



**The Dock Street Theatre:
Archaeological Discovery
and Exploration**

**Archaeological Contributions 42
March 2009**

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The Honorable Joseph P. Riley, Jr., Mayor of Charleston, has been an advocate for archaeological research and preservation for decades, and his support of this project is appreciated. Mr. Carl Tarpley of the City of Charleston coordinated the project, and provided financial and logistical support.

Fieldwork was conducted by Andrew Agha and Scott Kitchens of Brockington, assisted by Eric Poplin of Brockington and Martha Zierden of The Charleston Museum. Laboratory processing and analysis was conducted by College of Charleston intern Lacy Keesler. Museum Archaeologist Ron Anthony and volunteers Dr. William Turner and Ms. Lee Stevens conserved the artifacts. Holli Pennington assisted Carol Colannino in identification of the faunal remains.

Several scholars willingly shared their time and expertise in discussion of the Dock Street data. Dr. Nic Butler of the Charleston County Public Library, Dr. Steve Rosenberg of the Music Department, College of Charleston, Dr. John Watson of Colonial Williamsburg Foundation, Dr. Odai Johnson, University of Washington, and Ms. Kathy Staples, independent scholar, all shared their opinions on the meaning and use of quills in colonial Charleston. Members of the International Council for Zooarchaeology provided information on archaeological evidence for the harvesting of quills.

The History Workshop, directed by Carol Poplin, will prepare exhibitions for the lobby of the renovated Dock Street facility. Many of the artifacts and images shown here will be on long-term display at the Dock Street Theatre.

Chapter I

Charleston's Dock Street Theatre

The 1730s were a boom time for the Carolina colony. Charleston experienced significant physical and economic growth. Merchants and planters reaping the fruits of this expansion spent their newly acquired wealth in a number of ways, including the arts. Musicals and plays, presented in taverns and longrooms, proved so popular that a theatre was constructed at the corner of Church and Queen Street, recently renamed from Dock Street (Fraser 1989:60). The site of America's second colonial theatre remains a significant city landmark (Poston 1997:180).



Figure 1: View of Dock Street structure, during renovation, facing southeast

Archaeology has been used to explore the evolution of daily life in Charleston, from the early colonial period to the twentieth century. Excavations have traditionally focused on residential sites, but public sites also yield artifacts and data on urban dwellers. As a locus of entertainment and socializing, the Dock Street Theatre, later the Planters Hotel, is likely to provide information on diet, entertainment, and the trappings of social events. The late discovery of an intact refuse-filled feature provided an opportunity to retrieve data on daily life in the colonial city. The small project yielded an assemblage of material unique among the Charleston projects.

The Site

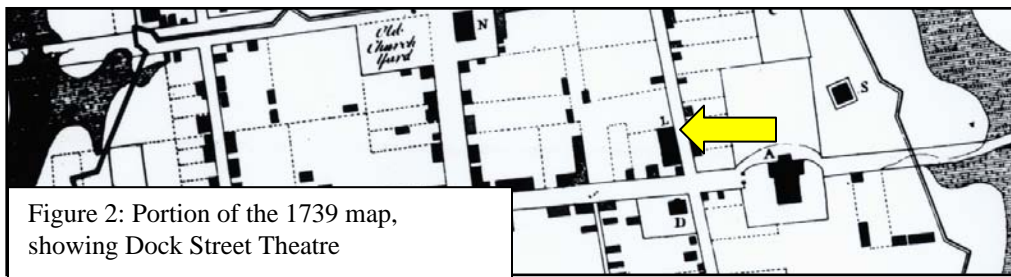


Figure 2: Portion of the 1739 map, showing Dock Street Theatre

Dock Street theater is located at 135 Church Street, within the boundaries of the old walled city. The original theater was constructed in 1736 and burned in 1754. A theatre was rebuilt in 1754, and the property hosted a number of productions in the

ensuing decades. The present structure contains only small fragments of colonial buildings. The main building was constructed in the early 19th century as the Planter's Hotel. The city's first major hotel provided lodging for notable visitors as well as wealthy planters. The building was enlarged incrementally, and has been described as six separate buildings (NRHP Inventory 1973).

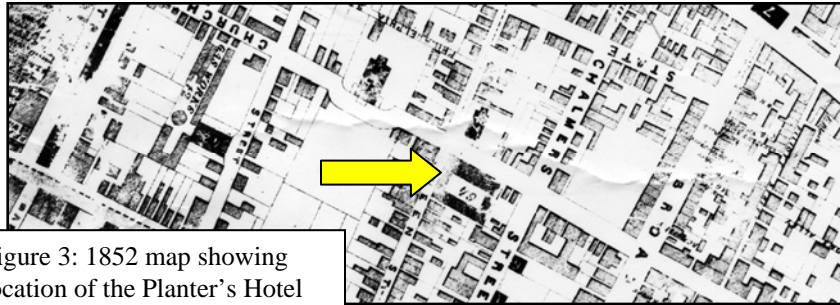


Figure 3: 1852 map showing location of the Planter's Hotel

By the early 20th century, the building was nearly vacant and in poor condition. The hotel was revitalized in an innovative Works Project Administration project, developed by Mayor Burnett Rhett Maybank in 1935. An 18th century style theater interior was created by noted Charleston architect Albert Simmons, and the building was refit with neoclassical woodwork from the demolished Radcliff-King house. The revitalized building functioned as a theater throughout the 20th century. The current renovation is the first since the 1930s.

The Project

Archaeological explorations at Dock Street Theater began with a telephone call from Mr. Tom Magee of NBM construction and Mr. Carl Tarpley of the City of Charleston to Martha Zierden of The Charleston Museum. Renovation of the building was in progress, and workers excavating an elevator shaft in the northwest corner of the courtyard had encountered an intact brick foundation beneath concrete flooring and three feet of sterile fill.

Prior to initiation of the project, project architect Joe Schmidt of Evans & Schmidt Architects carefully considered the archaeological potential of the property, and possibility of archaeological research. Renovations to the property in the 1930s were extensive, and documents suggested heavy disturbance to the grounds. Based on the available information, it appeared that controlled excavations would be unproductive. Nonetheless, allowances were made for late discovery, and all parties associated with the project were urged to report any unusual findings. Mr. Magee, familiar with archaeological deposits in the city, recognized the foundation as worthy of exploration.

Martha Zierden visited the sites on April 1, 2008. Visible in the northwest corner of the interior courtyard, adjacent to the exterior wall of the theater building and a brick property wall, was an opening in the concrete flooring of the courtyard, excavated to a depth of approximately 3' below the concrete surface. A rectangular brick foundation,

roughly 6' north/south by 8' east/west, was exposed in the 10' x 10' opening. Construction workers reported that three courses of brick were removed from the foundation to complete the pit excavation. The foundation, visible in remnant yellow sand fill, was a single header (brick laid with the narrow end exposed) wide. The size, configuration, and location of the foundation suggested a privy. Moreover, the location and possible association with the standing structure suggested the building could be associated with the early 19th century. However, the artifacts recovered during the pit excavation included five green glass bottles typical of the mid-18th century. Additional artifacts collected during the pit excavation and during the archaeologist's visit date to the 18th century. No early 19th century materials were recovered.

A thin lens of yellow fill sand remained on top of the foundation, but a very dark, cloying soil was visible just beneath the yellow overburden. Removal of a small portion revealed quantities of charcoal and animal bone in the dark gray soil. It appeared that the feature was full of refuse. Moreover, the feature fill appeared to be intact beneath the 1930s fill. The concentration of bone and artifacts, coupled with the early 18th century date, suggested the feature was significant, and likely to yield information on the early years of the theater.

Based on these results, the City contracted with Brockington and Associates, Inc. of Mt. Pleasant, in partnership with The Charleston Museum and the History Workshop to excavate a portion of the privy, analyze the recovered materials, and prepare a narrative report and an interpretive display. Based on the recovery of quantities of animal bone, the project budget included significant funds for faunal analysis, to be conducted by the University of Georgia, as well as pollen analysis, to be conducted at Washington State University. Two days of field excavation yielded a small, but significant collection of materials from the second quarter of the 18th century, including important environmental data.

Archaeology in Charleston

Archaeological research has been ongoing in Charleston for nearly four decades, resulting in a large body of data. The majority of the sites studied date to the second half of the 18th century and the 19th century; sealed contexts from the early 18th century – and from the earliest section of the city – are relatively scarce. The Dock Street project makes a significant contribution to our understanding of life in the early colonial city. Some of the sites excavated in Charleston are directly relevant to analysis of the Dock Street privy.

In the last decade, three large projects have produced intact data from the early 18th century, and these serve as a source of context and comparison for the present project. In 1997, New South Associates under the direction of J.W. Joseph excavated the block between Meeting and King streets, on the north side of Broad Street (Hamby and Joseph 2004). This site was located just outside the gate and ravelin of the city wall, and was occupied as early as 1720. Large block excavations recovered numerous

proveniences datable by decade, providing insight on land use and material culture throughout the colonial period (Hamby and Joseph 2004). In 2001, The Charleston Museum excavated the interior of the stable building at the Heyward-Washington house, built in 1772. The Heyward property was continuously occupied from 1730 to the present, and site of extensive excavations in the 1970s. The remarkably preserved site revealed a large assemblage of artifacts and features associated with the Milner occupations, from 1730 to 1770 (Herold 1978; Zierden and Reitz 2007).

In 2004, the Museum had the opportunity to excavate the colonial market, occupied as early as 1692, in the basement of City Hall. This project revealed well-defined strata from the 1690s through the 1790s, and large quantities of animal bone, providing data on subsistence strategies in the colonial city (Zierden and Reitz 2005). All three projects revealed proveniences that could be confidently dated to decades in the early to mid 18th century, as well as a range of artifacts from the early colonial period. Likewise, the three sites yielded significant faunal and environmental data, subject to analysis by a range of specialists.

In addition to these projects, the Museum has tested sites associated with public affairs and entertainment. These are defined as sites where people gathered for socializing, either formally or informally. These include Lodge Alley, location of a Masonic Lodge and various lodgings, and McCrady's Tavern and Longroom, site of dining and lodging, as well as public meetings and programs. The Beef Market also served this role to some extent. Archaeological projects on historic museum properties or public sites, whether large or small, have three concurrent goals:

1. To provide direct evidence of site features and their evolution.
2. To contribute information to public interpretation of the site, as relevant to the social history of Charleston.
3. To contribute data to ongoing studies of the urban environment, including the social meaning encoded in its features and layout, animal use and provisioning in the city, and the material remains of its residents.

Research issues proposed two decades ago (Zierden and Calhoun 1984) have been considered on a project-by-project basis, depending on the relevance of the site to that issue. Issues originally proposed for study in Charleston include site formation processes, subsistence strategies, socioeconomic status, rural-urban differences, spatial patterning, gender and ethnic identification, and the urban landscape. In ensuing years, many of these topics have been revised and combined, and new issues from the fields of historical archaeology, art history, history, folklore, historical architecture, and zooarchaeology have been incorporated into Charleston research.

Research at Dock Street

The data from the Dock Street privy is amenable to research on a number of issues. Some are site-specific, while others are ongoing topics addressed on a city or regional level. Interpretations begin with site-specific issues. Following these, the Dock

Street data will be explored in a larger, citywide context. The privy is likely associated with the earliest public structure on the property, and provides previously unknown details on buildings and lot layout. The contents of the feature provide new information on commercial and public enterprises in the city. The unusual preservation of small bones within a tightly dated context provides previously unknown details on animal use in the colonial city. The Dock Street data will be used to investigate the following issues:

Site Formation Processes: Investigation of the processes responsible for creation and alteration of the archaeological site is a basic component of ongoing Charleston archaeology. In order to most fully interpret an archaeological site, it is first necessary to understand the physical and cultural processes responsible for formation of that database (Schiffer 1977, 1983). An archaeological site consists of a natural setting altered by the humans who occupied that site. Artifacts are introduced into the ground through a variety of methods, including discard, loss, destruction, and abandonment. Once in the ground, the artifacts – and their soil matrix – can be redistributed or they can be removed. Occasionally these activities are recorded in the documentary record and the two sources of data can be compared. Specifically of interest are those activities that introduce materials into the ground and reorganize them after deposit. Urban sites, which are used intensely, are often a complex combination of such events.

Date and Association of the Deposits: Following analysis of the recovered artifacts, a date of deposition is assigned to each archaeological deposit. This date of deposition is assigned on the basis of Terminus Post Quem and stratigraphic position. Confidence in the interpreted date of deposition varies with the types of artifacts present in the matrix and the documented details of site history.

The principal of Stratigraphic Point of Initiation (the relative vertical position on the top of a feature or zone) states that soils gradually accumulate on sites of human occupation, and that the deepest is the earliest. Terminus Post Quem, or TPQ, is based on the invention date of the newest artifact in the provenience. The two principals are used in combination to date soil events on a site. When corroborating historical data are available, these can be used to refine the date of deposition, and to associate the deposit with a specific event. As will be explained in Chapter IV, the historical background on the Dock Street site is incomplete, but artifacts and stratigraphy were sufficient to associate the privy with the earliest theater building on the property.

Archaeological Signature of the Colonial Theater: Depending on the processes that result in archaeological deposits, a site may yield artifacts commonly discarded, or it may contain materials that rarely become part of the archaeological record, and so provide a broader, and more site-specific material assemblage. This may be in the form of individual artifacts, or in numbers of artifacts. The latter could be reflected in a deviation from the pattern, or average. Since Stanley South proposed the concept in the 1970s, archaeologists have quantified archaeological assemblages, grouping artifacts by function, or how they were used in the everyday life of their owners. Broad regularities, or patterns, in these proportions prescribe the average range of daily activities on British colonial sites (South 1977). Though precise proportions, or patterns, have not been

defined for faunal assemblages, the principal remains the same; deviation from the Charleston averages likely signals site-specific events. The cultural, faunal, and environmental data will be examined for clues to site-specific events.

The Material Assemblage of Colonial Charleston: The Dock Street privy, together with three recently examined sites, provides the opportunity to examine the material culture of colonial Charleston in detail. Three large projects conducted in the past decade are directly comparable to Dock Street; the Charleston Judicial Center (Hamby and Joseph 2004), the Beef Market (Zierden and Reitz 2005), and the Heyward-Washington House (Zierden and Reitz 2007). All sites exhibit well-defined strata, often datable to a single decade, and numerous features associated with both domestic and commercial activities. Considered together, the sites provide baseline data on the city's material culture as it reflects Charleston's development during the colonial period. The three sites have been considered together to propose general artifact profiles for various periods. These will be compared, together and separately, to the Dock Street assemblage.

Archaeology of Public Entertainment Venues: In over two decades of archaeological research in Charleston, a number of multi-component sites have been defined as venues of 'public entertainment'. These are sites that were entirely commercial, or both commercial and residential, where the commercial activities involved the preparation and consumption of food outside of the domestic setting. Various scenarios complicate analysis of these sites: the site was also a full-time residence, generating residential refuse; the site changed functions through time; the site reflects deposition of refuse from multiple buildings with multiple functions. Despite these issues, analysis of faunal remains from all of the Charleston sites indicates some measurable differences among the 'public entertainment' sites. There may be measurable differences in the cultural materials, as well. Public venues appropriate for comparison include McCrady's Tavern and Longroom (Zierden et al. 1982) and Lodge Alley, site of the first Masonic lodge and various boarding houses (Zierden et al. 1983a). The Beef Market may also be used in this comparison, as some of the materials reflect informal socializing and food consumption at the site.

Archaeological data is an important source of interpretive data on all historic sites. The key word is interpretation, for all types of data are subject to interpretation, to be read by many viewers. Archaeological data, like architectural features, documentary information, maps, plats, oral history, etc. contributes to a more complete understanding of a historical issue, but archaeological answers do not supercede those from other disciplines. Each discipline, in turn, contributes to an ongoing debate, and the relative value of that contribution varies in reference to the quality of data. In the case of the Dock Street privy, archaeology revealed remarkably preserved data, providing information unavailable from other sources. This report details archaeology's contribution to our understanding of the early theater in Charleston. Consideration of the research topics follows sections on the cultural materials (Chapter IV), the faunal assemblage (Chapter V), and the pollen evidence (Chapter VI).

Chapter II Background

Charleston in the 18th Century

Charleston, the first English settlement in the Carolina colony is well-known as the social and intellectual center of a flourishing plantation economy. That the final state of eighteenth-century development would be Charleston's economic domination of the south Atlantic seaboard was unknown to the settlers a century earlier, who feared their position 'in the very chaps of the Spaniard'.

A group of English noblemen who found themselves on the profitable side of political upheaval in Britain received the Carolina colony as a reward. The earliest settlement was established in 1670, up the Ashley River at Albemarle Point. The new settlers were led by veterans of the West Indian colonies, particularly Barbados. Oyster Point proved attractive to the colonists and, after some exploration, increasing numbers of them left Albemarle for the peninsula formed by the Confluence of the Ashley and Cooper Rivers, as well as outlying plantation tracts.

The area of relatively high bluffs and narrow marsh along the Cooper River was best suited for shipping, and the new city began to grow around the waterfront. The early threats from the Spanish and French necessitated a fortified city, and surrounding city walls were constructed by 1711, encompassing the area bounded by present-day Water, East Bay, Cumberland, and Meeting Streets. A broad plan for granting city lots and



developing a modern urban center, called the Grand Modell, encompassed the high land from Oyster Point at the tip of the peninsula to Beaufain Street. The town focused on Bay Street along the waterfront, and a broad thoroughfare running west at the center (Broad Street). Three streets parallel to Bay Street were soon densely populated. The town was laid out around a central square on the west side and divided by wide streets into deep, narrow lots, a plan characteristic of 17th century Irish towns colonized by the British (Reps 1965).

Figure 4: Carolina and Charles Town (inset), c. 1711, by Edward Crisp

Still, the city's growth was slow through the remainder of the 17th century; historian Robert Weir (2002) suggests that the city's very survival was in question until the turn of the 18th century. Discovery of profitable staples, particularly rice and naval stores, led first to economic stability, and then expansion. Still, the town remained in a defensive posture, and improved fortifications were constructed along the waterfront, with the city huddled behind what would eventually be a brick seawall. While Charles

Town was a renaissance city in many ways, the surrounding wall, crowded lots, and steep roofs gave it a decidedly medieval atmosphere (Coclanis 1984). As the threat of invasion faded, following a series of raids in the first decade of the century, and prosperity rose, the city' landward walls were dismantled. Removal began in the 1720, and continued intermittently for the next decades (Saunders 2002; Poston 1997).

Charleston's physical and economic growth accelerated in the 1720s and 1730s. Several factors account for this, including the success of rice as a commodity, the replacement of the inefficient proprietary government with royal rule, and the removal of the Indian threat and redirection of the Indian trade with the defeat of the Yamasee in 1714. The development of new communities pushed farther into the interior, particularly after passage of the Township Plan of 1730. These settlements brought an influx of products from the backcountry. Meanwhile, as rice became more profitable, lowcountry plantations rapidly expanded.

During this period, merchants emerged as a distinct group, and began to invest their earnings in the local economy (Rogers 1980; Stumpf 1982). As the colony prospered, the merchants and planters emerged as the leaders of local society. The two groups often overlapped, for planters engaged in mercantile activities and merchants invested their earnings in land, becoming planters themselves.

Charleston's economic growth was matched by physical expansion. A major fire in 1740 destroyed the lower half of the early city, and the medieval-style architecture visible in Roberts' prospect was replaced by more modern, Georgian structures. Bishop Roberts' 1739 map shows the outline of the former walled city, with street and building growth well beyond the original borders. The city spread west to the banks of the Ashley River and south to the tip of the peninsula, though much of the peripheral area was only sparsely occupied. The brick seawall and bastions remained in place through the American Revolution, but wharves and bridges were built in front of the wall throughout the colonial period. Though the Roberts prospect omits these to better reflect the fortifications, the Roberts and Toms map shows eight features already in place.



Figure 5: Charles Town in 1739 (Roberts and Toms). Arrow shows location of Dock Street Theatre

By the mid-18th century, concerns over defense were overshadowed by the issues of commerce and quality of life in the port city. The port was constantly expanding as new docks and wharves were built. The shift in attitude is reflected in the ongoing struggle between maintenance of the curtain line along the waterfront and opportunities to breach this curtain line for efficiency of transportation.

As the 18th century advanced, Charles Town expanded in economic importance and in the relative affluence of its citizens. By the third quarter of the century, Charleston was the fourth largest colonial city, and white per capita income was among the highest in the colonies (Weir 1983). As the planters and merchants gained in prosperity, they began to acquire goods more appropriate to their elevated station in life. Personal wealth poured into the colony from Europe in the form of furniture, silver, tableware, clothing and paintings. Imports were matched by a rise in local craftsmen, particularly cabinetmakers and silversmiths (Burton 1968). They and their slaves produced this finery. This rise in personal and collective wealth continued after the Revolution, peaking in the early 19th century (Rogers 1980:74; Green 1965).

Personal wealth was matched by a rise in imposing public and domestic architecture. Ironically, the devastating fire of 1740 cleared the way for construction of large structures in new styles. Examples of public architecture on a grand scale include St. Michael's Episcopal Church, built in 1751 at the corner of Meeting and Broad Streets, the State House on the opposite corner, and the Exchange and Customs house, built on the waterfront at the foot of Broad Street in 1769. On the domestic front, a number of large double houses were constructed during this period, in some cases replacing earlier, more modest structures on the same lot.

The Theater in Colonial Charleston

Financially successful colonists throughout the British colonies spent their money on a range of luxury goods and services. In addition to material goods, luxuries included education, arts, and amusements. Development of a viable English provincial theater began in the West Indian colonies, particularly Jamaica, where planters acquired vast fortunes from sugarcane. The British West Indies had extensive trade connections with North American cities, including New York, Philadelphia, Charleston, and Boston. Professional troupes traveled from the Islands to these cities, bringing a repertoire of almost exclusively British plays, including contemporary plays as well as Shakespeare (Miller 2007:2-3)

Wealthy Charlestonians also spent their money on social events and the arts, both visual and performing. Music and drama, enjoyed in "sociable surroundings", appealed to Charlestonians (Bridenbaugh 1938:463). Lowcountry residents enjoyed musical performances throughout the 1730s. Organ recitals were often held at St. Philips' and St. Michael's, while taverns and longrooms were used for concerts and other performances. Taverns abounded in and around the city, and many were elegant venues, offering a range of spaces for large public gatherings. Establishments such as Sheperd's Tavern, McCrady's Tavern, Pike's, Nightingale's, and the Sign of Bacchus featured dining rooms, longrooms, piazzas, lofts, and bedrooms. Many had billiard tables, card tables, and some featured a bowling green. The larger spaces, particularly the longrooms, were used for dances, lectures, exhibitions, public celebrations, and concerts. The St. Cecelia Society was formed to hire outstanding musicians for regular concert appearances

(Edgar1998:172; Butler 2007). The first theatrical performance was held in 1735, at the popular Shepherd's tavern.

Charleston was one of the first colonial towns to boast a theater, though theatrical performances were available in other colonial towns, including Williamsburg, Philadelphia, Annapolis, and New York. The arrival of touring theater companies from Britain coincided with the religious revival of the Great Awakening, and bombastic sermons by preachers such as George Whitfield tended to have a sobering effect in the cities they visited. New York and, especially, Philadelphia were resistant to the taint of the theater, but more southerly cities such as Annapolis and Charleston were more receptive.

The success of the first theatrical season at Pike's tavern led to construction of the Dock Street Theater a year later. The new "Theatre in Dock Street" opened on February 1, 1736, with a performance of George Farquhar's popular comedy, *The Recruiting Officer*, and a large audience was expected (Rankin 1965:27). The theater changed ownership six months later, but the season continued the following autumn without a hitch. The Charleston theatre was bolstered by a profitable relationship with the fraternal order of Masons, led by tavern owner Charles Shephard. For a May 26 performance, the masons marched in a body to the theater, and were treated to a special prologue and epilogue (Rankin 1965:29).

The Theater in Dock Street was built on grand model lot 113, on the southwest corner of Church and Queen (formerly Dock) streets. The 1739 map designates the theater, and it is shown as a long building fronting Queen, on a lot 70 feet in front and 49 feet in width (Robinson 1954).

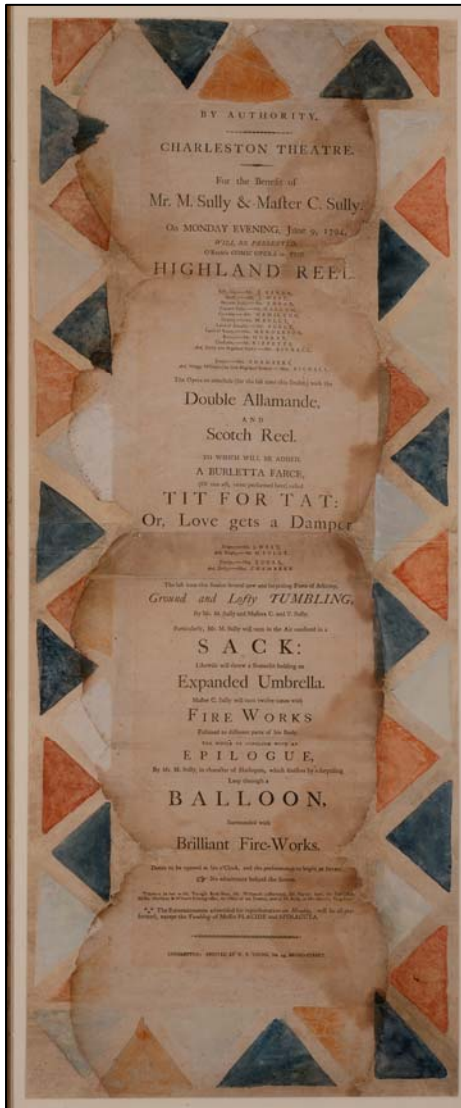


Figure 6: Location of Dock Street Theatre in 1739

Theaters in the American colonies were typically wood, measuring approximately 80' by 40'. There was no set plan for theaters, the principal goal being to "crowd as many people as possible into the available space". Seating consisted of narrow benches in the pit, or floor area, with boxed seats around the walls in one, and sometimes two, tiers. The lower boxes were the most desirable seats, with the upper tier less so. In some cases, sharpened metal spikes were used to separate the boxes from the pit and stage, reinforcing social hierarchy. Internal columns often blocked the view. The structures were dimly lit, often with candle sconces on the wall and chandeliers over the stage. The dim lighting and brightly painted props camouflaged many irregularities in the sets.

Details on the architectural features of the Dock Street Theater are sketchy, but it was likely a basic wooden building, as it has been described as a 'barn', suggesting a very basic building. Boxed seats were evidently available, as tickets for opening performance of *The Recruiting Officer* ranged from "30 s for the boxes and 20s for the pitt" (Maybank and von Kolnitz 1937). Dramatic performances were absent from the Charleston scene for the next eighteen years, and the theater was used principally for dance assemblies.

The decline in theatrical productions coincided with an effective sermon by John Wesley at St. Philips a block away.



The Dock Street Theater evidently burned in 1754, and Charleston was without a theater until 1763, when a second theater was constructed on Queen Street. The building was evidently erected in a matter of weeks, and measured 75’ by 35’. Once again the building hosted successful performance seasons, as well as Mr. Pike’s “annual Ball for the young ladies and gentlemen under his tuition” (Rankin 1965:103). Repertoire for the ensuing decade included operas, farces, and Shakespearean plays (Poston 1997:179-180). The Masons continued their central role in supporting the theater, with special performances that included Masonic songs, epilogues, and prologues (Rankin 1965:185). The American Theater Company departed for New York, and then Jamaica, at the close of the season in 1775 (Rankin 1965:188).

Figure 7: Playbill from the Charleston Theatre, 1794

The Planter’s Hotel

The Planter’s Hotel was constructed on the site of the theater in 1809 by Alexander Calder, who moved his establishment to this location. The Planter’s was the city’s first major hotel, and it provided lodging to a variety of gentry, including upcountry planters in town for the social season (February), as well as notable visitors to the city (Poston 1997:180). The establishment was known

for its service and cuisine, and is the reputed source of Planter’s Punch. The hotel occasionally housed itinerant theatrical troupes, performing at the New Theater, located at the corner of Broad and New streets. The most famous of this troupe was Junius Brutus Booth, the same family as Lincoln assassin John Wilkes Booth (National Register of Historic Places nomination, p. 4). During his stay, however, Junius Booth was reportedly involved in an altercation with his manager, a Mr. Flynn. After attacking Mr. Flynn with a fire-dog, Booth was “placed under restraint, and will doubtless be kept so until he recovers from his aberration of mind” (quoted in Robinson 1954:7),

The hotel was enlarged several times, and is considered six separate structures. The original building remains the focal point of the structure. This features a recessed three-step porch with six brown sandstone columns. The hotel remained popular through

the Civil War, but, like many Charleston establishments, declined in the late 19th and early 20th centuries.

Vine-covered and nearly empty, the historic property was targeted for an innovative Works Progress Administration project; the building was “usefully adapted to meet the needs of the city while preserving visual evidence of the past” (South Carolina Department of Archives and History). Working with local architects Albert Simmons and Samuel Lapham, architect Douglas Ellington designed a new theater, in an 18th century style, behind the brownstone façade. Historic brick and woodwork from the c. 1806 Radcliff-King mansion was used in reception rooms (Fick in Edgar 2006:269). The lobby and ballrooms of the hotel were retained in some detail. The auditorium follows 18th century tradition, modified for modern functions, including a commodious orchestra pit and somewhat larger stage. The adjoining green room was designed as a traditional retiring place for the actors (Robinson 1954). The building is currently managed by the City of Charleston and has become a fixture in theater and cultural affairs of the lowcountry.

The current restoration is the first major project since the adaptation of the 1930s. The WPA project was such a thorough re-working of the buildings that survival of any below-ground resources seemed unlikely. Therefore, architects Evans and Schmidt, in consultation with the City of Charleston and The Charleston Museum, decided against any archaeological work prior to onset of the project. The discovery of an intact feature from the early 18th century was surprising.

Figure 7: Planter’s Hotel, early 20th century, before restoration as Dock Street Theatre



Chapter III Fieldwork

Andrew Agha, Eric Poplin, Martha Zierden

Fieldwork

Excavation of the privy was accomplished in two days, with a crew of three. The field crew included Andrew Agha and Scott Kitchens of Brockington and Associates and Martha Zierden of The Charleston Museum. Dr. Eric Poplin of Brockington supervised the project. Between the initial site visit on April 1 and the initiation of fieldwork on April 21, 2008, the crew of NBM Construction poured the form for the elevator shaft in the courtyard opening. This substantial concrete structure left an area 4' by 4', directly on top of the privy foundation. Given the reduction in available area, the entire 4' opening became the excavation unit. Heavy rains resulted in the filling of this opening with construction debris and slag, and the first task was cleaning this out.



Figure 8: Privy foundation exposed during construction; work area after installation of shaft foundation

The cleaning exposed the north wall of the privy running through the middle of the unit. This left a 1.2' by 1.5' area of the privy interior available for testing. An area north of the foundation, on the building exterior, was also exposed for testing; this area measured 1.5' by 2.0'. The two sections exhibited different stratigraphy and were excavated separately.

All soil was screened through ¼ inch mesh, adjacent to the excavation unit. Large samples of the organic soil were collected for screening through 1/16" mesh. Additional samples were collected for flotation, and the potential recovery of small seeds and bones.



Figure 9: Excavation and screening in progress, facing north

All materials were bagged and tagged separately, according to provenience. Each provenience received a Field Specimen number (FS#) in ordinal fashion. Cultural, faunal, and ferrous artifacts were bagged together, and later separated in the laboratory during the washing process. Soil samples and architectural samples were collected where appropriate.

Field notes were developed under the system used by The Charleston Museum. Daily narrative notes were augmented by feature forms, excavation unit forms, photographic logs, and field specimen logs. All features were mapped and photographed prior to excavation, and soil profiles were mapped. All features and profiles were photographed prior to and after excavation, using Kodachrome 200 slide film, for archival stability. Digital photography was utilized throughout the project.

Definition of Proveniences

The available area of Dock Street Theater measured 4' by 4', and was designated Unit 1. The north wall of the exposed privy bisected Unit 1, resulting in the south half of the unit containing fill from the privy interior and the north half exposing soil layers and construction features on the privy exterior.



Figure 10: West profile, privy interior, showing zones 1 - 3

Soils were excavated to a depth of 1.8' below surface on both sides of the privy wall; three zones were defined in each area. The privy fill, collectively defined as Feature 1, exhibited three separate deposits. Zone 1 was a dark grayish-brown silty sand matrix (10yr4/2) packed with fragments of finish-coat plaster and smaller amounts of brick and mortar.

The soil below the plaster cap, designated Zone 2, was the focus of the excavation project. This soil was very dark, organic, and greasy in feel (2.5y3/1). The soil itself was almost black, contained a high concentration of very small animal bone. For this reason, much of the soil was collected for flotation or fine screening. Zone 2 was thickest adjacent to the privy walls. Also present in the zone, particularly in the lower level, was

large chunks of charcoal and wood cinders. There were also large fragments of animal bone, ceramic, and glass in this level.

The lowest level continued beneath the foundation wall and was present on both sides of the privy; the deposit predates construction of the privy. Zone 3 was light brown-gray sand mottled with brownish-yellow sand (2.5y5/3). Materials were relatively sparse in zone 3, but were also significantly different in age than those deposits above. The mottled soils defined as Zone 3 (10yr6/3) continued to a level of yellow-brown sand containing no dark mottles, about .7' in depth.

Soils on the north side of the privy wall (designated feature 2) were different, and reflect construction of the privy foundation, as well as general midden accumulation. The upper zones, reflecting site alteration after the privy was abandoned, were highly mottled sands with architectural debris, and were designated Zone A. The lenses of soil were designated level 1 (2.5y6/4 and 2.5y3/2). A level of highly mottled soil beneath was segregated as Zone A level 2. This mottled soil was followed by a narrow builders trench, designated Feature 3 (10yr4/2). Both are associated with construction of the privy foundation. Zone 3, followed by sterile subsoil, was the same deposit encountered on the privy interior, in content as well as composition (2.5y5/6). The similarities between zone 3 inside the privy and outside the foundation wall suggest the soils were deposited before the privy was constructed. Excavations were halted at mottled, hard-packed yellow/orange subsoil, on both the interior and exterior of the privy wall.

Exposure of feature 2 revealed very rough construction technique. The wall was laid exclusively of headers, creating a foundation .7' wide. The exterior wall was particularly uneven and poorly laid. The brick continued 1.2' from the top of the excavation, though workers from NBM reportedly removed three courses of brick prior to the archaeological project. The narrow builders trench at the base of Zone A level 2 contained no artifacts.



Figure 11: West profile, privy exterior (north portion)

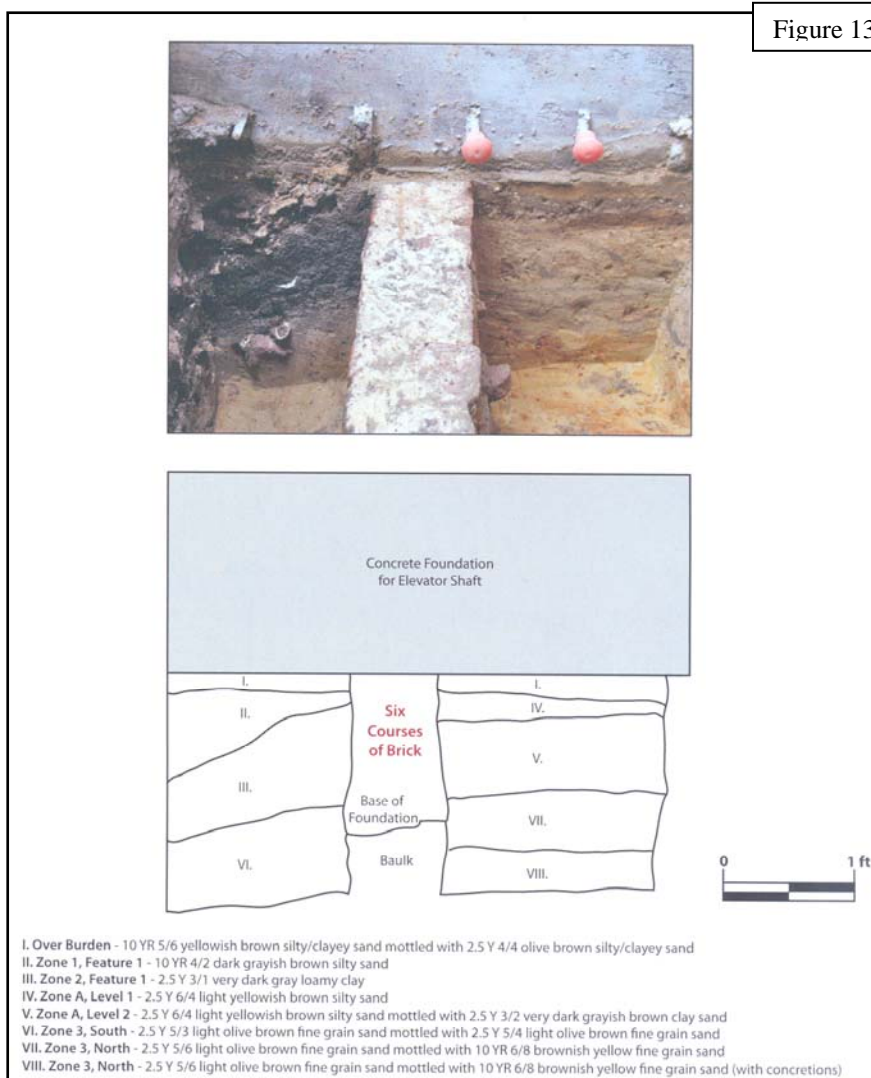
Following completion of excavation within the limits of Unit 1, we received permission to collect a larger sample of Feature 1, beneath the concrete foundation. An exploratory excavation into the southeast corner of the unit measured 2.4' north/south by 2.2' east/west. In this exploratory excavation, we found the northeast corner of the privy foundation. From this exposure, we learned that the internal dimensions of the privy are 6.5' by 4.5'. A concentration of large bone was encountered in this portion of the feature.

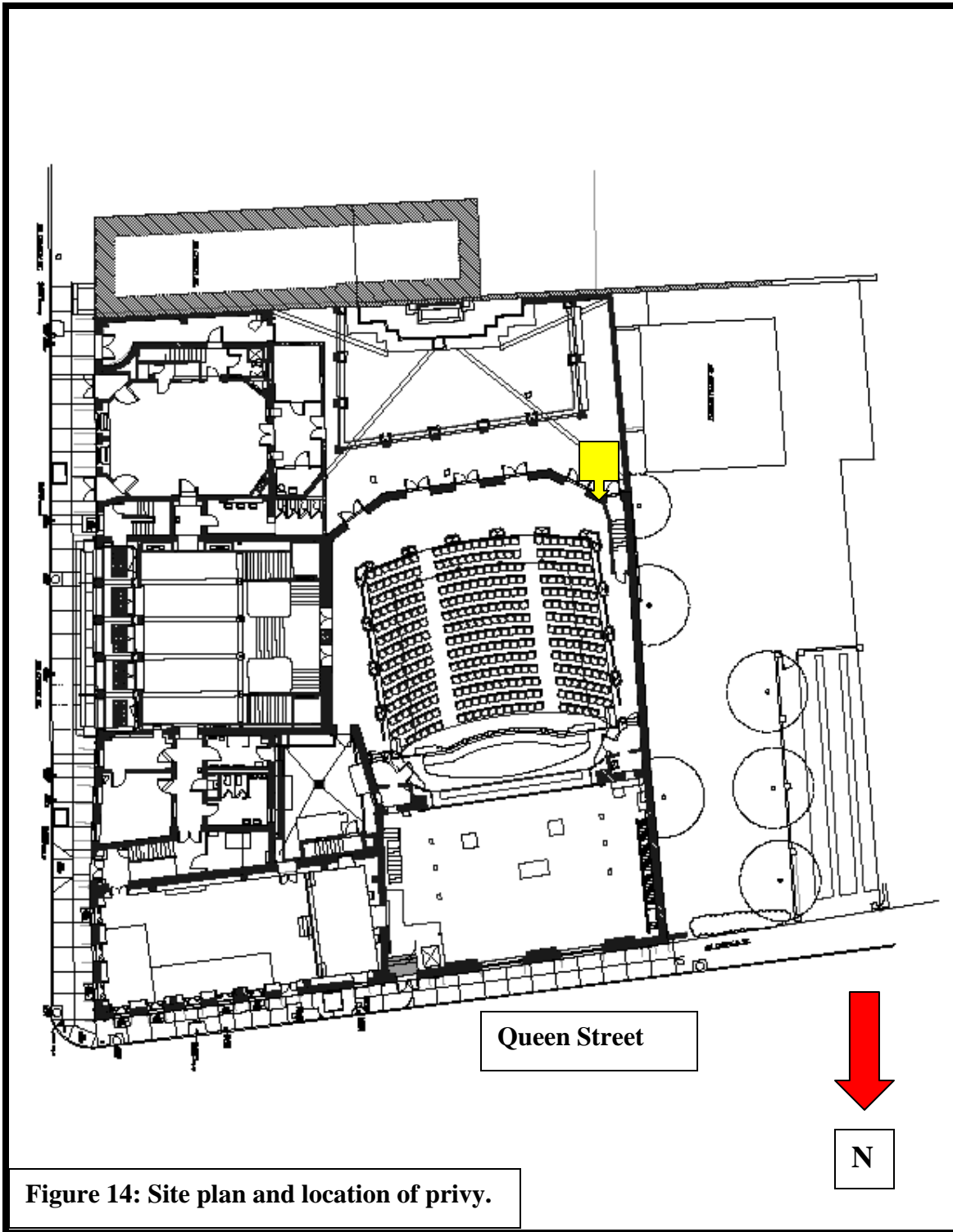
Fourteen liters of zone 2 soil were collected for flotation and four gallons of soil were recovered for window screening.

The fieldwork revealed a shallow foundation, constructed in haphazard fashion and likely supporting a single-story structure. The foundation was constructed in the 1730s and likely filled in the 1750s. The upper deposits of finish coat plaster and window glass suggest destruction of the building or buildings, slumped into the organic fill at the base of the privy. The well-preserved stratigraphy and artifact sample provide a firm basis for this temporal sequence.



Figure 12: White saltglazed stoneware teapot lid in zone 2





Courtyard Trenches

On February 4, 2009, Eric Poplin, Martha Zierden, and Andrew Agha returned to Dock Street at the request of Joe Schmidt (Evans and Schmidt Architects) and Tom Magee (NBM Construction) to record features exposed in shallow service trenches. The trenches crossed the courtyard, following former drainage lines delineated by brick paving. The trench locations are visible in figure 13. The trenches were 1.0' across and 15" deep. These revealed a series of deposits, including brick foundations, lenses of demolished brick, and midden deposits from the Planter's Hotel period. Several features were delineated.



Figure 15: Poplin examining trench profile, facing northeast

A deeper excavation, 5' by 10', adjacent to the theater in the northeast corner of the courtyard, revealed a brick drain and a foundation. The drain, designated feature 5, likely fed a large cistern for the hotel. The drain was two bricks tall and a single stretcher brick wide. The drain was covered with stretcher bricks, and a large slate slab at the intersection with the building. Inspection of the interior revealed that the drain was filled with redeposited sands. Feature 6 was a square brick foundation, seven courses deep and stepped toward the interior. The steps were irregular in width, ranging from .3' to .9'. Inspection of the building foundation indicated later brick within the limits of this feature. This appears to be a cellar entrance for the front building, sealed at a later date. Feature 7 was a builder's trench for the hotel. The deposit of yellow sand was .7' wide, and initiated 1.3' below grade, disturbed by construction of the drain at a later date. A deposit of dark soil, ash, and charcoal, as well as 18th century artifacts, indicates that deposits associated with destruction of the original theatre in 1754 exist below the level of excavation in this unit.



Figure 16: Drain (feature 5) and construction trench (feature 7) visible beneath the drain



Feature 10 was a narrow foundation (9" wide) exposed in the southeastern trench. Three courses were exposed, and no footer was evident. This has been interpreted as the foundation to a piazza along the west side of the hotel buildings. Feature 8 was a brick foundation trending east/west, through the center of the courtyard. The foundation was two courses deep plus a footer course, 13" wide with a 17" footer width. Feature 9 was a north/south trending brick wall located in the western portion of the courtyard. The wall was 13" wide, and three courses were exposed.

Artifacts recovered during excavation of the drain, and those observed in the trench profiles, date to the second half of the 19th century, and are associated with the Hotel era. Colonial materials were observed only in the large excavation, initiating 3' below surface. Generally, inspection of the profiles suggests that the soils in the courtyard are intact, as indicated by discovery of the privy. The 1930s renovations evidently left the courtyard undisturbed. The courtyard likely contains intact archaeological deposits from the 18th and 19th centuries, amenable to research at a future date.



Figure 17: Feature 10 (above)
Feature 6 (left)
Artifacts recovered during trench
excavation (below)



Chapter IV

Materials Recovered

Laboratory Methods

Upon completion of the fieldwork, all materials were transported to The Charleston Museum, where they were sorted for analysis. Soil samples were separated and inventoried. One-cup samples from select proveniences were dried for shipment to environmental specialists. The remainder of the smaller (one-quart) samples was stored in double plastic bags for permanent curation. Some of the larger samples were floated at the Brockington laboratory. Others were water-screened through 1/6" inch mesh in the Museum laboratory. The soil samples will be retained as part of the permanent collection.

Faunal materials were washed, separated from other materials, and weighed by provenience. They were then shipped to the Zooarchaeology Laboratory, University of Georgia for analysis. Funds were sufficient to analyze the entire faunal assemblage, particularly the fine-screen samples. The report by the zooarchaeologists appears in this volume. Upon completion of the zooarchaeological study, the faunal samples were returned to The Charleston Museum for permanent curation.

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

The few metal artifacts (ferrous and non-ferrous) retrieved were highly degraded, and were not suitable for treatment through electrolytic reduction. They were instead soaked in distilled water to stabilize the corrosion, and bagged when dry.

The City of Charleston decided that permanent curation of the collection at The Charleston Museum was appropriate, and donated the collection to the Museum. The Dock Street materials received accession number 2008.048, and the artifacts are catalogued by provenience. All materials are curated in the Museum's storage facility according to museum collection policy. Selected items are on permanent exhibit at the renovated Dock Street Theater, in an interpretive display developed by the History Workshop.

Material Culture

The first step in the analysis of the materials was the identification of the artifacts. The Museum's type collection, as well as a range of texts and web pages, was consulted for identification. These are cited throughout the chapter, where appropriate.

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

Generally, assemblages from the three zone deposits were similar. Though they represent temporally and behaviorally distinct events, the events are separated by only 25 years. Therefore, the assemblage will be described as a single unit. All were dominated by kitchen wares, principally ceramics and glass. Architectural items were also present, principally window glass and nail fragments. Kaolin tobacco pipes were a large portion of the materials recovered. Individual artifact types will be discussed as a unit, with differences among the temporal assemblages explored again at the end of the chapter.

Ceramics recovered include those typical of the colonial period. Of particular interest are the utilitarian earthenwares that form the foundation of kitchen wares used during the first quarter of the 18th century. North Devon Gravel-Tempered Ware and North Devon Sgraffito slipware were developed in 1650 in the Devon region of England and are considered markers of 17th century occupation in the lowcountry (Outlaw 2002; South and Hartley 1980). However, Sgraffito slipware is documented through 1740 and the gravel-tempered ware was made through the colonial period. These two wares have been recovered in small, but consistent amounts in later colonial proveniences in Charleston. The assemblages from the Market and from the Heyward house suggest that North Devon gravel-tempered ware is present throughout the colonial period. The Sgraffito wares are slightly different. They are less common, and seem to peak in popularity in the 1740s, near the end of their manufacture.



Figure 18: Sgraffito slipware

North Devon gravel-tempered ware consists of smooth pink and gray clay with quartz inclusions, hence its name. Vessels are thick and rather large. The interior is coated with a thick apple-green lead glaze, rendered bumpy by the temper protruding from the clay. North Devon Sgraffito slipware features the same clay body, minus the quartz temper, so the paste is smooth. The interior of the vessel was then covered with a white slip, and often designs are scratched through the slip to expose portions of the

brown body below. The slipped area is then covered with a yellowish lead glaze. The slip and glaze are found on the vessel interior, and on open vessels continue around the rim exterior. A single fragment of North Devon gravel tempered ware was recovered from zone 3. Sgraffito slipware was recovered from zone 3 (2 fragments) and from zone 1 (one fragment). Neither ware was recovered from the privy fill (zone 2).

Combed and trailed slipwares are a prominent component of 18th century ceramic assemblages in Charleston, averaging 20% of the colonial ceramics. Combed and Trailed slipware from the Staffordshire potteries was in production by 1670, and was manufactured through 1795. They were intended for middle and lower class kitchens and dining tables, as well as taverns (www.jefpat.org). These wares evidently increase in use throughout the 18th century, as evidenced from the Market assemblages (Zierden and Reitz 2005).

Ivor Noel Hume attributes most of the combed and trailed slipwares to factories in Staffordshire and Bristol, but British archaeologist David Barker suggests Buckley or Liverpool as a source for much of the slipware imported to Charleston (Noel Hume 1969; Barker 1999; personal communication). Most of these wares feature a buff to yellow body and are decorated with combed lines in iron oxide or manganese under a clear to pale yellow glaze. The simplest were trails of brown glaze over the buff body, sometimes combed into elaborate designs. Other variations occur with light trailed stripes over a black slip, or with “...skillfully marbled blend of white, dark, and light-brown slips” (Noel Hume 1969:136).

Combed and trailed slipwares are a dominant type in the privy assemblage; fifteen fragments were recovered overall. Several of the larger fragments exhibited the carefully-combed designs and rim forms that characterize wares from the first quarter of the 18th century (Grigsby 1993:57). Combed and Trailed slipwares comprise 15% of the privy ceramics.



Figure 19: Staffordshire Combed and Trailed Slipware

Manganese mottled ware has been recovered consistently in Charleston and on other British colonial sites, but its period of use has been poorly understood. Scholars have suggested that it was developed in 1680 and used through the first half of the 18th century. The recent recovery of this ceramic in closed contexts at Charles Town Landing led Michael Stoner to propose a 1670 date of manufacture instead (Stoner and South 1991). A large amount of this ware was recovered at the Market; it was most common in the early 18th century, but remained a significant component of the late 18th century assemblage. This is consistent with most evidence, which suggests that mottled ware was still being produced as late as 1780 (www.jefpat.org). Mottled ware is 5% of the privy ceramics, and was recovered from Zone 3 and Zone 2.

Manganese mottled ware is thin, but the paste is otherwise similar to Staffordshire slipware. The vessels feature a brown streaky glaze with manganese inclusions and bands of narrow ribbing around the vessel. The runniness of the glaze results in a relatively thin glaze near the rim and a thick puddling on the interior base of the vessel. While some bowl forms have been identified, the majority of these wares are tankards of various sizes. The tall, cylindrical vessels feature bands or cordons at various intervals.

A similar ware, featuring a solid, rather than streaked, glaze is also recovered from early 18th century deposits. This ceramic was identified as Slip coated ware by David Barker of Stoke-on-Trent museum (Barker 2005: personal communication; see also Kershaw 1987, Davey 1988). Slip-coated ware features paste and vessel forms similar to Mottled ware, and comes in two glaze varieties. The dark variety features a very dark brown, almost black lead glaze over the buff paste, while the light variety is a warm brown. Formal attributes on wares recovered from the market suggest that tankards or other hollow wares were the most common forms. The ware was popular from 1720 until about 1740. A single fragment was recovered from zone 3.



Figure 20: Coarse earthenwares; manganese mottled ware

Utilitarian, but otherwise unnamed, lead-glazed earthenwares are a significant component of colonial sites in Charleston. Common forms include cream pans and butter pots, as well as cooking vessels (Beaudry et al. 1983). Smaller vessels include cups and bowls. Commonly recovered lead glazed earthenwares of the 18th century feature yellow, brown, or black glaze.

Six fragments were recovered from the privy, the majority from Zone 1. A large fragment from an open jar was recovered from zone 2. This vessel exhibited straight sides and a ridged interior, with a rounded straight lip. The vessel interior featured a brown lead glaze.



Figure 21: portion of large earthenware jar, brown lead glazed interior

The most common ceramic in the privy assemblage is the tin-enamelled coarse earthenware known as delft. Delft comprises nearly half of the ceramics recovered from the privy, and was most common in the zone 2 assemblage. This mirrors the market assemblage, where delft was the most common ceramic in the early 18th century assemblage. Delft tableware was developed in the 17th century and persisted in use through the 18th century, declining after the development of superior stoneware and refined earthenware vessels in the mid-18th century. British delft features a soft yellow-to-buff-colored earthenware paste and an opaque, sometimes chalky-textured glaze consisting of tin oxide in a lead glaze. The glaze can be white, but often exhibits a light ‘robin’s egg’ blue background color. Individual vessels may be undecorated, or feature hand-painted decoration in blue or a range of colors, the latter classified as polychrome.

The majority of the Dock Street fragments were undecorated, and many exhibited a white background. A few fragments were painted in blue. Plates were among the recognizable forms. Material researchers suggest that delft was manufactured throughout the 18th century, but its popularity declined precipitously after development of more

durable ceramics, particularly white saltglazed stoneware in the 1740s and creamware in the 1760s. Charleston sites average 24% delft for sites dating to the second quarter of the 18th century, and drop to 10% for sites from the second half of the century. The market assemblage contained 25% delft for the first quarter of the 18th century, and the amount rose to 30% for the second quarter. Delft is more common in the Dock Street assemblage.



Figure 22: examples of blue on white delft bowls

Utilitarian stonewares were a minor component of the Dock Street assemblage. Noel Hume suggests that stonewares manufactured in the Rhineland were imported into England and later into the colonies in large numbers throughout the 17th and first half of the 18th centuries. After 1760, the Rhineland’s virtual monopoly was broken by the saltglaze potters of Staffordshire (Noel Hume 1969:276). The type known to archaeologists as Westerwald is gray-bodied and decorated in blue; earlier examples also feature purple or manganese decoration. Vessel forms common in the mid to late 18th century include chamber pots, small pots, and mugs of various sizes. Earlier forms include jugs with bulbous bodies and reed necks, as well as porringers. Three



25 Figure 23: examples of Westerwald stoneware

fragments were recovered from the Dock Street privy, and all exhibited characteristics of Westerwald from the first quarter of the 18th century. Two were fragments from reed-neck jugs, while the third exhibited elaborate sprigged decorations. Two additional fragments of gray saltglazed stoneware were recovered. One of these was the base to a large jug. The vessel featured a tan interior on a pale gray body, and a heavy light gray saltglaze finish.

Tablewares of saltglazed stoneware, developed in the 1720s and 1740s, are the latest item in the privy deposits. These ceramics are absent from the Zone 3, supporting a pre-1730s date of deposition for that zone. Zones 1 and 2 included fragments of slip-dipped stoneware, developed in 1715, and molded white saltglazed tableware, developed in 1740. The early type features a thick white glaze over a gray body. Because the glaze was not so durable, the edges of vessels were finished with a brown oxide slip, to prevent chipping around the rim. A single fragment of slip-dipped stoneware was recovered from zone 2. The privy fill included three examples of the molded white saltglaze ware, developed after 1740. This white-bodied ceramic was produced in block molds, resulting in crisp and often elaborate designs. The resulting wares were uniform, durable, and attractive (Noel Hume 1969:115). Besides elaborately molded dinner plates, the vessels included tankards, tea wares of all types, and a variety of specialty vessels. The Dock Street privy included an intact sugar bowl lid, missing the finial handle, but decorated with incised rings around the edge.

The latest ceramic in the privy fill was scratch blue stoneware, manufactured from 1744 to 1775. This is white saltglazed stoneware, with incised decorations. The incised designs are filled with blue glaze. The Dock Street example was a fragment of saucer.

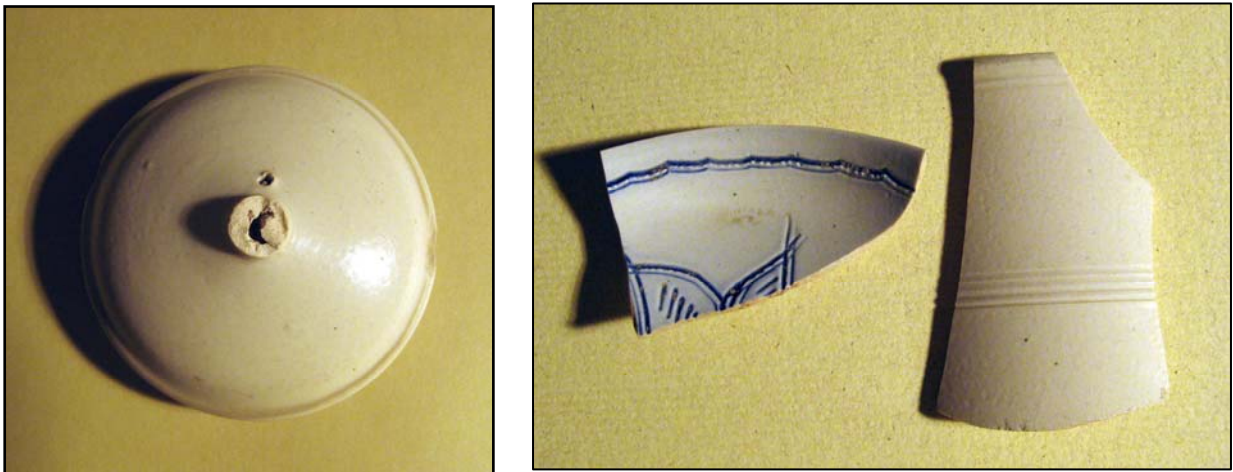


Figure 24: Examples of white saltglazed stoneware; teapot lid, scratch blue stoneware saucer, cann fragment

The Dock Street privy contained five fragments of Chinese export porcelain, with blue handpainted decoration. Most significant was a large fragment of a tea bowl, approximately half of the vessel. The tea bowl was decorated in blue under the glaze. The rural scene was highlighted by a seated man fishing with a cane pole. The vessel

was a common size, 4" in diameter, and 2.3" high. The form was very unusual, however, featuring a very narrow footring (1.5" in diameter) and straight sloping sides. Such



forms, and the similar 'paneled' cups, date to the first quarter of the 18th century and are often attributed to the Dutch trade (Gordon 1975:102; Robert Leath 2008, personal communication). The closest vessel form is shown in Gordon (1975). Vessels are listed as "Fukien porcelain, early 18th century. The other porcelain fragments were too fragmentary for formal description.

Figure 25: porcelain tea bowl

The final ceramic retrieved from the Dock St. privy was fragments of colono ware. Colono ware is locally made unglazed earthenware. It is recovered on all lowcountry sites from the early 18th century to the early 19th century. Joseph (2002) has determined that the ware peaks in frequency in the 1740s. In Charleston it comprises about 6% of the ceramics overall, while on rural plantation sites it may be as much as 50%. Archaeologists have suggested that much of this ware was likely made and used by African Americans (Ferguson 1992), though much of the ware is likely the product of interaction between African American plantation laborers and Native American slaves



Figure 26: colono wares from the Dock Street privy

(Anthony 2002). The most common forms are the shallow, open bowl and the globular jar, with constricted neck and flaring rim. Some vessels, though, copy European forms, including decorated rims and applied footrings.

The ware varies greatly in quality, and this is presumed to be associated with varied function. Colono wares range from thick, coarse sand tempered wares (classified at The Charleston Museum as Yaughan) to intermediately-thick burnished wares (Lesesne lustered) to fine, hard micaceous wares (River Burnished). The latter type often features painted

designs in red or black, particularly along the rim. These wares have been firmly identified as those from Catawba Indian potters of the Rock Hill area (Schohn 2003). The Catawba nation formed from a number of remnant tribes in the 18th century, and was producing large amounts of market-ware pottery by the end of the century. These wares have been recovered in quantity from early 19th century Catawba townsites (Riggs et al. 2006). In addition, itinerant Catawba potters traveled the lowcountry, making and selling pottery (Crane 1993; Ferguson 1992). In addition, researchers suggest that at least some of the colono wares presumably made by African Americans (the Yaughan and Lesesne varieties) were created as market wares (Hamby and Joseph 2004; Isenbarger 2006). The Beef Market, an anticipated locale of sale, contained relatively little colono ware, but the pottery is common on other colonial urban sites. Colono ware comprised 9% of the privy pottery, and was most numerous in the earliest deposit, zone 3.

Olive green bottle glass, ubiquitous on colonial sites, comprised a relatively small proportion of the early materials, but increased in proportion in zones 1 and 2. Bottle glass comprised 16% of the kitchen materials in zone 3, but 42% of the zone 1 kitchen materials. Green bottle glass is perhaps the most common artifact recovered at colonial sites. These hand-blown bottles were generally used to hold liquids, though the most common use was for alcoholic beverages. They were often reused, refilled from barrels or hogsheads, and sealed with cork held in place with copper wire (Smith 2008). Green bottles were hand-blown through the 17th and 18th centuries, shaped with a glass blowing tube, or pontil, and paddles. The resulting bottles are irregular in form, and feature a scar at the base, or kick-up, resulting from removal of the tube after blowing.

The hand-blown bottles also evolve in shape from the 17th through the 18th centuries. The earliest bottles were short and squat in both the body and the neck, and were known as ‘onion bottles’ for their shape. The bottles gradually get taller and thinner, until late 18th century bottles exhibit the proportions of modern wine bottles. It is therefore possible to date bottles by their shape and proportions (Noel Hume 1969:63-68; Smith 2008). Large fragments from the Dock Street privy are consistent with mid-18th century forms.



Figure 27: Case bottle fragments

Colonial bottles were also blown into a square mold, resulting in a bottle with square sides, a flat bottom, and a very short neck. Bottles of this form are common in the 17th century, but they were also produced in the 18th century and were known as ‘case bottles’. Zone 2 contained the neck and shoulder to a case bottle of the mid-18th century, as well as the base to a larger square bottle.

Smaller hand-blown bottles, of clear or aqua glass, are also recovered from colonial sites. These often held medicines or other condiments. These small bottles also feature a pontil scar on the base of the bottle. These vessels were not discarded in the Dock Street privy, however; a single fragment of clear glass was recovered.

Table glass is a common component of colonial assemblages. Like the bottles of the period, table glass was hand blown, and features a pontil scar on the base. Goblets of the 17th and 18th century often feature small bowls and elaborate and distinctive stems, and may be dated by their style. Goblets and tumblers are the most common glassware recovered, but other forms can be recovered, as well. Two fragments of table glass were recovered from the Dock Street privy, both recognizable forms. A plain tumbler with a heavy base was recovered from zone 1. Zone 2 yielded a goblet stem, featuring a solid, truncated inverted baluster. Noel Hume dates a similar example to the late 17th century (Noel Hume 1969: 191, example V). Bickerton (1984) shows similar pieces dated to 1710. Together, the sources suggest the glass dates to the turn of the 18th century.



Figure 28: tumbler and goblet fragments

Architectural materials were somewhat less common in the Dock Street deposits than other colonial sites, suggesting the privy does not contain the remains of a damaged or demolished building; this, despite the fact that zone 1 is characterized by a deposit of finish-coat plaster. Architectural materials comprised a third of the zone 3 materials, and 29% of the zone 1 assemblage. Nails and window glass were the only artifacts recovered. Most of the nails were corroded or fragmentary, but all those identifiable were hand-wrought.



Figure 29: window glass

All of the window glass was pale green or aqua, typical of the hand-blown glass common through the first quarter of the 19th century. Crown glass began as a bubble of hand-blown glass, gradually worked into a

disc. The discs of glass feature a thick edge, which was trimmed away and wasted, and a central pontil scar, or bulls-eye, which could be up to one inch thick. The circles of glass were known as 'crowns' and were shipped to America in crates, to be cut to size by the purchaser (Noel Hume 1969:234). Flat glass was most common in zone 2. A small iron hook was the final architectural artifact.

Tobacco pipes were the final artifacts present in large numbers. All three zones contained examples of pipes. Many of the kaolin stem fragments were long and relatively intact. A single bowl was recovered intact. This featured a long, undecorated bowl shape, with no heel. This style was developed as early as 1720, and was manufactured for the next century (Noel Hume 1969:303, #18). Three other bowl fragments were recovered.



Figure 30: examples of tobacco pipes

All of the recovered stems had central holes measuring $5/64$. In the 1970s, scholars noted that as pipe styles evolved through the 17th and early 18th centuries, the bore diameters gradually got smaller. Dr. J.C. Harrington devised a formula to calculate a mean date of occupation based on the bore diameter. This formula requires a large sample, however, and is most accurate for sites occupied during the 17th century (Harrington 1954). Noel Hume suggests that, in Williamsburg, stem diameters of $5/64$ ths are most common from 1710 to 1750 (Noel Hume 1969:298). The style and dimension of the recovered pipe stems are consistent with deposition in the second quarter of the 18th century.

Materials from functional categories other than kitchen, architecture, and tobacco pipes were only recovered from the organic soil in zone 2. Two brass artifacts were in an advanced state of corrosion. One was a thimble. The other was a small buckle, likely for a vest or the knee. A small iron disc may be a button, but it was too corroded for positive identification. The final item was a small disc of mica. The mica was fragmentary, but a cut edge suggests the piece was once circular. This may be a lid or cover for a small box, or it may have another, unknown function. The final artifact was a portion of iron barrel strap.



Figure 31: buckle, thimble, fragment of mica

Small Screen Samples

Large portions of the organic soil from zone 2 (approximately 8 gallons) were screened through fine mesh (1/16th inch). This yielded a large sample of small bone that was submitted for zooarchaeological analysis. A small artifact assemblage was retrieved from the window screen sample, one that was somewhat different from the larger assemblage. The window-screened soil contained four ceramics. These included a plate rim of blue on white delft, a fragment of undecorated delft, and a small piece of combed and trailed slipware. The final ceramic was a fragment of Lesesne lustered colono ware. The glass assemblage included a single fragment of olive green bottle glass and two fragments of tumbler rim.

The architectural materials included three nails, in fragmentary condition, and five fragments of aqua window glass. Three small iron tacks, less than ½' long, were also recovered.

The sample also included several very small artifacts. The sample was full of small pieces of straight pins. All were brass, and highly corroded. Thirty-one fragments were recovered. It is not unusual to find whole straight pins in quarter-inch screen, but fragments are unusual. The sample also contained three seed beads. Two were solid color, white and light blue. The third was a cornaline d'alleppo bead, a dark green glass interior covered with opaque red glass. A larger barrel bead, also cornaline d'alleppo, was



also recovered. Cornaline d'alleppo beads are recovered on English, French, and Spanish sites of the late 17th and 18th centuries, though they can be earlier (Deagan 1987:168-169). In his recent analysis of beads from sites across the Southeast, Jon Marcoux reports that cornaline d'alleppo seed beads are characteristic of the 1670-1730 period (Marcoux 2008).

Figure 32: beads from fine-screened samples

Collected Sample

A small number of artifacts were collected by workers for NBM Construction at the time of discovery. These were provided to The Charleston Museum as part of the site assemblage. Most notable were portions of five green glass bottles. Two were nearly

complete. The largest was 9" high (5" at the shoulder) and 4 3/8" in diameter. A smaller bottle exhibited similar proportions; this was 8" high (3.5" at the shoulder) and 3.5" in diameter. A large base was recovered, measuring 5" in diameter and exhibiting straight sides. Three necks were recovered. One was relatively long and narrow, typical of bottles from the second quarter of the 18th century. Two others were shorter and more sloping in profile, typical of the squat bottles of the first decades of the 18th century. One example featured remains of the brass wire closure. Additional fragments of green glass, some animal bone, and a sherd of lead-glazed earthenware were also recovered.



Figure 29: Bottles retrieved during construction of the elevator shaft; all types associated with the mid-18th century



During the fieldwork, a small collection of artifacts was retrieved from another portion of the site, behind the stage. These were from mixed soils, and were somewhat later than those from feature 1. Included in this group was the base of a porcelain bowl. The bowl featured red overglazed decoration, as well as underglaze blue painting, in the Imari style. The second artifact was an octagonal inkwell, typical of the mid-19th century.

Dating the Proveniences

The various deposits contained moderate amounts of cultural material. Artifacts were most numerous in the dark zone 2 soil filling the privy, but here they were still sparse, relative to other Charleston sites. The materials contained in each deposit, though, were adequate for dating the stratigraphic sequence with confidence. Proveniences were first assigned a date of deposition on the basis of *Terminus Post Quem* and stratigraphic position. Mean Ceramic Date calculations were used to refine the interpreted depositional sequence.

The principal of Stratigraphic Point of Initiation (or the relative vertical position of the top of a feature or zone) states that soils gradually accumulate on sites of human occupation, and that the deepest is the earliest. Terminus Post Quem, or TPQ, is based in the invention date of the newest artifact in a provenience. The two principals are used in combination to date events on a site.

The artifacts collected during discovery of the feature suggested a mid-18th century date of deposition for the privy fill. This was supported by the artifacts recovered in the controlled excavation. The Zone 1 soils inside the privy, including the plaster layer, contained scratch blue stoneware as the most recent item. This ceramic was developed in 1744. The Zone A soils outside the privy contained a single sherd of creamware (developed in 1760) at the interface of the privy exterior and the 1930s overburden, removed from the feature before archaeologists arrived. Other layers of zone 1 contained white saltglazed stoneware, developed in 1740, as the latest in an otherwise sparse artifact assemblage. With the exception of the single fragment of creamware, the artifact assemblage from zone 1 suggests a feature abandoned by the 1750s.

Zone 2, the organic midden recovered from feature 1, was likely deposited, or left in place, when the feature was abandoned. Artifacts were more numerous in this deposit, and they also suggest a 1750s date of deposition. Four separate proveniences of zone 2 were defined, and three contained white saltglazed stoneware. Together, these confirm a date of deposition after 1740, likely in the 1750s.

The zone 3 deposits, both inside and outside of feature 1, contained a different assemblage, one supporting an earlier date of deposition and suggesting that zone 3 predates construction of the privy. The four proveniences of zone 3 contained a single fragment of pottery manufactured in 1720; all others were types in use during the late 17th century and first quarter of the 18th century. These suggest the midden accumulated during the first quarter of the 18th century, and the privy was built on top of the deposit. The artifacts suggest a relatively short use-life for the privy, of approximately a quarter century.

The ceramics recovered were analyzed further through the Mean Ceramic Date formula. This formula combines the number of each ceramic type found with its median date of manufacture to determine a mean, or possibly peak, point of occupation or use for the materials being measured. The Mean Ceramic Date Formula, derived by Stanley South (1972), is based on the principals of evolution and horizon. Evolution occurs with each manufactured consumer item; it will be created, rise in popularity until a peak is reached, then decline in popularity until it is no longer available, or used. Horizon is a compressed version of evolution, where an object experiences a broad and rapid spread in popularity. By measuring the relative quantity of artifacts against their presumed peak in popularity (the median date), a mean date of occupation can be proposed (South 1977:217). Here, the derived dates are compared to each other, to refine the sequence of deposition and association.

Ceramics of the 18th century are particularly appropriate for the MCD, as many of them have a relatively short date range. Those that were manufacture and used for over a century are less useful in determining a median date, and these are often the most plentiful on colonial sites. With those caveats in mind, it is interesting to observe the dates obtained from the three temporal samples at Dock Street. Mean Ceramic Date calculations for Zones 1 and 2 are similar; Zone 1 has a mean ceramic date of 1744, while Zone 2 yielded a date of 1747.2. Zone 3 produced an earlier date, 1738.1, and generally contained a larger number of ceramics associated with late 17th/early 18th century. These subtle differences support the interpreted dates of deposition discussed above, with Zones 1 and 2 representing abandonment of the privy, and Zone 3 reflecting occupation before or at the time of privy construction.

Table 1
Privy Assemblages by Function

	Zone 3		Zone 2		Zone 1	
	#	%	#	%	#	%
Kitchen	49	56.3	58	50.4	38	58.4
Architecture	29	33.3	37	32.1	19	29.2
Arms	0		0		0	
Clothing	0		3	2.6	0	
Personal	0		1	.86	0	
Furniture	0		0		0	
Pipes	9	10.3	15	13.0	8	12.3
Activities	0		1	.86	0	

Most of the sites excavated in Charleston were occupied for a much longer period than the Dock Street privy; for these assemblages, the material culture and proveniences are subdivided temporally, based on specific site events as well as general trends in the city's development. The temporal divisions are more or less comparable for a number of sites. Initially, three broad temporal periods were defined, based urban development and technological changes in material culture.

Two recent excavations, at the Beef Market and the Heyward-Washington house, produced intact soil layers containing large artifact assemblages that could be clearly associated with documented site history. This has permitted definition of narrower temporal/material assemblages. The tighter temporal events, in turn, provide an opportunity to refine our understanding of artifact assemblages that characterize these decades of the 18th century. Further, the narrowly-defined temporal periods, and excellent stratigraphic control at these sites allowed consideration of the dates of usage for the various ceramic types recovered in Charleston. Range of use and popularity can be further refined for ceramic types that are already well defined and have precise, if long, periods of manufacture. Dates of use can be determined, or refined, for ceramic types that are poorly defined or whose date of manufacture is unknown. This is particularly true

for ceramics from the early 18th century, when the Dock Street privy was in use. The data gained from the Beef Market and Heyward-Washington sites are reflected in the discussion of ceramic types from the Dock Street privy. This topic is explored further in Chapter VII.

Table 2
Quantification of the Assemblage

	Zone 3	Zone 2	Zone 1
North Devon gravel temp. ware	1		
Lead glazed earthenware	1	1	4
Sgraffito slipware	2	1	1
Combed & Trailed Slipware	6	5	4
Manganese Mottled Ware	3	2	
Slip coated ware	1		
Delft, undecorated	12	20	5
Delft, blue on white	4	1	3
White slip-dipped saltglaze stoneware		1	
White saltglazed stoneware, molded		2	1
Scratch blue stoneware			1
Chinese Export porcelain, b/w	1	2	1
Westerwald stoneware	1		2
Grey saltglazed stoneware	2		
Colono ware	7	2	
Creamware			1
Olive green glass	7	20	15
Clear container glass		1	
Table glass	1	1	
Brass wire			1
Aqua window glass	8	19	4
Wrought nail	15	2	7
Nail frag	6	15	7
Hook		1	
Pipestem	7	14	7
Pipe bowl	2	1	1
Button		1	
Buckle		1	
Thimble		1	
Mica lens		1	
Iron strap		1	
Total	87	115	65

Chapter V

Animal Remains from the Dock Street Theater Privy

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Introduction

Extensive archaeological excavations have been conducted in Charleston, South Carolina over the past two decades, focusing on residential, mixed-use, and commercial locations of the city. Zooarchaeological analyses of vertebrate remains recovered from such excavations paint a dynamic picture of the Charleston landscape, where animals actively shaped the urban environment (Zierden and Reitz 2009). Despite the past two decades of excavations in Charleston, few sites associated with public entertainment, such as taverns, longrooms, and theatres have been investigated. The Dock Street theatre privy, located at 135 Church Street, provides a unique opportunity to examine foodways at public entertainment establishments in the early eighteenth-century.

Additionally, the Dock Street theatre privy is a sealed context with privy deposition dating to the original theatre construction during the 1730s and terminating in the 1750s. Sealed archaeological contexts with such a narrow depositional time span are rare in Charleston. The short temporal period in which the privy was open and the sealed context of the archaeological materials allows for the investigation of several research questions associated with early Charleston public entertainment sites. Analysis of the Dock Street theatre privy faunal material is guided by two main research topics: the comparison of the Dock Street theatre privy faunal assemblage to other faunal assemblages of public entertainment sites in eighteenth-century Charleston, and the characterization of vertebrate fauna from a sealed archaeological context.

Zooarchaeological Materials and Methods

The Dock Street theatre privy is located within the boundaries of the old walled city of Charleston, South Carolina. Vertebrate remains reported here were excavated in 2008 by Brockington and Associates, Inc., with the assistance of Martha Zierden of the Charleston Museum. Quarter inch and fine-screen (< 1/16-inch) meshes were used to recover materials during excavation. For the purposes of this report, three analytical units are defined based on privy use and sampling techniques: 1) Zone 3 privy construction, sampled with 1/4-inch mesh; 2) Zones 1 and 2 privy fill, sampled with 1/4-inch mesh; and 3) four-gallon bulk samples of Zones 1 and 2 privy fill, sampled with fine-screen mesh (window screen). Zone 3 dates to privy construction from approximately 1730 to 1740. Zones 1 and 2 are associated with the privy fill and date to the 1750s. A list of the proveniences

reported here, their temporal assignment, and sampling technique is attached as Appendix A.

Vertebrate remains were identified following standard zooarchaeological methods. All identifications were made using the comparative skeletal collection of the Zooarchaeology Laboratory, Georgia Museum of Natural History, University of Georgia by Carol E. Colaninno. A number of primary data classes are recorded as part of every zooarchaeological study. Specimens are identified in terms of elements represented, the portion recovered, and symmetry. The Number of Identified Specimens (NISP) is determined. The only exception is the Indeterminate vertebrate category (Vertebrata), for which specimens are not counted due to the fragmented condition. Specimens that cross-mend are counted as one specimen. All specimens are weighed to provide additional information about the relative abundance of the taxa identified. Indicators for age at death, sex, and modifications are noted where observed. Measurements for mammals and birds are recorded following Driesch (1976) and are presented in Appendix B.

The Minimum Number of Individuals (MNI) is estimated based on paired elements, size, and age. Although MNI is a standard zooarchaeological quantification method, the measure has several well-known biases. For example, MNI emphasizes small species over larger ones. This can be demonstrated in a hypothetical sample consisting of ten chickens and one cow. Although ten chickens indicate emphasis on chicken, one cow would, in fact, supply more meat. Basic to MNI is the assumption that the entire individual was utilized at the site. From ethnographic evidence, it is known that this is not always true (Perkins and Daly 1968). This is particularly the case for larger individuals, animals used for special purposes, and where food exchange was an important economic activity (Thomas 1971; White 1953).

In addition to these primary biases, MNI is also subject to secondary bias introduced by the way samples are aggregated during analysis (Grayson 1973). The aggregation of archaeological samples into analytical units allows for a conservative estimate of MNI, while the "maximum distinction" method, applied when analysis discerns discrete sample units, results in a much larger MNI. In estimating MNI for the three analytical units reported here, faunal remains associated with time period and distinct sampling technique are divided. Privy fill is divided into two analytical units based on sampling technique; therefore, individuals reported in the privy fill 1/4-inch analytical unit may be the same as those reported in the privy fill fine-screen analytical unit.

Biomass estimates attempt to compensate for some of the problems encountered with MNI. Biomass refers to the quantity of tissue that a specified taxon might have supplied. Estimates of biomass are based on the allometric principle that the proportions of body mass, skeletal mass, and skeletal dimensions change with increasing body size. This scale effect results from a need to compensate for weakness in the basic structural material, in this case bones and

teeth. The relationship between body weight and skeletal weight is described by the allometric equation:

$$Y = aX^b$$

(Simpson et al. 1960:397). In this equation, X is specimen weight, Y is the biomass, 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 (Reitz et al. 1987; Reitz and Wing 2008:236-239). Many biological phenomena show allometry described by this formula (Gould 1966, 1971) so that a given quantity of skeletal material or a specific skeletal dimension represents a predictable amount of tissue or body length due to the effects of allometric growth. Values for a and b are derived from calculations based on data at the Florida Museum of Natural History, University of Florida, and the Georgia Museum of Natural History, University of Georgia. Allometric formulae for biomass estimates are not currently available for amphibians so biomass is not estimated for the Eastern spadefoot toad (*Scaphiopus holbrookii*). The allometric formulae used here are presented in Table 1.

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

Specimen count, MNI, and biomass also reflect identifiability. Some specimens of some animals are simply more readily identified than others and the taxa represented by these elements may appear more significant in terms of specimen count than they were in the diet. If these animals are identified largely by unpaired elements, such as scales and cranial fragments, the estimated MNI for these taxa will be low. At the same time, animals with many highly diagnostic but unpaired elements will yield a high specimen weight and biomass estimate. Hence high specimen count, low MNI, and high biomass for some animals are artifacts of analysis.

The species identified from the Dock Street theatre privy are summarized into faunal categories based on vertebrate class. This summary contrasts the percentage of various groups of taxa in the collection. These categories are Fishes, Turtles, Wild birds, Domestic birds, Domestic mammals, and Commensal taxa. In order to make comparisons of MNI and biomass estimates possible, the summary tables include biomass estimates only for those taxa for which MNI is estimated.

Turkeys are placed in the Wild bird category, but may actually be domestic birds. According to the American Poultry Association (1874), standards of excellence for turkeys were established by the mid-eighteenth century. However, measurements are the primary means of distinguishing between wild and domestic animals and specimens that could be measured are not present in these assemblages.

Because wild turkeys were present in South Carolina, the more conservative interpretation is to consider the archaeological specimens as pertaining to the wild form, especially for the early dates.

Commensal taxa include Eastern spadefoot toad, rodents (Rodentia), and domestic cat (*Felis catus*). Although commensal animals might be consumed, they are commonly found in close association with humans and their built environment as pets or vermin and part of the urban wildlife. Some commensal animals are ones that people either do not encourage or actively discourage. Just as some of the animals included in the commensal category might have been consumed, likewise some of the animals included in the non-commensal categories might have been commensal.

The presence or absence of elements in an archaeological assemblage provides data on animal use such as butchering practices and transportation costs. The chicken and artiodactyl elements identified at the Dock Street theatre privy are summarized into categories by body parts. The Head category includes only skull fragments, including antlers and teeth. The atlas and axis, along with other vertebrae and ribs, and sternum, furcula, and coracoids among birds, are placed into the Axial category. It is likely the Head and Axial categories are under-represented because of recovery and identification difficulties. Vertebrae and ribs of birds and mammals cannot be identified beyond class unless distinctive morphological features support such identifications. Usually they do not, and specimens from these elements are classified as Indeterminate bird and Indeterminate mammal. Forequarter includes the scapula, humerus, radius, and ulna for both artiodactyls and birds. Carpal and metacarpal specimens among artiodactyls and carpal, carpometacarpal, and digits of the manus among birds are presented in the Forefoot category. The Hindfoot category includes tarsal and metatarsal specimens among the artiodactyls and tarsometatarsus and phalanges among birds. The Hindquarter category includes the innominate, sacrum, femur, and tibia among artiodactyl and synsacrum, femur, tibiotarsus, and fibula among birds. Metapodiae and podiae which could not be assigned to one of the other categories, as well as sesamoids and phalanges of the artiodactyls are assigned to the Foot category.

The elements identified as chicken and artiodactyls from each analytical unit are summarized visually to illustrate their number and location in a carcass. Although the atlas and axis fragments are accurately depicted, other cervical, thoracic, lumbar, caudal vertebrae and ribs are placed approximately on the illustrations. The last lumbar location is used to illustrate vertebrae that could only be identified as vertebrae. The last rib location is used to illustrate ribs for which the specific rib could not be identified. Specimens identified only as sesamoids, metapodiae, podials, or phalanges are illustrated on the right hindfoot.

Relative ages of the artiodactyls identified are estimated based on observations of the degree of epiphyseal fusion for diagnostic elements. When animals are immature, a cartilaginous plate separates the shaft (diaphysis) of the

bone from the ends of the specimen (epiphyses). When maturity is reached and growth is complete, these cartilaginous plates ossify. While environmental factors influence the actual age at which fusion is complete, elements fuse in a regular temporal sequence (Gilbert 1980; Purdue 1983; Reitz and Wing 2008:173-174; Schmid 1972; Watson 1978). During analysis, specimens are recorded as either fused or unfused and placed into one of three categories based on the age in which fusion generally occurs. Unfused elements in the Early-fusing category are interpreted as evidence for juveniles; unfused elements in the Middle-fusing and Late-fusing categories are usually interpreted as evidence for subadults, though sometimes characteristics of the specimen may suggest a juvenile. Fused specimens in the Late-fusing group provide evidence for adults. Fused specimens in the Early- and Middle-fusing groups are indeterminate. Clearly fusion is more informative for unfused elements that fuse early in the maturation sequence and for fused elements that complete fusion late in the maturation process than it is for other elements. An Early-fusing element that is fused could be from an animal that died immediately after fusion was complete or many years later. The ambiguity inherent in age grouping is somewhat reduced by recording each element under the oldest category possible. Tooth eruption data (Severinghaus 1949) are also recorded.

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

Modifications can indicate butchering methods as well as site formation processes. Modifications are classified as pathological, hacked, sawed, clean-cut, cut, burned, calcined, rodent-gnawed, and carnivore-gnawed. Although NISP for specimens identified as Indeterminate vertebrate are not included in the species lists, modified Indeterminate vertebrate specimens are included in the modification tables.

Hacked, sawed, clean-cut, and cut specimens are the product of butchering and food preparation. Hacked marks are evidence that some larger instrument, such as a cleaver, was used. Presumably, a cleaver, hatchet, or axe was used to dismember the carcass before, rather than after, the meat was cooked. Saw marks may result from a variety of metal-toothed instruments (Reitz and Wing 2008:130). Saw marks from metal-toothed tools result in parallel striations that are usually clearly visible; however, some specimens have smooth, straight, but un-striated

edges. These "clean-cut" specimens are most likely sawed, but the serrations are not visible because of the cancellous bone over which the saw passed. Cuts are small incisions across the surface of specimens. These marks were probably made by knives as meat was removed before or after the meat was cooked. Cuts may also be left on specimens if attempts are made to disarticulate the carcass at joints. Some marks that appear to be made by human tools may actually be abrasions inflicted after the specimens were discarded, but distinguishing this source of small cuts requires access to higher-powered magnification that is currently unavailable (Shipman and Rose 1983).

Burned and calcined specimens are the result of exposure to fire when a cut of meat is roasted or if specimens are burned intentionally or unintentionally after discard. Burned specimens result from the carbonization of bone collagen and are identified by their charred-black coloration (Lyman 1994:384-385). Calcined specimens are usually indicated by white or blue-gray discoloration (Lyman 1994:385-386). Calcined bones are the result of two possible processes: burning at extreme temperatures ($\geq 600^{\circ}\text{C}$) and leaching of calcite. Experimental studies indicate that the color of bone may be a poor indicator of the type of modification because it is difficult to precisely describe color variation and other diagenetic factors may alter bone color (Lyman 1994:385). Both types of calcination are believed to have occurred in this assemblage, but no attempt was made to distinguish between them.

Gnawing by rodents and carnivores indicates that specimens were not immediately buried after disposal. While burial would not ensure an absence of gnawing, exposure of specimens for any length of time might result in gnawing. Rodents include such animals as mice, rats, and squirrels. Carnivores include such animals as opossums (*Didelphis virginiana*), dogs (*Canis familiaris*), raccoons (*Procyon lotor*), and cats. Gnawing by rodents and carnivores result in loss of an unknown quantity of discarded material. Kent (1981) demonstrates that some bone gnawed by carnivores such as dogs may not necessarily leave any visible sign of such gnawing and yet the specimens would quite probably be removed from their original context.

The vertebrate remains reported here are from a privy and some of these remains were likely consumed and digested by humans. Evidence of human consumption comes from tooth scratches and traces of digestion. Digestion can be detected by acid-etching and surface erosion of the bone (Lyman 1994:210-211). Acid-etching and surface erosion of bones can also be caused by chemicals added to a site, such as lime. Most of the bone examined here showed evidence of surface erosion and acid-etching and was noted. Because both digestion and non-human chemical degradation can cause acid-etching and surface erosion no attempt was made to distinguish between the two. Metal-staining was also noted on several bones, but these are not noted in the modification tables.

Results

The three analytical units analyzed in this study reveal two slightly different versions of animal use. Samples from analytical units excavated with 1/4-inch screen mesh are dominated by domestic mammals and few other taxa. These samples contrast with those from the analytical unit excavated with fine-screen mesh, which has a greater number of taxa showing less emphasis on domestic mammals and greater emphasis on aquatic taxa, specifically fishes.

Dock Street Privy Construction (1/4-inch)

The Dock Street theatre privy construction subdivision contains 32 specimens weighing 251.25 g and the remains of an estimated three individuals (Table 2) from three taxa. Domestic mammals contribute 67% of these individuals and 99% of the biomass (Table 3). The domestic mammals are cow (*Bos taurus*) and sheep/goat (Caprinae). A seatrout (*Cynoscion* sp.) contributes 33% of the individuals and 1% of the biomass.

Specimen distribution data for cow and sheep/goat are presented in Table 4 and Figures 1-2. Cow specimens are primarily from the Foot (50% of NISP). Cow specimens from the Forequarter and Vertebra/Rib are also present. The age of the cow individual cannot be estimated but the animal was at least a subadult at death. The caprine specimen is from the Hindfoot. The age of the sheep/goat cannot be estimated but it was at least a subadult at death.

Hacking is the most common modification in the material, present on 75% of the modified specimens (Table 5). Cut marks are present on 25% of the modified specimens. No other modifications are identified.

Dock Street Privy Fill (1/4-inch)

The 1/4-inch screened subdivision of the privy fill contains 111 specimens weighing 1131.32 g and the remains of at least 11 individuals from eight taxa (Table 6). Domestic mammals contribute 36% of these individuals and 95% of the biomass (Table 7). The domestic mammals are a pig (*Sus scrofa*), two cows (*Bos taurus*), and a sheep (*Ovis aries*). Beef contributes 91% of the biomass. Pork and mutton contributes 4% of the biomass. Chickens (*Gallus gallus*) are the only domestic bird. One wild bird contributes 9% of the individuals and 1% of the biomass. Two aquatic animals, a sea turtle (Cheloniidae) and a drum (Sciaenidae) contribute 18% of the individuals. A cat (*Felis catus*) is the only commensal taxon and contributes 9% of the individuals.

Specimen distribution data for chicken, pig, cows, and sheep, including one specimen identified as sheep/goat (Caprinae) are presented in Table 8 and Figures 3-6. Chicken specimens are from the Axial skeleton, Forequarter, Hindquarter, and Forefoot. Chicken specimen distribution shows 67% of the chicken specimens are from the Forequarter. One pig specimen was from the Hindfoot. Cow specimen distribution reveals a high incidence of specimens from

the Forequarter (42% of NISP). All sheep and goat specimens are from the Forequarter. The sheep is represented by an ulna.

Juvenile, subadults, and adults are present. Epiphyseal fusion for individual pig cannot be estimated. One cow individual was a juvenile at death and one was an adult (Table 9). The one sheep was an adult when it died. The cat was a juvenile at death. One chicken is a subadult and two are adults.

Hacks and clean-cuts are the most common modification in the material. Combined, hacked and clean-cut specimens are present on 57% of the modified specimens (Table 10). Other specimens are cut, burned, and calcined. Rodent and carnivore gnawing is present on 9% of the modified specimens. One chicken humerus has pathology of unknown cause.

Dock Street Privy Fill (fine-screened)

The fine-screened Dock Street privy fill samples contain 1,605 specimens weighing 119.90 g and the remains of at least 37 individuals from 21 taxa (Table 11). Domestic mammals contribute 8% of these individuals and 25% of the biomass (Table 12). The domestic mammals are pig (*Sus scrofa*) and sheep/goat (Caprinae). Eleven chickens (*Gallus gallus*) are the only domestic birds, contributing 30% of the individuals and 37% of the biomass. Wild birds are also present and contribute 14% of the individuals. Aquatic animals contribute 41% of the individuals and 21% of the biomass. Among the aquatic animals are 14 fishes from ten taxa. The sunfish (*Lepomis* spp.) is the only freshwater fish represented. The remaining 13 individuals are from five families of marine fishes common to estuaries and inshore areas. Sea catfishes (Ariidae) are represented by two taxa, hardhead catfish (*Ariopsis felis*) and gafftopsail catfish (*Bagre marinus*). The drum family (Sciaenidae) is represented by four taxa and six individuals. The remaining marine fishes are from three taxa, mullets (*Mugil* sp.), sea bass (*Centropristis* spp.), and flounder (*Paralichthys* spp.). One sea turtle (Cheloniidae) is also represented. An Eastern spadefoot toad (*Scaphiopus holbrookii*), a rodent (Rodentia), and a cat (*Felis catus*) are the commensal taxa present.

Specimen distribution data for chicken, pig, and sheep/goat are presented in Table 13 and Figure 7-9. Specimen distribution of chicken reveals a high incidence of specimens from the Forefoot (48% of NISP). Chicken specimens are also from the Axial skeleton, Forequarter, Hindquarter, and Hindfoot. Specimen distribution of anatids (Anatidae), chickens, and turkey (*Meleagris gallopavo*) reveals a high frequency of specimens from the Forefoot and are illustrated in Figure 10. All pig specimens are from the Foot. The sheep/goat specimens are from the Forefoot and the Foot.

Juvenile and subadult individuals are present. Two pigs were identified by the large size differences of two 1st phalanges. Epiphyseal fusion for pigs indicates that both individuals were juveniles at death (Table 14). The age to the sheep/goat

individual cannot be determined. The cat was a juvenile when it died. Five chickens are subadults and six chickens are adults.

Burning is the most common modification in the material, present on 74% of the modified specimens (Table 15). Hacking, clean-cutting, and cutting are present on 21% of the modified specimens. Rodent gnawing is only present on 2% of the modified specimens. One Indeterminate vertebrate specimen has an unknown pathology.

Discussion

Zooarchaeological data are used to explore early eighteenth-century public entertainment sites in Charleston and to identify the nature of foodways at public entertainment sites. The faunal materials from the 1750s fine-screened privy fill are the basis of this comparison. This assemblage is analyzed for comparison with other public entertainment sites of eighteenth-century Charleston. Additionally the Dock Street theatre privy is compared to the fauna assemblages from non-market and market assemblages from Charleston deposited during 1692-1750 (Table 16; Zierden and Reitz 2009).

Foodways at urban eating establishments of colonial Charleston are not well-documented. Research and analyses at the McCrady's Tavern and Longroom, a late eighteenth-century public dining and entertainment establishment, have determined some characteristics of elite, public entertainment foodways (Zierden et al. 1982). Data from McCrady's Tavern and Longroom suggest that menus at public eating establishments in urban Charleston prominently featured pork and beef (Zierden et al. 1982). Wild resources such as venison and wild birds were also regularly consumed although to a lesser extent than beef and pork. When the faunal assemblage from McCrady's Tavern is compared to the more elegant and exclusive McCrady's Longroom, it appears that more domestic taxa were used at the Longroom whereas patrons of the Tavern consumed more wild taxa. This may reflect differences between the economic standings of the patrons using each of these separate facilities (Zierden et al. 1982). Vertebrate fauna from the Dock Street privy may provide more evidence of foodways at public entertainment sites. When the Dock Street theatre privy faunal assemblage is compared to the assemblage from the McCrady's Tavern and Longroom, three characteristics differ: 1) more domestic mammals were used at McCrady's; 2) more fishes were deposited in the Dock Street theatre privy; and 3) more birds were deposited at the Dock Street theater privy (Table 16).

Although the comparison between the Dock Street privy and the McCrady's Tavern and Longroom suggest differences in foodways at public entertainment sites, the Dock Street privy should be contextualized within the overall pattern of animal use in Charleston. When the Dock Street theatre privy assemblage is compared to non-market and market Charleston collection during this time period, additional differences in the privy assemblage are shown (Table 16; Zierden and

Reitz 2009). The frequency in which specific taxa are represented, such as rodents and wild mammals, is lower in the Dock Street theatre privy compared to assemblages from other locations in the city (Zierden and Reitz 2009). Similar to the comparison between the Dock Street privy and the McCrady's establishment, domestic birds, specifically chickens, are much more abundant in the privy fill compared to the overall faunal assemblages from Charleston (Table 16; Zierden and Reitz 2009). Unlike non-market deposits in Charleston, including the McCrady's Tavern and Longroom, the Dock Street privy assemblage is dominated by fishes. In terms of modifications, burning, sawing, and clean-cutting are much more common among the privy collection than in other non-market and market contexts (Table 16; Zierden and Reitz 2009). These differences will be examined further to expand the understanding of the Dock Street theatre privy faunal assemblage.

Domestic mammals were used to a greater extent at the McCrady's Tavern and Longroom compared to the Dock Street theatre, assuming that the privy generally represents the types of foods consumed at the theatre by staff, actors, or patrons. The limited use of domestic mammals at the Dock Street theatre is even more pronounced when the Dock Street assemblage is compared to all available, analyzed archaeological sites in Charleston dating to the same time period as the privy use (Table 16). Non-market assemblages from 1712-1750 Charleston suggest that people of Charleston frequently consumed domestic mammals. Domestic mammals constitute 38% of the individuals in non-market materials compared to 8% of the individuals in the Dock Street privy fine-screened collection (Table 16; Zierden and Reitz 2009). Several explanations can be offered as to why there is a difference in the use of domestic mammals.

From the established differences in elite and non-elite animal use at the McCrady's Longroom and Tavern, it has been suggested that the use of fewer domestic mammals indicates less elite foodways (Zierden et al. 1982). The limited use of domestic mammals at Dock Street may indicate that the patrons of the Dock Street theater were not as economically privileged as the patrons of the McCrady's Longroom. However, the comparison between the domestic mammals in the Dock Street theatre privy and the overall data from Charleston which includes public, upper status, and moderate status sites, suggest that the infrequent use of domestic mammals at Dock Street theatre may be due to factors other than status.

The Dock Street theatre privy is the first privy in Charleston to be excavated and it is unknown whether there were significant differences between the meats served at the Dock Street theatre and those discarded in the associated privy. One possible explanation for the differences among these assemblages is the nature of the deposition. The Dock Street site was used not only as a privy but also for trash disposal. Disposal of large animal remains, as such those from large-bodied domestic mammals, into the privy may have been discouraged. The frequent disposal of large mammal remains would have quickly filled in the privy, decreasing its capacity or increasing the frequency with which the privy had to be

cleaned. Remains from large, domestic mammals may have been discarded in other areas associated with the theatre that are not available for study.

The Dock Street theatre privy faunal assemblage also differs from the McCrady's Tavern and Longroom and assemblages from throughout Charleston in the use of fish resources. A comparison of vertebrate assemblages from McCrady's Tavern and Longroom demonstrates that fishes represent 15% of the total individuals whereas 38% of the individuals from the Dock Street privy fine-screened assemblage are fishes (Table 16). Again, this could be an indication that the patrons of McCrady's were more economically-privileged compared to those who frequented the Dock Street theatre, choosing to dine on pork and beef. However, the context and the differences in the archaeological recovery techniques at the two sites must also be considered.

The Dock Street theatre privy faunal assemblage differs from the McCrady's Tavern and Longroom assemblage in that Dock Street is from a sealed context and a portion of the faunal assemblage was recovered with fine-screening. Numerous excavations from unsealed contexts in Charleston, such as McCrady's, document the limited use of fishes and other aquatic taxa, which is surprising given the city's proximity to coastal and estuarine resources (Zierden and Reitz 2009; Zierden et al. 1982). This is not true for the Dock Street privy, in which a large percentage of the individuals are fishes. Typically, screen size and the recovery of fishes are related and could be an explanation for the differences among McCrady's, other Charleston sites throughout the city, and the privy. A large portion of the Dock Street privy assemblage was recovered with fine-screen whereas McCrady's was recovered with 1/4-inch screen. Generally, the finer the screen size used to recover animal remains, the greater is the quantity of fish recovered. However, this has not been true for Charleston, where the use of finer screen sizes has been tested against larger screen sizes. These tests have demonstrated that the recovery of fishes in Charleston is not related to screen size (Zierden and Reitz 2009). The lack of fish recovery with fine-screen has suggested that fish recovery in Charleston is more sensitive to context. Protected contexts free from trampling and scavenging, such as the vaulted drainage of the Brewton House (Zierden 2001), have yielded abundant fish remains. The Dock Street theatre privy appears to conform to this characterization of sealed contexts.

This interpretation is further supported by the limited recovery of commensal taxa, specifically rodents, from the Dock Street privy. Commensal taxa are frequently recovered from archaeological sites throughout the city of Charleston, particularly from sheltered contexts that were partially opened such as stables (Zierden and Reitz 2007) and wells (Reitz 1990; Zierden and Reitz 2009). The Dock Street theatre, although sheltered, was only open for a very short time and did not attract and accumulate large numbers of rodents. The Dock Street privy fine-screened fill indicates that an abundant array of fishes were used at the Dock Street theatre and rodent remains did not collect in the privy. The deposition nature and sealed context of the privy most likely accounts for the differences among the

assemblages of the Dock Street theatre privy, the McCrady's Tavern and Longroom, and other non-market sites throughout Charleston.

The Dock Street theatre privy has a higher frequency of birds compared to McCrady's Tavern and Longroom and compared to studied Charleston sites from the privy's time period. The vertebrate assemblages from McCrady's Tavern and Longroom demonstrate that birds, both wild and domestic, represent 31% of the total individuals and from all analyzed faunal assemblages in Charleston, 20% of the individuals are birds. In the fine-screened portion of the Dock Street theatre privy, bird individuals represent 43% of the individuals in the assemblage (Table 16). As noted in the results section, the specimen distribution of birds, including anatids, chickens, and turkeys demonstrates a high frequency of specimens from the Forefoot, specifically the carpals and the digits of the manus (Figure 10). This is an uncommon representation of bird elements. Little to no meat is attached to carpals and the digits of the manus. This element distribution suggests alternative uses of birds at the Dock Street theatre other than meat consumption.

Like many animals, bird carcasses can provide numerous resources other than flesh, such as eggs and feathers. The high frequency of bird elements from the Forefoot suggests that this portion of the bird was used at this site. The Forefoot of the bird is the main attachment for feathers, specifically the primary feathers. The primary feathers are historically favoured for quill pen production; therefore, quill pen production is considered the best possible explanation for the high frequency of Forefoot element distribution from these bird taxa, (Serjeantson 2002). It is noted that geese feathers were once considered the best feathers for quill pens and no mention of chicken or turkey feather quill pens was found in a literature search. Because there is no mention of the value of chicken and turkey quill pen, it is assumed that these species were not valued in quill pen production. Because the majority of the elements used in quill pen production at the Dock Street theatre privy are from chickens, it is suggested that quill production was not intended for elite clientele. It is also noted that flight feathers can be used as weaving bobbins, paintbrushes, fletching arrows, and as picks for music instruments as well as quill pen production (Serjeantson 2002).

Conclusions

Research at the Dock Street theatre privy provides additional data from early eighteenth-century Charleston, which expands our understanding of foodways at public entertainment establishments. Similar to other public entertainment establishments, specifically McCrady's Tavern and Longroom, domestic mammals and birds as well as wild resources, such as fishes, were used at the Dock Street theatre. However, the Dock Street theatre privy differs from other public entertainments sites: fewer domestic mammal remains were discarded in the Dock Street privy and more birds and fishes were recovered. These differences between the Dock Street theatre and McCrady's Tavern and Longroom may represent economic status differences between the patrons of these establishments. However,

these differences between the privy and the McCrady's establishment extends to both market and non-market locations in Charleston dating to this time period. This suggests that the pattern of animal use and deposition is unique to the context of Dock Street theatre privy. Despite this limitation, the specimen distribution of bird remains from the privy is suggestive of quill pen production at this site. If possible, future research should concentrate on faunal remains recovered from the early eighteenth-century component of the Dock Street theatre to support additional interpretations of foodways at early eighteenth-century public entertainment establishments.

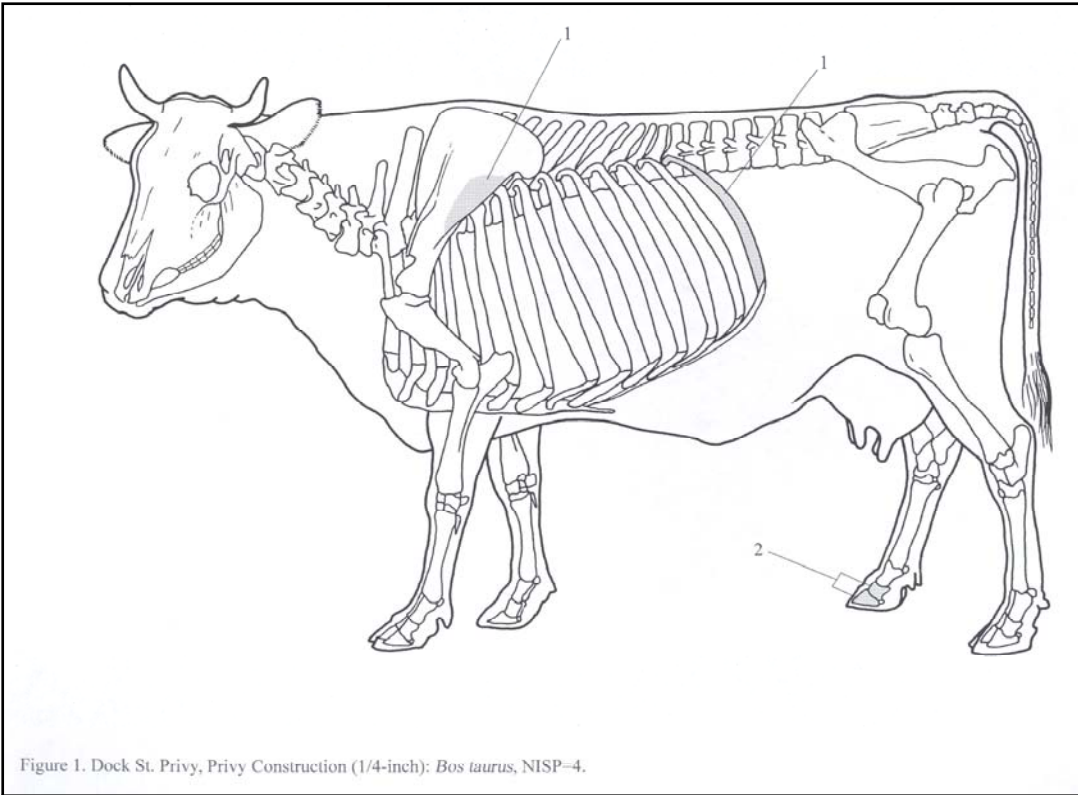


Figure 1. Dock St. Privy, Privy Construction (1/4-inch): *Bos taurus*, NISP=4.

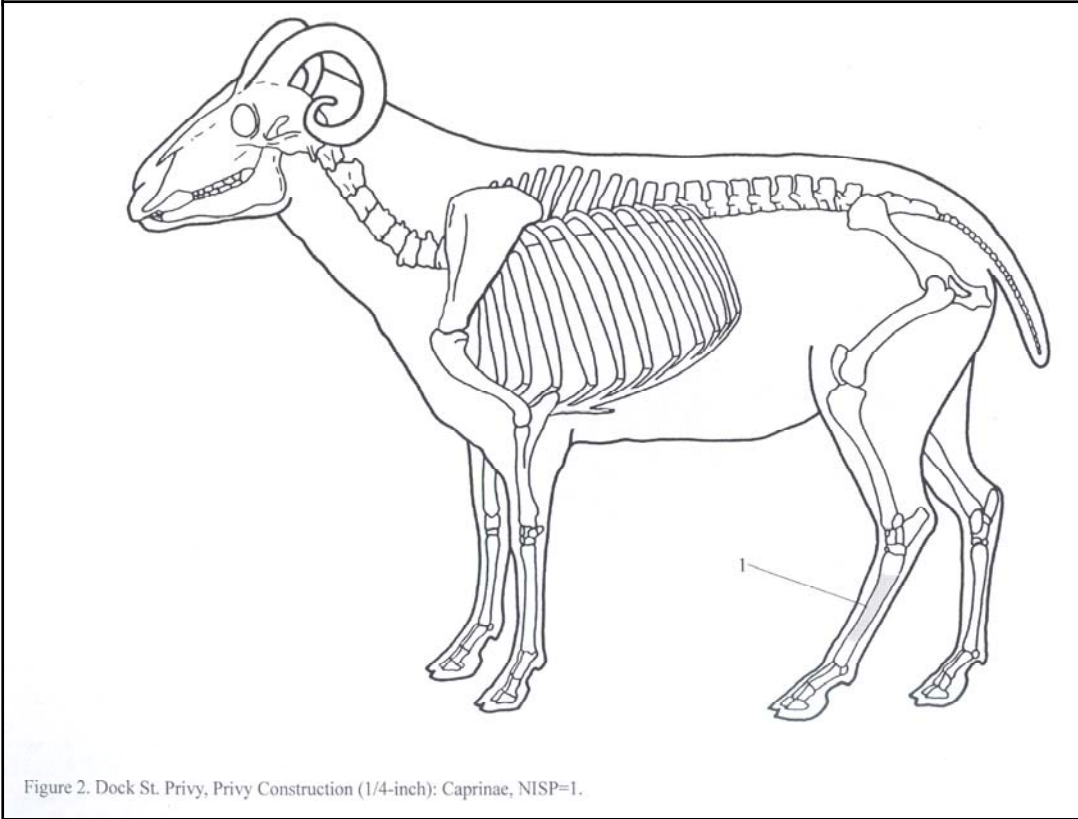


Figure 2. Dock St. Privy, Privy Construction (1/4-inch): Caprinae, NISP=1.

Figure 34: Cow and Caprine elements from zone 3, privy construction

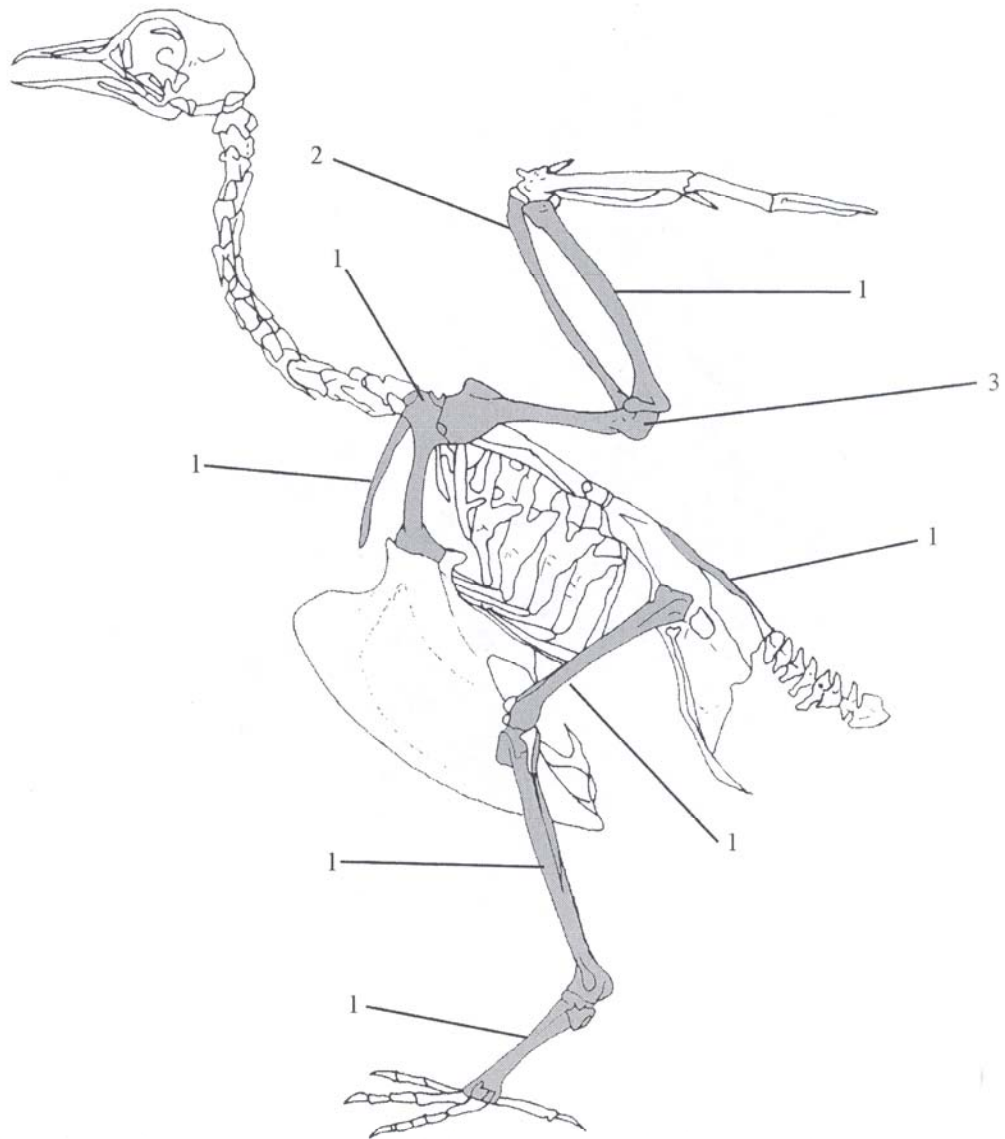


Figure 35: Remains of chicken (*Gallus gallus*) from privy fill, zone 2

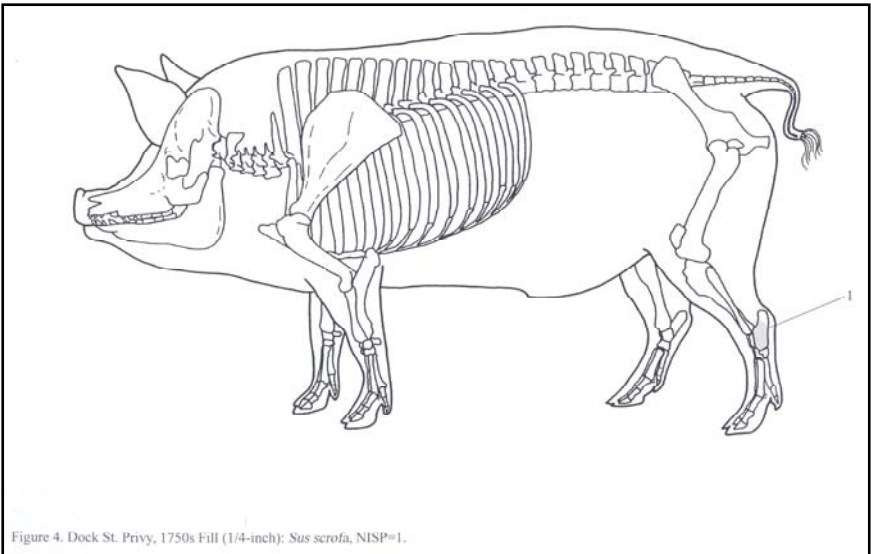


Figure 4. Dock St. Privy, 1750s Fill (1/4-inch): *Sus scrofa*, NISP=1.

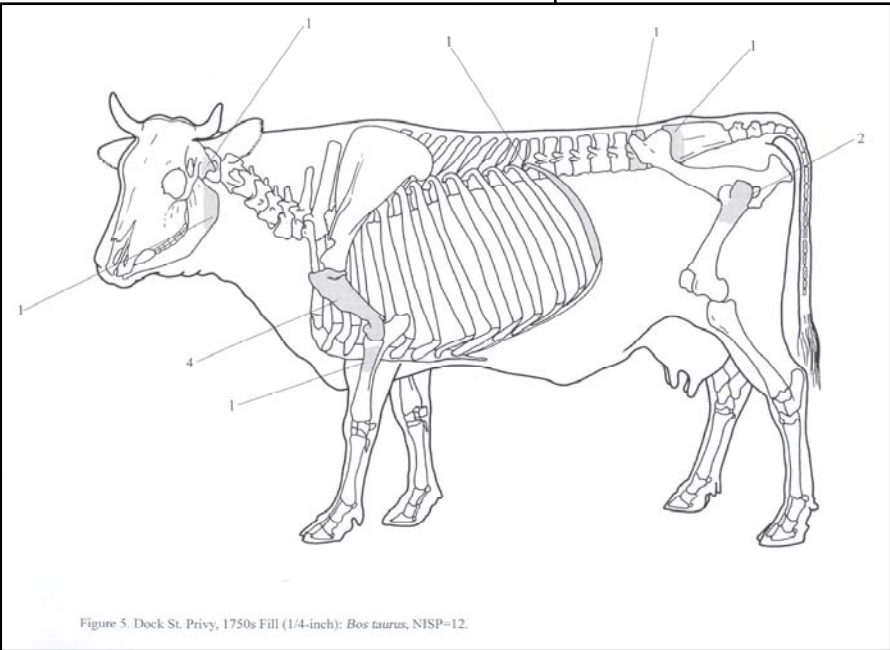


Figure 5. Dock St. Privy, 1750s Fill (1/4-inch): *Bos taurus*, NISP=12.

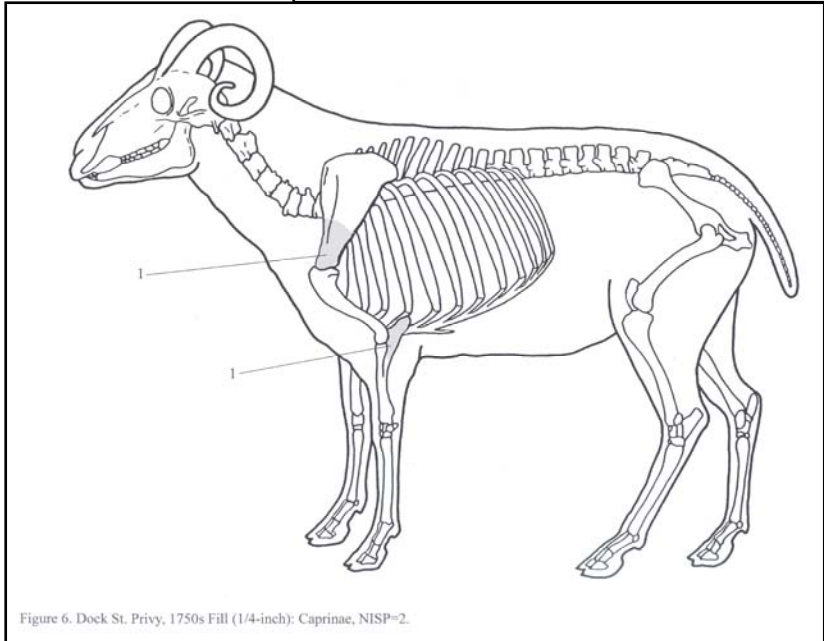


Figure 6. Dock St. Privy, 1750s Fill (1/4-inch): Caprinae, NISP=2.

Figure 36: Elements from Cow, Pig and Caprine, zone 2 (privy fill)

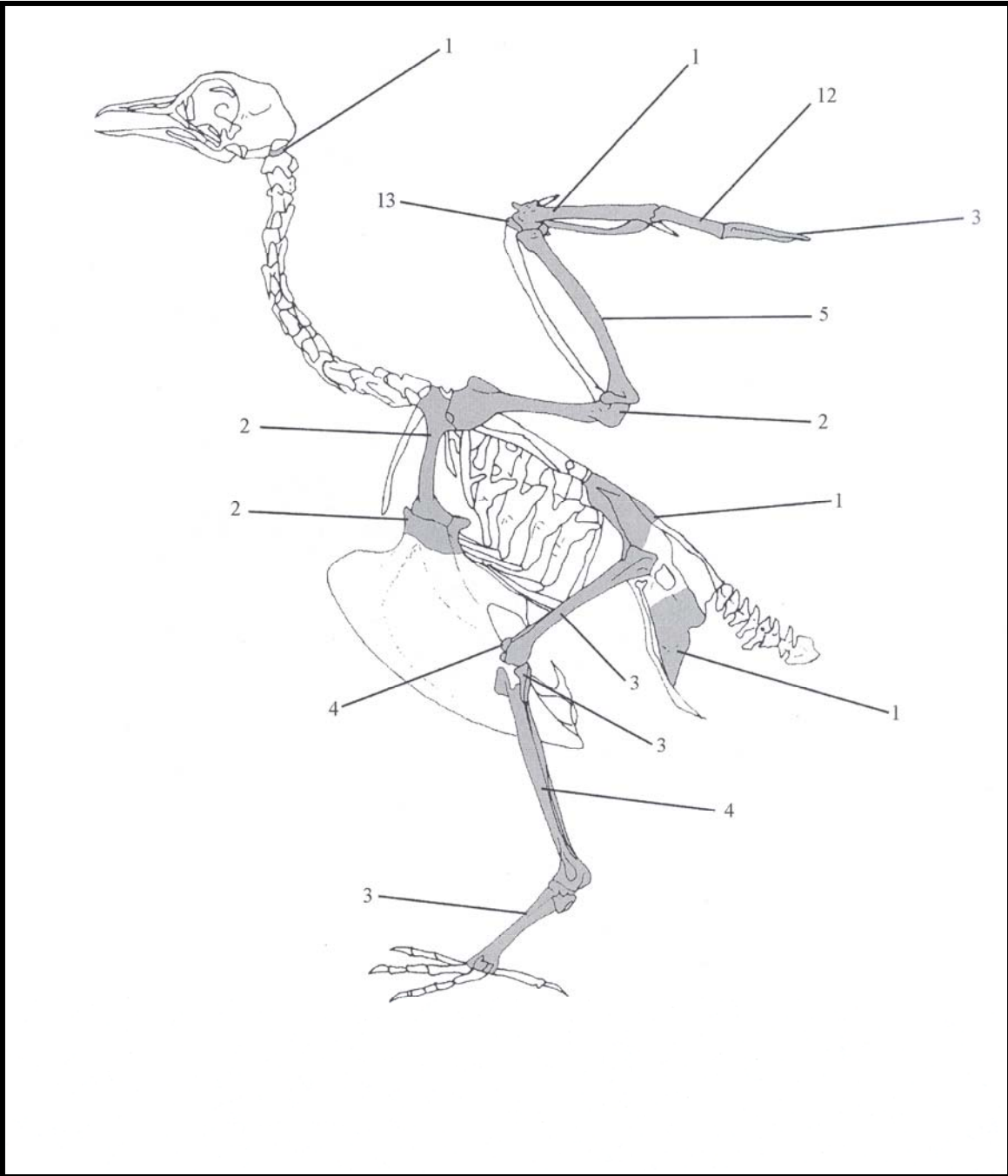


Figure 37: Elements from chicken (*Gallus gallus*), from fine-screen sample, zone 2

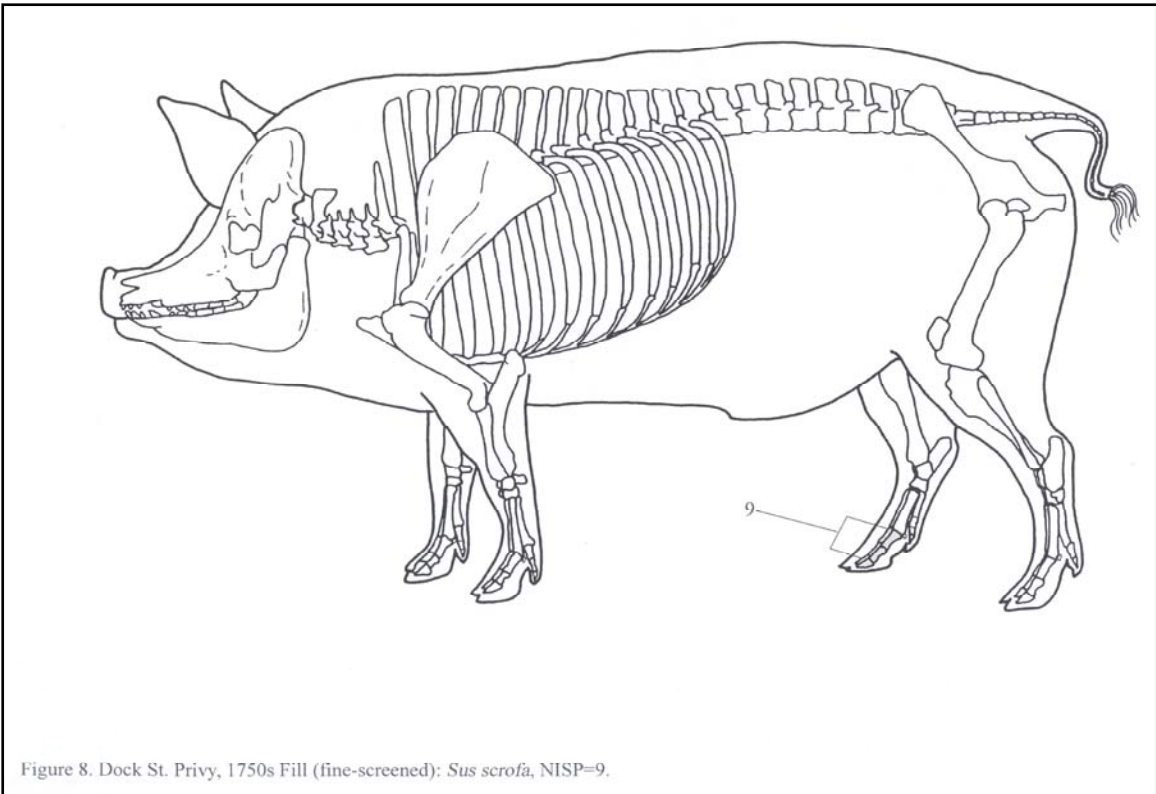


Figure 8. Dock St. Privy, 1750s Fill (fine-screened): *Sus scrofa*, NISP=9.

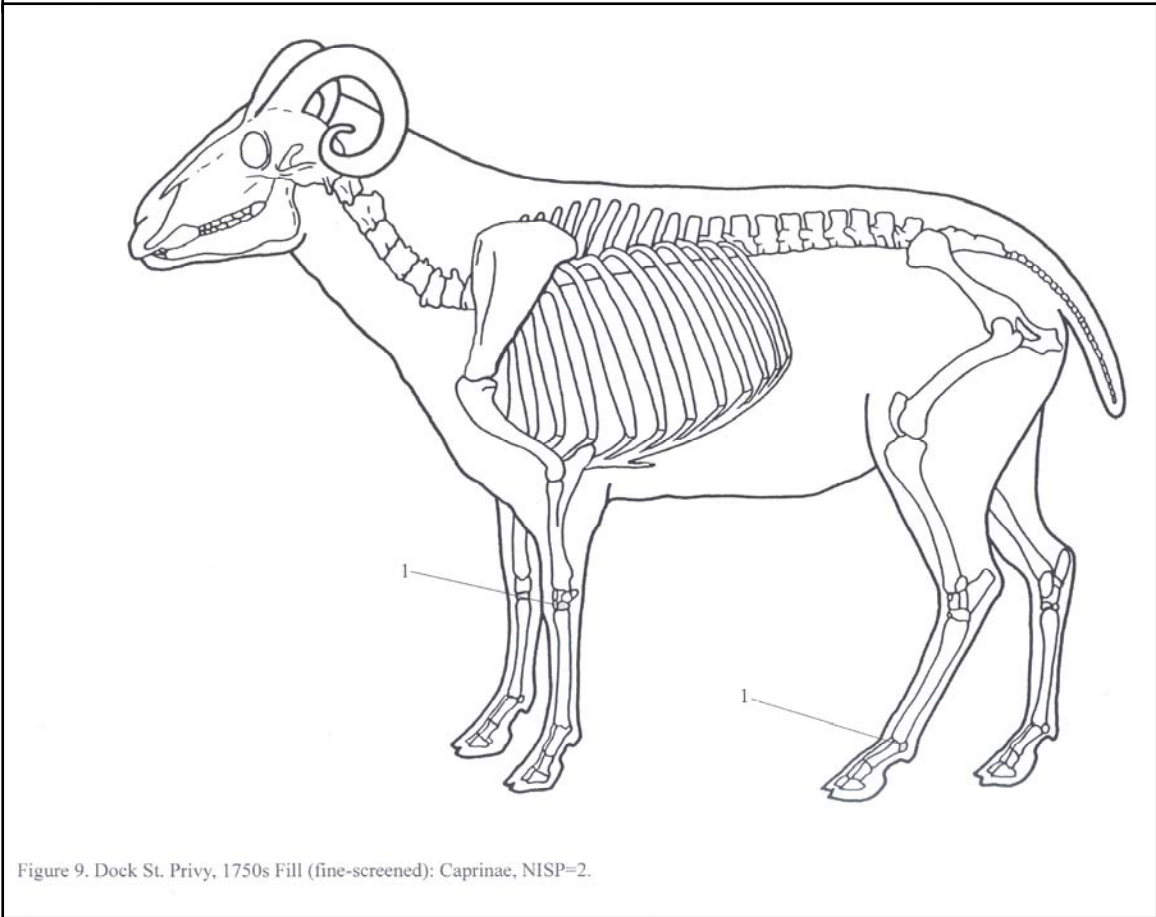
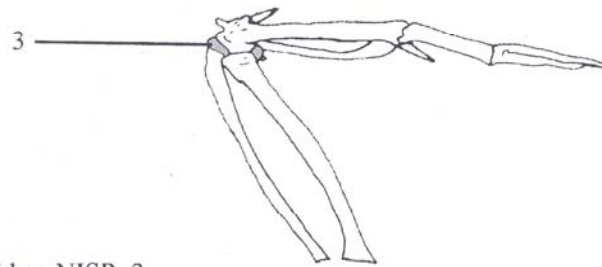
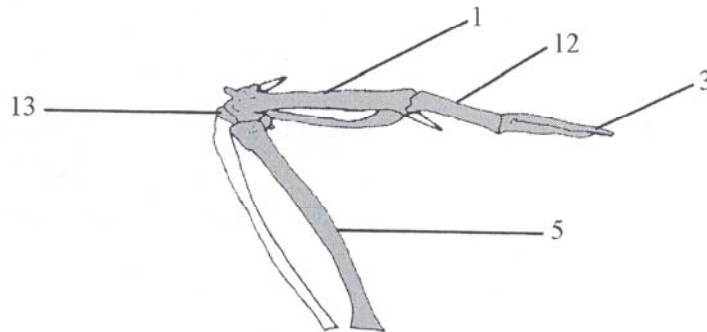


Figure 9. Dock St. Privy, 1750s Fill (fine-screened): Caprinae, NISP=2.

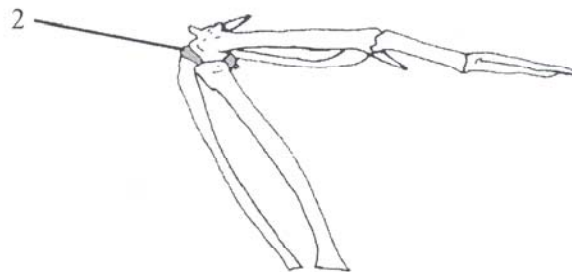
Figure 38: Pig and Caprine elements from zone 2, fine-screened samples



Anatidae: NISP=3.



Gallus gallus: NISP=60.



Meleagris gallopavo: NISP=2.

Figure 39: Zone 2 (fine-screened) deposit: Forefoot element distribution of three Bird taxa

Table 3. Dock St. Privy: Regression Formulae Used.

Taxon	N	Slope (b)	Y-intercept (a)	r²
Actinopterygii	393	0.81	0.9	0.8
Siluriformes	36	0.95	1.15	0.87
Perciformes	274	0.83	0.93	0.76
Centrarchidae	38	0.84	0.76	0.8
Sciaenidae	99	0.74	0.81	0.73
Pleuronectiformes	21	0.89	1.09	0.95
Testudines	26	0.67	0.51	0.55
Aves	307	0.91	1.04	0.97
Mammalia	97	0.9	1.12	0.94

Note: $Y = aX^b$ where \underline{Y} is biomass or meat weight; \underline{x} is bone weight; \underline{a} is the Y-intercept; and \underline{b} is the slope. \underline{N} is the number of observations (Reitz and Wing 2008:234-242).

Table 4: Privy construction, Species List

Taxa	NISP	#	MNI	%	Weight, g	Biomass, kg
Actinopterygii	1				0.25	0.010
Indeterminate bony fishes						
<i>Cynoscion</i> sp.	1	1		33.3	0.81	0.033
Seatrout						
Mammalia	25				93.70	1.565
Indeterminate mammals						
<i>Bos taurus</i>	4	1		33.3	134.31	2.164
Cow						
Caprinae	1	1		33.3	21.57	0.417
Sheep and goats						
Vertebrata					0.61	
Indeterminate vertebrates						
Total	32	3			251.25	4.189

Table 5. Dock St. Privy, Privy Construction (1/4-inch): Summary Table.

	MNI		Biomass	
	#	%	kg	%
Fishes	1	33.3	0.033	1.3
Turtles				
Wild birds				
Domestic birds				
Domestic mammals	2	66.7	2.581	98.7
Commensal taxa				
Total	3		2.614	

Table 6. Dock St. Privy, Privy Construction (1/4-inch): Element Distribution.

	Chicken	Pig	Cow	Sheep/Goat
Head				
Vertebra/Rib			1	
Forequarter			1	
Hindquarter				
Forefoot				
Hindfoot				1
Foot			2	
Total	0	0	4	1

Table 7: Dock St. Privy, Privy Construction (1/4-inch): Modifications.

Taxon	Pathological	Hacked	Clean Cut	Cut	Burned	Calcined	Rodent gnawed	Carnivore gnawed
Indeterminate mammals		3						
Cow								
Sheep and goats				1				
Total	0	3	0	1	0	0	0	0

Table 8. Dock St. Privy, 1750s Fill (1/4-inch): Species List.

Taxa	MNI			Weight, g	Biomass, kg
	NISP	#	%		
Sciaenidae	1	1	9.1	0.01	0.001
Drums					
Cheloniidae	1	1	9.1	2.52	0.059
Sea turtles					
Aves	4			8.19	0.138
Indeterminate birds					
Anatidae	2	1	9.1	4.37	0.078
Swans, geese, and ducks					
<i>Gallus gallus</i>	12	3	27.3	16.76	0.266
Chicken					
Mammalia	68			359.82	5.254
Indeterminate mammals					
<i>Felis catus</i>	7	1	9.1	6.86	0.149
Domestic cat					
Artiodactyla	1			2.76	0.066
Even-toed ungulate					
<i>Sus scrofa</i>	1	1	9.1	9.15	0.193
Pig					
<i>Bos taurus</i>	12	2	18.2	688.86	9.426
Cow					
Caprinae	1			16.08	0.320
Sheep and goats					
<i>Ovis aries</i>	1	1	9.1	9.30	0.196
Sheep					
Vertebrata				6.64	
Indeterminate vertebrates					
Total	111	11		1131.32	16.145

Table 9. Dock St. Privy, 1750s Fill (1/4-inch): Summary Table.

	MNI		Biomass	
	#	%	kg	%
Fishes	1	9.1	0.001	0.01
Turtles	1	9.1	0.059	0.6
Wild birds	1	9.1	0.078	0.8
Domestic birds	3	27.3	0.266	2.6
Domestic mammals	4	36.4	9.815	94.7
Commensal taxa	1	9.1	0.149	1.4
Total	11		10.368	

Table 10. Dock St. Privy, 1750s Fill (1/4-inch): Element Distribution.

	Chicken	Pig	Cow	Sheep/Goat
Head			2	
Axial	1		2	
Forequarter	8		5	2
Hindquarter	2		3	
Forefoot				
Hindfoot	1	1		
Foot				
Total	12	1	12	2

Table 11. Dock St. Privy, 1750s Fill (1/4-inch): Epiphyseal Fusion for Cow (*Bos taurus*).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal	1		1
Scapula, distal			
Radius, proximal	1		1
Acetabulum			
Metapodials, proximal			
1st/2nd phalanx, proximal			
Middle Fusing:			
Tibia, distal			
Calcaneus, proximal			
Metapodials, distal			
Late Fusing:			
Humerus, proximal	1		1
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal	1		1
Femur, distal			
Tibia, proximal			
Total	4	0	4

Table 12. Dock St. Privy, 1750s Fill (1/4-inch): Modifications.

Taxon	Pathological	Hacked	Clean Cut	Cut	Burned	Calcined	Rodent gnawed	Carnivore gnawed
Indeterminate birds							1	1
Chicken	1			2			1	
Indeterminate mammals		5	6	1	2	1		
Even-toed ungulate			1					
Pig			1					
Cow		4	2					
Sheep and goats		1						
Sheep					1	1		
Indeterminate vertebrates					2	1		
Total	1	10	10	3	5	3	2	1

Table 13. Dock St. Privy, 1750s Fill (fine-screened): Species List.

Taxa	MNI			Weight, g	Biomass, kg
	NISP	#	%		
Actinopterygii	1041			12.39	0.227
Indeterminate bony fishes					
Ariidae	2			0.04	0.001
Sea catfishes					
<i>Ariopsis felis</i>	2	2	5.4	0.04	0.001
Hardhead catfish					
<i>Bagre marinus</i>	2	1	2.7	0.13	0.003
Gafftopsail catfish					
<i>Mugil</i> spp.	12	1	2.7	0.25	0.010
Mullet					
<i>Centropristis</i> spp.	8	1	2.7	0.58	0.010
Sea bass					
Centrarchidae	1			0.04	0.001
Sunfishes and basses					
<i>Lepomis</i> spp.	4	1	2.7	0.16	0.004
Sunfish					
Sciaenidae	15			0.31	0.016
Drums					
<i>Cynoscion</i> spp.	8	1	2.7	0.37	0.018
Seatrout					
<i>Menticirrhus</i> spp.	14	2	5.4	0.40	0.020
Kingfish					
<i>Micropogonias undulatus</i>	6	2	5.4	0.20	0.012
Atlantic croaker					
<i>Sciaenops ocellatus</i>	1	1	2.7	0.03	0.003
Red drum					
<i>Paralichthys</i> spp.	4	2	5.4	0.33	0.010
Flounder					
Anura	2			0.05	

Frogs and toads

Scaphiopus holbrookii 1 1 2.7 0.02

Eastern spadefoot toad

Table 13. Dock St. Privy, 1750s Fill (fine-screened): Species List, cont.

Taxa	MNI			Weight, g	Biomass, kg
	NISP	#	%		
Cheloniidae	1	1	2.7	0.53	0.021
Sea turtles					
Aves	246			14.98	0.240
Indeterminate birds					
Anatidae	3	2	5.4	0.23	0.005
Swans, geese, and ducks					
Galliformes	5			0.22	0.005
Gallinaceous birds					
<i>Gallus gallus</i>	60	11	29.7	12.40	0.202
Chicken					
<i>Meleagris gallopavo</i>	2	1	2.7	0.39	0.009
Turkey					
Charadriiformes	1	1	2.7	0.81	0.017
Shorebirds					
Passeriformes	2	1	2.7	0.03	0.001
Perching birds					
Mammalia	143			27.63	0.522
Indeterminate mammals					
Rodentia	3	1	2.7	0.10	0.003
Rodents					
<i>Felis catus</i>	5	1	2.7	2.61	0.062
Domestic cat					
<i>Sus scrofa</i>	9	2	5.4	3.72	0.086
Pig					
Caprinae	2	1	2.7	1.95	0.048
Sheep and goats					

Vertebrata		38.96	
Indeterminate vertebrates			
Total	1605 37	119.90	1.557

Table 14. Dock St. Privy, 1750s Fill (fine-screened): Summary Table.

	MNI		Biomass	
	#	%	kg	%
Fishes	14	37.8	0.091	16.7
Turtles	1	2.7	0.021	3.9
Wild birds	5	13.5	0.032	5.9
Domestic birds	11	29.7	0.202	37.1
Domestic mammals	3	8.1	0.134	24.6
Commensal taxa	3	8.1	0.065	11.9
Total	37		0.545	

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

Table 15. Dock St. Privy, 1750s Fill (fine-screened): Element Distribution.

	Chicken	Pig	Cow	Sheep/Goat
Head				
Axial	7			
Forequarter	5			
Hindquarter	16			
Forefoot	29			1
Hindfoot	3			

Foot		9		1
Total	60	9	0	2

Table 16. Dock St. Privy, 1750s Fill (fine-screened): Epiphyseal Fusion for Pig (*Sus scrofa*).

	Unfused	Fused	Total
Early Fusing:			
Humerus, distal			
Scapula, distal			
Radius, proximal			
Acetabulum			
Metapodials, proximal			
1st/2nd phalanx, proximal	4		4
Middle Fusing:			
Tibia, distal			
Calcaneus, proximal			
Metapodials, distal			
Late Fusing:			
Humerus, proximal			
Radius, distal			
Ulna, proximal			
Ulna, distal			
Femur, proximal			
Femur, distal			
Tibia, proximal			
Total	4	0	4

Table 17. Dock St. Privy, 1750s Fill (Fine-screened): Modifications.

Taxon	Pathological	Hacked	Clean Cut	Cut	Burned	Calcined	Rodent gnawed	Carnivore gnawed
Indeterminate bony fishes					4			
Seatrout					1			
Indeterminate birds		1	1		1			
Turkey				1				
Indeterminate mammals		1	3				1	
Indeterminate vertebrates	1	5	3		43			
Total	1	7	7	1	49	0	1	0

Chapter VI

Dock Street Privy: Palynological Evidence of 18th Century Dietary Patterns

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In November 2008, five sediment samples were submitted to the Washington State University palynology laboratory for analysis. These samples were collected from the base of a small privy feature identified in recent construction of an elevator at the site of the Dock Street Theatre. Ceramics and other artifacts date the fill to the period of around 1730-1754, the period when the original theatre was in use, prior to a fire in the structure in 1754. It was anticipated that a detailed examination of fossil pollen in the privy feature might shed light on the use or fill of the feature. Samples were collected from the fill and the base of the privy (Table 1). As the actual privy fill consisted of a relatively thin band of deposits, a stratigraphic profile could not be collected. Rather, a series of three samples (FS# 2, 13 and 16) were collected horizontally across the fill, representing probably contemporaneous samples.

Methodology

Following standard WSU protocol, a conservative pollen extraction technique was followed in the extraction of the Dock Street Privy pollen samples. Pollen is an organic compound and although very durable, is susceptible to bacterial, fungal and mechanical degradation. Natural cycles of wetting and drying produce an environment favorable for the growth of pollen-destroying bacteria and fungi. Under these conditions, pollen grains are likely to have suffered some adverse affects, and thus would be expected to be present, if at all, in a weakened state of preservation. With this fact in mind, weaker bases and acids were selected for use in extraction, particularly involving those chemicals that have been documented to act harshly towards poorly preserved fossil grains. Rapid burial, on the other hand, may mitigate these factors, and intentionally filled privies may well contain abundant well-preserved pollen grains.

The Dock Street Privy samples were first quantified (3mls), placed in sterile beakers, and a known quantity of exotic tracer spores was added to each sample. Here, Danish clubmoss (*Lycopodium clavatum*) spores were chosen as an exotic because these spores are unlikely to be found in the actual fossil pollen assemblages from this region. Tracer spores are added to samples for two reasons: First, by adding a known quantity of exotic spores to a known quantity of sediment, fossil pollen concentration values can be calculated. Second, in the event that no fossil pollen is observed in the sediment sample, the presence of *Lycopodium* tracer spores verifies that processor error was not a factor in the pollen loss.

Table 18
Proveniences of the Dock Street Privy Pollen Samples

Pollen Lab Number	Provenience
27	FS# 2, Zone 2, privy fill
28	FS# 10
29	FS# 13, Zone 2, privy fill
30	FS# 16, Zone 2, privy fill
31	FS# 18

Following the addition of the tracer spores, the samples were washed with 10% Hydrochloric Acid. This step removed carbonates and dissolved the bonding agent in the tracer spore tablets. The samples were then rinsed in distilled water, sieved through 150 micron mesh screens, and swirled to remove the larger and heavier particles. Next the samples were consolidated, and 50% Hydrofluoric Acid was added to the residues to remove unwanted silicates. After the silicates had been removed, the residues were rinsed thoroughly, and were then washed in 1% KOH to remove alkaline-soluble humates.

Next, the samples were dehydrated in Glacial Acetic Acid, and were subjected to an acetolysis treatment (Erdtman 1960) consisting of 9 parts Acetic Anhydride to 1 part concentrated Sulfuric Acid. During this process, the samples were placed in a heating block for a period of 8 minutes. This step removed most unwanted organic traces including cellulose, hemi-cellulose, lipids and proteins and converted these materials to water-soluble humates. The samples were then rinsed in distilled water until a neutral pH was achieved.

Following this treatment, the samples were next subjected to a heavy density separation using Zinc Chloride (Sp.G. 2.00). Here, the lighter organic fraction was isolated from the heavier minerals. After this treatment, the lighter pollen and organic remains were collected and rinsed thoroughly in water. The residues were then dehydrated in absolute alcohol, and transferred to a glycerine medium for curation in glass vials.

Permanent slides were prepared using glycerine as a mounting medium, and identifications were made on a Nikon compound stereomicroscope at 400x magnification. Identifications were confirmed by using published keys and the Palynology Laboratory's extensive pollen reference collection. Minimum 200-grain counts, standard among most palynologists (Barkley 1934), were made for each sample when pollen was preserved in the sediments. Pollen counts of 200 grains are thought to be fairly reflective of past vegetation and paleoenvironmental conditions.

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

Results

Three samples from the Dock Street Privy excavations contained well-preserved fossil pollen. Samples from the privy fill proper, FS numbers 2, 13 and 16 contained significant quantities of nearly perfectly preserved pollen, and at least 30 different plant taxons were represented in the assemblages (Table 2). Concentration values for these samples ranged from 43,951 to 77,532 fossil grains/ml of sediment, values considered to be very high, consistent with the excellent state of pollen preservation in these samples. Pollen counts and percentages are presented in Table 3.

Samples representing the natural strata into which the original privy was dug were largely barren of fossil grains. The few pollen grains that were found in these samples were perfectly preserved and of types that were common in the privy fill, thus are likely contaminants from the fill material.

Table 19
Pollen Taxons Identified in the Dock Street Privy Samples

Taxon	Common Name
Non-Arboreal	
Apiaceae	Parsley or Umbel Family
Asteraceae Low Spine	Ragweed Group
Asteraceae High Spine	Sunflower Group
<i>Cirsium</i>	Thistle Group
Liguliflorae	Dandelion Group
<i>Solidago</i>	Goldenrod
Brassicaceae A	Mustard Family
Brassicaceae B	
Caryophyllaceae	Pink Family
Cheno-Am	Goosefoot Family, Pigweed
Cyperaceae	Sedge Family
Fabaceae	Bean Family
<i>Fagopyrum</i>	Buckwheat
Liliaceae	Lily Family
<i>Lonicera</i>	Honeysuckle
<i>Plantago</i>	Plantain
Poaceae	Grass Family
Cerealea	Domesticated Old World Cereal
Arboreal	
<i>Acer</i>	Maple
<i>Alnus</i>	Alder
Anacardiaceae	Cashew Family, Sumac
<i>Carya</i>	Hickory
<i>Castanea</i>	Chestnut
<i>Fraxinus</i>	Ash

<i>Ilex</i>	Holly
<i>Liquidambar</i>	Sweet Gum
<i>Myrica</i>	Wax Myrtle
<i>Pinus</i>	Pine
<i>Quercus</i>	Oak
TCT	Taxodiaceae, Cupressaceae, <i>Thuja</i>
Indeterminate	Too poorly preserved to Identify

Table 20
Pollen Counts and Percentages from the Dock Street Privy Pollen Samples

Taxon	Provenience				
	FS#2	FS#10	FS#13	FS#16	FS#18
Apiaceae	1 (0.5)		1 (0.5)	1 (0.5)	
Asteraceae LS			1 (0.5)	3 (1.5)	
Asteraceae HS			1 (0.5)	1 (0.5)	
<i>Solidago</i>	1 (0.5)		1 (0.5)		
<i>Cirsium</i>			1 (0.5)	1 (0.5)	
Liguliflorae	2 (1.0)		1 (0.5)	1 (0.5)	
Brassicaceae A	35 (17.2)		58 (28.4)	55 (26.8)	
Brassicaceae B	64 (31.4)	*	60 (29.4)	50 (24.4)	*
Caryophyllaceae	1 (0.5)				
Cheno-Am	54 (26.5)		43 (21.1)	59 (28.8)	*
Cyperaceae	5 (2.5)		1 (0.5)	4 (2.0)	
Fabaceae				2 (1.0)	
<i>Fagopyrum</i>	1 (0.5)				
Liliaceae	4 (2.0)			1 (0.5)	
<i>Lonicera</i>			1 (0.5)		
Poaceae	6 (2.9)		8 (3.9)	4 (2.0)	
Cerealea	3 (1.5)		2 (1.0)	4 (2.0)	
<i>Plantago</i>	1 (0.5)				
<i>Acer</i>	1 (0.5)				
<i>Alnus</i>				1 (0.5)	
Anacardiaceae			1 (0.5)		
<i>Carya</i>				1 (0.5)	
<i>Castanea</i>	2 (1.0)		5 (2.5)	1 (0.5)	
<i>Fraxinus</i>			1 (0.5)		
<i>Ilex</i>	1 (0.5)				
<i>Liquidambar</i>	1 (0.5)				
<i>Myrica</i>				1 (0.5)	
<i>Pinus</i>	5 (2.5)		8 (3.9)	8 (3.9)	
<i>Quercus</i>	6 (2.9)	*	2 (1.0)	3 (1.5)	

TCT	3 (1.5)		3 (1.5)	4 (2.0)	
Unknown	1 (0.5)		1 (1.0)		
Indeterminate	6 (2.9)	*	4 (2.0)		
Total Pollen	204 (100)	3	204 (100)	205 (100)	8
Concentration (Grains/ml)	77,532	237	47,381	43,951	880

Taxons

A number of taxons identified in the Dock Street Privy represent significant or economically important plants and warrant discussion.

Apiaceae

Pollen grains from the Parsley Family were rare in the Dock Street Privy samples, and identification of these grains below the family level is usually not possible. This family possesses a number of mostly Old World economic species, including carrot, parsley, dill, fennel, caraway and ornamentals including Queen Anne's lace. Native North American members of this family tend to favor moist forest floors and streamsides. Apiaceae pollen is dispersed by insects, and its occurrence in pollen samples in appreciable quantities may signal an economic usage. Most members of the Apiaceae family are used economically as seeds, herbs or roots, thus their pollen grains would not normally be expected to be ingested. However, it is possible that some adhering pollen was accidentally introduced into some food item, or that the pollen in the Dock Street Privy might represent waste material from weeds.

Asteraceae

Pollen from members of the Asteraceae (Compositae or Composite) family can usually be separated into a subfamily based on the grain's diagnostic morphology. In addition to the distinctive *Artemisia* (sagebrush, wormwood, tarragon), members of this family that are readily recognized include *Cirsium* (thistle) type, *Liguliflorae* (dandelion or chicory) type, and both high and low spine Asteraceae types.

Insect pollinated members of this group, the high-spine Asteraceae types, are usually poorly represented in archaeological assemblages, despite their general abundance on the landscape. Members of the *Cirsium* and *Liguliflorae* group, when found, likely represent background weeds or ornamentals. The high spine Asteraceae group also includes a number of ornamental types, including *Aster* (aster) and *Helianthus* (sunflower).

Grains from low spine Asteraceae, being wind-pollinated, are produced in very large numbers and are dispersed over large areas. Two of the most important members of this group

include *Ambrosia* (ragweed) and *Solidago* (goldenrod). These grains tend to be over-represented in poorly preserved assemblages as their morphology makes them readily recognizable even when highly degraded. The scarcity of low spine Asteraceae grains in the Dock Street Privy might argue somewhat for the general cleanliness of the downtown 18th Century Charleston area.

Brassicaceae

Pollen from the Brassicaceae or mustard family is commonly encountered in archaeological sediment samples. A number of important cultivated plants of Old World origin are represented in this family, including broccoli, cauliflower, Brussel sprouts, cabbage, radish, mustard and rapeseed. Several native members of this family also have economic value among Native American populations, including *Lepidium* and *Descurainia*. Despite the fact that members of this family are insect pollinated and are relatively low pollen producers, the sheer abundance of these plants usually allows for at least a few Brassicaceae grains to occur in most archaeological samples. Pollen from Brassicaceae tends to be concentrated in privies because the floral elements are so widely consumed. At least two types of Brassicaceae pollen were abundant in the Dock Street Privy, likely representing Broccoli and/or some other member of this important family.

Cheno-Am

Cheno-Am pollen, representing plants in the Chenopodiaceae family and in the genus *Amaranthus* in the Amaranthaceae family are among the most commonly encountered grains in North America. The reason for this pollen type's abundance is that the grains are generally produced in large numbers, are readily dispersed by the wind, are extremely durable, and are readily recognizable even when degraded. Many members of the Cheno-Am group are disturbance indicators, favoring farmland and cleared areas around human habitation. In North America, Cheno-Ams especially *Chenopodium* and *Amaranthus* have been cultivated by Native Americans and served as important food sources. Old World domesticated members of this family include beets (*Beta vulgaris*) and spinach (*Spinacia oleracea*).

Liliaceae

Liliaceae pollen is strictly insect-pollinated, and its grains are infrequently encountered in archaeological sediments. A large number of mostly Old World economic plants are represented in the lily family, including *Allium* (onion, garlic, leek), *Asparagus* (asparagus), *Lilium* (lily), *Trillium* (trillium), *Tulipa* (tulip), *Agapanthus* (Africa lily), *Hyacinthus* (hyacinth) and *Muscari* (grape hyacinth). Native economic members of this family include *Camassia* (camas) and *Allium* (wild onion). As these grains are all scarce in the pollen record, the presence of more than a few grains in a sample may indicate economic activity. While flowers (and pollen) are infrequently ingested, pollen from the Dock Street Privy fill might represent the deliberate disposal of ornamental or economic flowers

Fagopyrum

Pollen from the Old World buckwheat is distinctive, but generally uncommon in historic-age samples, as it is dispersed largely by insects, and it thus produced in relatively low numbers. Pollen grains would not normally be associated with processed buckwheat groats, thus the presence of buckwheat pollen might be more indicative of the deliberate cultivation of this plant in the site vicinity.

Poaceae, Cerealea

All grasses are wind pollinated and produce large amounts of distinctive pollen, thus these grains generally make up a significant proportion of most pollen assemblages. However, the morphology of grass pollen does not allow for the identification below the family level, with the exception of *Zea mays* (maize), and cultivated Old World grains (Cerealea, including wheat [*Triticum*], barley [*Hordeum*], rye [*Secale*] and oats [*Avena*]). The domestication process has led to a significant enlargement of the pollen grains in these genera. Other native grass genera, some of which were economically important, unfortunately cannot be identified based on their pollen. The presence of Cerealea pollen in the Dock Street Privy fill may signal either the deliberate ingestion of cereal grains with adhering contaminant pollen (ie wheat or rye bread), the cultivation of cereal grains in the nearby site vicinity, or perhaps the disposal of animal feed or stable sweepings into the privy.

Fabaceae

Two pollen grains were found in Sample FS#16 that compare favorably to *Phaseolus* in the Fabaceae family. Pollen in this family is difficult to identify, and bean pollen under the best of circumstances is exceedingly rare. *Phaseolus* (kidney bean and allied species) is cleistogamous, meaning that the flowers are normally self pollinating, thus the plant produces very few pollen grains, and these are poorly dispersed, almost never leaving the flower. The presence of probable bean pollen in the privy fill might indicate the deliberate disposal of ornamental or otherwise cultivated bean flowers, as these flowers would probably not be deliberately ingested.

Ornamentals

Pollen from both Caryophyllaceae (Pink Family) and *Lonicera* (honeysuckle) may well represent the nearby cultivation of or deliberate disposal of flowers of these significant ornamental plants. Both are insect pollinated, produce relatively few grains and are poorly dispersed, that were likely introduced into the privy through cultural mechanisms. Other non-arboreal pollen types noted in the Dock Street Privy probably represent background types, including pollen from Cyperaceae (Sedge Family) and the introduced weedy *Plantago* (plantain). Both of these taxons are wind pollinated and are common elements in many sediment samples.

Arboreal Types

A number of arboreal pollen types were identified in the Dock Street Privy samples, all of which likely represent normal background types probably found in the site area. Pollen taxons identified include *Acer* (maple), *Alnus* (alder), *Carya* (hickory or pecan), *Castanea* (chestnut), *Fraxinus* (ash), *Ilex* (holly), *Liquidambar* (sweet gum), *Myrica* (wax myrtle), *Pinus* (pine), *Quercus* (oak), TCT (bald cypress, juniper) and an unidentified grain in the Anacardiaceae family, probably sumac. Most of these types represent readily dispersed wind pollinated grains, although several also represent popular shade or landscape trees and were likely to be found as ornamentals in the city.

Discussion

Although designed primarily as a receptacle for human waste, privies served a number of purposes that might have a bearing on the pollen findings. Privies also served as a convenient location for the disposal of unwanted garden, yard or kitchen waste. Thus pollen from the Dock Street privy might well represent sweepings, weeds thrown into the outhouse for disposal, or colonial meal remnants.

Pollen grains dispersed by the wind are common components of the natural environment, and it is likely that many grains found in any given sediment sample, represent natural background types introduced into the sediments through wind, water or any number of natural mechanisms. Several pollen types identified in the Dock Street sediment samples would likely fall into this category, representing background taxons rather than economic or ornamental types. Background non-arboreal taxons identified in the samples include high spine and low spine Asteraceae types, *Solidago*, *Cirsium*, Cyperaceae and *Plantago*. Arboreal types that likely represent background vegetation include *Acer*, *Alnus*, Anacardiaceae, *Carya*, *Castanea*, *Fraxinus*, *Ilex*, *Liquidambar*, *Myrica*, *Pinus*, *Quercus* and TCT types, although it is important to realize that all could well represent cultivated trees. In all cases, low percentages coupled with generally high pollen production, suggests these grains do not represent economically significant occurrences. All of these types represent naturally occurring vegetation or invasive weeds present in the Charleston area both today and in the past.

Economically important pollen types from the Dock Street privy fall into two categories, including probable food items and ornamentals, both of which are well represented in the assemblages. Ornamental types represent plants that were likely to have been cultivated for their flowers, although some of these could also have been utilized as a food source. Ornamental types identified in the privy fill include grains from the Caryophyllaceae and Liliaceae families, and *Lonicera* in the Caprifoliaceae family. Economically significant members of the Caryophyllaceae family include carnations and *Dianthus* (pinks), both of which are important cultivated flowers. Although this family is represented by a single grain occurrence from sample FS#2, its presence in the privy may well represent a cultivated plant as this pollen type is normally rare. Liliaceae pollen was identified in two samples (FS# 2 and 16), represented by a total of 5 grains in the assemblages. A number of important genera are known from this family, including both ornamentals (lilies, yucca, trillium, hyacinth) and food plants (onions, leeks,

garlic, chives, asparagus). Although flowers in this family are usually not targeted for food, the accidental ingestion of an inflorescence is possible, thus whether these grains represent Colonial food or flowers is not known.

Some species of *Lonicera* (honeysuckle) produce edible fruit, though this plant is more widely cultivated for its fragrant and showy flowers. The presence of a single grain of ordinarily rare honeysuckle pollen in sample FS#13 probably indicates this plant was cultivated in Charleston in the mid 18th century.

Economic food plants were more common in the Dock Street privy fill, and include Apiaceae, at least two types of Brassicaceae, Fabaceae, *Fagopyrum* and Cerealea types. Several economically significant taxons are represented in the Apiaceae family, including *Apium* (celery), *Petroselinum* (parsley), *Daucus* (carrot), *Pastinaca* (parsnip), *Foeniculum* (fennel), *Coriandrum* (coriander), *Carum* (caraway) and *Peucedanum* (dill). While flowers are not normally consumed, a certain amount of pollen would likely be expected in the consumption of some of these foods, thus the presence of the ordinarily scarce Apiaceae pollen grains likely represent the ingestion of one or more of these foods in Colonial times.

Flowers bearing pollen in the Brassicaceae family, on the other hand, are frequently ingested and the presence of Brassicaceae pollen in the Dock Street privy fill surely represents the ingestion of one or more of these plants in the mid 18th Century. Two distinctive types of pollen from the Brassicaceae family were identified in the privy fill. Whether this represents two economically utilized forms of plant or simply mature and incompletely developed pollen grains is not known. Economically significant members of this family, likely contributing pollen in these samples includes the polymorphic *Brassica oleracea* (broccoli, cauliflower, cabbage, kale, Brussels sprouts or kohlrabi), *Brassica nigra* (mustard), *Brassica nap*a (rapeseed) and *Brassica campestris* (turnip). Significant quantities of the two forms of this plant were found in all of the privy fill samples, indicating that members of this family were important dietary components in the mid 18th century.

Two pollen grains comparing favorably to *Phaseolus* (kidney bean) were identified in the Dock Street privy fill (FS#16), although positive identification is not possible. While pollen from beans would not be a likely dietary component as bean flowers are not normally ingested, these grains could represent the disposal of bean flowers in the outhouse fill. *Fagopyrum* (buckwheat) was represented by a single grain in sample FS#2. Again, the flowers are not a normal dietary component, although a contaminant grain could find its way into milled groats. An alternative explanation for both of these types, and possibly others is that the rare grains were ingested in the form of honey, as bees are known to pollinate both of these plants, and trace amounts of these pollen grains could be ingested in this fashion.

Cheno-Am pollen was notably high in all of the privy fill samples, ranging from 21.1 to 28.8% of the assemblage. Cheno-Ams are generally considered to be weeds, although a number of native species have been used as foods or medicine, including *Chenopodium* (goosefoot) and *Amaranthus* (pigweed) (Moerman 1998, Yanovsky 1936). These plants are often common weeds of disturbed areas, and might be expected in an urban environment. In historical contexts, however, these grains could also represent cultivated edible plants, including beets (*Beta*) and

spinach (*Spinaca*), or ornamentals such as *Celosia*, *Alternanthera* or *Gomphrena*. These plants produce copious quantities of durable easily recognized pollen, but the high quantities present in the privy fill might possibly represent the deliberate disposal of weeds, rather than colonial foods.

Cerealea pollen representing either *Triticum* (wheat), *Hordeum* (barley), *Secale* (rye) or *Avena* (oats) was identified in all of the privy fill samples, although in percentages not higher than 2%. These grains could have entered the privy fill in a number of ways. For example, the grains could be contaminants from processed bread, having entered the fill in fecal matter. They could also be background types representative of gardening in the site area, as all are wind pollinated and can travel some distance from the fields. Finally, they could well have been introduced into the fill from stable or street sweepings, representing horse feed or fecal matter.

Summary

Five sediment samples from a mid 18th Century privy from Charleston were examined for fossil pollen content. These samples, from the site of the Dock Street Theater, were collected from privy fill, base and sterile sides. Well-preserved fossil pollen was identified in the three fill samples, shedding light on past environment and agriculture in the area, as well as dietary practices in the 18th century.

Of particular significance were the economic pollen types identified in the privy fill samples. Significant quantities of at least two forms of Brassicaceae pollen were identified in all of the privy fill samples. These grains almost certainly represent the remains of meals of broccoli or other brassicaceous foods. Other food types identified from the pollen include Apiaceae (perhaps dill or caraway), *Fagopyrum* (buckwheat), Old World domesticated grains (Cerealea), and possibly *Phaseolus* (beans). Ornamental or otherwise significant pollen types also identified in the samples include carnations or pinks (Caryophyllaceae), Lilies (Liliaceae), Chenopods and honeysuckle (*Lonicera*). Remaining taxons represent probable background trees found in the downtown Charleston area.

Chapter VII Interpretations

Though the excavations were limited in duration and scale, the materials retrieved from the deposits at Dock Street Theatre were significant for the study of colonial urban life in many respects. The provenience could be tightly dated, reflecting a twenty-year deposition, with relatively certain beginning and end dates associated with documented events. Archaeological assemblages from the early 18th century, particularly those with narrow deposition ranges, are relatively scarce among the Charleston assemblages. The exceptional preservation of faunal and botanical remains provides new evidence on the Charleston environment. For these reasons, the Dock Street assemblage contributes to research on a number of issues.

Site Formation Processes

Investigation of the processes responsible for creation and alteration of the archaeological site is a foundation of ongoing Charleston archaeology. In order to most fully interpret an archaeological site, it is first necessary to understand the physical and cultural processes responsible for formation of that database (Schiffer 1977, 1983). An archaeological site consists of a natural setting altered by the humans who occupied that site. Artifacts are introduced into the ground through a variety of methods. Once in the ground, the artifacts – and their soil matrix – can be redistributed or they can be removed. Occasionally these activities are recorded in the documentary record and the two sources of data can be compared. Specifically of interest are those activities that introduce materials into the ground and reorganize them after deposit. Urban sites, which are densely occupied, are often a complex combination of such events.

Human habitation results in creation and gradual accumulation of soil. In his now-classic articles, archaeologist Michael Schiffer suggests that cultural materials, including natural and environmental data, enter the archaeological record (the soil) by four basic methods: discard, loss, destruction, or abandonment (Schiffer 1977). Discard, the throwing away of refuse, is the most common form of archaeological site creation. Artifacts and other debris are either broadcast on the ground surface, gradually forming zone deposits, or placed in newly-dug (trash pit) or previously existing holes (such as the privy pit at Dock Street), called features. Items deposited due to loss are usually small, such as buttons, coins, toys, bits of jewelry, etc. Archaeologists discover lost items in wells and drains where they have been carried by flowing water, in soil lenses that collect beneath wooden floors, and in yards where children play (particularly in the later 19th century). Abandonment includes destruction of buildings and their contents from fire or storm, or the cleanup associated with vacating a property or building. In some cases, though not all, it is possible to distinguish proveniences (the defined archaeological boundaries of single behaviors) resulting from specific depositional processes.

Distinguishing between discarded and abandoned deposits is key to accurately interpreting daily life, and is an important consideration with the Dock Street privy. Abandonment activities can often be distinguished from daily discard deposits by the artifact

profile, as well as the physical properties of the artifacts. A recent example is the colonial plantation of James Stobo, where a storm appears to have damaged the planter's home beyond repair (Zierden et al. 1999). A number of artifacts that have a long use life and are not normally discarded were recovered in a concentrated area. Such items as scissors, furniture hardware, and weapons were found in numbers and conditions that far exceed the normal range of materials (as reflected in South's [1977] Carolina Artifact Pattern). Another common form of site 'abandonment', particularly in urban areas, is the transfer of a domicile to a new tenant or owner (moving). The single-event filling of large features such as privies and wells with unusual numbers of highly-curated items can reflect this activity. Such deposits were noted at Charleston Place, where 19th century privies were filled with unusual concentrations of ceramics, toothbrushes, pharmaceutical bottles, and other household items (Zierden and Hacker 1987). Since such deposits do not reflect the retinue of daily behavior, using such deposits for interpretation requires caution.

Privy deposits are often the result of abandonment – the feature is filled after its original use has ended. The materials that end up in such features are often large and intact, and represent a single event, one often divergent from the affairs of daily life. In contrast, deposits associated with daily, inadvertent discard often include small items, smaller numbers of items, and organic materials. Determining the processes that resulted in zone 2 is key to understanding the evidence. This is further complicated by the presumption that the privy is associated with a building used intermittently and for special events, rather than a full-time residence.

In the case of the Dock Street privy, this event is informed by the organic content of the soil, as well as the cultural materials. The artifacts are large and intact, but they are relatively scarce, a pattern at odds with the typical abandonment assemblage. Further, the organic soil suggests that the privy deposit has not been disturbed since original deposition, a type of soil deposit known as 'primary' (Schiffer 1977). The preservation of small bone, as well as pollen that was likely ingested, suggests that zone 2 was an original privy deposit, sealed when the theatre burned.

Once in the ground, artifacts can be redistributed or they can be removed (Honerkamp and Fairbanks 1984; Schiffer 1983). Such deposits have been described by Schiffer as secondary, those that have been removed from their original placement in the ground. Nearly all urban deposits are secondary, if not tertiary, in nature. A primary deposit with such a concentration of organic material is extremely rare in an urban setting.

Based on the artifact profile, the preservation of organic remains, and the appearance of zone 2, the privy fill appears to be an undisturbed, primary deposit, associated with daily affairs at the Dock Street Theatre. As discussed below, the privy was likely constructed along with the theatre in 1736, and abandoned with the building burned in 1754. The layer of plaster and soil, designated zone 1, sealed the midden from post-depositional disturbance. Therefore, the contents of zone 2 may be used to interpret daily affairs at Charleston's colonial theatre.

Date and Association of the Deposits

Following analysis of the recovered artifacts, a date of deposition is assigned to each archaeological deposit. This date of deposition is based on Terminus Post Quem (or TPQ) and stratigraphic position. Confidence in the interpreted date of deposition varies with types of artifacts present in the matrix and documented details of site history.

The principal of Stratigraphic Point of Initiation (the relative vertical position on the top of a feature or zone) states that soils gradually accumulate on sites of human occupation, and the deepest is the earliest. Terminus Post Quem, or TPQ, is based on the invention date of the newest artifact in the provenience. The two principals are used in combination to date soil events on a site. When corroborating historical data are available, these can be used to refine the date of deposition and to associate the deposit with a specific event.

Artifacts recovered from Zone 1 inside the privy contain Scratch Blue Stoneware, developed in 1744, as the most recent item. This deposit of plaster and soil has been interpreted as a cap, or sealing of the privy, either deliberately for sanitary reasons or inadvertently with collapse of the burned theater. With the exception of a single fragment of creamware outside of the privy, the artifact assemblage from zone 1 suggests a feature abandoned in the 1750s.

Zone 2, the organic midden recovered from feature 1, was deposited, or likely left in place, when the feature was abandoned. This may have been a gradual filling, though the homogeneity of the soil suggests a single event. Four proveniences of Zone 2 were defined, and three contained white saltglazed stoneware, developed in 1740. Together, these confirm a date of deposition after 1740, likely in the 1750s. As privy pits were supposedly cleaned periodically, it is likely that zone 2 represents the last natural accumulation of debris prior to destruction of the buildings.

The Zone 3 deposits, both inside and outside of feature 1, contained a different assemblage, supporting an earlier date of deposition and suggesting that Zone 3 predates construction of the privy. The four proveniences of zone 3 contained a single fragment of pottery manufactured in 1720; all other types were in use during the late 17th century and first decades of the 18th century. The artifacts suggest the relatively sparse midden accumulated during the first quarter of the 18th century, and the privy was built on top of the deposit.

Together, the artifacts from zones 1 through 3 suggest a relatively short use-life for the privy, of approximately a quarter-century. The difference in date and content for zone 3 suggests it is a separate depositional event from those above. The TPQ sequence of 1720-1740-1744 corresponds closely with the known date of construction for Dock Street Theatre, 1736 and the documented date of destruction by fire 1754. The artifacts, stratigraphy, and general location of the feature support the documented events, and suggest the privy is associated with the original theatre building.

Archaeological Signature of the Colonial Theatre

Depending on the processes that result in archaeological deposits, a site may yield artifacts commonly discarded, or it may contain materials that rarely become part of the archaeological record, and so provide a broader, and more site-specific material assemblage. This may be in the form of individual artifacts, or in numbers of artifacts. The latter could be reflected in a deviation from the pattern, or average. Since Stanley South proposed the concept in the 1970s, archaeologists have quantified archaeological assemblages, grouping artifacts by function, or how they were used in the everyday life of their owners. Broad regularities, or patterns, in these proportions prescribe the average range of daily activities on British colonial sites (South 1977). Though precise prescriptions, or patterns, have not been defined for faunal assemblages, per se, the principal remains the same; deviation from the Charleston averages likely signals site-specific events. This was the case with the Dock Street assemblage; significant variation from the Charleston norm provided clues to events associated with the theatre.

As described by Colannino and Reitz in Chapter V, the most unusual aspect of the faunal assemblage was the unusually high frequency of birds, both wild and domestic (ducks, chickens, and turkeys). Moreover, the bird specimens were characterized by a high frequency of elements from the Forefoot, specifically the carpals and digits of the manus (Figures 37 and 39). As little or no meat is attached to these bones, the authors propose alternative uses, namely harvesting of the primary flight feathers. These are often used for a variety of products (Serjeantson 2002).

The stiff-spined flight feathers on the leading edge of the bird's wing were used to make quill pens. Right-handers and left-handers selected quills from the appropriate side of the bird. Each bird supplied between two and twelve appropriate flight feathers. By the 18th century, feathers from a variety of birds were used, each one selected for special characteristics. Raven or crow feathers were the finest, but goose feathers were the most common (www.jasa.net.au/quillpen). Turkey and pheasant feathers are also noted (Gilgun 1993:238). Use of chicken feathers was not mentioned in the sources consulted.

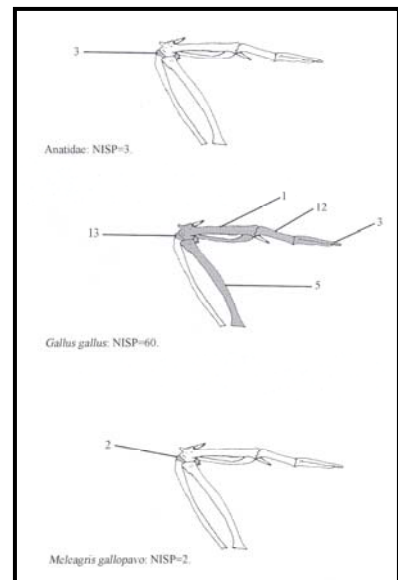


Figure 40: Forefoot elements from bird taxa, zone 2 fine screen



Figure 41: "Cutting a Quill Pen" (www.jasa.net.au/quillpen)

Gilgun (1993) and others described the production of quills. When the quills are plucked, the interior and exterior of the shaft is covered with membranes. These are removed by burying the end of the quill in heated sand, then scraping away the dried membrane. Heating also strengthens the quill shaft. The point is cut in a fashion that resembles a fountain pen. The shaft is cut at an angle, and the point is tapered to desired width. The point is then blunted, and the underside is scraped smooth. The tip is then slit vertically, allowing ink to flow from the shaft. Pens were sold by street vendors, at markets, and stationer's shops (www.jasa.net.au). In 1766, the bookstore of Robert Wells offered crow quills for sale (South Carolina Gazette, 1766).

An alternate use of quills, particularly at an entertainment venue, is the manufacture of picks, or plectra, for a variety of stringed instruments. Picks are used to pluck or strum stringed instruments, including the guitar, mandolin, banjo, and zither. Often these were made from tortoise shell (Baines 1966:36). The shafts of feathers were used for instruments requiring smaller or softer plectra, such as the harp and harpsichord (Baines 1966:61). Crow quills were also evidently the feather of choice for replacing the plectra of harpsichords in the 18th century. Again, feathers from different birds displayed different characteristics. Ads for musical supplies throughout the 18th century specify crow quills, so they were evidently available in Charleston (Butler, personal communication 2009).

Quills were used to repair or replace the plectrum of harpsichords, an instrument that was part of the colonial Charleston music scene (Rosenberg, personal communication 2009; Butler, personal communication 2009; Watson, personal communication 2009). Harpsichords feature a separate plectrum for each string. The plectra are very small and gently tapered. Feathers from crows or ravens were favored in the 18th century Britain, while some makers in Italy used vulture quills (<http://en.wikipedia.org/wiki/Plectrum>). Replacing the plectra in harpsichords is part of regular maintenance, and would be undertaken wherever the instrument was used (Watson 2009, p.c.). The harpsichord was considered somewhat portable, and was transported from a musician's home to rehearsal and performance. The musician usually did his own maintenance (Butler 2009, p.c.).

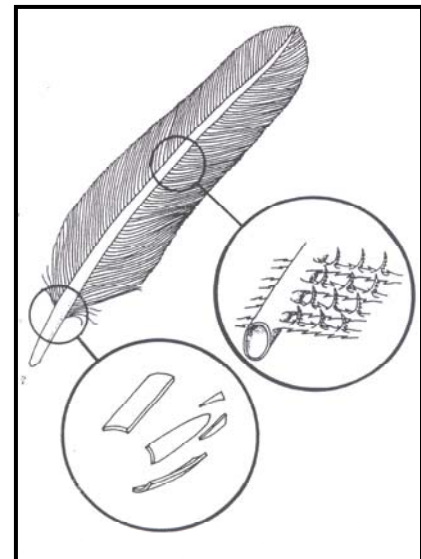


Figure 42: Detail of parts used for making plectra (from Barclay 1997:46)

Music was a regular part of performances at Dock Street. While the documentary record reveals much about performance at the theatre, little is known about the range of affairs at the building on a daily basis. Was someone in residence at the site? Was the site used for rehearsal, lessons, or maintenance of equipment, including instruments? A number of scholars were consulted on these issues, and the question of quill use at the theatre site. Dr. Nic Butler, music historian and author of *The St. Cecilia Society and the Patronage of Concert Music in Charleston, South Carolina* suggests that a harpsichordist might do his own repair, but this would take place in his own home or studio. The harpsichord would have

been transported to the theater only for rehearsal and performance. Dr. Steve Rosenberg, Professor of Early Music at the College of Charleston indicated that use of the quills for a harpsichord at Dock Street was possible. Dr. John Watson, Conservator of Instruments and Mechanical Arts at Colonial Williamsburg Foundation concurs that harpsichords were in use in Charleston at this time, and Charleston would have had many people capable of regular maintenance, including replacing the plectra. Dr. Watson concurred that crow, and occasionally raven, quills were preferred, although turkey quills are satisfactory replacements. Dr. Watson was unaware of any use of chicken feathers, as they lack the necessary stiffness. Finally, Dr. Odai Johnson of the School of Drama, University of Washington, was dubious of any application of the wings or feathers to production of theatre at Dock Street. He felt that the commercially-available crow quills would be adequate for local demand. Butler notes that every music advertisement in the 18th century specifies “crow quills”. Current instrument suppliers offer goose, turkey, and crow (www.fortepiano.com).



Figure 43: Bentside Spinet of Four Octaves, made in France by Nicolas Blanchet, 1686, open to show strings and plectra. Collections of The Charleston Museum, and on exhibit at the Heyward-Washington House.

The recovery of bird specimens from the Dock Street privy provides tantalizing clues to daily events at the theatre. Such specimens may reflect the production of pens, or the maintenance of musical instruments, both activities likely associated with the theatre. The specimens recovered, however, do not exactly match the prescribed materials for either task.

The fact that these specimens are unique among the numerous Charleston assemblages suggests that they reflect events specific to the theater. Just what these are remains elusive.

Other aspects of the site assemblage provide clues to theater life. The well-preserved pollen record contained evidence of ornamentals likely used in floral arrangements, particularly carnations, lilies, and honeysuckle. That these plants produce little pollen suggested to Jones that they were plants likely discarded in the privy. Finally, the recovery of vegetable pollen, as well as the ceramics and glass artifacts, suggests that food service and consumption was part of theatre life.

Archaeology of Public and Entertainment Venues:

In over two decades of archaeological research in Charleston, a number of multi-component sites that have been defined as venues of ‘public entertainment’. These are sites that were entirely commercial, or both residential and commercial, where the commercial activities involved the preparation and consumption of food outside of the domestic setting. Public venues appropriate for comparison to the Dock Street Theatre include McCrady’s Tavern and Longroom (Zierden et al. 1982) and Lodge Alley, site of the first Masonic lodge and various boarding houses in the 18th century (Zierden et al. 1983a). Even the Beef Market may be classified in this category, as some of the recovered materials reflect informal socializing and food consumption at the site (Zierden and Reitz 2005).

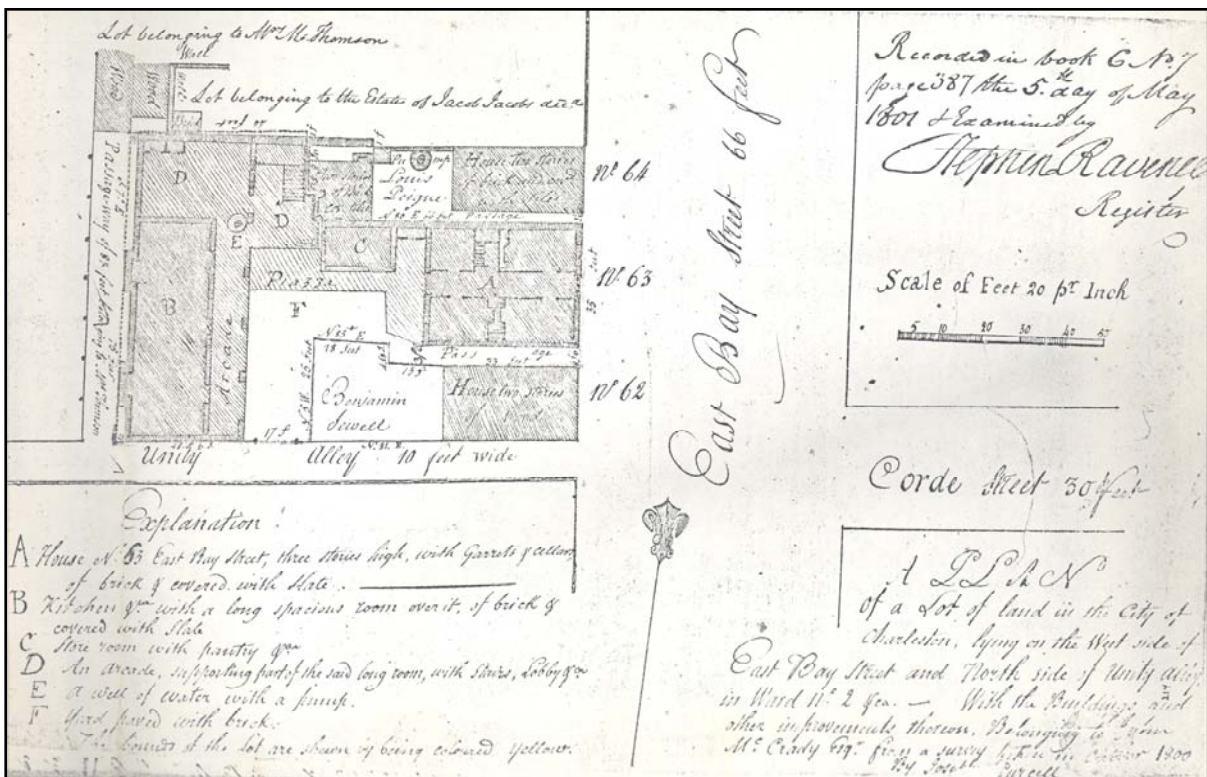


Figure 44: 1801 plat of properties associated with McCrady’s Tavern and Longroom. The tavern occupied the first floor of the house (A) fronting East Bay Street. The Longroom behind was accessed from a passage beside the house, leading to a ‘yard paved in brick’ (F). The ground floor featured a large kitchen (B) and arcade (D), “with a long spacious room over it”. A pump (E) and pantry (C) completed the compound.

Interpretation of public entertainment is complicated by varying scenarios at the sites: some sites were also full-time residences, generating a set of residential refuse. Some changed function through time, with mixing of some materials through redeposition. The Lodge Alley site reflects deposition of refuse from multiple buildings with multiple functions. Despite these issues, analysis of faunal remains from all of the Charleston sites indicates some measurable differences between the ‘public entertainment’ sites and residential sites in the city (Reitz and Ruff 1994; Zierden and Reitz 2009; Reitz et al. 2006).



Figure 45: wine bottle, c.1750.

The Dock Street cultural assemblage exhibits characteristics noted at other public sites in Charleston, and may help define a data set for such sites. The assemblage consists principally of materials in South’s Kitchen group – those associated with food preparation and service. When compared to the general Charleston profile, the sites exhibit a larger proportion of ceramics associated with cooking, and a reduced number and range of service vessels. Green beverage bottles are present in relatively large numbers. Tobacco pipes are present in larger proportions. In contrast, artifacts in the clothing, furniture, and personal group are absent, or present only in reduced amounts. This pattern was recently observed at two sites that may be considered public, though not ‘entertainment’ venues. The assemblage at the Charleston Courthouse presented a similar artifact profile, as did the artifacts from the waterfront fill and Lower Market at South Adger’s Wharf (Joseph and Elliott 1994; Agha and Poplin 2008).

McCrary’s Tavern and Longroom is the most comparable to the Dock Street theater, in terms of site function. The property on East Bay Street was used for a variety of functions until Edward McCrary began operating a tavern there some time in the 1770s. His business was evidently successful, for he purchased the property in 1778, and ten years later purchased adjoining properties on Unity Alley and constructed a longroom. The completed longroom served a somewhat different function than the tavern. Longrooms were traditionally used for special, festive occasions, and functioned as banquet halls, conference rooms, ballrooms, and theaters. McCrary’s was the scene of concerts, caucus and plays. The Society for the Cincinnati entertained President George Washington with a dinner during his southern tour of 1791 (Lipscomb 1993; Salley 1932:17). The building complex continued to serve as a tavern, and coffee house through the mid-19th century.

While the entertainment and socializing at McCrary’s was somewhat formal, the dining and socializing that likely occurred at the city Market was likely less so. The aspects of the material assemblage from the market – tobacco pipes, drinking glasses, some tableware, and cooking vessels, suggest a public setting for social activities. The market assemblage, in turn, is comparable to a number of colonial tavern assemblages (Zierden and

Reitz 2007:239-240; see also Rockman and Rothschild 1984; Luckenbach 2002; Brown et al. 1990; Bradgon 1981). Bradgon summarizes the characteristics of tavern assemblages as “ A large number of vessels, a large percentage of drinking vessels in relation to the total ceramic sub-assemblage, a large percentage of those ceramic types most often found in the form of drinking vessels, specialized glassware, and a large number of pipestems”.

Four ‘public entertainment’ venues from the colonial period are compared in Table 21 below. These are compared to the Charleston average for the mid-18th century (1720-1760). The data suggest considerable variation among the assemblages. The McCrady’s and Lodge Alley assemblages are somewhat later than those from the market and from Dock Street, and this is reflected in a relatively lower proportion of glass. Variation in the proportions of colonial ceramics is also a function of temporal association. Finally, some variation is relative to sample size. The assemblage from Dock Street is relatively small (n=230 kitchen artifacts), giving extra weight to the few clothing items recovered. The Lodge Alley assemblage, retrieved from the water-washed, highly trampled soils of the alley itself, is relatively large (n=2713 kitchen artifacts).

Among the assemblages shown below, the Early Market shows the greatest variation from the Charleston average. The elevated presence of Arms and Activities items are likely reflective of the market function (Zierden and Reitz 2005). It is the Kitchen group that reflects the social function of the site. The sites also exhibit significant variation in the architecture group. This category varies considerably across Charleston sites in general, and is reflective of the type of buildings present, and the site formation processes. The early market likely had no building, while the Lodge Alley units were located in a public thoroughfare. The Dock Street building collapsed in a fire, while the McCrady’s site featured a dense sprawl of structures, with multiple episodes of building and renovation.



Figure 46: wine bottle neck with wire closure.

Table 21
Comparison of Public Entertainment Assemblages

	Dock St	Early Market	McCrady’s Longroom	Lodge Alley	Charleston 1720-1760
Assemblage					
Kitchen	54.3	74.0	61.9	72.1	55.8
Architecture	31.8	13.9	26.5	19.9	26.0
Arms	0	2.7	.12	.08	.19
Clothing	1.1	.1	.25	.1	.64
Personal	.3	0	.5	.9	.29
Furniture	0	.05	.12	.3	.25
Pipes	11.9	15.7	10.0	6.3	11.2
Activities	.3	1.7	.25	.1	5.4

Ceramics

White saltglaze	5	2.7	6.0	11.8	
Chinese porcelain	5	3.7	11.8	8.1	6.07
Delft	46	30.7	26.3	10.5	
French/Spanish		.22			
Slipware	15.0	20.2	18.9	34.1	
Lead-glazed ware	6.0	9.0	4.7	4.7	
Colono ware	9	3.8	3.1	.9	22.3
Glass, % kitchen	31	38	24.8	15.0	32.5

Despite these variables, general trends are evident, when compared to the Charleston mean. Personal, clothing, and furniture items are scarce, while tobacco pipes are more common. There is an elevated proportion of green bottle glass relative to ceramics. There are fewer table ceramics, both in overall numbers and range of types. Finally, there is an increased number of earthenwares used for cooking and storing food. This pattern of public consumption is worthy of additional research. The urban archaeological record appears to be filled with a common range of artifacts, no matter the history of site use and development. Discerning differences among various assemblages refines our understanding the archaeology of urban life.

The Material Signature of Colonial Charleston

Because the deposit can be dated to a quarter-century, with confidence in the beginning and ending dates, the Dock Street privy provides an opportunity to refine the definition of artifact assemblages used in Charleston during the second quarter of the 18th century. Three large projects conducted in the past are directly comparable to Dock Street; the Charleston Judicial Center (Hamby and Joseph 2004), the Beef Market (Zierden and Reitz 2005), and the Heyward-Washington House (Zierden and Reitz 2007). All of these sites exhibit well-defined strata, often datable to a single decade, and numerous features associated with both domestic and commercial activities. Considered together, the sites provide baseline data on the city's material culture as it reflects Charleston's development during the colonial period.

The second quarter of the 18th century was a period of physical growth and economic coalescence for the port city. Rice and indigo production on lowcountry plantations solidified the economic base of Carolina planters. These plantation crops replaced deerskins as a major source of income, while white settlement pushed Native groups farther to the interior. A series of natural disasters, particularly the fire of 1740 and the hurricane of 1752 cleared areas of the city for rebuilding in newer, grander styles. The port and waterfront continued to develop, and the enclosing city wall was continually breached for access to bridges and wharves (Joseph et al. 2000; Zierden and Reitz 2002). Despite this growth, the

material wealth that characterized the city on the eve of the Revolution was still some decades away. The archaeological record of the early 18th century reflects a more modest assemblage of possessions.

Charleston's material assemblage has been subdivided temporally for sites occupied throughout the city's 300-year history, into 50-year subassemblages. Three broad periods were based on available archaeological data, specific site events, and general historical and technological trends. Specific artifact types and classes were considered as part of the overall analysis. The stratified deposits at the Heyward-Washington site and the Beef Market provided an opportunity to refine the definition of temporal components in Charleston to twenty-year time periods. These are shown below, relative to the Dock Street assemblage.

Table 22
Ceramic Types, Relative Proportions

Ceramic type, % of total	HW, Market 1720-1740	HW, Market 1740-1760	Dock St. 1736-1754
Chinese export porcelain	1.7	5.3	4.0
Slip dipped saltglazed stoneware	3.2	1.9	1.0
White saltglazed stoneware	1.6	4.6	4.0
Nottingham stoneware	.4	.7	
British brown stoneware	.1	.2	
Westerwald stoneware	3.4	7.6	3.0
Brown saltglazed stoneware	.9	1.4	
North Devon gravel tempered ware	3.2	1.8	1.0
Sgraffito slipware	.8	1.3	4.0
Buckley earthenware	.2	.3	
Manganese mottled ware	4.2	3.1	5.1
Slip coated ware	1.1	1.1	1.0
Staffordshire combed & trailed slipware	12.3	22.0	15.3
American slipware	.1	1.2	
Lead-glazed coarse earthenware	10.8	6.0	6.1
Delft	27.2	23.5	45.0
French ceramics	.6	2.0	
Spanish ceramics	.6	.5	
Colono wares	17.8	9.5	9.1

The baseline artifact profiles derived from the Heyward-Washington and Beef Market sites were designed as a guide to understanding poorly-documented assemblages, and to gauging date of deposition for deposits, based on relative proportions of artifacts. The sample was created from only two sites, with different functions and occupations, and is not considered definitive. The strength of the comparison nonetheless comes from the narrow, and comparable, date ranges for the assemblages, made possible through detailed documentary records and well-preserved stratigraphy. Comparison with comparably narrow and well-documented Dock Street assemblage strengthened this model. Review of Table 22 above shows that the Dock Street assemblage is in remarkably close agreement with the

profile for 1740-1760, and also a good temporal fit. This close comparison strengthens the interpretation of the assemblages as typical for the period.

Together, these define an assemblage of ceramics used during the period, despite a range in dates of manufacture for the individual types. As discussed in Chapter IV, this significance derives from the principals of evolution and horizon (South 1972). Evolution occurs with each manufactured item, in this case ceramics. It will be created, rise in popularity until a peak is reached, and then decline in popularity until it is no longer available or used. Horizon is a compressed version of evolution, where an object experiences a broad and rapid spread in popularity.

The assemblages of this period are dominated by delft, a tableware, and Staffordshire slipware, an earthenware used for both cooking and consumption. These wares, developed earlier in the 18th century, remain the cornerstone of kitchen wares. Slipware evidently replaces lead-glazed earthenwares to some extent, as these decline from the earlier period. The late 17th/early 18th century earthenwares from the Devon region are slightly less common in the mid-18th century, but together North Devon Gravel Tempered ware and Sgraffitto slipware average 3% of the assemblage, and are 5% of the Dock Street ceramics. The earthenware drinking vessels, represented by fragments of Manganese Mottled Ware and Slip Coated ware together comprise 4% to 6% of the wares.

The utilitarian stonewares that were produced through the 18th century increase in frequency by the mid-18th century. These wares, usually associated with food preservation and storage, were evidently not used at Dock Street. It is also interesting to note that Westerwald was the preferred ware for chamber pots, and none were recovered at Dock Street. Evidently, use of chamber pots was not part of the hygiene regimen at this public site.

Locally made colono ware decline in frequency relative to the European wares, but still remain a significant part of lowcountry foodways. Colono wares are nearly 10% of the mid-18th century ceramics, a pattern reflected in the Dock Street assemblage, as well.

From this profile, we can also posit the time lag between invention or purchase of objects, their use on a daily basis, and their eventual destruction and/or discard. The length of use can, of course, vary tremendously. Individual objects may be used and/or retained long after their date of manufacture, and it is not possible to measure this activity. The Dock Street assemblage contained several fragments of combed and trailed slipware decorated with carefully combed designs from the first quarter of the century. Several Westerwald stoneware fragments can also be attributed to the first decades of the 18th century. Finally, the form of the Chinese porcelain tea bowl places it squarely in the first two decades of the century.

Slip coated ware has a narrow date range, 1720 to 1740, and so was obsolete shortly after construction of the privy; the ware was recovered only from the construction layer. Likewise, the cornaline d'alleppo beads recovered in the fill are most commonly associated with deposits predating 1730. Together, the data suggest that a significant portion of the wares discarded at Dock Street were manufactured two decades before construction of the

privy. As some of these were recovered from zone 3, it is possible that they were discarded on site prior to theatre construction, and mixed into the soils at the time of building. Other wares, such as the white saltglazed stoneware, were developed after construction in 1736, and therefore discarded after a relatively short use-life.

The small, but well-preserved assemblage from Dock Street contributes to the developing profile of Charleston's material culture assemblage during the colonial period. The Dock Street assemblage is comparable to those from sites of the same period, where the sample is larger. Together, these provide a reliable profile for further comparative study.

Summary

The late discovery of an intact, refuse-filled feature at the site of Charleston's Dock Street Theatre provided an opportunity to retrieve data on daily life during the colonial period. The small project yielded a collection of cultural and environmental material unique among the Charleston assemblages. Foundations discovered during construction suggest a privy, and the organic content of the fill confirmed this interpretation. The recovery of datable artifacts in the fill and in layers beneath the foundation suggest the privy construction was original to the theatre in 1736, and likely abandoned when the theatre burned in 1754. The foundation and fill were remarkably undisturbed.

The cultural and environmental materials suggest that food was prepared and consumed at the theatre. The range of meats consumed overall is similar to other Charleston sites; the Dock Street assemblage, however, featured a larger number of fish and wild birds than other colonial sites. The pollen evidence was likewise productive, with extensive evidence of foods consumed. Possible plant foods consumed include the parsley family (carrots, parsley, dill, fennel) and the mustard family (broccoli, cauliflower, Brussel sprouts, cabbage, mustard, and rapeseed). There was also evidence of beans and buckwheat in the assemblage.

The faunal and floral samples also provided evidence of cultural activities at the site. The recovery of a large number of bird wings suggests production of quill pens, plectra for musical instruments, or brushes. The pollen evidence suggests deliberate deposition of lilies, carnations, and other ornamentals.

The small project nonetheless made significant contributions to the ongoing study of colonial Charleston. The privy provided previously unknown details on buildings and lot layout for the original theatre. The contents of the feature provided new information on commercial and public enterprises in the city. And the unusual preservation of small bones within a tightly dated context provided new details on animal use in the colonial city.

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