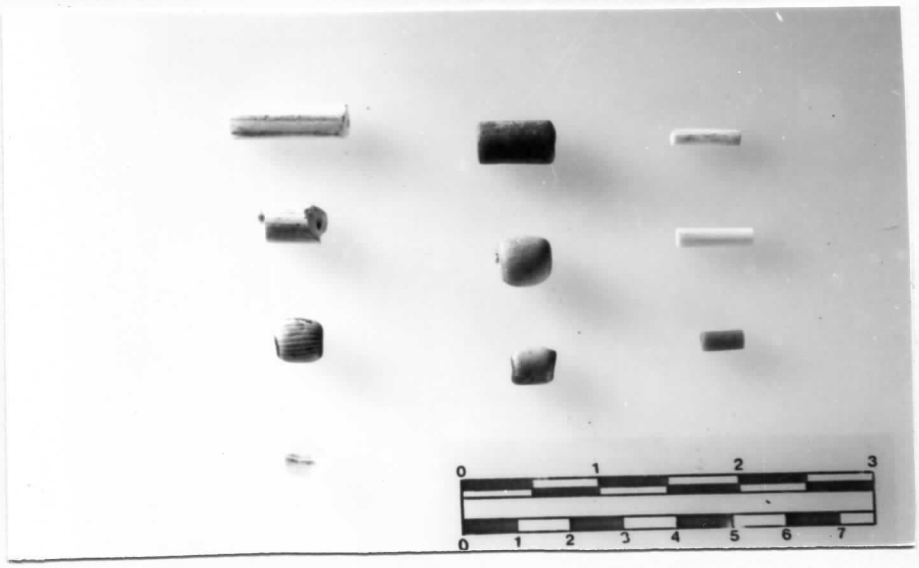


Figure 19

Clothing and activity items from colonial assemblage

a) glass beads

b) brass leatherworking tools

long and has a curved, pointed end. The second is quite small, and is straight with a round, spatulate end. To this group may be added the twenty brass tacks before mentioned in the Furniture group.

The extremely high percentage of Activities artifacts strongly suggest that the site was utilized during the colonial period for craft activities. The leather scraps, belt fragments, brass tacks, and small tools indicate that leather products were being made at the site, while the presence of the cow bone suggest also that leather was being tanned at the site.

Leather tanning is one of the earliest industries known to man, and was one that was essential to the colonies. Sources for the raw materials necessary for leather tanning - hides, bark, and water - were ubiquitous, so the choices for the location of a tannery were almost infinite (Hoover 1937:125). Hides were available everywhere, because slaughtering was a strictly local business. Hides were especially abundant in Charleston because of the city's role as a beef exporting center. Oak bark was also available in great quantities in the frontier colony. Nearly every colonial community had at least one tanner, and his business was located on the most convenient stream (Donham 1930 :261).

Urban seaports soon became the locus of many tanneries; not only did the demand for beef and dairy products in the thickly settled districts provide a plentiful supply of hides and market for leather products, but the ships provided cheap transportation from remote material sources (Hoover 1937:127). That Charleston was an ideal location for tanning operations is reflected in the number of leather workers who advertised during the colonial period (Calhoun et al 1982).

The tanning industry did not industrialize and centralize until the nineteenth century (Hoover 1937; Ellsworth 1975; Welsh 1964). During the colonial period, when the First Trident enterprise would have been in operation, tanneries were small and scattered. A few vats were the principal equipment and there was no power machinery (Foss et al 1982). Small tanneries operated to supply the local market, and labor was often unskilled and unspecialized. Single proprietors owned most of the tanneries (Ellsworth 1975:24). The ground space required for tanning is relatively large and the aesthetic qualities of the tannery are low, so that tanneries were often located on the periphery of an urban center. The above information suggests that the First Trident site was an ideal location for the demands of a colonial tannery.

Because no direct archaeological evidence of the tanning operation was encountered, the various steps in preparing hides will not be enumerated here. These can be found in detail in Welsh (1964) and Foss et al (1982). Documentary evidence indicates that there was very little division of labor in the industry, but labor was sometimes

divided into yardwork (preparing) and finishing (currying). Ellsworth suggests that by the beginning of the nineteenth century finishers often maintained businesses separate from the tanners. During the early colonial period, though, the two operations were probably combined, as indicated in the archaeological deposits at First Trident. The number of leather straps recovered suggest that saddles and horse tack was being made at the site (Diderot 1959:467).

Test Pit 1

Although the deposits in Test Pit 1 were present as a result of recent bulldozong activities, a sample was screened from two arbitrary levels. The samples were tabulated separately from Test Pit 2. This was done for comparative purposes in order to determine the effect of recent ground moving activities on the research potential of the archaeological record. This comparison will be developed further in the following chapter; the assemblage will be discussed briefly here.

All of the artifacts recovered from Test Pit 1 proveniences were quite small, indicating extensive trampling and disturbance. The materials were grouped according to South's categories, as were the two subassemblages from Test Pit 2.

Kitchen

Kitchen artifacts comprised 59.3% of the total assemblage, with the Kitchen group being divided between ceramic (44.7%) and glass (55.2%) artifacts. The ceramic assemblage contained an overwhelming quantity of tableware, 82% as opposed to utilitarian wares; this may reflect the fact that the unit was not located in an area of food preparation or secondary refuse disposal.

Using Stanley South's (1972) formula, the ceramic assemblage yielded a Mean Ceramic Date of 1804.4, comparable to the Test Pit 2 antebellum assemblage of 1807.3 (Table 4). The majority of the ceramic assemblage consisted of refined earthenwares of the late eighteenth and nineteenth centuries. Earlier ceramics were relatively scarce.

Glass artifacts comprised 55% of the Kitchen group. The majority of this class consisted of green, 12% and clear, 40.4% bottle glass. Glass tableware was relatively sparse, comprising .33% of the Kitchen group.

Architecture

Architectural artifacts comprised 34% of the total assemblage. The most common architectural artifact was nails, 60% of the group, followed by window glass, 19.3% of the group. Other artifacts include fragments of floor tile and an agate ware door knob.

Table 4

Mean Ceramic Date Calculations
Antebellum Assemblage - Test Pit 2

Ceramic Type	fi	xi	xi·fi
porcelain, blue on white	31	1730	53630
porcelain, overglaze q	10	1808	18080
porcelain, plain	35	1730	60550
porcelain, white	1	1860	1860
utilitarian stoneware	146	1860	271560
Elers ware	3	1769	5307
White Saltglaze	33	1758	58014
Brown Saltglaze	2	1733	3466
Westerwald	7	1738	12166
Scratch Blue	4	1760	7040
blacking bottle	1	1860	1860
ud refined earthenware	68	1830	124440
Creamware, plain	229	1791	410139
Creamware, hand paint	2	1805	3610
Whieldon ware	6	1755	10530
Pearlware, plain	142	1805	256310
Pearlware, blue hand paint	17	1800	30600
Pearlware, poly hand paint	26	1800	46800
Annular ware	26	1860	48360
Shell edge	29	1810	52490
Transfer print, blue	118	1818	214524
Transfer print, other	11	1860	20460
Mocha	3	1843	14744
Whiteware, plain	8	1860	14880
Buckley	3	1748	5244
Astbury	1	1738	1738
Agate ware	11	1758	19338
Jackfield	1	1760	1760
Slipware	78	1750	136500
Delft,	75	1750	131250
Tin enamel, yellow	6	-	-
Colono ware	66	-	-
Lead glazed earthenware	11	-	-
unglazed earthenware	5	-	-
Black lead glazed	3	-	-
Brown faience	4	1788	7152
	n= 1137		2054902

y = 1807.3

Table 4, cont.

Colonial Assemblage - Test Pit 2

Ceramic Type	fi	xi	xi·fi
porcelain, blue on white	30	1730	51900
porcelain, overglazed	3	1808	5424
porcelain, plain	11	1730	19030
White saltglaze	32	1758	56256
White salt dipped	1	1745	1745
Brown saltglaze	8	1733	13864
Westerwald	4	1738	6952
Scratch blue	1	1760	1760
Nottingham	4	1755	7020
Grey saltglaze	3	1738	5214
Creamware, plain	13	1791	23283
Creamware, hand painted	2	1791	3582
Buckley	1	1748	1748
Colono ware	89	-	-
Tin enamel, yellow	3	-	-
Black lead glaze	5	-	-
North Devon gravel tempered	2	1713	3426
Tortoise shell glaze	10	1760	17600
Unglazed earthenware	4	-	-
Agate ware	5	1758	8795
Slipware	113	1750	197750
Slipware, metripolitan	2	1750	3500
Delft	98	1750	171500
	n=343		600349

y = 1750.29

Table 4, cont.

Test Pit 1

Ceramic Type	fi	xi	xi·fi
porcelain, blue on white	14	1730	24220
porcelain, overglaze	2	1808	3616
porcelain, plain	10	1730	17300
porcelain, white	10	1860	18600
utilitarian stoneware	25	1860	46500
White Saltglaze	9	1758	15822
Creamware, plain	104	1791	186264
Pearlware, plain	80	1800	144000
Pearlware, transfer print, blue	30	1818	54540
Pearlware, shell edge	15	1810	27150
Pearlware, hand paint, blue	6	1800	10800
Pearlware, transfer print, other	5	1860	9300
Pearlware, hand paint, poly	15	1800	27000
Whiteware, plain	29	1860	53940
Annular ware	7	1860	13020
Mocha ware	2	1843	3686
Yellow ware	1	1860	1860
Whieldon ware	2	1755	3510
Slipware	18	1750	35100
Jackfield	5	1760	8800
Buckley	2	1748	3496
	n=391		705824

y = 1804.41

Miscellaneous

Miscellaneous artifacts were relatively sparse in the Test Pit 1 assemblage. No Arms related artifacts or Personal artifacts were recovered. Furniture comprised .26% of the assemblage, and consisted of a brass handle and three brass tacks. The Pipe group was relatively sparse, comprising 1.56% of the assemblage. This group consisted entirely of fragments of white kaolin pipes. The Clothing group was also small, comprisong only .65% of the assemblage. The group consisted of one striped tube bead, one straight pin, four porcelain buttons, two bone buttons, and two brass buttons. The Activities group, in contrast was relatively large, comprising 3.39% of the assemblage. The large size of this group is due to the presence of quantities of coke, coal, and slag, suggesting an industry requiring hot fires. Seven fragments of barrel straps completed the group.

In summary, the assemblage from Test Pit 1 was relatively consistent with the Carolina Artifact Pattern, considering the amount of post depositional activities affecting the deposits. A Mean Ceramic Date of 1804 suggests that the assemblage is comparable to the antebellum assemblage of Test Pit 2, with a Mean Ceramic Date of 1807. A comparison of the two assemblages, using South's functional categories (South 1977) suggests that the two are similar. The major difference between the two artifactual assemblages was the fragmentary nature of the materials themselves, plus the presence of the modern materials. Differences between the two artifactual assemblages, as well as the floral and faunal assemblages, will be discussed in the following section.

CHAPTER V

Research Emphases

Research at the First Trident site focused on three subjects, site formation processes, site function, and socioeconomic status of site inhabitants. Each research question will be discussed separately and, as these questions have been addressed in previous investigations, data from other projects will be utilized for comparative purposes.

Site Formation Processes

Under the prodding of Schiffer (1977; 1983), among others, archaeologists have begun to realize the importance of examining the physical and cultural processes that result in the formation of the archaeological record. As archaeologists began to address the social and behavioral implications of the material culture they were studying, they began to realize the importance of understanding the processes that affect, and possibly alter, these materials in the ground. Ascher (1968) was one of the first to address this subject, with his suggestion that "time's arrow" reduced the quantity and quality of evidence surviving in the archaeological record. Since that time archaeologists have addressed a more complex set of physical and cultural processes, commonly labeled transformations (Schiffer 1983). Without becoming overburdened in a study of possible "distortions" of the archaeological record (see Binford 1981, Honerkamp and Fairbanks 1982, and even to an extent Schiffer 1983: 677), it is important to examine the processes responsible for the formation of the urban archaeological record.

In recent years there has been a substantial increase in interest in urban archaeology, as evidenced by the growing number of publications on the subject. Many of these publications deal at length with the relative complexity of the urban site and the difficulties in recognizing site patterning (Rubertone and Gallagher 1981; Sandy 1983). A discussion, then, of the various site formation processes is especially pertinent to interpretation of the urban site.

An archaeological site basically consists of a natural environmental setting modified by the activities of the humans who occupy the site. Specifically of interest to the archaeologist are activities which alter and introduce materials into the ground. Once introduced into the ground, materials can be redistributed in the ground or they can be removed. At complex sites such as those in urban settings, the archaeological record is a combination of all three events (Honerkamp and Fairbanks 1982). Redistribution, though, is often extensive at such sites, resulting in the mixing of earlier deposits with later ones. Several different site formation processes resulted in the complex archaeological record at the First Trident site.

Because of the configuration of the site, an extremely shallow frontage along Meeting Street, and its proximity to such a large, modern structure as the Cumberland Street Garage, it was expected that the construction activity of recent years would have affected the archaeological record at the site. The nature and extent of this affect was not known prior to excavation.

Excavation of Test Pit 1 revealed that the archaeological proveniences recovered from the square resulted from a massive land alteration activity of the past few years. According to local informants, the lot tested contained a structure that was razed for the construction of the garage. This structure contained a semisubterranean basement, and it is most likely that soil from this site was pushed into the cellar hole to create a stable surface. Despite the fact that Zone 3 was deposited in the past few years, soils from the deposit were screened according to field standards, and artifactual, faunal, and ethnobotanical samples were analyzed accordingly.

Based on the evidence of extensive redistribution in Test Pit 1 and the lack of such evidence in Test Pit 2 (to be discussed later), it was decided to compare the assemblages from the two squares. This was done to determine the extent of the distortion to the record in Test Pit 1, and thus the research potential of such deposits. Archaeologists, especially those involved in the decision making processes of cultural resource management, have recently come under fire for automatically disregarding the potential of such altered deposits (Honerkamp and Fairbanks 1982; Schiffer 1983:676), and archaeologists have begun to address the research potential of such deposits (Honerkamp et al. 1983). The following analysis attempts to continue such efforts.

As discussed in the previous chapter, the material of Test Pit 1 were grouped according to functional categories, and South's Mean Ceramic Date formula was applied to the assemblage. The calculations yielded a mean date of occupation of 1804, comparable to the mean date of 1807 for the antebellum assemblage in Test Pit 2. A comparison of the two artifactual assemblages, using South's functional categories (1977)(Table 6) suggests that the two assemblages are remarkably similar, considering that the excavation units are located on what were separate lots. A reduction in the percentage of Arms, Pipes, Personal and Clothing objects may reflect behavioral differences in the two assemblages, or it may indicate that the small, relatively fragile objects that characterize these artifact groups are more subject to the destructive forces of the bulldozer. An increased percentage in the architectural category probably reflects the structural razing associated with the bulldozing. The Kitchen group was quite comparable to that of Test Pit 2. The most noticable difference was the smaller size of the kitchen artifacts in the Test Pit 1 assemblage. In a recent article, Schiffer notes that one of the most visible results of trampling and other cultural disturbances is size reduction of the artifacts (Baker 1978; Schiffer 1977).

The comparison suggests that artifactual assemblages subjected to extensive post-depositional disturbance may be biased in a measurable, predictable manner, and thus are still suitable for certain research purposes. Possible biases in the present assemblage include size reduction, and a possible destruction of small, fragile artifacts, reducing the relative percentages of certain artifact categories. (for a similar discussion of other post-depositional activities and the resulting biases, see Honerkamp and Fairbanks 1982 and Honerkamp et al. 1983). An interesting aspect of the Test Pit 1 artifact assemblage was a relatively small number of earlier artifacts usually present in proveniences on multicomponent sites. It is possible that many of these earlier artifacts, which were present in the Test Pit 2 antebellum assemblage, were displaced with the construction of the basement, and therefore were not present when the present assemblage was deposited.

Unfortunately, the floral and faunal assemblages did not fare as well in the bulldozong process. Trinkley's analysis reveals that the bulldozing activities almost completely destroyed any ethnobotanical remains; despite carefully controlled flotation procedures, the samples from Test Pit 1 contained no plant food materials, and low quantities of the usually ubiquitous wood charcoal. Trinkley concludes that the collection of ethnobotanical remains may not be cost effective when proveniences have suffered extensive, mechanical disturbances. The possible effects of other post-depositional activities on the ethnobotanical record has been discussed in greater detail by Trinkley and Zierden (1983). The faunal record fared slightly better. Faunal remains were present and were analyzed, although the sample size was quite small. As with the artifactual assemblage, there were both similarities and differences between the assemblages from the two squares. In both samples, domestic species comprised 87% of the biomass, for example. There were, however, several species found only in the Test Pit 1 sample, and many of these were commensal. The increased presence of the commensal species may be a result of the razed structure being vacant for a period of time. In general, the faunal sample contributed little new information. Larger sample sizes are needed to assess the research value of faunal collections from such disturbed contexts.

The archaeological record in Test Pit 2 was the result of quite different site formation processes than Test Pit 1. The uppermost zone, Zone 3, had a number of characteristics similar to Zone 3 in Test Pit 1, and was disturbed by the same bulldozing activities. The rest of the square beneath Zone 3 contained a series of features and sheet deposits undisturbed by large scale ground moving activities. The numerous shallow zone deposits suggest that the gradual aggradation of soils in combination with the general distribution of cultural and organic materials on the ground surface was the primary formation process in this portion of the site. Other, more organic refuse deposits were deliberately placed in subsurface pits.

The presence of these highly organic, "midden" deposits in this portion of the site was somewhat unexpected. Such extensive deposits of refuse are usually expected in the rear portion of the lot, especially

in the urban setting, as discussed by Fairbanks (1977) in his suggested shift in research strategy to "backyard archaeology". The shallow, historically artificial configuration of the First Trident site indicated that the backyard deposits associated with houses on the site would have been located beneath the parking garage structure. The presence, then, of such extensive refuse deposits in this location indicate that lot configuration here may have varied from the norm in a number of ways.

To explain the early, colonial deposits, it is most likely that the lot was unimproved at this time. This is supported by cartographic research. Prior to 1788, the lot consisted of a narrow strip of high land (approximately the dimensions of the present site) bordering an extensive marsh. The proprietor of the tanning operation probably utilized his property across the street and used this unoccupied, marshy area to deposit his refuse. Such areas were favored for the deposition of refuse. The ethnobotanical record reflects the low, marshy nature of the site at this time.

By the antebellum period, the marsh had been filled and the lots fronting Meeting Street improved. The most likely explanation for the presence of these extensive refuse deposits is that no structure stood on this particular lot. This vacant lot may have been an area in which refuse was deposited, possibly from neighboring households. It is also possible that a house or houses faced Cumberland Street, with this area being the actual back or side yard. In any case, the presence of extensive, stratified refuse deposits in this area suggests that no structure was located here during this period. The ethnobotanical record here, and at other Charleston sites, contained seeds from weedy plants common to disturbed habitats. From these data, Trinkley has suggested that even nineteenth century Charleston contained abundant areas of open, weed covered ground. These areas would have been likely spots for trash disposal.

Insight into formation process provide at least partial answers to another aspect of the archaeological record at the First Trident site. Although the site was continually occupied through the nineteenth and twentieth centuries, the latest dating context encountered dates to the 1840's. The Test Pit 1 deposit, in fact, contains primarily antebellum materials with late twentieth century additions. No postbellum materials were encountered. There are two possible explanations for this phenomenon.

1) At this time structures were constructed which covered the site, precluding the further deposition of refuse here.

2) An undocumented, extensive ground moving activity resulted in the removal of these later deposits.

Conflicting lines of evidence make resolution of this issue unclear. Cartographic sources dating to 1852 indicate that the site was covered with a continuous row of structures, supporting the first hypothesis. Archaeologists have noted that structures in Charleston without basements

tend to seal, rather than destroy, earlier deposits. The presence of such structures in this area would also have precluded subsequent refuse deposition, especially if Test Pit 2 is located within a mid-nineteenth century structure.

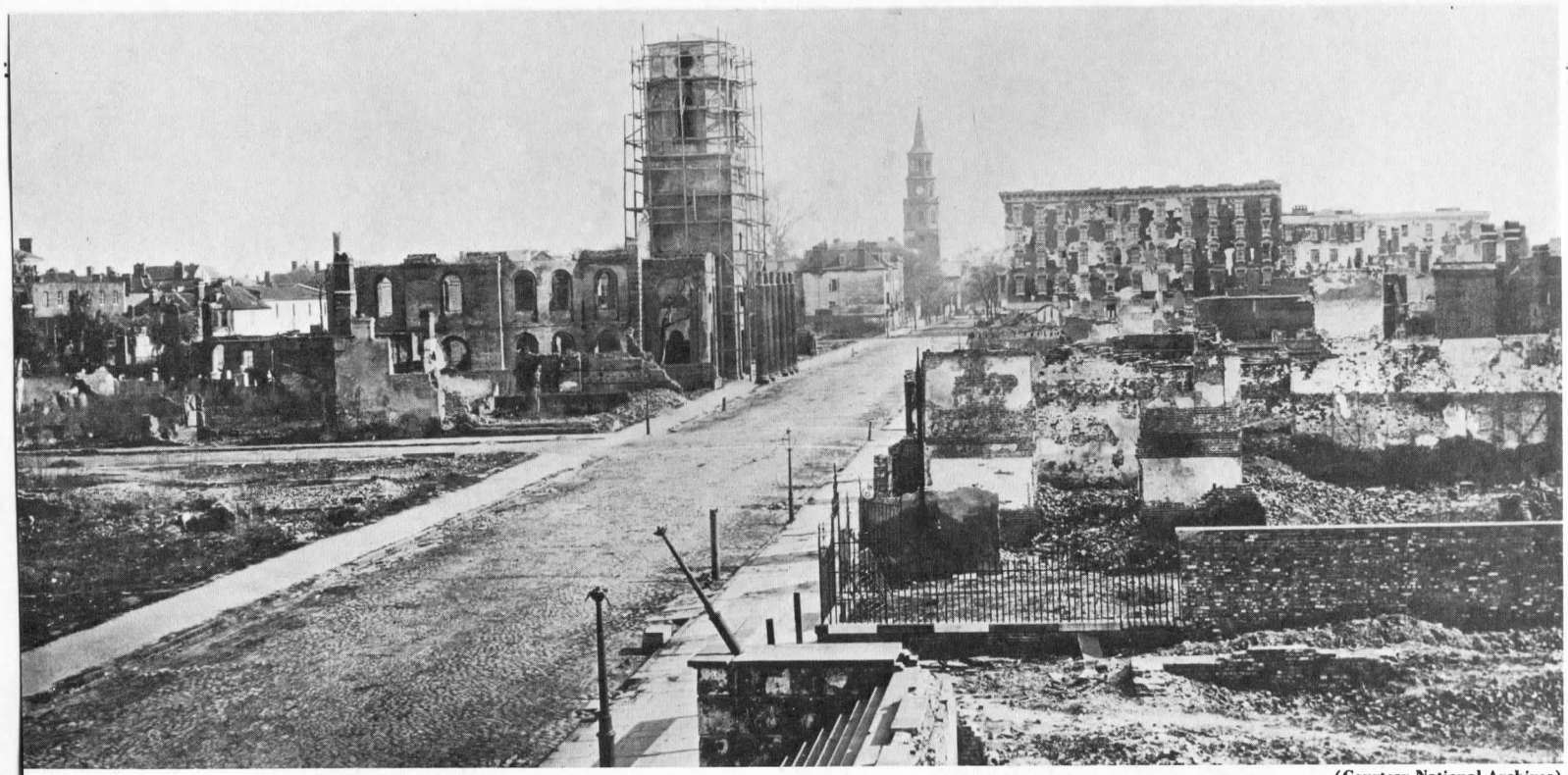
Compounding the problem, however, is that the First Trident site was located within the boundaries of the 1861 fire, which destroyed any structures on the site. A photograph taken in 1865 (Figure 21) shows the First Trident site completely vacant. Such disasters usually leave highly visible evidence in the archaeological record. The absence of any such evidence of this fire suggests that in this case the cleanup of the aftermath entailed wholesale removal of a portion of the archaeological record. Without the benefit of further excavations, it is likely that this issue will remain unresolved.

As indicated above, abandonment, as opposed to discard, activities were not in evidence at the First Trident site. This is in contrast to evidence from other sites in Charleston (Zierden et al. 1983; Herold 1981a; 1981b), and may be a result of small sample size. Abandonment versus discard behavior will be discussed further in the section dealing with site function.

A final site formation process to be considered is filling, the deliberate introduction of soils to produce a more desirable ground surface. This activity was most clearly evidenced by Zones 1 and 2, representing the cap of sterile fill placed on the site following the bulldozing evidenced by Zone 3.

This section suggests that the archaeological record at the First Trident site is the result of a complex series of processes. Site formation processes evidenced at the site include the discard of refuse, both on the ground surface and in deliberate features, the construction and destruction of structures, deliberate introduction and removal of soils, and finally, the large scale post-depositional redistribution of materials. These processes resulted in the deep, complex stratigraphy characteristic of Charleston, and the First Trident site in particular.

An elucidation of these site formation processes also have important ramifications for cultural resource management studies, especially in the urban environment. First, the research potential of badly "disturbed" deposits was clearly demonstrated. This evidence, plus that from other cities (see Babits et al 1982; Honerkamp et al 1983) strongly suggests that disturbed sites are actually a true reflection of the urban processes (Honerkamp and Fairbanks 1982) and therefore should not be dismissed without through investigation. Furthermore, the disparity in the conditions of the archaeological record in Test Pits 1 and 2, barely 40 feet apart, suggest the danger in assessing the integrity and significance of the urban site without adequate testing, or prior knowledge of the nature of the urban archaeological record. Clearly, a greater understanding of site formation processes is essential to a clearer interpretation of the urban processes reflected in the archaeological record of cities.



(Courtesy National Archives)

Figure 20

1865 photo of Meeting Street showing destruction of the 1861 fire. First Trident site in the foreground is completely vacant.

Site Function

A major emphasis of archaeological research has been an examination of site function on sites used for both residential and commercial purposes. Initial research on the delineation of functional characteristics of sites through analysis of artifactual materials has led archaeologists to suggest that certain commercial activities may not be reflected in the archaeological record. Both Lewis (1977:177) and Honerkamp et al (1982L17) have suggested that commercial enterprises that transfer, rather than produce, goods (such as retail shops) are likely to produce little in the way of byproducts which would be recovered archaeologically. This was supported by data from the Charleston Center site, a locus of nineteenth century retail commercial activity, which produced refuse from domestic activities almost exclusively (Honerkamp et al. 1982:142-155). By contrast, sites characterized by craft-oriented, or combined craft-domestic occupations would be expected to generate at least some discarded byproducts indicative of site function (Honerkamp 1980; Lewis 1977).

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

Evidence of retail commercial activities has also been recovered from abandonment type deposits; some of the privy deposits salvaged at the Charleston Center site (Zierden and Paysinger n.d.) contained evidence of commercial activities. Some of these deposits appear to be the result of cleanup after the fires which devastated the area in the early nineteenth century (Honerkamp et al 1982) while others seem to represent cleanup after a property changed occupants (see Lewis and Haskell 1981).

With these ideas in mind, the First Trident assemblages were examined for evidence of commercial function. In order to facilitate this study, the materials were classified according to South's functional categories and compared to to the Carolina Artifact Pattern (South 1977). The Carolina Artifact Pattern is a quantified artifact distribution which basically monitors domestic activities at British colonial sites (see Honerkamp 1980).

Researchers have noted that the empirical artifact profiles South used in establishing the Carolina Artifact Pattern were derived from assemblages of combined domestic-craft activity sites. Therefore, domestic only refuse from whatever source, should exceed the mean for the domestic artifact classes (Honerkamp et al 1982:142-157)(Table 6).

Examination of the colonial subassemblage revealed dramatic evidence of craft activity; the Activities group, which traditionally monitors craft activity (South 1977) comprised 16% of the total assemblage. This is in strong contrast to the Carolina mean of 1.7%. The high percentage of this artifact group is due to the recovery of a large number of leather straps in the lowest levels of the square. If we remove the leather from the totals, because of the unusual preservation conditions, the activities group still totals 5.7%. This percentage is comparable to the Activities group at 38 State Street, 4.19% These percentages strongly suggest that the First Trident site was used for craft activities during the colonial period. Grouping the assemblage into the three artifact groups proposed by Honerkamp (1980) reveals an exceptionally low percentage of domestic artifacts (49.7% when compared to other sites (Table 7). The only other site with a comparative percentage was the Dobree site Honerkamp 1980), a combined craft-domestic site. The miscellaneous group was comparable to other sites, at 34.3%. The major difference between the First Trident and all other assemblages was, of course, the extremely high percentage of Activities artifacts.

The archaeological data suggests that the primary activity at the site was the manufacture of leather products. The presence of the quantities of modified scrap leather support this suggestion. The faunal material suggests that cows were butchered at the site, based on the unusual modifications to the bone, suggesting also that the leather was tanned at the site. The presence of the cut and stitched leather scraps, the brass tools, and the number of brass tacks strongly supprt the manufacture of leather products at the site. The situation of the site, on the outskirts of the colonial town, is consistent with the suggested location of offensive or dangerous crafts, such as tanning and butchering.

The materials appear to have been deposited as a result of discard, rather than abandonment, making the high percentage of Activities materials even more remarkable. The historical documents suggest that a tanner owned the lot across Meeting Street from the site. It is possible that he had his tanning operation on the site and that some of the operation expanded across the street. An alternate explanation is that the strip of high land adjacent to the marshy area was an excellent location for the deposition of byproducts from the leatherworking operation.

The archaeological record also indicates some domestic activity at the site. There are several interesting aspects to the domestic assemblage, including a high percentage of green bottle glass (47% of the Kitchen group) and, especially, of Colono ware (20% of the ceramics). This, coupled with the low percentage of high status items, suggests a low status for the site inhabitants. Because the owner of the property across the street was a man of some wealth, it is suggested that the refuse belonged to

Table 5

Comparison of Three Subassemblages

With the Carolina Artifact Pattern

	Colonial Test Pit 2	Antebellum Test Pit 2	Test Pit 1	Carolina mean
Kitchen	47.75	59.56	59.39	63.1
Architecture	23.65	30.24	34.75	25.5
Arms	.1	.38	.00	.05
Furniture	.00	.27	.26	.2
Pipes	10.55	3.87	1.56	5.8
Personal	.05	.27	.00	.2
Clothing	.9	3.26	.65	3.0
Activities	17.0	2.14	3.39	1.7

Table 6

Summary of Three Artifact Group Categories
for Several British Colonial and American Sites*

Group Category	Carolina Pattern	1st Tri. Colonial	1st Tri. Antebellum	Lodge# Alley	38 # State	McCrady's@ Longroom	Charleston+ Center
Domestic							
Kitchen	63.1	47.75	59.56	76.2	63.2	63.0	68.9
Furniture	.2	.00	.27	.07	.00	.06	.1
Clothing	3.0	.9	3.26	.6	.21	.41	1.7
Personal	.2	.05	.27	.21	.13	.06	.1
Total	66.5	49.7	63.36	77.12	63.74	63.54	70.8
Miscellaneous							
Architecture	25.5	23.65	30.24	17.79	27.8	25.8	24.9
Arms	.5	.1	.38	.43	.0	.2	.1
Pipes	5.8	10.55	3.87	4.23	4.49	9.98	2.7
Total	31.8	34.3	34.49	33.09	32.3	36.0	27.7
Activities							
Activities	1.7	16.0	2.14	.77	4.19	.25	1.5

* After Honerkamp, Council and Will 1982:157

+ Honerkamp, Council and Will 1982
# Zierden, Calhoun and Paysinger 1983
@ Zierden, Reitz, Trinkley and Paysinger 1982

Table 6, cont.

Group Category	Dobree**	Hird**	Camden++	Fort Moultrie¢
Domestic				
Kitchen	53.5	61.2	71.4	68.9
Furniture	.08	.07	.08	.1
Clothing	.5	.7	.3	3.1
Personal	.05	.07	.04	.15
Total	54.13	62.04	71.78	72.25
Miscellaneous				
Architecture	28.4	23.4	22.0	22.25
Arms	.8	1.1	.2	.9
Pipes	13.6	11.9	3.1	2.8
Total	42.8	36.4	25.3	25.9
Activities				
Activities	3.0	1.6	2.8	1.8

** Honerkamp 1980
++ Lewis 1977
¢ South 1974

laborers, probably slaves, living at the tannery. The faunal assemblage also indicates a domestic occupation. The domestic occupation will be developed more fully in the following section.

It is important to note that the above interpretation of events at the First Trident site is based primarily on archaeological data, although historical data have been incorporated to a certain extent. While this may horrify the historical particularist, such an approach has been advocated by many archaeologists (Honerkamp 1980; South 1977; Deagan 1978a, 1978b; Reitz and Honerkamp 1983). These researchers propose an emphasis on archaeological, rather than historical, data, especially when the two are not in agreement. The limited documentary information available for the site supports the conclusions derived from the archaeological data in terms of site function.

Site function is less readily discernable in the later, antebellum assemblage from the site. By this time the First Trident location was no longer peripheral to commercial activities in Charleston; general documentary evidence suggests that the commercial function of the site during this period may have been retail.

When divided into domestic and non-domestic groups, the assemblage conforms more closely to combined use sites than to domestic only sites (Table 6). This is demonstrated in the relatively low percentage of domestic artifacts (63.3%) and relatively high percentage of miscellaneous artifacts (34.5%). The possibility that a relatively high percentage of miscellaneous artifacts may reflect a dual site function has been discussed in detail elsewhere (Zierden et al 1983). All of the combined use sites reflect a smaller domestic assemblage and a larger miscellaneous group; such diversity in the archaeological assemblage may reflect a greater range of activities at the site (Zierden et al 1982). It is also possible that the miscellaneous category varies independently of site function (Honerkamp et al 1982).

An interesting aspect of the antebellum assemblage is a relatively large percentage of arms artifacts, when compared to other Charleston sites. This may suggest that guns were repaired or sold at the site, In addition to these categories, the antebellum assemblage had a somewhat large activities group, 2.14%. Most of the activities artifacts, however, probably reflect domestic activities. An exception to this might be the bale seal and the large number of barrel strap fragments.

In general the antebellum assemblage reflects primarily domestic activities. This is not inconsistent with the observed fact that the deposits are primarily the result of discard behavior, as discussed earlier. The slight inconsistencies in this otherwise domestic assemblage may reflect retail commercial activity at this site.

In summary, commercial activity was reflected strongly in the colonial assemblage and weakly in the antebellum assemblage. This may be explained by the probable craft function of the colonial site in contrast to the

probable retail function of the later period. This may also be explained by the discard, rather than abandonment, process active in forming the archaeological record.

Socioeconomic Status

The manifestation of sociocultural variables in the archaeological record has been the subject of considerable interest in historical archaeology (Deagan 1982:165). Using the documentary record as a control, researchers have examined the ways in which social status may be reflected archaeologically (Deagan 1983; Poe n.d.; Otto 1975; Miller 1978; Miller 1980; Schultz and Gust 1983). These researchers, among others, have been able to demonstrate definite correlations between the socioeconomic status of individuals and their material culture on sites spanning a number of temporal, geographical, and cultural associations. More importantly, many researchers have developed preliminary models for determining socioeconomic status, which can be applied to historic sites where documentary evidence of the inhabitants is unknown (Deagan 1978b; Zierden and Calhoun 1983; Drucker and Anthony 1979). A continued testing and refinement of the proposed models by examining both documented and undocumented sites will provide a greater understanding of the reflection of social variability in the archaeological record.

The urban center provides an ideal setting for the examination of social variability. One characteristic of urban centers is a stratified population, and Charleston was no exception. Moreover, extensive documentary records are available to help determine the socioeconomic status of individual site inhabitants (Cressey et al 1983; Spencer-Wood and Riley 1981). In addition to these documents, some information is available on the socioeconomic status of various sections and neighborhoods of the city (Zierden et al 1984).

As is often the case, however, documentary evidence of site inhabitants is rarely as extensive as archaeologists would like it to be. Such a problem is often encountered by the urban researcher when the site in question was a tenement, or rental property. Within the commercial area of Charleston and, indeed, in some residential sections, large blocks of land were owned by wealthy merchants for investment purposes, and rental of property was quite common. Therefore, the owner of a property was often not the occupant of the site. The problems of relying totally on a title search alone for information on site activities has been discussed elsewhere (Zierden 1983; Calhoun et al 1982). All of the sites within Charleston's commercial core that have been investigated archaeologically to date have served as rental property at some point in their history; the First Trident site is no exception.

An additional problem of this nature encountered in Charleston is that many portions of the city were not socially segregated. Along Meeting Street, especially, affluent and downtrodden might live side by

side. Although several generalizations can be made about the relative social status of several sections of the city, it is important to remember that within a given area social status might vary considerably (Berlin 1974).

The above discussion underlies the importance of developing testable models of socioeconomic status for Charleston and other urban centers. Efforts in this direction have met with some success so far. Very little specific documentary evidence was available on the occupants of Lodge Alley and 38 State Street. Based on trends evident through a general historical study of the city (Zierden et al 1984) and evidence in the archaeological record, it was possible to determine socioeconomic differences in the two assemblages.

It was necessary to use this same methodology with the First Trident site. Although enough documentary evidence was available to outline general trends, very little information was available on individual occupants of the property. The archaeological record suggests two distinct occupations at the First Trident site which, for the sake of convenience, have been labeled colonial and antebellum. The two assemblages are quite different and reflect different land use trends for the area, as discussed in the previous section.

The earliest occupation of the site appears to have occurred from circa 1740 to 1765, and represents a combined commercial-domestic occupation. During this period the site was on the northern periphery of the city, and the immediate vicinity of the site was sparsely occupied (Figure 3a). At this time, the property on the west side of the site, and possibly the First Trident site as well, was owned by a tanner. The craftsmen was a man of at least moderate means, and it is highly unlikely that his residence was at the site of his tannery. Although this idea was only vaguely suggested by the sparse documentary record, it was strongly supported by the archaeological record, which suggested a low status occupation.

By the early nineteenth century, the second period of site occupation suggested by the archaeological record, the site was centrally located in the retail commercial section of the city. General historical research (Zierden et al 1984) as well as specific studies on adjacent sites (Herold 1981a; Honerkamp et al. 1982) suggest a predominantly middle class occupation of the area during this period, certainly a mean income above that of the same area during the colonial period.

The assemblage was examined for clues to social status. Based on previous research in a variety of settings, diet is expected to be sensitive to socioeconomic status (Schultz and Gust 1983; Miller 1978; Reitz et al. 1983; Cumbaa 1975). Thus, artifacts in the Kitchen group which function in a sociotechnic and technomic sphere (Binford 1961) are expected to reflect social status, as are the floral and faunal remains (Deagan 1983; Otto 1975). In addition, personal, highly curated objects are expected to reflect social status, based on availability (Zierden 1981).

Previous research in Charleston, and other areas, has suggested that certain artifact groups and classes may reflect social status. Within the Kitchen group, an increase in the relative percentage of oriental porcelain, glass tableware, and ceramic tableware should vary positively with income and status. Likewise, variety in vessel form has been demonstrated to vary positively with relative affluence (Otto 1975). In addition, variety within and relative percentages of the Clothing and Personal groups are expected to reflect social variability. (A sparsity of such artifacts has been discussed relative to lower social status [Deagan 1978; Singleton 1980]). Because these particular assemblages are generally small, inferences concerning these groups are more tenuous.

Based on these indicators, the antebellum assemblage suggests occupation by individuals of high status, in fact, higher than that of any site tested in Charleston by the authors to date. The ceramic assemblage contained 71% refined earthenware, compared to 68% at McCrady's. Within the ceramic assemblage, the First Trident assemblage contained 6.2% porcelain, compared to 5% at Lodge Alley and 11% at McCrady's. The assemblage also contained a higher percentage of transfer print ware, 10% as opposed to 4% at Lodge Alley. This higher percentage of tablewares previously associated with high status (Otto 1977) is relfected in an examination of vessel form (Table 3). The antebellum assemblage contained a large number of vessels associated with specialized dishes or with individual services. Evidence of matched sets was also present. The ceramic assemblage suggests a high status diet, as reflected in the quantity and variety of ceramic vessels present.

The antebellum assemblage also contained a high percentage of Colono ware, when compared to other late eighteenth - early nineteenth century sites. The ceramic assemblage contained 5.3% Colono ware, as compared to 1.02% at Charleston Center, 1.2% at Lodge Alley, and 3.14% at McCrady's. Elsewhere, it has been suggested that on the constricted urban site, Colono ware in relation to other utilitarian wares may be a "reverse" status indicator (Zierden 1983). Based on the assumption that Colono ware was an inexpensive ware used primarily by slaves (Ferguson 1980), the relative percentage of Colono ware on a site in downtown Charleston may be an index for the presence of slaves on a site in the traditionally white sections of the antebellum city. Thus, the wealthier an individual the more likely slaves using Colono ware will be in residence. Without the benefit of the documented presence of slaves at any site other than McCrady's, the present data support this suggestion. Of course, this hypothesis is very preliminary, and considerably more documentary research is needed, including documentarily anchored status studies, larger sample sizes, and investigation of a known urban slave site. The problem of slaves "living out" must also be considered (Wade 1964).

Other artifacts within the Kitchen group suggested a high status for the site inhabitants. The First Trident site contained the largest percentages of decorative glassware from any site examined so far, containing .74% as opposed to .04% at Lodge Alley and .25% at McCrady's. In general

the Kitchen assemblage suggested a high status occupation, based on the presence of large numbers of relatively expensive ceramic types, the variety of vessel forms, suggesting matched sets of tableware, specialized service and consumption vessels, and luxury goods such as specialized glassware.

The faunal assemblage exhibited some of the characteristics that have been attributed to high status assemblages in Charleston; other suggested high status markers were absent. Absent from the assemblage were caprines, which have been associated with high status as a result of research at McCrady's. The assemblage did contain a quantity of sawed bones, associated with high status. Perhaps high status was most strongly reflected in the diversity of the species list. This diversity was obvious despite the problems with relative sample sizes. High status diets, whether rural or urban, have exhibited a greater variety of both wild and domestic fauna. This was supported by the First Trident data.

A comparison of the First Trident Clothing and Personal categories with other antebellum assemblages also revealed some interesting differences. Both groups formed a higher percentage of the total assemblage at First Trident. Clothing items comprised 3.2%, compared to .3% at Lodge Alley and .5% at McCrady's. This large percentage is due in part to the presence of a large number of brass straight pins, as opposed to clothing items per se. When these pins are removed from the calculations, though, the Clothing group still comprises 1.18% of the assemblage, considerably higher than the other two sites. The Personal category was also larger, comprising .3%, compared to .0% at Lodge Alley and .12% at McCrady's.

In addition to being larger, the First Trident assemblage was considerably more varied (Table 2). The button class was quite varied, including those of brass, porcelain, bone and mother of pearl, denoting use on a variety of garments. Other closures, such as hooks and eyes and lacing tips were included. Glass beads, recovered in large numbers at Lodge Alley and associated with lower status sites (Deagan 1976) were absent. The Personal group was also more varied, containing women's and men's personal items. Of particular interest was the recovery of the brass cross, suggesting higher status.

The antebellum assemblage stands in contrast to the earlier, colonial assemblage, which suggests a low status occupation. The colonial assemblage is comparable to that of the Lodge Alley site, also presumed to the low status. The colonial assemblage from McCrady's was too small for valid comparison.

The First Trident assemblage contained 44% refined tableware, compared to 43% at Lodge Alley. Porcelain comprised 9.5% of the assemblage, compared to 10.4% at Lodge Alley. The low percentage of refined tablewares is mirrored in the lack of diversity in vessel form. Less plates and more cups and bowls are present in the colonial assemblage. The assemblage contains no hygiene vessels, which comprised 7% of the antebellum vessels. There are also fewer recognizable vessels in the colonial assemblage. In contrast to the proposed low status pattern, though, decorative glass

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comprised .63% of the Kitchen group, as opposed to .19% at Lodge Alley. In general, a high percentage of bowls and cups, a low diversity of vessel form, and a low percentage of specialized tableware suggest a low status for the colonial occupants of First Trident. The lack of ceramic diversity is reflected in a lack of dietary diversity, although this may be partially due to small sample size.

Of special interest is the unusually large percentage of Colono ware, comprising 19% of the ceramics. This is in contrast to the Lodge Alley assemblage at 2.3% and even the small McCrady's sample at 8%. Colono ware and Slipware together, in fact, comprise 44% of the ceramic assemblage. This unusually large percentage of Colono ware suggests to the authors that the domestic occupation is that of laborers at the tanyard, probably slaves. It is not lost upon the authors that this statement contrasts somewhat to the previous statement that Colono ware may be an indicator of high status; here it is being suggested as an indicator of low status. The statements are less conflicting, though, when it is considered that the basic assumption in both cases is that slaves were the primary users of Colono ware and Colono ware indicates the presence of slaves. In this case, it is believed that the Colono ware is indicative of a slave labor force employed at the tanyard (for a further discussion of the use of urban slave labor see Wade 1964, Walsh 1954). Since the tanner probably did not live at the site, the high status artifacts associated with the slaves' owner/employer are absent.

A final, interesting aspect of the Kitchen assemblage, and one that may not be related to social status at all, is the unusually large percentage of green bottle glass, which comprised 42% of the Kitchen group. This is in marked contrast to other sites, where green glass averages 15% of the group. This may reflect an increased consumption of alcohol by the site inhabitants, or it may reflect the sale of beer on the premises. Newspaper advertisements suggest that such businesses as tanyards often sold beer on the side.

The lack of diversity and lack of luxury goods is also reflected in the Clothing and Personal groups. Clothing comprised .9% of the assemblage, compared to .94% at Lodge Alley. The Personal group was even smaller, comprising .05%, compared to .32% at Lodge Alley. The relatively low percentage is reflected in a lack of diversity in the two groups. The Personal group consisted of a single ivory knob fragment. The lack of personal objects suggests the relative poverty of the inhabitants. The Clothing group also reflects this poverty. Beads, associated with lower status, comprise half of the Clothing group. The other half consists of buttons and a few straight pins.

In general, the colonial assemblage suggests low status and is comparable in almost all respects to the Lodge Alley colonial assemblage. Differences between the two assemblages may be related to the commercial/domestic contrast between the two. The low status is reflected in a lack of luxury goods and a lack of diversity in the assemblage.

While there are clear contrasts between the assemblages discussed, there are problems with an examination of these sites for social variability. These problems will be discussed in the concluding chapter.

CHAPTER VI

Summary and Conclusions

In August 1983 the City of Charleston contracted with the Charleston Museum to conduct limited archaeological excavations at the site of the First Trident Savings and Loan building, currently under construction in downtown Charleston. The site is located on the northeast corner of Cumberland and Meeting Streets, and is a shallow lot measuring fifty feet by one hundred fifty feet, fronting along Meeting Street. The relatively small lot is directly in front of a large parking garage, constructed in 1980. Archaeological investigations focused on the southern two thirds of the lot.

Two units were excavated at the site, and were located to test two separate nineteenth century lots. A 7 foot square was located in the first, southernmost lot, while a 5 foot by 7 foot square was excavated in the more northerly lot. Excavations revealed strikingly different stratigraphy in the two squares. Excavation of Test Pit 1 revealed a brick wall foundation and a deep, extensively disturbed deposit containing early nineteenth century material, late twentieth century material, and large sections of concrete slabs at vertical or oblique angles. The deposit is most likely the result of bulldozing activity associated with the construction of the garage; it appears that the soils were pushed into the cellar of a razed structure in order to create a stable ground surface. Test Pit 2 revealed a strikingly different stratigraphy, and was composed of a series of superimposed sheet deposits and trash filled features dating from the mid eighteenth century through the early nineteenth century. Although the square was only 40 feet north of Test Pit 1 and less than 15 feet west of the garage, only the top zone contained any evidence of the bulldozing activity so evident in Test Pit 1. Deposits at the First Trident site were 6 feet deep, which has been the average depth of deposits at sites recently tested in Charleston, the McCrady's Longroom site and the Lodge Alley site. The temporal parameters of site occupation indicated by the archaeological record are not in agreement with those suggested by the documentary record. The archaeological record suggests two periods of occupation, a mid eighteenth century occupation of 1740 to 1765 and an antebellum occupation from 1790 to 1840. Although the site was also extensively occupied from this time period through the twentieth century, no evidence of this later occupation was noted.

Extensive documentary research was conducted prior to, and after, the archaeological excavations. In addition to pursuing a title search of the particular property, primary and secondary sources pertinent to Charleston's general development were consulted. This is in keeping with the general goal of the Museum's research program to approach the archaeological investigation of Charleston from a city wide, rather than site specific, basis. Formulation of a chain of title for the properties proved to be

both impossible and of secondary importance. As is typical of properties in the commercial section of Charleston, the properties at First Trident were most frequently occupied by someone other than the owner. Because so little concrete information was available on individual owners or occupants of the lots, the archaeological studies were based instead on general trends derived from an extensive examination of documents in preparation of an archaeological research design for the city (Zierden et al 1984). These general trends have been supported by site specific research at other sites. In addition, a detailed examination of newspaper advertisements has provided information on individual occupants within the commercial area as well as on general developmental trends for the colonial period (Calhoun et al. 1982).

The occupation and socioeconomic status of the site inhabitants changed as Charleston grew and developed during the eighteenth and nineteenth centuries. The site was located outside the northwest corner of the original city walls, and was peripheral to commercial development throughout the eighteenth century. Such peripheral sites were often chosen by craftsmen, who found rent in more central locations prohibitive and who needed the larger lots found only on the edge of town (Calhoun et al 1984). Circumstantial evidence indicates that a wealthy tanner owned the lot across the street from the First Trident site during the 1740's and operated a tannery there. During this same period the First Trident site consisted of a narrow strip of high land adjacent to an expanse of marsh. Archaeological evidence indicates that this narrow strip was used for the leatherworking operations or, at least, refuse from the tannery was deposited here.

The marsh was gradually filled during the eighteenth century as development moved north and real estate in the area of the site became more valuable. By the nineteenth century, this section of Meeting Street was centrally located in the retail business district and real estate values had increased accordingly. The lots of the newly filled block were now the long, narrow lots characteristic of the commercial core of Charleston.

Associated with this new, more commercially central function of the site was an increase in the general socioeconomic status of the neighborhood inhabitants. The area remained the heart of the commercial core during the nineteenth century, but declined economically in the twentieth century. The current construction is part of a general trend of revitalization of the downtown area.

The archaeological investigations at First Trident were successful in meeting several goals simultaneously. First, the project provided historical details on the daily life and activities of eighteenth and nineteenth century Charleston. The changing role of the site illustrates general development trends in the city. The site also provided additional information on colonial craft activities. This information will be incorporated into the Museum's interpretive programs for the general public, including exhibits, lectures, and classes.

The same data were used to address questions of current interest in historical archaeology. For this, a combination of historical, artifactual, faunal and ethnobotanical data were utilized, as well as comparative data from other investigations. Three research questions were examined utilizing these data.

The first involves an investigation of site formation processes. The urban site in general and the First Trident site in particular is a complex combination of soil alterations resulting from human activity. The stratigraphic record at the site revealed a general aggradation of soils at the site as artifactual materials were introduced into the ground, as evidenced in Test Pit 2. There was also extensive evidence of redeposition of these archaeological deposits, as suggested in Test Pit 1. A greater understanding of the processes affecting the formation of the archaeological record at urban sites will aid in interpreting archaeological patterning and the behavior represented by this patterning.

Associated with this general study of site formation processes was a consideration of the effects of wholesale mechanical redistribution on the research potential of archaeological deposits. For these purposes, the early nineteenth century assemblages from Test Pits 1 and 2 were compared. This analysis suggests that the record may be altered in a predictable manner, including reduction of artifact size, possible destruction of small, fragile artifacts, and destruction of the ethnobotanical record. Reduction of the faunal record is also evident. This information has important ramifications for cultural resource management programs, in that disturbed sites should be carefully examined before their research potential is discounted. Additional research is needed on this subject; the present study was hampered by small sample size.

The second research question, site function, is particularly dependent on a clearer understanding of site formation processes. Two basic types of activities are responsible for formation of the urban archaeological record; discard or loss and abandonment. Previous research has shown that on dual function sites, such as those included in the First Trident site, the archaeological assemblage will be dominated by the discarded byproducts of domestic activities. Craft activities, generating at least some byproducts to be discarded, may also be represented archaeologically. Retail activities, on the other hand, involve the transfer rather than production of goods and produce little in the way of discarded material to be recovered archaeologically. Abandonment of site materials, in contrast, usually results from an unexpected disaster and subsequent cleanup. In this way, materials not normally discarded become part of the archaeological record. Deposits at dual function sites are more likely to contain evidence of commercial activities if they are the result of abandonment behavior. Deposits resulting from the daily discard of refuse, in contrast, are likely to be overwhelmingly domestic.

In contrast to other sites, such as Lodge Alley and the Exchange building, no evidence of abandonment activities was noted at First Trident. The site did contain evidence of craft activity, in the discarded byproducts of a colonial tannery and leatherworking operation. Evidence of the commercial activity of the later period, which was probably retail, was not recovered. The First Trident data then generally supports the suggestions made from previous research, and has provided a clearer understanding of the reflection of commercial activity in the archaeological record.

An examination of site function is an important concern in the ongoing research in Charleston; all of the archaeological investigations in the city to date have been in areas historically associated with commercial activity. Furthermore, most of the future development projects planned by the City will be in this commercial area, providing additional comparative data.

The third research question examined the relative socioeconomic status of the site residents during the colonial and antebellum periods. Based on historical evidence, it was assumed that the antebellum occupants would be of a generally higher socioeconomic status than the colonial period residents. Data from these two temporal periods from previously researched sites were utilized for comparative purposes.

Analysis focused on several artifact categories developed by South (1977) which previous research has suggested may be sensitive to socio-economic status. These include diet and associated Kitchen artifacts, kitchen wares which functioned in a sociotechnic sphere, and such personal, highly curated objects as those of clothing and personal possession. The data confirmed a low status occupation during the colonial period; the domestic refuse encountered may well be that of laborers working at the tannery. The data also suggested a high status for the antebellum occupants, although certain classes believed to reflect high status were absent here. Not supported by the First Trident data were the presence of caprines and a high percentage of oriental porcelain and glass tableware.

Despite these rather obvious differences between the two assemblages and among those from other sites examined, there are several problems with the present study of socioeconomic status. The primary problem with the research is a lack of adequate documentation on the site inhabitants. In the case of the First Trident and Lodge Alley sites, especially, chains of title are incomplete, as the properties were subdivided and changed hands on several occasions. More importantly, though, all of the properties were rental units; in such cases knowledge of the site owner is irrelevant to a study of the site occupants. The site occupants may have changed several times during a period of ownership, and it is often difficult to trace the changing tenants of a particular site. An examination of City Directories can aid this process for the nineteenth century, but no such systematic sources exist for the eighteenth century. While newspaper ads, deeds, etc. somestimes provide clues to both the owner and occupant

of a site, this information is often sporadic, and is hampered by a lack of street addresses. While enough information has been available to make inferences about the general socioeconomic status of the immediate area, it has been impossible to associate specific proveniences with specific occupants. This problem is not peculiar to the sites investigated, but is common to urban research in general.

With the sites investigated prior to the First Trident site, the socioeconomic status of the immediate areas was fairly consistent, and fairly well documented, allowing relatively safe assumptions to be made about the archaeological data. The problems with this approach are made apparent with the First Trident site, however, in that the immediate area of the site along Meeting Street contained a socioeconomic cross section of individuals, often living side by side. Such was the case at the Liberty National Bank site, across Meeting Street from the First Trident site, where William Caldwell, a wealthy merchant, lived next door to Oliver Fuller, a mariner of only modest means (Herold 1981a). These status differences were reflected in the archaeological record.

The result of this situation is that we have assumed, with documentary and archaeological bases, that the McCrady's site represents a high status occupation and the Lodge Alley assemblage represents that of low status individuals. From these data, and a general documentary base, inferences have been made about the First Trident assemblages. It is entirely possible that these assumptions are incorrect.

There are certain strengths to this approach, however, the primary one being that the archaeological record is emphasized over the historical record. Certain differences between the various assemblages are obvious, and these differences are fairly well patterned. A tendency to rely too heavily on the documentary record has been cited as a potential failing of historical archaeology (Honerkamp 1980:29).

The artifact types and groups cited as being sensitive to socioeconomic status have been developed from excavations at documentarily anchored sites throughout the southeast (Deagan 1976; 1983; Otto 1975; Stone 1974; Mullins Moore 1981). The possibility exists, however, that these artifact categories are not sensitive to social variability in Charleston. Without documentarily anchored sites, this will be impossible to determine.

Another problem with the present data is that the presumed high status site, McCrady's Longroom, functioned as a public eating establishment, rather than as a private domestic site. This may have skewed the patterns seen in both the faunal assemblage and in the kitchen group. It also resulted in a lack of personal and clothing items being recovered from the site, making the present study of these groups more difficult. The final problem, of course, is sample size. All of the samples collected are quite small, a problem that has been discussed in detail by Reitz in reference to the faunal collections (Reitz 1984). Without larger samples, the possibility exists that the assemblages do not reflect the full range of site activities.

Realistically speaking, it is probable that some of these problems will never be solved satisfactorally. By recognizing problems and weaknesses, however, it is possible to proceed with caution in these studies. An examination of socioeconomic status to date has provided a preliminary model to be tested in future excavations. Because of the small size of the First Trident project, the main value of the data lie in comparative studies and the integration of this project into the general research framework established for the city (Zierden et al. 1984). The data have provided additional support for the hypotheses proposed on site function and socioeconomic variability. The project has also provided information on the research potential of disturbed deposits.

The project has also provided new information on the interpretation of Charleston's heritage. We have recovered new information on colonial craft activites and on Charleston's underrepresented lower classes. These data provide a more objective view of Charleton's heritage. The integration of the present data into the longterm archaeological investigations will provide a broadened understanding of this cosmopolitan port city.

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APPENDIX I

ANALYSIS OF ETHNOBOTANICAL REMAINS, FIRST TRIDENT SITE, CITY OF CHARLESTON

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Introduction

During September 1983 personnel of the Charleston Museum, directed by Ms. Martha Zierden, conducted test excavations at the location of a proposed First Trident bank building, on the corner of Meeting and Cumberland streets in downtown Charleston, South Carolina. Test Pit 1 was excavated closest to the street corner, in the expectation that undisturbed midden from adjacent structures might be identified. Unfortunately, this square evidenced considerable disturbance and was probably placed in the twentieth century cellar fill of a nineteenth century building. Only one flotation sample was collected from this unit, primarily to examine the nature and condition of ethnobotanical remains from a bulldozed urban context. Test Pit 2 was placed adjacent to the parking garage at the northeastern edge of the property. This pit is in the vicinity of a marsh inlet shown on the 1739 map of Charleston by Roberts and Toms and the 1787 Beckman map. The majority of the deposits from this unit represent secondary trash middens, including several features containing midden soil. The lower levels, however, may contain deposits from a tannery.

In Test Pit 2, Zone 3 represents a dark sandy midden, disturbed by bulldozing, with an estimated date of 1830. Zone 4 is an undisturbed continuation of the upper zone and has a similar date. Zone 5 dates to the late eighteenth century and consists of a mottled sandy fill which contains smaller quantities of plant remains. Zone 6 is also a sandy fill which dates to the 1760s and which contains sparse plant remains. Soil moisture gradually increases from Zone 7 to Zone 9, the lowest excavation level, which is a dark midden zone, dating to about 1740, which contains quantities of scrap leather, cow bones, and noncarbonized plant parts. Feature 2, in Test Pit 2, dates to the 183o's and is a circular trash filled pit containing abundant bone and oyster shell. Feature 5 is a shallow, semicircular area of mottled soil dating to the 1750's and Feature 6, also a shallow, semicircular area, is characterized by abundant wood charcoal and a 1740's date.

Samples from the excavations were collected by water flotation of primarily 4 gallon soil samples and by hand picking of charcoal from the midden levels. The soil samples were floated by the Charleston Museum personnel after the completion of the fieldwork. Four gallon flotation samples were collected from Test Pit 1, Zone 3, level 2; Zones 3-5; Zones 7, level 1; and Feature 6. One gallon soil samples were collected from Features 2 and 5.

Procedures and Results

The eight floated 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 used U.S.D.A. (1948, 1971), Martin and Barkley (1961), and Montgomery (1977). The results of this analysis are shown in Table 1.

In those zones not disturbed by bulldozing wood charcoal accounts for close to 99% of the samples by weight. Those samples obtained from bulldozed deposits (Test Pit 1, Zone 3, level 1 and Test Pit 2, Zone 3) evidenced low quantities of wood charcoal and abundant slag. Seeds were most abundant in Test Pit 2, Zone 5, and the collection contains seeds of three genera, two families, and an unidentified category. Identified seeds include vetch (Vicia sp.), wildbean (Stropostyles helvola), paspalum (Paspalum sp.), the Fabaceae family, and the Brassicaceae family. All seeds were heavily worn, which made identification difficult. The Test Pit 2, Zone 4 sample contained a small quantity of hickory nutshell (Carya sp.), the only evidence of possible food remains in the eight flotation samples. The debris category in Table 1 includes animal bones (particularly abundant in Test Pit 2, Zone 5), soil and sand, mortar, and noncarbonized wood and rootlets.

The hand picked samples were also examined under low magnification (7 to 30x) with the wood charcoal identified, where possible, to the genus level, using comparative samples, Panshin and deZeeuw (1970), and Koehler (1917). Wood charcoal specimens were broken in half to expose a fresh transverse surface. Wood charcoal from the upper screened portions of the floated samples were also identified to the genus level. The results of this analysis are shown in Table 2, which is organized by unit and provenience.

The charcoal from the First Trident site evidences little variety, with pine (Pinus sp.) being found in all but one of the samples and being dominant in 67% of the samples. Other woods include oak (Quercus sp.), found in six of the ten samples but dominant in only two, ash (Fraxinus sp.), hickory (Carya sp.), and maple (Acer sp.), each found in only one sample. The bulk of the wood from Test Pit 2, Zone 4 represents portions of a plank, cut tangentially, of longleaf pine (Pinus palustris). This identification, while tentative, is based on Koehler (1918:65, 73-74). In addition to the wood, Test Pit 2, Zone 9 produced a small quantity of noncarbonized botanical remains preserved because of their wetland condition. Included were seven peach pits (Prunus persica), one black walnut (Juglans nigra), and one bitternut hickory nutshell (Carya cordiformis).

Discussion

In spite of the excellent field collecting techniques, the samples from First Trident are relatively unrevealing. Very few plant foods or food remains are evidenced and none were found in Feature 2, a "trash" pit presumably resulting from domestic activity and containing quantities of faunal remains, including small fish remains. The occurrence of peach pits continues to support the abundant historical record of peach

	Wood Charcoal		Seeds		Hickory Nutshell		Coal/ Slag		Debris		Total		Seeds
	wt	%	wt	%	wt	%	wt	%	wt	%	wt	%	
TP 1													
Z. 3, L.1	2.10	2.0	-	-	-	-	104.99	98.0	-	-	107.09	100.0	
TP 2													
Z. 3	36.15	48.0	0.01	t	-	-	37.11	49.3	2.03	2.7	75.30	100.0	1 Vicia sp.
Z. 4	56.34	93.6			0.05	0.1	3.43	5.7	0.35	0.6	60.17	100.0	
Z. 5	44.05	77.0	0.15	0.3	-	-	2.64	4.6	10.35	18.1	57.19	100.0	1 Strophostyles helvola, 2 Fabaceae, 50 Brassicaceae, 2 UID
Z.7, L.1	11.51	98.7	0.01	0.1	-	-	-	-	0.14	1.2	11.66	100.0	1 Paspalum sp.
Fea. 2	45.41	92.5	t	t	-	-	-	-	3.70	7.5	49.11	100.0	1 Brassicaceae 1 UID
Fea. 5	10.63	75.9	-	-	-	-	-	-	3.38	24.1	14.01	100.0	
Fea. 6	63.12	95.8	-	-	-	-	-	-	2.76	4.2	65.88	100.0	

Table 1. Flotation sample components, weight in grams.

	Pinus sp.	*Quercus* sp.	*Fraxinus* sp.	*Carya* sp.	*Acer* sp.	UID	
TP 2, Z. 3	+						
Z. 4	+	t					plank of *Pinus palustris*
Z. 5	t	+					
Z. 7, L. 1	+	t					
Z. 7, L. 2	t	+					
Z. 9, L. 1							7 *Prunus persica*, 1 *Juglans nigra*, 1 *Carya cordiformis*
Z. 9, L. 2	+		t			t	
Fea. 2	+	t		t			
Fea. 5	+	t					
Fea. 6	t				t		*Pinus* sp. bark and resin

+ = abundant; t = trace

Figure 2. Analysis of hand picked charcoal samples.

cultivation (see for example Lawson Lefler 1967:115 ; Phillips 1966: 311; Fogel and Engerman 1974:111). The presence of both carbonized and noncarbonized nutshells provides only equivocal evidence for the use of nuts since these might be accidental inclusions. Previous work in Charleston (Trinkley 1982, 1983) has provided little evidence for the use of nuts as a food source. The black walnut fruits in October and is usually found in rich woods, primarily in the piedmont (see Fowells 1965:203; Radford et al. 1968:362-365). While this fruit is often bitter it is not inedible (Medsger 1966:104).

The seeds recovered from the flotation samples, while not representing food plants, do provide some information on site environs. Vetch is an annual, biennial, or perennial herb frequently found in waste areas, fields and other disturbed habitats. This "weedy" plant produces a seed which is edible (Medsger 1966:129; Anderson 1971:169) and the Cherokee used the plant for dyspepsia and various pains (Hamel and Chiltoskey 1975:60). This genus generally fruits from May through July (Radford et al. 1968). Wildbean is an annual or perennial herbaceous vine which fruits from August through October and occurs in fields, open woods, and clearings. Paspalum is an annual or perennial of the Poaceae family. Various species are known as dallisgrass or knotgrass. Most occur as "weedy" plants in low, swampy areas or ditches and fruits in the late summer and fall. The seeds identified only the Fabaceae or Brassicaceae families may represent any of a number of different plants. The Fabaceae family consists of trees, shrubs, or herbs which produce a legume fruit. The Brassicaceae family consists of perennial or annual herbs, many of which are introduced weeds. The greatest quantity of seeds were observed in Test Pit 2, Zone 5, described by Zierden (personal communication) as square fill consisting of mottled grey and tan sand with charcoal flecks.

Table 1 indicates that coal and slag are abundant in Test Pit 1, Zone 3, level 2 and Test Pit 2, Zone 3 and that they significantly decrease in Test Pit 2, Zones 4 and 5. The exceptionally high percentages in Test Pit 1 and in zone 3 of Test Pit 2 are probably the result of these levels being exposed to bulldozing activities. These activities almost completely destroyed the ethnobotanical remains in Test Pit 1 and severely reduced their quantity in Test Pit, Zone 3. Based on these data, the collection of ethnobotanical remains may not be cost effective when the proveniences have suffered extensive, twentieth century mechanical disturbances.

Small quantities of coal and coal slag began appearing in the First Trident samples in the 1790's (Test Pit 2, Zone 5) and there is a slight increase into the 1830's (Test Pit 2, Zone 4). While unburned coal has been identified from other Charleston samples (Trinkley 1983: 117) this is the first study which has identified coal waste. Reynolds (1942:5) suggests that coal did not become the predominant fuel in the south until the late nineteenth century, although the wealthy used imported English "cannel" coal throughout the eighteenth century.

The wood species identified from First Trident evidence little diversity, much less than from the Lodge Alley studies (Trinkley 1983).

More diversity, however, is shown in these samples than was found in those from McCrady's Longroom (Trinkley 1982). Pine, from all sites, is the most common wood. While it is not possible to determine if the abundance of pine is the result of environmental or cultural situations, it is probable that pine was an abundant wood in the Charleston vicinity during the late eighteenth and early nineteenth centuries, just as it is today. Pines may be found on either dry, sandy soils or on low, rich soils. The longleaf pine identified from Test Pit 2, Zone 4 may grow in well drained, sandy soil or in poorly drained sandy clays and is known as a fire subclimax species which originally existed in pure stands because other species could not tolerate frequent fires (Fowells 1965:388). The maple (probably Acer rubrum) and ash (probably Fraxinus caroliniana) both prefer low, rich woods or swampy forests (Radford et al. 1968). The oak and hickory may be found on a variety of soil types. None of the woods examined could be identified as small branches, unlike samples from Lodge Alley (Trinkley 1983). In one sample longleaf pine was identified as representing structural remains, probably a plank.

The features from First Trident present a view little different from the various square samples. Feature 2 contains primarily wood charcoal with several "weed" seeds. Feature 5 suggests a shallow depression filled with midden soil. The debris from this feature include shell and mortar. Feature 6 contains primarily wood charcoal and wood charcoal byproducts (specifically large quantities of burned resin from pine wood).

In summary, the First Trident samples, like others from urban Charleston, document enxensive reliance on wood for a fuel, but provide little indication of plant foods or food remains. Peach pits are ubiquitous, nutshell fragments are uncommon. Seeds, found in the flotation samples, are generally identifiable, but are suggestive of accidental inclusions. These seeds represent plants common to disturbed habitats, emphasizing that early nineteenth century Charleston contained abundant areas of disturbed ground supporting a variety of weedy plants. The presence of paspalum in the lower levels of Test Pit 2 suggests that the site vicinity was strongly influenced by the nearby swampy creeks.

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APPENDIX II

VERTEBRATE REMAINS FROM FIRST TRIDENT

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Abstract

Vertebrate remains were excavated in 1983 from the First Trident site in Charleston, South Carolina, by Martha Zierden of the Charleston Museum. The materials were recovered from two test pits excavated at this small site. Test Pit 1 yielded a small faunal sample from a severely disturbed area. Test Pit 2 was less disturbed and provided materials from three contexts: a tannery operating in the 1740's; a colonial deposit between 1740's and 1765; and a federal/antebellum deposit dating from the 1790's to the 1840's. The collections from all four deposits were small. Nonetheless they provide an interesting contrast to data recovered from other urban collections excavated from Charleston and Savannah. The First Trident data indicate that a variety of subsistence strategies were practiced in the city. The vertebrate sample included 5491 bones, weighing 11,579.77 grams, and contained remains from at least 126 individuals.

Introduction

The urban centers of Charleston, South Carolina, and Savannah, Georgia, have been the focus of several archaeological projects in the past three years. Since 1981 four urban deposits have been excavated in these cities. These excavations have provided vertebrate data from the eighteenth and nineteenth centuries which have been studied for evidence of undocumented subsistence activities by residents of these cities. From this analysis a tentative pattern of urban subsistence has been proposed. Excavations at the First Trident site in Charleston provode an opportunity to test the pattern and make appropriate adjustments to it.

Prior to work at the First Trident site, work had been done at three other Charleston sites: the Charleston Convention Center; McCrady's Tavern and Longroom; and Lodge Alley. The Charleston Convention Center site was excavated by Nicholas Honerkamp in 1981 (Honerkamp et al. 1982). The site yielded vertebrate data from several eighteenth and nineteenth century contexts. The sample contained 183 vertebrate individuals reflecting subsistence in an area of mixed residential and commercial activity by people of unknown socioeconomic status. Subsistence at the site was based almost entirely upon consumption of domestic animals (89% of the biomass, 51% of the individuals). Beef, pork, venison, chickens, and caprines were the major meats consumed. Opossum, squirrels, raccoons, and deer were the only wild mammals identified. Wild birds were rarely consumed. These animals included Canada goose, Snowy egrets and turkeys. The striking aspect of the collection was the low use of estuarine fishes (11% of the individuals, 0.2% of the biomass). All of the ten fish species identified were estuarine species which could have been captured in the harbor.

Excavations at McCrady's Tavern and Longroom provided materials from a different cultural setting. The Tavern began operation in the 1770's and continued to serve patrons until the late nineteenth century (Zierden et al. 1982). A Longroom was added in 1788 for special functions. Although a public facility, at least some of McCrady's patrons were influential community members. In 1791 George Washington was entertained here. Most of the deposits from McCrady's are from the eighteenth century. The McCrady's vertebrate sample contained remains from at least 39 individuals and was quite small. Domestic animals provided 83% of the biomass and 51% of the individuals identified. The major meat sources were cow, deer, pig, and caprines. Deer were the only wild mammals identified. Ducks and turkeys were the only wild birds identified. Fishes contributed 15% of the individuals and 1.5% of the biomass. The six fish species identified were all estuarine species which could have been obtained from the nearby sound.

Lodge Alley was excavated by Martha Zierden in 1982 (Zierden et al. 1983). This was an area of mixed domestic and commercial activity. Although the identities of the residents are unknown, the area was once occupied by

very poor individuals according to documentary sources. The deposits date from the middle of the eighteenth century until the middle of the nineteenth century. The sample contained 44 individuals. Domestic animals contributed 46% of the individuals and 95% of the meat. The major species were cows, pigs, deer and caprines. Rabbit, mink, and deer were the only wild mammals identified. Ducks, turkey, and small perching birds were the only wild birds identified. Fishes contributed 18% of the individuals and 0.6% of the biomass. Seven taxa were identified and all were estuarine species.

Excavations in Savannah, Georgia, provided additional evidence of a consistent urban subsistence pattern. The Savannah-Telfair site was excavated by Nicholas Honerkamp and Charles Fairbanks in 1982 (Honerkamp et al. 1983). As at the Convention Center site, it is not known who occupied the area or what types of activities occurred here. The deposits date from the late eighteenth century into the middle of the nineteenth century. The deposits contained the remains of 186 individuals. Domestic animals contributed 53% of the individuals and 88% of the meat. The major species were cow, pit, chicken, deer and caprines. Opossum, squirrel, and deer were the only wild mammals identified. Wild birds included herons, ducks, turkeys, and perching birds. Fishes contributed 21% of the individuals and 4% of the biomass. The twelve fish species identified included several normally fresh water species along with the same estuarine species found in Charleston collections. The fresh water species probably reflect Savannah's location further up the estuary.

Based on these four samples a general urban subsistence pattern was hypothesized (Table 1). This urban strategy was based upon emphasis on domestic meat sources. The primary species used were cow and pig, with occasionally heavy use of caprines. Domestic birds, essentially chickens were also used, sometimes quite extensively. Other domestic birds included muscovy ducks and rock doves. Although seven wild bird species were identified, only turkeys and Canada geese were extensively exploited. At least some Canada geese, turkeys and mallards were domesticated by the mid-1800's (American Poultry Association 1874). If these three species were domesticated in Charleston and Savannah then the use of domestic birds would increase to 26% of the individuals and 9% of the biomass. Although six wild mammal taxa were identified from urban contexts 72% of the wild mammal individuals were deer. Fishes were from four main families: sea catfishes, sheepshead, drums, and mullets.

The consistency of the urban subsistence strategy can be highlighted by referring to the strategy being employed by contemporaneous groups living on Georgia coastal plantations. Twelve rural deposits from planter, slave, overseer, and freedmen sites were examined (Reitz 1984). The results are summarized in Table 2. Domestic livestock were less prominent in the rural diet than in the urban one. The primary species were cow and pig. Very few caprines have been identified. Chickens were the most abundant domestic fowl. Only one other domestic bird has been identified from a rural site - one muscovy duck. Wild birds were extensively used and contained six taxa not identified from urban deposits. No Canada geese have been identified and few turkeys. Wild mammals identified from rural

sites included three additional taxa but deer contributed only 18% of the wild mammal individuals. A major difference between urban and rural subsistence was in the use of fish. All rural deposits contained essentially the same taxa as the urban samples but in far greater numbers. There is evidence for fishing outside the estuary in the rural samples.

Although the samples from each of the individual contexts are generally small, the regularity with which each of the 16 samples conform to one or the other pattern has been a feature of zooarchaeological analysis of historic samples from the South Carolina/Georgia coastal regions. Divergences from this regular pattern would be most informative and provide interesting analytical problems. Each additional sample affords the opportunity to refine our understanding of early subsistence in the region.

Materials and Methods

The vertebrate materials were excavated in 1983 by Martha Zierden, the Charleston Museum. The excavations were conducted at the First Trident site, at the corner of Cumberland and Meeting Streets in Charleston, South Carolina. The site is small, measuring 150 feet by 50 feet, and has been subject to many disturbances over the years. The earliest deposits are thought to be from a tannery operating in the area in the 1740's. At this time the site was on the periphery of town and the occupants may have been mainly men, some of whom may have been slaves. Other colonial proveniences were excavated in addition to the tannery deposits. These were probably deposited between the 1740's and 1760's. Federal or antebellum contexts, dating between the 1790's and 1840's, were also identified. During the federal/antebellum period, the site was near the commercial center of town and may have seen more domestic use. All of these samples were taken from Test Pit 2. Some faunal materials were excavated from Test Pit 1. This was a large excavation unit which contained artifacts from the eighteenth century through the twentieth centuries and was highly disturbed. It is considered in this report in order to examine the extent such disturbances have on faunal deposits. A list of the proveniences examined is provided in Table 3. A ¼ inch screen was used during excavation.

The vertebrate faunal collection was examined using standard zooarchaeological methods. They were identified by H. Catherine Brown and Elizabeth Reitz, using the comparative skeletal collection of the Zooarchaeology Laboratory, Department of Anthropology, University of Georgia. Bonnie M. O'Brian assisted with the identification and Karen G. Wood prepared the tables. Bones of all taxa were weithed and counted in order to determine relative abundance of the species identified. Notes were made of modifications to the bones and the elements identified in order to discuss butchering techniques. Measurements were taken of all elements where possible following the guidelines established by Angela von den Driesch (1976). These measurements assist in determining the original size of the animals used in Charleston. The Minimum Number

of Individuals (MNI) were determined by paired elements and age. MNI is based upon the observation that most animals are symmetrical. They have only one left humerus, for example. If there are two left humerii in the faunal collection, then there must have been two animals present. MNI is a standard measure of abundance in zooarchaeological analysis. In calculating MNI the field specimen's associated with four temporal and spatial components were analyzed as separate observations.

Although MNI is the standard zooarchaeological quantification medium, the measure has several problems. MNI is an index which emphasizes small species over large ones. A faunal collection may have 10 individuals of catfish and only one deer, based on MNI. It seems unlikely that the catfish contributed more meat than did the deer, however. Further, MNI is based upon the assumption that the entire animal was utilized at the site. This ignores a basic facet of human behavior: exchange or trade. Particularly at historic sites it is quite possible that no live animals actually were ever at the site. It is possible that all of the bones recovered were from salted, smoked or fresh butcher meat. Careful examination of the elements identified and butchering marks may provide information about this problem.

In addition to MNI, bone count, and bone weight, an estimate of biomass provides information on the quantity of meat supplied by the identified species. In some cases the original live weight of the animal can also be estimated. The predictions are based upon the allometric principle that the proportions of body mass, skeletal mass, and skeletal dimensions change with increasing size. This scale effect results from a need to compensate for weakness in the basic structural materials, in this case, bone. The relationship between body weight and skeletal weight is described by the allometric equation

$$Y = aX^b$$

(Simpson et al. 1960:397). Many biological phenomena show allometry in accordance with this law (Gould 1971). In this equation X is the skeletal weight or a linear dimension of the bones, Y is the quantity of meat or the total live weight, b is the constant of allometry (the slope of the line), and a is the Y-intercept for a log-log plot using the method of least squares regression and the best fit line (Casteel 1978; Wing and Borwn 1979; Reitz 1982a; Reitz and Cordier 1982). A given quantity of bone or a specific skeletal dimension represents a predictable amount of tissue due to the effects of allometric growth. Values for a and b are obtained from calculations based upon data at the Florida State Museum, University of Florida. The allometric formulae used here are presented in Table 4.

Allometry is used to predict two distinct values. One of these is kilograms of meat represented by kilograms of bone where X is archaeological

bone weight. This is a conservative estimate of biomass determined from the faunal materials actually recovered from the site. (The term "biomass" is used to refer to the results of this calculation.) Biomass reflects the possibility that only certain portions of the animal were used at the site. This would be the case where salted meats or butcher meat was consumed. On the other hand, when $\overline{X}$ is a linear measurement of a skeletal dimension defined by Driesch (1976), scaling predicts the total live weight of the animal. The total live weight estimate is used to assess the size of colonial and American livestock. It does not imply that the entire animal was consumed. Unfortunately formulae are not currently available for the elements identified from First Trident.

Both MNI and biomass calculations are subject to sample size bias. In samples of less than 200 individuals or 1400 bones, the sample is undoubtedly too small for reliable interpretations (Grayson 1979, 1981; Wing and Brown 1979). With small samples the species list is too short, and the abundance of one species in relationship to others is probably somewhat inaccurate. It is not possible to determine the nature or extent of the bias, or correct for it , until the sample is made larger through additional work.

The age of the species identified was estimated by observing the degree of epiphisial fusion for selected elements. When animals are young their bones are not fully formed. Along the area of growth the shaft and the end of the bone, or epiphysis, are not fused. When growth is complete the shaft and epiphysis fuse. Elements fuse in a regular temporal sequence (Silver 1963; Schmid 1972; Gilbert 1980), although environmental factors influence the actual age at which fusion is complete. Fusion rates can be grouped into four categories. Bones identified were noted as either fused or unfused in the age category where fusion normally occurs. This is most successful for unfused bones which fuse in the first year or so of life, and for fused bones which complete growth at three or four years of age. Intermediate bones are more difficult to interpret. An element which fuses before or at 18 months of age and is found fused archaeologically, could be from an animal which died immediately after fusion was complete or many years later. The ambiguity inherent in age groupings is reduced somewhat by recording each element under the oldest category possible. Although this method has drawbacks, it does provide a rough indication of husbandry techniques. For instance, the presence of very old cattle or sheep may indicate dairy or wool industries, while mostly young animals may suggest use of animals primarily for meat.

As a further step in analysis, the species identified were summarized into faunal categories. Domestic mammals include pig (Sus scrofa), cattle (Bos taurus), and caprines. Caprines include sheep and goat. These animals are difficult to separate from one another from their bones, hence they are identified as either sheep or goats and referred to as "caprines". Domestic birds include muscovy duch (Cairina moschata), rock dove (Columba livia) and chickens (Gallus gallus) and wild birds include ducks (Anas spp.

Aythya spp.), geese (Branta canadensis), and turkeys (Meleagris gallopavo). Deer (Odocoileus virginianus), as well as opossum (Didelphis virginiana, rabbit (Sylvilagus spp.) and squirrel (Sciurus spp.) are wild terrestrial animals. Aquatic reptiles include a variety of turtles, including sea turtles (Cheloniidae). Fishes include sharks (Carcharhinidae), sea catfishes (Ariidae, Ariopsis felis, Bagre marinus), sea bass (Centropristis spp.) scup (Stenotomus chrysopes), black drum (Pogonias cromis), red drum (Sciaenops ocellatus), sea trout (Cynoscian spp.) and croakers (Micropogonias undulatus). The commensal species identified were rats (Rattus spp., Sigmodon hispidus) and mice (Mus musculus). Dogs (Canis familiaris) were also considered commensal. Since these animals live in close association with human residences it is assumed that the individuals identified from Charleston are commensal with the deposits rather than food items. In calculating biomass summaries only those taxa for which MNI was calculated were counted. Taxa such as Ud. Mammal or Ariidae are not tabulated in the summary biomass calculations in Tables 9-12.

Results

The four components of the First Trident collection were all quite small so that analysis of the results must be considered tentative. When they are examined, however, it appears that the results are in some respects dissimilar to other urban samples studied so far. In other respects the First Trident data are similar to data from other samples. Species lists for the four analytical components are provided in Table 5 through 8, beginning with Test Pit 1 and ending with the tannery deposits. These data are summarized in Tables 9 through 12, following this same order. In Tables 13 through 15, data on the elements identified, modifications observed on the bones, the age of the large mammals at death and bone measurements are presented. Table 17 is a summary list of species identified comparing the four analytical units.

The vertebrate remains from Test Pit 1 contained only 8 individuals (Tables 5 and 9). Of these one was a pig and one was a cow. A single canine tooth from a domestic dog was also identified. The only wild mammal identified was a deer. Although no chicken remains were recovered, bones from a muscovy duck and rock dove were found. One fish was also identified.

The federal/antebellum samples were the largest of the First Trident components, and also one of the larger samples from Charleston (Tables 6 and 10). Domestic meat was a major food source apparently. In terms of biomass the First Trident use of domestic mammals is identical to that in Table 1. The number of domestic individuals is substantially less. The same is true of the use of domestic birds. Chickens were the only domestic birds identified, although turkeys and Canada geese were almost as common as chickens. Use of wild mammals is similar to that at other urban sites, although deer are less prominent in the list of wild mammals than is usually the case. The striking and unexpected feature of the federal/antebellum data is the abundance of fish in the

collection. The sharks, sea catfishes, sea bass, drums, mullets, and flounder are identified in higher numbers than in other urban samples. All of these, however, are typical estuarine species and have been identified in lower frequencies in other urban samples. The unusual identification is that of a scup (Stenotomus chrysops) from Zone 5, levels 1, 2, and 3. Scup are coastal and offshore fishes in this area (Dahlberg 1976). They are gregarious fish which feed near or on the bottom in depths of at least 200 feet. Further north they may be found closer to shore. The identification of this fish is good evidence for the functioning of a fish market and/or commercial fishing in the town. The fish may have been taken either off-shore by a local boat, or imported from northern ports. Since the identified elements are entirely from the head, and filleted fish are usually headless, it is assumed that the scup represents a local product of offshore commercial fishing. This is the first evidence of such an activity from any coastal historic sample.

The colonial sample, excluding the tannery data, contained the remains of 27 individuals, and is, therfore, quite small. Use of domestic livestock appears to have been unusually high at this time (Tables 7 and 11). Use of domestic birds is less than at other urban sites and in the federal/antebellum assemblage. Chickens were the only domestic bird identified although remains of Canada geese and turkeys were also found in the collection. A deer was the only wild mammal identified. As in the federal/antebellum component, fish were quite common in the colonial proveniences. A variety of fish were identified, and these included scup. This scup was from Zone 7, level 3.

Those colonial proveniences thought to have been associated with the tannery were studied apart from the other colonial period contexts. Although the collection is small (15 individuals), an even greater percentage of the individuals and biomass are from domestic sources. The level of domestic biomass is the highest of any urban sample. Interestingly, the two samples which approach the tannery levels are from Lodge Alley and the other colonial proveniences at First Trident. The major resources were cow, caprine, pig and deer. Chickens were the only domestic bird identified, although the remains of Canada geese were also found in the collection. Deer were the only wild terrestrial animal identified. Levels of fish abundance in the tannery deposits are slightly less than in the federal/antebellum and colonial proveniences. The species identified are typical estuarine species. No scup were identified in the sample.

The elements identified from First Trident are tabulated in Table 13. In this table, head elements include teeth, mandible, and skull fragments as well as atlas and axis. Most of the elements in this category are teeth. Heads could either be evidence that head meat was consumed or that the animal was slaughtered nearby and the head discarded here unused. Forequarters include the scapula, humerus, radius, and ulna. These bones are among the major meat bearing elements. Forefeet include metacarpals and carpals, and do not contain much meat. Their presence may indicate either debris from slaughtering an animal on the spot, or use of feet in making stew broth, gelatin, glue. Hind quarters include the innominate, sacrum, femur, and tibia. These are the major meat bearing elements and

are historically the favored cuts of meat. Hindfeet include the metatarsal and tarsals. These would be found in a deposit for the same reasons as the forefeet elements. "Feet"bones are those phalanges and distal metapodial fragments which could not be assigned to one of the other categories. No ribs or vertebrae could be identified to species although both were present in the unidentified Mammal category. In all four of the archaeological analytical units from First Trident pigs were represented primarily by cranial elements, whereas the other major food species were represented by a large quantity of post-cranial elements. In the tannery deposits 45% of the identified cattle bones were carpals, tarsals, or other feet bones. The elements identified suggest cuts of meat from the entire carcass were consumed, with some preference for hogs heads in the federal/antebellum occupation.

Modifications to the bones included small knife cuts, deep cleaver hacks, dog and rodent gnawing, sawing and burning (Table 14). Burning was a common modification in tannery and colonial proveniences, but burned bones were as common as cut bones only among the tannery materials. The burned bones suggest either that some cuts of meat were roasted, or that the area was burned at one time. Many of the bones were not actually burned, but had been exposed to heat and were discolored. This was especially the case among the tannery bones. Cut bones were common in all time periods, although less common than hacked and burned bones in the tannery deposit. The multiple small cut marks were probably made with a knife or cleaver when meat was removed from the bones before or after cooking. Those marks interpreted to be hack marks are probably the result of striking cuts of meat away from the carcass with a cleaver prior to cooking. Hacking was very common among the tannery bones, where12% of the bone was hacked. The recovery of sawed bones is noteworthy. Sawing is not thought to have been common until the 1800's (Deetz 1977); however, there is some suspicion that sawed bones may be found in higher status or at least urban contexts prior to the 1800's. One sawed bone was found in the tannery deposit. Both ends had been sawed, which suggests that this was a cut of meat consumed at the site rather than taken off the carcass and sold to a customer. Sawed bones were more common in the federal/antebellum deposits. An additional modification was also observed. Seven bones from FS#'s 7, 8, 11, 12, 15, and 24 had a green stain associated with proximity to metal. Five of these bones were mammal and two were birds.

Age of death was determined by degree of epiphyseal fusion (Table 15). There is very little evidence that adult animals were consumed. One caprine from a colonial provenience was over 3.5 years of age at death, but most of the other large mammals were younger than this when slaughtered. Seven of the pig individuals were at least older than 2.5 years of age but is not possible to determine their exact age. Three pigs were less than 2 years of age and one was at least a sub-adult. All of the deer were older than 12 months and were probably adults. Five of the cows were older than 1.5 years of age at death, six were less than 3.5 years old, and one was less than 1.5 years of age at death. These data

indicate that animals were being raised and slaughtered specifically for food rather than being aged beasts which no longer could be used for traction, milk, or reproduction. Two of the chickens were juveniles and eight were adults. Three unidentified bird bones were from juveniles also. The rabbit and squirrel were probably adults, as was the opossum. Rodent materials were from both adults and juveniles.

Very little evidence for the sex of the animals was observed. Three chicken bones had medullary deposits. This is a deposit which is a source of calcium for females while laying eggs (Rick 1975). This means that at least two laying hens were consumed in the federal/antebellum period and in the colonial period.

Bone measurements are one way to estimate the size of animals utilized at a site. The problem with this method is that it has only recently been applied to North American faunal collections. Therefore a comparative data base is lacking. The measurements from First Trident are provided in Table 16 for future use. These measurements generally appear to be similar to those from other urban deposits (Honerkamp et al. 1982, 1983; Zierden et al. 1982, 1983).

Discussion

The data from the First Trident site are different from other urban samples in a number of respects. The main difference is in the high frequency of fish identified in First Trident deposits. In other respects the First Tirdent data are more similar to other urban deposits. These similarities are in the use of Canada geese and turkeys as well as chickens, a generally low use of all wild mammals except deer, and use of caprines.

One question upon which analysis of the First Trident sample focused was upon the amount of disturbance evident between the Test Pit 1 and Test Pit 2 deposits. Test Pit 1 had been badly disturbed while Test Pit 2 was comparatively less disturbed by post-depositional activities. In fact, Test Pit 2 provided one of the richest, most diverse samples so far recovered from Charleston. Test Pit 1 contained a very attenuated fauna (Table 17). It is interesting to note, therefore, that Test Pit 1 contained several species not identified from Test Pit 2. These species included a dog, a muscovy duck, and a pigeon. While the dog and the rock dove might have been casual, commensal species, the muscovyduck as well as most of the other identified species except the rat probably reflect human activity. Given twentieth century eating habits, city ordinances, and the cut marks observed on some bones, many of the taxa identified are probably from an earlier time period. The high amounts of sawed bones from Test Pit 1 may be an indication of twentieth century activity, but is not improbable for the federal period as well, considering the quantity of sawed bones found in the federal materials. Given the small sample, however, it

is not possible to conclusively assign the Test Pit 1 fauna to either century or otherwise interpret the data.

A comparison of the tannery and colonial materials indicates that they are in most respects quite similar. Since the two collections were almost equal in terms of bone count, bone weight, and biomass quantities, it is interesting that the tannery component had about half the individuals found in the colonial sample. Far more tannery bones were burned than were colonial bones, yet cut marks were more common in the colonial sample. Hack marks were more frequent in the tannery sample. The larger quantity of hacked bones and of unidentified mammal fragments probably explains why fewer individuals were distinguished in the tannery deposit. The species identified in both deposits were similar in most major aspects. Both lacked all wild mammals except deer and both contained caprines. Pig and cow individuals were present in both samples in similar amounts, although more pork was consumed by the colonial period residents than by those associated with the earlier tannery. Both contained large quantities of fish.

It is interesting to compare the tannery data with those from Puerto Real, Haiti. Puerto Real was a sixteenth century Spanish town on the north coast of Hispaniola. Ordinarily they would have little in common except that Area 19 at Puerto Real has been interpreted to be an area where cattle products were processed (Reitz 1982a). The bulk of the Puerto Real, Area 19 sample (98%) was composed of fragments of unidentified mammal bones. Many of these were burned and/or hacked. In addition to this the bulk of the identified portion (80%) was cattle. Most of these bones were distal radii, distal tibiae, carpals and tarsals (60%). The possibility of similarity between the tannery and the Area 19 fauna was one area which warranted exploration and there are similarities between the two collections. Areas of dissimilarity also exist. The Area 19 fauna included very few elements from cattle heads or from metapodial/phalange units (17%) while the First Trident tannery does include such elements (52%). While there seemed to be some evidence at Puerto Real that residential activity of a limited nature had also occurred at Area 19, there seems to be substantial evidence at First Trident that in addition to a tannery occupation, people were also living there and depositing food remains from non-tanning activities.

Differences between the colonial faunal identifications and the federal/antebellum species list are hampered by the fact that the federal materials are much more abundant than those from the colonial period. One interesting observation is that the use of domestic animals may have actually declined between the 1740-1760 period and the 1790-1840 time period while the use of wild terrestrial mammals increased. If the colonial deposits are primarily those of a tannery area it is possible that the decline reflects a change in the site's function from a commercial meat or animal processing one to a domestic one. The increase in the amount of wild mammals used is due both to an increase in the frequency of venison as well as to an increase in the variety of wild

mammals exploited. Interestingly, no caprines were identified. Wild birds increased in use slightly in the federal/antebellum period over the level of use in the colonial period and the use of fish declined slightly. Fewer of the federal/antebellum materials had been modified, but cut marks were the most common modification observed. Far more of the federal bones had been burned in comparison to the colonial bones exclusive of the tannery material. Rodent gnawing was also more common. Sawed bone was more frequent in the federal/antebellum deposits. The federal/antebellum deposits are more similar to those from other urban areas (Table 1) than were the other First Trident samples.

The differences between the colonial and federal/antebellum samples are not as great as are the differences between the First Trident deposits and other urban samples. On the other hand, these deposits are not typical of rural samples either. In fact, many typically urban characteristics are present in the First Trident materials. These include a high frequency of domestic animals; a diversity of domestic and wild birds with heaviest emphasis on chickens, Canada geese, and turkeys; primary emphasis upon deer and limited use of other wild terrestrial fauna; and an abundance of commensal species, primarily rats. The main difference is in the levels of fish recovered from the First Trident site and from other urban contexts. This might reflect a behavioral difference between the residents at First Trident and elsewhere in the city, but this seems unlikely for two reasons. The first of these is that there is documentary and archaeological evidence to suggest that two distinctly different groups of people lived at First Trident. The tannery/colonial period people were living on the outskirts of town and probably were affiliated with the tannery operation. The federal/antebellum occupants lived in the commercial center of the city and were probably affluent. It seems strange that a behavior as novel to Charleston as high fish consumption would persist across that cultural boundary. The other reason that a behavioral explanation seems unwarranted for this phenomenon lies in the conditions of the site itself. It appears that the site was sufficiently humid to preserve leather. This is an unusual archaeological situation and would also enhance preservation of fish and other animal remains. The First Trident excavated area is one of the smaller archaeological sites in the city and yet was most productive in the quantity of bone recovered. This suggests that conditions for preservation at the site were better at First Trident than they were elsewhere. Better preservation would produce a more extensive fish assemblage. If the First Trident deposits do represent an urban faunal assemblage under conditions of good preservation than it could be that this sample provides us with a more reliable indication of historic subsistence in the city than do the other samples so far examined.

One further aspect of the collection to be examined is evidence of socioeconomic status in the First Trident materials. Indicators of socioeconomic status which are being tested include higher diversity in species exploited, presence of sawed bones in early contexts, and

presence of caprines. A comparison of the colonial and federal/antebellum samples on these aspects suggests that the federal/antebellum samples may reflect higher socioeconomic status. No caprines were identified from the federal/antebellum deposits, but far more sawed bones were found in the federal/antebellum samples than in the colonial/tannery ones. The federal/antebellum species list is also more diverse, however this could be simply an artifact of sample size since the federal/antebellum sample is several times larger than the colonial/tannery sample.

Conclusion

The First Trident materials have provided an interesting aspect from which to view urban subsistence strategies. Analysis of the data have shown the importance of taphonomic problems in subsistence analysis. They have also provided archaeological evidence for commercial fishing in deeper waters beyond the estuary. The problems which First Trident creates cannot be resolved at this juncture, but the sample serves as a worthwile reminder of the importance of obtaining multiple samples seeking redundancy before assuming an interpretation based upon only a few observations is correct.

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Table 1. Urban Faunal Use (Reitz 1984)

	MNI		Biomass	
	#	%	kg	%
Domestic Mammals	140	31.0	301.18	87.2
Domestic Birds	102	22.6	8.84	2.6
Wild Mammals	36	8.0	18.55	5.4
Wild Birds	28	6.2	2.02	0.6
Turtles & Alligators	26	5.8	7.02	2.0
Fishes, Sharks, Rays	73	16.2	4.04	1.2
Commensal Species	47	10.4	3.92	1.1
Total	452		345.57	

Table 2. Rural Fanual Use*

	MNI	
	#	%
Domestic Mammals	195	18.3
Domestic Birds	44	4.1
Wild Mammals	211	19.8
Wild Birds	33	3.1
Turtles & Alligators	146	13.7
Fishes, Sharks, & Rays	393	36.8
Commensal Species	46	4.3
Total	1068	

*Biomass has not been consistently calculated for rural deposits. Taken From Reitz (1984).

Table 3

First Trident: Field Specimens Examined,
Arranged According to Groups Analyzed for MNI.

Test Pit 1
- FS. #2
- FS. #3

Federal/Antebellum Zone Material
- FS. #5
- FS. #7
- FS. #8
- FS. #12
- FS. #14
- FS. #15

Federal/Antebellum - Feature 2
- FS. #9

Federal/Antebellum - Feature 3
- FS. #11
- FS. #22

Colonial Proveniences - Zone
- FS. #16
- FS. #17
- FS. #18
- FS. #19
- FS. #23

Colonial Proveniences - Tannery
- FS. #24 - Feature 6
- FS. #25
- FS. #26

Colonial Proveniences - Feature 4
- FS. #4

Colonial Proveniences - Feature 5
- FS. #21

Table 4: Allometric Constants Used in Calculating Biomass

Taxa	N	Slope (b)	log a	r^2
Mammal	97	0.90	1.12	0.94
Bird	307	0.91	1.04	0.97
Turtle	26	0.67	0.51	0.55
Chondrichthyes	17	0.86	1.68	0.85
Osteichthyes	393	0.81	0.90	0.80
Siluriformes	36	0.95	1.15	0.87
Pleuronectiformes	21	0.89	1.09	0.95
Perciformes	274	0.83	0.93	0.76
Sparidae	22	0.92	0.96	0.98
Sciaenidae	99	0.74	0.81	0.78

Table 5. First Trident: Species List for Test Pit 1

Taxa	Ct	MNI #	MNI %	Wt. gms.	Biomass kg	Biomass %
Ud Mammal	131			145.39	2.3242	52.96
Ud Rodent	4			0.21	0.0065	0.15
Rattus spp. Rat	1	1	12.5	0.04	0.0015	0.03
Canis Familiaris Domestic dog	1	1	12.5	2.50	0.0600	1.37
Sus scrofa Pig	2	1	12.5	1.86	0.0460	1.05
Odocoileus virginianus Deer	1	1	12.5	6.97	0.1510	3.44
Bos taurus Cow	5	1	12.5	100.44	1.6662	37.96
Ud Bird	8			2.89	0.0536	1.22
Cairina moschata Muscovy	1	1	12.5	1.15	0.0232	0.53
Columba livia Rock dove	1	1	12.5	0.31	0.0070	0.16
Ud Fish	12			1.42	0.0392	0.89
Cynoscion spp. Sea trout	1	1	12.5	0.17	0.0105	0.24
Total	168	8		263.35	4.3889	

Table 6. First Trident: Species List for Federal/Antebellum Proveniences

Taxa	Ct	MNI		Wt. gms.	Biomass	
		#	%		kg	%
Ud Mammal	3031			3261.1	38.197	62.2
Didelphis virginiuna Opossum	5	2	2.6	3.475	0.81	0.13
Syvilagus spp. Rabbit	3	2	2.6	2.0	0.049	0.08
Sciurus spp. Squirrel	3	2	2.6	1.09	0.028	0.05
Ud Rodent	47			5.52	0.122	0.20
Peromyscus spp. Field mouse	6	2	2.6	1.09	0.028	0.05
Signodon hispidas	1	1	1.3	0.14	0.005	0.01
Hispid cotton rat	1	1	1.3			
Rattus sp.	1	1	1.3	2.1	0.051	0.08
Rattus norvegicus Norway rat	14	4	5.3	5.2	0.116	0.19
Mus musculus House mouse	1	1	1.3	0.015	0.001	0.00002
Artiodactyl	18			89.76	1.506	2.45
Sus scrofa Pig	116	8	10.5	339.64	4.988	8.13
Odocoileus virginianus Deer	5	2	2.6	24.2	0.463	0.75
Bos taurus Cow	46	6	7.9	879.3	11.742	19.13
Ud Bird	262			100.47	1.355	2.21
Branta canadensis Canada goose	7	3	4.0	9.91	0.17	0.28
Anus spp.	4			2.05	0.039	0.06
Anas platyrhynchos Mallard	2	1	1.3	5.7	0.100	0.16
Rallidae Rail	2	1	1.3	0.385	0.009	0.01
Meleagris gallapavo Turkey	11	3	4.0	17.21	0.272	0.44
Gallus gallus Chicken	47	7	9.2	39.53	0.580	0.95
Passeriformes Perching bird	2	1	1.3	0.20	0.005	0.0001
Mimidae Mockingbird/Thrasher	1	1	1.3	0.10	0.003	0.0001
Ud. turtle	6			8.64	0.134	0.22
Chrysemys spp. Cooters	1	1	1.3	2.20	0.054	0.09
Malaclemys spp. Diamond-back terrapin	1	1	1.3	0.90	0.030	0.05
Rana spp. Frog	1	1	1.3	0.20	0.017	0.03

Table 6. First Trident: Species List for Federal/Antebellum Proveniences (cont.)

Taxa	Ct	MNI		Wt. gms.	Biomass	
		#	%		kg	%
Squaliformes Sharks, rays	1	1	1.3	0.30	0.045	0.07
Carcharhinidae Requiem sharks	2	2	2.6	0.84	0.108	0.18
Ud Fish	429			47.55	0.674	0.01
Ariidae Sea catfishes	15			5.63	0.103	0.17
Arius felis Hardhead catfish	10	4	5.3	1.79	0.035	0.06
Bagre marinus Gafftopsail catfish	3	1	1.3	1.31	0.026	0.04
Centropristis spp. Sea bass	16	4	5.3	2.95	0.068	0.11
Stenotomus chrysops scup	10	3	4.0	1.50	0.023	0.04
Sciaenidae Drums	1			0.10	0.007	0.01
Cynoscion spp. Seatrout	12	2	2.6	1.12	0.045	0.07
Micropogonias undulatus Atlantic croaker	4	2	2.6	0.875	0.035	0.06
Pogonias cromis Black drum	3	1	1.3	12.67	0.025	0.04
Sciaenops ocellatus Red drum	1	1	1.3	0.04	0.004	0.01
Mugil spp. Mullet	2	2	2.6	0.125	0.005	0.01
Paralichthy spp. Flounder	2	2	2.6	0.72	0.020	0.03
Ud Bone						
Total	4155	76		5091.40	61.377	

Table 7. First Trident: Species List for Colonial Proveniences

Taxa	Ct	MNI #	MNI %	Wt. gms.	Biomass kg	Biomass %
Ud Mammal	284			1675.04	20.971	54.41
Rattus spp.	1			0.13	0.004	0.01
Rattus norvegicus Norway rat	1	1	3.7	0.30	0.009	0.02
Artiodactyl	23			110.56	1.817	4.71
Sus scrofa Pig	12	2	7.4	87.83	1.477	3.83
Odocoileus virginianus Deer	3	1	3.7	5.67	0.125	0.32
Bos taurus Cow	36	4	14.8	873.55	11.672	30.28
Caprine Sheep/goat	6	1	3.7	57.45	1.008	2.62
Ud Bird	60			27.0	0.410	1.06
Branta canadensis Canada goose	4	1	3.7	4.27	0.08	0.2
Anas spp. Duck	1	1	3.7	0.6	0.013	0.03
Aythya spp. Bay duck	2	1	3.7	2.21	0.042	0.11
Melegris gallapavo Turkey	1	1	3.7	0.6	0.013	0.03
Gallus gallus Chicken	11	2	7.4	5.86	0.102	0.26
Ud Turtle	2			1.17	0.035	0.09
Malaclemys spp. Diamondback terrapin	1	1	3.7	1.3	0.038	0.10
Ud. Fish	112			14.78	0.262	0.68
Cheloniidae Sea turtles	1	1	3.7	1.80	0.0470	0.12
Ariidae Sea catfishes	4			0.72	0.015	0.04
Arius Felis Hardhead catfish	1	1	3.7	0.14	0.003	0.01
Centropristis spp. Sea bass	1	1	3.7	0.20	0.007	0.02
Archosargue probatocephalus Sheepshead	1	1	3.7	0.25	0.004	0.01
Stenotomus chrysops Scup	4	1	3.7	0.64	0.087	0.23
Cynoscion spp. Seatrout	8	1	3.7	0.66	0.029	0.08

Table 7. First Trident: Species List for Colonial Proveniences

Taxa	Ct.	MNI #	MNI %	Wt. gms.	Biomass kg	Biomass %
Micropogonias undulatus Atlantic croaker	1	1	3.7	0.01	0.001	0.00003
Pogonias cromis Black drum	1	1	3.7	6.5	0.155	0.40
Sciaenops ocellatus Red drum	5	1	3.7	2.25	0.071	0.18
Mugil spp. Mullet	5	1	3.7	0.77	0.022	0.06
Paralichthys spp. Flounder	4	1	3.7	0.83	0.022	0.06
Ud. Bone	---	---	---	73.03 ----	------	
Total	596	27		2956.12	38.541	

Table 8. First Trident: Species List for Tannery

Taxa	Ct	MNI		Wt. gms.	Biomass	
		#	%		kg	%
Ud Mammal	466			1960.52	24.1621	59.98
Rattus norvegicus Norway rat	1	1	6.7	0.40	0.0115	0.03
Artiodactyl Even-toed hoofed animals	6			58.81	1.0292	2.55
Sus scrofa Pig	5	1	6.7	5.80	0.1280	0.32
Odocoileus virginianus Whitetailed Deer	1	1	6.7	4.80	0.1079	0.27
Bos taurus Cow	31	2	13.3	1021.60	13.4386	33.36
Caprine Sheep/goat	2	1	6.7	33.00	0.6119	1.52
Ud. Bird	31			16.30	0.2589	0.64
Branta canadensis Canada Goose	2	1	6.7	5.50	0.0963	0.24
Gallus gallus Chicken	4	1	6.7	1.90	0.0366	0.09
Muscicapidae Thrush	1	1	6.7	0.30	0.0068	0.02
Ud. Turtle	2	1	6.7	1.70	0.1131	0.28
Ud. Fish	12			1.25	0.0354	0.09
Cf. Lepisosteus osseus Longnose gar	1	1	6.7	0.20	0.0080	0.02
Centropristis spp. Sea bass	1	1	6.7	0.10	0.1335	0.33
Cynoscion spp. Sea trout	1	1	6.7	3.10	0.0071	0.02
Sciaenops ocellatus Red drum	4	1	6.7	3.10	0.0899	0.22
Paralichthys spp. Flounder	1	1	6.7	0.30	0.0090	0.02
Ud. Bone				153.22		
	572	15		3268.9	40.2841	

Table 9. First Trident: Summary of Species List
Test Pit 1

	MNI		Biomass	
	#	%	#	%
Domestic Mammals	2	25.0	1.71	87.1
Domestic Birds	2	25.0	0.03	1.5
Wild Mammals	1	12.5	0.151	7.7
Wild Birds				
Reptiles				
Fishes	1	12.5	0.011	0.6
Commensal Species	2	25.0	0.062	3.2
Total	8		1.964	

Table 10. First Trident: Summary of Federal/Antebellum Species List

	MNI		Biomass	
	#	%	kg	%
Domestic Mammals	14	18.4	16.73	87.1
Domestic Birds	7	9.2	0.58	3.0
Wild Mammals	8	10.5	0.621	3.2
Wild Birds	10	13.2	0.559	2.9
Reptiles	3	4.0	0.101	0.5
Fishes	25	32.9	0.387	2.0
Commensal Species	9	11.8	0.218	1.1
Total	76		19.20	

Table 11. First Trident: Summary of Colonial Species List

	MNI		Biomass	
	#	%	kg	%
Domestic Mammals	7	25.9	14.157	94.2
Domestic Birds	2	7.4	0.102	0.7
Wild Mammals	1	3.7	0.139	0.9
Wild Birds	4	14.8	0.134	0.9
Reptiles	2	7.8	0.085	0.57
Fishes	10	37.0	0.401	2.67
Commensal Species	1	3.7	0.009	0.06
Total	27		15.027	

Table 12. First Trident: Summary of Tannery Species List

	MNI		Biomass	
	#	%	kg	%
Domestic Mammals	4	26.7	14.18	95.16
Domestic Birds	1	6.7	0.037	0.25
Wild Mammals	1	6.7	0.108	0.72
Wild Birds	2	13.3	0.103	0.69
Reptiles	1	6.7	0.113	0.76
Fishes	5	33.3	0.248	1.66
Commensal Species	1	6.7	0.112	0.75
Total	15		14.90	

Table 13. First Trident: Elements Identified

Taxa	Head	Forequarters	Forefeet		Hindquarters	Feet	Total
Recent							
Pig	2						2
Deer		1			1		1
Cow		2	2				5
Federal/Antebellum							
Pig	86	10		3	5	12	116
Deer	1	2	2				5
Cow	8	6	3	15	3	11	46
Colonial							
Pig	7	1		1	2	1	12
Deer			2			1	3
Cow	14	3	1	8	6	4	36
Caprine	4	2					6
Tannery							
Pig	3					2	5
Deer					1		1
Cow	11	1	4	5	5	5	31
Caprine				1	1		2

Table 14. First Trident: Modified Bones

Taxa	Burned	Cut	Sawed	Hacked	Rodent Gnawed	Dog Gnawed
		Test Pit 1				
Ud Mammal			4			
Cow			1			
Muscovy Duck		1				
Total	0	1	5	0	0	0
		Federal/Antebellum				
Ud Mammal	61	53	39	37	44	2
Ud Rodent	2					
Norway rat	1					
Artiodactyl				2		
Pig	3	10		4	6	1
Deer		2		1		
Cow	1	3	3	11	3	
Ud Bird	2	9			14	
Canada goose						
Mallard						
Turkey					1	1
Chicken					2	
Ud Fish						
Total	70	77	42	55	70	4

Table 14. First Trident: Modified Bones (cont.)

Taxa	Burned	Cut	Sawed	Hacked	Rodent Gnawed	Dog Gnawed
			Colonial			
Ud Mammal	5	36		36	3	
Artidactyl		4				
Pig		1		1		
Cow		6		4		
Ud Bird					1	
Canada goose		1				
Chicken		4				
Total	5	52	0	41	4	0
			Tannery			
Ud Mammal	46	18	1	58		
Artiodactyl				2		
Pig	1					
Cow	5	2		5		
Caprine				1		
Ud Bird	5			1		
Thrush	1					
Red drum	1					
Total	59	20	1	67	0	0

Table 15. First Trident: Age Distribution (Values are those of fused/unfused elements)

	Test Pit 1	Federal	Colonial	Tannery
Pig				
Less than 2 years		1	1	
At least 2 years		2		
Less than 3 years		7		
3 years or older				
Total	0	10	1	0
Deer				
Less than 1 year old				
More than 1 year old		2	1	
Less than 2 to 3 years				
3 years or older				
Total	0	2	1	0
Cow				
Less than 1.5 years		3	1	1
At least 1.5 years		3	4	5
Less than 3 to 4 years		2	5	2
3.5 years or older				
Total	0	8	10	8
Sheep/Goat				
Less than 1.5 years				
More than 1.5 years			1	
Less than 3 years				1
3.5 years or older				
Total	0	0	2	1

Table 16

First Trident: Bone Measurements, in mm.

Test Pit 1			
Odocoileus virginianus	ulna	BPC	20.2
Cairina moschata	tibiotarsus	Dd	15.9
		Bd	14.7
Columba livia	radius	GL	48.4
		Bd	5.2
Federal			
Sus scrofa	radius	BP	31.5
		BFp	28.7
	scapula	GLP	33.1
		LG	26.0
		BG	23.6
Odocoileus virginianus	metacarpal	Bp	26.4
	radius	Bp	31.0
		BFp	28.0
Bos taurus	radius	BPC	43.3
	3^{o} phalanx	DLS	62.1
			72.2
			59.4
		LD	47.5
			57.6
			49.3
	humerus	Bp	31.0
	ulna	Did	14.2
Branta candensis	carpometacarpus	Bp	20.6
	tarsometatarus	Bp	11.2
Gallus gallus	scapula	Dic	11.5

Table 16 (cont.)

Gallus gallus	humerus	Bd	16.5
			14.5
			14.8
			16.4
			13.9
		Bp	20.3
			19.6
	ulna	Did	9.4
			8.1
		Bp	8.8
		Dip	11.5
	carpometacarpus	did	6.2
	tibiotarsus	Bd	11.2
			9.8
		Dd	10.5
			10.3
Meleagris gallopavo	carpometacarpus	GL	69.0
Centropristis spp.	atlas width		4.1
			4.2
Cynoscion spp.	otolith length		12.6
Micropogonias spp.	otolith length		7.6
			10.1
Pogonias cromis	otolith length		24.0
Sciaenops ocellatus	atlas width		4.5

Colonial

Sus scrofa	astragalus	DI	22.5
Odocoileus virginianus	1^{o} phalanx	Bp	13.7
		Bd	12.7
		GL	41.0
Bos taurus	ulna	BPC	47.7
	tibia	Bd	65.0
		Dd	50.0
	astragalus	GLl	79.0
		GLm	62.0
		Bd	47.8

Table 16 (cont.)

Bos taurus	2° phalanx	BFd	23.7
		Bd	26.6
Caprine	scapula	GLP	30.6
		LG	23.0
		BG	18.7
	humerus	GLl	145.5
		GLC	130.5
		BT	28.5
		Bd	29.1
		Dp	44.7
Gallus gallus	humerus	Bp	18.0
	carpometacarpus	GL	36.2
		Bp	11.1
			12.4
		Did	7.0
	tarsometatarsus	Bp	11.5
Cynoscion spp.	atlas width		5.1
Sciaenops ocellatus	otolith length		17.7

Tannery

Bos taurus	calcaneus	GL	127.1
	tibia	Dd	50.4
			46.8
		Bd	66.6
			68.9
Caprine	metacarpal	Bp	24.8
Gallus gallus	coracoid	Bp	13.2
		GL	42.8
		Did	8.5
	ulna	Bp	7.7
		Dip	11.1

Table 17. First Trident: Species Identification

Taxa	Test Pit 1	Federal	Colonial	Tannery
Ud Mammal	X	X	X	X
Didelphis virginiana oppossum		X		
Syvilagus spp. rabbit		X		
Sciurus spp. squirrel		X		
Ud. Rodent		X		
Peromyscus spp. Field mouse		X		
Sigmodon hispidas Hispid cotton rat		X		
Rattus spp.		X		
Rattus norvegicus Norway rat		X		
Mus musculus House mouse		X		
Canis familiaris Dog				
Artiodactyl		X		
Sus scrofa Pig		X		
Odocoileus virginianus Deer		X		
Bos taurus Cow		X		
Caprine Sheep/goat		X		
Ud. Bird	X	X	X	X
Branta canadensis Canada goose		X	X	X
Anas spp.		X	X	
Mallard		X		
Cairina moschata muscovy	X			
Aythya spp. Bay duck			X	
Rallidae rail		X		
Meleagris gallapava Turkey				
Gallus gallus				

Table 17. First Trident: Species Identification (cont.)

Taxa	Test Pit 1	Federal	Colonial	Tannery
Meleagris gallopavo Turkey		X	X	
Gallus gallus Chicken		X	X	X
Passeriformes perching bird		X		
Columba livia Rock dove	X			
Mimidae Mocking bird/thrasher		X		
Muscicapidae Thrush				X
Ud. turtle		X	X	X
Chrysemys spp. cooters		X		
Malaclemys spp. Diamond back terrapin		X	X	
Cheloniidae Sea turtles			X	
Rana spp.		X		
Squaliformes Sharks, rays		X		
Carcharhinidae Requiem sharks		X		
Ud. Fish	X	X	X	X
Lepisosteus osseus Longnose gar				X
Ariidae Sea catfishes		X	X	
Arius felis Hardhead catfish		X	X	
Bagre Marinus Gafftopsail catfish		X	X	
Centropristis spp. Sea bass		X	X	X
Archosargus probatocephalus Sheepshead			X	
Stenotomus chrysops Scup		X	X	

Table 17. First Trident: Species Identification (cont.)

Taxa	Test Pit 1	Federal	Colonial	Tannery
Scieaenidae Drums		X		
Cynoscion spp. Seatrout	X	X	X	X
Micropogonias undulatus Atlantic croaker		X	X	
Pogonias cromis Black drum		X	X	
Sciaenops ocellatus Red drum		X	X	X
Mugil sp. Mullet		X	X	
Paralichthys spp. Flounder		X	X	X
Ud. bone		X	X	X