

**ARCHAEOLOGICAL INVESTIGATIONS AT THE VANCE SITE  
ON THE UNIVERSITY OF NORTH CAROLINA CAMPUS,  
CHAPEL HILL, NORTH CAROLINA**

**by**

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## ABSTRACT

The Research Laboratories of Archaeology at the University of North Carolina at Chapel Hill conducted data-recovery excavations at the Vance site (RLA-Or467, 31OR638) during November 2011. This work investigated nineteenth-century features exposed during the installation of a stormwater drain for the Battle-Vance-Pettigrew building. The project area was located on the east side of Vance Hall and lies within the Chapel Hill Historic District, which is listed on the *National Register of Historic Places*. During the nineteenth century the excavated area was located at the boundary between University property and Lot 11, a privately-held parcel auctioned off by the University Trustees in 1793. Excavations revealed that the modern storm-drain trench had cut through a nineteenth-century storm drain and cellar pit. Artifacts from a prehistoric American Indian occupation of the area sometime between 3,000 and 300 years ago were also uncovered. Although the nineteenth-century stone-lined drain and cellar pit had been disturbed by twentieth-century activities, intact portions of these features yielded significant information concerning antebellum Chapel Hill. In particular, a large quantity of kitchen and dining debris in the form of animal bone and historic ceramics were recovered. The analysis of these materials, in combination with archival information, provides unprecedented information about mid-nineteenth-century foodways in Chapel Hill. In addition, the stone-lined drain can be identified as part of an engineering project designed by UNC professor Elisha Mitchell and built by slaves in the early 1840s. Future archaeological work to identify and assess outbuildings and other deposits associated with such border spaces would significantly contribute to our understanding of the history of the relationship between the University and Chapel Hill. Such deposits remain intact less than a foot below the modern ground surface and should be considered during the planning stages of ground-disturbing activities on campus.

## ACKNOWLEDGMENTS

Many people contributed to this project, and their efforts have enabled us to develop a more detailed understanding of daily life in antebellum Chapel Hill. Archaeological endeavors tend to be logistically complex undertakings that require planning, archival research, fieldwork, laboratory work, analysis, and dissemination of results. All of these aspects of the Vance site project were accomplished with the assistance of UNC staff, faculty, and student employees and volunteers, as well as other researchers off site who generously contributed resources to this project.

We are grateful to Wendy Hillis, formerly of UNC Facilities Planning, for reviewing the proposal for this project and securing funding for mitigation work at the site. We would also like to thank Todd Snyder, Progressive Contracting Co., Inc., Sanford, NC, for coordinating the installation of the Battle-Vance-Pettigrew stormwater drainage system with our archaeological assessment activities. Although the Vance site excavations were relatively small in extent, they revealed a set of complex stratigraphic relationships that were revealed by the diligent work of Brett Riggs, Steve Davis, Anna Agbe-Davies, Lindsay Bloch, David Cranford, Duane Esarey, Mary Beth Fitts, Elise Duffield, Bouran Mozayen, Andy Valiunas, Isaac Warshauer, and Hunter Riddick. The excavation units were protected from the elements by a shelter engineered by Steve Davis, who also maintained total station data and took documentary photographs. All of the excavators are grateful to Tom Bythell and Tom Sudderth of UNC Grounds Services for arranging for the completed excavation units to be filled in with mechanical equipment.

The artifacts and soils collected during excavations at the Vance site were cleaned and processed by a bevy of undergraduate students including Isaac Warshauer, Hunter Riddick, Marisa Hobbs, Jonathan Branch, and Shane Hale. Elise Duffield ran the water screen and processed flotation samples. When all materials were cleaned and processed, Steve Davis compiled the artifact catalog. Artifact analysis was completed with the assistance of undergraduate and graduate archaeology students. Elise Duffield and Marisa Hobbs worked with Steve Davis to conduct window glass analysis, and Bouran Mozayen examined the button assemblage. Graduate student Lindsay Block assisted with the analysis of the ceramic assemblage, and Ashley Peles conducted an analysis of the faunal remains and wrote a report of her findings. Dr. Walter Klippel of the University of Tennessee graciously allowed Ashley access to his comparative faunal collection. Mary Beth Fitts examined macrobotanical samples in the laboratory of Dr. Margaret Scarry, who also assisted with species identifications.

Archival research for this project was conducted by Mary Beth Fitts, who benefitted from the attentiveness and patience of the staff of UNC Archives and the North Carolina Collection. Robert D. Hohertz of the American Society of Check Collectors provided information regarding nineteenth-century patent medicine tax stamps. This report was compiled by Mary Beth Fitts. Finally, this project would not have been possible without Lisa-Jean Michienzi and Vin Steponaitis of the Research Laboratories of Archaeology, who provided behind-the-scenes organizational support.

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## Chapter 1

### INTRODUCTION

This report describes the results of a project designed to mitigate, through data recovery, damage to archaeological remains along the east side of Vance Hall on the campus of the University of North Carolina at Chapel Hill. The work was limited to a 3x3-meter area (approximately 100 square feet) between the building foundation and an adjacent brick walkway (Figure 1). This area lies within the Chapel Hill Historic District, which is listed on the *National Register of Historic Places*. This project resulted in the identification and excavation of intact cultural features, specifically a cellar pit and one end of a stone-lined drain, both of which date to the first half of the nineteenth century. Although partly disturbed by late-nineteenth and twentieth-century activities, the intact portions of these features yielded significant information about daily life in Antebellum Chapel Hill. Since these features were located near a boundary between public university property and a parcel that was privately held into the early twentieth century, this information is useful for investigating the interface between two entities often called “town and gown.” In addition, this project re-affirmed what already has been demonstrated by other archaeological projects conducted on UNC’s campus, namely that archaeological features from the earliest portion of Chapel Hill’s history do remain intact beneath the modern ground surface despite more than a century and a half of development and maintenance activities.

All excavations were conducted by students and staff of the UNC Research Laboratories of Archaeology under Permit 92 of the North Carolina Archaeological Resources Protection Act, and were sponsored by the UNC Facilities Planning Department. Fieldwork took place between November 15 and November 23, 2011, and consisted of the hand excavation of features and nineteenth-century soil deposits down to clay subsoil. Fieldwork was supervised by R. P. Stephen Davis, Jr. and Brett H. Riggs. The excavation crew consisted of one paid graduate field assistant and seven undergraduate, graduate, and faculty volunteers. In addition to the early nineteenth-century features identified by this project, a few artifacts indicating the presence of American Indian activity in the area sometime during the last 3,000 years were also recovered. The archaeological resources identified by this project have been designated the Vance site (RLA-Or467, 31OR638).

### Project Background

On October 21, 2011, trench excavations undertaken by outside contractors to replace clogged stormwater lines for Battle-Vance-Pettigrew exposed potentially significant archaeological remains along the east side of Vance Hall. Specifically, they uncovered numerous large fragments of pottery dating from the second quarter of the nineteenth century, as well as bottle and window glass, animal bones, and dislodged foundation stones. Upon notification by the contractors, archaeologists from UNC’s Research Laboratories of Archaeology collected the artifacts exposed by trenching and undertook limited excavations within and adjacent to the newly excavated trench to determine the nature of the deposits that produced the artifacts (Figure 2). This work documented what appeared to be a large, roughly circular, filled-in pit that had been bisected by the trench to a depth of about one foot. Probing of the pit with a soil auger and steel probe encountered dark, refuse-laden fill and buried rocks or

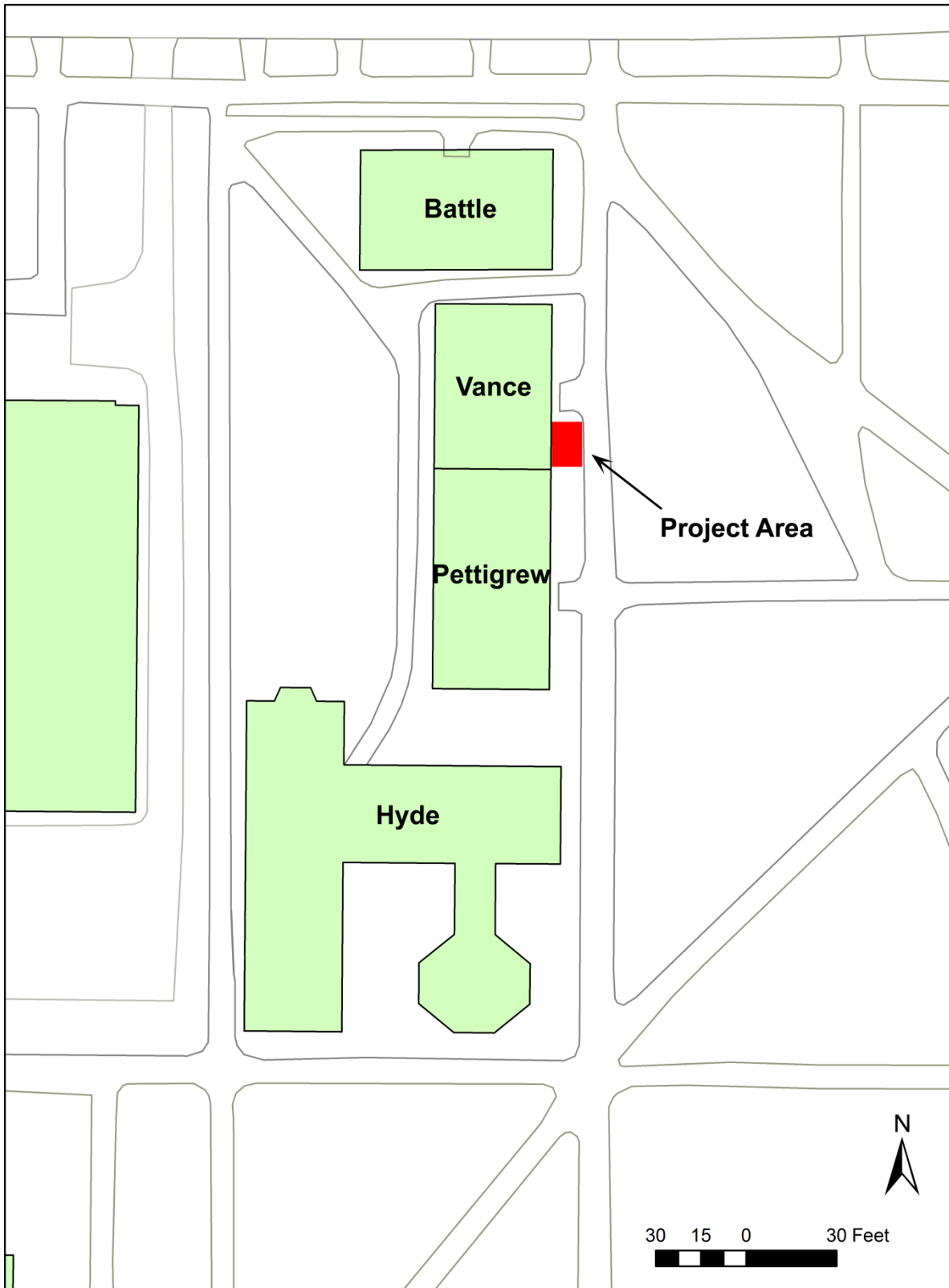


Figure 1. Location of the project area on the campus of the University of North Carolina at Chapel Hill. The Vance site (RLA-OR467, 31OR638) is located within this area, but also likely extends beyond it to the north and east.



Figure 2. Preliminary archaeological investigation of the Vance site within the trench dug for drainage pipe installation.

bricks which prevented a determination of the feature's total depth below the exposed surface. This feature also produced most of the recovered artifacts. Adjacent to the pit and resting upon undisturbed subsoil was the edge of a possible foundation stone likely lying in its original position; immediately beside it were three conjoining fragments of a large, decorated, redware platter (Figure 3). Pottery of this style has been dated elsewhere to the early nineteenth century (Zug 1986).

This initial investigation concluded that the feature was likely a well dug during the late 1790s or early 1800s and filled in during the 1830s or early 1840s. This interpretation was based on the size and apparent shape of the feature, the presence of dense stone or brick rubble within it, and the age of identified ceramics. The presence of an apparent foundation stone adjacent to the feature suggested it was contained within a frame structure, or well house. A nineteenth-century well contained within a 14x18-ft structure supported by stone footers was excavated in 2004 behind the James Lee Love House, which is now home of UNC's Center for the Study of the American South (Boudreaux et al. 2004). A c.1800 plat of Chapel Hill and the University shows a residence on Lot 11 at the approximate location of present Battle Hall (Jones et al. 1998:81), and it seemed likely that the archaeological features near Vance Hall were associated with this residential complex (Figure 4). While the archaeological features later were determined to be a cellar pit and a stone-lined drain rather than a well house, they are nevertheless clearly associated with the late eighteenth through early nineteenth-century residential complex at the northeast corner of Lot 11.



Figure 3. Fragments of a nineteenth-century redware platter uncovered during preliminary assessment of the Vance site.

## Research Design

The data recovery plan for this project included fieldwork, artifact analysis, archival research, and report writing components. The fieldwork component would take place within an approximately 10x15-foot area bounded by Vance Hall and an adjacent brick walkway, which would not be disturbed by the excavation process. The proposed excavation would proceed by first removing by hand the modern overburden from above the archaeological feature and its immediate periphery in order to expose the undisturbed pre-1912 ground surface. The buried topsoil, which built up over the nineteenth and early twentieth centuries, would then be hand-excavated and screened through 1/4-inch mesh to retrieve artifacts. Fill within the archaeological features would be hand-excavated and waterscreened off-site through 1/16-inch mesh to ensure the recovery of fine-scale faunal remains and other small artifacts.

Once fieldwork was completed, all artifacts would be cleaned, cataloged, labeled, and prepared for analysis by undergraduate lab assistants and volunteers. Background research, analysis of excavation results, and report writing would be undertaken by an RLA graduate research assistant, and conform to reporting requirements of the North Carolina Office of State Archaeology. Artifacts recovered by the project and associated field and analysis records would be curated by the Research Laboratories of Archaeology.

The discovery that the archaeological features adjacent to Vance Hall were a stone-lined drain and a cellar pit helped focus subsequent documentary research and artifact analysis. One primary goal of artifact analysis was to use categories of materials with well-documented ranges of manufacture, such as ceramics, and those with attributes that change predictably through the nineteenth century, such as window glass thickness, to determine when the features were likely



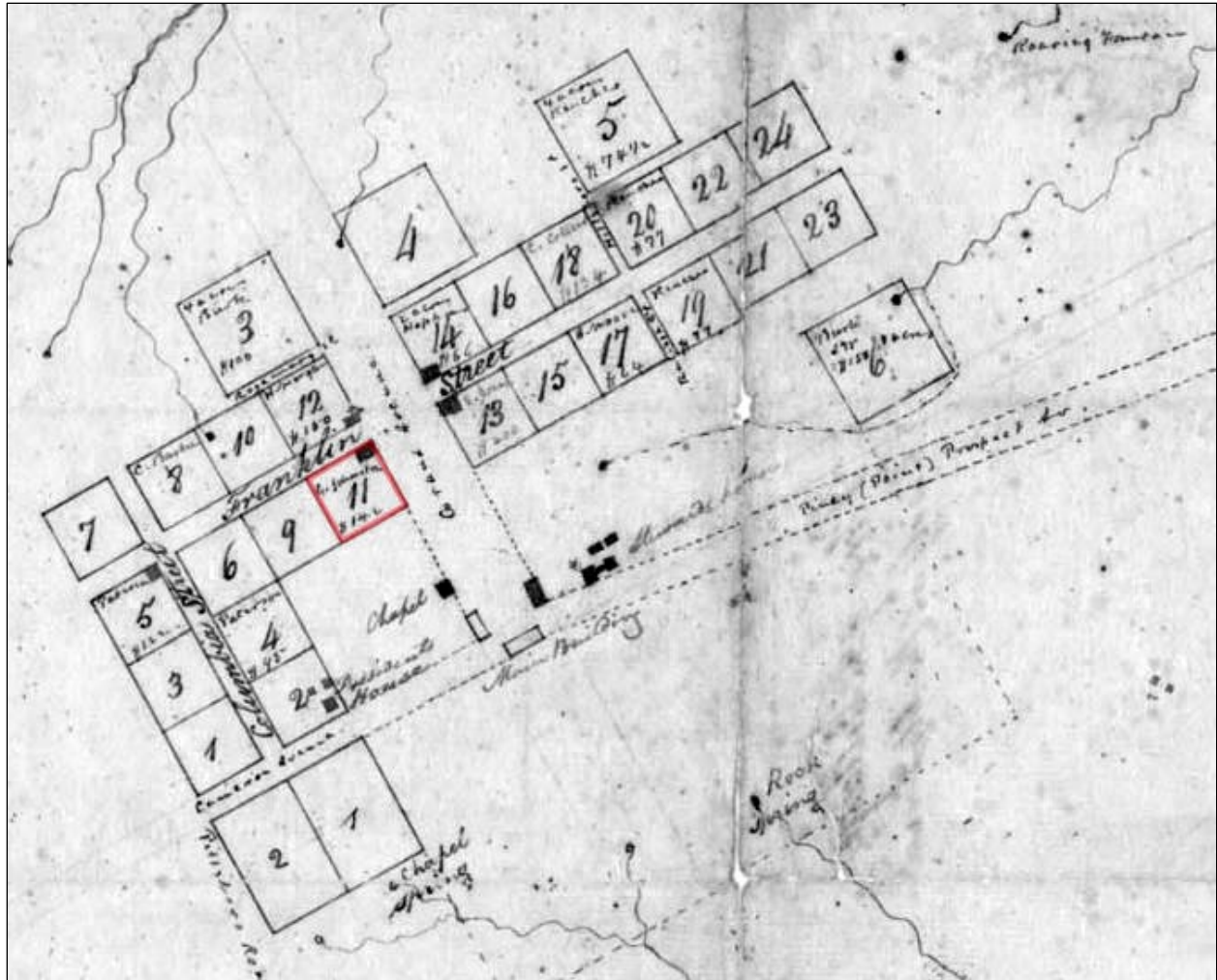


Figure 4. “Plan of the Village at the University with the Adjoining Lands Belonging to the Institution,” produced between 1797 and 1812. University of North Carolina Papers (#40005), University Archives, University of North Carolina at Chapel Hill. Note Lot 11 which is labeled “Geo. Johnston – \$142” and shows a structure at the northeast corner of the parcel.

constructed, used, and filled in. The artifact assemblage also would allow for more general insights into the kinds of activities that took place in the northern portion of Lot 11. Documentary research focused on locating information that might pertain to these features and also put them in a broader context. University archives were examined for references to the construction of drains and infrastructure, and local nineteenth-century newspapers were scanned for references to the owners and inhabitants of Lot 11. This work was facilitated by previous research on Lot 11 conducted by Jones et al. (1998) as part of a project investigating the Pettigrew site (RLA-Or412, 31Or464), located at the southern end of Lot 11 under present Hyde Hall. Information about nineteenth-century sanitation practices in general was also assembled so that the significance of the archaeological data recovered from this project could be understood more fully. Finally, since the project area is located at a boundary between public University property and a parcel that was privately held into the early twentieth century, information about such interfaces was also collected.

This report addresses the following questions: When were the archaeological features constructed? Who designed them and who made them? What activities took place in and around the northern portion of Lot 11 during the nineteenth century? What can these and similar archaeological features tell us about interfaces between the University and town during the Antebellum Period?

## Chapter 2

### CONTEXT

The University of North Carolina at Chapel Hill is the oldest public-supported institution of higher learning in the United States, and for this reason its history is significant at both the local and national levels. Article 41 of the 1776 North Carolina Constitution provided “that a school or schools be established by the Legislature, for the convenient Instruction of Youth, with such Salaries to the Masters, paid by the Public, as may enable them to instruct at low prices; and all useful Learning shall be duly encouraged and promoted in one or more Universities.” While the Representatives may have recognized education would produce children “capable of freedom” (Battle 2002[1907]:1), they were also pursuing freedom themselves. The General Assembly of North Carolina had attempted to establish a college at public expense as early as 1754, but all attempts to do so were thwarted by the Crown (Snider 1992:5–6). Thus, when the University of North Carolina opened its doors in 1795, it was the culmination of a 40-year project valued by both the Scotch-Irish “dissenters” living in the western part of the state and the more aristocratic Federalists of the east (Snider 1992:8).

In 1792 the committee charged with selecting a site for the University visited 14 locations near Pittsboro, Haw River, and Raleigh, each nominated by a set of landowners willing to donate land for the establishment of the institution. The committee unanimously selected New Hope Chapel Hill, where landholders offered 1,386 acres and £798 in donations (Snider 1992:14). The lofty view offered by Point Prospect along with the community’s “central situation, on some of the most public roads in the state” were among the benefits of Chapel Hill offered by William R. Davie in the announcement of the Trustees’ auction, in which lots adjoining the campus would be sold (*North Carolina Journal*, 25 September 1793). While these roads made it possible for people and materials to arrive in Chapel Hill from afar, the journey was by no means an easy one. Prior to the construction of railroads, imported materials were shipped up the Cape Fear River to Fayetteville and then hauled the rest of the way to Chapel Hill (Battle 2005[1883]:4). However, for trustees such as the Reverend Samuel E. McCorkle, this relative remoteness was desirable because they reasoned it would make the vices and distractions of population centers less accessible to students (Henderson 1949:54).

The University’s existence as a publicly-funded institution and the selection of Chapel Hill as its location highlight two subjects important for interpreting the Vance site. The first is the attribution and interplay of public and private resources; the second is the relationship between the ideals of University leaders and the logistics of building and maintaining such an institution. This rest of this chapter provides background information on Lot 11, investigates the history of sanitation practices at the University, and considers other interfaces between the University and Chapel Hill relevant for understanding boundary spaces such as the Vance site. As this research will hopefully show, the neat, straight lines of plat maps belie the complex material realities of such spaces.

### History of Lot 11

The chain of title for Lot 11 was systematically documented by Jones et al. (1998) in order to interpret archaeological materials excavated at the south end of the lot. Archival

information recovered during the current project provides additional detail concerning the chronology of improvements to the parcel. Since the bulk of the artifacts recovered from the Vance site date from the second quarter of the nineteenth century, research efforts focused on the antebellum history of Lot 11.

*Mercantile Foundations, 1793–1837*

Lot 11 was platted as an approximately 2-acre lot and auctioned off by the University Trustees on October 16, 1793. It was purchased by George Johnston for £71 (Deed Book 5:84). Johnston sold the lot four months later for £71 to John McCauley (Deed Book 5:123). Despite the fact that the plat map illustrated in Figure 2 shows Lot 11 labeled “Geo. Johnston” and also depicts a structure in the northeast corner of the parcel, it seems unlikely Johnston made any improvements to the lot. While Johnston could have built a house and vacated the parcel in four months, the fact he sold the lot for his purchase price suggests he did not. The building shown on the plat map was more likely constructed by McCauley. Indeed, when he sold the eastern half of the parcel to William R. Davie in 1804, the price was £750 and the lot description refers to “the Store house of the said McCauley” (Deed Book 11:186). The term “store house” is somewhat ambiguous but is not used explicitly to refer to an ancillary building, suggesting McCauley had established a mercantile business on the lot.

William R. Davie was instrumental in the establishment of the University, but no documentation has been identified that might shed light on his specific interest in Lot 11. He owned the eastern half for less than two years before selling it to James Hogg, who moved to Chapel Hill from Scotland via Wilmington with his wife and college-aged son, Gavin (Vickers 1985:22; Keyes 1996:159–160). Gavin, who was a member of the Dialectic Society, graduated from the University in 1807, and was a tutor in the University the following year. He went on to become a noted lawyer practicing in Windsor, Bertie County, and later in Raleigh, but his parents continued to live in Chapel Hill. While the deed books are silent regarding the transactions by which the Hoggs acquired Lot 11, it appears they obtained both the eastern half owned by Davie and the western portion that had been retained by McCauley.<sup>1</sup> It is possible the Hoggs enlarged the original Store house to also serve as a residence, or built a residence next to it (Vickers 1985:22). James Hogg seems to have attempted to run the store established by McCauley, but quickly ran into financial difficulties; one of the parcels was forced into sale by creditors in 1806 and the other in 1810 (Deed Book 17:59–62). James Hogg’s financial difficulties may have been exacerbated by the depression that preceded the War of 1812. However, in each case his son Gavin was able to buy back the property at auction. The Hoggs owned Lot 11 until 1832, when Gavin sold it to Benton Utley (Deed Book 28:8–9). This change in ownership and family arrangements may have been spurred by the death of Gavin’s first wife in 1831, which left him a widower with an 11-year-old son.

Gavin Hogg sold all of Lot 11 to Utley for \$400. This apparent depreciation has been attributed to a regional depression and deterioration of the house (Vickers 1985:22); it does not

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<sup>1</sup> Previous research concluded that the Hoggs only owned the eastern half of Lot 11 (Jones et al. 1998). However, the transaction titled “David Ray to Gavin Hogg” (Deed Book 17:59–61) describes a parcel with a western corner adjacent to property “formerly owned or occupied by one Thomas Edwards.” Edwards owned the eastern half of Lot 9, which was immediately west of Lot 11. Edwards obtained it from John Caldwell in 1803 (Deed Book 11:242), who had purchased it from John McCauley in 1798 (Deed Book 7:213). McCauley had obtained the eastern half of Lot 9 from John Carrington, who bought the original two-acre lot at the Trustees’ auction.

appear any improvements were made to the parcel between ca. 1810 and 1832. This would change, however, with the entrepreneurial designs of Benton Utley. In the same year he bought Lot 11, Utley also bought out a dry goods business for \$19,715.54, financed as a two-year loan (Vickers 1985:23). Perhaps finding this project over-ambitious, Utley sought to abandon it the following year, but not without having made improvements to the property:

Selling off at COST!! The subscriber having made arrangements for removing from Chapel Hill, offers for sale, for *cash*, his entire STOCK OF GOODS AT COST. As his assortment is *general*, it is useless to enumerate articles, the Stock consisting of a great variety of Goods well selected and purchased upon the most advantageous terms. ALSO – A Dwelling House, Store House, and the building now occupied as a tailor’s Shop, and about three acres of ground under cultivation on which the buildings are situated. Part of the lot and all the tenements front on the main street, and in the centre and business part of the village. The Store House has been recently built; it is both spacious and convenient, being 60 by 30 feet. The whole will be sold together, or on lots to suit purchasers. Benton Utley, Chapel Hill, Nov. 18, 1833. [*The Harbinger* 19 Nov 1833]<sup>2</sup>

In December 1833, this advertisement was replaced by one that identifies James C. Holland and John Newton as Utley’s agents, “to whom those indebted should make payment without further notice” (*The Harbinger* 12 Dec 1833). A buyer for Lot 11 had not yet been found, and the agents suggest that “being anxious to sell, a bargain may be had, and immediate possession given.” This advertisement ran until February 20 of the following year. Since there is no record of Utley selling Lot 11 until 1837, it seems that he may have found some way to re-negotiate his terms with Newton and return to Chapel Hill. Utley’s continued operation of the shop on Lot 11 is supported by the University Bursar’s report for 1836, which contains a line item that reads: “Benton Utley’s bill of Sundries – \$3.49” (Mitchell to Manly, 19 Dec 1836, UNC Papers #40005). Benton Utley married Martha Hilliard in 1836, an event that seems to have precipitated his ultimate removal from the Lot 11 enterprise in 1837.

Utley’s ad provides important information about what Lot 11 looked like in the mid-1830s. There were three buildings fronting Franklin Street, and the back portion of the lot was under cultivation. The three buildings, possibly from east to west, were a residence, store house, and tailor’s shop. This orientation of the buildings is supported by the fact that when Zachariah Trice purchased Lot 11 from Utley in 1837 for \$1,800, the house “formerly occupied by...James Hogg” is noted as being in the northeastern corner of the lot (Deed Book 29:231). In addition to the house, Trice acquired “all the additional improvements, which have been made on there by the said Benton Utley.”

### *Strife and Grace, 1837–1847*

The Zachariah Trice family that owned, and may have moved into the Lot 11 residence in 1837, consisted of Zachariah, his second wife Martha (*née* Strayhorn), their five-year-old daughter who was also named Martha, and possibly the younger of Martha’s children by her first husband, Sampson Moore. According to the Greensboro *Patriot* (3 Mar 1830), Moore died “very suddenly” on February 16, 1830, leaving his wife of 21 years well-supported (Bynum 1992:73; Silkenat 2011:83). Martha married Zachariah Trice on May 16, 1831. Martha and

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<sup>2</sup> *The Harbinger* was a short-lived Chapel Hill newspaper operated by Isaac Patridge from 1833 to 1834 (Vickers 1985:39). The first time this advertisement ran, the year was mistakenly printed as 1832; this was corrected in the following edition.

Zachariah have been of interest to historians of nineteenth-century family life due to the “extremely well-documented suit of *Trice v. Trice*” (Bynum 1992:174). Despite a list of charges including squandering of Martha’s inherited fortune, battery, and adultery, Martha lost her divorce suit in 1842 and returned to her father’s home penniless, ultimately moving to Tennessee with her daughter in 1851. Bynum (1992:74) attributes this outcome, which is relatively unusual given the outcomes of similar cases, to Zachariah being a justice of the peace at the time of the suit. He also notes that while the case is well-documented, there are “interesting gaps in the records;” specifically, “all of the depositions taken in favor of Martha Trice at the home of her father, John Strayhorn, are missing from the file” (Bynum 1992:174). Zachariah was convicted of slave stealing from his brother in 1846 (Bynum 1992:46) and then effectively disappears from the historical record. The present research did not identify any record of his death, but he is not present on the 1850 U.S. census.

Zachariah Trice retained ownership of Lot 11 as a result of the 1842 divorce suit. The following year, however, he lost it in another suit (*King v. Trice*). The lot was auctioned off by the sheriff on February 27, 1843 and bought by Sidney Barbee for one dollar. The resulting deed notes that the execution included “two lots of ground...known as the Benton Utley property, which is now occupied by Sidney Barbee as a store” (Deed Book 30:227–228). The following year, Barbee bought out his partner S.S. Tower’s interest in the property for \$500 (Deed Book 31:157). This information suggests Barbee was running the Lot 11 store, and possibly also living in the residence prior to the sale. It is possible that it was Barbee, not Trice, who occupied Lot 11 for some or all of the period between 1837 and 1843. It also happens that Barbee and Trice were cousins; Barbee’s grandmother Sara Patterson was the sister of Trice’s grandfather Mark Patterson. Almost as quickly as he obtained title to Lot 11, however, Barbee sold it—the western half to Francis Devereaux and the eastern half to Charles Force Deems. The portion sold to Devereaux for \$700 contained “the house formerly owned & occupied by Benton Utley as a store” (Deed Book 32:30). From this point forward the eastern and western sections of Lot 11 have different ownership histories. Here, we focus on the eastern half due to its spatial proximity to the Vance site archaeological features.

No record has been located for the transaction between Deems and Barbee for the eastern portion of Lot 11, but it likely contained the original McCauley/Hogg building on the northeast corner. In 1842 at the age of 22, Deems, a charismatic Methodist preacher who had impressed University President Swain at an American Bible Society convention in Raleigh, accepted a professorship in logic and rhetoric at UNC (Deems 1897:80). In 1843 he married Anna Disosway, and they began their family on Lot 11: Theodore Disosway Deems was born on May 27, 1844, and Francis Melville Deems was born on December 18, 1846. Francis, as his father’s biographer, wrote that for Deems this period was “marked by perfect good will between the students and himself,” while his social and family life was such “that he ever looked back upon that period with pleasure almost unalloyed” (Deems 1897:93).

Deems’ high standing in the community can be gauged by the impression he made on Joseph John Summerell, who was a senior at UNC in 1842 and later married Ellen Mitchell, daughter of Professor Eliza Mitchell. Deems’ fame preceded him and the night before his first sermon in Chapel Hill, Summerell wrote “the curiosity & expectation of every one is on tiptoe to hear their youthful preacher tomorrow” (15 Jan 1842, Summerell Diary #05296-z, UNC Southern Historical Collection). These expectations were fully realized for Summerell, who the following day wrote “fluency dwells upon his tongue, and eloquence flows like honey from his lips.” Further, Deems’ manner was “presupposing and unaffected, graceful & elegant...the

inhabitants of this place, particularly the ladies were anxious to hear him again tonight.” Deems preached at the campus chapel, Union Church, Orange Church, and Miles Davis’ house, which was the location for meetings of Chapel Hill’s fledgling Methodist congregation (Vickers 1985:48). Thanks to Deems’ popularity the Methodist congregation grew in size, requiring new accommodations. Deems also officiated weddings, such as the marriage between John Watson and Nancy Utley (28 Feb 1845, Cornelia Spencer Phillips #683, UNC Southern Historical Collection). In the classroom Deems revamped the logic curriculum, as he found the text used previously a “most absurd and contemptible little treatise by Professor Hedge, of Harvard University, a book bearing the title of logic, with every essential thing belonging to logic left out” (Deems 1897:82). A man of relatively small stature, Deems noted “there was not a single student who could not have taken me by the nape of the neck and put me out of the window” but he managed “to make work for the class; so much so that they complained to the president that his young professor was making the department of logic absolutely more difficult than the department of mathematics” (Deems 1897:82).

A star burning so brightly was likely to attract a wide audience, and indeed Deems accepted an invitation to deliver the 1847 commencement address at Randolph-Macon College, a Methodist institution in Virginia. He was immediately offered the chair of natural science and left Chapel Hill that summer, selling Lot 11 to Jones Watson (Deems 1897:94–95; Deed Book 47:533–534). Even from afar, Deems continued to influence events in Chapel Hill: he helped Cornelia Spencer Phillips publish her memoir *The Last Ninety Days of the War in North Carolina* (1866), and in 1867 sent \$300 to establish a fund for needy students at UNC in honor of his eldest son, Theodore, who was killed in the Battle of Gettysburg. The Deems Fund was later endowed with \$10,000 from William H. Vanderbilt, who met Deems while he was pastor at New York City’s Church of the Strangers.

### *Boomtimes, Crisis, and Recovery, 1847–1882*

Jones Watson, whose father William was involved in the construction of the University’s Main (South) Building (Battle 1907:272; Vickers 1985:34), owned the eastern half of Lot 11 during a period of time critical to the modern American historical imagination. As political tensions increased exponentially during the decade before the Civil War, Chapel Hill experienced an economic boom due to continuously increasing student enrollment. In the 1849–1850 academic year, 91 students attended the University. This number nearly doubled in five years, reaching 380 in the 1855–1856 academic year (Henderson 1949:149). By 1858, 456 students were attending classes in Chapel Hill. At this time, only six campus buildings existed: the chapel (Person Hall), Old East and Old West, the Main (South) Building, Smith Hall (Playmakers Theatre), and Gerrard Hall. These buildings were not sufficient to house the increased number of students, and while the Trustees and faculty debated whether the existing buildings should be renovated or new ones built, the citizens of Chapel Hill took matters into their own hands. Those who had money to invest built multi-room cottages, called “offices,” in “corners of their yards or on vacant lots, all over town” (Henderson 1949:149).

There is some debate as to whether Jones Watson took advantage of this opportunity by constructing housing for student boarders on Lot 11. While there is no detailed record of his purchase of the eastern half of the parcel from Deems, it seems unlikely that the lot contained anything other than a residence and associated outbuildings. Vickers (1985:100) suggests that Watson remodeled the residence and named it the Central Hotel. Jones et al. (1998:7) are

skeptical of this claim, observing that while a hotel was constructed on the parcel in the late nineteenth century, there are no records of this building existing before the Civil War. They do note, however, that on the 1850s census Jones Watson's real estate was valued at \$2,000. Ten years later, Watson's real estate was valued at \$4,000. This increase in the value of his property may indicate that he undertook construction or renovations of some sort. The most parsimonious explanation for these facts may be that Watson did indeed take part in the student housing market— not by constructing a hotel, but by building an “office” cottage (Jones et al. 1998:14). Such a building, called the “Poor House,” did indeed exist on the extreme southern end of the parcel.

After the war, when student attendance was low and New East and New West had been constructed (1859), the “offices” present in the yard of “almost every substantial residence” were “reduced to serving as storage bins for a citizenry with little to hoard” (Vickers 1985:79). Some of these buildings were removed to “remote spots” and sold to poor African Americans (Henderson 1949:175). Jones Watson's strategy for dealing with the “Poor House” was to sell it in place. The original buyer, Henry N. Brown, bought the southern strip of Lot 11 containing the Poor House from Watson in 1869, but lost it in bankruptcy proceedings in 1872 (Deed Book 47:568–569). The next buyer, Jonathan W. Carr, appears to have ultimately let the building fall into disrepair. By the time he sold it to A.B. Roberson in 1883, it was reduced to a pile of bricks that the former owner pledged to “remove within a reasonable time hereafter” (Deed Book 47:569).

Constructing student housing was only one activity that sustained the Watson family. Prior to the Civil War, Jones Watson also operated a mercantile business. Something of his business practices can be gleaned from an advertisement he placed in the local paper:

Notice. I have just returned from the North, and am now receiving my Spring and Summer stock of GOODS, which consists of the usual variety kept in Chapel Hill, which I will sell low for cash or to punctual customers. I shall be much obliged if those who owe me for former years would pay, for I am really in NEED OF THE MONEY. I have been as indulgent to my customers as I well could be—with some I have waited a LONG time—it is nothing but common justice, now that I need the money so much, to call and pay up. I shall expect all who trade with me on a credit to settle up either by cash or note on the 1<sup>st</sup> of January as usual. [18 Apr 1857, *The Chapel Hill Weekly Gazette*]

During the war, Watson lost his mercantile business but retained ownership of a farm, and became a defense attorney at age 55 in 1868 (Vickers 1985:100). When the University closed in 1871, Watson's farm became an important source of revenue, and reportedly produced “an excellent grade of wheat” (Vickers 1985:84). He donated \$50 towards the renovation of the University for the 1875 re-opening (Vickers 1985:84). Both Jones Watson and his brother John were active in politics. John was mayor of Chapel Hill on four separate occasions in the late nineteenth century. Jones Watson served in the North Carolina General Assembly from 1872 to 1874 and as Mayor of Chapel Hill from 1882 to 1883. In 1882 he sold his portion of Lot 11 to Abner B. Roberson for \$2,500. The following year Roberson obtained the southern portion of the parcel that had contained the Poor House for \$35, uniting the eastern half of Lot 11 once more (Deed Book 47:568–569).



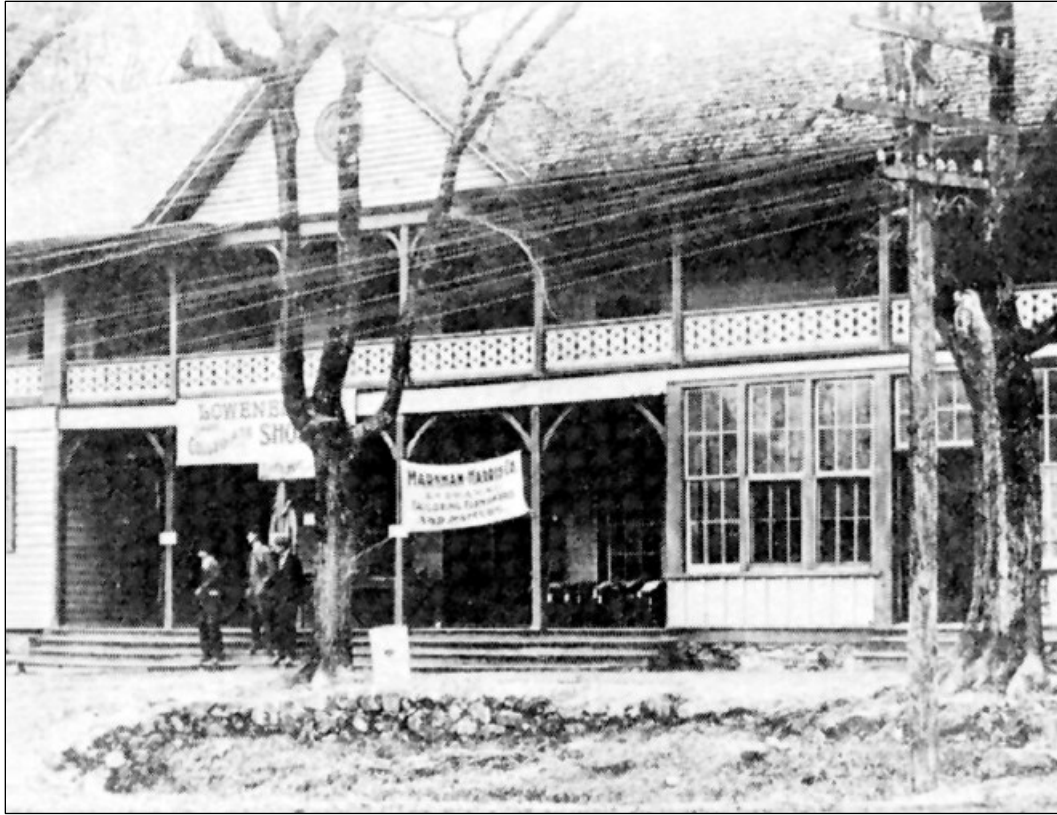


Figure 5. Veranda of the Central Hotel, photograph taken facing south on Franklin Street. Courtesy UNC North Carolina Collection.

### *Home Away from Home, 1882–1968*

Dr. Abner B. Roberson was born in Chatham County, studied medicine at the University of the City of New York, and began a practice in Orange and Chatham counties in 1866 (29 Jul 1885, *Durham Recorder*). Roberson already had a residence and general merchandise store in Chapel Hill. His purchase of Lot 11 in 1882 coincided with the Durham-Greensboro Southern Railway line beginning service to Chapel Hill, and he seems to have bought the property with a business venture in mind. Indeed, the “Roberson House” hotel opened on October 18, 1884, and reportedly could accommodate “twenty or thirty guests during the hot summer months” (29 Jul 1885, *Durham Recorder*). Students were said to find it a “capital place at which to board.” By the time of Roberson’s death in 1897 the hotel was being managed by Mrs. A. A. Kluttz; later it was managed by N. G. L. Patterson (Jones et. al 1998:11). In the early twentieth century the establishment was renamed the Central Hotel. According to one critic, the Central Hotel was “a large, box-like wooden structure” that was only “redeemed” by its verandas facing Franklin Street (Henderson 1949:219) (Figure 5). In 1911 the University bought the hotel property for \$10,000 and constructed the Battle-Vance-Pettigrew dormitories. Use of the parcel as student housing remained unchanged until 1968, when the buildings were converted to offices.

A different kind of student housing was constructed on the southern portion of Lot 11 sometime between 1908 and 1911. The Roberson heirs sold a 125-foot square parcel on the south end of Lot 11, where the Poor House earlier stood, to Fred J. Coxe in 1908 (Deed Book

60:511–512). Cox was likely operating on behalf of the Phi Delta Theta fraternity, as a house attributed to this organization is shown on the 1911 Sanborn map of Chapel Hill. The building was a frame structure, 2½ stories tall and approximately 32 ft north-south by 36 ft east-west, resting on a brick pier foundation (Jones et al. 1998:13). It was one of several fraternity houses that were built in a row between the businesses that fronted Franklin Street and the northern boundary of University property. In 1919 a fire destroyed several of these buildings and threatened Hill Hall, which at that time was the University library. Only Phi Delta Theta, on the east end of the row, and Delta Kappa Epsilon, at the west end, survived the blaze. Based on the demonstrated risk associated with having fraternity houses located immediately adjacent to campus, the Trustees moved purchase the associated properties in 1920 (Deed Book 76:382, 385, 543). The Phi Delta Theta house on Lot 11 was acquired by the University in 1929, and destroyed sometime after 1932 (Jones et al. 1998:14). The Delta Kappa Epsilon house, now known as Hill Annex, has been converted into faculty office space.

### **Previous Archaeological Investigations**

One previous archaeological research project has taken place on Lot 11. In the summer of 1997, the Research Laboratories of Archaeology (RLA) conducted excavations in the southern portion of the parcel at the proposed location of a new building (Hyde Hall) for the UNC Institute for the Arts and Humanities (Jones et al. 1998). The archaeological resources identified within the project area were designated the Pettigrew site (RLA-Or412, 31OR464). This work uncovered the foundations of two buildings that stood on the southern-most portion of Lot 11 in the nineteenth and early twentieth centuries: the Poor House and the Phi Delta Theta fraternity house (Figures 6 and 7). The Poor House foundations, which supported a brick structure, were the more substantial of the two (Figure 6). They revealed that the building was 120 ft long and 16 ft wide, and contained eight rooms heated by four chimneys (Davis et al. 2010:160). The Phi Delta Theta fraternity house, which was a wood-frame structure, had foundations that consisted of at least eight brick piers. Unlike the Poor House, the Phi Delta Theta house is well-documented on maps and in early twentieth-century photographs. A postcard from the early twentieth century shows that the two-story building had two chimneys and a wrap-around porch on the east and south (Jones et al. 1998:13).

Archival sources suggest the Phi Delta Theta house was present on Lot 11 from ca. 1908 to sometime after 1932. Documents are less useful for understanding the history of the Poor House, but do establish that it was no longer standing when Abner B. Roberson bought the southern end of Lot 11 in 1883 (Deed Book 47:568–569). Based on the absence of post-1840 artifacts directly underneath the Poor House foundations, Jones et al. (1998:57–58) suggest the building was constructed during Benton Utley’s ownership of Lot 11 between 1832 and 1837. Single-row brick dormitories similar in form to the Poor House, apparently inspired by Thomas Jefferson’s Academical Village at the University of Virginia (1825), were constructed at Davidson College in 1836 and 1837 (Davis et al. 2010:160). On the other hand, the plowed soil into which the foundation trenches for the Poor House were dug, designated Level 4, did contain artifacts likely manufactured after 1840.<sup>3</sup> Presumably, this area could no longer be plowed after the Poor House was constructed. Combined with secondary accounts of Jones Watson’s student

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<sup>3</sup> Specifically, nine white granite refined earthenware pottery sherds likely manufactured after 1840 were recovered from Level 4 in the southern portion of the excavated area, just north of the Poor House foundations (Jones et al. 1998:73).



Figure 6. Photograph of the Poor House and Phi Delta Theta house foundations, facing east (Jones et al. 1998).

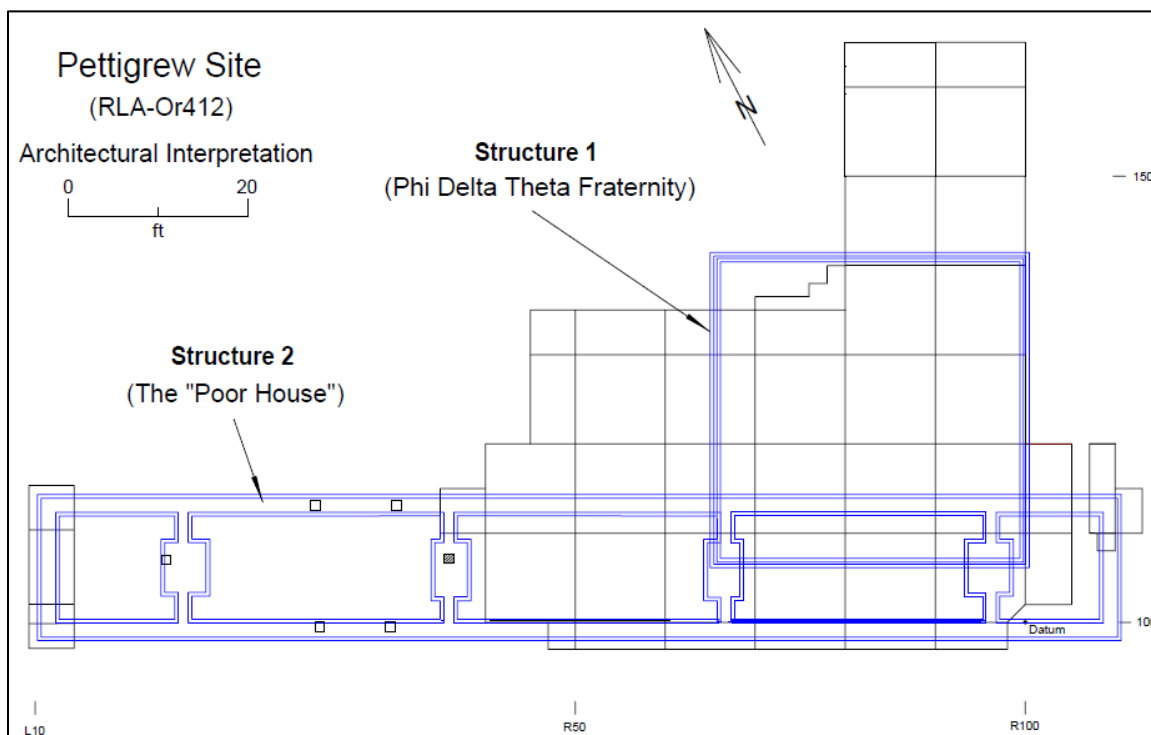


Figure 7. Architectural interpretation of the foundations identified at the Pettigrew site (Jones et al. 1998).

housing operation and the University attendance boom of the 1850s, it seems equally as likely that the Poor House was constructed in the late 1840s or early 1850s.

Excavations at the Pettigrew site also resulted in the recovery of artifacts that could be used to assess the kinds of activities that took place in Lot 11 during the late nineteenth and early twentieth centuries. A large number of pharmaceutical bottles manufactured between 1860 and 1880 were recovered and may be attributed to the mercantile business of Jones Watson; similarly, a large number of whiteware dishes attributed to the 1880s were likely associated with the operation of the Roberson House (Jones et al. 1998:58). In contrast, few cooking and dining artifacts dated to the Phi Delta Theta and Battle-Vance-Pettigrew dormitory period. Items from this period included many personal and toiletry items, as well as a large number of soda bottles.

Three other archaeological projects conducted by the RLA have documented nineteenth-century archaeological features on UNC's campus. During the 1993–1994 school year, RLA archaeologists excavated structural remains in the northwest corner of Lot 13 (Figure 2). Designated the Graham Memorial site, these features were the remains of a tavern that was established in 1797 and converted to a hotel around 1823 (Davis et al. 2010:149–150). By the mid-1830s this establishment was called the Eagle Hotel. It was acquired by the University in 1908 and destroyed by fire in 1921. The brick base of a chimney and the cellar of the tavern, along with associated drainage features, were documented by this project. Another project was undertaken in 2004 prior to the construction of an addition to the James Lee Love House (Boudreaux et al. 2004). The archaeological resources identified in this case were designated the Love House site (RLA-Or444, 31OR562). These excavations revealed a filled-in well and the architectural foundations of an associated well house that stood in the backyard of the Second President's House between c. 1812 and 1886, debris associated with the destruction of the Second President's House by fire in 1886, and soil deposits associated with the construction and occupation of the James Lee Love House from 1887 to present. Finally, in the fall of 2005 and January 2006 RLA archaeologists undertook limited excavations on the south side of Gerrard Hall (RLA Or445, 31OR567) with the express purpose of establishing the dimensions of a portico that had been removed c. 1900 so that it might be accurately restored (Davis and Riggs 2006).

### **Nineteenth-Century Sanitation History**

The stone-lined drain identified at the Vance site may at first seem to have little interpretive value since this category of the built environment is ancillary to the houses, offices, and meeting places that are the actual physical spaces people inhabit. Yet such ancillary systems can be viewed as solutions to problems people encounter in the process of constructing and inhabiting the built environment. Thus, the study of ancillary systems like sanitation systems can also be the study of decision-making processes at different times and places. All decisions concerning technology have short- and long-term implications. The concept of “path dependence” can be used to describe this situation wherein the effects of earlier choices constrain the options that are later available (Melosi 2000:10). The history of sanitation systems in American cities and towns also can be examined to identify the parties that were involved in the decision-making and implementation process, as well as to consider issues of ownership and health policy. Sanitation practices in most American communities prior to the mid-nineteenth century involved what has been called the “cesspool - privy vault - scavenger system” (Melosi 2000:22, 41). People obtained water from wells or nearby watercourses, used privy vaults and cesspools for human and household liquid waste, left household and commercial waste out for

scavengers, and burned the rest. In low density areas, these methods were resistant to change and have persisted into the twenty-first century; however, they gradually became untenable in cities and towns. Sewers constructed by the end of the eighteenth century in cities like New York and Boston were open street gutters intended for carrying off stormwater. The first sanitation “proto-systems” were built to supply water. America’s first municipal water distribution system, constructed in Philadelphia in 1801, was initiated in part by Benjamin Franklin, who added a codicil to his will instructing the inhabitants of Philadelphia to use part of the funds he left them to build a system for supplying water to the city from a nearby creek (Melosi 2000:31). In general, early sanitation systems proved to be capital-intensive and were often publically regulated and operated, thereby removing the individual from direct responsibility.

Edwin Chadwick’s 1842 treatise on the dismal health conditions in England’s industrial cities, titled *Report on the Sanitary Condition of the Labouring Population of Great Britain*, was widely disseminated, and its legacy in the United States was to make the correlation between health and proper sanitation infrastructure “gospel” (Melosi 2000:56). During the latter half of the century, it also became apparent that new water distribution systems were not compatible with earlier methods of dealing with wastewater. As water consumption in households increased, the older cesspool-privy vault systems began to fail, leading to the development of the first planned underground sewer systems in the 1860s and 1870s (Melosi 2000:93).

One of the earliest sanitation infrastructure projects undertaken in North Carolina was Raleigh’s first city water system, completed in 1818 (Howells 1989:2). It conveyed water in wooden pipes from springs to a water-powered “propelling engine” on Rocky Branch that raised the water to a tower from which it descended to fill three underground reservoirs. The extensive maintenance required to keep a system of wooden conduits operational appears to have ultimately led its abandonment. As a result of the “sanitary awakening” spurred by Chadwick, the North Carolina Board of Health was created by the General Assembly in 1877 (Howells 1989:5). The first two publications of the board, “Disinfection, Drainage, Drinking Water, and Disinfectants” and “Sanitary Engineering,” were authored by UNC Professor William Cain. In 1886, Raleigh and Durham moved to create community water systems, but it was not until 1892 that the first water system was installed on the Chapel Hill campus (Howells 1989:7, 17).

### *Antebellum Sanitation on Campus*

Antebellum sanitation in Chapel Hill has not been a popular subject for those who have written about the history of the University. It receives only passing mention in most treatments of the period. Battle (2002[1907]:592), for example, simply notes that “there was no sewerage system, and, until shortly after 1850, slops were thrown from the windows freely.”<sup>5</sup> One exception to this trend is Madry’s (2004) treatment of the Old Well. Given this lack of secondary sources, the following discussion draws primarily from archival documents to investigate the perceived problems and proposed solutions of campus sanitation before the Civil War.

The existence of multiple wells on campus during this period is implied by a 1797 expense for “walling up the Stewards well” (Office of the Vice Chancellor for Business and Finance of the University of North Carolina at Chapel Hill Records #40095, University Archives). The previous year £1.13s.4d had been dispensed for digging a well “at the

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<sup>5</sup> Unfortunately, Battle does not explain how the freedom of slops was curtailed.

University.” These wells appear to have lasted into the 1820s with periodic cleanings. However, in 1824 the Faculty reported to the Trustees that

Both of the College wells want digging anew. One of them was quite dry during the last summer and the other afforded only so much muddy water as was wanted by the family living at the Stewards hall. The water used in college was brought from a distance and after being carried in the sun was not nearly as good as though it had been drawn from the well immediately in front of the buildings. [December 1824, Folder 89, University of North Carolina Papers (#40005), University Archives]

In this age before refrigeration, water straight out of the ground was preferred to transported water, and proper well maintenance was essential. In addition to this request for re-digging of the wells, receipts for well cleaning are also present in the archives. The going rate for well cleaning in 1823 was \$1.25 (Disbursements by J.C. White, Folder 79, University of North Carolina Papers #40005, University Archives).

Drainage of waste and storm water does not appear to have been a matter of much concern on the early nineteenth-century campus, except when it was perceived to threaten the University buildings. Perhaps the earliest reference to drains in the University archives was written in June 1801 and concerns the as-yet-unfinished Main (South) Building. At this time only the foundation had been completed. In a set of resolutions authorizing construction of the first floor, the Building Commissioners also made provision for the maintenance of drains serving the structure:

Resolved that as soon as the walls shall be raised...Mr. Henderson<sup>6</sup> shall take certain & effectual measures to preserve them from injury or decay & to keep the foundation free from water which may be left by rain or otherwise by keeping the drains left for that purpose constantly open or opening other where it may be necessary. [Resolutions of the Building Commissioners, June 1801, Folder 16, University of North Carolina Papers #40005, University Archives]

While nature may have posed the first threat to the University buildings, students soon became a close second, leading the Trustees to take action. In 1817 a resolution was passed to deal with the logistics of dormitory life while also protecting University buildings and innocent bystanders:

Resolved that a student shall not throw water out of the college windows, and that a bucket shall be provided for each room, by the superintendant of publick buildings as a receptacle of the water which shall be used by the inhabitants, and that it shall be a part of the business of the college servants to empty these buckets once every day. The buckets shall be at first furnished by the Board of Trustees, and afterwards continued at the expense of the students. [Ordinances for the Better Regulation of the University, 6 December 1817, Folder 58, University of North Carolina Papers #40005, University Archives]

It was not until the second quarter of the nineteenth century, particularly the 1840s, that drain systems were constructed systematically on campus. This effort corresponded with President Swain’s focus on the beautification of the campus grounds that resulted, among other things, in the hiring of architect A. J. Davis and the first campus gardener (Allcott 1986:21–50; Henderson 1949:121–165). In developing plans for campus, Swain sent scouts to investigate the grounds of noted public spaces. In August 1847 James Pettigrew reported to Swain from Washington, D.C.

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<sup>6</sup> Pleasant Henderson succeeded Buck Taylor as the second University steward (Vickers 1985:25).

on the details of the landscaping around the Capitol. While plantings and their arrangement were the focus of his description, it is clear Swain had expressed interest in all aspects of the landscape, since Pettigrew diligently reported

The gutter on each side of the Capitol walks are about one foot wide, and made of brick, where the walk is of gravel or stone, when it is of stone, they are curved downwards and every now and then empty, through an iron grating into covered drains. [Pettigrew to Swain, 16 August 1847, Records of the Philanthropic Society #40166, University Archives]

The implementation of campus drainage projects was likely overseen by the celebrated Professor Elisha Mitchell, who came to Chapel Hill in 1818 to teach mathematics and during the next 20 years “fixed himself in the minds of his colleagues and of the people of North Carolina generally as a scientist of multilateral mind and encyclopedic knowledge” (Henderson 1949:126). Mitchell, who was “conspicuous” for thoroughness and efficiency, also served as Bursar and Supervisor of the Campus and University Grounds. His most celebrated project as the University’s amateur landscape architect was the low stone rubble walls that are now emblematic of the campus and Chapel Hill generally. Like most construction projects on the antebellum campus, these were executed with slave labor, sometimes that of Mitchell’s own slaves (Chamberlain 1945:103; Vickers 1985:56). There are two documents in the University Archives that associate Mitchell with the placement and design of stone drain systems on campus. One line item in Mitchell’s Bursar Report from October 1842 reads “Charges for lining ditches in grove with stone, \$13.00?” (Question mark in original, 19 October 1842, University of North Carolina Papers (#40005), University Archives). The word “grove” was used to refer to the early nineteenth-century campus, the area known today as McCorkle Place (Henderson 1949:60). While this document is significant for dating the construction of stone drains in McCorkle Place to the early 1840s, a letter from Mitchell to Swain in 1844 provides more compelling evidence that Mitchell was involved in the design and orientation of the drains themselves. Once again South Building was experiencing drainage problems, and Mitchell, not agreeing with the proposed solution, devised his own plan that he presented to Swain complete with illustrations (Figure 8):

Mr. Polly desired me to consult you about the arrangements for conveying off the water from the south building. When I stated to him the objections to his plan of pipes running through the building he said it would not answer. \_and when I stated farther what my own plan was \_ he said that his assistant had suggested that as the best that could be adopted. The pipes will not remove the water thrown out by the occupants of the rooms from their windows and that is what makes the puddles in which the hogs wallow and make a stink. I propose a blind ditch which the college hands could dig in a week 6 feet deep at a distance of perhaps 15 feet from the front of the building the bottom to be filled with small loose rock to the height of perhaps 3 feet, and then covered over so as to make all smooth. Smaller ditches made in the same way would run up to where the water might be expected to collect and there have their mouths covered with a cut stone and small grating. It could not but keep everything neat and dry \_ nor could the cost be much. [Mitchell to Swain, 30 December 1844, University of North Carolina Papers #40005, University Archives]

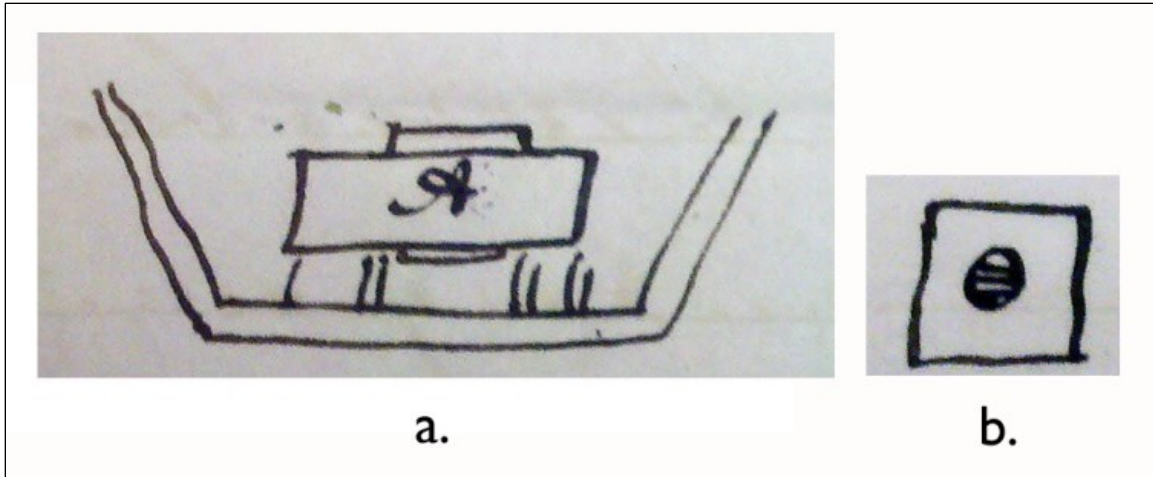


Figure 8. Elisha Mitchell's drawings to illustrate his plan for drains to serve South Building (Mitchell to Swain, 30 December 1844, University of North Carolina Papers #40005, University Archives). The first sketch (a) shows South Building, labeled "A," with short drains extending perpendicular northward from the building to join a larger conduit that discharges to the southeast and southwest. The second drawing (b) shows his conception of a drain cover with grating.

Evidence that Mitchell's plan prevailed was uncovered in 1992, when a stone drain was encountered in front of the South Building during a utilities construction project (Davis, personal communication 2012). The outer edge of the drain is visible in Figure 9 as a layer of rubble in the wall of the utility trench. In 2006 an irrigation project resulted in the identification of one of the drains in the "grove," running north–south in front of Alumni Hall (Figure 10). Examination of the interior of the drain revealed that it was hollow and thus still operating to carry stormwater (Davis, personal communication 2012).

The most extensive archaeological examination of stone drainage features on campus took place during excavations of the Eagle Hotel foundations at the Graham-Memorial site (Davis et al. 2010:149–155). During the nineteenth century, this establishment was privately owned but adjoined University property. Two sections of a stone drain were documented during the Graham-Memorial excavations. One ran parallel to the foundation trench of the hotel; the other ran at an oblique angle from the northwest corner of the tavern basement. The section of the drain that ran parallel to the hotel contained ceramics manufactured during the second quarter of the nineteenth century (Samford 1994). The excavations in the tavern cellar revealed that drainage had been a persistent problem. On two separate occasions sand was brought in to raise the height of the floor. When this did not solve the drainage problem, a ditch was dug diagonally across the sand floor of the basement to the northwest corner of the foundation, where it fed into a stone-lined drain that directed the water downhill to Franklin Street (Davis et al. 2010:155).

Other aspects of sanitation on the antebellum campus were handled by pigs and privies. Despite their necessity, references to the latter are rare in the antebellum University archives (none were identified during the course of this research), and none have been identified archaeologically. The use of pigs as a sanitation strategy is indicated in Pettigrew's letter to Swain concerning landscaping at the Capitol. He suggests that grass growth would be encouraged by enclosing the campus to keep out "the larger beasts and permit only such a number of privileged college hogs (however ridiculous the idea may seem to those who are not aware of the immense quantity of peelings and rinds thrown out of the windows), as may be





Figure 9. RLA archaeologist Trawick Ward standing above the stone drain uncovered in front of South Building in 1992.



Figure 10. Section of stone drain uncovered in front of Alumni Hall in 2006.

necessary for scavengers” (Pettigrew to Swain, 16 August 1847, Records of the Philanthropic Society #40166, University Archives). As Elisha Mitchell’s drainage system for the South Building was developed in order to reduce the “stink” caused by wallowing hogs, their use as scavengers seems to have required a certain amount of damage control (Mitchell to Swain, 30 December 1844, University of North Carolina Papers #40005, University Archives). Free-roaming hogs were a management problem not only on campus, but in the village as well. During the weeks leading up to commencement in 1834, editorials were run in *The Harbinger* complaining about the injuries hogs inflicted upon the public thoroughfares of Chapel Hill:

Mr. Harbinger: - Have you any commissioners for your village? I understand you have! But it appears that Hogs are the most privileged class in your community. They root up the streets with impunity, and that too immediately after they are worked. Would not your police prosecute a person for injuring your streets – but these grunting gentry, it appears, ask you no odds, and say go-off. [signed] E. [Letter to the Editor, 3 April 1834, *The Harbinger*]

The Overseer of the Streets of our village has performed his duty faithfully, and he deserves the thanks of every citizen. It is so seldom that these public officers do their duty, that it gives us pleasure to mention one who has. [Editorial Comment, 10 April 1834, *The Harbinger*]

These comments suggest public officials were expected to take care of nuisances caused by hogs; there was no call for their owners to make reparations as was the case in other communities where the issue of free-roaming hogs became a struggle over property rights (Gretler 1999). Pig-management would plague Chapel Hill public officials into the 1890s. An ordinance was passed in 1873 that required owners to remove dead hogs from the streets and prohibited “feeding hogs on sidewalks, or keeping hogs in a pen abutting a sidewalk” (Vickers 1985:95). While voters passed a 1877 referendum that asked “Shall Hogs be allowed to run at large in the town?” by 43 to 38, the community was clearly divided on the issue. This division is evident in an 1891 editorial in the *Chapel Hillian*:

We have heard many complaints lately in regard to the negligence of our town commissioners. In many places water stands in the gutters for days, refuse matter is deposited in the streets, pig-pens are allowed within the village with all their savory odors. We have seen certain citizens, in self-defense, opening up ditches so as to allow water to be drained off. The condition of affairs was permitted to exist during the past year to such an extent that several pig-pens were burned. We do not favor such methods of procedure in getting rid of certain public nuisances, but sometimes such expedients must be resorted to. If our town commissioners do not attend to *their duty* and remedy these things we prophesy that great sickness will be the result during the coming summer. [*The Chapel Hillian*, 28 March 1891]

### *Modern Conveniences of a Gown Town*

The sanitary arrangements used on campus and in the village of Chapel Hill during the first half of the nineteenth century persisted after the Civil War. When the university reopened in 1875, new “comfort houses” (i.e., privies) were erected behind South Building (Vickers 1985:101). Ten years later, a student complaint that the basement of South Building was being used as a privy to the potential detriment of its inhabitants’ health led the Trustees to form a committee on the “Sanitation of the University Buildings” (Allcott 1986:54-55). The committee, which included Dr. R. H. Lewis of the State Board of Health, reported that matters concerning the disposal of human waste on campus had changed little in the past 80 years (Paul C. Cameron,

Executive Committee Minutes, 26 August 1886, University of North Carolina Trustee Affairs #40001, University Archives). The report recognized two main phases of sanitation on campus. During the first 40 years, tin cups were hung on nails just outside of the windows of the campus buildings. The demise of the tin cup urinal system is attributed to “visiting and innocent young ladies – who were desirous to know how and for what used” as well as “the unpleasant consequences to those who occupied the rooms.” In “a bad exchange” the tin cups were replaced with “a cheap wooden bucket made of soft and porous wood” that was kept inside until full, “thus corrupting the air of the room and of the entire building.” While the committee recognized that urinals flooded with water from a tank would be the best solution to the issue of dormitory sanitation, they were scared off by the cost estimates they received for the proposed work and decided on a less drastic course of action:

It is ordered by the Board of Trustees that hereafter in each room in the college buildings there shall be kept and owned by the students a chamber pot of white stone china of the hardest material that these urinals shall be emptied at least once in 24 hours by the college servant and removed in iron or tin tubs to the various and remote parts of the campus to induce the growth of grass. And it is further ordered that the President shall require that the members of the faculty shall in turn by the week or month as it may be arranged inspect all of the rooms in the college and see to the enforcement of this ordinance and obtain the highest standard of neatness, cleanliness and purity not only within the buildings but in all their surroundings. [Paul C. Cameron, Executive Committee Minutes, 26 August 1886, University of North Carolina Trustee Affairs #40001, University Archives]

The switch to ceramic chamber pots may have been a cost-effective solution, but concerns over student health would ultimately lead to more substantial changes.

Three students boarding at Roberson’s Hotel died in an outbreak of typhoid fever in 1892, and the Trustees resolved to notify the proprietor “that the well of impure water on the premises must be filled after half a barrel of copper shall have been emptied into it” (Executive Committee Minutes, 18 June 1892, University of North Carolina Trustee Affairs #40001, University Archives). In order to prevent similar incidents in the future, Professor F. P. Venable was appointed the Sanitary Officer of the University, with the power to “forbid” students from boarding with individuals who refused to follow his directions “for preventing sickness among their student boarders.” With the prevailing conception of sanitation now framed in terms of life and death as well as convenience and decorum, University President Winston succeeded in convincing the Trustees and legislature that funds for modernizing campus sanitation were essential. In his 1893 report to the Trustees, Winston noted that it would be impossible for the University to grow “or even maintain its present status, unless it is supplied at once with such sanitary conveniences and material comforts as are essential to health and decency and are supplied at similar institutions” (President’s Report, 8 February 1893, University of North Carolina Trustee Affairs #40001, University Archives). Of six improvements to the campus Winston proposed, number one was “a water supply” to “provide baths, closets and urinals, and will afford much protection against fire.” That same year the General Assembly appropriated a total of \$20,000 for campus improvements, including the creation of a sanitation system (*UNC Magazine* 1893, 12(5):229).

The following year, the *Alumni Quarterly* (1894:37–38) could boast that “bath tubs, shower baths, closets, and urinals” had been installed in the basement of the library, which was in Smith Hall (now Playmakers). The water was stored in two tanks in the attic of South Building. Since this location was adjacent to the athletic grounds, it was hoped these

improvements would make “marked contributions to the healthfulness of the University, besides stimulating the athletic spirit, and thus aiding in the upbuilding of the moral and intellectual tone of the student-body” (*UNC Magazine* 1893, 12(5):229). In its first year, the water supply was reported to have encouraged a “great regularity of habits” resulting in “more decency and refinement in dress, manners and language” on campus (*Alumni Quarterly* 1894:37–38). In 1895 the first electrical power plant in Chapel Hill accompanied this gestalt of modernity. It was built by William Rand Kenan, Jr. near the location of present Phillips Hall and reportedly could illuminate 800 lights (Vickers 1985:101).

The University was the initial beneficiary of these utilities, but by the turn of the century work was underway to develop a sanitary system throughout Chapel Hill. In 1901 the aldermen granted the University permission to lay pipes for water and sewers along the streets of Chapel Hill. This system, which served the downtown area and emptied into Bolin Creek, was operational by 1906 (Vickers 1985:102). By the second quarter of the twentieth century the University utilities were celebrated as a source of income that provided town residents with “necessities and conveniences not otherwise obtainable” (*Daily Tar Heel*, 16 February 1935, North Carolina Collection Clipping File).

### **Materiality of Public-Private Boundaries**

Networks of interaction between public and private entities are clearly evident in the history of campus sanitation. The physical boundaries between publically- and privately-held properties are another set of spaces where archaeology can be used to investigate the history of the relationship between the University and Chapel Hill. The Vance site is clearly located at one such intersection, which was the boundary between Lot 11 and University property. Public thoroughfares, outbuildings, and encroachments are all aspects of the landscape that can be structured by and in turn structure prevailing attitudes towards the nature of property and its ownership.

The Vance site was University property during the nineteenth century, but it was originally platted as part of Lot 11. George Johnston purchased the entire two-acre lot in 1793, and sold it to John McCauley in 1794. In 1796, the University purchased a 60x300-foot strip along the eastern edge of the parcel from McCauley (Deed Book 5:667). This was not an isolated purchase, but rather corresponded to designs for a “Grand Avenue” that would extend northward from the heart of campus (Alcott 1986:6–7). The plans for both Raleigh and Chapel Hill, which were developed in the early 1790s, consisted of a block of gridiron streets with wide avenues leading out from public spaces in cardinal directions. By purchasing the edges of the lots bordering the proposed Grand Avenue, the Trustees effectively created an overlap “made up of land from avenue and town” that could be experienced as a park of “common land belonging to both citizens and University people” (Alcott 1986:7). While noble in concept, this plan ultimately was hindered by topography; the steep drop off to Foxhall Branch, a tributary of Bolin Creek, ensured that this route would not be a major thoroughfare.<sup>7</sup> As the nineteenth century progressed “frequent applications” were made to purchase the University land north of Franklin Street, and President Swain ultimately advocated selling off the northern portion of the Grand Avenue (Henderson 1949:122).

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<sup>7</sup> This name is provided on a 1918 topographic map of Chapel Hill produced by T. F. Hickerson and W. F. Morrison.

The Grand Avenue illustrates a case in which public-private boundaries were used as an opportunity to materialize noble ideals. However, most property boundaries in the nineteenth century were more likely to be places where the messy activities of everyday existence were facilitated. In other words, they were likely to be places where people constructed outbuildings. The University archives contain references to the sorts of ancillary structures that were built on campus during the first two decades of its existence, and likely on private holdings as well. These include a kitchen, which like most kitchens of the period was separate from the dining area (Stewards Hall) due to the danger of fire, smoke houses, stables, granaries, privies, wells, and “fowl houses” (Waste Book of the University 1789–1810, Office of the Vice Chancellor for Business and Finance Records #40095, University Archives). In an 1836 report on repairs needed to the Steward’s Hall, the “Superintendent of Buildings” observed

The Out Buildings Consist of Kitchen, Poultry House, Smoke House and Negro House which can be put in keeping with the Hall by making small repairs. [Thomas A. Waitt’s Estimate for Repairing Steward’s Hall, July 22, 1836, UNC Papers #40005, University Archives]

It is likely that similar outbuildings on private parcels would have been built close to if not at the borders these properties shared with the University, as far away from residences fronting the main streets as possible. Outbuildings were often arranged in “more or less” formal rows, courtyards, or clusters (Bishir 2005:182). Two letters from UNC alumnus and patron of the architect A. J. Davis, Robert Donaldson, written to President Swain in 1843, indicate a concern with the visual effect of these structures on University aesthetics. Both letters have to do with plans for beautifying the campus grounds. In the first, Donaldson suggests that in addition to pruning trees and planting grass, it would be a good idea “to plant out or exclude the sight of the rears of the lots & out houses which adjoin the Campus, by planting a belt of trees & shrubs” (Donaldson to Swain, 10 November 1843, UNC Papers #40005, University Archives, emphasis in original). He re-iterates this suggestion as a plan to be submitted to A. J. Davis: “the rears of the adjoining lots to be excluded from sight by planting a thick belt of trees along the boundary of the campus – This belt may vary in width & be composed of any trees – most likely to grow” (Donaldson to Swain, 16 December 1843, UNC Papers #40005, University Archives, emphasis in original). Upon further reflection, he notes in a postscript that “the Cedar Tree or any evergreen will answer well for the belt of trees – but they are difficult to transport.” Given the limited budget allotted to landscape gardening by the Trustees, it seems unlikely Donaldson’s romantic ideal was ever realized. His interest in the topic, however, seems a fair indication of the number of outbuildings that populated the mid-nineteenth-century campus landscape.

Outbuildings may have marked the edges of lots, but the fact these lines existed only by virtue of social contract meant their inherent permeability occasionally needed to be counteracted. From the perspective of state officials, both domestic animals and private citizens had the potential to encroach to an unreasonable degree on University property. Animals could be controlled through fencing. Vickers (1985:164) notes a “peculiar folkway” of nineteenth-century Chapel Hill, “a sort of exaggerated assertion of American liberty and democracy, was the popular aversion to fencing in horses, mules, donkeys, cows, sheep, and hogs.” Early in the history of the University, at least one field under university charge was “enclosed,” presumably to prevent animals from ruining the crops (11 July 1796, Waste Book of the University 1789-1810, Office of the Vice Chancellor for Business and Finance Records #40095, University Archives). And while Elisha Mitchell is well-known for directing the construction of rock walls

around campus, a Bursar's report from 1836 notes that \$2.70 was allocated "to digging 54 post holes at 5c," suggesting other kinds of fencing also were constructed as needed.

Domestic animals were not the only beings that viewed the lands of the University as a resource to be used as needed. In an 1831 report to the Trustees, the faculty complained of "a system of plundering wood" that had grown so commonplace that "many of the villagers may begin to plead, at least among one another, that they do it by the authority of prescription" (Faculty Report, 20 December 1831, UNC Papers #40005, University Archives). A more archaeologically visible form of encroachment was also noted, in which "spots that have been this insensibly cleared, have been further improved, by putting up little log huts upon them." The faculty recommended the Trustees hire someone to give public notice "that such depredations will no longer be relinquished by a certain date, and that offenders will be prosecuted without forbearance." While these squatters were considered a nuisance, other encroachments were less benign. In 1849 a Mr. Couch, who had obtained permission to build a cabin on private land adjoining campus, incurred the wrath of Elisha Mitchell:

Couch of whom I can hear no good in any quarter thought it safer though warned by some who knew of his proceedings that he was over the line and trespassing, to place his building on the ground of the trustees so as to be able to plunder his wood and also be close at hand to supply the students, with whiskey, whores, fighting-cocks and other articles of the kind whenever any might imagine themselves to stand in need of them.... The whole matter wants some regulating.  
[Mitchell to Trustees, 27 December 1849, UNC Papers #40005, University Archives]

Thus, potential archaeological features at the edges of lots may include not only outbuildings, but also squatter's quarters of various sorts. While neither of these structure categories is likely to be documented on maps, evidence of their existence remains underground, accessible through archaeological investigation.

## Chapter 3

### ARCHAEOLOGICAL FIELDWORK

Archaeological fieldwork at the Vance site (RLA-Or467, 31OR638) took place between November 15 and November 23, 2011. A core group of excavators including Brett Riggs, Steve Davis, Mary Beth Fitts, and David Cranford were augmented by a rotating crew of undergraduate students, graduate students, and faculty. The excavations, given their location, attracted the attention of many UNC students, staff, and campus visitors.

An excavation grid, established with a total station and referenced to the corners of existing nearby buildings, was used to precisely designate nine 1x1-meter squares surrounding the stone feature identified during the drainage pipe installation project in October. The upper 20 to 30 centimeters (8 to 12 inches) of soil in these squares was removed with shovels and was not screened for artifacts, although they were collected when observed. This soil, which was designated Level 1, consisted of twentieth-century disturbances on top of a layer of clay fill associated with the construction of the adjacent brick sidewalk. The installation of brick sidewalks on campus began c. 1940 (*The Chapel Hill Newspaper*, 29 October 1972, North Carolina Collection Clipping File), which suggests that the material removed as Level 1 was all deposited after this date. Removal of Level 1 exposed a surface that cut through a variety of nineteenth- and twentieth-century features. These were documented by photography and mapped with a total station prior to the excavation of Level 2 (Figures 11, 12, and 13).

Work proceeded next in the three easternmost squares located immediately adjacent to the sidewalk. Soil excavated during this process, designated Level 2, was screened through 1/4" hardwire mesh. A few centimeters of soil associated with sidewalk construction were removed in this manner, exposing nineteenth-century deposits as well as early twentieth-century intrusions produced by utility installation and landscaping of Vance Hall. The most prominent of these was an electrical or gas conduit, the trench for which had been dug into nineteenth-century features. This trench extended perpendicularly from Vance Hall and then made a 90 degree turn towards Franklin Street to avoid the early twentieth century pre-brick walkway. Also exposed by the removal of Level 2 soils were the capstones of the drain feature (Figure 12), suggesting that the portion of the drain closest to the sidewalk had been exposed when the bricks were laid in the 1940s. Some portions of Level 2 consisted of a uniform soil that was likely nineteenth-century plowzone re-deposited on the south side of the drain.

The rest of the fieldwork involved the identification and excavation of features, or pits that were dug into the soil for various reasons and then refilled. If the feature was determined to be a twentieth-century disturbance such as a shrub planting by its fill and shape, the soil was screened through 1/4" mesh. Soil from features that were nineteenth-century in origin was transported off site to be washed through window screen; a subset of this material was processed by flotation. While some soils in the eastern squares were excavated as Level 3, these can be distinguished in retrospect as either feature fill or re-deposited plowzone soil on top of the stone drain feature.<sup>8</sup> Excavation of the stone-lined drain, designated Feature 3, was temporarily halted at the capstones present in the eastern squares. In the western squares, a pile of stone and brick rubble was encountered (Figure 14). This rubble, which had been thrown into the opening of the

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<sup>8</sup> Due to disturbances including the early twentieth-century conduit, the edges of the trench dug for the stone drain were not preserved in the eastern squares.



Figure 11. Cleaning the excavated surface at the base of Level 1. View to west.



Figure 12. Removing deposits at the top of Level 2 along the east side of the excavation block. View to northeast.



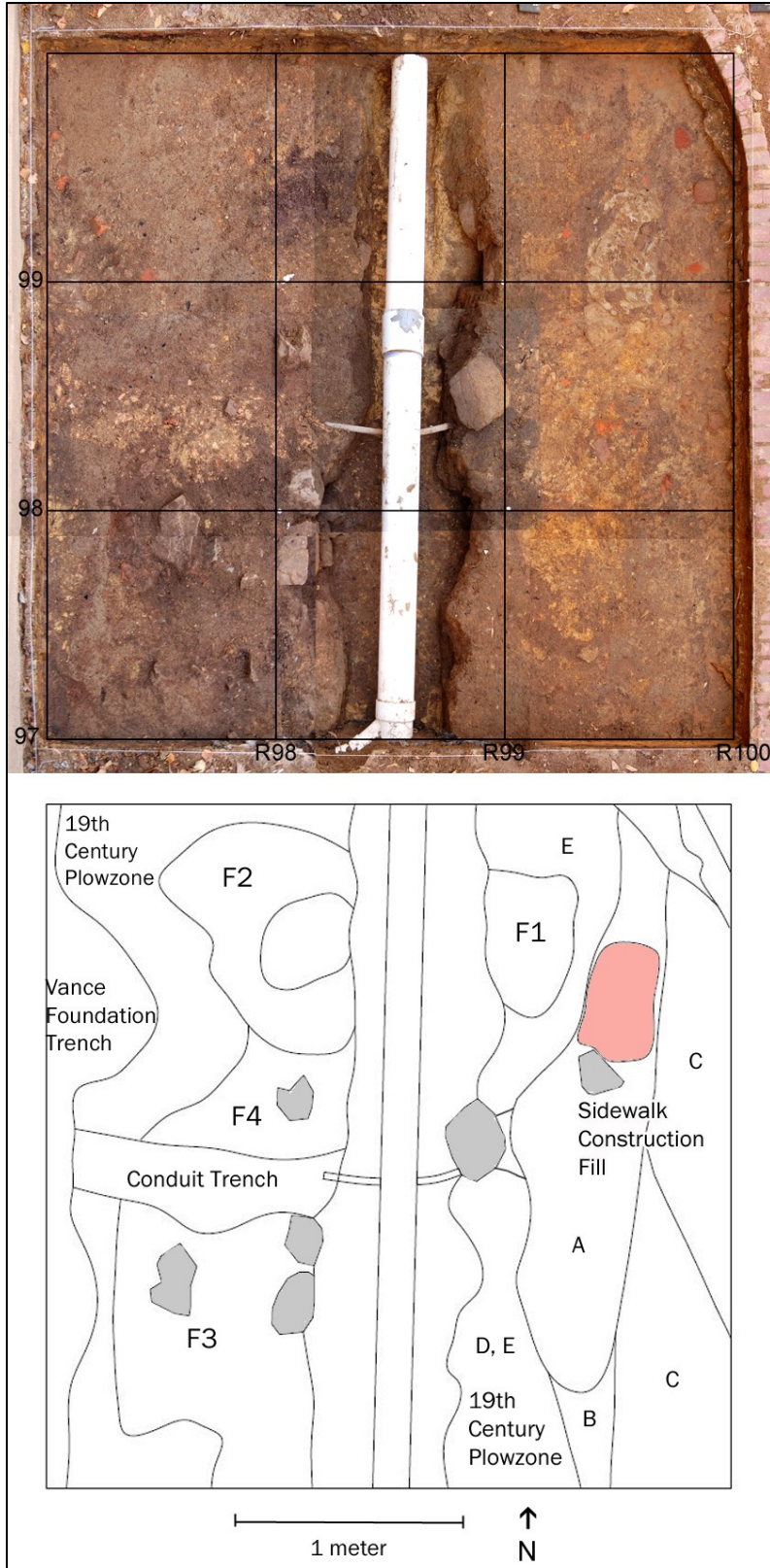


Figure 13. Base of Level 1 showing the top of Features 1 (F1), 2 (F2), 3 (F3), 4 (F4), Zones A – E, the conduit trench, and nineteenth-century deposits. In the illustration a mortar patch is yellow.

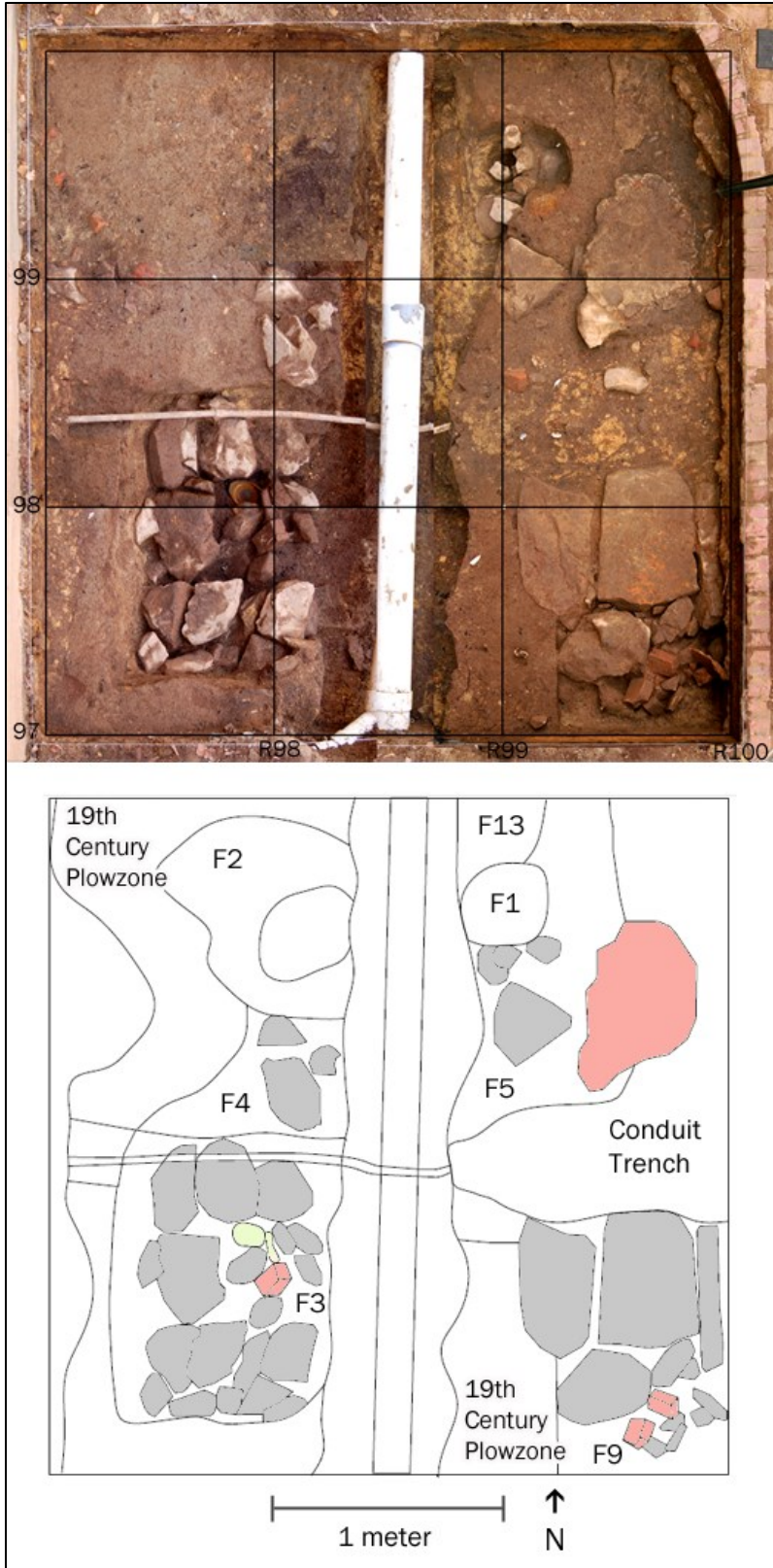


Figure 14. Base of Level 2 showing excavated Feature 1 (F1), rubble, and capstones of the drain (F3). In the illustration the base of a redware container and an animal bone in F3 are green; a mortar patch is yellow.

drain when it was abandoned, was removed in several stages until the stones that defined the edges of the drain were identified. Finally, the capstones were removed and the soil that had accumulated in the drain was excavated.

Work stopped when features were removed down to subsoil, although the stones of the drain were left in place (Figures 15, 16, and 17). All features were excavated with the exception of the Vance Hall foundation trench, which was mapped but not dug.

These excavations determined the nature of the stone feature identified during the drainage pipe installation. Originally interpreted as a probable well and well house, excavations revealed instead a stone-lined drain. In addition, another nineteenth-century feature was identified. Although considerably disturbed by the modern drainage trench, the early twentieth-century conduit, and plantings, a cellar associated with a kitchen or other outbuilding was identified immediately north of the stone drain. Lying on the bottom of the cellar were more fragments of the redware platter that was identified during preliminary investigations of the Vance site. While the stratigraphic relationship between the cellar and stone drain was difficult to ascertain because the twentieth-century conduit trench was dug through the intersection of these two features, it appears that the cellar was filled in sometime, possibly immediately, before the drain was constructed. The temporal relationship between these two features can be explored further through artifact analysis.

### **Excavated Contexts**

The following descriptions provide information about the soil zones excavated at the Vance site. These descriptions also provide information about the shape, dimensions, contents, and likely purpose of the identified features.

#### *Drainage Pipe Trench*

This designation is applied to the fill from a trench that was mechanically dug to install a PVC drainage pipe for Battle-Vance-Pettigrew in October 2012. The 534 artifacts collected from this context largely date to the nineteenth century, but cannot be attributed to any single archaeological feature.

#### *Sidewalk Construction*

Most of the fill associated with sidewalk construction in the 1940s was removed as Level 1 (Figure 18). The composition, location, and thickness of certain zones in Level 2 suggest they also can be attributed to this construction episode. These include Zone A in squares 97R100 and 98R100, Zone B in 97R100, and Zone C in 97R100, 98R100, and 99R100. Zone A was a 5YR 6/8 reddish yellow silty clay mottled with 10YR 4/3 brown silty sand and was found to extend only 1 to 2 cm below the base of Zone 1. It capped Zone D, conduit trench fill, and the capstones of the drain. A patch of mortar present in square 99R100 at the base of Level 1 was likely associated with this zone (Figures 13 and 14). Zone B consisted of 10YR 4/3 brown silty sand with 5YR 6/8 reddish yellow silty clay and was 2 to 4 cm thick. It overlaid Zone D and Zone F (Feature 9). Although this zone differs slightly in composition from Zone A in that it contained less clay, it nonetheless also appears to have been formed as a consequence of sidewalk construction. Zone C consisted of 10YR 4/3 brown silty sand mixed with 7.5YR 5/6 strong



Figure 15. Excavation block following the removal of all archaeological features except the stones in Feature 3 and the Vance Hall foundation trench (at right). View to south.



Figure 16. View of the stone drain (Feature 3) after excavation. View to north.

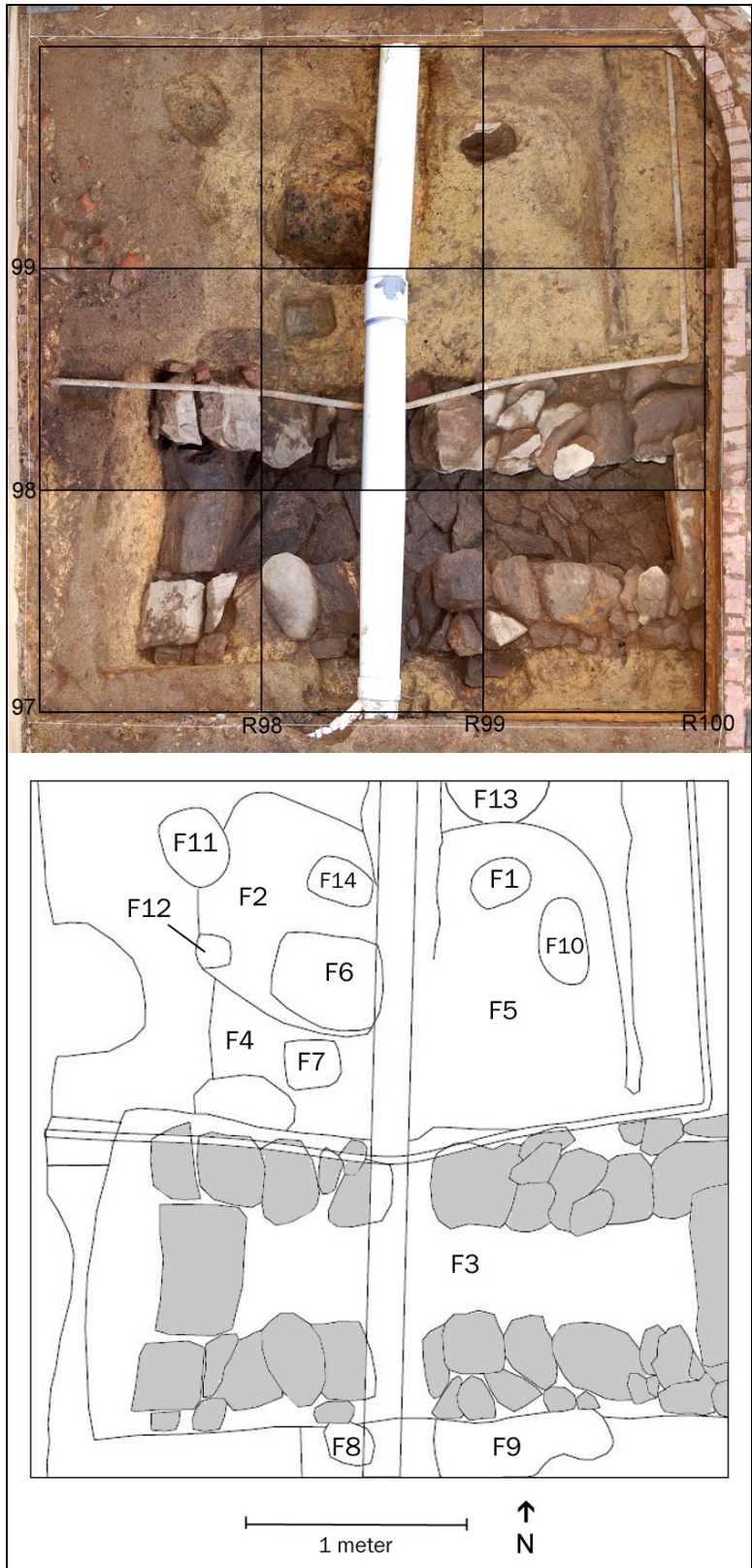


Figure 17. Base of excavations showing the bottoms of all features including the exposed the stone drain feature (F3) and the northeast edge of the cellar pit (F5).

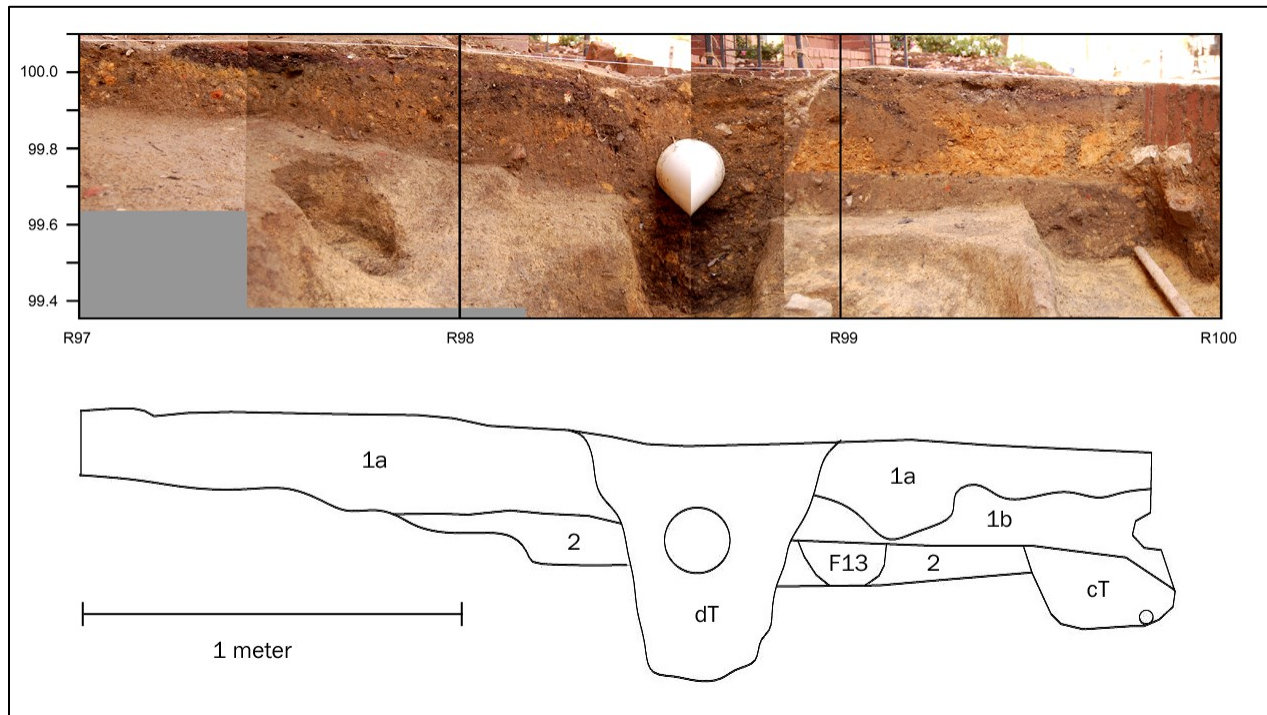


Figure 18. North wall of excavations at the Vance site showing stratigraphic relationships. The modern drainage trench and the conduit trench are labeled dT and cT, respectively. Level 1 consists of soils labeled 1a and 1b. Level 2 (2), which here corresponds to the nineteenth-century plowzone, is cut by Feature 13 (F13) as well as the utility trenches.

brown silty sand. Like Zones A and B, it was relatively thin (i.e., only 2 to 4 cm thick). It was present on top of the drain cap stones and Zone F (Feature 9) in 97R100 and on top of conduit trench fill in squares 98R100 and 99R100. Although Zone C contained little clay, its thickness and position between Zones A and B and the sidewalk suggest that it can be interpreted as fill on an exposed work surface associated with sidewalk construction.

A total of 207 artifacts were recovered from Zones A, B, and C. Most of these were produced in the nineteenth century but removed from their original depositional context during sidewalk construction. Items that probably date to the twentieth century include light bulb fragments and a brass pencil band.

### *Conduit Trench*

This trench was dug for a metal pipe approximately one inch in diameter. It emerges from Vance Hall and runs straight to the walkway, where it turns at a 90 degree angle and continues towards Franklin Street. The fill in the conduit trench consisted of 10YR 4/3 brown silty sand mottled with 2.5Y 7/8 yellow and 5YR 6/6 reddish yellow clay. Since it was capped by sidewalk construction fill, this conduit predates the 1940s and may even be original to the construction of Battle-Vance-Pettigrew, which was completed in 1912. This trench was dug through Features 3, 4, and 5, partly obscuring the relationships among these adjacent nineteenth-century features. Most of the 835 artifacts recovered from the conduit trench probably were

deposited in these features, unearthed when the trench was dug, and then re-deposited in the conduit trench when it was filled. Artifacts unique to the conduit trench artifact assemblage include a 0.22 caliber brass cartridge, a brass thimble, and a domed brass tack.

### *Nineteenth-Century Plowzone*

This designation applies to a layer of relatively uniform silty sand that was originally the upper layer of soil plowed in the late eighteenth and early nineteenth centuries when the area was under cultivation. Since most of this soil was removed from above the stone drain and cellar pit features during the Vance site excavations, it is technically re-deposited plow zone soil, as it is unlikely the Vance site was plowed after these features were abandoned. The excavated contexts included in this category are Zones D of Level 2 in squares 97R99 and 97R100, and Zone E of Level 2 in squares 97R100, 98R99, 98R100, and 99R100. Zone D consisted of a mixed 10YR 4/4 dark yellowish brown silty sand with inclusions of 5YR 6/8 reddish yellow silty clay. It capped the stone drain (Feature 3) and was truncated by sidewalk construction. Zone E was a relatively uniform 10YR 4/4 dark yellowish brown silty sand. In 97R100, it was continuous with Zone D and capped the drain (Feature 3); in 98R99, 98R100, and 99R100 it was fill covering the cellar pit (Feature 5) that was truncated by sidewalk construction. Level 2, Zone E was cut by Feature 1, Feature 13, and the conduit trench.

A total of 385 artifacts were recovered from the nineteenth-century plowzone. One third of these are window glass fragments (n=128). The remaining artifacts include 50 historic ceramic sherds and one American Indian potsherd, 76 fragments of glass containers, 45 fragments of lamp chimney glass, 52 nails, at least 10 iron fragments, and over 20 animal bone fragments. One clay smoking pipe fragment, one polished slate fragment, and one set of cufflinks were also found in the plowzone. The cufflinks, which feature the image of a fox and the word "TALLIO," date to the late eighteenth century (Smith 2000:183).

### *Feature 1*

This feature, located in square 99R100, is a posthole that was dug through the plowzone (Zone E of Level 2) and cellar pit (Feature 5). At the base of Level 1 it was ovoid in cross-section and about 60 cm long (Figure 13); the bottom of the post hole was approximately 25 cm long and 20 cm wide (Figure 17). This change in diameter suggests that there may have been some disturbance to the surrounding soil when the post was removed, possibly by being pushed over. Feature 1 extended 15 cm below the base of Level 1. The fill inside the posthole was 10YR 7/8 yellow clay mottled with 10YR 4/3 brown sand. The bottom of Feature 1 contained broken concrete fragments with a round post impression.

Fifty-three artifacts were present in the fill excavated from Feature 1: 17 historic ceramic sherds, 13 pieces of container glass, 3 pieces of window glass, 14 nails, 5 animal bone fragments, and 1 piece of oyster shell. The historic sherds consisted of 5 creamware sherds, 4 pearlware sherds, 4 whiteware sherds, 3 redware sherds, and 1 indeterminate red-slipped refined earthenware sherd. One pearlware sherd had warm polychrome hand-painted designs, while the whiteware sherds were decorated with unmolded blue shell edging, and transfer printing in blue and brown. Of the 12 pieces of container glass, 8 shards were colorless, and the remaining four came from aqua, olive green, emerald green, and opaque white bottles or jars.

The concrete fragments at the bottom of Feature 1, its visibility in cross-section at the base of Level 1, and its proximity to a Vance Hall entranceway suggest this feature may have been originally dug to receive a signpost in the twentieth century, possibly for identifying the building or University entity housed within. Most of the artifacts in Feature 1 likely originated in either the nineteenth-century plowzone or the cellar pit (Feature 5).

### *Feature 2*

This dish-shaped disturbance is a modern shrubbery planting. It was visible at the base of Level 1 in square 99R98 (Figure 13). Feature 2 measured approximately 80 cm in diameter, but its full extent could not be determined because its eastern edge was cut by the modern drainage trench. The fill in Feature 2 consisted of 10YR 4/2 dark grayish brown silty clay mottled with 10YR 4/4 dark yellowish brown silty clay. This pit was dug into at least six different pre-existing features. Of these, three were post holes (Features 11, 12, and 14) and three were pits (Features 3, 4, and 5) (Figure 17). Artifacts originally present in these other features were re-deposited in Feature 2.

A total of 217 artifacts were present in the Feature 2 fill. They include 50 historic ceramic sherds, 53 fragments of container glass, 6 lamp chimney fragments, 61 pieces of window glass, 34 nails, 11 iron objects, 2 fragments of oyster shell, and a small amount of animal bone. The historic sherds consisted of 1 creamware sherd, 3 possible cream or pearlware sherds, 3 pearlware sherds, 1 possible pearlware or whiteware sherd, 19 whiteware sherds, 14 redware sherds, 5 stoneware sherds, and 4 porcellaneous sherds. Decorations included a dendritic design on mochaware, green shell edge, cool polychrome hand painting, and transfer printing in blue, black, red, mulberry, and green. The container glass assemblage includes both bottles and tableware. The tableware assemblage consists of 3 colorless tumbler fragments. Sixteen of the bottle or jar glass fragments were colorless, 9 were aqua, 2 were olive, 1 was emerald green, 2 were very dark olive, 1 was yellow amber, and 2 were opaque white. In addition, 15 fragments of greenish aqua bottle glass were present in the assemblage, which were all likely part of the same Coca-cola bottle. One of these shards contained a partial applied white label with the script letters "ola." This method of labeling Coke bottles began in 1957; therefore, the planting which created Feature 2 took place sometime after that date.

### *Feature 3*

Feature 3 is the inlet terminus of a stone-lined drainage trench (Figures 15, 16, and 17). It is oriented to drain from west to east, perpendicular to the nineteenth-century property line, and extends beyond the limits of excavation for an unknown distance into McCorkle Place. The sides of the drain consist of two parallel rows of stacked stones that give it an exterior width of approximately 1 meter (3 1/3 ft) and an interior width of about 40 cm (1 1/3 ft). The bottom of the drain was paved with small, angular stones and has a 5.6% slope, dropping 10.8 cm over a length of 191.5 cm. The top of the drain east of the inlet was capped with flat, roughly rectangular stones. Feature 3 was cut by the modern PVC pipe drainage trench. Given this disturbance and the recognition early in the fieldwork process that the western opening of the drain exhibited a different depositional sequence than the eastern half, Feature 3 was excavated in two parts.



The well-defined western end of trench was initially obscured with rubble (Figure 19). Designated Zone 1, this deposit consisted of 10YR 4/4 dark yellowish brown silty sand mottled with 10 YR7/8 yellow coarse sandy clay that filled the spaces between rocks and brick fragments. Large artifacts were present amidst the rubble, such as the base of a redware vessel and large mammal bone visible in Figure 20. Zone 1 was 45 cm thick and bounded by straight, gently sloping trench walls to the south and west. Excavation of this zone ended when a uniform fill without rubble was identified within the drain, between edge stones that were still in their original locations (Figure 21). This fill, designated Zone 2, was 7.5YR 3/3 dark brown sandy silt with large charcoal inclusions. It was 24 cm thick. Below Zone 2 was approximately 5 cm of 2.5Y 6/4 light yellowish brown wet sand that rested on the bottom of the trench and filled the cracks between the paving stones. This final layer was designated Zone 3.

The excavated portion of Feature 3 east of the modern trench was covered with capstones (Figure 22). These were removed, revealing a rodent nest (Figure 23). The rodent-disturbed fill under the capstones was excavated as Zone 1. This zone was 5 cm thick and consisted of 10YR 3/3 dark brown silty sand with abundant cellophane and modern plant material. The entrance to the rodent nest was likely in the western rubble-filled opening of Feature 3, as cellophane fragments were also found in this context. Beneath the rodent nest was a layer of 10YR 5/3 brown silty sand with small patches of 10YR 5/6 silty sand. This layer, designated Zone 2, was approximately 10 cm thick. In the northeast corner of 97R100 there was a patch of 10YR 6/6 brownish yellow silty sand with charcoal inclusions. This fill lens was about 5 cm thick and was designated Zone 3. The soil below Zones 2 and 3 was described as 5YR 5/4 reddish brown gritty, silty sand with ash and abundant charcoal inclusions (Figure 24). It was 10 cm thick. Beneath Zone 4 and resting on top and between the paving stones at the bottom of the drain was 10YR 6/6 brownish yellow silty sand (Figures 25 and 26). The east wall profile of squares 97R100 and 98R100 illustrates Zones 1 through 5 as they were excavated in the eastern portion of Feature 3 (Figure 27).

Correlations between the fill zones in the western and eastern portions of Feature 3 can be made by comparing soil descriptions and elevation data. This process also leads to the identification of zones that do not correspond. For example, it is clear that deposits attributed to Zone 1 are very different on the western and eastern sides of Feature 3. Zone 1 on the west side is rubble and trash filled into the drain opening, while on the east side it is a rodent disturbance. Zones 2 and 3 on the east side do not have a clear analog on the west side of Feature 3, although they may be related to the lower portion of the rubble fill. However, it is clear that Zone 2 on the west side of Feature 3 corresponds to Zone 4 of the east side. Both of these zones were described as dark brown to reddish brown silty sand with abundant charcoal, and existed at the same relative elevation given the 5.6% slope from west to east. Similarly, Zone 3 of the west side of Feature 3 can be correlated with Zone 5 of the east side. This silty sand is variously described as yellowish brown or brownish yellow, and its removal revealed the bottom of the feature. Based on this analysis, four major analytical units can be identified: the rubble in the opening of the drain (Zone 1 west), the light-colored fill underneath the capstones (Zones 1–3 east), the middle layer of fill (Zone 2 west and Zone 4 east), and the layer of sand lying on the bottom of the drain (Zone 3 west and Zone 5 east).

A minimum of 1,869 artifacts were collected from the four analytical contexts of Feature 3. Just over a quarter of these (27%) are window glass fragments (n=510). Nails account for 23% of the assemblage (n=423). The remaining 50% includes 347 historic ceramic sherds, 297 pieces of container glass, 72 pieces of lamp chimney glass, 21 iron objects and 28 iron



Figure 19. Top of Zone 1 rubble in the western opening of Feature 3.



Figure 20. Zone 1 rubble in western opening of Feature 3; note base of redware vessel in center of photograph.



Figure 21. Base of Zone 1 (Top of Zone 2) in western portion of Feature 3, facing north.



Figure 22. Capstones of eastern portion of Feature 3, facing north; also note rubble of Feature 9 along the southern edge of Feature 3.



Figure 23. Rodent disturbance underneath the capstones of Feature 3, facing north.



Figure 24. Feature 3 facing north; top of Zone 2 in square 98R100 and bottom of Zones 2 and 3 in 97R100.



Figure 25. Andy Valiunas excavating Zone 5 of Feature 3, facing northeast.



Figure 26. Anna Agbe-Davies and Brett Riggs excavating Zone 5 of Feature 3, facing east.

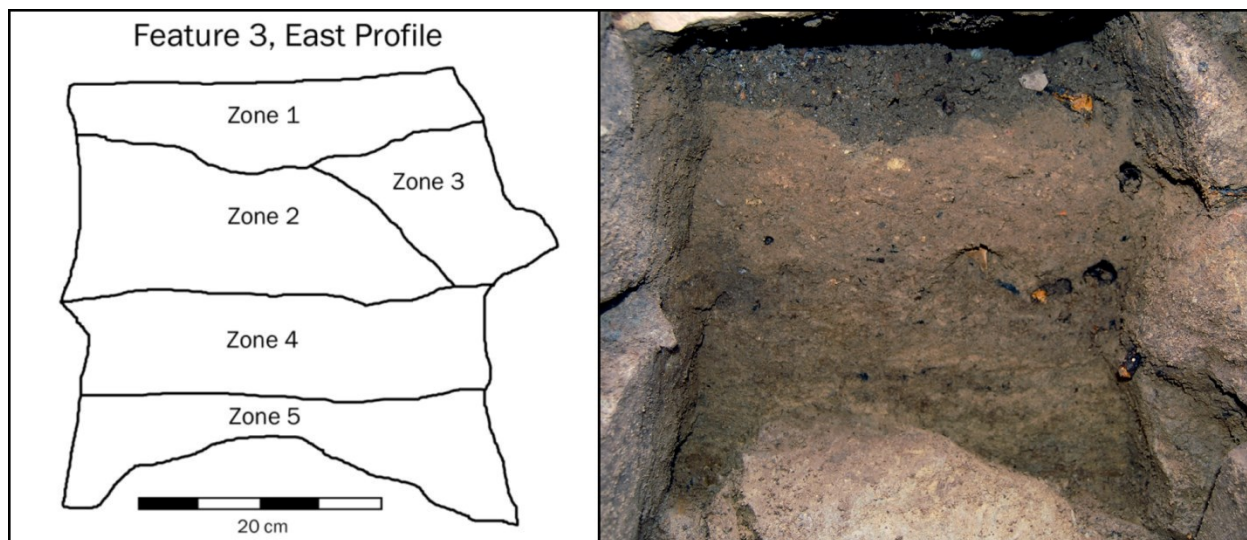


Figure 27. East profile of fill in Feature 3 showing excavated zone contexts.

fragments, 6 barrel hoop fragments, 34 brick fragments, 12 clay pipe fragments, 18 pins, 20 buttons and other fasteners, 24 oyster shell fragments, and a large quantity of animal bone. A diverse set of objects ranging from bone toothbrush fragments to an iron hinge are present in the assemblage but occur with less frequency. These items will be considered in more detail in Chapter 4, with the intent of understanding both the activities they may represent and the timing of the stone drain's construction, use, and abandonment.

#### *Feature 4*

This feature consisted of a thin lens of 10YR 5/2 grayish brown sandy clay fill on the north side of the stone drain (Feature 3) in square 98R98. It was not possible to determine its size and shape because it was cut by the PVC drainage trench, conduit trench, and Feature 2. It is possible this deposit may be re-deposited nineteenth-century plowzone soil.

Sixty-two artifacts were collected from Feature 4 fill, including 13 historic ceramic sherds, 9 container glass fragments, 4 pieces of lamp chimney glass, 22 pieces of window glass, 10 nails, and animal bone fragments. Other items include a pearl button, a brass grommet, a brass pin, and a fragment of a mirror. The historic ceramics consist of 2 undecorated creamware sherds, 1 warm polychrome hand-painted pearlware sherd, 8 whiteware sherds of which 4 displayed transfer-print designs in red, black, and blue, and 2 redware sherds of which one had green glaze. The container glass included 4 colorless shards and 2 aqua shards, along with one olive, one emerald green, and one very dark olive shard. The artifact assemblage from Feature 4 does not contain any twentieth-century materials, suggesting it may date to the nineteenth century.

#### *Feature 5*

This feature is a flat-bottomed, sub-rectangular cellar pit that was identified immediately north of the stone-lined drain (Feature 3). The dimensions of Feature 5 cannot be determined because only the northeastern section of this feature survived the numerous ground-disturbing

activities that took place at the Vance site after this feature was abandoned. It was capped and perhaps truncated by fill from sidewalk construction, cut by the conduit trench and the PVC drainage pipe trench, and intruded by Features 1, 2, 4, 6, 7, 8 and 14 (Figures 15 and 17). It also appears that Feature 5 was cut by the installation of the stone-lined drain (Feature 3), although the interface between the two was significantly disturbed by the conduit trench.

Two zones of fill were identified during the excavation of Feature 5. Zone 1 was a 10-cm thick deposit of 10YR 4/3 brown silty sand mottled with 10YR 5/6 yellowish brown clayey sand with ash and charcoal. This soil filled in the spaces between large angular rocks lying at the base of Zone 1 (Figures 28 and 29). Prior to the identification of Feature 5, some of Zone 1 was excavated as part of Level 3. Zone B of Level 3 in square 99R100 and Level 3 of square 98R100 can both be attributed to Zone 1 of Feature 5. Zone B was described as 10YR 5/3 brown sand mottled with 2.5Y 6/3 light yellowish brown coarse sand containing brick fragments and large charcoal inclusions. Level 3 in square 98R100 consisted of 10YR 4/3 brown sand with brick fragments.

A 5-cm layer of 10YR 4/3 brown silty coarse sand with charcoal flecks was present beneath the large angular stones of Zone 1. This fill was designated Zone 2. The excavation of Zone 2 revealed large redware and whiteware sherds lying on the bottom of the cellar pit (Figures 30 and 31). It also became apparent during the excavation of Zone 2 that only a thin strip of undisturbed subsoil existed between the north-south running segment of the conduit trench and the eastern wall of Feature 5 (Figure 31). This small mercy of preservation greatly facilitated the identification of Feature 5 as a cellar pit.

A total of 299 artifacts were collected from Feature 5 fill. They include 3 prehistoric flakes, 96 historic ceramic sherds, 45 fragments of container glass, 1 piece of lamp chimney glass, 53 pieces of window glass, 79 nails, 5 shell fragments, and more than 5 pieces of animal bone. Other items present in the Feature 5 assemblage include 2 buttons, a bone knife handle, a brass pin, a gizzard stone, 3 clay pipe fragments, a piece of brick, and a fragment of polished slate. Some of these materials will be considered in greater detail in Chapter 4 in an effort to characterize the types of activities they represent, identify when Feature 5 was abandoned, and investigate its relationship to Feature 3.

### *Feature 6*

Feature 6 is a sub-rectangular pit of unknown function located in square 99R99. It was approximately 50 cm by 40 cm in dimension and contained 10YR 4/4 brown silty sand mixed with 5R 6/6 reddish yellow clay chunks. Feature 6 intrudes the cellar pit (Feature 5) and was itself intruded by Feature 2. It had a flat bottom and was relatively deep, extending 44 cm below the base of Feature 5.

The fill of Feature 6 contained 108 artifacts, including 37 historic ceramic sherds, 6 fragments of container glass, 3 fragments of lamp chimney glass, 23 fragments of window glass, 34 nails, 5 fragments of animal bone, and 2 fragments of oyster shell. Also present were a lead ball, a lead solder lump, and a portion of a porcelain doorknob. The ceramics included 1 creamware sherd, 2 pearlware sherds, 17 whiteware sherds, 3 white granite sherds, 11 redware sherds, and 2 porcellaneous sherds. Decorations on the whiteware sherds include cool polychrome hand-painting, blue and green molded edging, transfer-printed designs in red, green, and blue, and blue sponge painting. The container glass assemblage consists of 5 olive, 1 aqua,



Figure 28. Brett Riggs excavating Zone 1 of Feature 5, facing west.



Figure 29. Base of Zone 1 in Feature 5, facing north; also note adjacent conduit trench.





Figure 30. Large slipped earthenware pottery, brick, and stones resting on the bottom of the cellar pit (Feature 5), facing east.



Figure 31. Bouran Mozayen and Mary Beth Fitts removing sherds from the bottom of Feature 5; David Cranford excavating Feature 3. Note the thin strip of subsoil in the foreground that separates Feature 5 from the conduit trench. Photograph taken facing southwest.

and 2 colorless sherds. Of these items, the white granite ceramic sherds are the most recently produced, and may indicate Feature 6 was filled in during the late nineteenth century.

### *Feature 7*

This feature is a rectangular posthole in square 98R98 (Figure 17). It measured approximately 30 cm by 25 cm in cross-section and extended about 15 cm below the base of the cellar pit (Feature 5). It was truncated by Feature 4. Feature 7 fill consisted of 10YR 4/4 dark yellowish brown silty sand and chunks of 10YR 6/8 brownish yellow sandy clay. Based on its bottom elevation and shape, this post may be associated with two others designated Feature 8 and Feature 14. Although only three in number, these posts form a line parallel to Vance Hall and may represent either a fence built along the property line or scaffolding for the construction of Roberson's Hotel or Battle-Vance-Pettigrew.

The fill of Feature 7 yielded 5 historic ceramic sherds, 2 pieces of container glass (colorless and olive green), 1 piece of window glass, a fragment of a slate pencil, and a kaolin pipestem. The ceramics consisted of 1 creamware sherd, 2 creamware or pearlware sherds, 1 redware sherd, and 1 porcellaneous sherd. This admittedly small assemblage suggests a relatively early date for the fill of Feature 7.

### *Feature 8*

Feature 8 is a rectangular posthole in square 97R99. It was identified in the bottom of the modern PVC drainage pipe trench, just south of Feature 3 (Figure 17). Feature 8 measured approximately 30 cm by 20 cm in cross-section and extended 19 cm below the bottom of the PVC pipe trench. Based on its relative depth and shape, this post may be associated with Features 7 and 14. Together they may indicate the presence of a fence line or scaffolding.

Artifacts collected from Feature 8 include 4 historic ceramic sherds, 2 pieces of window glass, 1 nail, and fragments of animal bone. Like Feature 7, Feature 8 yielded a small but relatively early ceramic assemblage. Three of the four sherds are undecorated creamware, and the fourth is blue transfer-printed whiteware.

### *Feature 9*

This feature, located in square 97R100, is a disturbance along the southern edge of the stone drain (Feature 3) (Figures 14 and 17). It had an irregular shape and was filled with stone and brick rubble. Excavated contexts that can be attributed to Feature 9 include Zone F of Levels 2 and 3. Zone F of Level 2 was a 22 cm-thick deposit of 7.5YR 5/6 brown sticky, clayey, silty sand. It was overlain by sidewalk construction fill (Zones B and C). This fill continued for another 10 cm and was excavated as Zone F of Level 3. This material was present immediately on top of the fill inside the stone drain (Feature 3). The fill at the bottom of this disturbance on the southern edge of Feature 3, which was excavated as Feature 9, contained abundant angular chunks of gravel.

A total of 95 artifacts are attributed to Feature 9. These include 26 historic ceramic sherds, 2 brick fragments, 6 fragments of container glass, 11 pieces of window glass, 25 nails, 8 iron fragments, and 15 animal bone fragments. One bone button and one polished slate fragment were also recovered from fill attributed to Feature 9. Approximately 58% of the ceramic sherds

are whiteware (n=15). One of these is decorated with cool polychrome hand-painting, another with molded blue shell-edge, and two with transfer-printed designs in blue and light blue. A diversity of other wares are represented by single sherds, including creamware, pearlware, white granite, redware, stoneware, porcellaneous ware, and yellow ware. Three of the container glass fragments were colorless, two were olive, and one was aqua. Overall, the artifact assemblage and rubble present in Feature 9 resembles that which was thrown into the opening of the stone drain when it was abandoned, suggesting the two events may be contemporaneous.

#### *Feature 10*

This designation was given to a shallow, ovoid depression in the bottom of the cellar pit (Feature 5) (Figure 17). This disturbance, located in square 99R100, measured about 40 cm by 20 cm and was approximately 4 cm deep. No artifacts were recovered from Feature 10, which was only visible after the subsoil base of Feature 5 was cleaned. In fact, large ceramic sherds were found lying on the floor of Feature 5 directly above Feature 10. While this disturbance may be the very bottom of a posthole disturbed by the cellar pit, it is perhaps more likely an irregularity in the floor of the pit.

#### *Feature 11*

Feature 11 is an ovoid posthole that was cut by the western edge of Feature 2 (Figure 17). It measured 35 cm by 25 cm and extended 20 cm below the base of Level 1. The fill excavated from Feature 11 consisted of 10YR 5/3 brown sandy clay with brick fragments and charcoal. This fill yielded one whiteware sherd, one nail, and one fragment of animal bone. Based on the position and depth of this posthole, it may be associated with another designated Feature 12.

#### *Feature 12*

Feature 12 is an ovoid posthole that was cut by the southwestern edge of Feature 2 (Figure 17). This feature was approximately 15 cm in diameter and extended 19 cm below the base of Level 1. Its fill consisted of 5YR 3/3 dark reddish brown silty sand, with small brick fragments and chunks of 10YR 5/6 yellowish brown silty clay. One piece of window glass was present in the Feature 12 fill. Given the position and depth of Feature 12, it may have been dug at the same time as Feature 11. Since both were cut by Feature 2, they likely date before c. 1957.

#### *Feature 13*

This feature was excavated as Zone A of Level 3 in square 99R100. It is visible in the north profile of the square (Figure 18) as originating at the base of Level 1, although it was not recognized during excavations until some of the plowzone was removed as Level 2. Feature 13 is basin-shaped and approximately 30 cm in diameter. The fill excavated from this feature was 10YR 4/4 dark yellowish brown sand with small brick fragments. Artifacts present in the fill consisted of a whiteware sherd with annular slip decoration, a whiteware sherd with blue sponge decoration, two fragments of window glass, two nails, and a fragment of animal bone. Feature 13 appears to be a post or small planting that was dug through the nineteenth-century plowzone (Level 3, Zone B) to subsoil.

### *Feature 14*

Feature 14 is a rectangular posthole that was almost entirely removed by the creation of Feature 2 (Figure 17). Only the very bottom of this post, which measures 25 cm by 15 cm, was revealed by clean-troweling after Feature 2 was removed. Therefore, no excavated soil was attributed to this context. However, given its relative depth and shape, Feature 14 may be associated with the post Features 7 and 8. Taken together, these posts are suggestive of a fence line or scaffolding.

## Chapter 4

### ARTIFACT ANALYSIS

Over 9,190 artifacts were collected during archaeological fieldwork at the Vance site. Most of these were deposited in the nineteenth-century plowzone, the cellar pit (Feature 5), and the stone drain (Feature 3). In addition, later disturbances produced a large collection of artifacts that cannot be attributed to any one of these contexts individually but they are still clearly the products of nineteenth-century activities. The following analyses have been conducted to document the artifacts collected from the Vance site, to identify the nineteenth-century activities that produced this assemblage, and to more precisely date the construction, use, and abandonment of the stone drain and cellar pit.

All artifact analysis was conducted by students and staff of the Research Laboratories of Archaeology (RLA) at the University of North Carolina at Chapel Hill. Bouran Mozayan examined the button assemblage, Elise Duffield, Marisa Hobbs, and Steve Davis conducted an analysis of the window glass, Ashely Peles examined and reported on the faunal materials, and Lindsay Block assisted with the analysis of the ceramic assemblage. Mary Beth Fitts examined the prehistoric artifacts, ceramics, glass, a subsample of the macrobotanical assemblages produced by flotation, and miscellaneous artifacts. As the iron objects collected during this project await stabilization and cleaning, detailed analyses of the nails and other iron objects were not conducted. All artifacts and notes from the Vance site excavations are curated at the Research Laboratories of Archaeology according to standards established by the National Park Service.

#### Prehistoric Artifacts

A few artifacts from the Vance site attest to the use of this location by American Indians sometime between 3,000 and 300 years ago. This rather large window of time is due to the small size of the prehistoric assemblage, which consists of six stone flakes and one pottery sherd. The small assemblage suggests use of this location did not involve a large number of people or last very long, although it should be noted that these artifacts were collected from only a 3 x 3-meter area. In addition, some plowzone soil as well as the upper subsoil was left unexcavated, possibly also limiting the assemblage size. Three of the prehistoric artifacts came from the bottom zone of Feature 5 and may have originated in the upper subsoil. The others were present in the stone drain fill, and are clearly re-deposited from their original contexts.

Flakes are created during a process of chipped-stone tool production called flintknapping (Whittaker 1994). Sometimes the flakes themselves are the desired product of knapping, as they are thin and have sharp edges. Only certain types of stone knap well, and American Indian communities passed along knowledge about their locations. The flakes in the Vance site assemblage came from at least three different sources. All three are rocks from the Carolina Terrane, which is composed of volcanic material deposited under differing conditions and later subjected to lowgrade metamorphism (Stoddard 2006:47–48). This group of rocks is classified as dacite due to their percentages of quartz, alkali feldspar, and plagioclase, and as rhyolite based on the ratio of alkalis to silica. The former term is more precise geologically, but the latter is more commonly used by archaeologists (Rogers 2006:12).

Two of the flakes from the Vance site assemblage are rhyolite (dacite) tuff. This material is volcanic ash that was turned to stone through welding and compacting caused by heat and pressure from overlying material (Stoddard 2006:46). The Vance site examples, which were found in Zone 2 of Feature 5, consist of one secondary flake and one tertiary flake. They are bluish gray in color and resemble material collected at the Crow Brach North Site (31OR633) (Fitts 2010:29). This stone is not macroscopically similar to identified sources in Orange, Chatham, or Durham counties, suggesting it may have been carried in from outside the tri-county area. One tertiary flake in the Vance site assemblage is crystal-lithic tuff. It was found in Zone 5 of Feature 3. This material consists of a mixture of volcanic ash and rock fragments. A prehistoric quarry of crystal-lithic tuff has been documented at a site on St. Mary's Road in Durham County (Fitts 2010:29). The third type of raw material present in the Vance site assemblage is metasedimentary rock. Two tertiary flakes of this material were present in the upper fill enclosed by the capstones of Feature 3. Metasedimentary rock consists of volcanic materials transported by water, which produces metamorphic rock that is very fine-grained and contains parallel bedding planes (Stoddard 2006:57). A prehistoric quarry near Pittsboro in Chatham County contains this type of material. Finally, one tertiary flake present in Zone 2 of Feature 5 was knapped from a metavolcanic rock, but it could not be attributed to a specific category.

The prehistoric assemblage from the Vance site also includes one ceramic sherd, which was recovered from Zone 5 of Feature 3. This artifact is just over 2 cm in size. It is tempered with angular quartz sand and has an exterior surface that has been stamped with a tool, although the type of tool is not readily apparent. The interior surface of the sherd is relatively rough. These characteristics are not sufficient to suggest a specific period of production for the pot it came from. American Indians in the Piedmont of North Carolina have been making pottery for approximately 3,000 years (Ward and Davis 1999), so the Vance site assemblage was created some time after this date.

Prehistoric artifacts also were recovered from excavations at the Pettigrew Site on the south end of Lot 11 (Jones et al. 1998:28). Two projectile points, a chipped ax, and a small biface fragment were found along with 18 fragments of chipped-stone debris. Both projectile points were classified as Small Savannah River Stemmed, which were typically made between 4,000 and 2,500 years ago. The axe resembles a form called Guilford and likely dates to the Middle Archaic period (c. 6,500 years ago). This suggests there may have been at least two temporally distinct prehistoric occupations of the Lot 11 area. If the pottery in the Vance Hall assemblage was produced at the same time as the Savannah River projectile points from the Pettigrew Site, it would be an example of the earliest pottery made in the region. The existing data, however, are not sufficient to make this attribution.

### **Historic Artifacts**

Most of the artifacts from the Vance site were used and discarded by the people who lived and worked in Lot 11 from the late eighteenth through the early twentieth centuries. They include not only the owners of the lot, their business partners, and the students who boarded there, but also any slaves who may have lived or worked on the parcel. While it may be reasonable to attribute certain artifacts to one of these groups, in general the most appropriate scale for interpreting the Vance site assemblage is that of the Lot 11 "community." The artifacts have been grouped into four major associations: foodways, architecture and furniture, personal

adornment and ablutions, and occupations. The attribution of an artifact to one of these categories requires an identification of its function. While useful for comparison, this process does ignore heirlooms and recycling, two very common ways artifacts acquire different uses than those for which they were designed. This system of organization is influenced by South's (1977) systematic approach to reporting artifact assemblages from historic sites. The goal of this approach is to organize data in a way that enables comparisons of artifact patterns at different sites. Such comparisons can highlight regional and functional differences in material culture practices.

A summary of the historic Vance site artifacts by functional category is presented in Table 1. This summary accounts for all but 292 of the excavated artifacts, of which most are small glass shards that could not be attributed a specific category. When compared to the assemblage from the Pettigrew site (Table 2), it is clear that there are some overall similarities but also striking differences between the two assemblages. Percentages of artifacts attributed to the furniture, kitchen, dining, activities, and personal groups are strikingly similar, given that the Pettigrew assemblage is approximately three times as large as the Vance site assemblage.

Considerable differences are apparent, however, in the architecture and food categories. About a quarter of the Vance site assemblage can be associated with aspects of the built environment, while architecture accounts for 67% of the Pettigrew assemblage. On the other hand, food accounts for 50% of the Vance site assemblage and only 4% of the Pettigrew assemblage. The difference in architectural artifacts is due to higher proportions of nails and window glass at the Pettigrew site, which also yielded a greater variety of architectural items. This difference can be attributed to the fact that the Pettigrew excavations focused on revealing the remains of two buildings, the Poor House and the Phi Delta Theta house, while the Vance site excavations exposed a section of a stone drain, and possibly the corner of an outbuilding with a cellar pit. The difference in food group representation is due to the large size of the Vance site faunal assemblage, which includes 4,467 fragments of animal bone and 45 pieces of shell. The Pettigrew bone assemblage, on the other hand, consisted of 754 bone fragments and 274 shell fragments. Given the large size of the Vance site faunal assemblage, Ashely Peles, a UNC graduate student with specialized training in faunal analysis, was employed to examine it. As most of the animal bone assemblage was recovered from the stone drain (Feature 3), this feature appears to have been a preferred location for disposing of slops. Thus, the differences between the Vance and Pettigrew artifact assemblages appear to be largely a function of the nature of the features excavated at each site.

### *Foodways*

The term foodways refers to all of the activities and ideas associated with the acquisition and consumption of food, ranging from the types of foods people eat to the customs associated with dining. The following examination of foodways at the Vance site presents data derived from plant and animal remains, historic ceramics, and glass. The latter two materials are grouped according to whether they were used in the kitchen for cooking and storage, or on the table for dining at mealtimes.

Despite or perhaps because of their importance in daily life, foodways are often omitted from histories. Archival documents can, however, provide useful details. Two particularly interesting examples from Chapel Hill occur in letters authored by Elisha Mitchell and his wife, both shortly after their arrival at the University. In an 1818 letter to his fiancée Maria North,

Table 1. Inventory of Historic Artifacts from the Vance Site with Assigned Function.

Functional Category	Quantity	Functional Category	Quantity
<b>Architectural Group</b>	<b>2,233</b>	Commerce	
Nails		Lead Seal	1
Cut	1	Iron Barrel Hoop	6
Wire	1	Gardening (Flower Pots)	15
Unidentified	825	Sewing	
Padlock	1	Brass Thimble	1
Porcelain Doorknob	1	Brass Straight Pins	20
Hinge	1	Tools (Shovel)	1
Window Hardware	2	Writing	
Window Glass	1,347	Slate pencil	1
Plumbing (Brass Cap)	1	Polished Slate	6
Plaster	4	Stoneware Ink Bottle	1
Brick	38	Brass Pencil Band	1
Stone Dressing Flake	4		
Mud Dauber Nest	7	<b>Personal Group</b>	<b>61</b>
		Clothing	
<b>Furniture Group</b>	<b>270</b>	Buttons	25
Lighting Fixtures		Cuff Links	1
Lamp Glass	264	Wire Loop	2
Light Bulb	1	Grommet	3
Mirror	5	Press Stud Post	1
		Stock or Belt Buckle	1
<b>Food Group</b>	<b>4,518</b>	Jewelry (Glass Bead)	2
Animal Bone	4,467	Tobacco Pipe Fragments	25
Shell	45	Pocket Knife	1
Gizzard Stone	6		
		<b>Toiletries Group</b>	<b>30</b>
<b>Kitchen Group</b>	<b>610</b>	Toothbrush Fragments	4
Ceramics		Ceramic Basin/Chamber Pot	12
Cooking/Storage	202	Medicine Bottle Glass	14
Glass			
Beverage	404	<b>Miscellaneous Group</b>	<b>116</b>
Food	3	Bone Handle	2
Cast Iron Cookware	1	Coal	4
		Solder Lump	2
<b>Dining Group</b>	<b>999</b>	Lead Sheet	1
Ceramics, Tableware	861	Copper Sheet	1
Glass, Tableware	136	Wire	10
Antler Tableware Handle	1	Brass Strip	1
Bone Knife Handle	1	Brass Pellet	2
		Unidentified Iron Objects	93
<b>Activities Group</b>	<b>55</b>		
Ammunition	2	<b>Total</b>	<b>8,892</b>



Table 2. Comparison of the Vance Site and Pettigrew Site Historic Artifact Assemblages.

Functional Group	Vance Site		Pettigrew Site	
	Count	Percent (%)	Count	Percent (%)
Architecture	2,233	25.1	15,758	68.0
Furniture	270	3.0	805	3.5
Food	4,518	50.8	1,028	4.4
Kitchen	610	6.9	1,651	7.1
Dining	999	11.2	2,190	9.5
Activities	55	0.6	208	0.9
Personal	61	0.7	139	0.6
Toiletries	30	0.3	310	1.3
Miscellaneous	116	1.3	1,078	4.7
Total	8,892	100.0	23,167	100.0

Elisha Mitchell tells her of the fare provided at his boarding house: “we have coff[ee whea]t biscuit and bacon either cold or warm—at noon bacon, fowls corn bread and hominy— also cab[bage]—The Irish potatoe will not grow well here—for supper we have wheat biscuit and coffee” (Mitchell to North, 11 February 1818, Elisha Mitchell Papers #518, Southern Historical Collection). The following year Maria, now his wife newly arrived in Chapel Hill, wrote to her mother about a meal that had been held in her honor consisting of “roast turkey with duck, roast beef and broiled, [sic] broiled chicken, broiled Irish and sweet potatoes, turnips, rice, carrots, parsnips, cabbage, stewed apples, boiled pudding, baked potato pudding, damson tarts, current tarts, apple pies and whipp[s]” (*Carolina Magazine*, 11 March 1934, NC Collection Clipping File). These two accounts, both written by northerners early in their encounters with southern foodways, describe two very different sorts of meals. Elisha describes daily fare, while Maria lists the contents of a veritable feast. These contrasting accounts show that while certain foods, such as potatoes, may not have been eaten every day they were nonetheless accessible to Chapel Hill residents. Based on Elisha Mitchell’s account, it appears coffee, wheat and corn bread, hominy (grits), bacon, and “fowl” were staple foods.

### *Botanical Remains*

The physical remains of meals provide a different perspective on foodways. In this case it is not the interests of an author that filter our knowledge, but rather practices of waste disposal and the mechanics of preservation and sampling. Plant and animal remains recovered from archaeological sites must be examined with these potential biases in mind. Macrobotanical materials in particular are preserved only under certain circumstances. If they are not burned, they may survive in arid contexts with low moisture or in wet contexts with low turbidity. However, plant materials that have been burned and turned to charcoal are resistant to decay and can survive in a wide variety of contexts. The likelihood of a particular plant material becoming carbonized depends mostly on whether or not it was intentionally burned as fuel or waste-fuel. In forested areas, wood is the most likely material to be carbonized, while in arid, pastoral contexts seed-containing dung is common fuel (Hastorf and Wright 1998). Cleansing of storage areas by fire may result in a broader spectrum of carbonized materials, as may accidents during

food preparation or more tragic circumstances. In a very general sense, the amount and types of burning that take place in a given context contribute to the size and diversity of its botanical assemblage.

Soil samples from the Vance site stone drain (Feature 3) and cellar pit (Feature 5) were processed by flotation, a process designed to quickly separate carbonized plant materials from soil with as little damage to the plant materials as possible. Flotation was conducted by Elise Duffield using a SMAP-type machine that collected heavy fractions in 0.01-in<sup>2</sup> (0.25-mm<sup>2</sup>) mesh and light fractions in approximately 125 $\mu$  chiffon fabric. Mary Beth Fitts examined two Vance site flotation samples: one from Feature 3, Zone 5 that involved processing 21.5 liters of soil, and one from Feature 5, Zone 2 obtained from 14.5 liters of soil. Analysis of flotation samples followed procedures described by Pearsall (2000). This process involved separating samples into size-graded fractions using geological sieves, which were then examined under a low-power stereoscopic microscope. The 2-mm fraction was completely sorted and the smaller fractions scanned for seeds, nutshell, and other identifiable plant materials. Seeds were identified with reference to the type collection of southeastern botanical materials in Dr. Margaret Scarry's paleoethnobotany lab at the University of North Carolina, Chapel Hill. Dr. Scarry also assisted with the verification of species identifications. Both counts and weights were recorded for all food-plant fragments and seeds.

The examined flotation samples from the Vance site contained little carbonized plant material. The sample from the bottom zone of the stone drain yielded 6.04 grams of wood charcoal, while the sample from the cellar pit contained 2.81 grams of wood. When standardized by soil volume, the drain contained approximately 0.28 grams of wood fragments per liter, and the cellar pit 0.19 grams of wood fragments per liter. This difference suggests more burned material was incorporated into the drain fill relative to the cellar pit fill. Despite this, only two identifiable carbonized plant remains were present in the sample from Feature 3, Zone 5. One was a maize cupule (*Zea mays*), or corncob fragment; the other was a goosegrass (*Eleusine indica*) seed. Goosegrass is a pantropical weed that originated in Africa. It is a wild ancestor of finger millet (*Eleusine coracana* ssp. *coracana*) (Salimanth et al. 1995). Identified plant remains from the cellar pit include a grape seed fragment (*Vitis* sp.), a wild buckwheat seed (*Polygonum convolvulus*), a purslane seed (*Portulaca oleracea*), and a seed from a plant in the Compositae family. Like goosegrass, wild buckwheat is an agricultural weed that grows well in disturbed soil. The composite seed is also likely a weed. These seeds may have been burned during field-clearing activities. It is somewhat surprising that no domestic grains are present in the assemblage; this suggests that only harvesting took place on Lot 11, with all grain processing taking place at one of the many mills on nearby Bolin and Morgan creeks. Purslane may have been grown for greens in a house garden, and the grape seed fragment recovered from the cellar pit fill may be residue of a fermented beverage. The presence of only a single maize cupule suggests corn was not processed on site and rarely eaten on the cob. This is consistent with Elisha Mitchell's account of daily Chapel Hill fare in 1818, in which he mentions eating foods made from milled maize products, cornbread and hominy.

### *Faunal Remains*

Faunal remains from the Vance Site account for approximately half of the total artifact assemblage. This collection was examined by Ashley Peles at the University of North Carolina, Chapel Hill (Peles 2012). Bone fragments were identified by using the comparative collection

housed in the Research Laboratories of Archaeology at UNC Chapel Hill. Due to the limited size of this collection, domestic mammal, domestic and wild bird, and fish specimens, as well as some unidentified remains, were taken to the Zooarchaeology Laboratory in the Department of Anthropology at the University of Tennessee at Knoxville. Secure identifications were made through use of the modern faunal collection, with Dr. Walter Klippel assisting with identification of unusual specimens. Categories of information recorded during analysis include: Class, Taxon, Body Part, Portion, Proximal Fusion, Distal Fusion, Symmetry, Weathering, Burning, Butchering, Cut Marks, Chop Marks, Shear Marks, Saw Marks, Rodent Gnawing, and Carnivore Gnawing. All specimens were weighed to the nearest tenth of a gram in broad taxonomic groupings and, with the exception of eggshell fragments, were counted. Some specimens appear to have fractured during the recovery process, as indicated by fresh breaks with an absence of soil staining, and where possible these specimens were combined and recorded as individual specimens.

Potential biases present in a faunal collection can come from a number of sources. The most fundamental of these is related to recovery method. Archaeological investigations that employ the use of quarter-inch mesh recover fewer small vertebrates and invertebrates (mice, amphibians, passerine birds, fish) and small elements of medium mammals (sesamoids, phalanges, carpals/tarsals, teeth, scales) (Reitz and Wing 2008). In the case of the Vance site collection, most feature contexts were wet-screened through 1/16-inch mesh, resulting in a high recovery rate of small specimens. The non-feature contexts screened through quarter-inch mesh are biased towards larger bones.

A second faunal bias relates to the specimens and animals themselves. As a general rule, the smaller the animal, the more identifiable its remains may be. This is because small mammals are less likely to be butchered; therefore, as long as their remains are collected during excavation, elements tend to be whole. As the size of the animal increases, it is more likely that butchery will have to take place before cooking. Butchery results in a high number of medium-sized and large mammal fragments that are essentially unidentifiable. As a corollary to this, the bones of some vertebrates remain highly identifiable due to their distinctive features; these include catfish pectoral spines, eggshell, and pig tooth enamel. These species will then be better represented in archaeological collections. The age of an animal when it is killed can also affect preservation. The bones of young animals are softer and in the process of growing, therefore they are more likely to deteriorate over time, particularly in poor preservation environments. Therefore, it is common for juvenile remains to be underrepresented in collections.

The three most common methods for reporting faunal data are the Number of Individual Specimens (NISP), the Minimum Number of Individuals (MNI), and Biomass. Each of these is affected by preservation and size of the faunal sample. NISP is simply a count of all bone fragments present, divided into appropriate categories. Though not a direct proxy, NISP is often used as an estimation of the upper limit of animals present at a site. Since the Vance site assemblage is highly fragmented, the NISP will be correspondingly high, so specimen weight can be used concurrently as a mitigating factor. Because NISP tends to emphasize animals with easily identifiable parts, it is often used in conjunction with MNI. This calculation takes into account factors such as sex, age, and symmetry to estimate the smallest number of animals needed to account for all skeletal parts. The MNI tends to emphasize rarer species that may only be represented by one element. Using the two calculations together serves to balance out their weaknesses, as well as providing a range of animals that could have been present at a site (Reitz and Wing 2008). The third calculation considered in the Vance site collection is biomass, an

estimate of the total weight that the archaeological specimen weight may represent, often referring to the edible or usable meat on an animal.

Faunal remains from the Vance site consist of 4,514 individual specimens, weighing a total of 3,848.8 g (Table 3). This total does not include 66 grams of eggshell, which was weighed but not systematically counted. When a bone could not be identified to species, genus, or family, a size range was applied. For these purposes, a small animal is rabbit-sized or smaller, medium mammal is larger than a rabbit and up to a deer, and large mammal is larger than deer. Other categories used are Artiodactyla and Artiodactyla II. Technically, Artiodactyla refers to even-toed ungulates, meaning hoofed mammals whose weight is borne more or less equally by the third and fourth toes. This class includes Pig, Deer, Mule Deer, Antelope, Big Horned Mountain Sheep, and Sheep/Goat. Many pig bones are unique compared to animals like sheep and deer, and can therefore be ruled out, creating the category Artiodactyla II which includes Cervids and Caprines, but excludes Suidae. Bone preservation varied from moderate to good, particularly within the stone drain. Several specimens collected during the Vance site excavations are likely incidental inclusions to the faunal assemblage. These include four fragments of land snail shell, one unidentified reptile vertebra, and 30 amphibian bones.

Mammal remains make up 63% of the Vance site faunal collection, consisting of 2,866 specimens. This majority becomes even more pronounced when looking at the specimens by weight; out of a total bone weight of 3,848.8 g, mammal remains accounted for 3,570.2 g, or 93%. However, this is not surprising because birds, fish, amphibians, and reptiles are generally smaller than mammals, and their bones weigh correspondingly less. A number of modifications to these bones were recorded: 498 specimens (17%) were burned or calcined, 28 specimens were weathered (this is distinct from degradation due to poor preservation), 45 showed evidence of butchery (119 cut marks, 24 chop marks, 5 shear marks, and 5 saw marks), 12 showed evidence of rodent gnaw marks, and 2 specimens contained evidence of possible carnivore gnawing marks.

Pigs (*Sus scrofa*) were the most common animal recovered at the Vance site, with 298 remains representing a minimum of 4 individuals. One of the first animals to be domesticated, pigs descended from wild boars about 10,000 years ago. Domesticated pigs were brought to the New World by Spanish conquistadors and were kept as free-roaming groups, leading to the proliferation of feral populations (Clutton-Brock 1999). Pigs were generally a popular domesticate because they could be left to their own devices and caught when needed. In addition, pig carcasses yield 65–80% dressed meat, almost the entire carcass can be put to use, and pork preserves better than other meats (Reitz and Scarry 1985:70).

A quarter of the pig remains from the Vance site are loose teeth (n=71). When combined with other cranial parts in an encompassing “head” category, this becomes 29% of the remains (n=86). This percentage represents a normal distribution of head elements in comparison to the rest of the body. In contrast, 57% of the pig remains (n=171) can be grouped in the category of lower leg parts (carpals/tarsals, sesamoids, metapodials, and phalanxes). These are non-meaty portions of the skeleton that may have been discarded during primary processing. Thus, some of the Vance site collection could represent primary refuse from butchery. However, analyses of colonial sites, even in urban contexts, often reject the idea that such parts were simply being cast off because they could have easily been repurposed for other dishes that are not as popular today, including head cheese and pig’s feet. The presence of lower pig feet in the Vance site assemblage may therefore indicate the consumption of prepared pig’s feet, rather than the disposal of butchery waste.

Table 3. Faunal Remains Recovered from the Vance Site.

Taxon	Common Name	MNI	NISP (g)	Weight (kg)	Biomass
<i>Bos taurus</i>	Cow	3	20	766.9	10.4
Caprine	Sheep/Goat	1	1	19.4	0.4
<i>Sus scrofa</i>	Pig	4	298	1140	14.8
Artiodactyla	Pig/Sheep/Goat/Deer	-	89	306.9	4.6
<i>Sylvilagus</i> sp.	Cottontail Rabbit	1	2	1.1	0.0
<i>Didelphus virginiana</i>	Virginia opossum	2	35	33.1	0.6
<i>Sciurus</i> sp.	Squirrel	1	2	<0.1	0.0
cf. <i>Rattus</i> sp.	Rat	1	1	<0.01	0.0
cf. <i>Peromyscus leucopus</i>	White-footed mouse	1	11	<0.1	0.0
<i>Mus</i> sp.	Mouse	1	1	<0.1	0.0
<i>Microtus pennsylvanicus</i>	Meadow vole	1	1	<0.1	0.0
large mammal	-	-	27	220.4	3.4
large-medium mammal	-	-	14	66	1.1
medium mammal	-	-	1,717	924.5	12.3
small-medium mammal	-	-	108	19.9	0.4
small mammal	-	-	516	72	1.2
very small mammal	-	-	23	<0.1	0.0
<i>Meleagris gallapavo</i>	Turkey	1	2	3	0.1
<i>Gallus gallus</i>	Chicken	5	32	14.8	0.2
<i>Anas platyrhynchos</i> cf. <i>domesticus</i>	Mallard, domestic	1	2	4.1	0.1
Anatidae	Duck family	-	1	<0.1	0.0
Rallidae	Small-medium bird	1	1	0.2	0.0
Phasianidae	Terrestrial birds	-	325	83.8	1.1
cf. <i>Cyanocitta cristata</i>	Blue Jay	1	1	<0.1	0.0
<i>Melanerpes carolinus</i>	Red-bellied woodpecker	1	1	<0.1	0.0
<i>Colaptes</i> sp.	Shafted flicker	1	1	<0.1	0.0
Unidentified bird	-	-	789	55.9	0.8
<i>Ameiurus brunneus</i>	Snail bullhead	1	3	0.2	0.0
<i>Ameiurus catus</i>	White catfish	1	3	<0.1	0.0
<i>Ameiurus natalis</i>	Yellow bullhead	4	23	0.6	0.0
<i>Ameiurus nebulosus</i>	Brown bullhead	3	13	0.9	0.0
<i>Cynoscion regalis</i>	Weakfish	1	1	0.2	0.0
<i>Cynoscion nebulosus</i>	Spotted Seatrout	2	2	0.7	0.0
Siluriformes	Catfish	-	7	0.5	0.0
Unidentified fish scales	-	-	156	0.3	0.0
Unidentified fish	-	-	192	11	0.2
<i>Crassostrea virginica</i>	Eastern oyster	-	7	56.8	-
<i>Chione elevata</i>	Cross-barred venus	1	1	2.8	-
<i>Mercenaria</i> sp.	Quahog	1	1	6.7	-
Pelecypod	Bi-valve Mollusc	-	47	34.7	-
Gastropod	Land Snail	-	4	0.6	-
Reptile	-	1	1	0.5	-
Amphibian	Frog/Toad	3	30	0.3	-
Total			4,514	3,848.80	51.8

Cattle (*Bos taurus*) are believed to have been independently domesticated at least twice, with the first occurring around the Fertile Crescent 8,000 years ago. They were first domesticated for hides, meat, and milk, but around 4,000 years ago oxen began being utilized as draft animals (Clutton-Brock 1999). The Spanish brought over the first cows in the sixteenth century, spreading them rapidly across the New World. At the Vance site 20 specimens were recovered, weighing a total of 766.9 g and resulting in a minimum count of three cows. Three elements were unfused: a distal tibia, a proximal humerus, and a proximal tibia. These indicate that the cows were less than four years old when they were slaughtered, age ranges that fall between those that would be considered ideal for beef production, particularly considering relevant differences in weight gain among females/males and different breeds.

Caprine is a category that includes both sheep and goats. While these two animals look distinct in life, their bone structures are nearly identical. There are only certain bones that can be used to identify sheep or goat specifically, and these differences are sometimes not apparent in both young and large animals, so any species identification is considered provisional. Only one Caprine bone was present in the Vance site collection (the distal shaft of a right tibia); therefore, the corresponding MNI is also one. Although this bone did not show direct evidence of butchery, the way the shaft was broken resulted in a spiral fracture, which some faunal analysts have seen as possible evidence of butchery. The fact that the tibia was fused indicates that the animal was older than 18–24 months when it died.

A small number of wild mammals were also recovered from the Vance Site excavations. Remains of a cottontail rabbit, at least two Virginia opossums, and a squirrel are likely to be animals hunted by students for food and/or pleasure. One opossum humerus and a squirrel ulna were calcined; this may be further evidence of that these animals were consumed. The remains of mice, a rat, and a meadow vole are more likely to be indicative of commensal animals attracted to the refuse. Seven unidentified, very small mammal bones were calcined, indicating intentional burning, but it is unclear if this was for the purpose of a very tiny meal, or perhaps as part of relatively few original deposits being burned for reasons of sanitation.

Bird remains comprised slightly over 25% of the Vance site collection. Because birds are generally smaller than many mammals used for food sources, they are often more identifiable, being subject to less butchery. A total of 68.3% of the birds (n=789) recovered from the Vance site are considered unidentified, while 28.3% were identified to family (n=327), and 3.4% were identified to species/genus (n=39). The remains of 48 bones were burned (46 calcined), one bone showed evidence of butchery marks, and three showed evidence of rodent gnawing. Additionally, more than 203 eggshell fragments were recorded, weighing a total of 66.0 g. While eggshell recovered on archaeological sites is often assumed to be from chickens, research aimed at identifying eggshell has shown that this is not a safe assumption. Analysis of eggshell from a subfloor pit at Thomas Jefferson's plantation Poplar Forest has recovered evidence of eggshell from a number of species (Lamzik 2012). In addition to chicken eggs, shell fragments were also recovered from wild/domestic turkey, goose, and guinea fowl. Given that archaeological and documentary evidence indicate wild animals and birds were hunted in nineteenth-century Chapel Hill, we should also assume that eggs may have been procured from small farmers raising different types of fowl or from wild bird's nests.

The domestication date of chicken (*Gallus gallus*) is constantly under discussion. Archaeological evidence indicates domestication in China about 7,400 years ago in multiple areas, although genetic studies suggest that there may have been several origins, perhaps going back as early as 10,000 years ago (Liu et al. 2006). While chickens were originally brought over

to the Americas by the Spanish, chicken bones from South American sites such as El Arenal suggest at least some Pre-Columbian contact between A.D. 1320 and 1400 (Fitzpatrick and Callaghan 2009). Chicken remains at the Vance site were represented by 32 specimens from a minimum of four birds. While this number seems small, an additional 325 specimens were identified as Phasianidae. This is a category that includes a number of terrestrial birds, but in this case is used to indicate that no distinction could be made between chicken and guinea fowl, whose bones are very similar both as juveniles and adults. Despite this, the fact that no remains of guinea fowl were recovered indicates these remains are more than likely all from chickens. The majority of specimens recovered from the Vance site are of juveniles and not egg-laying hens, suggesting chickens were kept primarily for consumption. This is one reason that so many specimens were catalogued as Phasianidae; epiphyseal ends were not sufficiently differentiated to provide for specific identifications.

Domestic mallard duck (*Anas platyrhynchos* cf. *domesticus*) is represented in the Vance site collection by two specimens, a proximal sternum and a complete and fused right coracoid. Although there is no skeletal difference between wild mallard and domesticated mallard, domesticated examples tend to be much larger as a result of breeding selection. Thus, it is the size of the specimens identified that indicate they were probably domestic rather than wild examples. Ducks were typically more expensive fare than chickens and were reserved for special occasions, as is suggested by the fact Maria Mitchell lists duck in her account of the dinner held in her honor. First on Mrs. Mitchell's list, however, was turkey (*Meleagris gallapavo*). Two specimens were identified in the Vance site assemblage: a right and a left fused radius. Until commercial factory farming began in the twentieth century, turkeys were not common dining fare. Breeds such as the Standard Bronze were domesticated in the nineteenth century and raised on small family farms, so despite the fact that they were not necessarily common, they still would have occasionally made their way onto diners' plates. Additionally, with the known hunting that occurred in the Chapel Hill area, it is possible the turkey specimens represent a wild turkey.

A small number of other bird species were found in the Vance site collection. They include a Blue Jay, a Red-bellied Woodpecker, and a Shafted Flicker. Their small size makes it unlikely they were consumed, although they could have been caught for pleasure by Chapel Hill residents and discarded along with other food remains. Two specimens were placed in the wider categories of Anatidae (duck family) and Rallidae (small-medium bird) because they were unable to be matched with a particular species.

Archaeological materials can provide information not available in historical records, and this is clearly the case with fish remains at the Vance site. While the Mitchells do not mention eating fish, a total of 400 fish remains are present in the collection. This number includes the recovery of 156 fish scales, representing almost 40% of the assemblage. Another 192 specimens consist of unidentifiable parts, vertebrae, vertebral spines, or skeletal parts that could not be identified to species. While future analysis of the scales and vertebrae may result in the identification of additional species in the collection, the present analysis focused on head parts, pectoral spines, and otoliths. Four species of catfish were identified: Snail Bullhead (MNI=1), White Catfish (MNI=1), Yellow Bullhead (MNI=4), and Brown Bullhead (MNI=3). All four species belong to the same genus and live in a variety of habitats, including brackish ponds, rivers, and lakes. They were likely caught locally. Additionally, two species of fish were identified through otoliths, which are hard, calcium carbonate structures located directly behind the brain of teleost (bony) fish. These include one Weakfish (*Cynoscion regalis*) and two

Spotted Seatrout (*Cynoscion nebulosus*). Both are estuarine species and are known to be particularly abundant between New York and North Carolina. Given the limits of nineteenth-century transportation, these fish may have made their way inland to Chapel Hill in a salted and dried form. However, the likelihood of fish processed in this manner retaining their heads for the journey inland is unknown. Alternatively, the otoliths may have arrived as incidental inclusions with deliveries of mollusk shells, since they are particularly durable structures.

A total of 54 specimens of pelecypod, or bi-valve mollusk shell are present in the Vance site assemblage. Seven of these can be identified as eastern oyster (*Crassostrea virginica*), and the rest are likely oyster fragments. It is unclear if these remains represent consumption, as they could also have made their way inland as components of building materials. During the nineteenth century oyster shell was particularly popular for making mortar, as filler in roads, and as a source of lime for fertilizer. University archives contain multiple references to the purchase of shells for construction. For example, in 1800 the University paid a Rich Bennehan for 300 bushels of shells “for the Main Building” (28 June 1800, Waste Book of the University 1789–1810, Office of the Vice Chancellor for Business and Finance Records #40095, University Archives). Oysters occasionally were served on special occasions, such as the senior-class oyster supper held at the Eagle Hotel in 1841 (Dusenberry 1842:109); however, it is not clear if they were available at other times of the year. Some restaurants did specialize in fresh oysters during the oyster craze of the 1890s, instigated by North Carolina Governor Alfred Moore Scales (Vickers 1985:100). Recovery of one *Chione elevata* specimen, a bivalve not usually consumed for food, may support the conclusion that most of the oyster shells present were not originally meant for consumption. Additionally, one *Mercenaria* sp. clam was identified, which could represent either northern or southern quahog. Again, while both species are popularly consumed, clams were also used as a component of mortar, so it is difficult to distinguish their original use in this context.

Overall, the faunal remains from the Vance site collection provide a glimpse of the types of animals being consumed by residents of Lot 11, and likely are representative of those available in Chapel Hill at large. Since most of the specimens were collected from the stone drain (Feature 3), they are a product of local cuisine during the period the drain was in use through its abandonment. As the cellar pit (Feature 5) appears to pre-date the drain, in theory it may be possible to examine change in animal use at the Vance site through time (Table 4). Only limited observations can be made, however, because the cellar pit assemblage is only about 2% the size of the drain assemblage. Diversity is correlated with sample size, so it is not surprising that most of the identified species are present only in the Feature 3 assemblage. However, three differences between the two assemblages are striking. First, despite the small sample size of the cellar pit assemblage, it contains cottontail rabbit (*Sylvilagus* sp.) while the drain does not. Second, probable chicken (Phasianidae) bones and eggshell from the cellar pit occur in lower proportions than they do in the drain assemblage. Finally, fish remains in the cellar pit are limited to a single unidentified scale. While differing assemblage formation processes likely contributed to the character of the faunal remains found in Features 3 and 5, it seems possible to at least hypothesize that Chapel Hill diets may have included more chickens and fish as the nineteenth century progressed. But, as Elisha Mitchell and the Vance site faunal assemblage attest, bacon was ever-present.



Table 4. Identified Faunal Remains from Vance Site Features 3 and 5.

Taxon	Common Name	Feature 3		Feature 5	
		NISP	Weight (g)	NISP	Weight (g)
<i>Bos taurus</i>	Cow	15	683.6		
Caprine	Sheep/Goat	1	19.4		
<i>Sus scrofa</i>	Pig	215	810.9	11	17.0
Artiodactyla	Pig/Sheep/Goat/Deer	50	163.1	2	17.1
<i>Sylvilagus</i> sp.	Cottontail Rabbit	-	-	1	1.1
<i>Didelphus virginiana</i>	Virginia opossum	29	26.0	1	0.2
<i>Sciurus</i> sp.	Squirrel	2	<0.1	-	-
<i>Peromyscus leucopus</i>	White-footed mouse	9	<0.1	1	<0.1
<i>Mus</i> sp.	Mouse	1	<0.1	-	-
<i>Microtus pennsylvanicus</i>	Meadow vole	1	<0.1	-	-
<i>Meleagris gallapavo</i>	Turkey	2	3.0	-	-
<i>Gallus gallus</i>	Chicken	27	10.5	-	-
<i>Anas platyrhynchos</i> cf. <i>domesticus</i>	Mallard, domestic	2	4.1	-	-
Anatidae	Duck family	1	<0.1	-	-
Phasianidae	Terrestrial birds	313	72.3	2	5.3
cf. <i>Cyanocitta cristata</i>	Blue Jay	1	<0.1	-	-
<i>Melanerpes carolinus</i>	Red-bellied woodpecker	1	<0.1	-	-
<i>Colaptes</i> sp.	Shafted flicker	1	<0.1	-	-
Unidentified bird eggshell	-	-	65.1	-	0.2
<i>Ameiurus brunneus</i>	Snail bullhead	3	0.2	-	-
<i>Ameiurus catus</i>	White catfish	3	<0.1	-	-
<i>Ameiurus natalis</i>	Yellow bullhead	23	0.6	-	-
<i>Ameiurus nebulosus</i>	Brown bullhead	13	0.9	-	-
<i>Cynoscion regalis</i>	Weakfish	1	0.2	-	-
<i>Cynoscion nebulosus</i>	Spotted Trout	2	0.7	-	-
Siluriformes	Catfish	7	0.5	-	-
Unidentified fish scales	-	143	0.3	1	<0.1
Unidentified fish	-	181	0.6	-	-
Total		1,047	1,862.0	19	40.9

### Storage and Cooking

Artifacts used for storage and cooking at the Vance site were classified as belonging in the “kitchen” group (Table 1), which includes 200 redware and stoneware ceramic sherds, 2 yellowware sherds, 413 fragments of glass attributable to beverage and food containers, and one piece of cast-iron cookware. While basement kitchens were traditional in European architecture and a feature of the earliest homes in the South, as the eighteenth century progressed detached “summer” kitchens became the norm, a vernacular practice with pragmatic ties to a variety of circumstances ranging from climate to the use of slaves in the kitchen (Snodgrass 2004:192). Detached kitchens were codified as an aspect of regional architecture by the mid-nineteenth century (Bishir 2005:293-4). There was most certainly a kitchen on Lot 11 behind the main house on the northeast corner of the parcel, and it is possible the Feature 5 cellar pit was associated with this structure.

The Vance site assemblage includes 1,091 historic ceramic sherds. Most of these could be classified into one of four categories: coarse earthenware, refined earthenware, stoneware, and porcelain (Table 5). Refined earthenware and porcelain sherds together account for 80% of the assemblage, with coarse earthenware being 15% (n=158) and stoneware 5% (n=58). These latter

Table 5. Distribution of Historic Ceramic Ware Types in the Vance Site Assemblage.

Context	Coarse		Refined		Stoneware		Porcelain		Total	
	Earthenware N	%	Earthenware N	%	N	%	N	%	N	%
All Contexts	158	14.8	798	74.8	58	5.4	53	5.0	1,067	100.0
<i>Feature 3</i>										
Rubble	22	22.7	59	60.8	8	8.2	8	8.2	97	100.0
Top	14	19.4	53	73.6	3	4.2	2	2.8	72	100.0
Middle	18	14.5	90	72.6	7	5.6	9	7.3	124	100.0
Bottom	2	5.1	32	82.1	2	5.1	3	7.7	39	100.0
<i>Feature 5</i>										
Zone 1	4	8.7	41	89.1	1	2.2			46	100.0
Zone 2	15	30.6	34	69.4					49	100.0

two types of pottery were most frequently made in forms designed for storage and cooking. The primary difference between them is that stoneware is heated to a higher temperature than earthenware during firing (over 1200°C), producing the stone-like vitrified clay body from which it gets its name. Stoneware was made in Europe as early as the sixteenth century, but the examples in the Vance site assemblage are products of American potters working in the nineteenth century. All but 11 of the earthenware sherds are locally-produced, lead-glazed redware. Ten earthenware sherds could not be assigned to a more specific category, and one resembles Buckley-type ware, which was imported from England prior to the American Revolution.

There are interesting patterns in the distribution of coarse earthenware and stoneware in Features 3 and 5. For example, there is an increase in coarse earthenware from the bottom zone of fill in the stone drain, where it accounts for only 5% (n=2) of the sherds collected, to the rubble in the opening of the drain, where it accounts for 23% (n=22) of the sherds. The greatest proportion of stoneware in any Feature 3 or 5 context (8%, or 8 sherds) also exists in the assemblage from the rubble fill zone of the drain. Only one piece of stoneware was obtained from Feature 5. However, coarse earthenware accounts for 30% (n=15) of the sherds collected from the fill in the bottom zone of the cellar pit. This zone also yielded the greatest proportion of sherds greater than 8 cm in size (18%, n=9) (Table 6). Most of these sherds can in fact be attributed a single, slipped, lead-glazed redware baking dish that was found lying on the floor of the cellar pit (Figure 32). This dish had been broken in several large pieces that were scattered across the floor. It is likely the product of a local potter and bears a strong likeness to an example signed “Solomon Loy” that dates to the second quarter of the nineteenth century (Zug 1986: Plate 2).

Solomon Loy belonged to a family of non-conformist German Quaker potters who settled in northern Chatham County in the late eighteenth century (Carnes-McNaughton 1997:240). A second Chatham County pottery was established by another German family in 1779, this one led by Jacob Fox (originally Fuchs) (Zug 1986:53). Jacob and his progeny operated a pottery business until the 1880s and trained other potters in Chatham County, notably Henry Vestal and Nathaniel H. Dixon. Dixon worked as a potter from the late 1840s until his death in 1863.

Table 6. Distribution of Historic Ceramic Sherd Sizes in the Vance Site Assemblage.

Context	0–2 cm		2–4 cm		4–6 cm		6–8 cm		8–10 cm		>10 cm		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
All Contexts	416	38.1	394	36.1	171	15.7	64	5.9	33	3.0	13	1.2	1,091	100.0
<i>Feature 3</i>														
Rubble	51	48.6	38	36.2	10	9.5	2	1.9	3	2.9	1	1.0	105	100.0
Top	33	45.2	24	32.9	8	11.0	6	8.2	2	2.7			73	100.0
Middle	57	43.8	42	32.3	14	10.8	9	6.9	5	3.8	3	2.3	130	100.0
Bottom	26	63.4	12	29.3	3	7.3							41	100.0
<i>Feature 5</i>														
Zone 1	26	56.5	18	39.1	1	2.2	1	2.2					46	100.0
Zone 2	25	51.0	8	16.3	4	8.2	3	6.1	5	10.2	4	8.2	49	100.0

Archaeological work at the kiln sites of these potters (Carnes-McNaughton 1997, 2011) makes it possible to compare wares that are unambiguously their work with artifacts collected from the sites where these wares were consumed, such as the Vance site. The kiln site of Solomon Loy (31Am191), for example, has yielded at least 123 lead-glazed redware plates, 35 of which had slip decoration (Carnes-McNaughton 1997:191). The slips were created with various powdered metal oxides. Iron oxide was used to make brown and black slips, manganese oxide was used for purples and browns, and copper oxide was used for greens. Patterns on the slipped sherds from the Solomon Loy site include “wavy sine lines in single or multiple rows, broad-stroke florettes or grasses, multiple arched lunettes, dotted circles, nested triangles, and fish-scales” (Carnes-McNaughton 1997:196). The baking dish recovered from the Vance site displays arched lunettes, wavy sine lines, and a grass design. It also displays combinations of slip colors identical to those on Solomon Loy’s pottery. For example, the arched lunettes both on sherds from the Solomon Loy site (Carnes-McNaughton 2011:46–47) and on the Vance site dish alternate between light and dark slip lines with the outermost arch being light in color, although on the Vance site dish the second arch is rendered as series of dots. In addition, both the signed Solomon Loy dish (Zug 1986: Plate 2) and the dish from the Vance site feature wavy dark-colored sine lines of slip running between straight light-colored slip lines. These similarities are not as definitive as a signature, but do suggest the Vance site dish was produced by a potter working in the same idiom as Loy.

Patterns in the distribution of stoneware and coarse earthenware, in addition to marking the distribution of kitchen-related activities, can have temporal implications. Both types of pottery were made by local potters in the Carolinas during the first half of the nineteenth century. However, stoneware gradually began to replace earthenware after 1825, a time that marks a “generation gap” during which new potters were trained only in stoneware production and not earthenware (Zug 1986:25). Older potters like Solomon Loy, however, continued to produce earthenware into the 1850s (Carnes-McNaughton 1997, 2011). From this perspective, the presence of only one fragment of stoneware in the cellar pit is consistent with it being filled in before the stone drain. Two kinds of glazes are present in the stoneware assemblage (Table 7): salt glaze (n=45) and alkaline glaze (n=8). The former reflects a “traditional” approach to stoneware production, while the latter was an approach inspired by glassmaking that developed in Edgefield, South Carolina, and began to be adopted by North Carolina potters in the 1830s (Zug 1986:74,82). Many of the salt-glazed sherds come from vessels that were decorated with



Figure 32. Top and bottom views of reconstructed lead-glazed redware cooking dish from Zone 2 of Feature 5. The diameter of the dish is approximately 26.8 cm (10.55 inches).

Table 7. Distribution of Earthenware and Stoneware Sherds in the Vance Site Assemblage.

Ceramic Type	All Contexts	Rubble	Feature 3			Feature 5	
			Top	Middle	Bottom	Zone 1	Zone 2
Lead-glazed Redware							
Undecorated	115	20	12	17	-	4	1
Trailed-Slip	17	-	1	-	-	-	13
Subtotal	132	20	13	17	-	4	14
Other Earthenwares							
Buckley-type	1	-	-	-	-	-	-
Indeterminate	10	-	-	1	2	-	-
Subtotal	11	-	-	1	2	-	-
Stoneware							
Salt glaze	21	1	1	2	-	-	-
Salt glaze, iron oxide interior	8	2	1	-	2	-	-
Salt glaze, iron oxide exterior and interior	16	-	-	3	-	1	-
Alkaline glaze	4	1	-	-	-	-	-
Alkaline glaze, iron oxide interior	4	3	-	-	-	-	-
Indeterminate	5	1	1	2	-	-	-
Subtotal	58	8	3	7	2	1	-

an iron oxide wash under the salt glaze, producing a brown coloration. The most common form of stoneware vessels in the Vance site kitchen assemblage are jugs and bottles (n=10), although a fragment of a lid from a butter jar was also identified (Figure 33). Four sherds from different vessels were stamped with the letters “ING,” “NG,” “J,” and “SOU.”

Two yellowware sherds were present in the Vance site assemblage. One was found in the middle layer of fill in the stone drain (Feature 3), and the other in the fill of the disturbance on the south side of the drain. Yellowware is earthenware with a buff to yellow paste that is glazed with a clear lead or alkaline glaze. Its earliest production in America dates to 1828, when a suite of English potters began to establish businesses in New Jersey and New York (Goldberg 2003). Although the sherds in the Vance site assemblage are too small to determine vessel type, yellowware was often made in utilitarian forms such as bowls and pitchers, and for this reason they are included in the kitchenware category.

The bottle glass assemblage from the Vance site consists of 421 fragments of glass (Table 8). Fourteen of these have been classified as fragments of medicine bottles and are therefore technically part of the personal adornment and ablutions category. Most of the shards were too small to classify as to bottle type (n=362). Bottle forms that were identified include spirit/utility bottle (n=25 shards), case gin bottle (n=3 shards), peppersauce/catsup bottle (n=2 shards), and soda bottle (n=14 shards). In addition, one colorless jar fragment was present in the assemblage. There are broad historical and functional patterns in bottle glass color that can be used to assess the composition and period of an assemblage. For example, olive amber bottles were rarely produced after 1890, and very dark or “black” bottles were mostly used to hold liquor, wine, and ale (Lindsey 2012). An examination of the distribution of bottle glass colors in Features 3 and 5 suggests that the cellar pit and bottom zone of the stone-lined drain can be distinguished from the rest of the stone drain fill. Both of these contexts yielded primarily olive green and olive amber glass, and with the exception of a single shard in Zone 1 of the cellar pit did not contain any aqua bottle glass. Aqua was a very common color for utilitarian food bottles between the 1850s and



Figure 33. Vance site kitchen ceramic sherds: top row, stoneware jug/bottle rims; middle row, lid of stoneware butter jar lid and stamped sherds; bottom row, yellowware sherd.

1880s (Lindsey 2012). While it continued to be used for some food and soda products into the 1930s, seven of the eleven aqua bottle bases in the assemblage have blowpipe pontil scars (Figure 34), suggesting they were produced before the Civil War. In a broad sense, the cellar pit and bottom of the stone drain primarily reflect the storage of alcoholic beverages in glass bottles, while a more diverse use of bottles is reflected in the assemblage that dates to the use and abandonment of the stone drain. This is particularly evident in the assemblage from the rubble fill of the drain opening, which has the greatest diversity of glass colors (n=14) despite being half the size of the bottle glass assemblage from the middle fill of the drain.

The cooking and storage assemblage from the Vance site is consistent with what would be expected of Antebellum material culture in the region. Coarse earthenware and stoneware were the products of local artisans. This was due partly to their bulk, which greatly increased transport cost, and also their role in the kitchen. Unlike dining wares, these vessels generally were not put on display and used to communicate social status. The presence of a redware baking dish on the bottom of the cellar pit may indicate this feature was part of or adjacent to a kitchen. Finally, the relative abundance of stoneware and aqua bottle glass in the stone drain but not the cellar pit supports the proposition that the cellar was filled in before the drain.

### *Drinking and Dining*

A total of 999 artifacts from the Vance site assemblage are the result of drinking and dining, or the meal consumption aspect of foodways. They include 861 historic ceramic sherds, 136 pieces of glass tableware such as tumblers and tea plates, one antler tableware handle, and

Table 8. Distribution of Bottle Glass Colors in the Vance Site Assemblage.

Bottle Type	All Contexts	Rubble	Feature 3			Feature 5	
			Top	Middle	Bottom	Zone 1	Zone 2
<b>Indeterminate Bottle</b>							
Colorless	32	1	6	-	-	-	-
Colorless, amethyst tint	2	-	-	-	-	-	-
Colorless, aqua tint	1	-	-	-	-	-	-
Colorless, blue tint	1	-	-	-	-	-	-
Aqua	38	12	-	5	-	-	-
Greenish aqua	12	2	1	-	-	-	-
Pale aqua	9	1	1	6	-	-	-
Pale blue aqua	16	1	1	-	-	-	-
Pale greenish aqua	43	6	3	28	-	1	-
Medium blue green	1	-	-	-	1	-	-
Pale emerald green	1	-	-	-	-	-	-
Medium emerald green	20	4	1	1	-	-	1
Forest green	2	-	-	-	-	-	-
Dark olive green	10	2	3	1	-	-	1
Olive green	96	10	6	6	2	9	8
Very dark olive	7	1	-	-	-	-	-
Olive amber	16	-	3	-	2	-	-
Very dark olive amber	39	3	6	20	1	1	-
Medium amber	4	1	-	-	-	-	-
Yellow amber	6	1	-	-	-	-	-
Reddish amber	3	2	-	1	-	-	-
Indeterminate	3	-	-	2	-	-	-
<b>Utility/Spirit Bottle</b>							
Olive amber	23	-	-	23	-	-	-
Very dark olive amber	2	-	-	2	-	-	-
<b>Case Gin Bottle</b>							
Olive amber	3	-	-	-	-	-	3
<b>Medicine Bottle/Vial</b>							
Colorless	8	1	-	-	-	-	6
Aqua	5	-	1	1	-	-	-
Pale aqua	1	-	-	-	-	-	-
<b>Peppersauce/Catsup Bottle</b>							
Aqua	2	-	-	-	-	-	-
<b>Jar</b>							
Colorless	1	-	-	-	-	-	-
<b>Coke Bottle</b>							
Greenish aqua	14	-	-	-	-	-	-
<b>Total</b>	<b>421</b>	<b>48</b>	<b>32</b>	<b>96</b>	<b>6</b>	<b>11</b>	<b>19</b>



Figure 34. Bottle glass fragments from the Vance site: top row, emerald and olive liquor bottle fragments; bottom left, two 12-sided condiment bottle fragments; bottom right, two soda bottle fragments.

one bone knife handle. Unlike kitchenware, tablewares are on display during the meal ritual and are used to communicate aspects of household identity such as affiliation with a particular socioeconomic class. The dynamic of status-related materiality, in which high-status items gradually become less effective for communicating distinction as their popularity and accessibility increase, is one factor that contributes to the change of tableware form and decoration over time. Another is simply the fact that they are moved around more than storage or cooking wares and are more subject to breakage and replacement. This turnover in dining ware decoration makes it particularly useful for dating archaeological deposits.

Six main types of refined ware are present in the Vance site dining assemblage: creamware, pearlware, whiteware, white granite, porcelain, and porcellaneous ware. These categories are the product of a synthesis between archaeological analysis of the materials themselves and historical records concerning ceramic production. The refined earthenwares were developed by mid-eighteenth-century English potters who were attempting to produce an alternative to Chinese porcelain. The first widely successful product of these experiments was creamware, a lead-glazed, cream-colored earthenware introduced by Josiah Wedgwood in 1762 (Noël Hume 1970). The popularity of creamware led to “England’s conquest of the world tableware market” by the end of the eighteenth century (Miller 1980:2). As creamware expanded in popularity, potters continued to tinker with the glaze to produce a cooler tone that more closely resembled Chinese porcelain. By 1775 Staffordshire potters’ use of calcined bone, feldspar, and white-firing clays resulted in the development of a blue-tinted ware that Wedgwood dubbed “China glaze” (Miller and Hunter 2001). Archaeologists frequently refer to this blue-tinted ware as pearlware. Both creamware and pearlware were produced during the early nineteenth century and adorned with the same types of decorations. The introduction of bone china by Josiah Spode around 1800 likely led Staffordshire potters to develop whiteware, a lead-



glazed earthenware almost purely white in color. Bone china lacks the bluish cast of Chinese porcelain, and earthenware potters sought to emulate this by adding just the right amount of cobalt to the clay body and reducing the amount of cobalt in the glaze (Miller 1980:17). Whiteware appears in North America in the 1820s, decorated in the same manner as pearlware and creamware.

A substantial transformation of the tableware market took place in the 1840s and 1850s, when plain, undecorated ceramics became more popular. Coincident with this development was the rise of the American refined earthenware potteries. Around 1840 both English and American potters began to produce white granite, a plain, undecorated, vitrified ware. White granite was first made in molded geometric shapes, with rounded forms being more popular after 1870 (Wetherbee 1985). By the end of the nineteenth century this plain ware was no longer completely vitrified and is sometimes referred to as “hotel ware.” Most of the porcelain present in the Vance site assemblage was produced in either England beginning in 1820 or the U.S. after 1850, and is termed “porcellaneous” to distinguish it from porcelain produced in China. It has a well-defined, clear, glassy glaze.

Systematic archaeological analysis of historic ceramic ware types is possible, but not completely unambiguous. Given the transitional development of new sets of production practices from earlier ones, it is not naturally obvious where to draw the line between creamware and pearlware, for example, or pearlware and whiteware. For this reason some sherds in the Vance site assemblage were classified as creamware/pearlware (n=23) and others as pearlware/whiteware (n=72). Sherds that could be attributed to a single ware category are shown in Table 9. Whiteware makes up 65% of the assemblage, white granite is 12%, and pearlware and creamware are 9.5% and 7%, respectively. While creamware accounts for only 7% of the overall site assemblage, it accounts for 35% of the refined wares (n=8) from Zone 2 of the cellar pit. It also decreases in abundance from 12% in the bottom of the stone drain, to 4% in the upper fill under the capstones, to being completely absent from the rubble in the drain opening. This distribution is consistent with Feature 5 fill being older than Feature 3 fill, and the age of Feature 3 deposits increasing with depth. Pearlware occurs in greater-than-average proportions in Zone 1 of the cellar pit and the rubble of the drain opening. The upper fill under the capstones of the drain, on the other hand, yielded the highest proportion of whiteware (i.e., 80%). White granite was absent from the bottom zone of the stone drain and accounts for only 10% of the sherds in the rubble fill. A single white granite sherd was present in Zone 1 of the cellar pit, which, if it is not intrusive, indicates it could not have been filled in much before 1840. Also, as noted earlier, porcellaneous ware is not present in the Feature 5 assemblage.

Five styles of decoration used by English potters during the late eighteenth and first half of the nineteenth centuries are present in the Vance site assemblage: edged wares, painted wares, dipped wares, sponged wares, and transfer-printed wares. Edged wares, called “shell-edge” by the Staffordshire potters, had rims that were molded and painted with a single color, usually blue or green. Two main types of painted wares are present in the Vance site assemblage. One exhibits blue underglaze designs that emulate Chinese porcelain, and the other was produced with polychrome floral motifs. Slipped ware, called “dipped ware” by English potters and “annular ware” by modern collectors, was decorated with horizontal bands of slip in shades of brown, green, blue, and black. As their name implies, sponged wares were made using sponges to apply paint; these wares were popular in the 1830s. Transfer-printed wares were made by using tissue paper to apply designs from inked metal plates onto earthenwares prior to firing.

Table 9. Fine Earthenware and Porcellaneous Ware from the Vance Site.

Context	Creamware (1762–1820)		Pearlware (1775–1830)		Whiteware (after 1820)		White Granite (1840–1900)		Porcellaneous (after 1820)		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
All Contexts	52	7	71	9.5	486	65.1	89	11.9	49	6.6	747	100
Feature 3												
Rubble			8	14	36	63.2	6	10.5	7	12.3	57	100
Top	2	3.8	4	7.7	42	80.8	2	3.8	2	3.8	52	100
Middle	9	9.6	8	8.5	68	72.3	1	1.1	8	8.5	94	100
Bottom	4	12.1	4	12.1	22	66.7			3	9.1	33	100
Feature 5												
Zone 1	3	9.7	5	16.1	22	71	1	3.2			31	100
Zone 2	8	34.8	2	8.7	13	56.5					23	100

Table 10. Decorated Refined Earthenwares from the Vance Site.

Context	Edged		Painted		Slipped		Sponged		Printed		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
All Contexts	71	20	36	10.1	63	17.7	10	2.8	175	49.3	355	100
Feature 3												
Rubble	6	18.2	3	9.1	5	15.2	-	-	19	57.6	33	100
Top	5	17.9	1	3.6	3	10.7	-	-	19	67.9	28	100
Middle	8	19	3	7.1	3	7.1	-	-	28	66.7	42	100
Bottom	-	-	3	20	1	6.7	-	-	11	73.3	15	100
Feature 5												
Zone 1	2	9.5	6	28.6	4	19	-	-	9	42.9	21	100
Zone 2	6	46.2	5	38.5	-	-	-	-	2	15.4	13	100

Edged wares were typically the least expensive of these wares, and transfer-printed wares the most expensive (Miller 1980:8). All of these decoration methods were used during the transition period between creamware and whiteware, and therefore can occur on any of the refined earthenware types. This was the case in the Vance site assemblage, with the exception that transfer printing was not observed on any unambiguous creamware sherds.

Transfer printing is the most common decoration in the Vance site refined earthenware assemblage, accounting for about 49% (n=175) of the decorated, refined earthenware sherds (Table 10). The next most common category is edged ware (20%), followed by dipped (17.7%) and hand-painted (10.1%) wares. Sponge ware, which was not found in either the stone drain or the cellar pit, accounts for less than 3% of the Vance site assemblage. Zone 2 of the cellar pit yielded the highest proportions of edged wares and painted ware, which together account for 85% (n=11) of the decorated tableware sherds from this context. Relatively high proportions of slipped ware are present in Zone 1 of the cellar pit (19%, n=4) and the rubble filling the opening of the stone drain (15%, n=5). For all of the drain contexts, transfer-printed wares are over 50% of the decorated assemblage, with the highest proportion occurring in the bottom layer of fill (73%, n=10).

Table 11. Edged and Hand-Painted Refined Earthenware from the Vance Site.

Type	Peak Production	All Contexts	Rubble	Feature 3			Feature 5	
				Top	Middle	Bottom	Zone 1	Zone 2
Edged Ware								
Shell-edged								
Rococo	1775–1810	5	-	-	-	-	-	3
Neoclassical	1800–1840	20	1	3	-	-	2	-
Unscalloped	1840–1870	23	1	2	4	-	-	-
Indeterminate		13	2	-	4	-	-	-
Other Edged								
Green Darts	1800–1840	4	-	-	-	-	-	3
Blue Plume	1800–1840	6	2	-	-	-	-	-
Painted								
Blue on White	1775–1810	1	1	-	-	-	-	-
Polychrome								
Warm	1795–1830	9	-	-	-	1	2	2
Cool	1830–1920	17	-	1	3	1	2	1
Indeterminate		1						

Edged wares, painted wares, dipped wares, sponged wares, and transfer-printed wares were all produced during the same time period, but within each mode it is possible to identify systematic changes that took place over time. Edged wares, for example, were first produced with elaborate details that later became streamlined. The earliest shell-edged wares, produced between 1775 and 1810, have asymmetrical, undulating edges in emulation of the French Rococo style (Hunter and Miller 1994). Five Rococo-style, edged-ware sherds are present in the Vance site assemblage, three of which were recovered from Zone 2 of the cellar pit (Table 11, Figure 35). The bulk of the edged ware in the assemblage (n=30), however, can be attributed to a Neoclassical-inspired category, which featured symmetrical scalloped rims. Edged wares in this style were produced between 1800 and 1840, and are present in both the stone drain and Zone 1 of the cellar pit (Figure 35). After 1840, edged wares were no longer scalloped, and by 1860 the edge design was painted on with straight lines but not molded. A total of 23 sherds from the Vance site can be attributed to this post-1840 category, and seven of these were recovered from the fill in the middle, top, and rubble of the stone drain (Figure 35).

Among painted wares, the most temporally diagnostic change took place in the 1830s (Giffin 2005). Prior to this time, polychrome floral designs were painted in warm tones. However, as whiteware was developed a corresponding change took place in English potters' polychrome palate; brown and orange hues were replaced with black and pink colors. Of the nine warm polychrome-painted sherds in the Vance site assemblage, four were present in Feature 5 and one was found in the bottom fill of the stone drain (Figure 36). Cool polychrome-painted sherds were recovered from all Feature 3 and 5 contexts except the rubble-filled opening of the stone drain (Figure 36). Two temporal categories can also be discerned for English wares painted with blue cobalt paint in imitation of Chinese porcelain. From about 1775 to 1810, these wares display relatively fine-lined work that appears to directly emulate Chinese designs. After 1810, broader strokes are used and designs blend Chinese motifs with the floral designs popular on polychrome-painted wares. The single sherd of blue-on-white painted earthenware in the



Figure 35. Edged-ware sherds from the Vance site: top left, Rococo style; top center, two Neoclassical shell-edged sherds; top right, Neoclassical green darts design; bottom left, Neoclassical blue plume platter; bottom right, unscalloped shell-edged plate.



Figure 36. Painted, refined earthenware from the Vance site: top row, cool polychrome sherds; bottom row, three warm polychrome sherds; bottom right, blue on white sherd.

Table 12. Dipped Ware Styles Present in the Vance Site Assemblage.

Style	Peak Production	All Contexts	Rubble	Feature 3			Feature 5
				Top	Middle	Bottom	Zone 1
Mocha	1795–1830	5	-	-	-	-	1
Engine Turned	1790–1830	4	-	-	-	1	-
Multi-Chambered	1811–1830	4	-	-	1	-	-
Trailed Slip	1820–1840	2	1	-	-	-	1
Banded	1790–1900	32	1	1	1	-	1
Indeterminate	1790–1900	10	1	2	1	-	1

Vance site assemblage (Figure 36), recovered from the rubble fill of Feature 3, appears to have been part of a vessel produced during the earlier period.

Dipped wares are harder to date than edged and painted wares because, given the horizontal “zoned” structure of their decoration, one sherd may not necessarily represent the range of decoration present on the vessel. However, certain design elements, if identified, do have temporal significance. Some of the earliest dipped wares made in the late eighteenth century were cut with lines or roulette designs using specialized spring-loaded machines. Another early design element consists of a black dendritic design on a brown slip, called “Mocha ware” (Rickard 2006). Marbleized circular designs called “Cat’s Eyes” and wavy sine lines called “common cable” were produced with a special, multi-chambered slip tool patented in 1811, and do not appear in late-eighteenth-century catalogs (Rickard 2006:13). After 1820, single-color wavy sine lines of trailed slip became popular as part of the “fancy” aesthetic, moving away from marbleized geological textures to “achieve total abstraction” (Rickard 2006:92). Pre-1840s design elements on dipped sherds in the Vance site assemblage (n=15) were present in Zone 1 of the cellar pit as well as in the rubble, middle, and bottom fill zones of the stone drain (Table 12, Figure 37). Unlike edged and printed wares, dipped wares were almost exclusively made in hollow-bodied forms such as tankards and pitchers, and are therefore technically “drinking” wares.

Staffordshire potters began to produce transfer-printed wares at the end of the eighteenth century, and the popularity of these wares persisted into the mid-nineteenth century. The designs and colors used on transfer-printed wares changed over time, and the examination of complete, marked examples in collections makes it possible to assign archaeological examples to specific peak production periods (Samford 1997). Given the detailed nature of transfer-printed designs, it is sometimes possible to assign even small sherds to a specific category. This is particularly true for designs made in imitation of Chinese porcelain (Figure 38). In the Vance site assemblage, 23 sherds from Chinese-style vessels were identified, 16 of which were collected from the stone drain (Table 13). These designs were produced mostly between 1790 and 1836 (Samford 1997:7–9). The next most frequently encountered design on printed ware from the Vance site are Romantic designs (n=16), which can be recognized by scenes with stylized buildings in the background, a water body in the mid-ground, and small humans or animals in the foreground for scale (Samford 1997:14). These designs, produced primarily between 1831 and 1851, were inspired by the Romantic Movement that emphasized the power of nature over human reason. Most of the Vance site Romantic-style sherds can be attributed to a single pitcher, which was executed in blue and therefore likely dates to the earlier portion of the Romantic period (Figure

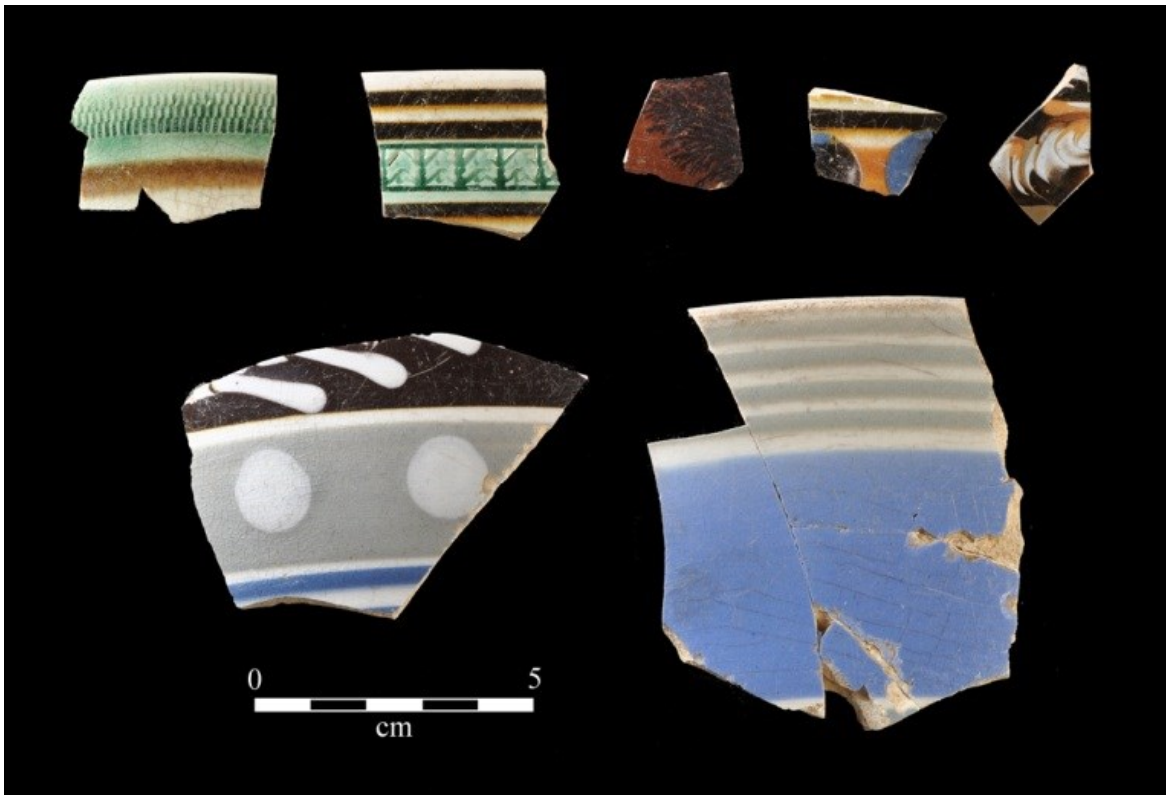


Figure 37. Dipped sherds from the Vance site: top left, two engine-turned sherds; top center, dendritic mocha sherd; top right, two multi-chambered slip sherds; bottom left, trailed slip; and bottom right, banded.

39). Fragments of this vessel were found in the stone drain, with most coming from the middle zone of fill. The same is true for the Chinese and Chinoiserie sherds from the assemblage.

Only one transfer-printed sherd collected from the cellar pit fill (Feature 5) could be attributed to a specific design category (Figure 38). It was recovered from Zone 1 and has a continuous, blue geometric pattern with an average production range of 1818 to 1829 (Samford 1997:18). However, a wide range of transfer-printed colors are present in the cellar pit assemblage (Table 13). Like designs, color use on printed wares changed through time, with dark and medium blue in use earlier than brown, green, red, and purple. Zone 1 of the cellar pit yielded one brown, one red, and two light blue printed sherds, all of which are colors used most frequently in the 1830s. In addition, both Zones 1 and 2 contained a single sherd of “flow blue” ware (Figure 38). English potters developed this ware in the 1830s to counteract the “mechanical” look of printed wares by adding chemicals during the firing process that caused the color of the print to “flow,” or become blurry and produce a “halo” effect. The flown vessels represented in the cellar pit assemblage have chinoiserie designs that were popular in the American market between 1841 and 1854 (Samford 1997:24). One sherd of this type was also identified in the rubble fill of the stone drain opening. The presence of flow blue sherds in both features suggests they were filled in after 1840.

White granite ware, produced after 1840, was not decorated with color but was molded in different styles. Of the 89 white granite sherds in the Vance site assemblage, 24 (27%) could be attributed to a specific molded design category. Nine sherds exhibited geometric panels (Figure 40), a mode of design popular between 1840 and 1860 (Wetherbee 1985). Of the six white



Figure 38. Printed sherds from the Vance Site: top two rows, Chinese design; third row, continuous geometric border; and fourth row, flow blue sherds. The specimen at bottom left is from the cellar pit.



Figure 39. Transfer-printed ware from the Vance site: top left, Romantic pitcher or tea pot; bottom left, non-continuous floral border; top right, two different plates with Exotic design; and bottom right, Exotic and Classical designs in mulberry.

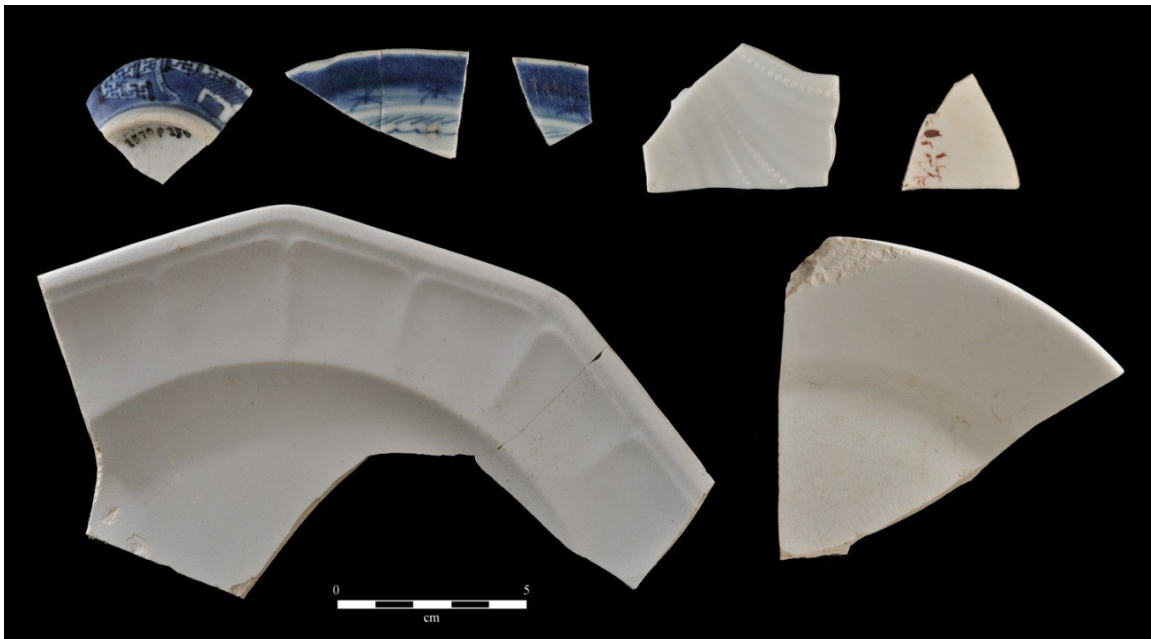


Figure 40. Vance site sherds: top left, Chinese porcelain; top right, molded and over-glaze printed porcellaneous ware; bottom left, geometric paneled white granite plate; and bottom right, plain/rounded white granite plate.



Table 13. Transfer-Printed Ware in the Vance Site Assemblage.

Print Attribute	Peak Production	All Contexts	Rubble	Feature 3			Feature 5	
				Top	Middle	Bottom	Zone 1	Zone 2
Central Design								
Chinese	1790–1836	23	3	3	7	3	-	-
Exotic, Blue	1820–1834	7	1	1	-	-	-	-
Exotic, Mulberry	1834–1842	1	-	-	-	-	-	-
Classical, Mulberry	1834–1847	1	-	-	-	-	-	-
Romantic, Blue	1831–1834	16	-	1	4	1	-	-
Border								
Continuous Geometric	1818–1829	1	-	-	-	-	1	-
Continuous Floral	1820–1834	1	-	-	1	-	-	-
Non-continuous Floral	1820–1834	3	-	-	3	-	-	-
Floral Vignette	1832–1848	1	-	-	-	-	-	-
Indeterminate Pattern								
Dark Blue	1819–1835	4	1	-	-	-	-	-
Blue	1817–1834	63	10	11	7	1	2	1
Black	1825–1838	9	-	3	2	1	1	-
Brown	1829–1843	2	-	-	-	-	1	-
Light Blue	1833–1848	11	2	-	-	-	2	-
Green	1832–1850	2	1	-	-	-	-	-
Red	1829–1842	10	-	-	2	2	1	-
Green and Red	1832–1842	2	-	-	-	1	-	-
Purple/Mulberry	1834–1848	8	-	-	2	2	-	-
Flow Blue	1839–1908	9	1	-	-	-	1	1
Total		174	19	19	28	11	9	2

granite sherds in the upper fill and rubble of Feature 3, one exhibited geometric paneling. Three sherds in the Vance site assemblage were ribbed, a style common during the third quarter of the nineteenth century, and 12 were rounded, a form common after 1870. No sherds attributable to either of these later categories were found in Features 3 or 5. From this analysis it appears that approximately half the white granite sherds represent dining ware in use prior to the Civil War, and the other half represent dishes in use during the Roberson Hotel era of Lot 11.

Porcelain was the most expensive of dining wares, and was often reserved for use on special occasions. Both factors limit its presence in archaeological assemblages. Of the 53 porcelain sherds in the Vance site assemblage, four came from imported Chinese vessels. Three of these are Canton porcelain, which is distinguished by its grayish glaze and cobalt designs executed in broad brush strokes (Figure 40). The remaining 49 porcellaneous sherds were likely produced in Europe during the nineteenth century, probably after 1820. Four very thin examples have an ivory cast and may be bone china. Overglaze painting in red, blue, and gold was apparent on nine of the porcellaneous sherds. However, in most cases the color had rubbed off of the sherd, leaving a “ghosted” design. Finally, two porcellaneous sherds exhibited molded scallop decoration. Overall, porcelain accounts for 5% of the historic ceramic assemblage at both the Vance and Pettigrew sites (Jones et al. 1998:71). This suggests it played a small but consistent role in the dining practices of the Lot 11 residents.

An examination of ware by vessel form further clarifies the nature of the Vance site ceramic dining assemblage (Table 14). Three broad categories of dining activities can be

Table 14. Decorated Refined Earthenware and Porcelain Vessels in the Vance Site Assemblage.

Type	Dipped	Painted	Edged	Sponge	Printed	Molded	Other*	Porcelain	Total
Tea Bowl	-	-	-	-	2	-	1	-	3
Tea Cup	-	3	-	1	6	2	-	8	20
Saucer	-	-	-	-	1	-	1	1	3
Mug/Tankard	6	-	-	-	-	-	-	-	6
Plate/Platter	-	-	18	1	12	5	7	-	43
Soup Plate	-	-	-	-	-	-	2	-	2
Pitcher	-	-	-	-	9	-	-	-	9
Pepper Pot	-	1	-	-	-	-	-	-	1
Total	6	4	18	2	30	7	11	9	87

\*Refined earthenware of indeterminate decoration type.

inferred from the presence of different types of vessels. Teaware, including tea bowls, tea cups, and saucers, accounts for approximately 30% of the sherds that could be attributed to a vessel type. All of the porcellaneous sherds that could be assigned to a vessel type are teaware (n=9). Most of the painted wares are also attributable to this category. Tableware, including mugs, plates, platters, and soup plates, accounts for approximately 60% of the assemblage. All of the edged-ware sherds with identifiable vessel form can be attributed to plates and platters (n=18), as is typically the case. The remaining sherds identified as to vessel form were part of specialized serving vessels, specifically a pitcher and a pepper pot.

Another category of dining ware in the Vance site assemblage is cutlery. While utensils may fall to the floor more frequently than ceramic or glass dining wares, their durability limits their representation in archaeological assemblages. Two tableware handles, one antler and one bone, were found at the Vance site (Figure 41). The antler handle was found in the modern drain pipe fill. It measures 7.6 cm (3 inches) long and is capped with a domed iron finial. Antler handle cutlery was made in the eighteenth century and remained popular into the twentieth century (Dunning 2000:35). The bone knife handle was recovered from Zone 1 of the cellar pit. It has two drilled rivet holes, is 7.7 cm (3 inches) long, and tapers from 2.1 to 1.3 cm. The presence of rivet holes and tapering form of this handle are consistent with late eighteenth and early nineteenth century cutlery (Dunning 2000:38–9; Noël Hume 1970:178).

The glass dining assemblage from the Vance site consists of 136 fragments of tumblers, stemware, tea cups, and cup plates (Table 15). About 40% of these fragments (n=56) were too small to specify vessel form. However, most of the 39 colorless glass shards in this category are likely tumbler fragments. Late eighteenth and early nineteenth-century tumblers were made of colorless lead glass and had circular cross-sections. Pressed-paneled tumblers were produced beginning in the mid-1830s (Jones 2000:225). Four tumbler fragments from the Vance site are large enough to allow for the identification of form. Three have pressed panels, and the fourth, recovered from the middle zone of fill in Feature 3, is cylindrical with a pressed 12-pointed star in its base (Figure 42). The rim of one thin-walled sapphire or cobalt stemware glass was also present in the Vance site assemblage, and small shards of this color glass from Zone 1 of the cellar pit are likely part of this vessel. Sapphire or cobalt glass tableware was produced in the early nineteenth century, but became more popular towards mid-century following the influence of Bohemian glass from Eastern Europe.

An unusual element of the Vance site tableware glass assemblage is a set of cup plates recovered from the middle fill of the stone drain. A “fascinating anomaly in glass,” cup plates



Figure 41. Bone (top) and antler (bottom) cutlery handles from the Vance site.

Table 15. Glass Tableware Assemblage from the Vance Site.

Type	All Contexts	Rubble	Feature 3			Feature 5	
			Top	Middle	Bottom	Zone 1	Zone 2
Indeterminate							
Colorless	39	6	4	8	-	2	1
Amethyst	1	-	-	-	-	-	-
Sapphire	14	9	-	-	-	2	-
Pale blue aqua	1	-	-	-	-	-	-
Opaque White	1	1	-	-	-	-	-
Tumbler							
Colorless	23	3	-	3	3	-	-
Stemware							
Colorless	6	1	-	-	-	-	-
Amethyst	1	-	-	-	-	-	-
Sapphire	1	-	-	-	-	-	-
Tea cup							
Opaque White	1	-	-	-	-	-	-
Cup plate							
Colorless	48	2	-	39	5	-	-
Total	136	22	4	50	8	4	1



Figure 42. Glass tumblers from the Vance Site: top row, circular; bottom row, paneled.

were used in the United States only from c. 1825 to 1860 and were probably among the first glass items to be produced by machine pressing (Spillman 1981:111). These small plates were intended to hold the cup while a tea drinker consumed any tea that had accumulated in the saucer. A total of 48 colorless cup plate fragments are present in the Vance site assemblage, the overwhelming majority of which (81%) were recovered from the middle fill of the stone-lined drain. Feature 3 also yielded two cup plate fragments from the rubble fill and five from the bottom zone. Forty of these fragments could be fitted to one of four matching plates, and the remaining six fragments from the stone drain fill can be attributed to this set as well (Figure 43). One cup plate fragment displaying a different pattern was recovered from the conduit trench fill. Both patterns are in the “lacy” style of pressed glass and match examples produced by the Boston & Sandwich Glass Company of Massachusetts between c. 1835 and 1850 (Spillman 1981:125, 130) (Figure 44). The presence of a set of matching cup plates in the stone drain invites speculation as to the circumstances surrounding their disposal. While it is possible they were thrown in the drain after the cup plate “craze” ended, it is just as likely they were broken during transport and were never actually used by Lot 11 diners. Since a dry goods store was in operation on Lot 11 throughout the first half of the nineteenth century, the cup plates may represent wares intended for sale, and not dining on site. While this interpretive conundrum

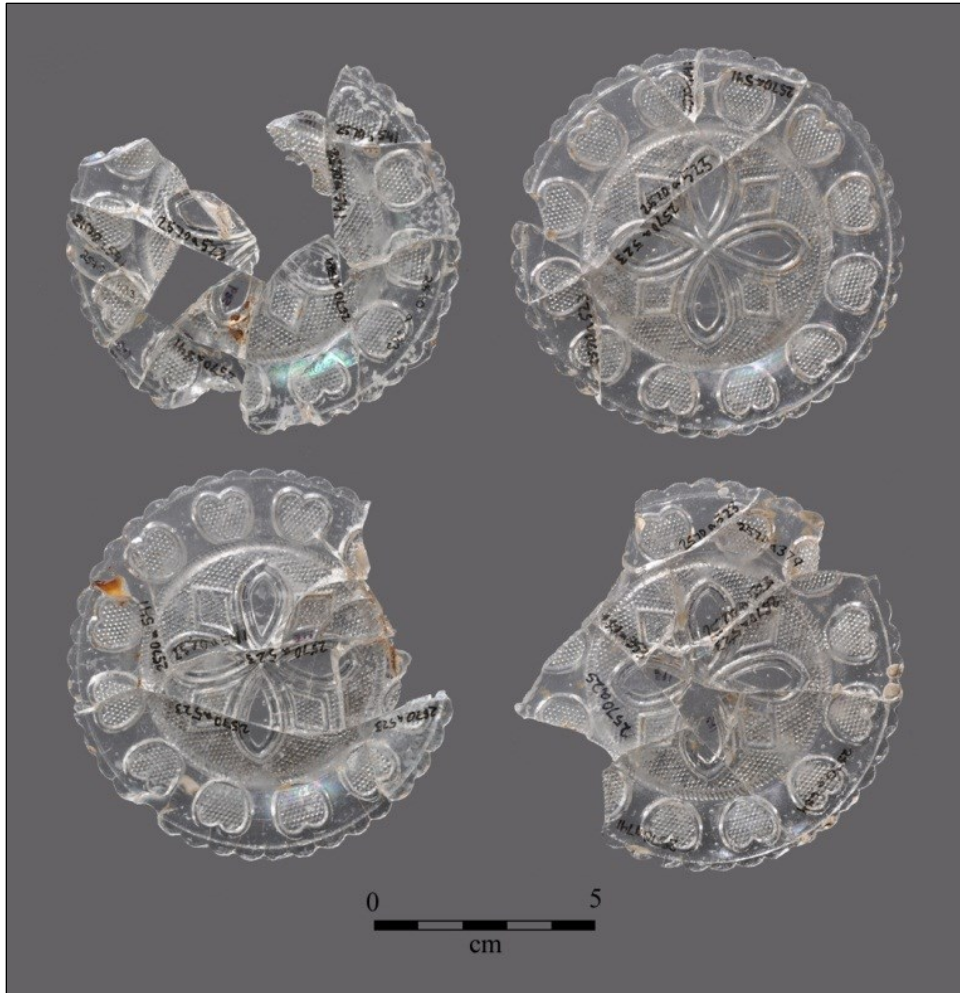


Figure 43. Four matching “lacy” glass cup plates recovered from the stone-lined drain at the Vance site.

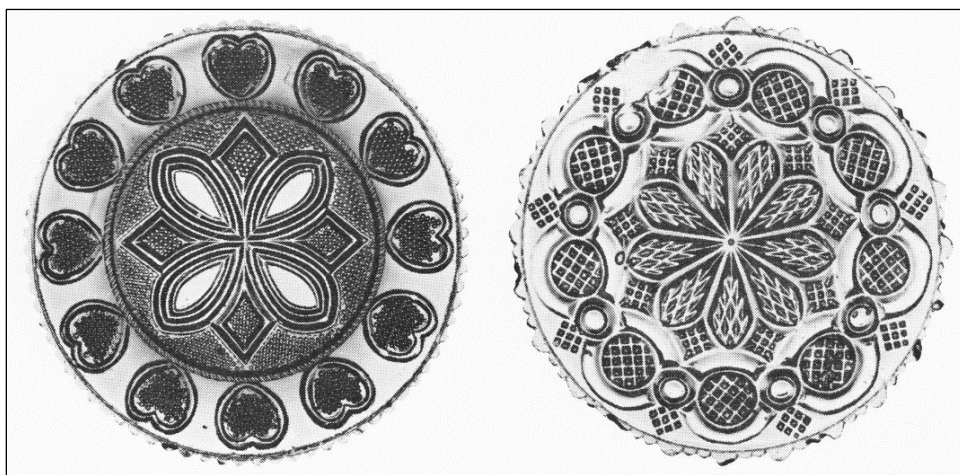


Figure 44. Cup plate designs in the Vance site assemblage attributed to the Boston & Sandwich Glass Company of Massachusetts, manufactured between c. 1835 and 1850 (Spillman 1981:125, 130).

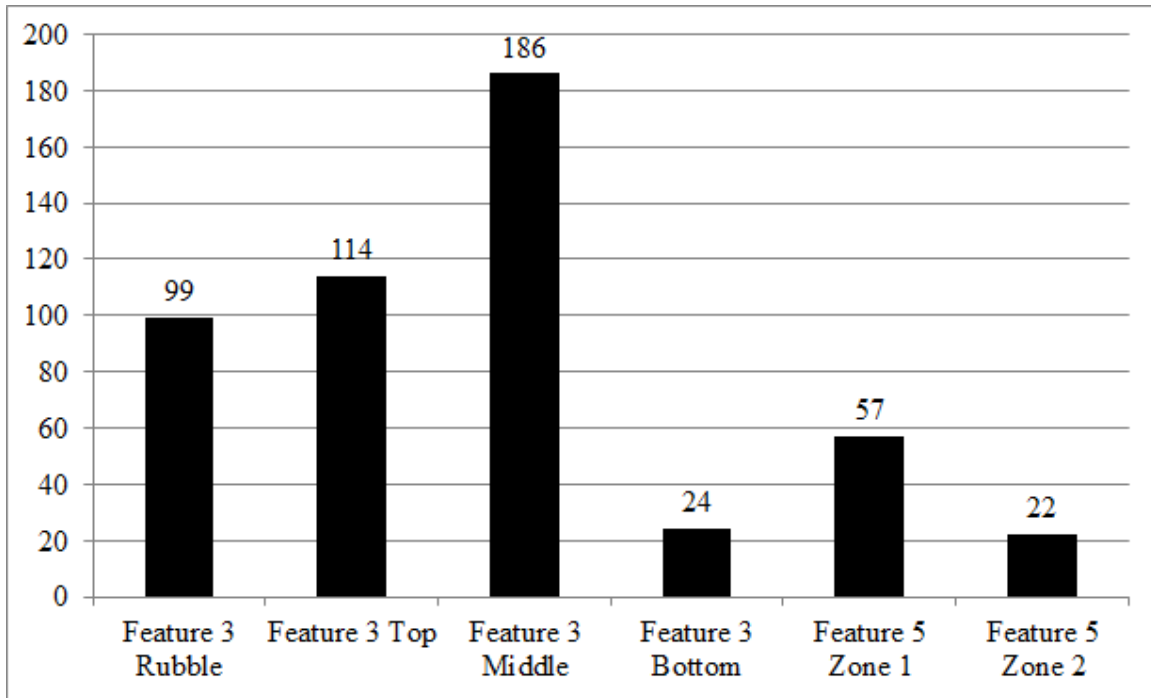


Figure 45. Distribution of probable nails and nail fragments in the Vance site assemblage.

exists for the cup plate set, the other tablewares in the Vance site assemblage do not appear to represent sets and are more likely attritional losses from actual dining events.

### *Architecture and Furniture*

Materials that can be associated with the built environment account for approximately 28% (n=2,502) of the Vance site assemblage, and about half of these items are window glass fragments. Nails and nail fragments account for 33% (n=827) of the architecture and furniture artifacts. One of these is clearly a twentieth-century wire nail, and another is a cut nail likely made in the nineteenth century. While the remaining nails have the potential to provide information about the timing of construction on Lot 11 and the depositional history of Features 3 and 5, it first will be necessary to remove the rust that obscures their forms. As this cleaning process has not been completed, further analysis of the nail assemblage is not undertaken here. However, it can be observed that their distribution varies between Features 3 and 5, with the rubble, top fill, and middle fill of the stone drain yielding the most nails (Figure 45). A similar pattern is evident in the distribution of brick fragments in the assemblage. Of the 38 brick fragments collected, 32 were present in the top and middle fill zones of the drain. In addition, four fragments of plaster were collected from the rubble of the drain and seven mud dauber wasp nests from the middle fill layer. Mud dauber nests are considered architectural artifacts because when they are found in concentrations on archaeological sites they likely signal the presence of sheltered spaces, such as the eaves of buildings. Further, as noted in the analysis of faunal materials, oysters were probably not consumed frequently in Chapel Hill prior to the late nineteenth century. The mollusk shell in the Vance site assemblage, therefore, is most likely construction material. When this material is considered by weight, approximately 39% was

recovered from the middle fill of the drain and 17% came from the upper fill and rubble. Only around 1% of the shell assemblage was present in the cellar pit fill. Taken together, the distribution of nails, brick, shell, and other architectural artifacts suggests the stone drain was filled in during a period of new construction activity, while this may not necessarily have been the case for the cellar pit.

A total of 1,347 window glass fragments were collected during excavations at the Vance site. Again, most of these were present in the middle drain fill and rubble. However, the presence of window glass does not necessarily relate to new construction, since windows were favorite targets of student aggression throughout the first half of the nineteenth century. For example, in May 1842 freshmen R. M. Allison and J. P. Barnes were called before the faculty to answer for “two of the most outrageous disorders of the Session” (Faculty Council Minutes, 2 May 1842, General Faculty Records #40106, University Archives). These “disorders” involved the “Stoning or throwing at a window of one of the tutors” and the other “killing and conveying two of D. Mitchell’s hogs into the old Chapel.” University business records from earlier in the century contain numerous receipts for window glass, putty, and labor associated with replacing windows, sometimes explicitly with reference to student damage (e.g., Chapman to University President, 28 October 1815, UNC Papers #40005, University Archives). While the buildings on Lot 11 were technically on private property, their adjacency to campus may have made them targets regardless of ownership. Since window glass increased in thickness during the nineteenth century, archaeologists have been able to use linear regression to establish dates for window glass assemblages (Moir 1987). While it is often used as tool to determine when a building was constructed, window glass from the Vance site, given the lot’s long occupational history and the likelihood of student vandalism, is more likely to serve as a way to date depositional contexts.

The results of window glass analysis are in some ways consistent with expectations derived from excavations and the analysis of other artifact classes (Table 16). For instance, all of the dates obtained for Features 3 and 5 contexts are in the second quarter of the nineteenth century. In addition, dates obtained for the different fill layers of the drain do increase from the bottom up, with the bottom and middle fill layers yielding dates in the mid-1820s and the rubble and top fill yielding estimated dates of 1846 and 1851, respectively. However, while it is hypothesized the cellar pit was filled in before the drain was constructed, the window glass from both zones of Feature 5 yielded date estimates of 1841. Further, Zone 1 of Feature 5 displays a bi-modal distribution, with the two most common glass thickness sizes in the assemblage associated with production ca. 1814 as well as ca. 1864. The bottom zone of the cellar pit yielded window glass fragments with thicknesses more consistent with an assemblage from the 1840s. Ultimately, the dates obtained from window glass analysis are more consistent with the stone drain and cellar pit being in use at the same, rather than the cellar pit being filled in prior to drain construction. When weighing the significance of this finding, it should be noted that the sample size for the cellar pit is much smaller than that of the drain.

The artifacts in the furniture category come from objects that we might classify today as “fixtures” – lamps and mirrors. The five mirror fragments in the Vance site assemblage were identified by the presence of silvering material adhering to otherwise clear, flat glass fragments. In the absence of silvering such fragments would likely be identified as window glass. Since there are unambiguous mirror fragments present in the assemblage, it is possible that others exist but have lost all their silvering and are included in either the unidentified or window glass categories. Lighting fixtures used by Lot 11 residents are represented by one light bulb base and 264 fragments of oil lamp chimney fragments. The light bulb base was found in the clayey fill

Table 16. Results of the Vance Site Window Glass Analysis.

Context	Weight (g)	Estimated Date	1 <sup>st</sup> by weight <sup>a</sup>	2 <sup>nd</sup> by weight <sup>b</sup>
Feature 3				
Rubble	153.8	1846	1839	1831
Top	69.6	1851	1847	1839
Middle	147.5	1825	1822	1814
Bottom	35.2	1826	1822	1814
Feature 5				
Zone 1	14.3	1841	1864	1814
Zone 2	6.4	1841	1847	1839

<sup>a</sup> Date of largest glass thickness category by weight.

<sup>b</sup> Date of second largest glass thickness category by weight.



Figure 46. Oil lamp chimney glass fragments from the Vance site.

associated with sidewalk construction. As electricity was introduced to Chapel Hill in the 1890s, this item probably dates to the twentieth century. Oil lamp chimney fragments are very thin and curved, with distinctive edges (Figure 46). According to Battle (2002 [1907]:592), oil lamps were not available until after the middle of the nineteenth century. Before this students studied at night “by the light of adamantine candles, one being usually sufficient for two persons, sitting by the table on which it was placed.” At the Pettigrew site, 617 oil lamp glass chimney fragments were found in all levels and throughout the site (Jones et al. 1998:30). Of the 264 lamp glass fragments in the Vance site assemblage, only 80 (30.3%) were found in Features 3 and 5. Of these 80 fragments, 46 were present in the rubble fill of the stone drain. The upper and middle fill of the drain yielded 15 and 17 lamp glass fragments, respectively. Only one lamp glass fragment was found in the bottom fill zone of the drain. Similarly, a single lamp glass fragment was present in Zone 1 of Feature 5. This distribution supports the hypothesis that the cellar pit was filled in before the drain. Further, the low counts of lamp glass in the bottom, middle, and upper portions of the stone drain may indicate it was in use not much past mid-century.



Table 17. Buttons in the Vance Site Assemblage.

Button Type	All	Rubble	Feature 3			Feature 5
	Contexts		Top	Middle	Bottom	Zone 1
Composite						
Tooled Bone Disc	1	-	-	-	-	1
Plain Bone Disc	2	2	-	-	-	-
Copper Alloy Dome	2	-	-	-	-	-
Bone						
4-Hole	5	1	1	-	1	-
5-Hole	4	-	-	4	-	-
Indeterminate	1	-	-	1	-	-
Flat Pewter	1	-	-	-	1	-
Flat Copper Alloy	2	-	-	-	1	1
4-Hole Shell	3	-	-	1	-	-
4-Hole Prosser	3	-	-	1	-	-
Total	24	3	1	7	3	2

### *Adornment and Ablution*

South's (1977:95) historic artifact classification scheme includes a group for items of personal use. This category is expanded here to include artifacts that can be considered accessories to the set of practices Mauss (1973[1934]) calls "techniques of the body." These are culturally-specific habits of movement and presentation that range from walking and swimming to hygienic practices. Artifacts of adornment and ablution are used in the construction of personal identities, whether they are highly visible articles used for the performance of status, such as clothing, or more private articles that enable "proper" personal care, such as toothbrushes or medicines. The Vance site assemblage contains 91 such items, which include 25 buttons and button fragments, 8 other fasteners of various kinds, 2 glass beads, 25 tobacco pipe fragments, a brass pocket knife cover, 12 basin or chamber pot fragments, 14 medicine bottle fragments, and 4 toothbrush fragments.

Textiles are rarely encountered in archaeological assemblages from moist climates. In general, fasteners of various materials are more likely to survive and stand proxy for clothing worn by the people who produced a given archaeological assemblage. Buttons are particularly common on historic sites as they have a tendency to become detached from garments and incorporated in archaeological deposits. The Vance site assemblage contains a minimum number of 24 buttons (Table 17). While this is a similar number compared to the Pettigrew site, where 22 buttons were recovered (Jones et. al 1998:48), it represents a considerably greater button density per unit area since only three square meters were excavated at the Vance site but over 50 sq m were excavated at the Pettigrew site. Half of the buttons in the Vance site assemblage are made of bone. Three of these have one hole, five have four holes, and four have five holes; the form of one fragmentary bone button could not be determined. The one-hole examples were part of composite buttons. The earliest of these were covered with thin, embossed brass or copper foil that was then decorated with spangles or embroidered designs in metal thread (Dauterman 1982:11). The bone or wood cores of such domed buttons had tooled, beveled edges for receiving the stamped-metal cap, and brass wire eyes passed through the single hole (White 2005:71). One such tooled bone disc was found in Zone 1 of Feature 5 (Figure 47).



Figure 47. Buttons from the Vance site: top row, composite buttons; second row, bone buttons; third row left, brass button from Feature 5; third row center, pewter button; third row right, gold-plated button from bottom of Feature 3; bottom left, three shell buttons; and bottom right, three Prosser buttons.

This example is approximately 25 mm in diameter. Such buttons, which correspond to South's (1964) Type 4, were common in the eighteenth century. The two other single-holed bone buttons in the Vance site assemblage lack a tooled edge and were probably covered with fabric or thread and sewn on with a string eye (Figure 47). These buttons, both of which were found in the rubble of Feature 3, were common from the Colonial period up to the Civil War. The examples from Feature 3 have diameters of approximately 10 mm. Two domed, composite buttons which retain their copper alloy covering are also present in the Vance site assemblage (Figure 47). These buttons, which were found in disturbed contexts, lack their shanks and have diameters of 15 mm and 19 mm.

The bone buttons with four and five holes in the Vance site assemblage all have a recessed central panel through with the holes were drilled. The four-hole buttons have diameters ranging from 11.7 mm to 17.4 mm, with an average diameter of 14.9 mm. The five-hole examples have a similar average of 15.1 mm, and range from 11.6 mm to 18.0 mm in diameter. While these types were originally thought to be contemporaneous (South 1964), recent excavations at mid-nineteenth century sites in western North Carolina suggest that the four-hole variety replaced the five-hole type during the 1840s, since sites with terminal occupation dates in the late 1830s lack four-hole buttons (Riggs et al. 2003:42). All of the five-hole buttons in the assemblage were recovered from the middle zone of the stone drain, while single four-hole

buttons were found in the bottom fill, top fill, and rubble. Neither type is present in the cellar pit. Given the proposed temporal change in bone button morphology, the presence of a four-hole button in the bottom of the drain suggests it was constructed after 1840.

Three flat metal buttons, one pewter and two copper alloy, were found at the Vance site (Figure 47). The pewter button was found in the bottom fill of the stone drain. It is 18 mm in diameter, has a cast eye, and has no discernible marks. The copper alloy buttons were found in the bottom fill of the drain and Zone 1 of the cellar pit. The button from the cellar pit, which is missing its shank, has a diameter of 25.4 mm and a stamped woven fabric design. The example from the stone drain is gold-plated and has an omega eye. It is stamped with the mark “B & BURNHAM EXTRA FINE” and is 17.7 mm in diameter. It was produced by the Benedict and Burnham Manufacturing Company of Waterbury, Connecticut. Waterbury was the center of the American brass industry in the nineteenth and early twentieth centuries (Lathrop 1926). Beginning in 1812, Aaron Benedict produced bone and ivory buttons, and during the next decade began making rolled brass buttons. He established a partnership with four other men in 1823 under the name “Benedict & Coe”; after reorganization in 1834 the business was renamed “Benedict & Burnham” (Anderson et al. 1896:297). In 1843 Benedict & Burnham became the first stock corporation formed in Waterbury and was renamed the “Benedict & Burnham Manufacturing Company.” As the century progressed, splinter corporations were formed from this parent company, one of which was the Waterbury Button company, established in 1849 (Anderson et al. 1896:298). Given this well-documented progression of business names, the button in the Vance site assemblage was probably produced sometime between 1834, when Benedict partnered with Burnham, and 1849, when Waterbury Button was founded. The presence of this button in the bottom fill of the stone drain indicates this deposit was created sometime after 1834.

Three shell buttons are present in the Vance site assemblage (Figure 47). All have four holes and are between 8.6 mm and 10 mm in diameter. Shell buttons were not mass-produced in the United States until 1855 (Dauterman 1982:16). Prior to this time England, particularly Birmingham, was the leading producer of buttons that were made from shell shipped in from the East Indies, Manila, the Bay of Panama, the Red Sea, and the Persian Gulf. No less a wordsmith than Charles Dickens was employed to document the Birmingham button factories. He describes the process of cutting shell blanks, and then notes how “each is fixed on a lathe, and turned, and smoothed; adorned with concentric rings, or with stars, or leaves, or dots; and then corded or milled at the edges, with streaks almost too fine to be seen by the naked eye” (Dickens 1852:111). The Vance site shell buttons exhibit decorations of this kind: two have 11–12 dots drilled along the outer edge, and one has a corded edge design. Dickens also observes that while merchants in the United States could “get almost any quantity of the shell, from their great trade with Manilla and Singapore,” the Americans did not manufacture shell buttons but instead bought “an incredible quantity from Birmingham” (Dickens 1852:111). Given the potential for such imports, the shell buttons from the Vance site may not necessarily post-date 1855. Only one of the three was found in an undisturbed context—the middle fill layer of the stone drain.

The final type of button in the Vance site assemblage is made from porcelain (Figure 47). The process for manufacturing porcelain buttons from powdered clay was first patented by Richard Prosser in 1840 (Sprague 2002). For this reason these white, glass-like buttons are called Prosser buttons. They can often be distinguished by the presence of a rough and pitted “pebbly or orange-peel surface” on the back-side of the button (Sprague 2002:11). As the introduction of Prosser button manufacture is well-documented, their presence can clearly



Figure 48. Personal items from the Vance site: top left, TALLIO cufflinks; top right, pocket knife fragment; middle left, buckle fragment; middle right, Willard Spencer stud; and bottom row, glass beads.

identify archaeological deposits that were produced after 1840. Three Prosser buttons are present in the Vance site assemblage, one of which was found in the middle fill of the stone drain. The presence of a Prosser button in the middle fill of the drain and a four-hole bone button in the bottom of the drain both suggest it was constructed sometime after 1840.

Another eight clothing fasteners of different kinds are present in the Vance site assemblage. These consist of a cufflink, two wire loops, a press stud post, three grommets, and a buckle fragment. The cufflink, or sleeve button, is oval in shape and measures 17.5 mm by 11.2 mm. The flat copper alloy buttons of the cufflink feature leaping foxes and the word “TALLIO” (Figure 48). This emblem of the foxhunt became common motif at the end of the eighteenth century, and foxes or jackals were embroidered on the collars of mens’ linen coats throughout the first quarter of the nineteenth century (Johnston 2005:34). Examples of TALLIO cufflinks have been found in a variety of military and civilian sites inhabited during the late eighteenth and early nineteenth centuries (Polhemus 1979:242–3; Smith 1993:327; Smith and Nance 2000:244; Smith 2000:183; Steen 2008:119). The Vance site cufflinks were found in Zone E of Level 2, a

context interpreted as re-deposited nineteenth-century plowzone. The wire loops were found in the top and middle fill of the stone drain, and were probably used with wire hooks. The French inventor Paul-Albert Regnault has been attributed with the invention of snap fasteners in 1855 (Harrison 2004). However, the press stud in the Vance site assemblage is stamped, in very small lettering, with the mark “WILLARD SPENCER PATENT” (Figure 48). Willard Spencer was a partner of another Waterbury, Connecticut button manufacturing company called Leavenworth, Spencer & Sperry, which was established in 1836 (Anderson et al. 1896:24). In 1939 Spencer branched off to make “patent buttons” with Dr. Ambrose Ives (Anderson et al. 1896:589). Politics and banking gradually replaced manufacturing as Spencer’s main occupation: in 1846 he was judge of probate, in 1850 he was warden of the borough, and in 1857 he was a state senator. He was also president of the Waterbury Savings Bank. While future research may more precisely date the manufacture of Spencer’s press stud found in the middle fill of the stone drain, it probably was produced sometime between 1839 and the mid-1850s.

The three grommets in the Vance site assemblage, two of which were found in the rubble and middle fill of the stone drain, are made of copper alloy and lack markings. Grommets, or “metallic oilet holes,” were first made to improve laced closures such as those at the back of waistcoats. Many English manufacturers created improvised waist coat fastenings during the 1830s and 1840s (Johnston 2005:142). The buckle fragment found in the rubble fill of the stone drain may also date to this period of improvisation in waist coat closures. It is a three-pronged brass buckle bar with a pressed linear design along the edges and two eyelets for sewn attachment (Figure 48). This buckle lacks the curvature of shoe buckles and is more elaborate than stock buckles, which also had three-pronged bars. While it may have been a waist-coat buckle, the decoration on this item suggests it was meant to be seen; it may instead be part of a woman’s belt buckle. In the late 1820s and early 1830s women’s fashion in the United States emphasized a “girlish” look with belted waists, ankle-length skirts, fluttering ribbons, and buoyant sleeves (Squire 1974:156). A fashion drawing from this period shows a dress with a wide belt fastened in the front with a rectangular buckle that has the same vertical orientation as a stock buckle (Squire 1974:155). The only relatively unambiguous items in the Vance site assemblage with regard to female adornment, however, are two glass beads. One, found in the rubble of the stone drain, is black and has a diameter of 10.5 mm. The other is an opalescent, wire-wound bead that measures 11.5 mm by 7.5 mm. It was found in the middle fill layer of the stone drain. While these items were likely worn by women as jewelry, the TALLIO cufflinks and the flat disc pewter and copper alloy buttons, which were likely attached to dress coats, were likely part of men’s wardrobes.

Both the men and women of the Lot 11 community were in need of water basins, medicine, and toothbrushes. All of these tools of ablution are present in the Vance site assemblage. Twelve historic sherds could be attributed to basins or chamber pots. One was a transitional pearlware/whiteware sherd, eight were whiteware, two were white granite, and one was redware. Two of the whiteware basin sherds were present in the middle fill of the stone drain, and one was found in Zone 2 of the cellar pit. The whiteware sherd from the cellar pit is the only decorated basin sherd. It has a single thin line of underglaze green paint around the foot of the vessel (Figure 49). The medicine bottle assemblage consists of 14 glass fragments. They were identified as medicine bottle fragments either by the presence of embossing or bottle shape and size. In most cases only snippets of embossed words were present; however, one manufacturer was identified. The most complete mark was present on an aqua vial, 2 cm in diameter, which has a blowpipe pontil mark (Figure 49). It was found in the rubble fill of the



Figure 49. Items of ablution from the Vance site: top row, basin fragments; center row left, Dr. McLane’s Vermifuge vial; bottom left clear and aqua medicine bottle fragments; and bottom right, toothbrush fragments.

stone drain and is embossed “...TOR,” “...NES,” “...ORM,” “...IFIC.” The full title of this medicine was “DOCTOR/McLANES/AMERICAN WORM/SPECIFIC” (Fike 2006 [1987]:222, Holcombe 1979:161). This rather self-explanatory substance was first introduced in 1844, and the formula was revised about 1865. After McLane’s death in 1855, the Fleming Brothers Co. obtained his proprietaries and continued production of the medicine. Following the Revenue Act of 1862, excise tax stamps were printed for “Dr. McLane’s Celebrated Vermifuge” starting in May, 1863, and were last issued prior to October 1, 1880 (Holcombe 1979:160). Although McLane’s medicine was produced into the late 1870s, the plowpipe pontil mark on the bottle in the Vance site assemblage suggests it was produced before the Civil War. Of the remaining medicine bottle fragments, five are aqua in color and eight are colorless. Six of the colorless examples were collected from Zone 2 of the cellar pit. These fragments are likely from the same bottle, which was rectangular and thick-walled. Ablutions on Lot 11 were also assisted by at least four bone toothbrushes. One toothbrush handle was found along with three fragments drilled with parallel rows of holes into which the bristles were inserted (Figure 49). Three of the four fragments were found in the rubble and middle fill of Feature 3.

It may at first seem strange to include tobacco pipes among artifacts affecting ablution, but in the nineteenth century tobacco retained medicinal connotations. As late as 1830 it was considered a narcotic, sedative, emetic, diuretic, and cathartic (Walker 1980:391). While tobacco gradually lost the favor of the medical profession as the century progressed, it remained

Table 18. Clay Smoking Pipe Fragments in the Vance Site Assemblage.

Type	All Contexts	Rubble	Feature 3		Feature 5	
			Top	Middle	Zone 1	Zone 2
Kaolin Clay						
Plain Stem	3	1	1	-	-	-
Plain Bowl	1	1	-	-	-	-
Fluted Bowl	1	-	-	-	-	-
Red Clay - Plain Bowl	1	-	-	-	-	-
Pale Brown Clay						
Ribbed	3	-	-	-	2	-
Anthropomorphic	1	-	-	-	-	1
Fluted	2	-	-	-	-	-
Fluted and Glazed	4	-	1	1	-	-
Fluted, Plain Bowl	1	-	-	1	-	-
Plain Bowl	1	-	1	-	-	-
Sandy Pale Brown Clay						
Ribbed	1	-	-	1	-	-
Ribbed Anthropomorphic	2	-	-	2	-	-
Anthropomorphic	3	-	-	2	-	-
Fluted	1	-	-	-	-	-
Total	25	2	3	7	2	1

a popular medicine for laymen. Prior to the development of the germ theory of disease, many were thought to be caused by bad air or “miasma,” which was often associated with fog. Following this logic, dry tobacco smoke was valued for its disinfecting power against epidemics (Walker 1980:392). This is not to deny, however, the recreational use of tobacco and its role in the construction of social identities. This latter aspect of smoking likely played a role in the styles of pipes that were produced by manufacturers and selected by consumers. The Vance site assemblage contains 25 fragments of clay tobacco pipes. Most of these fragments (76%, n=19) come from pipes that were likely produced by local North Carolina potters. This is consistent with findings from the Pettigrew site, where only three of 63 clay pipes were identified as imports (Jones et al. 1998:50). Of the six imported pipe fragments in the Vance site assemblage, five are made of white-firing kaolin clay. Four of these are from long-stemmed pipes that were mass-produced in England during the eighteenth and early nineteenth centuries. Three of these fragments were found in the rubble and top fill of the stone drain (Table 18). The fifth is a fluted bowl fragment that may have been part of a stub-stemmed pipe, which was the dominant pipe form of the nineteenth century (Figure 50). Another pipe of non-local manufacture is represented by a single red bodied smooth bowl fragment (Figure 50). The color and form of this pipe suggest it may have been produced near Pamplin, Virginia, which became a center of clay pipe production after the Civil War (Sudbury 1979:207).

All of the pipe fragments recovered from the middle fill of Feature 3 and the cellar pit are made of pale brown clay and are likely the products of North Carolina potters. The earliest pipes produced in the state were made by the Moravian Gottfried Aust, who established a pottery manufacture in Bethabara, North Carolina c. 1775 (Sudbury 1979:177). Aust’s workshop was one of the first in the state to be the subject of archaeological research (South 1999). Aust produced fluted, stub-stemmed pipes with anthropomorphic designs, many of which were lead-glazed. Two possible Aust pipes were found in Level 4 of the northern portion of the Pettigrew



Figure 50. Clay pipes from the Vance site assemblage: top left, two anthropomorphic ribbed pipes made of sandy pale brown clay; top right, ribbed pipe of pale brown clay and red clay pipe bowl; bottom left, fluted kaolin pipe bowl fragments and two pipe stems; and bottom right, two lead-glazed, fluted pipe stems.

site (Jones et al. 1998:50). While none of the pipe fragments in the Vance site assemblage are attributable to Aust, Moravian techniques and styles were important influences for other potters working in the region during the nineteenth century. Excavations at the kiln site of Solomon Loy, for example, recovered fluted, anthropomorphic pipe fragments as well as specialized kiln furniture designed to support pipes during firing. In addition, a pipe mold matching fragments found during excavation was found in his cabin (Carnes-McNaughton 1997:218). While it had been believed that only Aust's pipes were glazed, the recovery of lead-glazed pipe fragments at the Loy site revealed that later potters also adopted this practice. Research suggests that pipe production was common at North Carolina potteries, and was frequently undertaken by potters' wives (Sudbury 1979:181; Zug 1985:339–349).

The local redware pipe fragments in the Vance site assemblage were classified with regard to clay temper and mold design (Table 18). While some of the pale brown clay pipe fragments contained coarse, angular sand, others did not. This variation may indicate that the assemblage contains the products of at least two different manufacturers. Fragments were also differentiated with regard to whether they were fluted, ribbed, smoothed, or anthropomorphic. Since the stems and bowls of the pipes sometimes received different treatments, the portion of the pipe present was also taken into account. Finally, some of the pipe fragments exhibited traces of lead glaze, which was recorded when present. Nine of the 12 pipe fragments found in the stone drain were part of pipes made by local potters, as were all three of the pipe fragments collected from the cellar pit. In addition, all of the cellar pit pipe fragments are made of clay lacking sand inclusions, and exhibit ribbed and anthropomorphic designs. The stone drain, on the other hand, contained examples of both kinds of clay and a variety of designs. Unlike the examples from the cellar pit, the fragments lacking sand found in Feature 3 are fluted, not ribbed.



This may be evidence of temporal shift in production or of a third manufacturer. In addition, all of the lead-glazed pipe fragments in the Vance site assemblage, including two found in the upper and middle fill of the stone drain, are fluted and made of non-sandy clay. The sandy clay pipe fragments from the stone drain are all ribbed or anthropomorphic. Two relatively intact examples appear to be from the same mold (Figure 50). Future attribute-based analysis of clay pipes produced at North Carolina potteries in the nineteenth century may help evaluate the significance of the variation in material and design observed in the Vance site pipe assemblage.

### *Occupations*

The final class of artifacts from the Vance site that can be identified as to function are items that facilitated occupations. These “activities,” as South (1977) called them, encompass everything Lot 11 residents were doing when not engaged with food or ablution. Fifty-five artifacts from the Vance site can be attributed to a set of occupations including the use of firearms, commerce, gardening and landscaping, sewing, and writing. Two pieces of ammunition, likely evidence of recreational firearm use, were found at the Vance site. One is a lead ball, found in Feature 6, which pre-dates the Civil War (Figure 51). The other is a 0.22 caliber cartridge, first produced in the 1870s. The presence of wild animals in the Vance site faunal assemblage is likely a corollary of this activity. Commerce was a primary occupation of Lot 11 owners throughout the nineteenth century, but only seven items could be attributed to this activity: one lead seal (Figure 51), used to mark cloth or containers of goods, and six iron barrel hoop fragments. The lead seal was found in a disturbed context, but all the barrel hoop fragments were found in the top and middle fill of the stone drain. Gardening and landscaping activities undertaken by people living in the house at the northeast corner of Lot 11 are represented by 15 flower pot sherds and one shovel blade. The shovel was found in the middle fill of the stone drain.

The sewing activities of Lot 11 residents were facilitated by one thimble and 20 brass straight pins and pin fragments. The thimble, found in the conduit trench, was made of copper alloy by a production method called “deep-drawing” (Beaudry 2006:103). It is domed and 23.5 mm tall, with a diameter between 16 mm and 17 mm (Figure 51). The presence of machine-impressed knurlings and a decorative band near the base of the thimble indicate it was made in the nineteenth century (Beaudry 2006:106). Given their small size, pins were only recovered from water-screened feature contexts. Of the 20 pins in the Vance site assemblage, 18 were found in the stone drain fill and one came from the cellar pit. The rubble and upper fill of the drain yielded 12 pins, and the middle fill yielded six pins. The Vance site assemblage contains both round-headed pins and flat-headed pins. The latter only became available after 1830, when a machine was designed that used a steel punch to compress the small section of pin that protruded above a clamp (Beaudry 2006:20–21). The single pin in the cellar pit has a round head. The six flat-headed pins in the Vance site assemblage came from the top fill and rubble of the stone drain.

A few of the Vance site artifacts were used for writing. These include one slate pencil, found in Feature 7, six polished slate fragments, and a stoneware ink bottle (Figure 51). Four of these items were recovered from Features 3 and 5. One polished slate fragment was found in Zone 2 of the cellar pit, and two came from the top fill of the stone drain. The stoneware ink bottle was found in the rubble fill in the drain opening. Finally, a brass pencil band found in the sidewalk construction fill, complete with preserved fragments of wood, likely dates to the



Figure 51. Items for facilitating daily occupations at the Vance site: top left, lead seal; top center, 0.22 casing and lead ball; middle left, flat-headed pins; center, round-headed pins and thimble; bottom left, polished writing slate fragments and slate pencil; bottom center flower pot sherds; and right, stoneware ink bottle.

twentieth century. Artifacts associated with writing were more common at the southern end of Lot 11 near the Poor House, where 23 writing slate fragments were found along with 20 fragments of glass and stoneware ink bottles (Jones et al. 1998:47).

### Summary and Interpretation

Excavations at the Vance site resulted in the recovery of over 9,190 artifacts from two temporally discrete occupations. The earlier of the two took place sometime between 3,000 and 300 years ago. Artifacts attributed to this occupation include six lithic flakes and one pottery sherd. Previous excavations at the Pettigrew site, less than 50 meters (160 ft) south of the Vance excavations, recovered diagnostic artifacts from the Savannah River period (4,000 to 2,500 year ago). Although the prehistoric materials recovered from the Vance site lack temporally diagnostic attributes, it is possible they were produced by the same group of people. The overwhelming majority of artifacts recovered from the Vance site, however, are attributable to the Chapel Hill residents who lived on Lot 11 during the nineteenth century. Grouped according to function, these artifacts consist of 6,127 items associated with foodways, 2,503 with the built environment of architecture and furniture, 91 with personal adornment and ablutions, and

another 55 with daily occupations. When compared with the Pettigrew site, which was the location of the Poor House in the mid-nineteenth century and the Phi Delta Theta house in the early twentieth century, the Vance site contains relatively less architectural debris. On the other hand, food accounts for 50% of the Vance site assemblage and only 4% of the Pettigrew site assemblage. These patterns highlight the different functions of the features uncovered at each site: two residences in the case of the Pettigrew site, and a stone-lined drain used to dispose of kitchen debris at the Vance site.

Historic accounts by Elisha and Maria Mitchell provide information about daily fare and special meals in Chapel Hill during the second quarter of the nineteenth century. Archaeological evidence of foodways recovered from the Vance site both resonates with their observations and provides additional details about the sorts of foods consumed on Lot 11. Macrobotanical evidence from the stone drain and cellar pit includes agricultural weed seeds, which is consistent with historic accounts that a portion of Lot 11 was farmed into the mid-nineteenth century. However, the only evidence of grain recovered was a single maize cupule, which suggests that all crop processing likely took place at one of the local mills and Lot 11 residents cooked with ground grains to make foods like cornbread, hominy, and biscuits. According to both Elisha Mitchell's account and the faunal assemblage from the Vance site, pigs were the most common animal consumed. Since 57% of the pig remains identified are lower leg bones, it is possible that dishes such as prepared pig's feet were being consumed at the Vance site in addition to the familiar bacon that Elisha Mitchell mentions. Chickens were the most common avian fare, while the presence of two domestic duck bones in the assemblage indicates they were likely consumed on special occasions. Wild animals that occasionally graced the tables of Lot 11 residents include cottontail rabbit, opossum, squirrel, turkey, and catfish.

One of the primary research objectives that directed the analysis of historic artifacts from the Vance site was to date the construction, use, and abandonment of the cellar pit and stone-lined drain features. The spatial relationship of these two features, revealed during fieldwork, appeared to indicate that the cellar pit was filled in before the construction of the stone drain. The fill of the cellar pit was excavated in two zones. Zone 1 consisted of rocks and soil thrown into the cellar at the time of its abandonment, while Zone 2 likely contained some of this fill along with items that were lying on the floor of the pit and accumulated while it was in use. The most notable of these were large pieces of a slipped redware cooking dish that bears a strong likeness to one from the second quarter of the mid-nineteenth century that is signed "Solomon Loy" (Zug 1986:Plate 2). It is difficult to propose a date for the construction of the cellar pit, as most of the items it contains likely date to its abandonment. However, a relatively high percentage of creamware in Zone 2, along with the presence of small Rococo-edged and warm polychrome painted sherds, suggests it may have been in use during the late eighteenth or early nineteenth centuries. If so, it was likely under the kitchen or a storage structure associated with the Hogg residence. The presence of cool polychrome and flow blue sherds in Zone 1 suggests the pit was filled in sometime after 1840. This is consistent with the results of window glass analysis, which yielded a date of 1841. The fill of the cellar pit was noticeably different from that of the stone drain, inasmuch as it had a substantially lower artifact density and different button, glass bottle, and smoking pipe assemblages.

The stone drain had three main components: the bottom sandy fill, which likely accumulated soon after its construction; the middle fill, which accumulated during its use; and the upper fill and rubble, which was deposited when it was abandoned. It seems to cut into, but is also perpendicular to, the cellar pit. The bottom fill of the drain contained a four-hole bone

button, likely produced after 1840, and a gold-plated brass button produced sometime between 1834 and 1849. On the other hand, the window glass date for the bottom fill of the drain is 1826. The middle fill of the stone drain yielded a window glass date of 1825, but also contained artifacts produced after this time. For this reason it seems that the window glass dates are not reliable for the bottom and middle fill of the drain, and may be strongly influenced by the incorporation of either “antique” window glass or degraded mirror glass. Items that seem to date the use period of the drain include the presence of post-1840 edged ware, most of a pitcher with a Romantic-style printed design likely produced in the 1830s, and a set of pressed glass cup plates that have a production range of 1835 to 1850. A Prosser button and patent fastener produced by Willard Spencer of Waterbury were also found in the middle fill and indicate it accumulated after 1840. The upper fill and rubble of the drain yielded window glass dates of 1851 and 1846, respectively. The rubble yielded artifacts that could be attributed to mid-nineteenth century, but also items produced earlier in the 1800s. This is not surprising as the drain was likely filled in with nearby soil from either the cellar pit or the surrounding plow zone. This explains the presence of pearlware occurring in greater-than-average proportions in Zone 1 of the cellar pit and also in the rubble fill of the drain. Mid-century artifacts from the rubble fill of the drain include a vial for Dr. McLane’s American Worm Specific, which was introduced in 1844, and oil lamp chimney glass. While six white granite sherds were present in the stone drain, they do not exhibit the ribbed or plain styles common after 1870. Taken as a whole, the artifact evidence suggests the drain was abandoned before the Civil War.

Overall, the artifact evidence suggests that the cellar pit may have been filled in just prior to the construction of the stone drain in the early 1840s. When archival evidence is considered, it seems likely that this undertaking was planned by Elisha Mitchell for the benefit of the Deems family. Charles Force Deems arrived on campus in 1842 to much fanfare, and established a new family on Lot 11 by 1844, when his first son was born. In 1842 Mitchell recorded lining ditches in “the grove,” today’s McCorkle Place, with stone. He also drew a plan of a drainage system for South Building that involved the use of short feeder drains running perpendicular to a main drain. Feature 3 at the Vance site appears to be one such feeder drain that likely connects to a main drain that runs southward to Franklin Street. This system can be contrasted with the one planned by the owners of the Eagle Hotel. To solve drainage problems, they constructed a stone drain that ran diagonally through the cellar and northwestward toward Franklin Street. The direction of this drain simply followed the prevailing slope. This is not the case with the Vance site drain. It slopes downward but runs perpendicular to the prevailing slope; it is part of a larger system whose author was likely Mitchell. In addition, since a University professor was living in the Lot 11 house at the time, the construction of a drain to serve his property may have seemed an appropriate use of University funds.

Jones Watson obtained Lot 11 in 1847 when Deems left the University, and the abandonment of the stone drain was likely tied to improvements Watson made to the parcel. During the 1840s and 1850s kitchen waste was dumped into the drain, which eventually may have caused it to fail. A relatively high amount of construction debris in the middle and rubble of the drain suggest it was abandoned during a period of construction on the parcel. This may be related to Watson either expanding the Lot 11 house, constructing the Poor House, or cleanup after the Civil War. The general absence of late nineteenth-century artifacts in the Vance site assemblage suggest that little waste from the Roberson Hotel accumulated in this area, although some artifacts from this period may have been removed with the disturbed overburden during excavation.

## Chapter 5

### CONCLUSION

The Research Laboratories of Archaeology at UNC Chapel Hill conducted data-recovery excavations at the Vance site (RLA-Or467, 31OR638) during November, 2011. This work investigated nineteenth-century features exposed during the installation of a stormwater drain for the Battle-Vance-Pettigrew building. The project area was located on the east side of Vance Hall within the Chapel Hill Historic District, which is listed on the *National Register of Historic Places*. During the nineteenth century the excavated area was located at the boundary between University property and Lot 11, a privately-held parcel auctioned off by the University Trustees in 1793. Excavations revealed that the modern storm drain had uncovered an eighteenth-century storm drain and cellar pit. Artifacts from a prehistoric American Indian occupation of the area between 3,000 and 300 years ago were also uncovered. Although the nineteenth-century stone-lined drain and cellar pit had been disturbed by twentieth-century activities, intact portions of these features yielded significant information concerning antebellum Chapel Hill. In particular, a large quantity of kitchen and dining debris in the form of animal bone and historic ceramics were recovered. The analysis of these materials, in combination with archival information, provides unprecedented information about mid-nineteenth-century foodways in Chapel Hill. In addition, the stone-lined drain can be identified as part of an engineering project designed by UNC professor Elisha Mitchell and built by slaves in the early 1840s.

The University of North Carolina at Chapel Hill is the oldest public-supported institution of higher learning in the United States. For this reason, information from the Vance site is significant at both the local and national levels. The University's existence as a publicly-funded institution makes the investigation of a site located at the border between publicly and privately-owned property particularly interesting. In order to realize the research potential of the Vance site, questions were developed to guide archival research and analysis: When were the archaeological features found at the Vance site constructed? Who designed them and who made them? What activities took place in and around Lot 11 during the nineteenth century? Finally, what can these and similar archaeological features tell us about interfaces between the University and surrounding community during the nineteenth century?

Research in the University Archives revealed that owing to University President Swain's interest in campus beautification in the 1840s, Elisha Mitchell was enlisted to serve as amateur landscape architect for a variety of projects. One problem that concerned Swain was the smell produced by hogs wallowing in water that accumulated near University buildings. Mitchell designed a system of stone-lined drains to alleviate this situation, which he details in an 1844 letter to Swain. Mitchell, who also served as University Bursar, oversaw drainage projects in McCorkle Place as early as 1842. These drains constitute the earliest sanitation system in Chapel Hill, and were in large part necessitated by dormitory life. Thus, while Chapel Hill was by no means a city in the nineteenth century, it became necessary for the University to solve logistical problems similar in kind, if not scale, to those encountered in urban areas. This condition intensified as University enrollment grew, and by the end of the nineteenth century the University was not only a public institution of higher learning but also a public distributor of utilities for Chapel Hill.

Over 9,910 artifacts were collected during the Vance site excavations. Among these were six stone flakes and one prehistoric pottery sherd. Artifacts from the nineteenth century

occupation of Lot 11 included 6,127 items associated with foodways, 2,503 with aspects of the built environment including architecture and furniture, 91 associated with personal adornment and ablutions, and another 55 associated with daily occupations such as hunting, sewing, gardening, and writing. An examination of macrobotanical remains from the Vance site identified agricultural weed seeds but not grains, suggesting that crops grown on the parcel were transported to a local mill for processing into ground products such as corn meal and flour. According to both archival accounts and the faunal remains recovered from the Vance site, pigs were the most common animal consumed in antebellum Chapel Hill. As 57% of the pig remains in the Vance site assemblage were from lower leg bones, it is possible Lot 11 residents were consuming not only bacon but also meals that included prepared pig's feet. Bones from wild animals, including cottontail rabbit, opossum, squirrel, turkey, and catfish, provide a sense not only of the breadth of the antebellum diet but also the woodland nature of the area during this time.

The artifact evidence suggests the cellar pit may have been filled in just prior to the construction of the stone drain in the early 1840s. The cellar pit was likely part of a kitchen or outbuilding constructed by early residents of Lot 11, possibly the Hogg family. The stone drain was likely constructed for the benefit of the Deems family, who lived on the parcel from 1843 to 1847. Deems was a celebrated Methodist preacher who served as professor of logic and rhetoric. Jones Watson bought Deems' property in 1847, and soon afterward constructed the Poor House on the southern end of the parcel. The accumulated detritus of kitchen waste in the stone drain may therefore represent consumption of the Deems family, Jones Watson, or the students living in the Poor House. The accumulation of this debris likely caused the drain to fail, and it was filled in and abandoned sometime prior to or immediately after the Civil War.

The history and archaeology of the Vance site features, particularly the stone-lined drain, highlight the permeability of the interface between the University and community and well as the contextual character of concepts such as public and private. The very existence of a University drainage system designed to serve a dwelling on private property displays the permeability of property boundaries. However, the construction of the drain during Deems' ownership of Lot 11 suggests it was not viewed as serving an entirely "private" household. This situation stands in sharp contrast to instances where community members were seen as encroaching on University lands. Future archaeological work to identify and assess outbuildings and other deposits associated with such border spaces would significantly contribute to our understanding of the history of the relationship between the University and Chapel Hill. Such deposits, as the Vance, Pettigrew, and Graham-Memorial sites attest, remain intact less than a foot below the modern ground surface, and should be considered during the planning stages of ground-disturbing activities on campus.

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