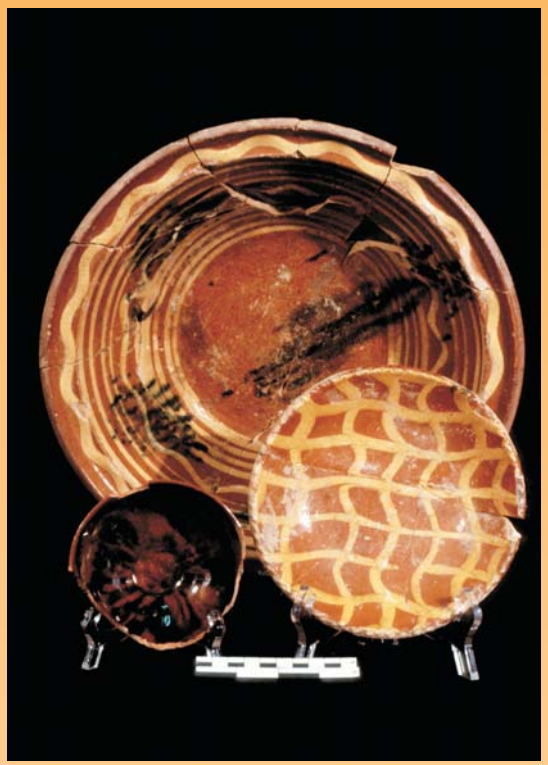
Hudson's Square-
A Place Through Time
Archeological Data Recovery
on Block 2
of Independence Mall



John Milner Associates
Architects • Archeologists • Planners

HUDSON'S SQUARE—A PLACE THROUGH TIME
ARCHEOLOGICAL DATA RECOVERY ON
BLOCK 2 OF INDEPENDENCE MALL

Final

submitted to

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ABSTRACT

John Milner Associates (JMA) completed Phase II archeological monitoring within the proposed Independence Visitor Center footprint between August 18 and September 15, 1999. The work was conducted under contract to Day & Zimmermann Infrastructure, Inc. The basements of three structures facing North Sixth Street and three facing Market Street were cleared by machine. Five truncated, brick-lined shaft features were identified during Phase II, three of them in lots facing North Sixth Street and two in lots facing Market Street. A slot between two building walls, which appeared to preserve an intact floor, was treated as an additional feature. Data recovery was recommended for all five-shaft features and the "floor" feature. During data recovery, which was conducted from December 6 to December 22, 1999, three additional features were identified and added to the investigation.

Significant assemblages that could be associated with lot residents were recovered from two of the features. Feature E, a brick-lined privy, at 13 (historically 9) North Sixth Street, had belonged to William Simmons, the chief clerk in the auditor's office in the Department of Treasury during the Washington administration and the chief accountant in the War Department during the Adams administration. The artifacts recovered reflected the bachelor household of a civil servant during the Federalist period. Combined with correspondence found in the papers of Alexander Hamilton, the archeological study provides insights into the conflict between the democratic values expressed in the Declaration of Independence and the elitist tendencies of the Federalists. Feature B, a huge cesspool behind the house that stood at 527 (historically 225) Market Street, contained artifacts belonging to the well-to-do merchants who lived there at the turn of the nineteenth century and to two generations of the Everly family who ran a comb manufactory and fancy dry goods store there from 1825 to about 1859. The Everlys' possessions and food remains reveal the tastes and values of an upwardly mobile, middle-class family in the part of Philadelphia that was its commercial center in the nineteenth century.

The report takes change through time as its theme. An initial narrative section describes the subdivision of the block in the eighteenth century, its development, the archeological investigation, and the people whose things were recovered. This section includes narrative vignettes, which attempt to bring William Simmons and the Everlys to life, and a quantitative study of artifacts relating to foodways, fashion, and health. The technical report, including a detailed description of the Phase II and III investigations and the artifact analyses, may be found in Appendix A. Subsequent appendices include a study of the public markets and public works in early Philadelphia, detailed analyses of the faunal and floral remains recovered, and parasitological and conservation reports.

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PREFACE

Joseph Jackson modestly calls his famous tome about Market Street, "a gossipy topographical survey of the most historic highway in America." Published in 1918, Jackson's book aimed "to keep the interest alive by avoiding the inflexible style usually associated with history, but at the same time to visit sources for the facts" (Jackson 1918:v). It would appear Jackson was struggling with some of the same problems early in the twentieth century that we are facing at the beginning of the twenty-first. The purpose here is also to present the results of a historical archeological data recovery in a style that is accessible. To that end, the report includes a narrative account of the results as well as the required technical account. The inclusion of a narrative seems particularly important because the data recovery took place on a block of Market Street (Figure 1) that was in the heart of early Philadelphia and was therefore part and parcel of Jackson's "most historic highway." There is the opportunity through archeology to get a different perspective on Market Street than was available from Jackson's sources, to get a view that is based on actual material remains of life in the late-eighteenth and early-nineteenth centuries. However, there are also other reasons to use narrative.

It has become increasingly clear over the past decade or so that very little of the research conducted in compliance with Section 106 of the National Historic Preservation Act and other state and federal laws has made a lasting contribution to the historical record. The "gray" literature, that is, the reports produced under these laws, reach a very small audience and the data are generally presented in a way that is meaningful only to archeologists. While an enormous amount of primary documentary research has been conducted for these projects, the results have not generally been presented in the context of issues that concern historians. Likewise, archeological interpretation has often been limited to descriptive analyses and comparisons that contribute only minimally to our understanding of broad patterns of past human behavior. When the historic-preservation legislation was originally put in place (beginning with the National Historic Preservation Act of 1966) it was presumed that a descriptive presentation of historical and archeological data and minimal analysis were all that were appropriate for studies done in association with pending construction. The expectation was that scholars would return to the data for in-depth studies using other resources, in terms of both time and money. However, for all the reasons stated above and others besides (not the least of which have to do with availability), that has not come to pass. If the data are not interpreted by the people who conduct the cultural resources studies in the first place, it is more than likely that they never will be.

On the site-specific level, there are even more reasons for using a narrative approach. When Independence Mall was created in the 1950s, no archeological investigations were conducted. The land was owned by the Commonwealth of Pennsylvania, and no laws were in place at the time that required environmental studies of any kind. The three blocks that became the Mall, including the sites of the house where the first two presidents of the country resided and the tavern directly across from Independence Hall where, undoubtedly, some of the most important debates affecting the future government took place, were leveled with no regard to the eighteenth-century resources that might underlie the nineteenth-century structures that stood on the sites at the time. Fortunately, the standing structures were photographed and some buildings were recorded before they were taken down, but no serious archeology was done. While interpretive signs at least mark the locations of historic structures on Block 1, no structures on Block 2 were considered noteworthy enough for signage. The landscape installed in the early 1960s, and only recently dismantled, made no reference to the historical configuration of Block 2 or to its eighteenth- or nineteenth-century residents.

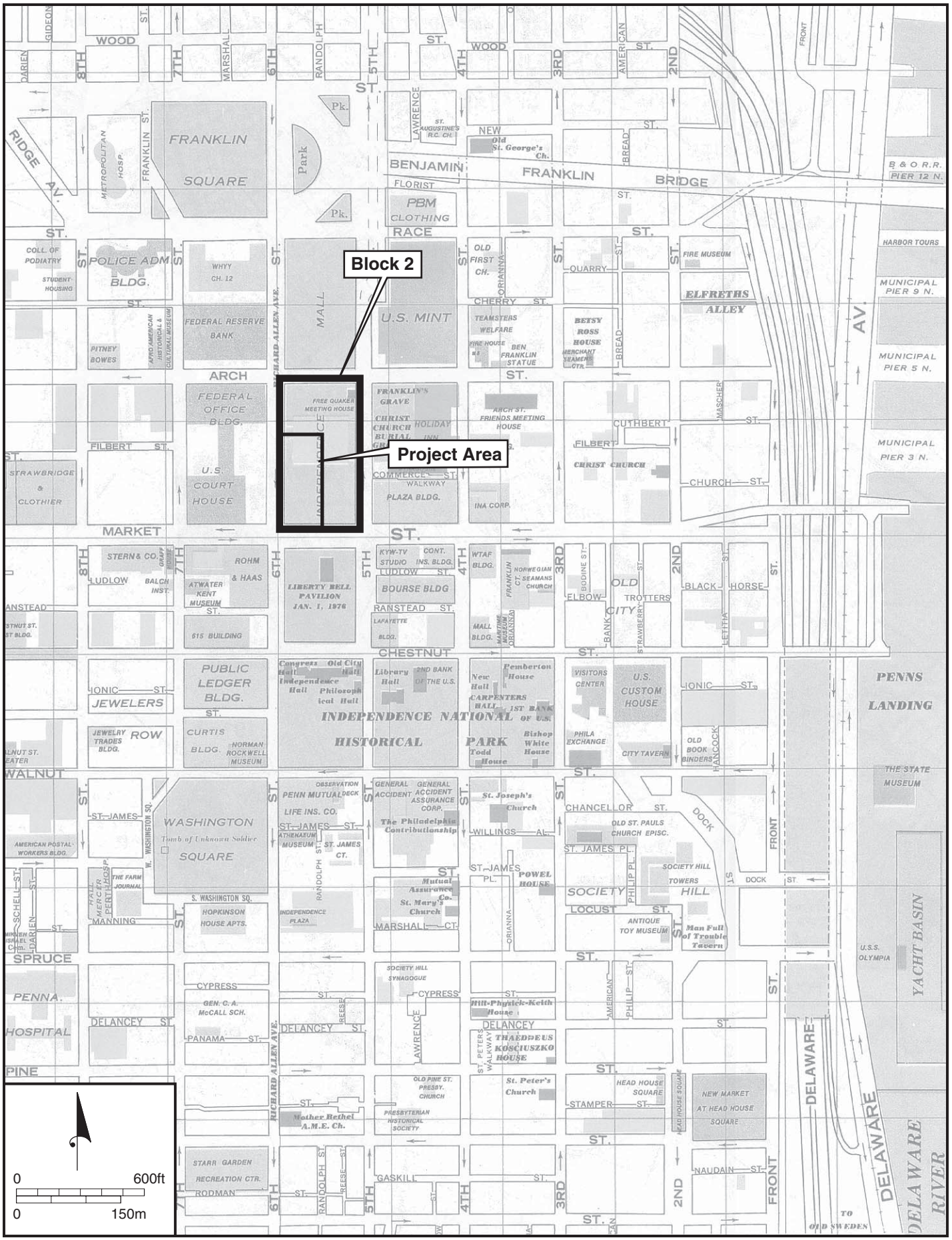

Figure 1. Independence Visitor Center project area within Block 2 of Independence Mall. From Franklin's *Street and Zip Code Atlas of Philadelphia and Suburbs*.

The last, but in no way least important, reason for producing a narrative report is the purpose of the project in the first place—to prepare the site for the Independence Visitor Center. The visitor center is meant to provide an "introductory interpretation of some Park and neighborhood resources…of a provocative nature, designed to interest visitors in the subject and entice them to visit the resource or facility being so interpreted" (Independence National Historical Park 1995:21). The results of this study may be used to orient the visitor to the historic ground on which a visit to the historic city begins. The authenticity of the archeological remains and their interpretation within the context of the specific periods to which they relate have the potential to bring the past to life, to make visitors believe in the reality of other times, surely an important preparation for the rest of their visit to Philadelphia. The past is elusive, hidden behind a curtain of present-day presumptions and prejudices. Archeology has a way of penetrating that curtain because its products are visible reminders of other people in other times.

The narrative portion of the report is organized into five chapters. The first examines the changing meaning of the landscape, from its initial development in the middle of the eighteenth century to its planned redevelopment in the first year of the twenty-first century. The second chapter describes John Milner Associates' archeological investigations, and the third chapter attempts to get inside the worlds of two households that occupied the project block at very different times. While he worked in the Washington and Adams administrations in the 1790s, William Simmons, a clerk/accountant who lived at 9 (subsequently 13) North Sixth Street, left remnants of life at that address at the bottom of a backyard privy. Several decades later, when the block had become more commercial, the Everly family lived and ran a business at 225 (subsequently 527) Market Street and left remnants of their lives there in a huge cesspool behind the house. Narrative vignettes attempt to combine the archeological and historical data to bring those households to life. In the fourth chapter, the archeological data are treated quantitatively in order to make comparisons with other sites, in both Philadelphia and elsewhere. Although this is the more traditional way of presenting the results of archeological investigations, an attempt is made here to make a clear connection between research questions posed and the data used to address them. The final chapter draws some conclusions about archeological history in general and about the place we refer to as Block 2 in particular. More detailed discussions of the excavation process and of the artifact assemblages are included in the appendices.

Appendix A, included at the back of Volume I, contains the required technical descriptions of the goals, field methods, field results of both Phase II and III investigations, laboratory methods, and artifact descriptions and analyses of the materials recovered. Each major artifact category, i.e., ceramics, glass, clay pipes, and small finds, is discussed in some depth and interpreted in the context of specific research questions. Appendix B is a study of the laws and regulations relating to animal husbandry, sanitation, and marketing in late eighteenth- and nineteenth-century Philadelphia. Appendix C contains an analysis of the faunal data with reference to the laws discussed in Appendix B and to studies of comparable material done for the Chiller Plant and Merchants Exchange projects in Philadelphia. Appendix D is a study of the floral remains and their implications for understanding diet and medicinal practice. Appendix E presents the results of the parasitological analysis of soil samples, and Appendix F is a description of conservation methods and procedures used on the collection.

ACKNOWLEDGMENTS

Urban Archeology is necessarily a team effort. Of particular importance to the archeological investigations are the machine operators, who not only remove fill and foundations to expose the resources we are looking for, but also protect our safety in the field. We wish to thank Harry Brown for supplying this service during the Phase II investigations and Tommy Williams for the same during Phase III. Additional machine operators and a skilled shoring crew also assisted us, and we appreciate all of their efforts. Steve Brown of Wu Associates coordinated these activities during Phase III, which made the project go more smoothly than otherwise would have been possible. We are grateful to him for his work and for his good company.

Our client, Day & Zimmermann (D & Z), took an active interest in the project and was responsive to all of our needs. We are particularly grateful to D & Z's project manger, Dan Bosin, for his enthusiastic support, to John Stetson for his involvement during the early stages of the Phase II work, and to Kurt Beier for his interest, help, and good humor throughout the Phase III investigation. Jed Levin and Alan Cooper, archeologists for the National Park Service, provided wise council at various points during the project. We thank them and their colleagues at the Park Service, Coxey Toogood, Doris Fanelli, David Hollenberg, and Dennis Reidenbach, all of whom contributed useful ideas and advice.

As always, we are grateful to JMA's management, graphics, and office staff for making it possible for us to do this project. Special thanks go to Tod Benedict for a final copy edit, and to Dawn Thomas and Margy Schoettle for report production.

1. AN EVOLVING LANDSCAPE

1.1 INTRODUCTION

John Milner Associates began archeological investigations on Block 2 in August 1999. The Judge Lewis Fountain, which had been the focal point of the block's landscape, was already dry (Figure 2). Its black marble walls described a geometry that fit the symmetry of the Mall, but they were doomed by the new design that would undo that very symmetry. Three men labored in the hot August sun to remove the 163,000 cobbles that surrounded the fountain. They piled them onto pallets and moved them to a storage area for reuse in the new landscape. Among the stones was a large slab dedicated to Judge Lewis, "commemorating the foresight of a great American." Many months later, Kurt Beier of Day and Zimmermann retrieved the inscribed stone (Figure 3). The judge was at least remembered even if his vision of an appropriate approach to Independence Hall was about to be destroyed.

Human beings mold the landscape to fit their vision of the world and are molded as well by the landscapes they inherit. Landscape, even in its natural state, is cultural. What one group perceives as an objective reality may be perceived completely differently by another group. Native Americans and early English immigrants, for instance, saw the physical world in completely different terms. For Native Americans, it was the "productive realm that needed to be maintained"; for the colonists it was a "howling wilderness that required improvement" (Hood 1996:123). Manmade landscapes, likewise, may be multivocal. Southern plantation owners created domains of domination while slaves within those domains found private places for their own ceremonies and economic activities that were independent of the plantation owner's control (Upton 1988:364). The manmade landscape surrounding Independence Hall, including the land we now call Block 2, has changed many times and meant many different things in each of its incarnations.

1.2 HUDSON'S SQUARE

When William Hudson made his long and complicated will in 1741 (probated 1743), his land on Market Street, then known as High Street, was well beyond the most developed portion of the city. Although William Penn and Thomas Holme intended the city to develop equally along the Delaware and Schuylkill riverbanks and grow gradually to meet in the center, early commercial activities clung to the Delaware shore, and instead of spreading inward the city spread north-south along its shore (Twiss-Garrity 1994:4) (Figure 4). Nevertheless, Hudson must have known that his land between Fifth and Sixth and High and Arch Streets would eventually be absorbed into the urban grid. Keeping to the rational principles intended by Penn and foreshadowing the Republican obsession with symmetrically organized urban space (Upton 1992), he specified exactly how what was then pasture should be laid out.

The square was to be subdivided into three equal parts, each running 200 feet north-south and 396 feet from east to west (Toogood 2000:vi). The subdivision was created by two 30-foot-wide public streets, named, appropriately enough, South and North Streets (renamed Commerce and Cuthbert respectively in the nineteenth century). The Clarkson and Biddle 1762 map (Figure 5) clearly shows the symmetry of the square. The map also shows several structures in the section between the two streets, but they were built at least a decade after Hudson made his will. When Hudson died, he decreed that the block remain undeveloped—to be known as Hudson's Square—until the death of his wife, which did not come until 1759.

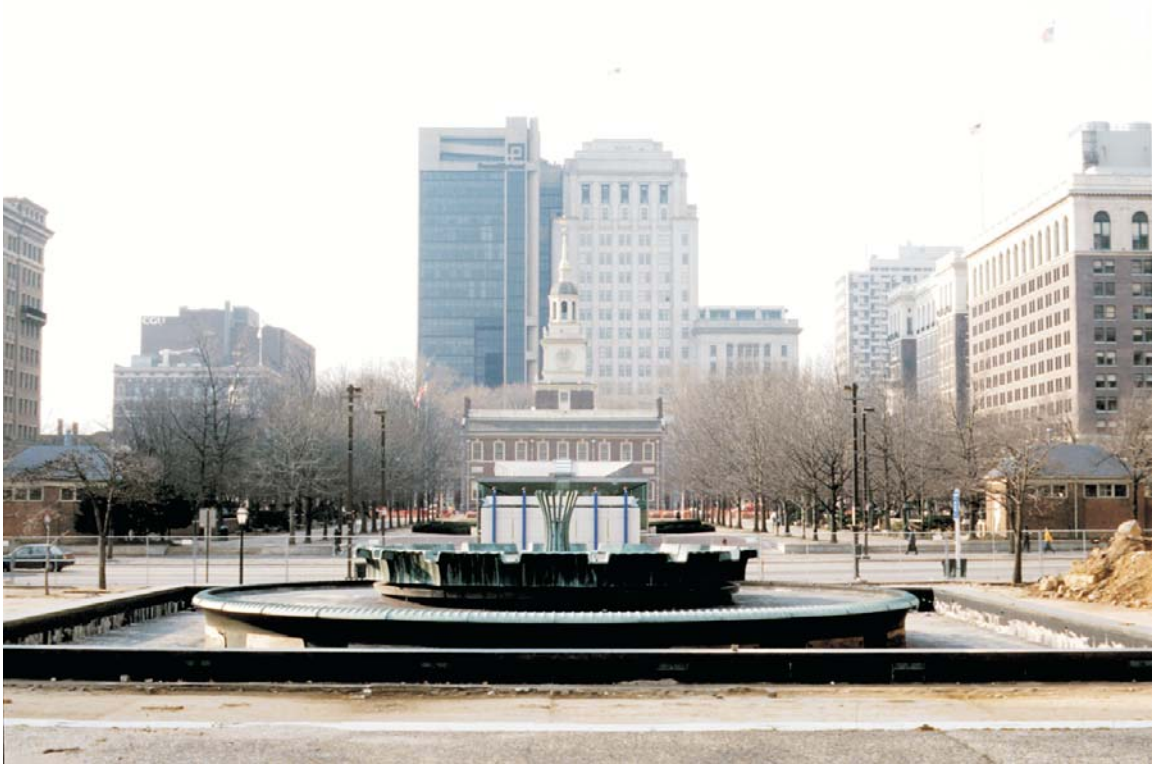

Figure 2. Judge Edwin O. Lewis Fountain. Photograph by Rebecca Yamin.

Figure 3. Stone inscribed to Judge Lewis.

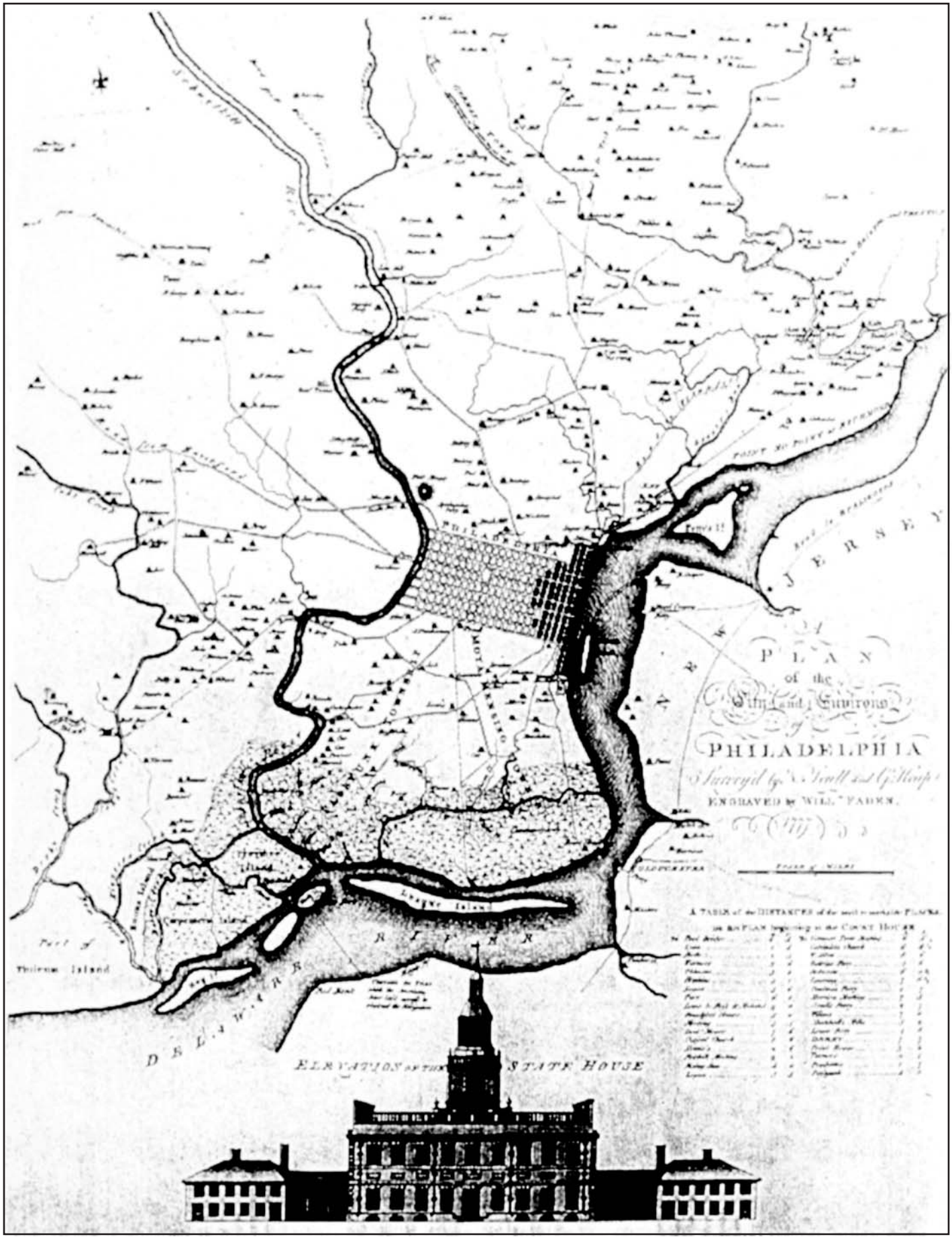

Figure 4. Faden 1777 map of Philadelphia showing the growth of the city along the Delaware. From Wolf 1975: 70.

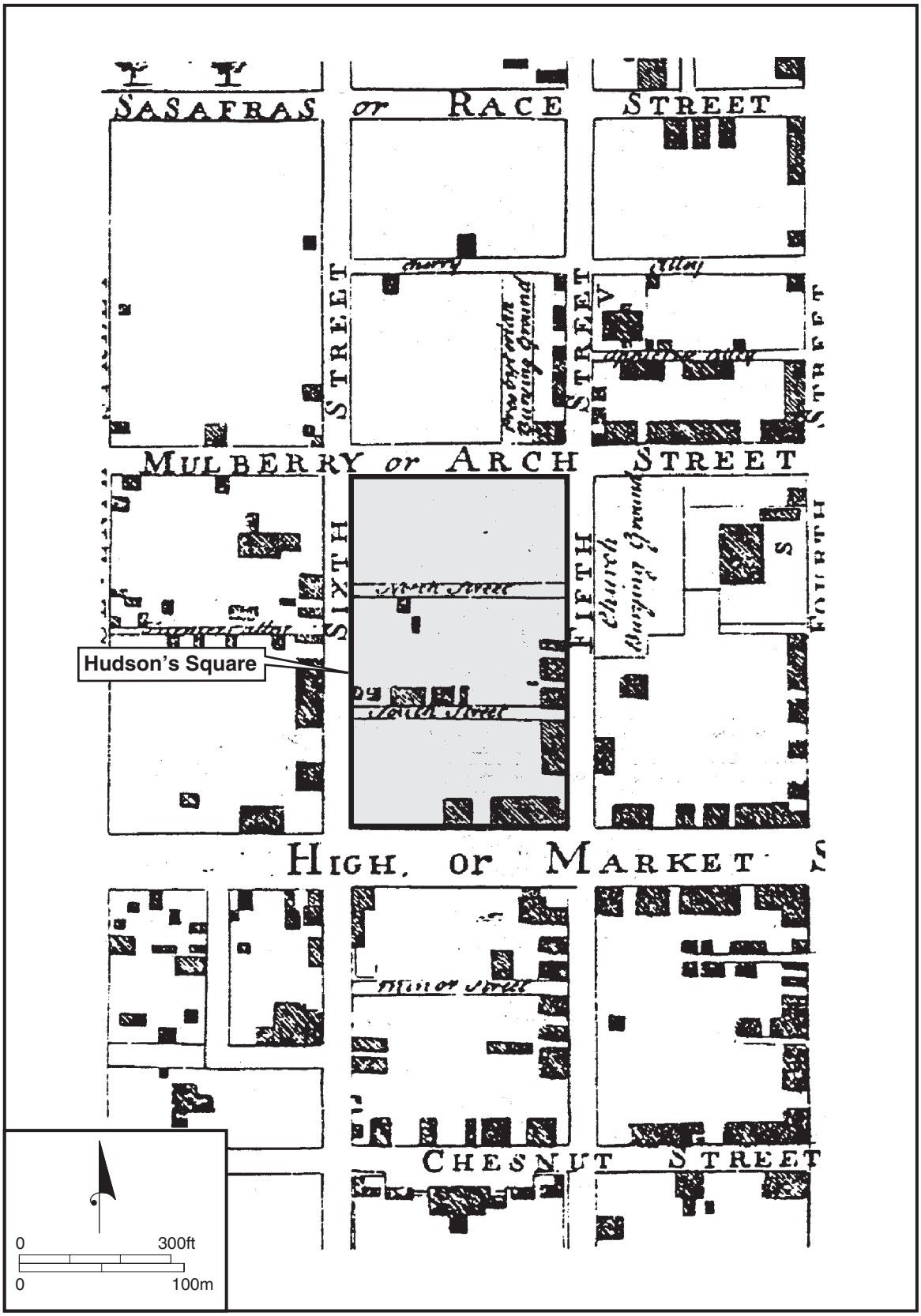

Figure 5. Clarkson and Biddle map of Philadelphia, 1762. Detail showing Hudson's Square.

As Hudson's Square it was remembered for the pond that appeared after heavy rains "about 60 feet from the northwest corner of Fifth and High Streets" (Toogood 2000:2, quoting *Watson's Annals of Philadelphia and Pennsylvania in the Olden Times*, Volume 1) and for its apple orchards (Toogood 2000:11). It was William Hudson's "plantation," part of the wealth that included "a great deal of property on Third Street below Chestnut" where he built the three-story brick house he lived in with his first and second wives and many children (Jackson 1918:96). Hudson had arrived in Philadelphia from Yorkshire in 1682. Like his father, he was a tanner and set up business along Dock Creek (Tolles 1948:66), which by the end of the seventeenth century was lined with tanyards. He married well [first to the daughter of Samuel Richardson, one of the wealthiest and most powerful members of the governor's council (Tolles 1948:43)], was chosen as one of the original councilmen by Penn under the City Charter of 1701 (Jackson 1918:96), was a member of the assembly in 1706 and 1724, and was the mayor of the city in 1725 and 1726. By his death in 1743 Hudson was "one of the largest manufacturers, shipping merchants, and ship owners in Philadelphia" (Toogood 2000:7).

Philadelphia's leading eighteenth-century Quaker merchants found themselves in a difficult position. While religion for them was not to be separated from politics—William Penn saw government as "a part of religion itself, a thing sacred in its institution and end" (Tolles 1948:10)—the wealth that brought them their political power was inconsistent with Quaker values of simplicity. In spite of George Fox's admonition, "let him that buys, or sells, or possesses or uses this world be as if he did not" (Tolles 1948:54), Philadelphia's Quaker merchants, Hudson among them, accumulated property and lived well. To assuage their guilt—or fulfill their duty—they devoted more than their share of attention to charitable activities. According to historian Frederick Tolles:

> wealthier merchants from the beginning bearing the major part of the burden of poor relief. Moreover, it usually fell to them as "weighty friends" to serve as overseers charged with the administration of relief. For example, in 1712 Anthony Morris, wealthy merchant and brewer, and William Hudson, owner of several tanneries in Philadelphia, were asked by the Monthly Meeting to inquire into the condition of 'a poor friend that came lately from England...and help him out of the monthly meeting stock (Tolles 1948:66).

Even the ability to be charitable reflected a prosperity that could be interpreted as a temptation to "luxury and pride" (Tolles 1948:82). In Hudson's will, which goes on for nine pages and enumerates enormous numbers of plots of land, messuages, tenements, rents on properties, appurtenances, grants of money, and the rent of "my Nego man," he left only "forty pounds money twenty pounds part thereof to be by her [his wife] distributed to and amongst the poor of these people called Quakers in such manner as to her shall seem meek and the twenty pounds residue to be by her distributed in like manner amongst the poor people of other religious societies in Philadelphia at her discretion." To his wife and various children, grandchildren, and even sons-in-law he gave 100 pounds or ground rents worth at least that much as well as extensive grants of property. Perhaps it was not seemly to display wealth by giving it away, even in death.

Hudson's detailed division of the portion of his property known as the "pasture," to be called and known by the name of "Hudson's Square" after his death, suggests something else. As Lorinda Goodwin has discussed in her book, *An Archaeology of Manners, The Polite World of the Merchant Elite of Colonial Massachusetts* (1999), New World merchants' legitimacy as an elite

was constructed. In Massachusetts the merchants "selected elements from the existing universe of polite conduct...to establish their own social and civic authority" (Goodwin 1999:2). In Pennsylvania, Hudson, at least, imitated the proprietor. Like Penn, he established a "square" to be "divided into three equal parts." The parts were then subdivided and granted to his children and grandchildren, each part described as "part of my square." In keeping with Quaker values, grants appear to have been equitable between children and grandchildren of different sexes, although it is difficult to judge since there were so many more girls than boys in the mix. It is also true, however, that Hudson's oldest son, William, got a greater share of his other property than any of the heirs (Figure 6).

Hudson saw himself as a creator of a new world, albeit smaller than Penn's ideal city of five squares and gridiron of streets, but equally ordered and meant to endure into the future. North and South Streets, cut at right angles to the north-south-running Fifth and Sixth Streets and parallel to Mulberry (now Arch) and High (now Market), were "to remain always open to be used as publick Streets of the City aforesaid for ever." Hudson was creating yet another piece of Penn's "Eden"[1] and dedicating it to himself. For a reason we will never understand, he did not want this piece of the urban plan to exist until his wife had also died. Perhaps, he simply thought the city would not reach Fifth Street until his grandchildren, to whom he granted most of the square, were adults. Hannah Hudson's death in 1759 coincided with what Toogood calls "a phenomenal housing boom in Philadelphia that would last for two decades" (Toogood 2000:11), from which Hudson's heirs apparently benefited. After 1783 only Sarah Moore, the daughter of Hudson's daughter Rachel (married name Emlen), still lived at Hudson's Square. All the other descendants had sold their holdings and moved elsewhere.

1.3 A LEGACY SUBDIVIDED

Nicholas Scull, Joseph Fox, and Jacob Lewis prepared a survey of the square for William Hudson's heirs in 1759, and it was surveyed again in 1789 (Toogood 2000:12). Of the 21 people named to inherit property in the will, 16 (76%) were women. Hudson's granddaughters received the bulk of the square (Figure 6) although two Medcalf grandsons and Hudson's eldest son, William, got the lots along Fifth Street (Hudson 1741). It is conceivable that Hudson placed a higher value on the Fifth Street properties, since at his death in 1743 the city had not spread much above Fourth Street. Larger properties faced Arch Street, presumably because its frontage was less valuable than the Market Street frontage. Hudson's daughter, Rachel Emlen, inherited the large lot on the northeast corner of Market and North Sixth Streets. The rest of that side of the block was divided more or less evenly (Figure 6).

Hudson's most valuable holdings went to his son, William, who, in addition to the house he was living in on Second Street, also inherited his father's tanyards on Dock Creek (Hudson 1741). The less valuable Hudson's Square properties may have been granted to granddaughters as a contribution to their dowries. Hudson's already-married daughters lived elsewhere and were presumably well taken care of at the time of their father's death.

[1] Frederick Tolles believes Penn envisioned "a land peopled largely by Friends, brought by the Spirit into a state of perfection like that of Adam before the fall, would thus become a second Eden. The coercive functions of the state could be expected to wither away from disuse, and a holy community of love and peace under the sway of God's Spirit would come into being on the banks of the Delaware" (1948:10-11).

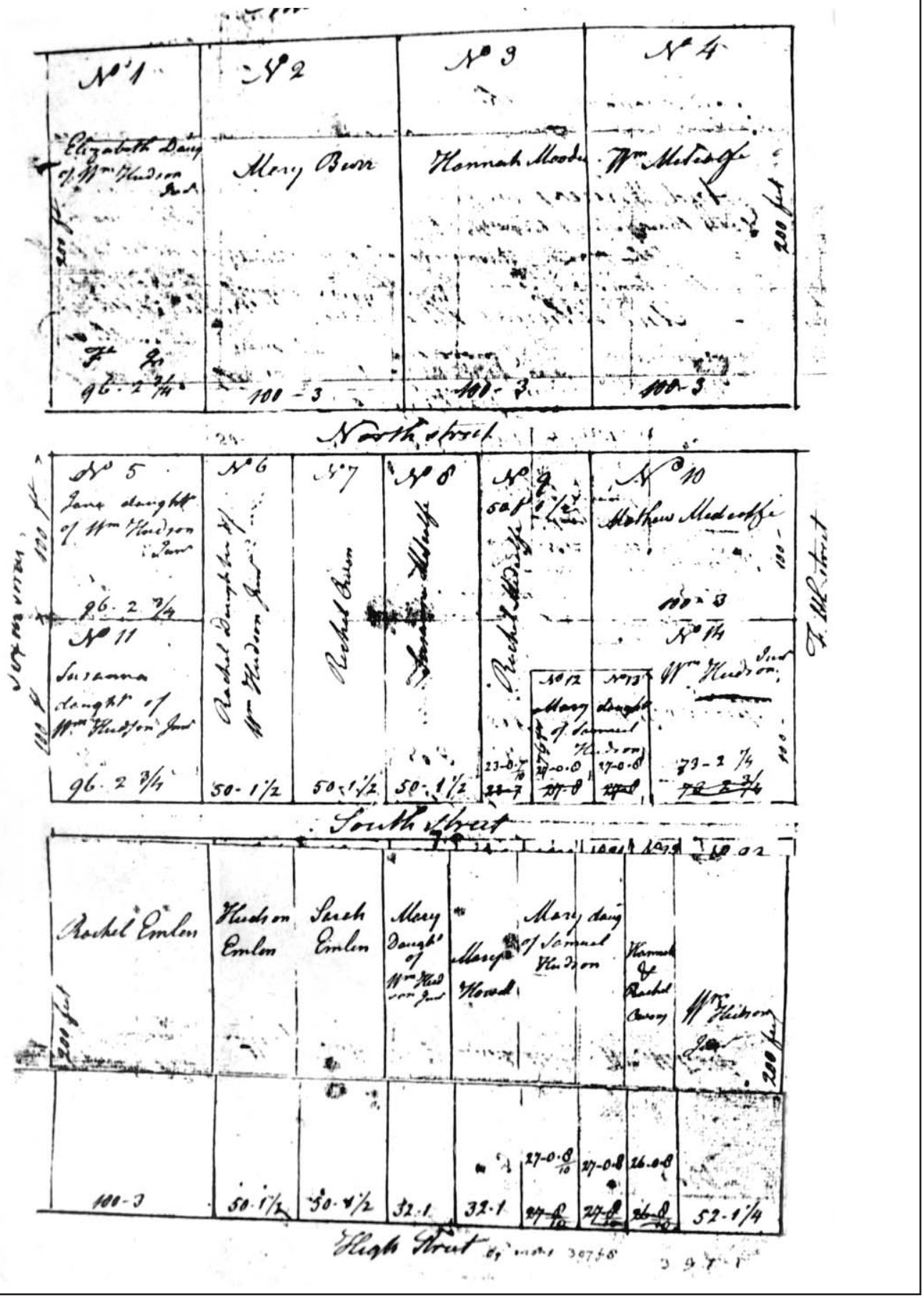

Figure 6. Diagram of property subdivision from Hudson's will, 1743.

It does not appear that any of the heirs was interested in living at Hudson's Square, at least not on its interior. Instead, they subdivided and sold off modest lots to men of modest means. According to Toogood, whose research details the purchases, "many of the first buyers were tradesmen, artisans, and small shopkeepers" (Toogood 2000:16). For instance, in 1760 William Hudson subdivided his 52-by-200-foot lot at the corner of Fifth and Market Streets into narrow 20-by-52-foot lots facing Fifth Street. Susannah Hudson's second husband, John Burr, subdivided his wife's lot between North and South Streets along Sixth into four 17-by-100- and two 16-by-100-foot lots. Samuel Witherell, who manufactured clothes for the Continental Army in the Revolution, purchased land from Sarah Emlen (who had bought it from her cousin Rachel Owen Kemble the year before) on the north side of South Alley in 1762 and lived and worked there for 20 years along with a variety of other artisans: cordwainers, blacksmiths, painters, watch makers, weavers.

Lots on Market Street were generally larger and sold to more-established merchants. Jane Hudson, a daughter of William, insured a new three-story brick house at the corner of Fifth and High, which she rented to John Obenhainer. Mary Hudson Howell deeded her large lot in the middle of the block to Quaker merchant John Pemberton in 1767. Pemberton built a three-story brick dwelling, 28.5 by 42 feet with a one-story piazza and small room, 15 by 20 feet, and two-story wash house and kitchen, 38 by 16.5 feet (Toogood 2000:41-42). Pemberton, who had begun his career as a West Indies trader, advertised ironmongery and metal for sale from his house on Hudson's Square. He eventually became a renowned Quaker minister and led the antiwar group to passive resistance at the outbreak of the Revolution (Toogood 2000:42).

Rachel and Samuel Emlen moved to the lot Rachel had inherited from her father, William Hudson, in 1761. There were two brick houses on the property, separated by a 3-foot-wide alley, and they lived in one and rented the other. Rachel Emlen died in 1771 and Samuel in 1783. Their niece, Sarah (or daughter, the record is unclear), and her husband, Thomas Moore, apparently inherited the two houses and lived in the easternmost one of them. That house and the one next door, where Amos Foulke lived, were assessed for 1300 pounds, second only to Pemberton's on the block. Moore owned a brewery on Race Street in partnership with Joseph Clark. He identified himself as a "gentleman" and kept a chariot, wagon, and two horses on the property (Toogood 2000:44).

Several of the houses along Market Street were large, but not all. As has been pointed out by several scholars (e.g., Gough 1994; Rosswurm 1994), neighborhoods were not segregated by class in eighteenth-century Philadelphia, but that does not mean that the rich did not differentiate themselves from the "lower sort." According to Steve Rosswurm (1994:52), "the ruling class became increasingly insulated from the lower and middling sort in the 1750s and 60s. While rich, middling, and poor often lived side by side in city neighborhoods, the wealthy set themselves apart from the poor by their houses, dress, and other signs of superiority, such as carriages." The Moores probably did not mix with their neighbors, except perhaps with the Pembertons, who ranked among Philadelphia's elite, and they certainly did not mix with residents living on the interior of the block. While interior lots were considered the most desirable in the first half of the eighteenth century, the Market Street lots on the exterior were the most valued in the second half, undoubtedly because of their visibility.

In the last decade of the eighteenth century, Nathan and David Sellers, wire makers; David McCormack, ironmonger; William Shippen, delegate to the Continental Congress; and Dr. Caspar Wistar, the celebrated anatomist, among others, lived along the Market Street side of Hudson's

Square. Joseph Jackson describes the Sellers house (Figure 7), which he considered typical of many merchants' houses of the period:

> The ground floor being occupied as a warehouse and counting room, with a separate entrance for the residence. The entrance was at the eastern line and approached by a flight of marble steps and opened into a long, wide hallway.
>
> This extended to the stair hall in the rear of the main building. The dining room was on the ground floor of the back building, where it connected by a terrace and flight of steps with the garden, which was the whole width of the lot extending to the coach house and stable, facing a court, which opened into Sixth Street. The stairway in the rear of the entrance hall led to the living rooms above, the parlor being in the front of the building… (Jackson 1918:97).

Neighbors across the street included the country's first president. Robert Morris's very grand (by Philadelphia standards) house was thought most suitable for the president, and Morris made it available, although Washington found it "inadequate to the commodious accommodation of [his] family" (Gough 1994:29) and made improvements (Burt 1875).

Washington was not the only politician living in the vicinity. Boarding houses along North Sixth Street housed many members of Congress. House member Hezekiah Hosmer of New York and Senator Samuel Livermore of New Hampshire lodged with William Simmons (about whom we will speak later) at No. 9 North Sixth, Representative James Schureman of New Jersey and Senator John Brown of Kentucky lodged at No. 11, and Senators Nathaniel Chipman of Vermont, Richard Stockton of New Jersey, and Henry Latimer of Delaware were at No. 39 along with Representatives Lewis R. Morris of New Jersey, James Cochran of New York, and James Bayard of Delaware (Toogood 2000:33). By the time the government moved to Washington in 1800, the neighborhood was about to change.

1.4 NINETEENTH-CENTURY BUSINESSMEN

Lively commerce gradually replaced gracious living on Market Street, and eventually the houses that had served as places of residence as well as business in the eighteenth century were replaced with large commercial buildings. Nathan Sellers, for instance, who had started a wireworks business near the corner of Sixth and Market Streets in 1782, turned the business over to his son Coleman in 1817. Coleman moved the wireworks across the street and sold the family house to his son, who in partnership with Abraham Liddon Pennock converted the house into a store and warehouse handling "Machine Cards, Woollens, Cotton, Silk & Linen Manufacturers Findings" (Yamin and Pitts 1998:10). John J. Vanderkamp bought the property to the east of Sellers at 229 (eventually 531) Market Street in 1809, demolished the house, and put up a "five story building that ran back the full length of the lot to Commerce Street. The three story house next to him (227, later 529 Market Street) was also converted for commercial uses and in 1855 Caleb Cope, a wealthy merchant, razed the dwelling and put up "a new and splendid brown stone store, five stories in height" that also extended through to Commerce Street (Yamin and Pitts 1998:10). A sequence of merchants occupied 225 (later 527) Market Street. In 1801 it was Henry & Boggs,

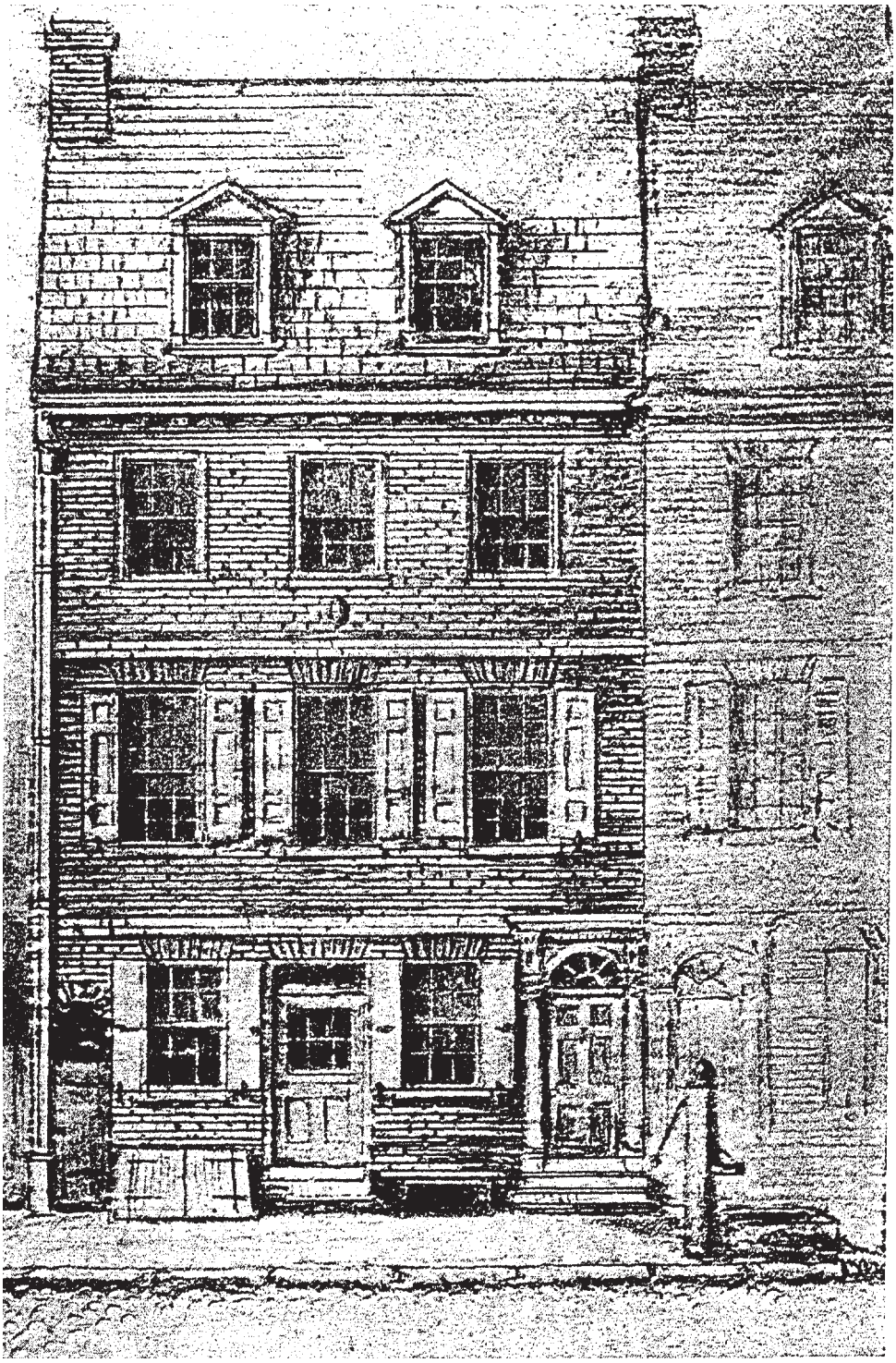

Figure 7. Drawing of Nathan Sellers house, 231 High Street, 1785-1829. From Joseph Jackson's *Market Street, Philadelphia: The Most Historic Highway in America, Its Merchants and Its Story, 1918.*

but in 1803 Henry Boggs, shipping merchant, is listed alone. By 1823 the property was occupied by Adam Everly and his fancy-combs business, a business that remained on the premises for two generations.

These substantial buildings and businesses, and many others, were destroyed by the massive fire that consumed much of the block in 1856. Starting in the paper warehouse of Jessup & Moore at 24-26 (520-522) North Street, the fire moved west along North Street, reaching the corner of North Sixth. All of the structures between North and the corner of Market Street were destroyed, including several tailor shops, an artist's supplies store, a piano store, Mr. Peterman's boardinghouse, a gents' furnishings store, a coppersmith, a grocery, and several furnishings establishments. The Market Street businesses that were burned included the William A. Everly Plain & Fancy Combs; R.B. Fairbank, Patent Scale Manufacturers; Truitt & Brother Hardware; and William W. Knight Hardware. Most of the Market Street owners were insured and able to rebuild after the fire. They built substantial five-story brick structures with marble or brownstone facades that reached all the way back to Commerce Street It is these buildings that the Commonwealth of Pennsylvania destroyed to make way for the Mall. The streetscape was described as "deteriorated," and the northern end of the area, including Block 2, as a "blighted, neglected slum" (Gibson et al. 1994:66). As pointed out in a cultural landscape report for Independence Mall produced by the National Park Service in 1994, the buildings—at least those along Market Street—would now probably be considered a "fine architectural horizon" (Gibson et al. 1994:67). The views from *Baxter's Panoramic Business Directory* (Figure 8) and a series of photographs are all that is left.

1.5 TWENTIETH-CENTURY TRANSFORMATION

When City Hall was completed at Penn Square in 1901, municipal functions that were carried out in buildings on Independence Square moved uptown (Riley 1953:39). By the 1920s and the era in which John D. Rockefeller funded the restoration of Colonial Williamsburg, Virginia, Independence Hall and Carpenters Hall were viewed as national shrines amidst decaying and irrelevant buildings. Stirred by the fear of fire, a variety of plans advanced in the late 1920s and 1930s called for the removal of the structures around Independence Hall. Connie Greiff describes a "not so sensible" plan advanced by Dr. Seneca Egbert that proposed "clearance of the three blocks from Chestnut to Race Street between Fifth and Sixth Streets" (Greiff 1987:38). This not-so-sensible plan, of course, is exactly what was done in the early 1950s.

Under the guidance of Judge Edwin O. Lewis, and the Independence Hall Association, which he formed in 1942, 200 properties including all of Block 2, were identified "which would have to be acquired by the Federal Government to provide a suitable approach to Independence Hall" (Greiff 1987:45). By October 1945 Judge Lewis had gotten the governor of Pennsylvania to authorize 4 million dollars for the creation of the Mall in spite of opposition from various camps. Charles L. Peterson, the National Park Service's leading expert on historic architecture, championed the ill-fated nineteenth-century buildings within the Park boundaries (Greiff 1987:43), and the Market Street Businessman's Association attempted to block demolition plans, which, they feared, would destroy their still very viable businesses (Gibson et al. 1994:67). To argue against the Mall they employed an architect, Louis Magaziner, who said the scale of the proposed mall was too large and "would reduce Independence Hall to insignificance, making the frame too big for the picture" (Greiff 1987:52).

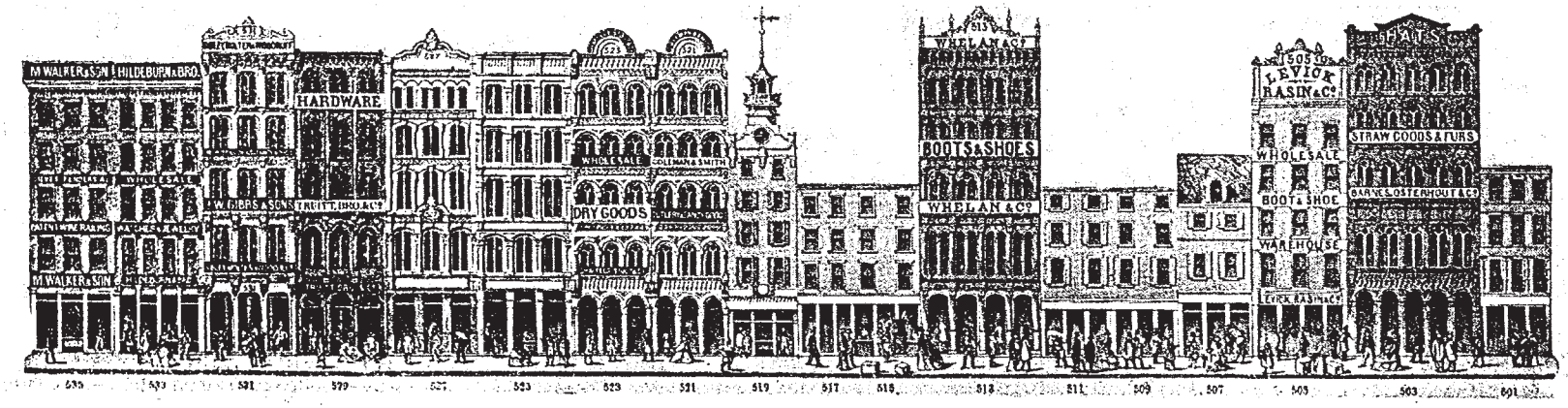

Figure 8. North side of Market Street between Fifth and Sixth Streets. From *Baxter's Panoramic Business Directory of Philadelphia, for 1859*.

Judge Lewis, however, was a formidable advocate, and concerns about the urban fabric and even about the house where two presidents had lived in the 1790s were somehow forgotten in the fervor to create a "suitable approach to Independence Hall" (Greiff 1987:45). As Greiff points out in her book about the creation of Independence National Historical Park, the surging patriotism in the early 1940s and the determination of one man culminated inexorably in the bulldozing of the three blocks in front of Independence Hall. The work began in 1953 and was completed by the end of the decade. Among the casualties were Seller's still-standing eighteenth-century house and Hudson's North (Cuthbert) and South (Commerce) Streets, intended "to remain always open to be used as publick streets."

1.6 A TWENTY-FIRST-CENTURY VISION

The redesign of the Mall in the twenty-first century cannot bring back the urban fabric that was lost in the twentieth, but the design guidelines, developed by the Olin Partnership, include reconnecting the Mall with the grid plan of the city. Stated as a "principle," the guidelines call for positioning "buildings and open space in deference to what is suggested by the city's grid plan" (Olin Partnership 1997:6). To accomplish this the new landscape will "1) integrate the Mall with the city's urban fabric by reinforcing the grid plan through the use of historic alleyways; 2) establish visual and physical links to nearby city attractions such as Christ Church, the National Museum of American Jewish History, the Atwater Kent Museum, Chinatown, etc.; and 3) develop a built edge along Sixth Street and at major intersections throughout the Mall." In other words, the new landscape will attempt to counter some of the emptiness of the space that was so carefully created as a "proper setting" for Independence Hall in the 1950s by reintegrating it into the city.

Olin's plan also talks about scale: "the new Mall will be modest, with deferential buildings appropriately scaled so that they preserve the prominence of the Hall…the reintroduction of the east-west streets which relate to historic or existing street patterns will reduce the scale of the Mall's superblocks" (Olin Partnership 1997:10). It is as if someone finally heard the concerns of the Market Street Businessman's Association's architect who argued that the frame was too big for the picture and one of its concerned members who said, "Independence Hall would look like a peanut in a two block vista" (Greiff 1987:69). The Olin plan includes more trees, the three-block Mall is crossed by diagonal walks that breakup the space, and low buildings along the west side enclose it, at least on one side, from the street (Figure 9). It is a plan conceived in a postmodern era that strives to be inclusive—to connect to the past and reflect the diversity of the present.

1.7 CHANGING MEANINGS

To William Hudson, who first subdivided the land now known as Block 2, the land was his legacy and his vision of the future. He called it Hudson's Square and willed it to his grandchildren, immortalizing himself in the name and ensuring the well-being of his descendants. What Hudson did not know was that future merchants would no longer want to live in the same place they did business. Hudson's heirs sold their properties to businessmen who converted the structures into warehouses and workshops and finally replaced them with much larger buildings that stretched from Market Street through to Commerce Street. For these businessmen Block 2 was in the heart of a commercial district. It represented productivity and prosperity, innovation and investment. They could not have imagined that 100 years later their five-story marble-faced factories would be considered unworthy of a neighborhood that included Independence Hall.

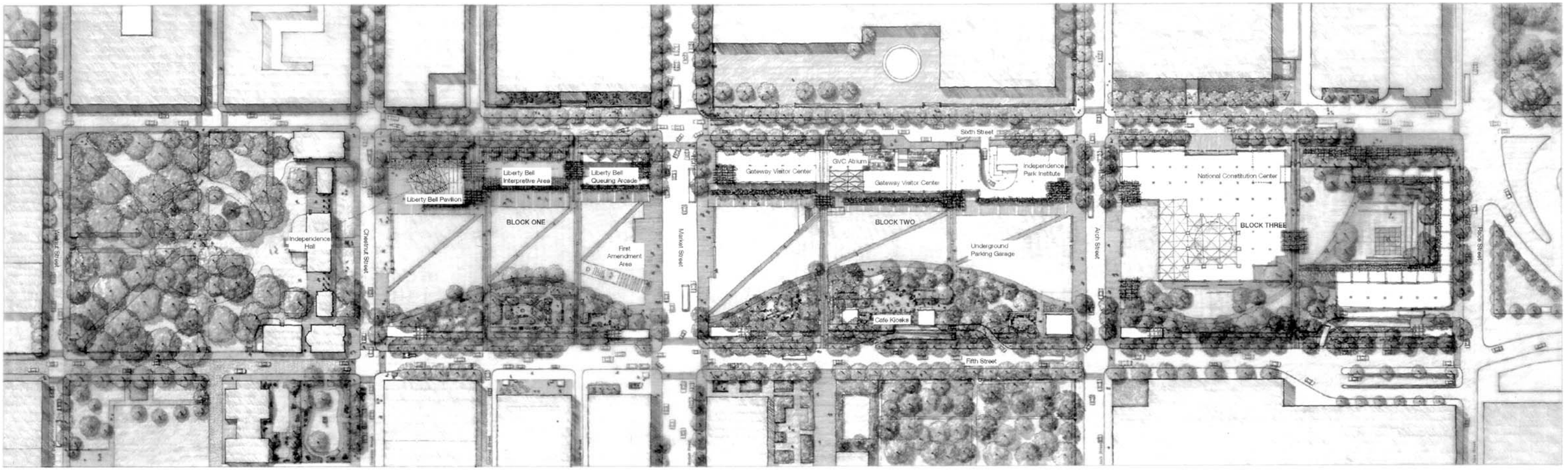

Figure 9. Olin Partnership rendering of newly designed Independence Mall.

For Judge Lewis and his colleagues, the commercial meaning of Block 2 clashed with their patriotic vision of an appropriate context for Independence Hall—the ultimate symbol of democracy. The Colonial Revival values of the 1920s (when the movement to create a park around Independence Hall began) disdained the commerce on which the country's growth rested. Colonial Revival values harked back to a time when the population did not include the immigrants whose labor fueled industry and gentlemen derived their status from good works and family fortunes. Even financial institutions seemed inappropriate to the purity of Independence Hall as a symbol. Judge Lewis's following championed the removal of the banks that had been built around Independence Hall as well as the commercial establishments that filled the three blocks in front of the Hall. When Independence National Historical Park was created, everything was removed except the structures that dated to the period of the Hall.

The creation of the three-block Mall and the Park sacrificed the urban fabric for the sake of creating an appropriate context for the Hall, a sacrifice that was seen as well worth the effort for many years. In the 1990s, however, new tastes and new values found the Mall, in particular, lacking. It was too open, too sterile, too empty to fit postmodern values. It needed to be knit back into the urban fabric, to become more user friendly (in the computer parlance of the period), to serve diverse functions and diverse people. The new design puts places for people into the space and anchors the places with references to the city as it was before the Colonial Revival movement destroyed it. The new symbolism replaces reverence for democratic beginnings with commitment to democratic inclusiveness. In addition, it includes references to the past. Archeological investigations, required by law, lend a kind of scientific legitimacy to the inclusion of the past into the future landscape.

The archeologists charged with identifying the remnants of the past still present on the Mall considered it an opportunity to recover the history that had been denied when the Mall was originally created. There was the opportunity to reinstate the historic players—William Hudson and his vision of the future; Nathan Sellers, David McCormack, Casper Wistar, and Adam Everly, and their innovations; Samuel Wetherill, John Helmuth, Caleb Cope, and their thriving businesses—to tell the whole story. However, the story needed to be told within the constraints of time and money—the realities of cultural resources studies done in compliance with environmental law. This is not history in a scholarly sense; it is history under contract. The purpose, after all, is to build a new Mall with new buildings and new symbols.

The designers see it as an improvement. The Independence Visitor Center, designed by Kallman, McKinnell, and Wood, will orient visitors to Philadelphia's attractions. The landscape, designed by the Laurie Olin Partnership, will reconnect the Mall with the city's grid. The symbols remain vital. The problem is how to communicate their meaning in the language of the time.

2. THE ARCHEOLOGICAL STORY

2.1 INTRODUCTION

The original Mall was conceived and constructed with little respect for the standing nineteenth-century buildings and virtually no thought to the potential presence, or significance, of archeological remains of eighteenth- and nineteenth-century occupation. Laws requiring cultural resource studies were not put into place until the 1960s and 1970s and, as already mentioned, the Mall was built without doing any archeology. The new Mall, however, is being developed in a legalistic era in which compliance includes very specific kinds of archeological investigations. It is also being developed within the purview of Independence National Historical Park (INDE), whose mandate is to preserve and interpret the resources under its care in the public trust. JMA began the called-for Phase II exploratory investigations in the partially destroyed terraced garden along the western edge of Block 2 on August 18, 1999 (Figure 10), the area where the Independence Visitor Center now stands. This work and the subsequent data recovery are described in detail in Appendix A. The following is a brief overview of what was done.

2.2 EXPLORATORY INVESTIGATIONS

As is required, the first stage of the work involved removing the 1950s landscape to look for remnants of earlier uses of the block. With the construction managers for the Independence Visitor Center standing by, JMA directed Harry Brown, the backhoe operator, to open a trench north of the brick wall that enclosed the terraced garden (Trench 1 on Figure 11) to look for the remains of Commerce Street, the street that Hudson had called South Street in his will. The original Mall landscape made no reference to Commerce Street. It was obliterated, but its location 200 feet north from Market Street fell in the space between the raised terrace garden and the underground parking facility that takes up most of the central portion of the block. Trench 1 might have hit remnants of the street if any were left. Unfortunately the construction of the parking garage apparently exceeded its exact dimensions, and nothing was found in the trench except sandy fill, rocks, and rubble.

On the chance that Market Street plus its broad bounding sidewalk took up some of the 200-foot distance to Commerce Street, JMA opened another trench within the terraced area to the south, but obstructions made digging impossible. The substructure for the 1950s landscape was massive. Deep-seated brick walls and concrete girders created a kind of cradle for the overlying landscape fill (Figure 12). Interspersed concrete vaults, two to three feet high, supported the brick pads on which the park benches had sat, and manholes for drainage were everywhere. To avoid these features, a north-south trench was dug inside (east of) the westernmost concrete girder (Trench 3 on Figure 11). Its purpose was to find Commerce Street if it lay even farther south and to define the bounding walls of the structures that faced Sixth Street. Walls were expected at about four feet below grade, the depth specified on the demolition plans dating to 1950.

On August 20, the first wall was exposed. A second wall was found 15 feet to the south, and a third 12 more feet to the south. That wall appeared to abut the 10-foot-wide alley that separated the properties oriented to Sixth Street from the properties oriented to Market Street. The distances between the walls matched the distances for the buildings shown on insurance maps. The backhoe scooped out the brick rubble that filled the basements to expose their floors and piled the rubble

Figure 10. Backhoe beginning to remove landscape on Block 2.

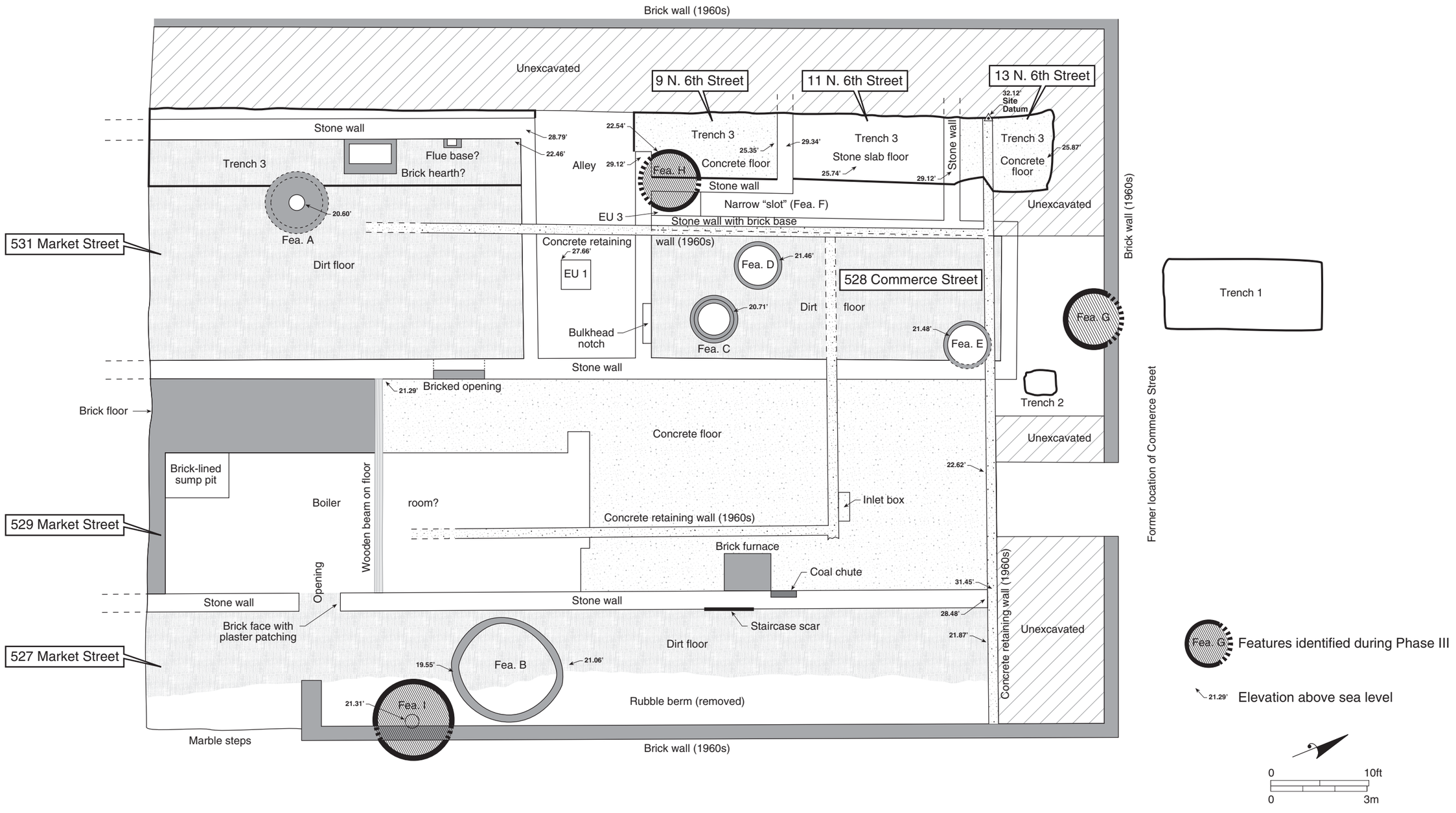

Figure 11. Area of archeological testing, showing location of architectural/archeological features.

Figure 12. Substructure for the 1950s landscape.

to the east of the foundations in the center portion of the site. No archeological features appeared to underlie the Sixth Street building floors. Two of the floors, which were found between six and seven feet below grade, were made of concrete, and one was made of cut stone slabs.

On the other side of the 10-foot-wide alley was the back wall of the building at 531 Market Street. The building's western wall defined the western edge of the site and lay directly beneath one of the concrete girders that supported the Mall landscape. Clearing out the rubble from this 11-foot-deep basement proved to be too large a task for Harry's backhoe, and a new, much larger machine was brought in to finish the job. A dome-capped shaft feature (Feature A) was set into the packed dirt floor of the 531 Market Street basement. The mushroom-shaped dome was made of plastered brick and sat on top of the truncated walls of a dry-laid brick shaft that appeared to be empty. Dense clay created a kind of ring around the edge of the feature, which may originally have been a privy, well, or perhaps even a sump. Historic records describe the corner of Sixth and Market Streets as prone to flooding. According to Watson (as quoted in Toogood 2000:2) "there was a raised footwalk, as a kind of causeway, of two feet elevation, to keep the traveler from the water which settled on the lot on the north side of High Street," and someone drowned there in 1731.

After the basement floor of 531 was exposed, Harry moved the machine to the east to clear the rubble out of the basement of 529 Market Street. The basement floor of this former hardware store building was subdivided by concrete platforms and brick vaults, which may have been some kind of ventilation shafts. Harry constructed a dirt ramp and drove down into the basement to dismantle the platforms and vaults in order to look beneath them for truncated archeological features. All remnants of early features appear to have been destroyed on this lot.

The machine then moved eastward to clear the rubble out of the basement of 527 Market Street. The historic lot exceeded the limits of the proposed footprint of the Independence Visitor Center, limiting the area that could be explored on this property. A large brick shaft—probably a cesspool—was exposed near the southern end of the cleared area. Its perimeter continued beyond (east of) the cleared area (Figure 13). An archeological test unit placed in the southwest quadrant of the feature recovered glass bottles dating to the 1880s, a layer of rubble, and an underlying stratum of nightsoil packed with artifacts dating to the 1830s and 1840s.

The only area within the project bounds that remained unexamined was the area where the rubble from the Sixth Street basements had been dumped (Figure 14). Jed Levin of the National Park Service wisely required that the rubble be removed to look for shaft features in what would have been the backyards of the Sixth Street properties. Three were found, two (Features C and D) in what would have been the rear yard of 9 North Sixth Street, and one (Feature E) in the yard of 11 North Sixth. The yard surfaces had been destroyed by basements of buildings facing Market and Commerce Streets, but the bottoms of the shafts remained. One of the features behind No. 9 was empty, but the other appeared to have been filled in the mid-nineteenth century, at least down to some kind of cover that blocked the lower shaft and could not be removed by hand. The feature (Feature E) behind 11 North Sixth was partially crosscut by a wall that was probably constructed after the 1856 fire. A test unit placed in the southwest quadrant of the feature recovered ceramics dating to the second half of the eighteenth century.

JMA recommended excavating (data recovery) all five features and exploring what appeared to be an intact wooden floor between two later building walls. The various reviews, approvals, and strategic planning took three months. We did not re-enter the field until the beginning of

Figure 13. Feature B, the large cesspool associated with the Everly property at 225 High (later 527 Market) Street.

Figure 14. Backdirt piles in North Sixth Street backyards.

December, just as the temperatures took a major dive in Philadelphia. Harry was unavailable and new machine operators joined the team. They took down the walls between the Market Street properties and moved all the backdirt away from the excavation area.

2.3 EXCAVATING THE FEATURES

The capped shaft feature on the 531 Market Street property and the wood-floored slot were excavated first. To protect the archeologists and comply with OSHA regulations, the shaft was enclosed in a steel box that held the surrounding soil away from the feature walls. As the archeologists dug down, they dismantled the walls of the feature and threw the brick rubble into the trench between the feature and the steel box. The shaft was, as it had originally appeared, empty, its function still a mystery although the lack of organic staining on its interior walls suggested it had not been a privy. The slot between the walls was more interesting. As we cleared out the fill, the rim of yet another brick-lined shaft appeared (Feature F on Figure 11). A brick arch, presumably built to support overlying walls, spanned the feature, making it difficult to test.

To prepare Feature E, the eighteenth-century privy behind 11 North Sixth Street, for excavation, the trackhoe dug a trench around the feature. A wooden shoring box was to be built in the trench outside the brick shaft, but the remaining walls of the feature were less than four feet deep and did not require shoring. While digging the trench another brick-lined shaft (Feature G) filled with eighteenth-century artifacts was exposed in the northern wall of the excavation area (Figure 15). Minutes after JMA finished photographing the feature it fell into the shoring trench. The trackhoe scooped up the artifacts and deposited them where the archeologists could examine them. As much of the eighteenth-century assemblage was recovered as possible.

The stratigraphic excavation of Feature E took about two days. In the upper portion the artifacts were concentrated around the edges. About a foot down they spread more evenly across the entire unit. When privies were cleaned, historically they were scooped out, and it is likely that the clustering around the edge was the result of the scooping process. Among the artifacts recovered were sherds of plain creamware decorated in the Royal pattern—a common eighteenth-century ceramic type—and many wine bottles. Food remains were sparse, but many tiny rodent bones were found. At the bottom of the privy was another layer with earlier artifacts including a delft teabowl and an onion-shaped wine bottle (Figure 16). Below this was a clean, pink sand—the subsoil.

A large shoring box was built around Features C and D, which were excavated next (Figure 17). Feature D, a probable privy, was empty, but Feature C contained a porcelain teacup in an upper layer and nightsoil with artifacts dating to the mid-nineteenth century at the bottom.

The preparation for excavating the largest feature, the cesspool behind 527 Market Street (Feature B on Figure 11), uncovered another brick shaft, Feature I. With its mushroom-shaped cap the feature appeared identical to Feature A at 531 Market Street. A pipe connected the new feature with Feature B, the larger cesspool, suggesting that the smaller shaft served as an overflow for the larger one. Feature B was packed with artifacts embedded in at least two distinct layers of nightsoil (Figure 18). Since only half of the feature was to be excavated, a single archeologist—Alex Bartlett—did all the digging while the rest of us manned the screens. Buckets full of nightsoil were dumped into the screens and sprayed with water (Figure 19). We then bagged the almost-whole ceramic (Figure 20) and glass vessels, animal bones, and other large fragments and

Figure 15. Feature G before it collapsed.

Figure 16. Artifacts at the bottom of Feature E.

Figure 17. Shoring box around Features C and D.

Figure 18. Feature B packed with artifacts.

Figure 19. Feature B artifacts in the screen.

Figure 20. Alex and Katherine with a teapot from Feature B.

put the rest of the soil in large plastic bags to be returned to the laboratory for screening under more controlled conditions. Floral preservation was excellent, and watermelon seeds and cherry pits were visible in every bucketful as well as the smaller seeds that are only identifiable under a microscope. Seeds were so plentiful that they covered the water-filled sumps below the screens. Samples of unscreened soil were taken for archeobotanical and parasitological studies.

The only remaining feature was the shaft beneath the arch. Because of its inaccessibility the trackhoe dismantled the feature under the supervision of Tod Benedict, the archeological field director. Bottles dating to the 1880s through the turn of the twentieth century were found embedded in brick rubble, and a nightsoil deposit with older material was reached at a depth of eight and one-half feet. Because the depth exceeded the expected construction depth in that location, the deposit was marked and left in place.

On December 22, with a dusting of snow on the backdirt piles (Figure 21), JMA completed the excavation (Figure 22). The artifacts were transported to JMA's West Chester laboratory for processing and analysis.

2.4 FINDING MEANING

While the placement of archeological features and even the way they are constructed tells us something about the past—how space was organized, the state of technology, etc.—much more information usually comes from the artifacts on an urban site. Nevertheless, the artifacts do not speak for themselves. The next two chapters use the artifacts in different ways to think about the people whose possessions they once were and what those peoples' lives were like. In Chapter Three, artifacts and historical information are woven into vignettes of everyday life. Such vignettes are neither pure fact nor pure fiction. They are possible scenarios based on the limited available information placed in historical context. The contexts come from the site-specific historical research and also from secondary sources that describe and analyze the period. Just as the historian organizes his or her data into coherent narratives that represent one way to look at the past, the archeologist creates vignettes that start with the archeological data and only go as far as the artifacts go. The process of constructing narratives helps archeologists understand what they do not know as well as what they do know (Yamin 1998:85). Most important of all, the narratives make archeological data accessible to non-archeologists, be they professional historians, colleagues in other fields, or the lay public.

A more conventional way to treat archeological data is quantitatively, which is the approach taken in Chapter Four. By looking at patterns and proportions, the chapter attempts to elucidate peoples' preferences, what they chose to spend their money on, how they used possessions in the construction of personal identity including class and ethnic group membership, and how all these choices compare to other groups in Philadelphia and elsewhere. While the quantitative approach is the more traditional, it is not necessarily as satisfying to the nonprofessional or even to historians who have gained very little from archeological reports. The purpose of presenting results in different ways is to do justice to the site, to get as much information as possible out of the data, and communicate the results to a wide audience. JMA has also developed an exhibit of images and artifacts, which will eventually be mounted in the Independence Visitor Center.

Figure 21. Snow-covered backdirt piles, December 22, 1999.

Figure 22. JMA crew, December 22, 1999.

3. PERSONALLY SPEAKING

3.1 INTRODUCTION

What is perhaps the most important contribution urban archeology makes to the knowledge of the past is the inclusion of people and places that might otherwise remain unknown. The people whose things we recovered from Block 2 were not well known. They weren't rich or powerful enough to be mentioned in history books and not unusual enough to be included in local folklore. They probably shared many of the same tastes with other members of their class, but they also surely carved out individual identities for themselves. What the following vignettes try to do is reveal all that is possible to reveal about these individuals in the hopes that they suggest the complexity of their times.

3.2 INSIDE THE WASHINGTON AND ADAMS ADMINISTRATIONS

The archeological assemblage from Feature E, the privy at the back of the lot at 11 North Sixth Street (see Figure 11), included a good number of liquor bottles (Figure 23), and we first thought a tavern might have been on the property. However, the assemblage turned out to date to the 1790s, the period when the federal government was seated in Philadelphia, and a William Simmons lived at No. 9 (later No. 11) North Sixth. Simmons was the principal clerk in the auditor's office of the Department of Treasury during George Washington's administration and the chief accountant in the War Department during John Adams's administration. It is not clear whether his wife lived with him on North Sixth Street or not, but his household occasionally included members of Congress as boarders. It seemed, at first, as if Simmons was one of those invisible civil servants who would not be found in historical records. However, Carl Prince's book on the civil service during the Federalist period (Prince 1977) led us to the papers of Alexander Hamilton, which include many letters to and from Simmons. The following vignette combines information from the letters—and, in some instances, the actual words—with the recovered archeological artifacts to present a picture of who Simmons was and what his life might have been like.

3.3 THE ACCOUNTANT AND HIS DISCONTENTS

It is not hard to imagine a disgruntled William Simmons trudging up Sixth Street muttering under his breath: "Hyde stole the money, that's what he did, stole the money and now the soldiers are out their pay. Why doesn't McHenry see it, why doesn't he care?" McHenry, that is, James McHenry, the Secretary of War in John Adams's administration, was Simmons's boss, and they didn't see eye to eye. The issue that was on Simmons's mind that chilly April day in 1799 was one of many. In this case, Mr. Hyde, the paymaster to the 1st U.S. Regiment, had received a very large sum of money, part of which was intended for the soldiers, but they had not gotten their pay and Simmons was upset about it (Syrett 1976a:45n). "The officers," thought Simmons, "took advantage of their rank and McHenry turned a blind eye. It was not just, and besides that, it was not legal." He would write a letter, but not tonight. Tonight he would sit by the fire with a comforting glass of gin and try to forget.

Little did he know that the worst was yet to come. In October of '99, the president, no less, wanted Simmons to pay Hugh McAllister, a citizen, a reward for capturing a deserter (Syrett

Figure 23. Liquor bottles from Simmons privy.

1976a:486n). Simmons refused, noting "prevailing custom in effecting settlements here when deserters have been pursued or apprehended, when detachments have been sent in pursuit of deserters…their reasonable expenses and not the Premium has been allowed." McHenry considered Simmons's conduct in this matter insubordinate and appealed to the president: … "It will be permitted to ask whether in the opinion of the president, the answers of the Accountant [i.e., Simmons] to an application on my part, plain, explicit, and definite, and to questions necessary to be answered for the government of the military officers are in a manner respectful…and also whether declining, as the Accountant has done…the claim of the citizen…is not an instance of insubordination, incompatible with the due administration of the Department, with the public interest, and those of Individuals in any manner concerned in business connected with military concerns." We do not know how Adams answered, but McHenry was fired before the federal government moved to Washington and Simmons survived, serving in the department until 1814. However, we are getting ahead of our story.

On April 17 of 1799, as the sun was going down and Simmons approached his doorstep at No. 9 North Sixth Street, he had only one thing on his mind—drink, and maybe a little dinner. He wondered what the cook had in store for him. Would there be an almond pudding, his favorite, before the roast chicken or would it be the usual corn? Maybe it would not be chicken at all; perhaps the cook had gotten a piece of beef or pork at the market. That would go well with the Madeira he had tucked in the cellar. Ah, yes, a warm glassful and a full stomach would take his mind off Mr. Hyde and Mr. McHenry. He quickened his step.

Last year at this time Simmons would have looked forward to the company of Hezekiah Hosmer, Representative from New York, and Senator Samuel Livingston of New Hampshire. Both had boarded with him at 9 North Sixth and had proved amiable drinking companions even though their allegiance to Federalism was a good bit more solid than his own. "The trouble with the damn Federalists," mused Simmons, "is they are more interested in advancing the rights of their own kind than serving the democratic ideals described so eloquently by Mr. Jefferson. And to think that I owe my present position in the War Department to Alexander Hamilton, the biggest Federalist of them all." He felt guilty about that debt—well, just a little. After all, he had worked hard at Treasury and given up any number of more lucrative opportunities. Even Hamilton recognized that. Simmons could not help feeling proud of the letter Hamilton had written to George Washington on his behalf:

> I have heretofore had occasion to mention to you the merits of Mr. Simmons the writer of the enclosed letter. It is but justice, that I bear in his favour the testimony he deserves. I can with truth give my opinion that he is well qualified for the office in question; insomuch that I believe it will be very difficult to find one who has better pretensions. From long service in the Department he understands thoroughly the course of business in it…His intelligence cooperates with his experience…and one may not speak too strongly of his assiduity and integrity.
>
> So necessary was he in the department from his knowledge of the course of the old business that it cost me repeated pains to prevent his leaving it; and as he had a prospect of doing better in private business than upon a Clerk's salary, one of the means employed was to give him the expectation of a recommendation at some future time to some more adequate station… (Syrett 1973:304).

He knew the letter by heart; it had been a great tribute for a clerk, but it had not made him into one of them. Of course he lacked the necessary social status, but he did not want it either. What Simmons liked was a plain dinner on plain dishes with a little plain talk. Yes, it was a shame that Hosmer and Livermore were not with him anymore. Those were good evenings around the fire, drinking and smoking until the wee hours (Figure 24).

Except for the cockfights Simmons occasionally staged in his own backyard, his major interest was work. He loved the numbers and he loved the law. Trained as an attorney, he knew the ins and outs of what was legal, and he knew them considerably better than his boss. When McHenry asked him to grant an allowance for General Macpherson's "table on a late expedition," Simmons said absolutely no. Nor would he grant special moneys to the Surgeon of a Regiment for attendance on the Indians at the Treaty of Greenville or the expenses incurred by an Indian agent in the execution of his trusts in the Indian nation. It was Simmons's position that "no allowance by my authority or any authority short of Congress can be made by an officer beyond the emoluments fixed to his office by law" (Syrett 1976b:314). One suspects that Simmons's Republican tendencies may have contributed to his adamance. The already privileged were not to be granted privileges. McHenry writhed at the missed opportunities to please his superiors and in the end McHenry lost. Nevertheless, Simmons's independence finally caught up with him. In 1814, after almost 20 years in the War Department, James Madison fired him "for alleged bitter hostility to the government and rudeness to his superiors" (Pitch 1998:68). The unbending Mr. Simmons had finally done himself in.

Simmons's years on North Sixth Street may have been his happiest. In Washington there were the obligations of family and many deaths: his wife in 1808, his eldest daughter in 1814, and his mother in 1818. However, if the will recorded for "Wm Simmons, Clerk in the General Land Office" in 1845 is our Mr. Simmons, he lived deep into his 70s. The will leaves his entire estate to his daughter Margaret, excluding his two sons, James Madison Simmons and Charles Simmons. The orneriness of it seems consistent with the man.

3.4 HISTORICAL SOURCES AND THE ARCHEOLOGICAL ASSEMBLAGE

The archeological assemblage associated with William Simmons's Philadelphia household included 4 case-gin bottles, 20 wine bottles, 4 ale bottles, and 12 miscellaneous liquor bottles. There were also two carafes, three decanters, and a variety of tumblers (7), flips (4), and one stemmed wine glass. For tableware there were only two plain creamware dinner plates, three saucer dishes, and three soup plates, but there were five coggled redware pieplates, a porringer, a pudding pan, and a tulip bowl, also made of redware and all well worn (Figure 25). The only fancy serving pieces in the assemblage were a fragment of a creamware fruit basket and a wine stand. The assemblage included many white ball-clay pipestems and several pipebowls. The 94 straight pins in the assemblage were probably used to secure documents Simmons brought home from the office. He appears to have been an eighteenth-century version of a workaholic. Straight pins have elsewhere been identified with documents (personal communication, Wade Catts, May 2005). They served as a substitute for staples or paper clips before such things were available. For an in-depth discussion of the assemblage see Appendix A, Section 3.

Simmons's unwillingness to grant favors to the elite, as recorded in the published correspondence included in Alexander Hamilton's papers, is the basis for speculating that he had Republican tendencies. The tensions between the Federalists and Republicans are well documented in this

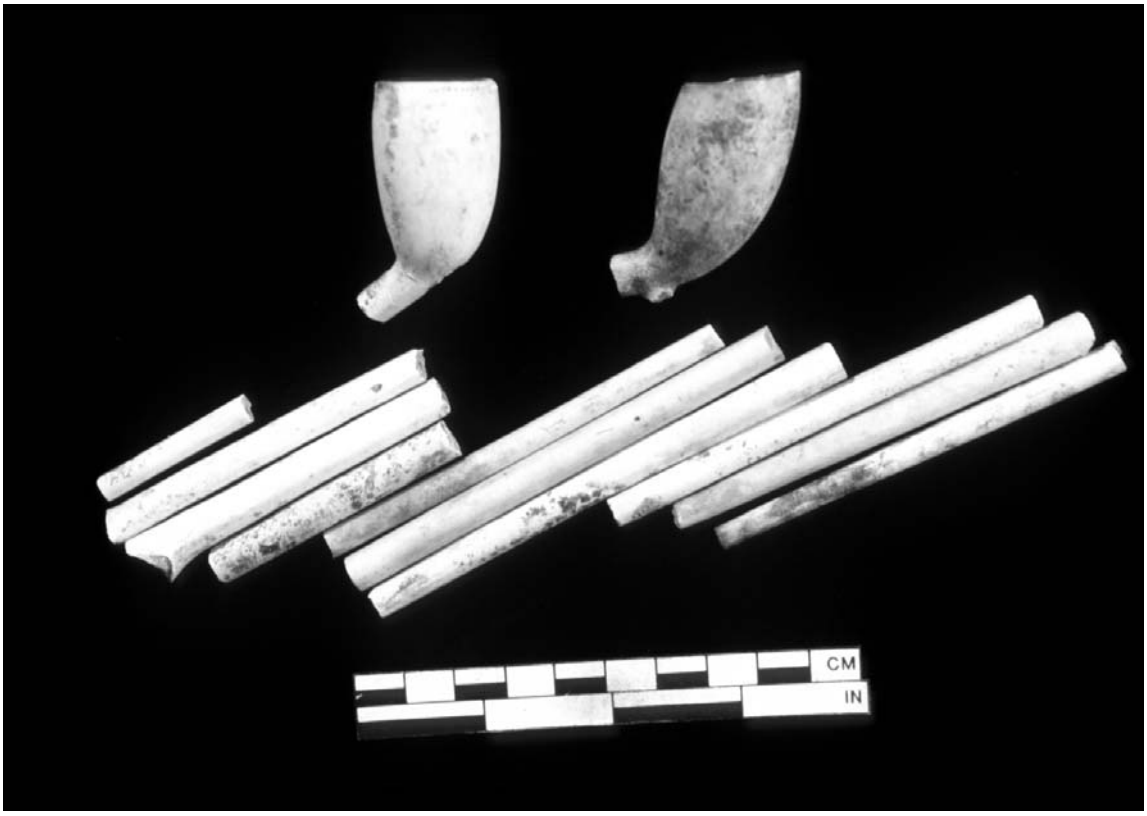

Figure 24. Clay pipes from Simmons privy.

Figure 25. Well-worn redwares from Simmons assemblage.

period (e.g., Miller 1982; Elkins and McKitrick 1993; Rosswurm 1994), and through Simmons we may imagine how they might have been experienced on a personal level. Simmons's drinking was probably not extraordinary. According to Paul Faler (1974:367-394), "alcohol was ubiquitous in the eighteenth and early nineteenth centuries…drinking was indulged in by all ministers, doctors, and teachers as well as by clerks, artisans, and workingmen, by young and old, by male and female." It was not even inappropriate to drink at work, which Simmons may well have done, if indeed the flask found was something he habitually had on his person.

That Simmons's ceramics were not particularly fancy is also not surprising in light of the documentary evidence for his salary in comparison to the salaries of others in government employ. When he was Principal Clerk in the office of the Auditor of the Treasury of the United States in 1793, he made $800 while the auditor, Richard Harrison, made $1900. That same year the treasurer, Samuel Meredith, and the comptroller, Oliver Wolcott, both made $2400 (Syrett 1967:465).

3.5 UPWARD MOBILITY ON MARKET STREET

The large feature (Feature B) behind 225 (later 527) Market Street was unusual for a number of reasons. With a diameter of almost 10 feet, it was dramatically larger than most other shaft features that have been found in Philadelphia (Yamin and Benedict 2001:Table 2), and it was also located closer to the back of the house than usual. The upper portions of the feature had been destroyed by the basement of a post-1856 building on the lot, which made it impossible to tell whether pipes had led into or out of the feature as would have been the case if it were a cesspool rather than a privy. Whichever, it served as a repository for human waste, as well as discarded domestic trash for over 50 years. The stratified deposits could be connected to several well-to-do gentlemen and their families at the end of the eighteenth and in the early years of the nineteenth centuries and to two generations of the Everly family beginning in 1823. The following vignette uses the material remains left by the Everlys and the small amount of information that is available in the documentary record to paint a picture of what life was like for the upwardly mobile commercial class in mid-nineteenth-century Philadelphia.

3.6 GROWING UP IN THE BUSINESS

When she was little they lived on High (now Market) Street, above her father's plain and fancy comb manufactory. Well it was a manufactory then, now it's a shop and an elegant one at that. Ann, still Everly, often thought of those days. She was born in the house on High Street, the house that had belonged to rich men before her father, Adam Everly, had gotten the money together to buy it himself. That was 1823, just five years before she was born, the last of the second batch of children. Her sisters, Harriet and Mary, were two and four years older, respectively, but their other sisters—there were four more girls—and a brother were born when the family still lived on Chestnut Street. She guessed her parents had all those children for the sake of the business. Everyone worked, even the little ones. She remembered setting her favorite doll (Figure 26) on a chair in the shop while she helped Ann Eliza, her oldest sister, fold handkerchiefs. The Everlys did not have just combs. There were brushes and looking glasses, perfume and toys, all the same things the other German storekeepers sold. However, not everyone manufactured the combs they sold. That was a serious investment and a lot of work.

Figure 26. Recovered doll parts from Queen Anne-type doll, ca. 1810-1819. Courtesy of the Chester County Historical Society.

Ann remembered how the machines looked when she was a child. There was a comb-cutting machine that made two combs from one piece of horn, and a circular saw for cutting the teeth. Then there was the magical screw press. It consisted of two iron boxes about a foot long by six inches deep and four inches wide that got filled with coal. Then the boxes were placed side by side in a frame, with a space between them for the horn that needed to be clarified. The boxes were heated and screwed together, which pressed the horn tight and made it clear—just like magic (Doyle 1925:54). That was the fun part. The smell was something else—rotting cattle horns and huge tortoiseshells lying in the cellar waiting to be made into something a lady would want to wear. It seemed almost inconceivable that anyone would wear something that smelled that bad. However, they did, and because they did her father made a good living for the family and they lived well on High Street.

There were elegant dinners in the upstairs dining room (the shop and manufactory were downstairs), served on the best china—blue-printed dishes with castles on them (Figure 27). The grown-ups ate all sorts of queer things: quail and pheasant and rabbit. Ann preferred their everyday meals—chicken was good, and meat pie was alright. She even preferred the dishes they were eaten on. It didn't matter if she dropped an everyday plate since there were piles just like it in the pantry—white with blue around the edges—and serving dishes in every shape and size. (Figure 28). It seemed funny that dishes could be so important, that one set of visitors—her mother's friends, for instance—were served tea in the fancy cups with gold rims while the family drank from the ones with pictures of dogs on them (Figure 28).

It all seemed perfect until the scarlet fever came. William, the oldest and only living son in the family, was 16 when they made the move to Market Street, and within 10 years he was married and a partner in the business. William and his wife, Anna Maria, had two little girls, Mary Denckla, born in 1833, and Anna Louisa, born two years later. Ann loved her nieces, who were not so much younger than she, and they played for hours together, pretending to bake cakes for their dolls and setting the table in the nursery with the miniature tea things that were their prized possessions (Figure 29). She threw the tea sets into the trash when the little girls died of scarlet fever in 1839, one on one day and the other on the next. It was too sad to want to play ever again. She even would have thrown her doll away if Ann Eliza had not stopped her. It had been Ann Eliza's doll, too, and she was not ready to part with the beloved remnant of her childhood. In 1840, just a year after Mary Denkla's and Anna Louisa's deaths, Adam Everly retired, leaving the business to William. Adam had moved his family to a house at 354 Mulberry the year before; William moved with his wife to 398 Mulberry in 1840. The business remained at 225 Market Street.

William, Ann noticed, was just as smart as their father, but not quite as interested in manufacturing. With Lippincott's at the corner of Fourth and Market Streets (Figure 30) and Tower Hall just across the street (Figure 31), William wanted to take advantage of the people who came to shop for ready-made clothing. In addition to combs, he chose things that those shops did not have—especially perfume, toothbrushes, and lovely fans made out of ivory. Ann loved to watch the fashionably clad ladies linger at the counter as her older sisters helped them choose one fan over another and dab their wrists with the sweet-smelling scents (Figure 32). Little did she realize that she would one day resent having to work behind that very same counter. Adam Everly may have retired, but he made sure that all members of the family gave William their full support. In 1850, the still-unmarried Mary L., Harriet, Catherine, Louisa, and Ann Everly were living at home and working in the shop.

Figure 27. Chinese Export porcelain dishes probably used on special occasions by the Everly family.

Figure 28. Edge-decorated set including serving dishes probably used everyday by the Everly family.

Figure 29. Little girls' miniature tea sets.

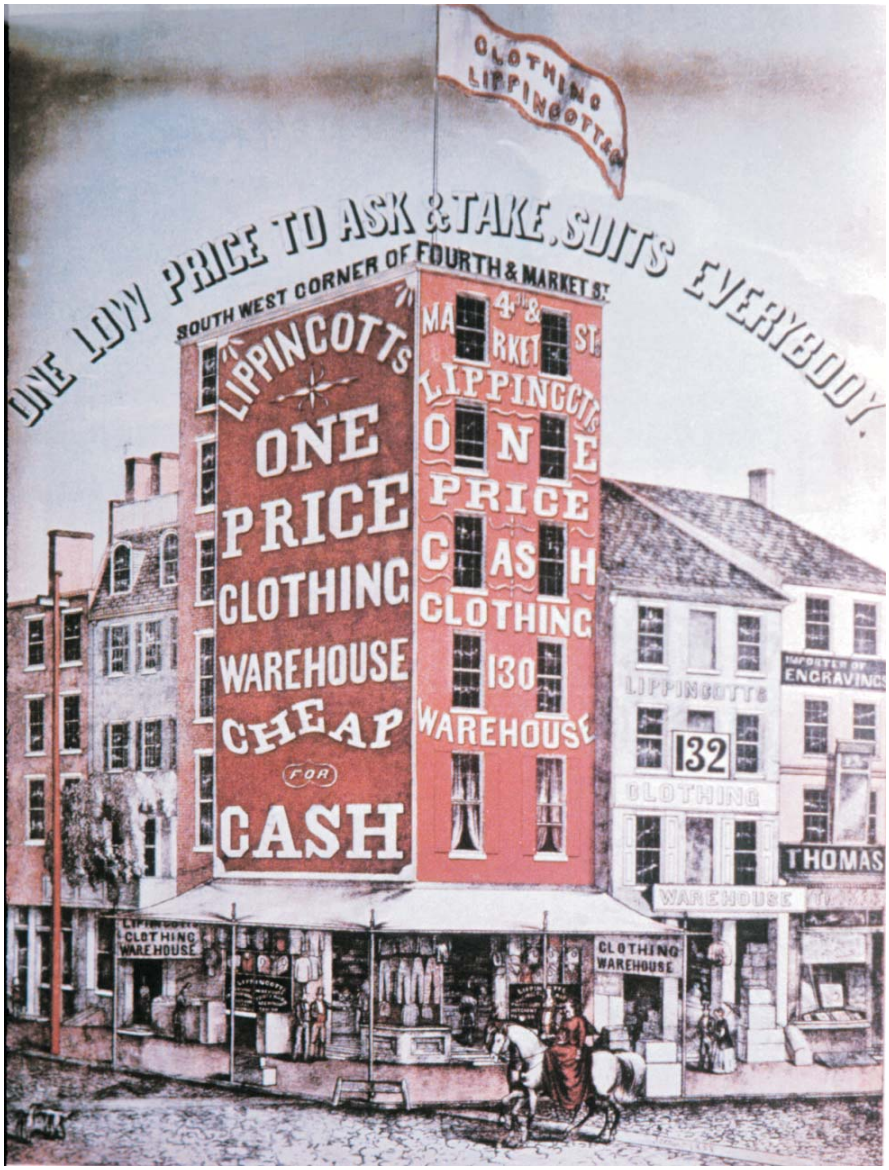

Figure 30. Lippencott's clothing warehouse as it appeared in 1853. From Wolf 1975:190.

Figure 31. Tower Hall as it appeared in 1898. From Looney 1976:78.

Figure 32. Cologne bottles, mid-nineteenth century. The lack of wear on the bases of the bottles suggests that they came from the stock of Everly's Fancy Goods store.

Once in the shop Ann realized that, more than anything else, William wanted to be known as a merchant rather than a manufacturer. He wanted to belong to the set of progressive merchants that included Lippincott and Colonel Bennett of Tower Hall. Unfortunately the great fire of 1856 stopped William in his tracks. The comb manufactory and shop at 225 Market Street were destroyed, and as if that were not enough, William's wife, Anna Maria, died of cancer the next year. Too depressed and drained to rebuild the business from scratch, William gave up, leaving the block between Fifth and Sixth Streets to the already well-established Colonel Bennett and the next generation. Not many years later John Wanamaker opened the department store that revolutionized merchandizing in Philadelphia on the southeast corner of Sixth and Market Streets, cattycorner from what was last known as W.A. Everly and Company, Fancy Goods. For William the closing of the business was a sad end; for Ann and her other sisters it was much-yearned-for liberation. They turned their minds to other matters.

3.7 HISTORICAL SOURCES AND THE ARTIFACT ASSEMBLAGE

No personal accounts of any members of the Everly family were found in the records. We cannot even be absolutely sure that Adam Everly manufactured combs at 225 Market Street, but it is more than likely. He listed himself as a "comb manufacturer" at 225 High Street in the 1825 Philadelphia Directory (Wilson 1825). In DeSilver's 1830, 1833, 1835, and 1836 directories he calls himself a "comb maker" (DeSilver 1830, 1833, 1835, 1836). Adam is listed in McElroy's 1839 directory as a "gentleman" and W.A. as a "merchant" at 225 High Street. William also calls himself a "merchant" in McElroy's 1844 and 1847 directories, but in 1848 and 1850 he lists himself twice, once as a "merchant" and once as "Everly, W.A. and Co., fancy goods." In 1855, '57, and '58 he is again a "merchant" (McElroy). It is very possible that William had given up the manufacturing part of the business.

That Adam Everly began manufacturing combs in the 1820s coincides with technological improvements in the industry that made the manufacture of combs more profitable. Enoch Noyes of West Newbury, Massachusetts, is credited with founding the industry and West Newbury remained a center of comb manufacture for 100 years (Doyle 1925:15). A nephew, David Emery Noyes, apprenticed in the business and then became a journeyman during which time he went to Philadelphia, where he built the first comb-cutting machine (Doyle 1925:30). According to Doyle, the invention, which was probably made in about 1820, revolutionized the comb business, since it made two combs from one piece of horn and gave each a better form (Doyle 1925:30). In the early 1830s Noyes made several other inventions including a machine for cutting, instead of sawing, the teeth. The Noyes connection to Philadelphia is interesting and may have stimulated the industry locally. Twelve comb dealers were listed in O'Brien's 1844 Wholesale Business Directory.

The Everly family is documented in census and church records, and several invoices for toothbrushes with William Everly's signature were found in the Winterthur Library. Otherwise the documents are silent. The Library Company's collection was searched for an ad comparable to the one for Lippencott's (included here as Figure 30), but none was found. However, Adam Everly is mentioned in what is deemed "a peculiar publication" by the authors of a book about Philadelphia published in 1941 (Collins and Jordan 1941). The publication in question was a paper entitled, "The Memoirs and Autobiography of Wealthy Citizens" by a "merchant of Philadelphia," written in 1846. It mentions that there were more than 1100 individual fortunes of $50,000 or more in the city at the time, but only 94 with $200,000 or more. Adam Everly, identified as a comb and fancy goods merchant, fell into the group that had $300,000 (Collins and

Jordan 1941:157). Having started as a hairdresser on Chestnut Street in the early 1800 Adam had clearly risen in the ranks by the time of his retirement in 1840.

The Everly ceramic assemblage includes a number of items that indicate a concern with status. One is a monogrammed set of Chinese porcelain teaware that would have been special ordered. The monogram reads, "AME," probably for Adam and Mary Everly. They owned many teasets as well as several sets of tableware, some obviously for everyday use and some for company. Among the company dishes were a set of syllabub cups that would have been used for a sweet drink consisting of wine, sugar, spices, and whipped cream. The children's teasets are also indicative of a concern with proper behavior. Middle-class ideas about raising children at the time emphasized gentility; little girls were supposed to learn the skills of a proper lady by playing games that prepared them for their adult roles. Dolls were also considered appropriate for girls for obvious reasons. Boys, on the other hand, were supposed to play more active games with less delicate toys. Not surprisingly, very few toys associated with boys' play were recovered.

The artifacts also provide information on the kinds of goods that were sold in the Everly store. Twenty-three cologne bottles, none showing wear on the bottom from use, were recovered. Seven of the bottles had the initials "PD" on them, a mark that is associated with a German mold maker who lived around the corner from the Everlys on Fifth Street (see Appendix A, Section 3.3 for a discussion of these bottles). It has been suggested that the many ceramic pitchers in the assemblage might have been for water or some kind of fruit drink served to customers in the store. Tortoiseshell comb fragments and fans may have been thrown out by mistake or not met high enough standards to be sold. While we cannot be sure if the redware roach trap found was used in the store or the kitchen, a good businessman would surely have wanted to prevent roaches from appearing in his establishment.

3.8 WHICH STORIES TO TELL

Not all archeological data can be woven into meaningful stories. Often there is neither enough documentary information nor a large enough assemblage from which to construct a story. The two features discussed here were the only ones on this site that were amenable to this method of analysis. The problem of having enough information is also relevant to other methods. The following chapter considers the data quantitatively. Small sample size is often hidden in statistics, and comparisons that do not use large enough samples are not meaningful. Only some of the research questions originally posed are quantitatively addressed for that reason. Questions for which there were not adequate data await larger assemblages from other sites.

4. QUANTITATIVELY SPEAKING

4.1 INTRODUCTION

Although we generally propose a series of research questions before we begin a data recovery project, the results of the excavation—what actually comes out of the ground—determine in great degree which of the research questions can be productively addressed. Some of the research questions originally posed have already been indirectly discussed in the narratives about the Simmons and Everly households. For instance, the class implications of ceramic usage and toys were considered in relation to the upwardly mobile Everlys, and items associated with the Everly comb and fancy-goods business were also discussed.

This chapter looks at specific research questions having to do with foodways, fashion, and health. Quantitative methods are used to make comparisons between one time and another and between Philadelphia assemblages and assemblages from elsewhere. Additional quantitative treatment of the artifact assemblages and features may be found in Appendices A, C, D, and E.

4.2 FOODWAYS

A presumption runs through the historical and archeological literature that wild foods became less important and prevalent as society became more sophisticated. It is assumed that city folk, in particular, were mainly consuming meat from domesticated animals by the turn of the nineteenth century, a trend that had begun by the middle of the eighteenth (personal communication, Claudia Milne, 2001). This is the kind of commonsense presumption that can be tested with archeological data. One of the surprising results of the analysis of food remains from Block 2 is the evidence for the continuing use of wild foods into the middle of the nineteenth century. Many of the wild foods were fish (13 different kinds were identified), but rabbit, pheasant, quail, guinea fowl, grouse, duck, goose, pigeon, snipe/woodcock, deer, lobster, and turtle were also identified. When these remains are compared with other sites in Philadelphia and elsewhere, it is evident that Philadelphians—at least those of means—desired and were able to acquire wild foods as a regular part of their diet. Table 1 compares the use of wild foods in Philadelphia with a group of urban sites in the Chesapeake Bay area and with another group from Massachusetts for two periods, 1740-1800 and 1800-1850. These comparative data were taken from a study by Charles Cheek (1998) published in *Historical Archaeology* and from Susan Trevarthen Andrews's study (1999) of the faunal remains from the Merchants' Exchange and Chiller Plant sites in Philadelphia.

Table 1. Percentages of Wild Foods Found on Chesapeake Bay and Massachusetts Urban Sites Compared with Block 2 and the Chiller Plant Site in Philadelphia: Early Period

Early Period	Massachusetts*		Chesapeake*		Block 2**		Chiller Plant***	
(1740-1800)	#	%	#	%	#	%	#	%
SPNO****	15.3	-----	20.7	-----	13.3	62.4	28.0	66.6
MNI	12.7	33.3	19.3	27.6	25.0	44.3	73.0	44.2
NISP	60.6	12.9	121.0	10.6	309.0	16.4	967.0	20.9
MTWGT	62.1	3.7	764.9	6.1	81.0	6.2	327.8	4.6
BIOM	1.1	1.2	3.1	2.5	5.9	5.7	8.3	1.7

*Data from Cheek 1998, Table 6, p. 161.
** Feature B, AS I and AS II; Feature E, AS II.
*** Data from Andrews 1999, Tables 18 and 20
****The abbreviations reflect the different ways that faunal analysts quantify their data: SPNO stands for number of species; MNI is the minimum number of individuals; NISP is the number of identified specimens per taxon; MTWGT is meat weight; and BIOM is a percentage of meat weight based on the weight of the archeological bone.

The table suggests that in the early period (1740-1800) the proportion of wild species (SPNO) in the assemblages from Philadelphia (Block 2 and Chiller Plant)—62.4 and 66.0 percent respectively—was very high. Although percentages were not calculated for the Massachusetts and Chesapeake urban assemblages, the number of wild species (15.3 and 20.7 respectively) is comparable to the Philadelphia samples. The minimum number of individuals (MNI) is considerably higher in Philadelphia, especially at the Chiller Plant site, where 33 individual fish and 24 individual birds were identified in addition to 6 reptiles and 10 mammals. The number of individual specimens (NISP), meat weights (MTWGT), and biomass (BIOM) are also generally higher for the Philadelphia assemblages (see Appendix C for a discussion of these measures).

The proportion of wild species is notably lower in the later sample from the Massachusetts sites (none was recorded for the Chesapeake), but that is not true for Philadelphia, especially for the assemblages from Block 2 (Table 2).

Table 2. Percentages of Wild Foods Found on Massachusetts Urban Sites Compared with Block 2 and Other Philadelphia Sites: Later Period

Later Period	Massachusetts*		Block 2**		Merchants' Exchange***	
(1800-1850)	#	%	#	%	#	%
SPNO	3.5	3.5	17.5	72.5	2.0	22.2
MNI	6.5	12.1	31	47.4	4.0	19.0
NISP	8.5	1.8	427	22.1	16.0	4.9
MTWGT	10.9	0.6	166.8	9.1	7.6	0.9
BIOM	0.1	0.2	5.9	7.7	.29	0.5

*Data from Cheek 1998, Table 6, p. 161.
** Feature B, AS III and AS V
***Andrews 1999, Table 17

The particularly large number of wild species in the Block 2 assemblages is mainly due to the number of fish identified (13 different species). No fish were recovered from Feature 1 at the Merchants' Exchange. The MNI for wild species in the Philadelphia assemblages is also substantially higher than for wild species in the Massachusetts samples as are the NISP, MTWGT, and BIOM. The question is why?

The proximity of the market to the Philadelphia sites may well have been a factor, particularly in the case of the Block 2 assemblages. The market house had been extended up to Fourth Street by 1786 and to Eighth by 1816. Market stalls would thus have been right in front of the house at 225 High Street, where several well-to-do merchant families lived at the end of the eighteenth century and two generations of the Everly family carried on their business from 1823 to the fire of 1856.

It would appear that these families took full advantage of what was available, a good proportion of it coming from the waters and woods around Philadelphia.

Most published descriptions of the market do not describe the variety seen in the assemblages. For instance, Lippencott (1917:53) quotes Johann David Schoepf's description of the market from his *Travels in the Confederation 1783-4.* He saw "fine wheat bread, good meats and fowl, cider, beer and rum." Ann Warder's diary (1786), also quoted by Lippencott (1917:53), describes table dishes consisting of "roast turkey, a tongue laid in mashed potatoes, whipped silly bubs, oyster-pie, boiled leg of pork, bread pudding and tarts…the greatest luxury is the abundance of fruit. Pineapples, strawberries, apples, cherries, and peas abound." With the exception of the oysters and fruit there is no mention of the wild meats and fish we know from the archeological remains must have been in the markets. However, Billy G. Smith (1990) quotes a different passage from Schoepf, which does mention indigenous foods: "Europeans find in season several dishes new to them, such as raccoons, opossums, fish-otters, bear-bacon, and bear's foot, etc. as well as many indigenous birds and fishes" (Smith 1990:35). In addition, from Janson's *Stranger in America,* apparently another traveler's journal, he notes, "Negroes and sometimes white people carried in squirrels, rabbits, and raccoons" (Smith 1990:35).

Philadelphia's eighteenth-century market was apparently celebrated as "one of the finest in the universe…with variety and abundance in the articles, order in the distribution, good faith and tranquility in the trader…no cries, the carts and horses are peaceably arranged" (quoted from J.P. Brissot de Warville 1788). Smith's narrative in Chapter One of "*The Lower Sort"* paints a picture of a bevy of activity where "more than 250 vendors sold an extraordinary store of provisions" (Smith 1995:34) from three brick halls, open on the side but covered on top, each a block long, the easternmost being the Jersey market, which was the "choicest spot for sellers" (Smith 1995:32). The year was 1799. A description written in 1811 by James Mease is reprinted in *The Life in Early Philadelphia Documents for the Revolutionary and Early National Periods*, edited by Billy G. Smith (1995:24). Mease wrote, "The quality of provisions, animal and vegetable, brought to market during the year, is immense, and much beyond the wants of the inhabitants…It may be safely asserted, that in no city in the world, is more animal food consumed, in proportion to its size, than in Philadelphia." Mease also claimed the hill on Market Street was allotted to fish: "This traffic, except in the case of those who bring fish preserved in ice, in wagons from the sea, is carried on chiefly by women, many of whose husbands are employed in catching the fish" (Smith 1990:23). It is not clear what hill he was referring to since elsewhere the fish market is described at the water's edge, between Water Street and the Delaware River docks (Lowber 1812:23; Lippincott 1917:86).

The value of the archeological data is that it provides specific information on what all this plenty consisted of and who was consuming it. Table 3 lists the many indigenous species that were present in the Block 2 features. The evidence does not suggest that the consumption of indigenous foods, including fish, which was considerably cheaper than meat, was confined to the "lower sort" or that indigenous foods were any less important in the middle of the nineteenth century than they had been in the late eighteenth century. They were, of course, combined with beef, lamb, and pork, which are discussed in Appendix C.

Table 3. Indigenous Species Present in the Block 2 Features, Pre-1800 and Post-1800*

	Pre-1800	Post-1800
Deer		x
Rabbit	x	x
Pheasant	x	x
Quail	x	x
Guinea Fowl		x
Grouse		x
Duck	x	x
Sm. Duck		x
Goose	x	x
Pigeon	x	x
Snipe/Woodcock	x	x
Atlantic Cod		x
Indet. Herring		x
Herring		x
Shad	x	x
Striped Bass	x	x
Black Sea Bass	x	x
White Perch		x
Indet. Bass		x
Mackerel	x	x
Large Flat Fish		x
Salmon		x
Bluefish		x
Tautog	x	x
Porgy		x
Sheepshead		x
Lobster		x
Turtle	x	x

*See Appendix C, Table C-13 for a complete presence and absence list of the fauna, including domesticates, recovered from the Block 2 features.

Some scholars have also suggested that foodways in the New World reflected, at least to some extent, the foodways of the places from which the colonists came (Cheek 1998, discussing the work of David Hackett Fisher). According to David Hacket Fisher's book, *The Albion Seed*, each group of English colonists brought somewhat different foodways, which formed the basis of regional cuisines. The middle colonists, who came fundamentally from the North, where boiling was customary, would, following this argument, have favored a cuisine that depended heavily on boiling. However, the ceramic evidence from Block 2 suggests that Philadelphians, like Massachusetts Bay colonists, were partial to baking at least in the eighteenth century.

Several studies have looked at the distribution of pans, pudding pans, and milk pans in an effort to identify preferred methods of cooking (and eating). Cheek (following Beaudry et al. 1983) calls pans "milk pans" if they are 10 inches or more in diameter and lumps the rest of the pans together in a category called "other" (Cheek 1998:165). Combining and comparing 28 assemblages from the Boston area with 18 assemblages from the Chesapeake area, Cheek found

that "other" pans were relatively common in Massachusetts Bay and rare in the Chesapeake (Cheek 1998:166). In the early period in Philadelphia, however, they were considerably more prevalent than in Cheek's Boston sample (in the Boston sample, "other" pans constituted 2.54%). Table 4 shows the proportion of milk pans and other pans in relation to the total number of vessels from the five components (i.e., analytical units) on Block 2 that included substantial ceramic assemblages. The analytical units or strata (abbreviated as AS) were defined by cross-mends between layers that were excavated separately in the field.

Table 4. Milk Pans and "Other" Pans Compared to Total Vessel Counts from Block 2 Features

Feature	AS	TPQ	Milk Pans		Other Pans		Total Number
			#	%	#	%	of Vessels
E	II	1790	1	(2.0)	6	(12.2)	49
B	II	1816	9	(2.1)	17	(3.9)	431
B	III	1830	4	(4.4)	3	(3.3)	90
G	---	1830	--	--	6	(3.1)	196
B	V	1850	4	(1.4)	4	(1.4)	291

If this trend is more than a reflection of the size of the assemblages, it appears that "other" pans, which were used for all kinds of pies and puddings, became less important as time went on. Presumably the diet changed from a heavy reliance on baked pies and puddings to other foods.

The milk and "other" pans from all the Block 2 assemblages, as well as most of the other kitchen wares, were made in Philadelphia. Table 5 shows the proportions of Philadelphia-made wares in the Block 2 collection.

Table 5. Number and Percentage of Philadelphia-Made Kitchenwares in the Block 2 Assemblages

Feature (TPQ)	Total # of Vessels	# and % Kitchenwares		# and % Local Redware	
E, AS II (1790)	49	17	34.7	11	64.7
B, AS II (1816)	431	57	13.2	45	78.9
B, AS III (1830)	90	15	17.0	12	80.0
G, no AS (1830)	196	24	12.2	19	80.0
B, AS V (1850)	291	34	12.0	26	76.0

Philadelphia redwares are distinctive, and if the Block 2 features are representative, local allegiance to them seems to have been extraordinarily high. In New York, for instance, where both redware and stoneware utilitarian vessels were locally made, redwares would have been less conspicuous in the kitchen. Table 6 shows the percentages of redware and stoneware utilitarian vessels from numerous assemblages that were found on Block 160 in Lower Manhattan.

Table 6. Number and Percentage of Locally Made Redware and Stoneware Kitchenwares in Block 160 Assemblages, New York City*

Features (TPQ)	Total # of Vessels	Kitchenwares		Redware		Stoneware	
		#	%	#	%	#	%

AF, AS II (1800)	127	15	11.8	10	66.7	5	33.3
D, AS V (1807)	54	7	12.9	4	57.1	1	14.3
H, AS III (1827)	100	10	10.0	3	30.0	7	70.0
N, AS IV (1840)	142	23	16.2	13	56.5	9	39.1
AG, AS III (1841)	419	22	5.3	13	59.1	4	18.2
B, AS IV/V (1840)	57	9	15.8	5	55.5	4	44.4
J, AS V (1850)	341	36	10.6	2	5.6	17	47.2
Z, AS II (1850)	59	13	22.0	2	15.4	11	84.6
AI, AS II (1850)	155	21	13.5	12	57.1	9	42.9

*Data from Appendix A in Tales of Five Points, Working-Class Life in Nineteenth-Century New York, Volume I. A Narrative History and Archaeology of Block 160, edited by Rebecca Yamin. On file, John Milner Associates, Inc., Philadelphia.

Just as indigenous foods seem to have continued to be important in Philadelphia well into the nineteenth century, indigenous ceramics continued to be part of the Philadelphia style, at least in the kitchen. In the dining room, however, middle-class (and certainly elite) Philadelphians were as fashion conscious as anyone else.

4.3 FASHION

A great deal has been written about middle-class dining practices and child rearing in the context of discussions of the cult of domesticity (see, for instance, Bushman 1992; Wall 1994). The assemblages from Block 2 provide an opportunity to look at these practices in Philadelphia.

A sequence of stories about a fictional Mr. and Mrs. Woodbridge, published in *Godey's Lady's Book* in January and February 1841, suggests that their author, identified as "Miss Leslie," thought Philadelphians needed a certain amount of instruction on proper social behavior. The newly wed Mrs. Woodbridge, who has come from New York, appears in the stories to find Philadelphians lacking, and although she is portrayed as shrill and overly critical she is also describing what may have been considered desirably higher standards.

The ceramics recovered on Block 2, especially the teawares, appear to have been relatively valuable, but they may indeed not have been the most fashionable. A comparison of the mean ceramic dates (MCD)[2] with *terminus post quem* (TPQ) dates (see Table 7) suggests that large proportions of the assemblages associated with both Everly households were old. While the TPQ date for the Adam Everly assemblage (AS III) is 1830, the MCD is only 1805.82 for teawares and 1810.8 for tablewares. That the tablewares were generally newer than teawares is also surprising since tea was so often associated with the expression of status (Wall 1994). In fact, one of the things that bothers the fictional Mrs. Woodbridge is that tea was not served at all at a dinner she attended in Philadelphia.

[2] The mean ceramic date is calculated by multiplying the median manufacturing date for each ceramic type in the assemblage times its frequency and adding the frequencies together. The average is the MCD for the assemblage. The terminus post quem is the most recent beginning manufacturing date for all of the datable ceramic types in the assemblage.

Table 7. Comparison of MCD and TPQ Dates for Block 2 Ceramic Assemblages

Feature/AS	TPQ	MCD (teaware)	MCD (tableware)
Early			
B, AS II	1790	1804.37	1800.4
E, AS II	1790	1793.84	1785.1
Late			
B, AS III	1830	1805.82	1810.80
B, AS V	1850	1820.34	1817.08

The ceramics in the earlier assemblages from Block 2, that is AS II from Feature B and AS II from Feature E, did not show the same discrepancies. The MCD for the assemblage associated with the sequence of merchants who lived at 225 High Street in the last decade of the eighteenth century and the first two decades of the nineteenth century was not only closer to the TPQ, but it was also later, suggesting that the residents probably had more up-to-date dishes than old ones (Table 7). The MCD and TPQ for the ceramics associated with William Simmons (Feature E, AS II) were very close, which suggests that Simmons probably purchased his dishes when he moved to Philadelphia in 1790.

When the index values[3] for the Block 2 ceramics are compared to middle-class New York assemblages (data from Wall 1994), Philadelphians appear to have been spending more, especially on teawares. By matching Block 2 assemblages with middle-class New York assemblages with comparable MCD and deposition dates, the differences become clear. The Philadelphia ceramics are consistently higher (Table 8), although the difference is greater for the earlier assemblages than for the later ones. Philadelphians also appear to have spent more on tablewares at least until the later period.

Table 8. Comparison of Index Values for Philadelphia and New York Middle-Class Assemblages

	Philadelphia Center			*New York City*		
Feature B, AS II (1804 and 1800)	Teawares 6.54	Tablewares 1.44	Feature 49 (1789)	Teawares 2.11	Tablewares .95	
EARLY						
Feature E, AS II (1793 and 1785)	2.65	1.57	Feature 51 (1789)	2.26	.95	
Feature B, AS III (1805 and 1810)	5.65	2.19	Feature AX (1804)	3.29	1.16	MID
Feature B, AS V (1820 and 1817)	3.68	1.86	Comp 15 (1820)	3.22	3.44	LATE

In spite of all these differences, Philadelphians owned more or less the same ceramic types as New Yorkers but in different proportions. The assemblage associated with William Everly's

[3] The index value is a calculation developed by George Miller based on his research into merchants' and manufacturers' wholesale pricing records. The values of ceramic vessel types in the assemblage compared to the value of the cheapest ware (CC ware) available at the time are multiplied by their frequency and then an average or CC value is calculated. Index values for tea and tableware are shown in Table 8.

household (Feature B, AS V), for instance, included 13 vessels from a tableware set of blue transfer-printed pearlware in the willow pattern, many more (66) edge-decorated vessels from at least four sets, and a few (7) vessels from a Canton hard-paste porcelain set. The Robsons in New York, a comparably well-to-do middle-class household (see Wall 1994), apparently favored willow-decorated tablewares for everyday and Canton for entertaining (Wall 1994:131). Both the Philadelphia Everlys and the New York Robsons preferred English transfer-printed teawares, mainly made of earthenware in New York, some of English bone china in Philadelphia.

The variety of ceramics in the early deposit from Feature B (AS II) is somewhat astonishing and as discussed in Appendix A, Section 3.2, it may represent a percolation deposit, which combined the discarded ceramic possessions of several well-to-do families. What is particularly notable is how many fancy teawares made up this deposit suggesting that Quaker simplicity did not influence the choices made by these High (Market) Street residents. Table 9 lists the sets of teaware and the number of vessels represented in each. Tablewares, notably more uniform and simpler, are also listed.

Table 9. Ceramic Sets Recovered From Feature B, AS II

Teaware	No. of Vessels
Plain creamware	11
Chinese Export porcelain, red overglaze landscape pattern	13
Chinese Export porcelain, red-brown overglaze rose bouquet	3
Chinese Export porcelain, red-black overglaze floral vine	3
Chinese Export porcelain, black overglaze rose bouquet	4
English porcelain, overglaze polychrome cornflowers, gilded	20
English soft-paste porcelain, overglaze brown leaf border, gilded	15
Tableware	
Creamware, Royal pattern	28
Plain creamware	16
Green-shell-edge creamware, Rococo	7
Green-shell-edge creamware, even scallop	10
Blue-shell-edge pearlware, Rococo with bud	12
Blue-shell-edge pearlware, Rococo with bud (John Davenport)	6
Blue-shell-edge pearlware, even scallop, curved lines (John Davenport)	16
Blue-shell-edge pearlware, even scallop, curved line	6
Blue-shell-edge pearlware, even scallop, straight lines	25
Canton hard-paste porcelain	3

The two creamware sets included matching child-sized teawares (only three vessels). According to Karin Calvert (1992), whose book, *Children in the House, The Material Culture of Early Childhood, 1600-1900,* discusses changes in societal attitudes towards children, parents at the turn of the nineteenth century still preferred girls not to play. Rather they were to "spend their time in more useful activities such as sewing or minding the baby, or in the quiet pastimes of embroidery or reading…Parents still preferred their daughters to behave like little women" (Calvert 1992:113). Presumably the child-sized teawares allowed girls to do just that—behave like little women—and also learn the skills they would need to grow into women like their mothers.

It is interesting that the child-size teawares matched the plain creamware sets, probably the sets used for tea with the family. As Diana Wall has discussed (1991), everyday teawares often matched the dinnerware while teasets for entertaining were generally different. In discussing the

sets of matching dishes for family dinners, Wall argues that family meals were ritualized, women being charged with creating a domestic haven in contrast to the competitive jungle that was the world of men (1991:79). It is interesting that on Block 2, even the latest assemblage, that is, AS V from Feature B, did not include the plain Gothic dishes that had replaced the New York Robsons' everyday dishes by the 1840s. This may be a significant distinction between New York and Philadelphia taste that further comparative work will hopefully illuminate.

4.4 HEALTH

The study of parasites recovered from nightsoil deposits on Block 2 suggests that even the well-to-do middle class suffered from parasitic disease (see Appendix E for the parasitologist's report). The strongest evidence for parasites surprisingly came from Feature B, AS II, the stratum associated with the well-to-do merchants who lived at 225 High (Market) Street at the end of the eighteenth century and the beginning of the nineteenth century. The parasites, mainly Ascaris and some Trichuris, could have caused pulmonary problems, hyperallergic responses, intestinal problems including fatal obstructions and appendicitis, and reduced growth in children. This stratum also included a substantial number of medicine bottles, more that 50 percent, as shown in Table 10.

Table 10. Proportions of Alcohol and Medicine Bottles, Features B and E

	Alcohol		Medicine		Total Alcohol and
	#	%	#	%	Medicine Bottles
Feature B					
AS II	69	(47.3)	77	(52.7)	146
AS III	15	(68.2)	7	(31.8)	22
AS V	18	(54.5)	15	(45.5)	33
Feature E					
AS II	34	(54.5)	3	(8.1)	37

Considerably fewer parasite eggs were found in the contemporaneous deposit (AS II) from Feature E, and very few medicine bottles were found in this deposit, which is associated with William Simmons, the accountant in the Treasury and War departments. The strata associated with the Everlys (Feature B, AS III and V) included considerably fewer parasite eggs and only moderate numbers of medicine bottles. It appears that the Everlys knew how to control parasitic disease. But premature death did visit the Everly family; William Everly's four- and six-year-old daughters died of scarlet fever in 1839, and his wife, Anna Maria, died of "a tumor" in 1857.

4.5 CONCLUSION

Numbers also tell stories. This chapter has used quantitative approaches to look at some of the same artifacts that were woven into narratives in the previous chapter. Together, we hope the people whose possessions the artifacts once were have come into focus. Until 1954 Block 2 was a place where people lived and worked. The telling of their stories is what makes the archeology worthwhile.

5. HUDSON'S SQUARE—A PLACE THROUGH TIME

Hudson's Square might have been called Judge Lewis's quadrangle during the 50 years it was part of the original Independence Mall. It will now undoubtedly be known as the Visitor Center block (Figure 33). When William Simmons lived on Hudson's Square it bustled with politicians going back and forth to the State House, where some had not long before placed their signatures on the Declaration of Independence and written the Constitution. When Adam Everly opened his comb manufactory in the 1820s, the square was at the heart of a burgeoning commercial district lining High (eventually Market) Street, what Joseph Jackson would later call "the most historic highway in America." By the time Independence Mall was created in the 1950s, Jackson's most historic highway was in decline. The buildings slated for demolition were considered dilapidated, the streetscape unworthy of a setting for the country's most sacred symbol—Independence Hall. At the end of the twentieth century the setting was again questioned. The open expanse in front of the Hall seemed empty, a sterile landscape in need of reconnection to the urban grid. Laurie Olin will provide that connection, including the reintroduction of the two alleys—South and North (eventually Commerce and Cuthbert) Streets—that Hudson had meant to remain in perpetuity.

The history of a space is more than the history of its physical transformation. It is the history of the people who populated the space. The people who lived on Hudson's Square were not unique in a cultural sense. In addition to William Simmons there were many other civil servants in eighteenth-century Philadelphia, and the Everlys would have had many nineteenth-century counterparts in manufacturing and business. Archeological investigations done in compliance with environmental laws lead us into the past in ways that independent research projects do not. The people who lived on Block 2 were not chosen for study because of who they were; they were chosen because of where they lived. Like many other people who become the objects of study on urban archeological projects, they did not belong to the highest rungs of society. Those peoples' properties tend to be preserved. The people who left material remnants of their lives on Block 2 were of the middling sort. William Simmons was not poor, but he was not rich either, and it would appear that he was not interested in identifying with the values of the elite. In his correspondence and in the simplicity of his possessions he seems to have favored egalitarian values, the values expressed in the Declaration of Independence and spelled out in the laws of the land, which Simmons attempted to enforce. Adam Everly, on the other hand, was a businessman who made a small fortune through hard work and ingenuity. His fortune supported a middle-class lifestyle at a time when such a style was first being elaborated, and the remnants of his household and his son's allow us to glimpse the Philadelphia version of mid-nineteenth-century, middle-class identity.

An archeological history is the history of the specific. No attempt has been made here to tell the whole story of Philadelphia in the eighteenth and nineteenth centuries. Instead, we have attempted to tell the intimate history of the people whose lives we have been able to look into. We have also used the things they left behind to consider how their material possessions compared to the possessions of people in other times and other places. Three areas were examined: foodways, fashions, and health.

The quantities of wild foods from the Block 2 features dating before 1800 and also from another Philadelphia site (the Chiller Plant) were greater than sites in Massachusetts and the Chesapeake. Even more surprising was how many wild foods were represented in the Block 2 assemblages dating between 1800 and 1850. The proximity of the market to the site may account for this, but

Figure 33. Independence Visitor Center under construction, November 2001.

it is also possible that wild foods had symbolic meaning reminding middle-class families of the man's former role as hunter and continuing role as provider. Because some scholars have suggested that regional cuisines developed that reflected where Americans had come from in Europe, the Block 2 data relating to cooking methods—especially ceramics—were compared to sites in Boston and the Chesapeake. Surprisingly, the early Philadelphia assemblages, in particular, resembled those from Boston suggesting that pies and puddings were a favored part of the local diet. When ceramics were used to assess middle-class mores in Philadelphia, the data suggested differences from New York. In spite of their middle-class status, the Everlys did not own particularly fashionable teawares although the ones they did own were more expensive than the ones owned by their counterparts in New York. Unique among the Everlys' ceramics was a roach trap, surely an indication of concern with cleanliness. In spite of the concern, however, the parasite analysis indicated that the Everlys as well as other residents before them suffered from parasitic disease.

Archaeology is anthropology and this report has attempted to be about the people who lived on Block 2, not just about the things they left behind. Things—the artifacts—are only the beginning. It is the people who count.

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APPENDIX A:

THE TECHNICAL REPORT

APPENDIX A: THE TECHNICAL REPORT

By

Alexander B. Bartlett (Sections 3.3 and 3.4)
Tod L. Benedict (Sections 1 and 2)
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APPENDIX A: THE TECHNICAL REPORT

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APPENDIX A: LIST OF TABLES

SECTION 1: PHASE II AND III FIELD METHODS

1.1 PHASE II ARCHEOLOGICAL MONITORING AND TESTING

Phase II archeological monitoring within the Independence Visitor Center basement footprint (Figure A-1) began on August 18, 1999. A rubber-wheeled, Case 580 backhoe with a 1.5-ft.-wide bucket was initially employed in the excavation of a series of trenches (Figure A-2). Trench 1 was placed at the northern end of the testing area, north of the brick perimeter wall, in the vicinity of the mapped location of Commerce Street (Figure A-1). It measured 15 ft. north-south by 7 ft. east-west. Trench 2 was attempted south of the brick perimeter wall but was discontinued when JMA's monitors determined that it was located between 1) a manhole for the drainage system and 2) a deep, massive concrete foundation that supported a brick pad for a park bench (Figure A-1). Trench 3, oriented north-south, was then excavated from north to south along the west side of the testing area (Figure A-1), for the purpose of locating the buried foundation walls of the North Sixth Street and Market Street buildings demolished in 1954 as well as a cartographically documented 10-ft.-wide, east-west alley that extended eastward from North Sixth Street. Upon delineating the foundation walls within Trench 3, the backhoe started removing ("bailing") the immense quantity of demolition rubble contained within the building basements. The bucket size and horsepower of the initial backhoe proved to be insufficient for this task, and on August 30, the Case 580 was replaced for the duration of the project with a much larger, Link-Belt LS-3400 trackhoe, which was equipped with a 4-ft.-wide bucket (Figure A-3). Mr. Harry Brown operated both machines.

After the rubble had been removed from the foundations facing North Sixth Street, and the west foundation wall of 531 Market Street was exposed, the trench was expanded eastward in a series of north-south swaths to expose additional foundation walls. The rubble filling the basements was removed from west to east and was piled primarily south of the testing area. The basement floors, whether composed of concrete, stone slab, or packed dirt, were cleaned by manual shoveling to document the presence of any cultural features (Figure A-4). An earthen ramp was constructed at the south end of the project area, permitting trackhoe access into the basement of 529 Market Street. The concrete floor within this basement was broken and removed mechanically to expose any subfloor features.

Concurrent with monitoring of the rubble removal, a baseline was established by transit and tape upon the existing grade along the west edge of Trench 3, at a bearing of 22/202 degrees east of magnetic north (Figure A-1). The primary site datum, designated S0-E0 and marked with a metal spike, was situated off the northwest corner of the trench. This point was 202.5 ft. north-northeast of the Market Street curb and 27.8 ft. east-southeast of the North Sixth Street curb. Additional grid points were established at 20-ft. intervals south of S0-E0 (to S60-E0), with another point along the E0 line marked at S85-E0. Subsequently, perpendicular points were established at E20 and E40 along the S0 line, though these points had to be removed as the trenching proceeded eastward. After the trench had been extended to the east edge of the testing area, which entailed exposing the upper inside face of the brick perimeter wall, three more datum points were established: S0-E62, set into the top of the concrete footer underlying the wall; and S40-E62.9 and S60-E63.2, set into the inside face of the wall. The various exposed foundation walls and other cultural features were mapped by triangulation relative to these points, using tapes and a plumb bob. Elevations were determined by transit and stadia rod from datum S0-E0. The absolute elevation (relative to sea level) of S0-E0 was calculated as 32.12 ft. above sea level (ASL), based on the known elevation at the top of the northwest corner of the brick perimeter wall.

The five non-recent cultural features documented during the course of Phase II monitoring were further exposed and delineated with hand tools, then scale drawn in plan and photodocumented with black-and-white prints and color slides. During Phase II archeological testing, the three filled shaft features were sampled by manually excavating an approximate quarter section to a maximum depth of 3 ft. to provide an approximate date of deposition of fills and the types of artifacts contained within the matrices (Figure A-5). Additionally, a 3-ft.-square unit (EU 1) was excavated within the 10-ft.-wide alley to assess the potential for intact surfaces or sealed cultural features. A slot between the walls parallel to North Sixth Street also appeared to contain an in situ wooden floor, and as much dirt as possible was removed from above it.

Excavation proceeded to the extent possible by identifiable depositional layers, which were distinguished on the basis of Munsell color, texture, or artifactual content; this information was recorded on standardized forms. The opening and closing depths of each layer, measured in tenths of feet below datum, were also recorded, as were any other relevant data or interpretations pertaining to excavation of the feature. All artifact-bearing fill was screened through quarter-inch hardware mesh, and the recovered artifacts were placed in bags marked with the pertinent provenience information. The profiles of the quartered sections were drawn to scale and photographed. The field supervisor wrote narrative field notes and took photographs of ongoing excavations and site conditions on a regular basis throughout the investigation. After the completion of Phase II testing on September 15, 1999, each feature was covered with heavy-duty plastic sheeting, which was secured with bricks, cobbles, and backdirt.

1.2 PHASE III DATA RECOVERY

The Phase III archeological data recovery within the Independence Visitor Center basement footprint entailed the excavation of five shaft features, as well as a rubble deposit located within a narrow “slot” between two stone foundation walls, which were identified during Phase II archeological monitoring and testing (Figure A-1). Fieldwork commenced on December 6, 1999. Prior to this date, all of the Market Street stone foundation walls east of the east wall of 531 Market had been removed. The initial focus of the data recovery was to investigate the slot between the east wall of 9 North Sixth Street and the west wall of 528 Commerce Street (designated Feature F), which contained a possible wooden floor, and to begin excavating Feature A. In preparation for excavating Feature A, a large, steel shoring box was placed around the feature by General Asphalt and Paving personnel (Figure A-6). As the machine removed the sand from around the sides of the feature, one side collapsed, but the base of the feature remained intact. After the box was in place, the sand was replaced around the remaining walls of the feature to give them support. A similar procedure was followed for the other features (B, C, and D), which were enclosed in wooden plank-and-beam shoring boxes constructed in place by General Asphalt and Paving (Figure A-7). A box was also intended for Feature E, but while the soil was being removed around the feature it became clear that its depth did not require shoring to comply with OSHA standards (Figure A-8).

During preshoring excavation around Feature E with the Link-Belt trackhoe, a sixth shaft feature was exposed farther north, at the north edge of the project area (Figure A-1). The south portion of this shaft, designated Feature G, was sliced by the trackhoe, revealing that it contained an artifact-bearing fill. The feature was mapped by triangulation and photographed in profile prior to the collapse of its interior fill (Figure A-9), which was then transported by trackhoe bucket to a secure location on-site for artifact recovery.

During manual removal of the fill within the slot (Feature F), another shaft feature was exposed, its midpoint located under the east wall of 9 North Sixth Street. This newly discovered shaft was designated Feature H (Figures A-1 and A-10). Preliminary Phase II archeological testing of its east portion (between the walls) was begun, extending to the maximum depth that was considered logistically practical and, more importantly, safe. To facilitate further excavation of the slot between 9 North Sixth and 528 Commerce Streets, and Feature H, the west foundation wall of 528 Commerce was removed by trackhoe, and the portion of the 9 North Sixth Street east wall that extended over the feature was cut out with a circular saw.

After the excavation of Features A and E and construction of the shoring box around Features C and D had been completed, excavation of the latter two features began. Concurrent with this, preshoring excavation around Feature B started, which resulted in the exposure of a third previously unidentified shaft feature (Feature I) located directly south (Figures A-1 and A-11). In consultation with National Park Service personnel, the decision was made to conduct the Phase II archeological investigation of the partially filled shaft by monitoring its cross-sectioning by the trackhoe. The same decision was made later regarding deeper archeological testing of Feature H, when the depth of the hand-excavated quarter section became unsafe because of the height of the unstable rubble fill along the west side of Trench 3.

The excavation techniques employed during the Phase III data recovery generally mirrored those of the Phase II testing, though the deeper excavation within the shaft features necessitated the implementation of safety precautions in addition to the shoring boxes. The depth of excavation within the shafts was not permitted to be more than 4 ft. lower than the top of the brickwork. When this depth was reached, photographs were taken to document the bond pattern of the brickwork, which then was dismantled by hand and/or trackhoe to the same level as the interior shaft fill. This process was repeated until the base of the shaft was reached. Earthen ramps were built on the inside of the shoring boxes, extending downward from the box entrance to the feature, to provide safe ingress and egress.

As before, excavation proceeded by identifiable layers, which were differentiated based on Munsell color, texture, and inclusions, the latter characteristic including the density of artifacts as well as the presence of gravel, cinders, and other materials. When appropriate, only half of a layer was initially excavated, to permit the recording of a cumulative profile, after which the remaining half was removed. Typically, the full depth of a layer was excavated as one provenience, though if it proved to be especially thick, arbitrary subdivisions were assigned (e.g., Level 7, 7.1, 7.2). Each excavated provenience received a unique catalog number, as per the PHMC's revised curation guidelines (9-28-1999). All pertinent information regarding a particular layer, such as opening and closing depths, matrix description, range of artifacts, and interpretations, was recorded on standardized forms. Fill deposits were initially passed through quarter-inch-mesh screen, but if a matrix consisted mainly of architectural rubble or secondarily deposited materials, only a sample (approximately 30 gallons) was screened, as per a pre-excavation agreement with the National Park Service. All matrices from primary deposits, defined as in-use fills that were associated with lot residents, were screened to ensure uniform artifact recovery. Artifacts were placed in paper bags marked with the pertinent provenience information, though large, plastic zip-lock bags were used during wet conditions. The presence of ubiquitous items that were not retained, such as brick fragments and cinders, was also noted on the forms. A datum, or in some instances successive datums, was established for each feature; the elevation ASL of these datums was determined relative to S0-E0.

The upper portion of Feature B was excavated to a depth of approximately 4 ft. prior to the construction of the shoring box around it. Excavation of the feature resumed below this depth

after the shoring box was installed (Figure A-12). Only the east half of this large shaft feature was excavated, per an agreement reached in consultation with the National Park Service and Day & Zimmermann; the west half was incrementally removed primarily by trackhoe. The matrices from Feature B were initially dry screened, but as the moisture and organic content of the layers increased with depth, waterscreening became necessary (Figure A-13). A tripod screen was set up over a trackhoe-excavated sediment trap, and a high-pressure hose equipped with a control nozzle was attached via an adapter to a fire hydrant along the east side of North Sixth Street. After most of the matrix was washed away, the artifacts were placed in paper bags set into large plastic bags; recovered macrobotanical and other fragile items such as nut hulls, seeds, eggshells, fish bones and scales, and straight pins were retained in plastic film vials. The residual matrix was then placed in heavy-duty plastic bags for further processing at JMA's laboratory in West Chester. Bulk samples for flotation and eventual floral and parasitological analyses were taken from all primary shaft deposits that appeared to be nightsoil or particularly rich in organic materials. These samples were approximately two liters in size and were put in plastic zip-lock bags marked with the relevant provenience information.

Black-and-white prints and color slides were taken of ongoing site activities, including in-progress feature excavation, notable in situ finds, shoring construction, and formal views of feature profiles and plans. A photo log was maintained, listing the description, direction, and date of each photograph. The field supervisor kept comprehensive field notes detailing site activities, weather conditions, interpretations, and quantitative data such as elevations and other measurements. At the end of each field day, heavy, metal "road plates" were positioned over the top of unfinished features, to preclude attempts at vandalism. After the excavation of each feature was completed, the remnant shaft and surrounding area were backfilled by the trackhoe. The final day of Phase III fieldwork was December 22, 1999.

SECTION 2: PHASE II AND III FIELD RESULTS AND INTERPRETATIONS

2.1 PHASE II ARCHEOLOGICAL MONITORING AND TESTING

Trench 1, located at the northern end of the project area (Figure A-1), did not reveal evidence of the east-west Commerce Street, which had been approximately 35 ft. wide based on fire-insurance maps. The entire depth of the trench, to approximately 5.9 ft. below grade, consisted of mixed fill, with brick and rock rubble exposed at the base (Figure A-14). Commerce Street as it existed within the project area prior to demolition of the block in 1953-1954 was apparently disturbed by that demolition or by the subsequent construction of the adjacent underground parking garage.

Multiple foundation walls, composed of coursed stone, were exposed during the archeologically monitored trenching within the then-proposed building footprint. These included the west, north, and east walls of 531 Market Street (the westernmost Market Street lot in the project area); the west (shared with 531) and east walls of 529 Market Street; the west wall of 527 (shared with 529) Market Street; the south, east, and north walls of 9 North Sixth Street; the south (shared with 9) and north walls of 11 North Sixth Street; the south wall of 13 North Sixth Street (shared with 11); and all four walls of 528 Commerce Street (Figure A-1). Measured depths to the top of the remnant foundation walls ranged from 2.36 to 3.64 ft. below the site datum (BSD) at S0-E0, though the upper surface of the walls often undulated. All of the site elevations, including depth below or above S0-E0 and the corresponding depths above sea level (ASL), are presented in Table A-1. Wall thicknesses were 2.0 ft. on the east and west walls of the Market Street foundations, and 1.5 ft. on the north wall of 531 Market. The North Sixth Street foundation walls were 1.6 ft. thick on average. Interior basement widths were 22.0 ft. at 531 Market, 21.7 ft. at 529 Market, 12.9 ft. at 9 North Sixth, 15.2 ft. at 11 North Sixth, and 12.6-12.7 ft. at 528 Commerce. The interior length of the 528 Commerce basement, the only one exposed in its entirety, was 35.5 ft.; although most of the foundation was stone, mortared courses of brick composed the lower portion of the east wall along its northern 5.5 ft. (Figure A-1).

Several concrete retaining walls, which functioned to hold the upper portion of the demolition rubble in place under the park landscaping that was extant at the start of the project, rested directly on top of the partially truncated stone foundation walls (Figure A-1). Between 0.5 and 1.0 ft. of recent, clean, sandy fill had been placed above the retaining walls during construction of the Park in the early 1960s, to support root growth within the planting beds (Figure A-15).

The interior faces of the west wall and northwest corner at 531 Market Street were plastered, as were the interior east wall and all but a portion of the west wall of 529 Market, the upper portion of the west interior wall of 527 Market, the three exposed interior walls of 9 North Sixth, and the south half of the east interior wall at 528 Commerce (Figures A-1, A-16, and A-17). Partial plastering was intact on the east interior wall of 531 Market and west interior wall of 527 Market. The stone composing the interior faces of the north wall and northeast corner of 531 Market Street; the north and south walls of 11 North Sixth; the south wall of 13 North Sixth; and the north wall, west wall, and north half of the east wall of 528 Commerce was unplastered (Figures A-1, A-18, and A-19). The basal 2.2 ft. of the south and west walls of 528 Commerce were composed of coursed, mortared brick; the south end of the upper (stone) portion of the west wall contacted the south wall at the southwest corner by means of a butt joint (Figures A-1 and A-20). A possible bulkhead opening was present in the south wall of 9 North Sixth, and a bulkhead notch occurred in the interior south wall of 528 Commerce (Figure A-1). A stairway scar was present

on the interior of the plastered west wall of 527 Market (Figures A-1 and A-21): three toy guns and several marbles were found in the demolition rubble under the scar, possibly representing the secret "stash" that a Pennock & Son employee's child had hidden under the basement stairs. The west interior wall of 529 Market contained graffiti, drawn in charcoal and chalk and covering an area of about 3.7 ft. wide by 1.35 ft. high (Figure A-22). A 4.0-ft.-wide doorway opening was located in the shared wall of 527/529 Market (Figure A-1). Its north jamb was brick faced, and the interior wall face of 529 Market, south of the doorway, was lined with vertical wooden boards. Another door opening was present in the shared wall of 529/531 Market. It was filled with brick on the 529 Market side of the wall and with coursed stone on the 531 Market side (Figure A-1).

Three of the basements had concrete floors (529 Market, 9 and 13 North Sixth), two were packed dirt (527 and 531 Market), and one was stone slab (11 North Sixth). Depths to the floors ranged from 6.25 to 10.83 ft. BSD, the former measurement corresponding to the middle of the concrete floor of 13 North Sixth. The concrete floor of 9 North Sixth and the stone-slab floor of 11 North Sixth were only slightly deeper, at 6.77 and 6.38 BSD, respectively. The concrete floor of 529 Market dipped from north to south, resulting in depths of 9.48 and 9.50 ft. BSD along the north interior wall and 10.83 BSD along the middle and south end of the exposed west wall. The two dirt floors of 527 and 531 Market ranged between 9.66 and 10.74 ft. BSD, though exact surfaces were often difficult to determine (Table A-1).

Other non-shaft features documented within the basements included a coal chute and adjacent brick furnace on the interior east wall of 529 Market, a probable boiler room set into the south half of the exposed basement floor at 529 Market, and a possible brick hearth and flue bases along the base of the west wall of 531 Market. The coal chute measured 2.75 ft. in width and had a metal lining; its bottom edge was 4.75 ft. above the concrete floor. The brick furnace directly abutted the south side of the coal chute. It extended 3.5 ft. inward from the foundation wall and was 4.75 ft. wide. A brick door on the front of the furnace was approximately 1.5 ft. wide by 1.0 ft. high, with the remnant of a handle on its left side (Figures A-1 and A-23). After the furnace and its firewall backing were removed, the blackened, unplastered foundation wall behind the furnace was visible. The probable boiler room was rectangular in plan and measured 43.2 ft. north-south by 14.2 ft. east-west, extending from the east wall of the basement across three-quarters of the floor's width. The interior of this inset feature was lined with both brick and concrete, and a brick-lined, probable sump pit was located at its southwest corner (Figures A-1 and A-24). Various concrete slabs and piers were present within and along the edge of the room. The possible hearth base measured 5.3 ft. along the west wall of 531 Market, extending 3.45 ft. inward. The possible flue base, located 4.85 ft. north of the hearth, was 1.75 ft. wide and extended 0.85 ft. inward from the wall (Figure A-1). Its 1.0-ft.-wide opening was filled with soot and ash.

An extensive complex of drainage and storage features was exposed under the concrete basement floor of 529 Market Street when the floor was broken up and removed by the trackhoe (Figures A-25 – A-27). A relatively thin deposit of rubble composed mostly of brick fragments and sandy sediment directly underlay the concrete floor, infilling the lower feature complex. The complex extended southward from the north edge of the exposed basement to a point just north of the doorway in the east wall of the building, a distance of over 62 ft. A low, brick wall was present across the width of the basement at the south end (Figure A-25). The southern 24.0 ft. of the complex overlapped with the northern portion of the previously noted boiler room set into the removed concrete floor.

Three brick-floored partitions, which were divided by low, brick walls, were situated across the northern section of the exposed complex, with iron-lidded, rectangular clean-out boxes located

Table A–1. Elevations Within the Independence Visitor Center Project Area

Location	Elevation relative to S0-E0 (ft.)	Elevation above sea level (ft.)
capstone on brick perimeter wall, NW corner	+4.65	36.77
S0-E0	0.00	32.12
S0-E20	+0.12	32.24
S0-E40	-0.36	31.76
S20-E0	+0.26	32.38
S40-E0	+0.19	32.31
S60-E0	0.00	32.12
top of N concrete retaining wall, over stone foundation wall between 527/529 Market	-0.67	31.45
top of stone foundation wall between 9 and 11 N 6th, middle	-2.78	29.34
top of stone foundation wall between 9 and 11 N 6th, E edge Trench 3	-2.39	29.73
9 N 6th, top of S stone foundation wall	-3.00	29.12
9 N 6th, top of E stone foundation wall	-3.25	28.87
9 N 6th, concrete floor S of N foundation wall	-6.77	25.35
11 N 6th St., middle of stone-slab basement floor	-6.38	25.74
13 N 6th St., concrete floor at N edge of Trench 3	-6.25	25.87
527 Market, basement floor along middle of N interior wall	-10.25	21.87
527 Market, basement floor S of above point	-10.74	21.38
top of stone foundation wall, 527/529 Market, S of N concrete retaining wall	-3.64	28.48
top of stone foundation wall, 527/529 Market, 27 ft. S of N concrete retaining wall	-2.36	29.76
529 Market, concrete basement floor along W interior wall	-9.48	22.64
529 Market, concrete basement floor, E of above point	-9.50	22.62
529 Market, approximate middle of concrete basement floor, along W interior wall	-10.83	21.29
529 Market, SW corner of exposed concrete basement floor	-10.83	21.29

Table A–1. (continued)

Location	Elevation relative to S0-E0 (ft.)	Elevation above sea level (ft.)
529 Market, top of yellow sand	-12.82	19.30
529 Market, top of gray clay	-12.87	19.25
531 Market, top of N stone foundation wall, E edge Trench 3	-2.70	29.42
531 Market, top of N stone foundation wall, NW corner	-3.33	28.79
531 Market, base of NW interior corner	-9.66	22.46
531 Market, basement, intact brick floor along N interior wall	-10.30	21.82
531 Market, brick hearth? along W interior wall	-10.47	21.65
10-ft.-wide alley, EU 1, SW corner	-4.46	27.66
slot between 9 N 6th and 528 Commerce (Feature F), top of concrete floor under wooden boards	-6.61	25.51
Feature A, top of brick dome	-11.52	20.60
Feature A, Phase III datum point	-14.56	17.56
Feature A, top of interior brick ring at base of brickwork	-20.36	11.76
Feature A, base of rubble fill	-21.46	10.66
Feature B, top of intact brick, N side	-11.06	21.06
Feature B, top of intact brick, S side	-12.57	19.55
Feature B, top of intact brick, E side	-11.86	20.26
Feature B, datum B1 (Phase II)	-12.66	19.46
Feature B, datum B2 (Phase III)	-13.58	18.54
Feature B, datum B3 (Phase III)	-15.84	16.28
Feature B, datum B4 (Phase III)	-16.40	15.72
Feature B, base	-20.80	11.32
Feature C, top of brick, NW side	-11.41	21.06
Feature C, Phase II datum	-11.27	20.85
Feature C, Phase III datum	-11.30	20.82
Feature C, top of lower shaft (interior brick ring)	-13.02	19.10
Feature C, top of cap	-14.04	18.08

Table A–1. (continued)

Location	Elevation relative to S0-E0 (ft.)	Elevation above sea level (ft.)
Feature C, base (center)	-16.48	15.64
Feature D, top of brick dome	-10.66	21.46
Feature D, top, E side, near base of dome	-11.04	21.08
Feature D, top of interior fill	-18.45	13.67
Feature D, Phase III datum	-11.30	20.82
Feature D, base (maximum depth)	-20.01	12.11
Feature E, top of brick, W side (Phase II datum)	-10.64	21.48
Feature E, Phase III datum	-11.25	20.87
Feature E, top of brick floor	-14.69	17.43
Feature E, top of undisturbed substratum	-14.83	17.29
Feature F, top of concrete floor	-6.61	25.51
Feature H, top of brick, E side	-8.18	23.94
Feature H, top of brick, W side	-9.58	22.54
Feature H, Phase III datum	-9.53	22.59
Feature H, top of interior fill (center)	-9.77	22.35
Feature H, top of nightsoil deposit	(±) -17.52	±14.60
Feature I, top of dome, adjacent to opening	-10.81	21.31
Feature I, top of cinder fill	(±) -15.31	±16.81
Feature I, base of cinder fill	-18.99	13.13
Feature I, top of interior brick ring (base of feature)	-20.56	11.56

along the north edge of the partitions. The partitions may have functioned as coal bins, given their proximity to the coal chute in the east wall of the basement. A brick-lined drainage channel underlay the middle brick wall, and cast-iron pipes were embedded in the bottom of the west brick wall as well as elsewhere. Additional brick-lined drainage channels were present farther south. Several concrete piers and walls were also located farther south, and an intact brick floor extended across the southern end of the complex. A narrow, iron-lidded trough containing cast-iron pipes ran along the inside of the east wall for the entire length (Figure A-25). Intact yellow sand underlain by gray clay, representing undisturbed natural substrata, were exposed within portions of the feature complex. After consulting with Mr. Jed Levin of the National Park Service, a scale drawing was made of these apparently twentieth-century features. Upon removal of the complex, no earlier features such as shafts were found.

EU 1 was excavated within the 10-ft.-wide alley between 531 Market and 9 North Sixth Streets, to determine if any intact surfaces or sealed features were extant (Figure A-1). The unit datum, at the southwest corner, was 4.46 ft. below S0-E0, which was 27.66 ft. above sea level. The uppermost level, even with the top of the stone foundation walls bordering the alley, consisted of a layer of strong brown and reddish yellow (7.5YR 5/8, 6/8) loamy sand to sandy loam that was 0.35 to 1.25 ft. thick (Figure A-28). The layer dipped considerably along the east side of the unit, probably due to disturbance from an adjacent lightpost foundation. Brickbats and three fragments of window glass were noted. The underlying layer, which was an undisturbed natural horizon, registered as light yellowish brown (10YR 6/4) fine sandy loam, with bands of strong brown (7.5YR 5/8) loamy fine sand in its upper portion. The horizon was excavated to an initial depth of 2.00 ft. below datum, which exposed from 0.48 to 1.15 ft. of the probable Coastal Plain sediment. Redoximorphic features (pedogenic mottles) of the same color as the bands were present in the lower portion (Figures A-28 and A-29). Subsequent bucket augering of the unit revealed that the horizon continued to a depth of about 5.9 ft. below datum, at which depth a light brownish gray (2.5Y 6/2) fine sandy loam with few, distinct, strong brown (7.5YR 5/6) redoximorphic features occurred to the base of the auger hole at 6.4 ft. below datum. The profile is interpreted as C-2BC-2Cg horizonation, with the upper C horizon consisting of fill. A backhoe trench was later excavated across the former alley, corroborating the stratigraphy recorded in the auger hole. These excavations documented the absence of a remnant alley surface, which likely was removed during the 1954 demolition of the block.

Five shaft features, designated Features A-E, were identified during Phase II archeological monitoring. The first of these, Feature A, occurred in the southern portion of the project area, 22.5 ft. south of the north wall face of 531 Market Street (229 High prior to 1856) (Figure A-1). It was exposed within the dirt floor of the basement by the trackhoe bucket. A plastered brick dome with a 1.6-ft.-diameter, circular opening capped the empty shaft, which was composed of dry-laid brick. Considerable brick rubble fell into the dome opening immediately after its exposure, which filled the shaft to within 4.1 ft. of its top. An elevation taken adjacent to the dome opening was 11.52 feet below S0-E0 (20.60 ft. ASL). The exterior of the shaft was packed with a dense clay, indicating that the feature served as a cistern rather than a privy. The full depth of the plastered dome was exposed with hand tools, revealing an exterior brick collar at its base corresponding to the upper course of the shaft. An 1883 Indian Head cent was found in situ along the north edge of the dome opening (Figure A-30). The presence of the intact dome precluded obtaining accurate dimensions, but the exterior of the shaft appeared to be about 5 ft. in diameter. No Phase II archeological testing of the feature's interior was conducted, because the depth to the top of the rubble fill exceeded OSHA safety standards for confined spaces without proper shoring. Whether any intact fill deposits were present at the bottom of the shaft, under the rubble, was unknown.

The location of Feature A would have been about 93 ft. behind the three-story house at 229 High Street, which was a rental property owned by Charles Syng in 1783. Dr. Joseph Redman lived in the house by 1787, and James Wilson was in residence by the following year. Wilson was a well-known attorney who signed both the Declaration of Independence and the Constitution. William Shippen Sr. and Walter Stewart lived at 229 High from 1790 to 1791. Shippen was a former member of the Continental Congress and a retired physician. In 1790 the household at 229 High Street had eight occupants, including one free and two enslaved blacks (U.S. Census 1790). Stewart was a colonel and later a brigadier general during the American Revolution. He was a successful merchant and was a member of the Hibernian Society and the Society of Cincinnati. He was elected director of the Bank of Pennsylvania in 1793 and the Insurance Company of North America in 1795, dying in 1796. David McCormack, an ironmonger, had purchased the lot by 1795, and by 1801, merchant John Glenn lived there. The original house was demolished after John J. Vanderkamp bought the property in 1829; he constructed a five-story commercial building that extended the full length of the lot to Commerce Street. Accordingly, Feature A must have been abandoned by ca. 1829.

Feature B, the second shaft discovered during the archeological monitoring, was located within the basement of 527 Market Street (225 High prior to 1856), its midpoint approximately 17 ft. north of the doorway between 527 and 529 (Figure A-1). It was by far the largest of the shaft features, with an interior north-south diameter of 9.8 ft. Elevations of the upper courses of the dry-laid brick shaft were 11.06 ft. BSD on the north side (21.06 ft. ASL) and 12.57 ft. BSD (19.55 ft. ASL) on the south side (Table A-1). Only the west half of the feature was within the proposed basement footprint; as a result the east half remained buried under the rubble berm at the edge of the trench during the Phase II investigation.

The feature, consisting of dry-laid brick, was tested by the excavation of EU 2 within its west edge (Figure A-31). The uppermost layer, consisting of dark brown (10YR 3/4) sandy overburden with crushed brick fragments and pockets of coal ash, ranged between 0.1 and 0.5 ft. thick (Figure A-32). Two 1870s- to 1880s-era bottles derived from the stratum, as well as 31 fragments of bottle glass, two nails and 37 nail fragments, and four gray saltglazed stoneware sherds from a master ink bottle. A loosely packed deposit (Level 2) of brick, mortar, and plaster rubble with sizeable voids and relatively few artifacts underlay the upper overburden. The layer was 1.4 to 1.9 ft. thick, within a matrix of brown to dark yellowish brown (10YR 4/3-4/4) gravelly silt loam. In addition, at this depth, a remnant deposit of very dark grayish brown to brown (10YR 4/2-4/3) silt loam adhered to the interior of the brickwork, containing window glass, bone, ceramic, and cut nails. In total, five fragments of bottle glass, four fragments of window glass, four nails and 10 nail fragments, and a shell button were in Level 2. Additional rubble composed of brick, mortar, and plaster in a matrix of dark yellowish brown (10YR 4/6) gravelly silt loam occurred below Level 2, with a much moister matrix and smaller void spaces than the overlying deposit. This layer (Level 3) was undulating, ranging from only 0.2 ft. thick in the northwest corner of the unit to 1.6 ft. thick in the southwest corner. Window and wine-bottle glass, redware, porcelain, and nails were recovered. An underlying lens of brown to dark yellowish brown (10YR 4/3-4/4), very moist silt loam dipped steeply eastward within the unit, precluding its complete excavation in the limited space that was available. Few artifacts occurred within the portion of the lens (Level 4) that was excavated, including three fragments of bottle glass, six fragments of window glass, a nail fragment, and bone. A probable nightsoil deposit was exposed below this, along the west edge of the feature. It consisted of very dark grayish brown (10YR 3/2) silt loam (Figure A-32) and contained a large quantity of 1830s-era artifacts, many of which were whole or nearly whole handblown wine and cologne/perfume bottles, condiment bottles, gray saltglazed stoneware beverage bottles, shell-edged and blue-transfer-printed pearlware (bowl, plate, and platter fragments), creamware (pitcher, basin, and chamber pot fragments), handpainted porcelain, and

coarse red earthenware. Bone buttons, window glass, and a large quantity of butchered bone were also recovered. Only a small sample of the deposit (Level 5) was excavated, to a depth of 3.65 ft. below datum, but it was obviously significant.

The original function of Feature B was not clear after Phase II testing had been completed. Possibly it was used as a cesspool that was shared between 527 and 529 Market (225 and 227 High) Street. Although 10-ft.-diameter brick-lined shafts are rare in Philadelphia, similar features in other cities have been identified as such. An informant in his late 60s, who has lived in Philadelphia all his life, knew of similar shafts in the city that were formerly used for storing ice (personal communication, Brown, 1999). A three-story brick house built in 1790, which superseded an earlier house on the lot, apparently was not replaced prior to the 1856 fire. However, a five-story commercial building was constructed on the lot after the fire, extending the full length of the lot between Market and Commerce Streets. Therefore, Feature B likely was abandoned before or soon after the fire. Occupants between 1790 and 1856 included Joseph Anthony (who was a resident from 1790-1794 or 1795); Dr. Caspar Wistar (1795-1801); Henry & Boggs, merchants (1801-1802); Alexander Henry (1803-1807); Smith & Helmuth, merchants (1807-1818); Adam Everly and later William A. Everly, comb dealers (1823-1840); and E. & T./R.B. Fairbank(s), patent scale manufacturers (1855-1856).

Features C and D were exposed within 2.0 ft. of one another in the southern portion of the 528 Commerce Street basement (Figure A-1), which was not constructed until after 1860. Feature C was a dry-laid brick shaft composed of stretcher courses, with an interior shaft diameter of 4.5 ft. east-west and 4.0 ft. north-south. The elevation at the top of the upper brick course on its northwest side was 11.41 ft. BSD, or 21.06 ft. ASL (Table A-1). The feature was archeologically tested by excavating its southeast quarter (Figure A-33) to a depth of 2.80 ft. below a datum established on the east side of the shaft, which was 11.27 ft. BSD (20.85 ft. ASL). The uppermost layer was a light olive brown (2.5Y 5/3) silt loam with yellowish brown (10YR 5/8), sandy loam mottling (Figure A-34), which was 0.15 to 0.25 ft. thick and contained no artifacts. The underlying layer consisted of very dark grayish brown to dark grayish brown (10YR 3/2-4/2) loam with coal slag and "clinkers." It was 0.1 to 0.65 ft. thick and contained few artifacts, including melted bottle glass, window glass, whiteware sherds, and a nail. Layers 3 and 4 consisted of gray (10YR 6/1) coal ash with slag, which were arbitrarily separated at the top of a smaller-diameter brick shaft exposed along the inside of the upper shaft at 1.80 ft. below the feature datum. Rockingham sherds, window glass, and nails were recovered from the Layer 3 portion of the deposit; fewer artifacts occurred in the Layer 4 portion, which terminated upon what was initially identified as a cast-iron floor between 2.70 and 2.80 ft. below datum (Figure A-34). This cover could not be removed by hand, and excavation was discontinued. The feature, which would have been located in the backyard of 9 North Sixth Street (5 North Sixth prior to 1856), was interpreted as a probable privy, because it was dry laid and did not have an exterior seal of clay. By 1795, a notary named Peter Lohra occupied the house on the property; city surveyor Josiah Matlack and sea captain William Waters were in residence in 1801 and 1803, respectively. The building was demolished ca. 1829, when Michael F. Clark purchased this property as well as 3 and 7 North Sixth (later 7 and 11 North Sixth) and the vacant lot at 233 High (later 535 Market), building a five-story commercial building that extended northward from High/Market Street.

Feature D, which also would have been located in the backyard of 5 [9] North Sixth, was comparable in size to Feature C, measuring 4.05 ft. on its interior (Figure A-1). However, the dry-laid brick shaft was capped by a plastered brick dome, like that which topped Feature A (Figure A-35). An elevation taken at the top of the dome was 10.66 ft. BSD (21.46 ft. ASL). The shaft was empty to nearly 8.5 ft. below its upper course, which precluded determining through Phase II

archeological testing the presence of intact primary deposits at its base. Both Features C and D may have functioned as privies that were used at different times or that were used by different residents of the same property. They likely were abandoned by 1829, when Clark demolished the house and constructed the commercial building along the east side of North Sixth (233 High, later 535 Market).

Feature E was exposed within the northeast corner of the 528 Commerce Street basement, its east edge extending under the foundation wall shared by 528 Commerce and 529 Market Streets (originally 227 High Street) (Figures A-1 and A-36). The interior of the shaft measured 3.9 ft. north-south, with an exterior diameter of 4.65 ft. Composed of dry-laid brick stretchers like most of the other shaft features, the upper course on its west side was calculated as 10.64 ft. BSD (21.48 ft. ASL) (Table A-1). Phase II archeological testing entailed sampling the southwest quarter of the feature, using a datum established at the same position and depth as the above elevation. The upper layer (Level 1) was an overburden of yellowish brown (10YR 5/4) loamy sand that contained a large amount of mortar and brick fragments as well as some mortared building stones (Figure A-37). The deposit was 0.42 ft. thick and contained 25 sherds of coarse red earthenware, eight sherds of creamware, one sherd each of pearlware and white saltglazed stoneware, five fragments of case-bottle glass, five fragments of window glass, three fragments of wine-bottle glass, 11 nail fragments, five iron fragments, an iron bolt, two bone fragments, one fragment of oyster shell, and a mirror fragment. Fourteen of the coarse red earthenware sherds were identifiable by vessel, including six each from a bowl and a platter and two from a pie pan. Level 1 was underlain by light yellowish brown (10YR 6/4) silt loam, which again included brick and mortar fragments mixed with occasional building stone. This layer (Level 2), 0.91 ft. thick in the center of the quarter section, produced creamware, redware, and white saltglazed stoneware sherds, derived predominantly from along the edge of the shaft. A third layer was the same texture as Level 2, but was lighter in color (brownish yellow, 10YR 6/6).

Feature E was likely a privy that was truncated by the construction of the west foundation wall of a five-story commercial building at 227 High Street built for merchant Caleb Cope ca. 1855, which extended to Commerce Street. When in use, the privy would have been located in the backyard of 9 North Sixth Street (later 13 North Sixth), which was the residence of accountant William Simmons between 1790 and 1800. He was the principal clerk in the U.S. Auditor's office in 1790 and was an accountant with the U.S. War Department by 1796/1797. Hezekiah Hosmer, who was a U.S. Representative from New York, and Samuel Livermore, a U.S. Senator from New Hampshire, were recorded as residents in 1798, evidently boarders with the Simmons household. Based on artifact content, the feature was probably filled during the last decade of the eighteenth century.

Phase II testing of the 2.35-ft.-wide slot between the east foundation wall of 9 North Sixth and the west foundation wall of 528 Commerce, designated Feature F, entailed using hand tools to remove the remaining rubble deposit, which was even with the top of the remnant walls following their exposure by the trackhoe (Figure A-1). Excavation of the upper portion of rubble exposed several wooden boards across the width of the slot, oriented north-south (Figure A-38). The boards contained handwrought nails and were located between 3.6 and 3.7 ft. below the top of the 9 North Sixth Street wall. These boards were initially interpreted as a possible intact floor. The base of the 9 North Sixth Street wall as well as that of the east-west connecting wall along the north side of the 10-ft.-wide alley were reached at a depth of 4.6 ft. below the top of these walls, with the rubble extending under both foundations. Phase II testing of the slot was discontinued at this depth because of safety considerations.

The three additional shaft features documented during the Phase III data recovery (Features G, H, and I) were also subjected to Phase II archeological testing to determine if they were potentially significant cultural resources warranting Phase III-level investigation. Two of the three (G and I) were discovered when the soil surrounding Features B and E was being excavated by trackhoe preparatory to the installation of shoring boxes, whereas Feature H was exposed during Phase III excavation of the "slot" (Feature F) between two stone foundation walls (Figure A-1). As noted in the discussion of Phase III field methods, exposure of Feature G occurred during the excavation of soil by the trackhoe for the planned shoring of Feature E, which resulted in removal of the south half of Feature G. An interior diameter of about 5.3 ft. was estimated. The interior fill within the north half of Feature G remained intact for a short period, but then collapsed to the floor of the excavation (Figure A-9). The fill was then transported in the trackhoe bucket to a secure location, where the JMA field team retrieved a large sample of the artifacts. The recovered artifacts included 272 glass fragments: 53 from tumblers, 49 from case-gin bottles, 44 from wine bottles, 37 from unidentifiable bottles, 28 from wine glasses, 16 from unidentifiable containers, 14 from medicine bottles, 11 from windows, five from condiment bottles, five from decanters, three from case bottles, two each from mugs and Ball mason jars, single fragments from a cruet and a snuff bottle, and a stopper. Other artifacts consisted of three bone utensil handles, five buttons (3 brass, 1 pewter, 1 bone), 16 brass straight pins, two pewter spoons, three clay pipe fragments, a gunflint, and a ceramic marble. Faunal and floral remains included 63 bone fragments, 60 shell fragments (30 clam, 20 turtle, 9 oyster, and 1 unknown), a tooth, a cherry pit, and a piece of coral. The feature would have been located in the backyard of 9 (later 13) North Sixth Street, whose residents besides William Simmons included Thomas Crilly and his family. Crilly ran a tavern on the premises.

The exposure of Feature I by trackhoe and hand tools revealed that it consisted of a plastered brick dome capping a dry-laid brick shaft, similar to the construction of Feature A. The exterior diameter of the shaft at the base of the dome was 8.2 ft., resulting in an interior diameter of 7.5 ft., and the height of the dome was 2.05 ft., with a 1.7-ft.-diameter circular opening at its top (Figure A-11). The elevation adjacent to the top of the opening was 10.81 ft. BSD (21.31 ft. ASL). Prior to removing the west half of the feature by the trackhoe, the dome was cut with a circular saw to facilitate its removal. Archeological monitoring of the cross-sectioning revealed that the masonry composing the dome was a double thickness of mortared bricks measuring 0.35 by 0.70 ft., which were set on their sides (Figures A-39 and A-40). The upper 3.8 ft. of the feature interior, as measured from the underside of the opening, was empty. A deposit of cinders, slag, and ash approximately 3.68 ft. thick was the uppermost fill, extending to a depth of 18.99 ft. BSD (13.13 ft. ASL). A terra-cotta pipe measuring 0.62 ft. in exterior diameter (0.50-ft. interior diameter) entered the north side of the feature from the east edge of Feature B; the base of the pipe was just above the top of the cinder fill (Figure A-41). A basal deposit of brown (7.5YR 4/4) sandy clay loam underlay the cinders, terminating at the base of a projecting brick sill exposed at 20.56 ft. BSD (11.56 ft. ASL). Only a portion of the sill was exposed; it consisted of a dry-laid header course. The underlying intact substratum (2C horizon) consisted of strong brown (7.5YR 5/8) very gravelly sand (Figure A-39). A minimal quantity of artifacts was recovered from the fills, including three glass fragments (1 window, 1 tumbler, and 1 unidentifiable), a clay pipe fragment, a fragment of tin flashing, and five sherds of gray saltglazed stoneware from an ink bottle. Ten additional gray saltglazed stoneware sherds belonging to an ink bottle were recovered from a pipe trench directly south of Feature I. The late eighteenth- to mid-nineteenth-century occupants of the 225 High/527 Market Street lot on which Feature I was located are detailed in the above discussion of Feature B.

Feature H was initially exposed under the rubble and broken concrete floor within the Feature F slot, the east half of its dry-laid brick shaft occurring between the west foundation wall of 528

Commerce Street and the east foundation wall of 9 North Sixth Street (Figures A-1 and A-10). Following removal of the 528 Commerce Street wall by the trackhoe to facilitate access to the feature, preliminary Phase II testing began, entailing excavation of the southeast quarter of the shaft fill. This task became increasingly difficult with depth because of the presence of the east wall of 9 North Sixth, which overlay the middle of the feature from north to south. The uppermost deposit within this portion of Feature H was a dark grayish brown (10YR 4/2) sandy loam with a large quantity of brick rubble. The 0.9-ft.-thick layer contained predominantly twentieth-century artifacts, including 14 whole or fragmentary milk bottles dating between 1940 and 1949, 27 fragments of post-1903 jar glass, and four lightbulb fragments. In addition, two sherds from a yellowware spittoon (1840-1910) and a gray saltglazed stoneware mineral bottle were recovered. The underlying deposit, only 0.3 ft. thick, was a yellowish brown (10YR 5/4) very fine sandy loam with brick fragments and large metal fragments. However, the temporally diagnostic artifacts within the layer dated to the late-nineteenth to early-twentieth centuries, including a complete, clear-glass whiskey bottle manufactured ca. 1910. A "clean" layer of yellowish brown (10YR 5/8) very fine sandy loam occurred next, capping a deposit of very dark grayish brown (10YR 3/2) sandy loam exposed at 1.6 ft. below the upper brick course. Excavation was discontinued at this depth until better access could be gained. An intact brick arch was visible under the base of the 9 North Sixth foundation wall across the feature, extending north-south along the west face of the wall.

Subsequently, the portion of the 9 North Sixth wall overlying Feature H was cut out with a circular saw, thus exposing the bricked-in brick arch (Figure A-42). The arch consisted of two-brick courses of one header and one stretcher, 1.05 ft. wide. The peak of the arch was approximately 2 ft. above the upper brick course on the east side of Feature H. After the arch was removed, the full width of the feature was exposed. It measured 5.35 ft. east-west by 5.4 ft. north-south on the interior and was an additional 0.7 ft. wide on the exterior.

Further Phase II testing of Feature H involved excavating its southwest quarter. A new feature datum was established off the southwest side, at an elevation of 9.53 ft. BSD (22.59 ft. ASL). The uppermost layer (Stratum 1) registered as brown (10YR 5/3) silt loam to very fine sandy loam with some yellowish brown (10YR 5/6) mottling (Figure A-43). The deposit ranged from 0.25 to 0.30 ft. thick and contained 26 glass fragments (22 window, 3 bottle, 1 unidentifiable), three nails and 17 nail fragments, and three more sherds of yellowware spittoon. Additionally, single fragments of aluminum foil and linoleum tile were recovered, as were three pipe fragments (1, iron, 1 copper, 1 lead). The density of material within Stratum 1 increased with depth. The underlying layer was a mottled deposit of dark and very dark grayish brown (10YR 4/2, 3/2) sandy loam with cinder and slag inclusions. The layer (Stratum 2) included 21 fragments of window glass, 13 additional sherds from a yellowware spittoon, eight fragments of bottle glass, three gray saltglazed stoneware sherds from a mineral bottle, a white graniteware sherd from a coffee cup, a whiteware sherd, a sherd from a porcelain plate, and 49 nail fragments. It was only 0.25-0.28 ft. thick except along the south edge of the shaft, where it dipped to a depth of 1.45 ft. below datum (1.05 ft. thick). Stratum 3, a light olive brown (2.5Y 5/4) loam, occurred across all but the southern 1.8 ft. of the feature's southwest quarter and was underlain by the same matrix as in Stratum 2. Stratum 3 contained fewer cinders than Stratum 2, but the artifact content was temporally the same, including fragments of bottle glass with red lettering and a gray saltglazed stoneware bottle among the diagnostic material. The portion of Stratum 2 that underlay Stratum 3, designated Stratum 4 to avoid confusion, extended to between 1.25 and 1.70 ft. below the feature datum. The artifacts were consistent with the upper portion of the deposit (Stratum 2), but the density of cinders decreased. The maximum thickness of the layer was 1.25 ft., at the center of the quarter section.

A sterile deposit of yellowish brown (10YR 5/5) very fine sandy loam (Stratum 5), 0.1 to 0.4 ft. thick, underlay Stratum 4, capping two additional layers. The first of these deposits, Stratum 6, occurred across the north half of the quarter section and consisted of yellowish brown (10YR 5/4) sandy loam with cinders, slag, and brick fragments. Its few artifacts, including single fragments of pharmaceutical bottle and window glass, were comparable in type and age to those recovered from Strata 2 through 4. Stratum 6 was 0.75 to 1.05 ft. thick and overlay Stratum 7, which was exposed directly below Stratum 5 in the south half of the quarter section. Stratum 7 consisted of black (10YR 2/1) sandy loam and contained four bottles at its surface (Figure A-44), all of which date to within the 1911-1929 time period. Only the south half of the deposit was excavated, with additional artifacts including three fragments of window glass, three other fragments of glass bottle, seven tin can fragments, five nail fragments, a flower-pot fragment, and a fragment of plastic pipe. The excavated portion of the layer was 0.70 ft. thick, extending to 2.55 ft. below the feature datum. The final deposit exposed by hand tools within the southwest quarter of Feature H was Stratum 8, which consisted of olive brown (2.5Y 4/4) sandy loam and was excavated to a depth of 3.40 ft. below datum along the south side of the quarter (Figures A-43 and A-45). Artifacts included 15 glass fragments (5 ink bottle, 4 window, 3 unidentifiable, 2 beverage bottle, and 1 cosmetic jar). Only the cosmetic-jar fragment is datable, having been manufactured after 1903. The other artifacts from Stratum 8 were four nail fragments, three fragments of flat iron, a porcelain insulator, a brass garter, and a fragment of earthenware sewer pipe.

To expose the deeper interior fills safely within Feature H, the trackhoe removed the southeast side of the brick shaft to an initial depth of 7.4 ft. below datum, leaving the feature fill intact (Figure A-46). The various fill layers continued to contain mostly early-twentieth-century artifacts for approximately the first 3.0 ft. below the base of the hand-excavated section, but within the basal portion of the exposed deposit, between about 6.0-6.7 ft. below datum, the artifacts recovered during removal of the fill became much earlier, including a soda bottle and two gray saltglazed stoneware bottles for mineral water. In addition, two white granite sherds were recovered, one of which derived from a saucer; these date from post-1842. A creamware sherd (1770-1820) was also recovered, as were a gray saltglazed stoneware ink bottle and a fragment of tumbler glass. This layer consisted of brown (10YR 5/3) and yellowish brown (10YR 5/6) fine sandy loam. Following additional trackhoe excavation of the soil on the exterior of the shaft, which revealed that the feature extended deeper than 8.0 ft. below datum, more of the interior fill was removed. An apparent nightsoil deposit more than 1.0 ft. deep, composed of very dark gray (10YR 3/1) silt loam to loam, was exposed approximately 8.0 ft. below datum (Figure A-47). It contained three beverage bottles dating to between 1845 and 1870, an undated fragment of a liquor bottle, three fragments of shoe leather, three fragments of window glass, and a porcelain sherd. No further excavation was attempted because of the likelihood of destabilizing the adjacent shoring box surrounding Features C and D.

JMA consulted with Mr. Allan Cooper of the National Park Service and Mr. Kurt Beier of Day & Zimmermann regarding further investigation of the feature. Mr. Beier contacted a Day & Zimmermann project engineer, who determined that the proposed basement excavation would not disturb the probable nightsoil deposit. Based on this information, Mr. Cooper recommended that the deposit be preserved in place. The top of the remaining portion of feature was marked with a black granite slab and an identification sign prior to backfilling.

Feature H was located in the backyard of 5 (later 9) North Sixth Street, though closer to the street than Features C and D. Its position under the southeast corner of the stone foundation wall and the presence of a brick arch over the shaft along the west side of the wall indicate that the foundation wall represents a later (post-1940s?) addition to the rear of 9 North Sixth, which

required reinforcing the shaft to support the weight of the wall over it. The shaft was last filled in the 1940s, based on the diagnostic bottles found in its upper portion.

2.2 PHASE III DATA RECOVERY

2.2.1 FEATURE A

Feature A, which was empty to a depth of approximately 8.0 ft. prior to its exposure by the trackhoe during Phase II testing, was filled with demolition rubble that fell through the dome opening during its exposure, accumulating to within 4.1 ft. of its top. Before Phase III excavation commenced, the dome and several of the upper brick courses from the southwest half were removed to facilitate placement of the surrounding construction box (Figure A-6). An interior diameter of 5.15 ft. was recorded for the shaft. The rubble fill, composed of dark yellowish brown (10YR 3/4 to 3/6) sandy loam that gradually changed to strong brown (7.5YR 5/6 to 4/6) sand, both with gravel, mortar, brick bats, and slag, extended below the base of the brick shaft, to a depth of 6.7 to 6.8 ft. below the feature datum (Figure A-48). A projecting brick sill occurred at the base of the shaft, at 5.8 ft. below the datum (Figure A-49) and 1.0 ft. above the base of the rubble. The sill consisted of a dry-laid header course, as opposed to the dry-laid stretcher courses above. Artifacts recovered from the upper rubble fill (Level 1) included five fragments of twentieth-century bottle glass (3 from post-1903, 1 from 1952, and 1 from 1920-1964); 13 fragments of window glass; single fragments of marble, slate, brass electric-lamp fixture, and iron wire; a nail and nail fragment; an iron bolt; and two iron rods. The lower portion of rubble fill (Level 2) contained another post-1903 glass bottle fragment and a copper wire fragment. A porcelain insulator and stone fragment were recovered from the base of the feature. The rubble deposit terminated on a sterile, 0.1-ft.-thick deposit of very dark brown (10YR 2/2) sandy loam, which overlay an intact substratum of light olive brown (2.5Y 5/6) loamy sand that was exposed between 6.7 and 6.8 ft. below datum.

2.2.2 FEATURE B

The dimensions of the slightly ovoid brick shaft of Feature B were accurately established during Phase III data recovery, following removal of the “berm” of rubble along the east side of the feature. The exterior diameter was 11.2 ft. north-south by 10.6 ft. east-west, and the interior diameter was 9.8 ft. north-south by 9.4 ft. east-west. The masonry construction of approximately the upper half of the intact shaft consisted of randomly laid courses of handmade brick positioned either two bricks thick (with stretchers facing both the interior and exterior of the feature) or one brick thick (with the header ends of the brick facing both the interior and exterior of the feature). As many as three consecutive two-brick courses occurred within the upper half (Figure A-50). However, the method of construction changed to one of all-header courses of handmade brick (one brick thick) in the lower portion of the feature.

Only the east half of the feature was excavated during the Phase III data recovery (Figure A-51); this half was chosen to avoid the disturbances caused by Phase II testing as well as by looting that occurred sometime between the Phase II testing and Phase III data recovery. The upper three layers of fill in Feature B postdated the fire of 1856. These fills were deposited after the last use of the privy for its intended purpose. The opening layer (Level 1) of Feature B, designated Analytical Stratum (AS) VIII, consisted of overburden and contained large quantities of brick, plaster, plastic and other demolition debris in a matrix of brown (10YR 4/3 to 5/3) sandy loam, extending to a maximum depth of 0.95 ft. below the initial Phase III feature datum (B2), which was 13.58 ft. BSD (18.54 ft. ASL). This layer was not screened. At the base of this level, two

pipes were encountered, both trending roughly north-south (Figure A-52). The first was a cast-iron pipe with a diameter of 0.55 ft., which extended 6.4 ft. into the feature. The original length of this pipe was not apparent, because the southern end had substantially deteriorated. The second pipe, which had a diameter of 0.9 ft., was composed of fired clay with an external glaze. Following the installation of shoring around Feature B, it was discovered that this pipe led to Feature I. The base of the clay pipe was 2.3 ft. below datum B2. Below the overburden was a thin, grayish brown (10YR 5/2) to light grayish brown (10YR 6/2) lens of ash, slag, and cinders, designated Level 2 in the field and AS VII during post-field analyses. This level, through which the clay pipe cut, was almost nonexistent in some areas of the feature, extending to a maximum depth of 1.35 ft. below datum (Figure A-50).

The underlying Level 3 (AS VI) consisted of large quantities of brick, mortar, and plaster within a matrix of dark yellowish brown (10YR 4/6) sandy loam with charcoal flecking and some larger pieces of charcoal (Figures A-50 and A-53). This level, which was 3.9 to 4.65 ft. thick, likely relates to the 1856 fire, as indicated by the large quantities of charcoal along with melted window glass and other artifacts found during the Phase II testing. A pipe trench associated with the cast-iron pipe extended to the base of this level, which had a maximum depth of 6.0 ft. below datum. A 0.2- to 0.3-ft.-wide "lining" of greasy nightsoil, composed of dark grayish brown (10YR 4/2) silt loam, adhered to the interior walls of the feature, adjoining Level 3. This remnant nightsoil deposit was excavated separately and appeared to be the same matrix as that found in the underlying stratum.

Level 4 was intact nightsoil, its deposition marking the end of the use of the privy (Figure A-50). This 0.25- to 0.90-ft.-thick level (referred to as AS V), in addition to being a rich nightsoil deposit, contained a very large number of artifacts, with the densest quantity found toward the center of the feature. A lime lens occurred at the base of Level 4, toward the center of the feature. The lens was approximately 2.5 ft. long, with a maximum thickness of 0.8 ft. Because most of the artifacts found in the lens were large and were intruding into Level 4, this deposit was not excavated separately. In areas not covered by the lime lens, Level 4 terminated abruptly on Level 5, an olive brown (2.5Y 4/4) silt loam. This level, AS IV, was 1.75 ft. thick in the southeast corner of the feature and 2.21 ft. thick in the northeast corner. It contained few artifacts and appeared to be fill placed over the nightsoil below. It was not screened.

At 8.00 ft. below datum, another nightsoil deposit (Level 6) was exposed (Figure A-50). The interface between Levels 5 and 6 was excavated separately, to better ascertain the nature of the nightsoil deposit. After removal of the interface it was determined that Level 5 also overlay a second level, designated Level 7. Level 6 was a very dense, packed, very dark gray (10YR 3/1) loamy nightsoil approximately 2 ft. wide, occurring discontinuously along the inside periphery of the shaft. This 1.04- to 1.76-ft.-thick layer (AS III), which extended to 8.65 ft. below datum in the northeast corner and 9.76 ft. below datum in the southeast corner, contained large quantities of organic materials, including cherry and peach pits, watermelon seeds, peanut shells, leather shoe fragments, and pieces of wood. Because Level 6 was extremely moist and dense, waterscreening was necessary to recover all of the cultural materials; this screening method would be continued for the remainder of the excavation. Level 7 was a cone-shaped deposit surrounded by Level 6. The matrix of this mottled stratum, which was 0.35 to 0.80 ft. thick, consisted of equal portions of dark brown (10YR 3/3) and grayish brown (10YR 5/2) silt loam. It contained a higher density of artifacts than any of the other layers encountered in the feature (Figure A-54) and is interpreted as percolation fill, deposited to facilitate drainage of the privy contents or, additionally, to raise the basal depth of the shaft. The stratum was arbitrarily terminated at a depth of 9.0 ft. below datum; the remainder was excavated as a second layer (Level 7.1) to maintain better stratigraphic control and to facilitate the artifact analysis. However, as the excavation of Level 7.1 proceeded, it

became apparent that the matrix of this stratum was slightly different, consisting of about 60 percent grayish brown (10YR 5/2) loamy sand mottled with 40 percent dark brown (10YR 3/3) silt loam. The deposit, also interpreted as percolation fill, was 0.76 to 0.82 ft. thick and extended to a maximum depth of 9.82 ft. below datum. Levels 7 and 7.1 were combined during stratigraphic/artifactual analyses as AS II. In all but the east-central portion of the feature, Level 7.1 constituted the base of the feature, below which was a compact, yellowish brown (10YR 5/8), gravelly sand substrate (Figure A-50).

Another residual nightsoil deposit (Level 8, shown on Figure A-50) occurred in the small remaining portion of the feature, with a maximum east-west width of 0.7 ft. and a north-south length of 6.0 ft.; this roughly crescent-shaped stratum, surrounded and capped by Level 7.1, was somewhat drier and more dense than Level 6. The 0.44-ft.-thick deposit consisted of a black (2.5Y 2.5/1) loamy nightsoil; as in Level 6, a large quantity of organic food and clothing remains were preserved. The eastern edge of Level 8 was 1.5 ft. west of the interior lining of the feature. This remnant deposit, designated AS I, also terminated on the base of the feature, revealing the same undisturbed soil exposed at the base of Level 7.1.

In summary, the Feature B fills represented what are interpreted as eight depositional episodes. The lowermost, AS I (Level 8), was privy nightsoil. AS II (Levels 7 and 7.1) has been interpreted as percolation fills. Another nightsoil deposit, AS III (Level 6), appears to have been a residual deposit that was mostly removed during privy cleaning. AS IV (Level 5) was apparently fill thrown on top of the underlying nightsoil. AS V (Level 4) was the uppermost privy deposit, constituting the final use of the shaft for that purpose. AS VI (Level 3) was demolition debris and melted glass that was placed in the shaft following the 1856 fire, while AS VII (Level 2) was an intrusive deposit into Level 3. The uppermost fill, AS VIII (Level 1), consisted of demolition debris that was dumped over the truncated shaft after 527 Market Street was razed in 1954.

2.2.3 FEATURE C

A Phase III datum was established for Feature C on top of the upper horizontal beam on the east side of the surrounding shoring box. The elevation of the datum was 11.30 ft. BSD, which was 20.82 ft. ASL. The upper portion of fill within Feature C, designated Level 1, consisted of grayish brown (10YR 5/2) slag with iron oxide mottling. A glass jar and a portion of a porcelain tea cup were the only artifacts contained therein. This deposit was between 1.9 and 2.70 ft. thick and extended to the top of a slightly concave concrete cap (Figures A-55 and A-56), which was exposed between 2.40 and 2.70 ft. below the feature datum (14.04 ft BSD/18.08 ft. ASL). An interior brick shaft, abutting the outer shaft, occurred at 1.75 ft. below datum (above the cap) decreasing the interior diameter of the feature by 0.80 ft. on average. The elevation at the top of the interior shaft was 13.02 ft. BSD (19.10 ft. ASL). Both shafts continued to the base of the feature. Removal of the concrete cap, which was between 0.15 and 0.20 ft. thick and contained a centrally located notch that was 1.80 ft. long by a maximum of 0.50 ft. wide, exposed a thin, sterile deposit of gray to grayish brown (10YR 5/1-5/2) fine sand. This layer was screened separately but not designated as a level in the field; it is shown as Level 2a on Figure A-55. Directly under the sand, which was about 0.35 ft. thick, was a moist deposit of slag with iron inclusions (Level 2b). The mottled slag registered as grayish brown (10YR 5/2), brown (10YR 5/3), and pale brown (10YR 6/3) and contained two fragments of window glass, two whiteware sherds, a portion of a porcelain tea cup, and an unidentifiable glass fragment. The combined thickness of Levels 2a and 2b ranged from 0.95 ft. in the northeast corner of the feature to 1.30 ft. in the northwest and southwest corners (Figure A-55).

Level 3 occurred between 3.75 and 4.0 ft. below datum and consisted of strong brown (7.5YR 4/6), very moist silt loam with brick, mortar, and slag. The deposit was 0.40 to 0.75 ft. thick and yielded six open-pontilled bottle bases or whole bottles, 14 porcelain sherds from a saucer, two fragments of window glass, a whiteware sherd, and bone fragments. It terminated abruptly on a nearly saturated, very dark brown (10YR 2/2) to very dark grayish brown (10YR 3/2) loamy nightsoil (Level 4), which was the basal deposit of the feature (Figure A-55). The large quantity of artifacts recovered from Level 4 includes 17 whole, open-pontilled medicine bottles; 10 fragments of other bottle glass; 11 fragments from glass tumblers; three fragments of wine glass; three bone toothbrushes; a bone comb; 39 whiteware sherds (12 pitcher fragments, 9 saucer fragments, 2 tea cup fragments); nine ironstone sherds (7 plate fragments); nine sherds from a flow-blue, soft-paste porcelain saucer; five pearlware sherds (2 bowl fragments); two white granite sherds; a sherd from a creamware chamber pot; a sherd from a saltglazed stoneware crock; seven fragments of window glass; a graphite pencil; and bone fragments. In addition, six sherds from a yellowware pan recovered from Levels 2 and 4 mended, as did two medicine bottles from Levels 3 and 4. The bottom of the deposit occurred between 4.75 and 5.00 ft. below datum, ranging from 0.25 ft. thick in the northeast corner to 0.55 ft. thick in the southwest corner and extending below the lowermost brick course of the shaft, which occurred at 4.70 ft. below datum (Figure A-55). The underlying, undisturbed substratum was grayish brown (10YR 5/2) sand, exposed at 16.48 ft. BSD or 15.64 ft. ASL. The brick bond used in construction of the shaft consisted exclusively of stretcher courses.

Feature C is interpreted as a privy that was filled in four episodes. AS I includes Level 4, which was a primary privy deposit. Level 3 (designated AS II) appeared to be fill intentionally placed on top of the nightsoil. AS III includes Levels 2a and 2b, with 2b representing a mix of household and furnace-cleanout debris thrown in after use of the shaft as a privy had been discontinued. Level 2a was an accumulation of low-energy sedimentation that washed into the shaft prior to its capping. AS IV, corresponding to Level 1, consisted of postabandonment fill, primarily from building demolition that accumulated on top of the concrete cap (Figure A-55).

2.2.4 FEATURE D

The Phase III datum established for Feature C was also used for Feature D, with an elevation of 11.30 ft. BSD (20.82 ft. ASL). Prior to the start of manual excavation, the remnant arched brick cap and the upper courses of the shaft were removed by trackhoe to near the top of the rubble that had fallen in during removal of the surrounding soil preparatory to Phase III excavation. After manually shoveling out the rubble that fell in during this procedure, two interior opening depths were taken, calculated as 18.63 and 18.86 ft. BSD. The interior “floor” of the shaft upon its initial exposure during Phase II testing had been 18.45 ft. BSD (13.67 ft. ASL), within 0.41 ft. of the initial depth.

Few artifacts were recovered from the interior fill, which consisted of alternating bands of olive brown (2.5Y 4/3) and light yellowish brown (2.5Y 6/4) sandy loam to loamy sand (Figure A-57). The only cultural material recovered was an open-pontilled bottle base, two other fragments of bottle glass; single fragments of window glass, a wine glass, and unidentifiable glass; three whiteware sherds; two pearlware sherds from a pitcher; eight nail fragments; and two buttons (1 shell, 1 iron). A small lens of very dark grayish brown (10YR 3/2) silt loam, likely derived from water percolation, occurred within the lower portion of the interior fill, which was only 1.10 to 1.38 ft. thick. The feature fill terminated on an undisturbed subfeature stratum of dark red (2.5YR 3/6) sand that was exposed at 8.66 and 8.71 ft. below feature datum, or 20.01 ft. BSD (12.11 ft. ASL) (Figure A-57). The brick bond of the 4.05-ft.-diameter shaft consisted of stretcher courses except for an occasional header used as a filler, and a basal sill was not present (Figure A-58).

Feature D is interpreted as a privy that was cleaned and then immediately capped. No analytical strata were assigned.

2.2.5 *FEATURE E*

The Phase III datum established for Feature E was located at the top course of the intact brickwork and was 11.25 ft. BSD (20.87 ft. ASL). Shoring was not required during Phase III excavation of the feature because of its shallow depth (4.19 ft.), which was determined by removing the surrounding soil by trackhoe. The feature was not bisected because of time considerations: Day & Zimmermann had to construct shoring around nearby Features C and D and needed to put the trackhoe in the location of Feature E.

The top layer within Feature E (Level 1a) consisted of stone rubble and substantial quantities of mortar and brick fragments in a matrix of brown (10YR 5/3) silt loam. A deposit of dark brown (10YR 3/3) silt loam mottled with strong brown (7.5YR 5/8) loam (Level 1) occurred along the north edge and extended to the same depth as Level 1a (Figure A-59). The stone rubble probably derived from the deconstructed wall that had lain across the east edge of the privy shaft, and the mortar likely related to the construction of this wall. Level 1/1a ranged between 0.34 and 0.70 ft. thick. Beneath this was a fairly homogeneous, thick layer of yellowish brown (10YR 5/4) sandy loam, which was arbitrarily divided into Levels 2 and 3 based on artifact density. In the upper portion of the layer (Level 2), which varied from 1.47 to 1.81 ft. thick and extended to a maximum of 2.26 ft. below the feature datum, the artifacts were concentrated around the edges of the shaft. In Level 3, which was 0.80 ft. thick, the artifacts occurred throughout the layer (Figure A-60). The maximum depth of Level 3 was 3.06 ft. below feature datum.

Level 4 consisted of brown (10YR 5/3) coarse sand that became wetter with depth. It was between 0.24 and 0.28 ft. thick and included concentrations of charcoal, mortar, and brick. The matrix was somewhat organic and may have included at least some nightsoil. Many small mammal and bird bones were recovered, suggesting that this layer was left open for some time and that the mammals were rodents. Many soil samples were taken for flotation and parasite analysis. Level 5 was light olive brown (2.5Y 5/6) sandy loam, probably also nightsoil. This was the lowermost deposit in the privy shaft and included a few early artifacts. A “floor” of small brick fragments occurred at the base of the stratum, at a depth of 14.69 ft. BSD (17.43 ft. ASL). The deposit ended at the base of the brick shaft, which was underlain by an intact substratum of clean, light reddish brown (5YR 6/3) sand that likely constituted a C horizon. The sand substratum was exposed only in the west side of the feature but is included in the drawn east profile (Figure A-59). It occurred at 14.83 ft. BSD (17.29 ft. ASL) in the middle of the feature.

Three analytical strata were identified in Feature E. The uppermost stratum, AS III (Levels 1 and 1a on Figure A-59), was rubble that overlay two privy fills: AS II, which included Levels 2, 3, and 4, and AS I, which included Level 5. AS II appeared to be a privy fill that had been partially removed by scooping.

2.2.6 FEATURE F

The narrow slot between 9 North Sixth Street and 528 Commerce Street, measuring 2.35 ft. wide by approximately 15 ft. long, was divided into three 5-ft.-long segments for the purpose of facilitating recordation. The apparent wooden floor partially exposed during Phase II testing was fully exposed during Phase III, revealing merely a pile of wooden boards rather than an intact floor. The wooden boards and the rubble fill that surrounded and underlay them were removed, exposing an in situ concrete floor that had been poured directly on a deeper layer of rubble fill.

The top of the concrete floor was 6.61 ft. BSD (25.51 ft. ASL). It was 1.5 to 1.75 ft. thick and had been broken in place, easily permitting its removal. Fragments of brick and rock adhered to its underside. The underlying rubble fill was removed and screened; it contained artifacts that were largely undatable, including 31 fragments of window glass, a fragment of terra-cotta flower pot, a porcelain insulator, two fragments of bottle glass, eight nails and 19 nail fragments. However, three yellowware sherds from a spittoon (1840-1910) were present. Below the rubble, intact soil was exposed within the east edge of the southern 5-ft. segment (designated EU 3), with the depth of the rubble dipping in the remainder of EU 3. Upon removal of more rubble, the intact east side of the dry-laid brick shaft designated Feature H (discussed above) was exposed at 8.18 ft. BSD (23.94 ft. ASL), surrounded by intact soil (Figure A-1). No additional features were present within the slot.

SECTION 3: LABORATORY PROCEDURES AND ARTIFACT ANALYSES

3.1 METHODS

JMA personnel processed a total of 73,438 artifacts from the Independence Visitor Center project in JMA's archeology laboratory in West Chester, Pennsylvania. Soil samples for flotation were processed in the lab and the resulting fraction was submitted to New South Associates for floral analysis. Soil samples for parasite and pollen analysis were likewise collected and submitted to New South. Emily Williams of The Colonial Williamsburg Foundation in Williamsburg, Virginia, conducted conservation of selected artifacts. Upon completion of the project, the Independence Visitor Center archeological collection (Accession 4142), an electronic copy of the inventory on disk, field notes, maps, and photographs will be submitted to Independence National Historical Park in Philadelphia.

Artifacts recovered during the field investigations were cleaned, cataloged in the National Park Service's Automated National Cataloging System Plus (ANCS+), marked with the appropriate catalog number, and stored in archival containers labeled with provenience information. Artifacts in nightsoil deposits, recovered through a process of waterscreening in the field and in the lab, required a second cleaning. Wood and leather objects recovered from nightsoil contexts were cleaned and kept in a wet, refrigerated environment until they could be treated further by a conservator. To the extent possible, artifacts were identified in the ANCS+ database by type, material, function, and cultural/chronological association. Ceramic and glass artifacts from Features B, E, and G were vesselized and cataloged at the vessel level, as well as only the glass artifacts from Feature H; the "remainders" that could not be vesselized were cataloged in order by lot. Each feature was assigned a series of vessel numbers, ceramic and glass each beginning with number one, which represent the minimum number of items for these features.

Artifact analysis concentrated on dating and defining functional and material patterns that were indicative of the functional nature of the assemblage and provided explanatory data related to site-formation processes. The results of the ceramic, glass, and small-find analyses are presented in Section 3 of this appendix; separate appendices describe the faunal (Appendix C), floral (Appendix D), and parasitological (Appendix E) analyses. The conservation methods and results are presented in Appendix F.

3.2 THE BLOCK 2 CERAMIC ASSEMBLAGE

3.2.1 METHODS

Ceramic sherds were labeled according to excavation level and laid out by ware type and vessel form for cross mending. Once assembled, vessels were grouped according to analytical strata (AS), then functional groups based on form and ware, and finally into matching and compatible groupings for the identification of sets. Sets were identified based on a minimum of three matching vessels or three different vessel forms of the same ware with identical decoration. Compatibility was noted for vessels of the same ware but with one or two slightly different elements present in the decoration. Vessels were then cataloged in this order, and individual vessels were described according to ware, decoration, form, and condition, i.e., percent present and degree of use wear visible. Vessels were assigned a unique vessel number in addition to the

INDE catalog number, with careful notation of which level the sherds from a given vessel derived. Residual sherds not attributed to a vessel were cataloged by ware type according to provenience with the rest of the artifacts.

For analysis, the ceramic assemblage was broken down into the following functional groupings: teaware, tableware, beverage consumption, kitchen, and hygiene. Teawares include vessels associated with the drinking of tea as well as other hot beverages, namely coffee and chocolate. In some cases it was possible to distinguish which beverage was being consumed by vessel form. Tablewares consist primarily of flatware vessel forms used in serving and eating food in the formal setting of a parlor or dining room. Hollowwares associated with dining were placed in a separate group for beverage consumption. This group included vessels used to prepare, serve, and consume non-tea/coffee/chocolate beverages. Kitchen vessels reflect food preparation and storage, cooking, and eating activities generally restricted to the informal setting of the kitchen work area. The fifth group, hygiene, comprises ceramic vessels associated with personal health and hygiene. All other ceramic vessels, such as those related to household furnishing, gardening, and miniatures (toys), are discussed in the small-finds section.

3.2.2 FEATURE B

A total of 841vessels was identified through Minimum Vessel Analysis; 818 of these vessels are discussed in the analysis that follows, while the remainder are discussed with the small finds or are unidentified. Ninety-nine percent of the vessels were recovered from the three analytical strata at the bottom of the Feature B: AS II, AS III, and AS V (Figure A-50). As discussed in Section 2.2.2 above, eight analytical strata (AS) were identified. The ceramics from each are described below, beginning with the earliest deposit.

AS I (TPQ 1790)
Only four vessels were recovered from the thin layer of nightsoil lining the bottom of Feature B: one Spanish coarse earthenware olive jar, an English creamware table plate belonging to a set (#16) discarded in the layer above (AS II), and two Chinese porcelain teawares, a slop bowl and a saucer. The TPQ is based on the two Chinese porcelain vessels, but the sample is really too small to date definitively.

AS II (TPQ 1816)
A minimum of 431 vessels were identified in AS II and are distributed among the following functional groups: 36 percent teaware, 37 percent tableware, 13 percent kitchen, 7 percent hygiene, and 7 percent beverage consumption. Out of the total, nearly one quarter (23%) belonged to matched sets. Nineteen sets were identified, including seven of teaware, 11 of tableware, and one of matching tankards. The TPQ is based on a glass “London” mustard, although many of the ceramics dated much earlier.

Teawares (155)
A total of 155 vessels was identified as pieces of tea services, including 8 vessels specifically for coffee (Table A-2). A pewter tea caddy (not included in the table) was among the discarded vessels associated with serving tea. Of the seven ceramic teasets, two included matching vessels for serving and drinking coffee in addition to tea. One teaset included child-size cups and saucers (Set #1), indicating the participation of children in the tea ceremony of the grownups. Two of the tea sets were from England. One was made of plain creamware (#1) and included three teapots, one slop bowl, four teabowls, one child-sized teabowl, one saucer, and one child-sized saucer.

				CHILD			TEA								COFFEE			
AS	SET	DESCRIPTION	DATE	TEAPOT	TEABOWL	SAUCER	TEABOWL	TEA CUP/CUP	SAUCER	SLOP BOWL	SUGAR BOWL	TRAY	TEAPOY	TEAPOT	COFFEE CAN	COFFEE CUP	COFFEE POT	TOTALS
		SETS																
II	1	Plain Creamware	*1770-1820*		1	1	4		1	1				3				11
III	1	Plain Creamware	*1770-1820*			1	1											2
II	2	CEP: Red Overglaze Landscape	*1790-1825*				5		4			1				3		13
III	2	CEP Red OG Landscape	*1790-1825*										1					1
II	3	CEP: Red/brown OG Rose Bouquet	*1790-1825*						2					1				3
III	3	CEP Red/brown OG Rose Bouquet	*1790-1825*				1											1
II	4	CEP: Red/black OG Floral Vine	*1790-1825*					1	2									3
III	4	CEP Red/black OG Floral Vine	*1790-1825*						1									1
II	5	CEP: Black OG Rose Bouquet	*1790-1825*					2	2									4
III	5	CEP Black OG Rose Bouquet	*1790-1825*					1										1
II	6	English Porcelain: OG Polychrome Cornflowers, Gilded	*1778-1781*					8	9			1		1		1		20
II	7	English Soft Paste Porcelain: OG Brown Leaf Border, Gilded	*1795-1825*					6	5		1			1	2			15
III	7	English Soft Paste Porcelain, OG Brown Leaf Border, Gilded	*1795-1825*						1									1
V	8	English Bone China, Black TP "My Play Fellow"	*1812-1825*				6		2									8
V	9	English Bone China, Black TP Shepherd Couple	*1812-1825*				6		2									8
V	10	Blue TP Pearlware "Lady of the Lake"	*1823-1842*				5		5									10
V	11	Blue TP Scenic, Pearlware	*1812-1825*				3		1									4
V	12	Black TP Genre, Whiteware	*1815-1915*					2	4									6
		NONSETS																
I		CEP: Painted Overglaze	*1790-1825*						1	1								2
II		CEP: Painted Overglaze	*1790-1825*				3	6	24	4						3		40
III		CEP: Painted Overglaze	*1790-1825*				2	1	2	3								8
V		CEP: Painted Overglaze	*1790-1825*				8		6					1				15
II		CEP: Blue Painted Underglaze	*1800-1830*						6	1								7
III		CEP: Blue Painted Underglaze	*1800-1830*						1									1
V		CEP: Blue Painted Underglaze	*1800-1830*						1	1								2
V		CEP: Plain	*1795-1825*				1									1		2
II		Porcelain, French/American? Painted Overglaze	*19th Century*						1					1				2
V		Porcelain, French/American? Painted Overglaze	*19th Century*					1										1
III		English Porcelain, Painted OG	*1795-1825*												2			2
II		English Basaltware	*1795-1805*							1				1			1	3
II		Creamware, Plain	*1770-1820*							11								11
III		Creamware, Plain	*1770-1820*				1			2								3
II		Pearlware, Painted Polychrome Underglaze	*1795-1830*		2	1	2			2	2			4				13
III		Pearlware, Painted Polychrome Underglaze	*1795-1830*	1	1	1		1	1									5
V		Pearlware, Painted Polychrome Underglaze	*1795-1830*											2				2
II		Pearlware, Painted/Sponged/Printed Polychrome Underglaze	*1795-1830*						1	1								2
II		Pearlware, Painted/Printed Polychrome Underglaze	*1795-1830*							1								1
II		Pearlware, Blue Painted Underglaze	*1775-1812*				1		1									2
V		Pearlware, Blue Painted Underglaze	*1775-1813*						1					1				2
II		Pearlware, Polychrome Painted Overglaze	*1775-1830*				1											1
V		Pearlware, Polychrome Painted Overglaze	*1775-1830*						1									1
II		Pearlware, Blue Transfer Print	*1784-1840*				1	1	1					1				4
III		Pearlware, Blue Transfer Print	*1784-1840*					1	1						1			3
V		Pearlware, Blue Transfer Print	*1784-1841*				1	2	2	4				3				12
III		Pearlware, Black Transfer Print	*1790-1830*							1								1
V		Pearlware, Red Transfer Print	*1830-1840*				1											1
III		Refined Redware, possibly Philadelphia	*19th Century*											3			1	4
V		Whiteware, Black Transfer Print	*1815-1915*						2									2
V		Bone China, Black Transfer Print	*1812-1825*				2		1									3
		TOTALS		1	4	4	55	33	95	34	3	2	1	23	5	8	2	270

Table A-2. Teawares, Feature B, AS II, III, and V

The second English set (#7), consisting of a teapot, sugar bowl, six teacups, five saucers, and two coffee cans (Figure A-61), was made of a gilded, floral soft-paste porcelain. Of four Chinese tea sets, Set #2 was decorated with a delicately painted Chinese red-orange landscape. This set included a tea tray or stand, five teabowls, three coffee cups, and four saucers. The other hand-painted Chinese porcelain tea sets included remnants of one teaset adorned with a red and brown rose bouquet and festoon border, one with a red floral sprig motif with black vine border, and one with a red bouquet with a black-and-gold geometric border. The best-preserved tea set (#6) was a set marked with the blue crossed swords of Dresden made in imitation of German Meissen. Decorated with overglaze polychrome bands of cornflowers in a gilded border, the set included a teapot and tray or stand, eight tea or coffee handled cups, and nine saucers (Figure A-62). Set # 6 may have been made in Bristol by Cookworthy and Champion, producers of hard-paste porcelain in 1778-1781 (Godden 1995:103; Feild 1987:167).

Sixty-nine percent of the teawares were porcelain, 15 percent pearlware, 14 percent creamware, and 2 percent basaltware. Ninety-nine percent were imported, 54 percent from England and 45 percent from China, and 1 percent were French or American. Handpainted teawares with floral motifs predominated. Over three-quarters of the teawares were painted (81%), 14 percent were plain, 3 percent were transferprinted, and 2 percent were molded.

Tea vessels not associated with the above sets included 34 saucers, 17 cups (8 teabowls, 6 teacups with handles, and 3 coffee/chocolate cups with handles), 20 slop bowls, 7 teapots, 1 coffeepot, and 2 sugar bowls. Among these were several matching cups and saucers and compatible vessels. The somewhat large number of unmatched slop bowls suggests that these items were probably purchased separately. Likewise, many cups and saucers had hand-painted floral decorations that were similar but not enough so to be described as compatible or matching.

Three nonmatching basaltware tea-serving vessels—a teapot, a coffee pot, and a slop bowl—were probably used in some combination with the above-described teawares. Despite the high incidence of handpainted pearlware tea vessels in AS II, none were identified as sets. Two blue and 22 polychrome cups, saucers, and teapots in high-temperature colors of mustard, brown, olive green, and blue were used. According to George Miller (personal communication 1995), these were the cheapest decorated teawares. One small saucer, probably used for butter, both painted and sponged, was decorated with a peafowl. Two of these teabowls and one saucer were child sizes. The children's teabowls matched two vessels in AS III.

Out of 155 vessels, 47 were less than 25 percent complete, 44 were 25-49 percent complete, 45 were 50-74 percent complete, and 19 were greater than 75 percent complete. Not surprisingly, the hard-paste porcelains were the most durable. The most noticeable wear exhibited by the porcelain teas was the deterioration of the overglaze decoration, particularly on the exteriors of teabowls and around cup rims where they were handled most. Wear on the outsides of the cups was less when the cups had handles. Interior stir marks were most visible on the creamware and soft-paste porcelain vessels. Overall, the Meissen-style porcelain tea set was the best preserved.

Tablewares (160)

A total of 160 tableware vessels was identified in AS II. Vessel forms associated with dining included 31 table plates (10" diameter), 28 supper plates (9" diameter), 25 muffin plates (4-7" diameter), 17 soup plates, 14 twifflers (8" diameter dessert plates), 1 saucer dish, and 1 egg cup. Serving vessels included 20 variously sized platters, 8 serving bowls, 7 serving dishes, 3 tureens, 3 sauceboats, and 1 cress basket (Table A-3). Additionally, one sherd was designated a vessel but was unidentifiable as to form.

All of the tablewares were imported, the overwhelming majority (94%) from England, and the rest from China. Forty-eight percent of the tablewares were creamware, 36 percent were pearlware, and 6 percent were porcelain. Edge-decorated tablewares were the most popular by far, totaling 64 percent, followed by Royal-patterned creamware (18%), plain undecorated wares (11%), and painted (7%). A single transfer-printed vessel accounted for less than one percent. Eighty-four percent of the tablewares belonged to at least eleven different sets (Table A-3).

There were five creamware table sets, one plain undecorated, one with rims molded in the Royal pattern, and three different green-shell-edged sets (Figure A-63). There were five distinct blue-shell-edge pearlware table sets and a single set of blue Canton porcelain dishes. Tableware sets were conservatively defined among the edge-decorated pearlwares, Royal pattern, and plain creamwares. Vessel shading and decoration had to be identical matches; consequently, some sets may have the same pattern but may have been separated on the basis of slight variations in color or shading or have different manufacturers. Initially, edge-decorated tablewares of the same color appeared to match, but on closer inspection, minor differences were noted in the edge decoration. These differences have been separated chronologically by Hunter and Miller (1994:434), but it is unclear how much attention nineteenth-century consumers paid to these minor distinctions.

Table A-3. Tablewares, Feature B, AS II

SET	DESCRIPTION	DATE	MUFFIN PLATE	SOUP PLATE	SUPPER PLATE	TABLE PLATE	TWIFFLER	EGG CUP	CRESS BASKET	SAUCER DISH	SERVING DISH	SERVING BOWL	SAUCE BOAT	TUREEN	PLATTER	UNID	Totals
17	Creamware, Royal Pattern	1765-1810	2	6		6	4					3			7		28
	Creamware, Feather Edge	1762-1800													1		1
16	Plain Creamware	1770-1820		2	6	8											16
	Plain Creamware	1770-1820		2													2
18	Green-Shell-Edge Creamware, Rococo	1775-1800	2			4	1										7
	Green-Shell-Edge Creamware, Rococo	1775-1800			1	3							1	2			7
20	Green-Shell-Edge Creamware, Even Scallop Straight Lines	1775-1800	2	3		1	1				1		1			1	10
	Green-Shell-Edge Pearlware, Even Scallop Straight Lines	1809-1831	1		1												2
19	Green-Shell-Edge Creamware, Even Scallop Curved Lines	1780-1800				1					2				3		6
	Green-Shell-Edge Pearlware, Unscalloped Impressed Lines	1830-1860	1		1			1			1						4
21	Blue-Shell-Edge Pearlware, Rococo w/ Bud	1784-1800			5	3							1	1	2		12
22	Blue-Shell-Edge Pearlware, Rococo w/ Bud (John Davenport)	1794-1815			2	1									3		6
23	Blue-Shell-Edge Pearlware, Even Scallop Curved Lines (John Davenport)	1802-1815	3	3	6						2	1			1		16
24	Blue-Shell-Edge Pearlware, Even Scallop Curved Lines	1802-1815				1	3					1			1		6
25	Blue-Shell-Edge Pearlware, Even Scallop Straight Lines	1809-1831	10	1	3	3	4					3			1		25
	Pearlware, Blue Painted								1		1						2
	Pearlware, Blue Printed		1														1
13	Canton Hard-Paste Porcelain	1800-1830	3														3
	Porcelain, Blue Painted						1			1					1		3
	Porcelain, Ovrglz Painted				3												3
	TOTALS		25	17	28	31	14	1	1	1	7	8	3	3	20	1	160

Plain creamware and Royal-patterned creamware table settings were defined by subtle differences in shading. It is conceivable that all of the plain and Royal creamwares in a given stratum were used together and represent additions purchased in batches or from different manufacturers. The creamware sets, popular in the 1780s, were old by the time they were discarded and due to breakage may have been supplemented with the purchase of individual pieces to replace ones broken during the life of the set. Therefore, sets and non-set vessels are summarized together in Table A-3. The heavy wear patterns visible on the creamware plates and platters reflect long use, or possibly, once replaced by the more fashionable edgewares, the plain creamware setting may have been relegated to the kitchen for further use by the servants. All of the table settings exhibited moderate to heavy signs of wear, particularly knife cuts in the interiors of plates and platters (Figure A-64). Platters were particularly worn with heavy cut marks inside, scratched bases, and often chipped rims.

Four different shell-edged rim patterns were represented in eight table services in two colors, blue (5) and green (3): rococo (ca. 1775-1800), rococo with bud (ca. 1784-1800), even scalloped with curved lines (ca. 1802-1832), and even scalloped with straight lines (ca. 1809-1831). One of the two earliest shell-edged patterns was made on a creamware body. With the exception of the rococo patterns, these table services were discarded while still popular, though as mentioned above, they showed evidence of heavy use before being relegated to the trash heap. Nearly half of the vessels were over 50 percent complete with the most common table forms represented, suggesting that whole sets were thrown out. Possible explanations for this behavior include when someone moves and disposes of old, out-of-style objects, when too many pieces of a set are worn and incomplete from breakage, or from illness. It should be noted that there was a cholera epidemic in Philadelphia in 1825, which may have inspired the discarding of large quantities of household goods.

The tableware vessels that did not belong to sets were generally compatible and may have been purchased to replace broken pieces. Exceptions were three very fine overglaze-decorated porcelain plates (V. 690-692) dating from 1750-1800, which may have been curated pieces. Two of the plates matched; approximately half of these two were present, while nearly three quarters of the third plate survived. The surfaces of the plates were moderately scratched, indicating use, and the overglaze decoration was discolored and worn. These plates may represent the equivalent of the occupants' "Sunday best" or, considering their antiquity, they may have been display pieces before being discarded.

Most (72%) of the serving vessels belonged to sets. The most pervasive form of serving vessel was the platter (20), followed by serving bowls and serving dishes (15), tureens (3), sauceboats (3), and one basket. Tureens and sauceboats were found only in the edge-decorated settings. Only a few fragments of a delicate blue-painted pearlware cress basket were recovered. This fancy vessel form, originally made by Josiah Wedgewood but copied by other English potters, was manufactured in the 1780s (Phillips 1956:158).

Beverage Consumption (29)

Twenty-nine vessels or 7 percent of the vessels in AS II were for the consumption of non-tea beverages. Vessels in this group included 3 children's mugs (2 creamware and 1 pearlware), 2 pearlware mugs, 4 creamware tankards, 17 jugs (10 pearlware, 3 redware, 3 creamware, and 1 buff earthenware), 2 creamware punch bowls, and 1 pearlware matching stand for one of the jugs. One set was identified in the beverage group, consisting of four matching plain creamware tankards of various sizes (Set #15). The predominant vessel form in this category, jugs, served

dual functions for temporary storage of liquids such as oil, and for fermenting cider in the kitchen as well as for mixing and serving beverages during meals.

Eight pearlware vessels had mocha decoration: two mugs, and five jugs, one with Greek key rouletting and a matching stand, possibly manufactured by Clews in Cobridge, England. Mocha wares were popular in this country from 1795-1835 and, according to George Miller, were "the cheapest hollow ware available with decoration" (Rickard 1993:187). Mocha ware bowls and jugs were probably used in the kitchen as well as for serving at the table.

Kitchen (57)

Kitchenwares (Table A-4) made up 13 percent of the AS II vessels. Seventy-nine percent of the vessels were redware, 7 percent creamware, 7 percent stoneware, 5 percent buff earthenware, and 2 percent coarse earthenware.

Table A-4. Kitchenwares, Feature B, AS II

Vessel form	AS II	AS III	AS V	Totals
Food Preparation, Food Storage				
milk pan	9	4	4	17
butter pot/crock/lid	9	4	5	18
Jar	8	0	1	9
mixing bowl	4	2	4	10
Bottle	0	0	1	1
Pipkin	1	0	1	2
olive jar	1	0	0	1
Mold	1	0	0	1
Subtotal	33	10	16	59
Eating/Serving Food				
patty pan	0	0	1	1
pie plate	5	1	1	7
pudding pan	12	2	2	16
Bowl	3	0	6	9
Porringer	2	0	1	3
egg cup	0	1	0	1
Trencher	0	1	5	6
Subtotal	22	5	16	43
Sherd, unidentified	2	0	2	4
TOTAL	57	15	34	106

All of the redware vessels were made in Philadelphia, revealing a strong preference for locally produced utilitarian wares. Only seven of the kitchenwares were imported, including one Spanish olive jar and several creamware vessels from England (three mixing bowls, one mold, and two stoneware jars). Pudding pans (12), the most abundant form, came in two sizes – one quart and one-and-three-quarters quarts – followed by milk pans (9), also present in two sizes– two-and-three-eighth quarts and five-and-one-quarter quarts (Figure A-65). Other kitchen forms included butter pots/crocks (9), jars of various sizes (8), pie plates (5), two-quart mixing bowls (4), bowls (3), porringers (2), an olive jar (1), a mold (1), a pipkin (1), and unidentified hollowware sherds (2). The kitchen vessel forms reflect food preparation and storage, cooking, and eating activities

generally conducted in the kitchen. The vessels that showed the heaviest use were the vessels that appeared in greater quantities in the food preparation and storage groups, that is, the milk pans, butter pots, mixing bowls, and jars. The interiors of the mixing bowls were scratched from stirring, and the glaze of the butter pots or crocks was dull and cracked. The exterior bases of the crocks, jars, and mixing bowls were chipped. The interior glazes of the pudding pans were dull and cracked from use, as were the pie plates, many of which were also burnt on the exterior surfaces.

Only five vessels in the kitchen group were primarily used for eating. These table forms were made of locally produced red or buff earthenware and included two redware porringers or posset cups, and three small bowls (2 redware, 1 buff earthenware (Figure A-66), one buff earthenware egg cup, and 1 slip-decorated redware trencher. The glazed rims of the small bowls were worn, possibly from stacking upside down.

Hygiene (30)

Seven percent of the vessels were hygiene related: 21 chamber pots, 8 drug jars/medicine cups/ointment pots, and 1 wash basin. Seven of the chamber pots were small and may have been used by children. With one exception, a blue-transfer-printed wash basin, these vessels were undecorated. Nearly half were creamware (14), followed by locally made redware (8), tin-glazed earthenware (5), pearlware (2), and white salt glazed stoneware (1). All of the redware chamber pots (8) in AS II were made in Philadelphia; the rest of the chamber pots (13) were imported from England. One chamber pot (V. 243) with a blue-transfer-printed scene called "Grazing Rabbits" may have been intended for children (Coysh and Henrywood 1989:94).

Vessels used to store medicinal or cosmetic chemicals, presumably obtained from apothecaries, came in three forms: small jars (4, tin-glazed earthenware), tiny rolled rim cups (3: 2 creamware, 1 white salt glazed stoneware), and a very large straight-sided jar (tin-glazed earthenware). All of these forms were imported from England, and variations in size and form probably reflect specific uses understood by the users but lost to the twentieth-first century analyst. All but the storage jar were plain and probably for personal use. The form of the rims of these vessels indicates they were covered, possibly by a piece of tied-on cloth. The storage jar, which was painted with blue horizontal bands, may have been for commercial use.

AS III (TPQ 1830)

Ninety vessels were identified in AS III of Feature B and are distributed among the following functional groups: 18 (20%) tableware, 34 (38%) teaware, 18 (20%) beverage consumption, 15 (17%) kitchen, and 5 (6%) hygiene. The TPQ is based on three sponge-decorated pearlware vessels.

Teawares (34)

A total of 34 vessels was identified as pieces of tea services, including four vessels specifically for coffee drinking, one coffee pot, and three coffee cans. No tea sets were identified in AS III. Non-set vessel forms included 10 cups (3 teabowls, 3 cups with handles, 3 coffee cans, and 1 child-size teabowl), 6 slop bowls, 6 saucers including one child sized, 4 teapots including one made for children, and 1 coffeepot (see Table A-2). Although no sets were present in AS III, several vessels belonged to sets identified in AS II. Among these was a bottle (Set # 2) called a teapoy used to hold water for weakening tea.

The majority of the teawares in AS III were porcelain (16) and pearlware (9). Creamware (3) was present as was a locally made refined redware (4). The teawares were largely imported (88%),

half from England (50%) and 38 percent from China, while 12 percent were local to Philadelphia. Handpainted (61%) teawares with floral motifs continued in popularity, and compared to AS II there was a slight increase in transfer-printed (12%) and engine-turned (12%) vessels. Fifteen percent of the teawares were plain and undecorated.

Out of 34 vessels, 10 were less than 25 percent complete, 6 were 25–49 percent complete, 13 were 50–74 percent complete, and 5 were greater than 75 percent complete (including one whole vessel). Only a third of the vessels showed visible wear patterns: four pearlware vessels and one redware vessel were noted as chipped, and five of the porcelain vessels showed loss of overglaze decoration. The percent of vessel completeness together with the absence of sets in AS III suggests the teawares were thrown out as they broke.

Tableware (18)

Remnants of five sets of tableware were present in AS III, accounting for 66 percent of the vessels in this group (Table A-5). Three Royal-patterned creamware vessels (Set #17), produced between 1765 and 1810, were represented by a table plate, a serving bowl, and a platter. The sherds from this set showed moderate signs of wear. Four pearlware sets, two edge-decorated—one green (#20) and one blue (#24)—and two transfer-printed sets—one blue Willow (#28) and one with matching castle scenes (#36)—were also present in AS III. The green-edged set (#20) was represented by fairly complete vessels, two muffin plates, one table plate, and one mustard cup. One muffin plate, one table plate, and one platter represented the Willow set.

Table A-5. Tablewares, Feature B, AS III

SET	DESCRIPTION	DATE	MUFFIN PLATE	TABLE PLATE	TWIFFLER	MUSTARD CUP	SERVING BOWL	SAUCE BOAT	LADLE	PICKLE DISH	PLATTER	UNID	Total
17	Creamware, Royal Pattern	1765-1810		1			1				1		3
	Plain Creamware	1770-1820					1						1
20	Green Shell Edge Pearlware, Even Scallop Straight Lines	1809-1831	2	1		1							4
	Green Molded Leaf Pearlware	1779-1830								1			1
28	Pearlware, Blue Willow	1790-1840	1	1							1		3
24	Blue-Shell-Edge Pearlware, Even Scallop Curved Lines	1802-1815			1								1
36	Pearlware, Blue Printed Castle	1817-1824	1										1
	Pearlware, Sponged	1830-1840							1			1	2
	Plain Whiteware	1810-1856						1					1
	Canton-Like Hard Paste Porcelain	1800-1830	1										1
	TOTALS		5	3	1	1	2	1	1	1	2	1	18

The majority of sets #17 and 20 were found in AS II (see Table A-3), while the majority of sets #28 and 36 were found in AS V (see Table A-5). While only one piece of Set #24 was found in AS III, greater numbers of this set were found in AS II and AS V.

All of the tablewares in AS III were imported from England except for one vessel from China. With the exception of one Canton-like muffin plate and one unidentified pearlware sherd, the remaining vessels not belonging to sets were for serving: one molded leaf-shaped pearlware pickle dish, one sponge-decorated pearlware ladle, one creamware serving bowl, and one whiteware sauceboat. With the exception of the whiteware sauceboat, which was 70 percent complete, these vessels were less than 50 percent complete, most being represented by small sherds. Such small sherds suggest these vessels represent sweepings of broken vessels that were cast into the privy shortly after breaking.

Beverage Consumption (18)

Vessel forms in this group included four syllabub cups, three child-size mugs, two mugs, four tankards, and five jugs. Over three quarters of these vessels were made in England, two were made in Philadelphia, one was made in Holland, and one was of unknown origin. Wares in this group included eight of creamware, five of pearlware, four of redware, and one of stoneware. Two sets were identified in AS III: four fancy ribbed creamware syllabub cups (Set #14; Figure A-67) and three plain creamware tankards (Set #33). The tankards held between 2 and 2-1/3 cups of liquid each.

Two of the children's mugs were transfer printed in black, one with a farm scene depicting two fighting fowl and the other depicting a boy playing with a dog. The other transfer-printed vessel was a refined redware jug with yellow chinoiserie motif on a chocolate-brown ground. The other jugs were plain except for incised or reeded bodies. The mugs and tankards were plain except for one polychrome sponge-decorated tankard.

Wear in this group consisted of chippage along the rims of the jugs and tankards. The reason for discard of two of the children's mugs was fairly obvious; one was complete except for a missing handle and the other was complete except for a hole in the base.

Kitchen (15)

Kitchen vessels included four butter pots, four milk pans, two mixing bowls, two pudding pans—one- and two-quart sizes—one pie plate, one trencher, and one egg cup (see Table A-4). Twelve of these were redwares made in Philadelphia, one was buff earthenware made in the United States, and two were creamware bowls made in England. All except three of these utilitarian wares were undecorated except for a simple incised band around the exteriors of the butter pots. The butterpots and milk pans had brown to black glazes; these vessels were chipped and worn by the time they were discarded. Only three vessels were slip decorated, the pudding pans and the trencher. The egg cup, pie plate, trencher, and pudding pans were the only vessels in this group that would have been brought to the table.

Hygiene (5)

Five chamber pots, two of redware, two of creamware, and one of buff earthenware, made up the hygiene group. Only the creamware pots were imported; the redware pots were made in Philadelphia and the buff earthenware was of unknown origin. All were plain with strap handles except the buff earthenware pot, which had traces of green splotches.

AS V (TPQ 1850)

Two hundred and ninety-one vessels were identified in AS V of Feature B, distributed among the following functional groups: 116 (40%) tableware, 79 (27%) teaware, 40 (14%) beverage consumption, 34 (12%) kitchen, and 22 (7%) hygiene. Curiously, no vessels were identified as child sized or for children's use in this stratum. Out of a total of 291 vessels, nearly half (114,

39%) belonged to tea or table settings. Thirteen sets were identified in AS V, including five tea settings and eight table settings. The TPQ for this stratum comes from an embossed cologne bottle, but the bulk of the ceramics was produced after 1835.

Teawares (79)

A total of 79 vessels was identified as pieces of tea services, including handled cups that may have been used for drinking tea, coffee, or chocolate (see Table A-2). In general, the cup bowls were larger, with no clear differences in size and shape to distinguish which beverage was being taken. All five of the AS V tea sets were made in England, two of black-transfer-printed bone china with complementary patterns, one with "My Play Fellow" (Set #8), and one with a shepherd couple and dog (Set #9). Two sets were dark-blue-transfer-printed pearlwares—one with the "Lady of the Lake" pattern (Set #10) and the other with a floral pattern (Set #11)—and one set was whiteware with a black-transfer-printed genre pattern (Set #12). The bone china and pearlware tea sets were made in Staffordshire, England, between 1812 to 1825, and the whiteware tea set was produced in England slightly later, from 1815 to 1915. Interestingly, the AS V tea sets consisted only of matching cups and saucers.

Ten pieces of the blue-transfer-printed "Lady of the Lake" pearlware tea set consisting of five teabowls and saucers were present in AS V (Figure A-68). Six of these vessels were over 75 percent complete including one whole vessel, two were 50 percent complete, and two were under 25 percent complete. Complementary with this tea set was Set #11, including three scenic-blue transfer-printed pearlware tea bowls and one saucer. Both sets were decorated with matching floral borders, and both exhibited use as evidenced by chipping around the bases. Notably, there were seven blue-transfer-printed pearlware vessels—four slop bowls and three teapots—with matching floral bands, which may indicate they were used with these tea cups and saucers.

Three compatible tea sets decorated in overglaze black-genre transfer prints were also discarded in this stratum (Figure A-69). All three had similar line borders and London-shaped cups, popular between 1812 and 1825. Two sets were made in bone china and a third in whiteware. Set #8 consisted of eight pieces including six cups and two saucers decorated in the "My Play Fellow" pattern, which shows a young girl playing with her cat. There were two nearly complete vessels, one only 30 percent complete, and the rest over half complete. This set showed considerable wear. Heavy stir marks were evident in most of the teabowls, and the line borders around the cup rims were well worn. A second set (Set #9) depicted a shepherd couple, dog, and church in the background. Equally worn, this set comprised six tea bowls and two saucers. The third set (#12), in whiteware, had matching black-line borders with differing interior pastoral scenes. Less worn, this set consisted of four saucers and two teacups.

Overall, 41 percent of the teawares were pearlware, 24 percent were porcelain, 24 percent were bone china, and 10 percent were whiteware. Three quarters (76%) of the teawares were made in England and one quarter (24%) in China. Vessel forms included 33 teabowls, 4 teacups, 2 cups, 28 saucers, 7 teapots, and 5 slop bowls. Transfer-printed teawares (54) were favored over painted teawares (25). Three Chinese Export porcelain vessels, painted in overglaze gold, were remnants of monogrammed sets: a tea bowl with the initials "AME," a saucer with "_AB" or possibly "EAB," and another saucer with the tail end of a scrolled letter (Figure A-70). These tea cups and saucers may have been used with a teapot (V. 745) decorated with a gilded castle scene on the front and honeycomb banding near the top.

Tablewares (116)

The tableware group includes hollowware and flatware vessels, used for serving and eating food in a formal setting. Nearly half (40%) of the vessels in AS V were identified as tablewares. Altogether there were 11 vessel forms, including muffin plates (34), table plates (26), supper plates (12), soup plates (11), and twifflers (4). Tablewares used for serving food included platters (11), an assortment of serving dishes and bowls (15), tureens (2), and one unidentified sherd.

Almost all of the tablewares were made in England (93%), with Chinese (7%) tablewares a distant second. Pearlware (101) was the dominant ware, followed by porcelain (8) and creamware (7). Over half of the tablewares exhibited shell-edge decoration (77), one of the most popular and long-lived styles produced by the English ceramics industry in the Federal period (Hunter and Miller 1994). Other forms of decoration on AS V tablewares were transfer prints (23), painted (11), plain undecorated (3), and lined (2).

Eight table settings were discarded in AS V along with remnants of three other sets (#16, 17, and 22) found in the lower strata. The AS V tablewares are summarized in Table A-6. Nearly all (87%) of the sets were pearlware. The exceptions included several pieces of creamware, including a soup plate from Set #17, two soup plates and a table plate from Set #16, and three serving vessels not identified as belonging to sets, consisting of a plain bowl and two nested lined vegetable bowls. Additionally, one set of blue Canton porcelain dishes (Set #13) was found in AS V. The porcelain set consisted of two muffin plates, two soup plates, and three twifflers that exhibited moderate use. These sets were also found in AS II, except for the creamware (Set #17) that was distributed across AS II, III, and V.

Two sets of blue Willow (Set #28 and 29) showed very little wear. Set #28 consisted of eight muffin plates, two serving dishes, one tureen lid, and two platters. Three pieces of this set—a muffin, a table plate, and a platter—were discarded in AS III (see Table A-5). Set #29 consisted of three nearly whole supper plates, which were slightly lighter in shade than Set #28.

Four large sets of blue-edged tablewares were identified in AS V: the earliest (Set #24) with even-scallop curved lines was made between 1802-1815, a second (Set #25) with even-scallop straight lines made between 1809-1831, Set #30 with an even scallop and impressed bud made between 1813-1834, and a fourth with embossed rope, spears, and bud (Set #32) made between 1823-1835. Set #30 was the largest of these sets, with 27 pieces. Set #25 was represented by 18 pieces, Set #32 by 11 pieces, and Set #24 by 10 pieces. Other pieces of blue-shell-edge vessels, not identified as sets, complimented these sets and were probably used alongside them, and indeed it is likely that blue-edged sets were used interchangeably and in combination. Most of the plates in these sets showed moderate to heavy cut marks, with a lighter pattern of wear on the muffin plates. Altogether, combining the sets and non-sets, the following vessel forms represented the blue-edge-decorated tablewares in AS V: 20 muffin plates, 21 table plates, 7 supper plates, 1 twiffler, 6 soup plates, 8 serving dishes or bowls, 1 tureen, and 7 platters.

Unlike the edge-decorated tablewares that were thrown into this deposit after they had gone out of fashion, the blue-transfer-printed pearlware dishes were discarded at the height of their popularity, suggesting they represent in-use dining sets that suffered accidental breakage. Two matching supper plates (V. 237 and 238) showing Windsor Castle with a dark-blue floral border, though crazed, showed little evidence of wear and may have been used for display. Three muffin plates also depicted castles, one of Furness Abbey in Lancashire (V. 234) made by William Mason between 1811-1824, and two by James and Ralph Clews (Set #36: V. 231-2) made between 1817-1824 (Coysh and Henrywood 1982:87; 1989:87). A third muffin plate (V. 233)

SET	DESCRIPTION	DATE	MUFFIN PLATE	SOUP PLATE	SUPPER PLATE	TABLE PLATE	TWIFFLER	SERVING DISH	SERVING BOWL	TUREEN	PLATTER	UNID	Totals
17	Royal Creamware	1765-1810		1									1
16	Plain Creamware	1770-1820		2		1							3
	Plain/Lined Creamware	1770-1820							3				3
	Pearlware, Blue Painted	1775-1830							1				1
28	Blue Transfer Printed Pearlware, Willow	1790-1840	8					2		1	2		13
29	Blue Transfer Printed Pearlware, Willow	1790-1840			3								3
22	Blue Shell Edge Pearlware, Rococco w/ Bud	1794-1815							1				1
36	Pearlware, Blue Printed Castle	1817-1824	2										2
	Pearlware, Blue Printed		1		2	2							5
24	Blue Shell Edge Pearlware, Even Scallop Curved Lines	1802-1815	3	1		5				1			10
25	Blue Shell Edge Pearlware, Even Scallop Straight Lines	1809-1831	7			4		5			2		18
30	Blue Shell Edge Pearlware, Even Scallop Impressed Bud	1813-1834	6	5	4	7	1	1			2	1	27
	Blue Shell Edge Pearlware, Embossed	1823-1835	1		2						2		5
32	Blue Shell Edge Pearlware, Embossed Rope, Spears & Bud	1823-1835	3		1	5		1			1		11
	Unscalloped/Impressed Pearlware	1818-1834							1				1
	Green Shell Edge Pearlware, Even Scallop Straight Lines	1809-1831				2					2		4
13	Canton Hard Paste Porcelain	1800-1830	2	2			3						7
	Porcelain, Ovrglz Painted Gold	1790-1825	1										1
	TOTALS		34	11	12	26	4	9	6	2	11	1	116

Table A-6. Tablewares, Feature B, AS V

from this set was discarded in AS III (see Table A-5). Reflecting a more patriotic, non-British theme was a blue printed table plate (V. 239) of which only the rim survived. This was enough, however, to identify it as a plate made in commemoration of the 200th anniversary of the landing of the Pilgrims. It was produced by Enoch Wood and Sons of Burslem between 1818-1846 and is inscribed "The Landing of the Fathers at Plymouth Dec 22 1620" (Crossman and Strickland 1970:780-781). Two other noteworthy vessels were a table plate (V. 236) with a very fine floral and geometric pattern and a muffin plate (V. 235) with a net pattern covering the entire surface of the plate.

Beverage Consumption (40)

Forty vessels were identified in this group, including 6 mugs, 2 tankards, 31 jugs, and 1 beverage bottle. The mugs ranged in size from one-half to one cup, the jugs from one quart to nearly three quarts. Sixty percent of these vessels were pearlware, 25 percent were creamware, and the remainder were equally divided between redware, whiteware, and gray salt glazed stoneware. All of the vessels were imported from England. Over half were engine turned, 14 were decorated with banding and geometric motifs known as annularware, and 7 were decorated with common cable and dendritic motifs known as mocha ware. Other decorative choices were transfer print (6), plain (6), painted (3), incised (2), manganese mottled (1), and molded (1).

Kitchen (34)

Thirty-four vessels were identified in the kitchen group of ceramics, further subdivided into 13 forms (see Table A-4). Nearly half (15) were used for eating or serving food: six bowls, two pudding pans (one 2-3/8 quarts or 9-1/2 cups), one large (2 quart) pie plate, one porringer, and five trenchers. The rest involved food preparation or storage: five butter pots or crocks, four milk pans, four mixing bowls, and one each of the following: bottle, jar, patty pan, and pipkin. The form of two sherds, designated vessels, is unknown. The majority of these vessels (76%) were locally produced redwares, six were imported from England—four pearlware, one whiteware, and one white salt glazed stoneware—and two likely produced elsewhere in the United States - one buff earthenware and one gray salt glazed stoneware. The origin of three redware mixing bowls that have slightly darker redware bodies with manganese mottling and beaded border bands is unknown (Figure A-71). They were well potted in the English tradition and glazed on both the interior and exterior surfaces. These distinctive redware vessels may or may not be Philadelphia made but they are similar to redware pots attributed to Philadelphia potter Thomas Haig (ca. 1819-1831).

Over half of the kitchen vessels were plain (17) and, except for one incised band around the exterior of many of the Philadelphia vessels, lacked decoration. Nine vessels were slip decorated, all from Philadelphia, and were decorated with a combination of manganese mottles and beaded bands. Interestingly, these nine slip-decorated vessels were forms used for eating or serving food at the table rather than for food preparation or storage. The English refined kitchenwares included four annularware bowls—one matched a jug in the beverage group, one whiteware patty pan, and one unidentified white salt glazed sherd. Predictably, the interiors of the mixing bowls were lightly scratched from stirring. The pie plate and three of the trenchers showed moderately heavy wear and were probably old and had seen much use when they were thrown out. The base of the jar was also chipped.

Hygiene (22)

Hygiene-related vessels in AS V consisted of seven wash basins, four chamber pots, four ointment pots, three ewers, two drug jars, one soap box, and one toothbrush holder. Creamware (13) was the preferred ware for vessels associated with sanitation, followed by pearlware (4), tin-

glazed earthenware (4), and redware (1). Only one redware chamber pot was locally made in Philadelphia; the rest were imported from England. All except four of these vessels were plain. Decoration in the form of transfer printing was restricted to toiletries: one matching blue ewer and wash basin, one light-blue soap box, and one mulberry toothbrush holder.

AS VI (TPQ 1856)
Two vessels, one floral-painted whiteware jug and a creamware table plate, were recovered amongst the brick rubble of AS VI. This layer clearly represents debris associated with the fire of 1856, and these vessels were probably in use at the time of the conflagration.

SUMMARY REMARKS ON FEATURE B
Feature B was twice the size of the other shaft features examined during the archeological investigation of Block 2 (Figure A-1), and despite the fact that only half the feature was excavated, the quantity of ceramics recovered from the fill was impressive. Analysis of the contents of this shaft feature verifies its use as a privy or cesspool. While Feature B did not exceed the legal privy depth, an advantage of its size (9.8-ft. diameter) is that it would have increased the rate of seepage out of the shaft, perhaps requiring fewer cleanings (Cosans in Liggett 1981:266). In addition, the proximity of a second shaft, Feature I, though sterile, suggests a relationship between the two, such as overflow runoff. The location of Feature B in the middle of the lot, closer to the dwelling rather than at the rear, also supports its interpretation as a cesspool. If it initially functioned as a privy, placed for convenience, it may have had a brick superstructure like the one insured "Necessary House" reported at New Market (Liggett 1981:250). If so, it is possible that Feature B may have served more than one household or it may have served both public/business and private use for the occupants, perhaps subdivided in such a way to segregate its users, be they family and business, family and servants, or tenants from different lots. The adjacent lot at 227 High Street was developed under the same owner, William Sheaff, and it is worth noting that Feature B was located against the property line separating these two lots. It is therefore conceivable that this very large shaft feature was originally built to serve two lots, especially because no shaft features were identified behind 227 High during this project.

The archeological deposits within Feature B indicate the feature was built prior to 1790 and in accordance with a 1767 city ordinance that regulated privy depth to 20 feet below grade in this location. Documentary research revealed that the first structure erected on this lot was a three-story brick house, with store and stable behind, built in 1787 by William Sheaff. Even though the feature may have ceased to serve its original function, it was still accessible when a fire swept through the block in 1856.

To summarize the depositional sequence in Feature B, its initial use was represented by a remnant of nightsoil (Level 8, AS I) lining the base of the privy. This ephemeral layer was overlain by less organic layers (7 and 7.1) that formed a dense concentration (AS II) of artifacts filling the bottom two feet of the shaft. Above AS II was a second, thicker deposit of nightsoil (Level 6, AS III). The privy was cleaned sometime in the 1830s, probably removing the upper portion of Level 6 (AS III), clean fill was added (Level 5, AS IV), and it continued in use (Level 4, AS V) from this point in time until the fire in 1856 when it was filled with construction rubble.

The question of how to interpret AS II and the crossmends between AS I, AS II, and AS III has been carefully examined in light of the artifacts, the historical context, and comparison with comparable archeological data in Philadelphia (Liggett 1981; Blomberg 1990; McCarthy and Roberts 1996). It could be argued that AS II represents percolation fill. Similar artifact-laden deposits at the bases of privies in Philadelphia have been explained as "percolation layers," i.e.,

intentional deposits added to facilitate drainage at the base of a privy (Cosans in Liggett 1981:270-271). In some instances, these deposits appear to have been added to older, deeper privies to raise their depths to that regulated by the privy ordinance (Roberts and Cosans 1980:161-162). Since Feature B was built to a depth regulated by the ordinance, the AS II deposit cannot be explained as a means of raising the level of the privy. According to Cosans (in Liggett 1981: 243), drainage fills were added as a means of privy maintenance, a method devised to promote percolation above the impermeable clay substratum found in Philadelphia. In either case, this interpretation suggests that the “percolation layers” were deposited all at once, presumably when a privy was opened, or else added after it was cleaned if it did not drain adequately. The implication is that the ceramics and glass objects used in lieu of more traditional materials such as gravel were probably collected off site and are, therefore, not site related (Cosans in Liggett 1981: 271). These are plausible explanations, drawn from archeological data, for poorly documented eighteenth- and nineteenth- century sanitation practices.

In light of the rich archeological deposits found in privy features, it is surprising to find that trash was collected in Philadelphia as early as 1767. However, the collection of trash probably refers to kitchen waste. Removal of such material was no doubt in response to the epidemics that swept through the city during this period. If this was the case, why then was so much trash, predominantly ceramic and glass, thrown down privies? Cosan’s explanation is that it was bulky and nonbiodegradable, readily available, and probably free (in Liggett 1981:271). The widespread occurrence of these deposits indicates it was "common knowledge" of the day that recycled dishes and bottles at the bottom of privies actually enhanced the functioning of the privies, and that it must have been an accepted practice as well as convenient and easy. Joan Geismar's study of waste-disposal practices in nineteenth-century New York indicates that by the middle of the century (1860) ordinances were in place in that city that directed privies be cleaned prior to filling them and prohibited using them for the disposal of "vegetable substances" or garbage (Geismar 1993:65). The dense layer of ceramics and glass in AS II was mixed with kitchen garbage, probably in violation of Philadelphia’s ordinance.

The succession of well-to-do merchant families, moving in and out of 225 High Street from 1790 to 1822, is an equally plausible source for this vast accumulation of seemingly expensive trash. A comparison of the density of ceramic vessels among the strata of Feature B produced surprising results (Table A-7 below). Assuming AS II to be percolation fill, one would expect it to have the greatest artifact density. In fact, the ratio of ceramics to soil was about the same, even less, than that of the nightsoil deposit AS V.

Table A-7. Density of Ceramic Vessels by Analytical Stratum in Feature B

AS	Ceramic Vessels	Cubic Feet of Soil	Ceramics/Cubic Ft
I	4	2.47	1.62
II	439	13.85	31.70
III	85	6.97	12.20
V	288	8.75	32.91
VI	2	64.59	0.03

While AS II and AS V may have begun as large dumpings of trash following a cleaning of the privy, they appear to have been added to over time as more trash was thrown into the privy, sank, and collected at the bottom. Whether by design or accident, the accumulation of this material at the bottom of the privy functioned as a filter as smaller objects sank to the bottom, eventually accreting into a new barrier or base. Subsequent cleanings would have removed the less-solid

wastes, leaving behind this more-solid material at the base. Loads of clean sand and lime (IV) were added to “sanitize” the pit to prevent disease as well as to mask noxious odors. The whole process was repeated when unwanted dishes were thrown in to form a new percolation layer (AS V) as the privy/cesspool continued to be used.

Artifacts that can be connected to the residential history of this lot further support the argument that AS I, AS II, and AS III were deposited in an uninterrupted sequence during the more than 40-year period from 1790 through 1830+. Excluding crossmended vessels between AS II and III, ceramics in AS II have a TPQ of 1813 and a mean ceramic date of 1802. There is no doubt that the quantities of ceramics dumped into the privy over time settled to the bottom. To reconcile the ceramic data with the obvious stratigraphic distinctions between AS I, II, and III, the beginning dates of the ceramic wares in AS II were plotted (Figure A-72). Figure A-72 shows two peaks, one at 1780 and a second, larger one at 1800 that bottoms out in the decade between 1810 and 1819. This figure suggests two major episodes of filling occurring in AS II in the period between 1790 and ending after 1813.

Census records and city directories list Joseph Anthony, not owner William Sheaff, at this address in 1790. Sheaff also owned the adjacent lot, and he may have used both lots as investment properties available for lease. Their proximity to the heart of the city, when it was the nation’s capital, made this prime real estate. Sheaff insured the "new, well appointed brick house" measuring 24 by 46 feet at 225 High Street in November 1790. His first tenant, Joseph Anthony, a merchant-captain from Newport, Rhode Island, moved in with six family members and a household that included a free black. While at 225 High Street he served as one of 25 directors of the Bank of the United States, and his portrait was painted by Gilbert Stuart on three occasions. The Anthonys’ stay at 225 High Street was brief, lasting only about two years.

A grocer, Michael Kunkle, was another short-lived tenant, living there with his family of seven, after which the house was let to Caspar Wistar, a prominent physician who, at the time he lived on High Street, served as vice president of the American Philosophical Society. Dr. Wistar, a widower, lived at 225 High Street for at least six years, from 1793 to 1798/1799. Dr. Wistar married Elizabeth Mifflin in 1798 and moved shortly after their marriage. The composition of the Wistar household prior to his marriage is unclear, but it seems unlikely that he would have taken his deceased wife’s tablewares to the home of his new bride.

Alexander Henry, a merchant, moved in after Wistar left and was listed at this address from 1800 to 1807. Henry was involved in the import/export business between America and Europe but we do not know what he was merchandising. He lived at 225 High with his wife, Sarah Charlton, their seven children, and at least two unidentified free white females, probably servants or relatives. The Henrys’ youngest children, a daughter named Sarah Matilda Henry, born February 7, 1800, and a son named George Washington Henry, born July 16, 1802, were born while the family lived on High Street. Until 1801, Henry had a partner named Boggs. He must have done well because he retired in 1807 at the age of 44 and left High Street when owner William Sheaff died. Sheaff left the house to his daughter, Anna Catherine Helmuth.

In 1801, Henry’s partner Boggs was operating the business then known as Boggs and Company at 227 High Street, where he remained until 1817. Boggs was followed at that address (227 High) by a firm of china merchants known as James Cresson and Brothers, who were in business selling ceramics until 1844.

William Sheaff's daughter, Anna Catherine, moved into 225 High Street with her husband, John Keppen Helmuth, who was a merchant, and lived there from 1807 to 1818. John Helmuth, along with his brother Henry, previously had offices at 99 South Front Street while his partner, Robert Smith, lived and ran his office a few doors down at No. 114. It is unclear what type of merchandising the partnership engaged in while on High Street, but it is intriguing to consider whether there might have been a relationship with Thomas W. Smith, who was a successful trade merchant of China in Philadelphia between 1805 and 1815 (Schiffer et al. 1980:71). Like their predecessor Alexander Henry, the firm of Smith and Helmuth, with their connections to Front Street businesses, was likely involved in trade. The china trade was evidently big business in Philadelphia during this time period, and with china merchants next door and a possible link to china merchant Thomas Smith, it seems highly possible that Smith and Helmuth were at least tangentially engaged in the china trade. We do know that from 1807 to 1818, a span of 11 years, John Keppen Helmuth conducted business on the premises and lived here with his family. The Helmuths were the first owner-occupants. They had seven children, described in the 1810 Federal Census as three boys and four girls under the age of 10. Two older women lived with them, perhaps grandmothers, nannies, or maids.

The enormous quantity of ceramics and glass present in AS II is better understood when viewed as trash discarded by several families rather than one. Subtle differences between Levels 7 and 7.1 of AS II suggest this deposit may have been laid in two stages (Figure A-72). The earliest occupants of 225 High Street, likely responsible for some of what was left behind in AS II (Level 7.1) as well as AS I, were the Anthonys (1790-1792), the Kunkles (1792-1793), and Dr. Caspar Wistar (1793-1798/1799). The Henry (1800-1807) and Helmuth (1807-1818) families may be responsible for the later accumulation of AS II (Level 7).

AS II was soon buried under a deposit of nightsoil that accumulated after 1813/1816 and into the 1830s. Ninety-one ceramic vessels were recovered in AS III, providing the TPQ of 1830 and a mean ceramic date of 1812 for the deposit. Adam Everly, manufacturer of decorative combs, purchased this property in 1822 and conducted business and raised his family there until sometime in the 1830s. AS III appears to be associated with the Adam Everly family occupation. Adam's son William, who worked in his father's business, married and started his own family here as well. Although the Everlys continued in business at this address until the year after the 1856 fire, Adam and William's families had moved to separate addresses on Mulberry (now Arch) Street by 1837. The cesspool appears to have been cleaned once during their occupation at High Street, probably in about 1830. AS III thus relates to the residential occupation of both families and AS V to a relatively short residential occupation plus the longer occupation of the business.

Discussion, Feature B Ceramics, 1790-1816 (AS I-II): Prominent Tenants to Prominent Owners

From 1790 until 1808, William Sheaff rented his "well appointed brick house" a block from the State House to a succession of families for periods as short as two years and up to eleven years. A merchant-captain from Rhode Island, Joseph Anthony, lived here with a family of six and one free black from 1790 to 1792; Michael Kunkle, grocer, lived here with a family of six from 1792 to 1793; the eminent Dr. Caspar Wistar lived here as a widower and moved only after he remarried in 1798; and the large, 11-person household of import/export merchant Alexander Henry moved in just as Philadelphia was making the transition from capital of the nation to center of commerce. The Henrys were at 225 High Street until William Sheaff's death in 1808, when the house passed to his daughter and son-in-law, merchant John K. Helmuth. The Helmuth family household was archeologically indistinguishable from the Henrys. Both heads of household were

merchants who conducted business in their home, both families had seven children, and both shared their homes with two other individuals who were probably live-in help. These five large, prominent families, moving in and moving out over a period of a few years, likely generated the trash found at the bottom of Feature B.

The ceramics associated with these affluent early residents of 225 High Street (AS I and II) indicate that the ritual of tea drinking was a significant part of their lives. Prior to 1800 tea generally followed dinner, but after that it became more fashionable to take tea in the afternoon (Godden 1995:175). It may be that the only creamware tea set (#1) was used with the creamware table settings to serve tea following dinner in the homes of the Anthonys, Kunkles, or Dr. Wistar.

The bulk of the tablewares discarded in AS II were edge decorated and probably represent everyday settings. Shell-edged wares, originally marketed for upper-middle-class families, were the least expensive English earthenware with color decoration available between 1780 and 1860 (Hunter and Miller 1994:432-443). Mrs. Parkes, in her book entitled *Domestic Duties; or Instructions to Young Married Ladies*, published in 1828, stated that a proper household should have a dinner service of china for company, one for ordinary use, and a third for the kitchen (Busch 1983:69). The green- and blue-shell-edged tablewares found in AS II were undoubtedly the dishes the Henrys and Helmuths used for "ordinary use" because once used they were not considered good enough to take with them. To these merchant families ceramics were cheap and easily replaced. New sets would have been easy to acquire, especially since both Henry and Helmuth were import/export merchants and may well have dealt in ceramics as well as other things. For formal dining, they used porcelain, blue Canton (Set #13) or overglaze polychrome porcelain exported from China.

For tea, the Anthonys, Henrys, and Helmuths appear to have had many choices. One of the older, more unique tea sets (#2), decorated in overglaze orange-red enameled Oriental landscapes, may have belonged to the merchant-captain Joseph Anthony. Chinese Export porcelain teawares decorated in overglaze enameled flowers—roses, vines, floral bouquets, wreaths, and festoons—were abundant and evidently favored until 1816 when they were thrown out. Set #2 was the only Chinese porcelain set in the assemblage that included a matching teapot. Either teapots were more prized and carefully curated, or these well-healed tenants were content to use English porcelain teapots (Set #6 and 7), English basalt tea and coffee pots, a French or American porcelain teapot, or refined redware teapots made in Philadelphia. A number of handpainted underglaze blue and polychrome teawares in pearlware present in the AS II assemblage showed added diversity. Only a very few blue-transfer-printed teawares were present in these lower strata, probably because they were new. Two notable porcelain tea sets from England—one hard-paste set in the Meissen style (Set # 6), the other a soft-paste porcelain with brown leaf border (Set # 7)—probably belonged to Mrs. Henry or Mrs. Helmuth.

By contrast, the dishes used in the kitchen for eating, cooking, and serving food were almost entirely of locally made redware. Porringers were used like bowls to consume liquid foods such as gruel or mush. Posset, another beverage, consisted of hot milk curdled with ale or wine and spiced (Brown 1966:156). Trenchers were large rectangular vessels, similar to pie plates but more like trays, used originally for communal eating, having evolved from wooden trenchers, and later used to serve meat or bread. Most of these vessels were plain, but those used to cook as well as serve food tended to be decorated with cheerful slip decorations.

The utilitarian forms present reflect an emphasis on preparation and storage of foods prior to refrigeration. Milk pans were used for storing milk or separating cream, butter pots and crocks for

storing butter. Many of these utilitarian forms served multiple purposes such as to carry vegetables and fruit, to collect eggs, and to temporarily store foods while in the house. Mixing bowls, molds, and pie plates are still in use while pipkins, three-legged ceramic pots used for cooking over the fire, are an eighteenth-century form. Pie pans showed heavy wear from baking (fire-blackened bases) and eating (knife cuts). Extracts from the journal of Ann Warder, 1786-1789, cited by Busch (1983:95-99), demonstrate that pies, both savory and sweet, were a popular method of baking foods:

> June 27, 1786 "We returned to sup at home which is become to me now entirely Pie or Fruit & Milk not being able to relish much Meat in this warm Climate…."
> August 11, 1786 "English dinner—fish, roast beef, plum pudding, and pies. After dinner we worked till three o'clock when we all partook of a nice Water Melon…."
> September 9, 1786 "supper—loin of lamb & peach pie…"
> December 21, 1786 "dinner—partridge pie…"
> January 3, 1789 "After making my weekly batch of Pies I set to work again…"
> January 7, 1789 "Got up Town to Market fully before breakfast appointing a considerable Number to Dine here Tomorrow I wished to make all the preparations in my power before hand therefore got Pies, Puddings & some Jellies nearly ready which occupied all the time till necessary to prepare for my afternoon visitors (Busch 1983:95-990."

The large number of pudding pans indicates a strong reliance on pudding food dishes. Whitehill (1963: 13-14), commenting on food preferences of New Englanders, remarks that puddings (with a cornmeal base) were baked, boiled, or served as mush and were the staff of life. According to her research, the son of Josiah Quincy wrote the following account of Sunday dinners at the home of his relation, Abigail Adams in 1814

> …well remember[ed] the modest dinners at the President's, to which I brought a school-boy's appetite. The pudding, generally composed of boiled corn meal, always constituted the first course. This was the custom of the time—it being thought desirable to take the edge off one's hunger before reaching the joint (Whitehill 1963:14).

An examination of period recipe books shows the popularity of sweet and savory puddings such as rice, corn, potato, macaroni, batter, bread, almond, lemon, cocoa nut, citron, orange, and apple; pickled foods such as red cabbage, walnuts, onions, green peaches, and oysters; and pies (Busch 1983:100-103). Butter pots, crocks, and jars were probably used for pickling foods and storing butter and other foodstuffs. Wear, evidenced by chipping, was greatest around the bottom edges from moving these twice-as-heavy-when-full vessels back and forth from table to shelf. One miniature creamware jelly mold with the imprint of a teapot may have been for serving jelly at tea or possibly for the children raised in the Henry and Helmuth households.

Water, particularly in cities, was often distasteful and not always healthful to drink, so it was usually imbibed diluted in "drinks." Throughout the eighteenth century until about 1825, cider was cheap and plentiful, a beverage that men, women, and children alike partook of freely at breakfast and dinner (Brown 1966:15). Jugs outnumbered all other vessels in this group and no doubt served as containers for storing and serving cider. Beer and ale were also popular, because

they were brewed in the home or locally made and consequently were cheap. Like cider, ale and beer would have been consumed in mugs and tankards. A set of plain creamware tankards (Set #15), variously decorated pearlware mugs, as well as three child-sized mugs belonged to the households living on this lot during this period.

No less than eleven different patterns of table settings were identified in AS II, eight of which were edge-decorated services (see Table A-3). It may be that the owners of the three green-shell-edged sets viewed them as one set purchased between 1775 and 1800, supplemented with pieces produced from 1780 to 1800, and again from 1809 to 1831. The 36 vessels in this "set" composed an assortment of eating and serving vessels for a service that originally might have been for 12 people. There were twice as many blue-edge-decorated tablewares, and if one sees the five different patterns as a whole produced as early as 1784 to 1800 and supplemented as late as 1809 to 1831, this "set" may be a remnant of a set for 24 people. Discarded around 1816 and judging from the amount of wear seen on these vessels, the green- and blue-edged sets could have been the everyday services of either the Henrys or the Helmuths.

Twenty-eight pieces of a creamware set with Royal pattern borders and fewer pieces of a plain creamware set represent slightly earlier settings that may have been part of Wistar's household goods. Proportionately, very few porcelain tablewares were present. Four pieces of Canton and three very fine overglaze painted Chinese Export porcelain supper plates that probably represent random breakage could have belonged to any one of the three households.

While there were a comparable number of table and teawares in AS II, the teaware assemblage was particularly noteworthy for the amount of porcelain it included. Two-thirds of the tea sets were porcelain, four from China and three from England. Of the Chinese Export porcelain teas, one was a landscape and the rest were floral motifs, all executed with overglaze enamels. The non-matching Chinese Export porcelain teas far outnumbered those identified as matching sets in AS II, suggesting these predominantly floral-patterned teawares were used together.

The English teawares in this assemblage, represented by two soft-paste porcelain tea sets and an assortment of polychrome-colored pearlware tea cups and saucers, were also decorated in floral patterns, reflecting a preference for the floral sprig patterns that preceded printed wares in popularity from 1795 to 1830 (Miller et al. 1994:237). Child-sized teabowls and saucers were found in this pattern and reflect the participation of the Henry and Helmuth children at tea time. The only plain tea set, in creamware, included one child-sized cup and saucer. These teawares, like the creamware table settings, may have belonged to one of the earlier tenants such as Caspar Wistar.

Discussion, Feature B Ceramics, 1822-1856 (AS III & V): The Everly Family

By 1822, when Adam Everly bought the brick house at 225 High Street, the Helmuth family had moved and Adam Everly moved in with his wife, Mary, and their five children, Susan (probably 15 or 16), William (14), Ann Eliza (12), Christiana (8), and Louisa (5). Adam Everly's occupation was listed as purveyor of fancy combs in city directories. The ceramics found in the nightsoil deposit, AS III, were probably a combination of ceramics thrown out by the Helmuths when they moved out and things thrown out by the Everly family as they took up residence in their new home.

The Everlys appear to have preferred the black- and blue-transfer-printed sets from England, depicting classical, pastoral, and romantic themes that were in fashion, to the porcelain that earlier residents had favored. Three of the Everlys' tea sets reflect an idyllic, romanticized vision

of home and family life as portrayed by English pottery manufacturers. One black printed set called "My Play Fellow" must have been a favorite of Adam Everly's four daughters. Another set in blue, titled "Lady of the Lake," projects a feeling of refinement with its classical theme. The Everlys also had purchased a special-order tea set of Chinese Export porcelain with a gold monogram "AME", perhaps standing for Adam and Mary Everly.

In addition to a set of blue-shell-edge pearlware (Set #24) that the Everlys used for everyday was a better set in blue transfer print of British castles (Set #36) and another in the blue Willow pattern (Set #28). These sets were identified in AS III and AS V, suggesting they were used by Adam's family and also by Adam's son William's family, which remained at 225 High Street after Adam had moved to Arch Street. The Everlys owned a number of unique tablewares that reflected their wealth. One was a leaf-shaped serving vessel, possibly a pickle dish, and another was a yellow-printed refined redware jug. A blue-transfer-printed plate commemorating the 200th anniversary of the landing of the Pilgrims reflects Adam or Mary Everly's interest in historical themes.

Punch, a beverage composed of wine or distilled liquor, water, milk, or tea, mixed with sugar, lemon juice, and spice or mint, was served from a common bowl that was passed and drunk from without glasses (Brown 1966:18,156). Two punch bowls were found in AS II, but a set of syllabub cups (Set #14) found in AS III represents a popular eighteenth- to nineteenth-century concoction of wine, sugar, spices, and whipped cream that was part beverage and part dessert (Whitehill 1963:7). Ann Warder of Philadelphia noted in her journal of July 8, 1786 that they had partaken of "sallybub" and again the following day "We had a second sallybub and a light supper" (Busch 1983:96). Recipes for "Solid Syllabubs" were listed in an 1820 recipe book (Busch 1983:100).

The three children's mugs found in AS III may have belonged to the youngest of Adam Everly's children or one of William Everly's children. Such mugs have been associated with middle-class parents' concern with teaching their children about private property (Praetzellis and Praetzellis 1992:92). One tea set from AS III also included child-sized cups, suggesting continuing concern with the sharing of the tea ceremony with children. The absence of children-sized vessels in AS V hints at the possibility that the comb business under William's direction had grown to the extent that the residential quarters at 225 High Street had been converted for business use.

The kitchen assemblage looked much like that found in AS II, the majority of it made of Philadelphia redware, with a few buff colored, and some creamware mixing bowls from England. Several slip-decorated redware trenchers were discarded, this form probably replaced by newer platters. Pieces of sponge-decorated wares appeared in AS III, and dipped wares in the form of annular and mocha bowls and jugs were also present.

Toiletry articles—a soap box and a toothbrush holder—decorated in transfer-printed scenes, along with a matching ewer and wash basin found in AS V, reflect the mid-century concern with hygiene. Undecorated plain chamber pots and ointment pots, in creamware and tin-glazed earthenware, made up the rest of the Everlys' hygienic wares. Many of the chamber pots had a predictable pattern of breakage, a hole in the base, no doubt made while tapping the upturned pot on the bottom to empty its contents (Figure A-73). This pattern was observed in the creamware chamber pots only, the creamware vessels being thinner walled than the redware chamber pots.

Real differences in the assemblage were evident in the final Everly deposit (AS V) in the beverage consumption group. The number of jugs tripled in AS V, which may be directly

attributed to the Everlys' business rather than residence. Presumably, jugs used to serve beverages would have been needed in greater numbers to supply both employees and customers with water or some other drink during the workday.

The ceramic assemblage associated with the Everly family reflects an upwardly mobile, middle-class urban family. Their tea and table services reflected the latest fashions of the day as dictated by the English ceramic market. Their several sets of dishes suggest that they followed the dictum of the day, which called for "one for company, one for ordinary use, and one for the kitchen" (Busch 1983:69). Even children had imported English teawares for their play. The Everlys did not rely exclusively on the utilitarian wares made locally in Philadelphia, but purchased imports as well, probably because they were nearly as cheap, but also because they may have been considered of a superior quality.

Table A-8. Ceramic Vessels, Feature E, AS I-III

DESCRIPTION	TEA			BC		TABLEWARE								KITCHEN						HYGIENE		SHERD/OTHER	TOTALS
							PLATES				SERVING			EATING		PREPARATION							
	TEABOWL	SAUCER	TEAPOT	TANKARD	JUG	BOWL	MUFFIN	SOUP	SUPPER	TABLE	SAUCER DISH	WINE STAND	FRUIT BASKET	PORRINGER	BOWL	PIE PAN	BUTTER POT	MILK PAN	PUDDING PAN	CHAMBER POT	MEDICINE CUP		
AS I																							
TGEW																							
PAINTED	1																						1
CREAMWARE																							
PLAIN										1													1
PAINTED, OG		1																					1
MOLDED																							0
EDGED																							0
PAINTED																							0
PRINTED																							0
ENGINE TURNED																							0
PORCELAIN,OG			1																				1
SUBTOTAL	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
AS II																							
EARTHENWARE		1																					1
REDWARE																							
DARK GLAZE				1										1			4	1		5		1	13
SLIP DEC															4	5			1				10
CREAMWARE																							
PLAIN			1	1		1																2	5
ROYAL								2	1														3
OVERGLAZE DEC							1																1
EDGE DEC							1	1	1														3
RIBBED												1											1
PIERCED													1										1
PEARLWARE																							
PAINTED		1																					1
SHELL EDGE										1													1
WSGSW						1															1		2
STONEWARE				1																			1
PORCELAIN																							
BLUE PAINTED		2	1								3												6
OVERGLAZE DEC		1																					1
SUBTOTAL	4	3	1	2	1	1	2	3	2	1	3	1	1	1	4	5	4	1	1	5	1	3	50
AS III																							
REDWARE																							
DARK GLAZE														1									1
SLIP DEC																2							2
CREAMWARE																							
ENGINE TURNED																						1	1
SUBTOTAL	0	0	0	0	0		0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	1	4
TOTALS	6	4	1	2	1	1	2	3	2	2	3	1	1	2	4	7	4	1	1	5	1	4	58

3.2.3 FEATURE E

A minimum of 58 vessels were identified in three strata, AS I-III, of Feature E, the privy of William Simmons (Table A-8). Eighty-six percent of the ceramic vessels in Feature E were recovered from AS II.

AS I (TPQ 1765)
Four vessels were recovered from the base of the feature, including two creamwares, one tin-glazed earthenware, and one Chinese Export porcelain. Three of these vessels were teawares: one creamware teabowl decorated in overglaze red, one tin-glazed earthenware teabowl with a blue handpainted floral motif, and a Chinese Export porcelain saucer painted with overglaze red swags. A single creamware plate with a beaded rim was the only tableware vessel in this stratum. The TPQ of 1765 was based on the overglaze painted creamware teabowl.

AS II (TPQ 1790)

Fifty vessels in AS II were distributed in the following functional groups: 16 kitchen, 14 tableware, 8 teaware, 6 hygiene, 3 beverage consumption, and 3 others. Nearly half of these vessels were redwares made in Philadelphia (Figure A-74). These included five slip-decorated pie plates, four slip-decorated tulip bowls, one slip-decorated pudding pan, four black-glazed butter pots with incised bands, one black-glazed milk pan, one dark-glazed porringer, and one unidentified sherd. The vessels used for food preparation and consumption showed unmistakable signs of wear; the rims of the bowls were chipped and the interiors were scarred by stirring, the rim of the porringer was nibbled, and the surfaces of the pie plates were scored by cut marks (Figure A-75).

The majority of tablewares in AS II were vestiges of creamware table settings: two feather-edged plates (one soup and one muffin), three Royal pattern plates (one supper and two soup), one red overglaze-decorated muffin plate, one reticulated fruit basket, and one wine stand. A set of three Chinese Export porcelain saucer dishes decorated with blue stylized dragons, one Rococo-blue shell-edged pearlware dinner plate, and a plain white saltglazed stoneware bowl made up the remainder.

Teawares were split between creamware (4), Chinese Export porcelain (4), and one blue-painted chinoiserie pearlware teabowl. The creamware teas were all plain and included one teapot, one saucer, and two indeterminate sherds. The porcelain teas included three blue handpainted, floral-decorated vessels, two teabowls and matching saucer to a set, and one red overglaze-painted teabowl.

The remaining vessels identified in AS II were for beverage consumption: one small creamware jug, one Philadelphia redware tankard, and one brown reeded stoneware tankard. There were six hygiene-related vessels, including five Philadelphia redware chamber pots and one white saltglazed stoneware medicine cup. One unglazed earthenware saucer waster was placed in an "other" category (Figure A-76).

AS III (TPQ 1795)
Only four ceramic vessels were recovered in the uppermost layer of Feature E: three red earthenware kitchenwares—two slip-decorated pie plates and one plain-glazed porringer—and one engine-turned creamware sherd. The TPQ of 1795 for this layer comes from the glass assemblage.

Discussion, Feature E

The four ceramic vessels lying on the bottom of the Feature E privy were discarded after 1762, but the bulk of the feature was filled between 1790 (AS II) and 1795 (AS III). The artifacts in AS II yielded a mean ceramic date of 1785. The privy fill corresponds in date to the occupancy of William Simmons, who lived at 9 (later 13) North Sixth Street from 1789/1790 until 1800, when he moved to Washington along with the federal government in which he worked as an accountant. Thomas Moore built and insured a new three-story house and separate two-story kitchen on this corner lot of Sixth Street and South Alley (later Commerce Street) shortly after Simmons left. This new construction coincides with the closing of Feature E. Simmons, who was probably not married while he lived in Philadelphia, boarded House member Hezekiah Hosmer of New York and Senator Samuel Livermore of New Hampshire in 1798 and may have had other lodgers as well.

The Simmons assemblage can be characterized as modest but refined. Simmons and his gentlemen boarders dined on creamware tablewares that were plain with molded rim decorations in the feather-edge and Royal patterns (Figure A-77). If they drank tea, it was from blue-and-white earthenware teabowls made in imitation of the few Chinese Export porcelain teabowls he did own. Beer and cider were drunk from jugs and tankards made of plain creamware, local redware, and stoneware. While he had only a few creamware serving vessels they were expensive, including a fine pierced fruit basket and a ribbed wine stand. The remnants of these creamware table settings, discarded at the height of their popularity, probably reflect random, accidental breakage. Three "antique" matching blue Chinese porcelain saucer dishes decorated in a stylized dragon motif must have added a genteel touch to Simmons's dinner or tea table (Figure A-76). None of these vessels reflected more than moderate wear, so it is suspected that the reason they were discarded was due to breakage. The few surviving pieces of teaware included cups and saucers of plain creamware, blue Chinese Export porcelain, an older blue-painted, tin-glazed earthenware teabowl, and a later blue-painted pearlware teabowl, both copies of the more expensive, desirable Chinese Export porcelain.

Simmons's kitchen must have been full of brightly decorated, slip-decorated bowls, pie plates, and pudding pans as well as the darker-glazed porringers, tankards, and milk pans, all utilitarian vessels made and sold locally in Philadelphia. These vessels, unlike the refined tablewares, showed heavy usage. The surfaces of the pie plates were heavily scored by knife cuts, and the rim of the porringer was nibbled from overzealous eating of gruel. A contemporary, Benjamin Franklin, who lived just two blocks away, described breakfast as follows:

> "My breakfast was a long time bread and milk (no tea) and I ate it out of a 2 penny porringer with pewter spoon" (American Philosophical Society 1958: 17)

while lunch, taken at a neighboring house, was

> "a large porringer of hot water gruel sprinkled with pepper, crumbled with bread and a bit of butter in it for the price of a pint of beer, wiz. 3 ½ pence" (American Philosophical Society 1958: 8).

Table A-9. Ceramic Vessels in Feature G.

DESCRIPTION	TEA						BEVERAGE				TABLE									KITCHEN								HYGIENE				SHERD/OTHER	TOTALS
											PLATES					SERVING				EATING		PREPARATION												
	TEABOWL	COFFEE CAN	HANDLED CUP	SAUCER	SLOP BOWL	TEAPOT	TANKARD	SYLLABUB CUP	PNCH BOWL	JUG	MUFFIN	SOUP	SUPPER	TABLE	TWIFFLER	SERVING BOWL	PLATTER	TUREEN/BASKET	PORRINGER	BOWL	MIX BOWL	BUTTER POT	PIE PAN	PUDDING PAN	JAR/BOTTLE	CHAMBER	CHILDS CHAMBER POT	STOOL POT	MED POT		
TGEW																													1		1
REDWARE																															0
DK GLAZE							1												5			3		1		7		3			20
SLIP DEC																				4			5								9
MOTTLED																					1										1
YELLOWWARE																				1											1
CREAMWARE																															0
PLAIN					1		1		2	5					3	8		1			1					7	4				33
ROYAL											7	8		14	7		9														45
EDGE DEC														1																	1
RIBBED								2																							2
PIERCED																		1													1
PEARLWARE																															0
PAINTED	1		1	3	6	1																									12
EDGE DEC											1	3	1	4	2		1													2	14
PRINTED	4				1																										5
DIPT							2			1																					3
WHITEWARE																															0
PLAIN										1																					1
PAINTED				1						1																					2
PRINTED		1	2	1																											4
SPONGED																										1					1
STONEWARE																						1			2						3
BASALTWARE						1																									1
REF REDWARE						1																									1
SP PORC																															0
PRINTED			2	1																											3
HP PORC																															0
UG DEC	4			5	1								6																		16
OG DEC	5	1		7	1							1		1																	16
TOTALS	14	2	5	18	10	3	4	2	2	8	8	12	7	20	12	8	10	2	5	5	2	4	5	1	2	15	4	3	1	2	196

The greater number of kitchenwares in the archeological record suggests that this group of vessels saw greater use, and for a longer time before they broke, than the refined wares described above. Perhaps Simmons dined very informally when he was not entertaining guests.

Considering the small size of the assemblage, there was a large number of chamber pots (5), possibly additional proof that Simmons operated a boarding house. All of the chamber pots were locally made, dark-glazed redware vessels. The presence of a waster in this assemblage, that is, an unfired vessel, in this case a saucer with an unusual spout, is tantalizing. Was it purchased at a very reduced rate from one of the nearby potters to be used under a flower pot, or as a milk dish for a kitten? On the other hand, was it a bonus giveaway to a good customer? Interestingly, it survived intact.

3.2.4 FEATURE G

An assemblage of 196 ceramics was salvaged from the collapse of a truncated privy, Feature G (Table A-9), at the northern edge of the project area. The assemblage as a whole had a TPQ of 1830, but a median date of 1780. It is unclear if the privy is associated with 9 (later 13) North Sixth Street or the earlier lot facing High Street. The Feature G ceramics fell into the following functional categories: 40 percent tableware, 27 percent teaware, 12 percent kitchenware, 12 percent hygiene, and 8 percent beverage consumption, with the remainder classified as "other."

Tableware (79)
Three sets of English manufacture were identified among the tablewares:, one of porcelain (Set #3), one of Royal creamware (Set #4), and one of green-shell-edged pearlware (Set #5). The porcelain set (Set #3) was probably made in Worcester at the Thompson Porcelain Manufactory around 1751 (personal communication, Johnathan Gray, 2001). It consisted of four supper plates with sprays of flowers on octagonal rims popular between 1750 and 1800 (Figure A-78). The rims of these plates bore nicks indicating they had seen a lot of use before being thrown out. Two blue floral supper plates with octagonal rims painted with a brown wash were compatible pieces with Set #3. Two very fancy Chinese Export porcelain vessels (V. 107 and 108)—a soup plate and a table plate—were finely painted with floral bands in pink, brown, and gold overglaze enamels. These exceptional pieces are of the same period and would have complemented Set #3. They would have been very expensive and highly prized (Figure A-79).

The Royal creamware set, manufactured by Joshua Heath in Staffordshire between 1780-1800, consisted of ten pieces: three muffin plates, two table plates, three soup plates, and two platters. The interior surfaces of this set were lightly scratched from cutting, and some of the plate rims were nicked. There were 32 other Royal creamware vessels that did not exactly match the set but may have been used together. If sets were purchased in batches rather than as one big order, or if existing sets were supplemented over time, subtle differences in shading or different manufactories may not have been important to the eighteenth-century consumer. Royal creamware vessels in Feature G that were not part of Set #4 included 4 muffin plates, 5 soup plates, 12 table plates, 7 twifflers, and 7 platters. These individual vessels underwent the same wear and tear as Set #3. Vessels used for serving, which may have complemented this set, included one basket-weave tureen, two scalloped vegetable dishes, and seven plain-rimmed serving dishes. The only other creamware vessels were two green-shell-edged table plates.

The green-shell-edged pearlware set (#5) bore similar but slightly heavier signs of use wear. Set #5 consisted of four pieces—three table plates and one soup plate. Compatible pieces, that is, the same color, pattern, and ware, included one muffin plate, two soup plates, one supper plate, one

table plate, two twifflers, and one platter. Two lone blue-shell-edged pearlware sherds were also present.

Teaware (52)

Chinese Export porcelain teawares made up 46 percent of the teas. Altogether seven teabowls and six saucers in the blue Fitzhugh pattern composing at least two sets were identified. There were also two blue Canton saucers and one blue Nanking slop bowl. The rest of the porcelain teas from China were overglaze painted, eleven with floral motifs in pink and brown hues with fluted rims—seven saucers, three teabowls, and one slop bowl. Additionally, there were two teabowls with black overglaze painted floral festoons and one coffee can with a gold rim band. Three teacups and one saucer in soft-paste porcelain with painted decoration over a transfer-printed ground were made in England.

In keeping with these expensive porcelain teawares were three fancy English teapots—one in black basalt, one engine-turned refined redware, and one with a brown transfer print. The English teawares were equally distributed between painted (13) and printed (12). The majority of the printed teawares were decorated with a black genre scene with a geometric border. Of these seven vessels, two teabowls and a matching saucer depicted guinea hens. Other printed colors included two red teacups, two light-blue genre scenes with geometric borders—one coffee can and one saucer—and one brown Oriental landscape on a slop bowl.

The painted teas were predominantly blue floral designs—one chocolate or breakfast cup, one teabowl, and three slop bowls. There were four muted polychrome slop bowls, one fluted saucer in a brown star motif, and one saucer with a red line band. A single plain creamware slop bowl was among the teawares.

Beverage Consumption (16)

Only four vessel forms were present in this beverage group, including jugs (8), tankards (4), punch bowls (2), and syllabub cups (2). Most of these vessels were made of creamware, nine were plain, the syllabub cups were ribbed, and one of the tankards was engine-turned. There were three pearlware vessels, two with annular decoration—a jug and a tankard, and one marbleized tankard. The remaining decorated vessels included one blue-painted whiteware jug and one locally made, black-glazed redware tankard. One tankard held two cups or one pint of liquid, and another held three cups. The interiors of the punch bowls were heavily scored from stir marks, and the tankards were fairly complete except for missing handles, the likely reason they were thrown out.

Kitchen (24)

Eighty percent of the kitchen group were made of Philadelphia redware. Local utilitarian forms included dark-glazed butter pots (3), slip-decorated pie plates (5), dark-glazed porringers (5), slip-decorated “tulip” bowls (4), and one large slip-decorated pudding pan. The “tulip” bowls are so named for the slipped decoration in the form of a tulip found on the interior of small bowls used for eating. The bowls and porringers showed wear around the vessel rims caused from eating out of the bowl or from stacking. The pie plates were heavily crazed on the interiors and blackened on the bases from baking on an open fire.

Vessels not typical of local manufacture or imported include one manganese-mottled refined redware mixing bowl, one plain creamware mixing bowl, one brown salt glazed stoneware crock, one tan salt glazed stoneware jar, one gray salt glazed stoneware bottle with a blue cobalt stylized flower and inscribed “3,” and one yellowware bowl. Less wear was evident on the stoneware vessels.

Hygiene (24)
All but two of the vessels in this category were identified as chamber or stool pots. The stool pots were made to rest in a stool or chair found in the house rather than the traditional pot-bellied form slid under the bed (Figure A-80). There were 15 chamber pots, four child-size chamber pots, three stool pots, one tin-glazed earthenware ointment pot, and one blue-transfer-printed porcelain sherd. Eleven of these vessels were plain creamware and ten were black-glazed Philadelphia redware. One of the chamber pots was whiteware with polychrome sponge decoration.

Discussion, Feature G
Because Feature G was not recovered in situ it is impossible to know whether the discrepancy between the TPQ (1830) and the mean ceramic date (1780) indicates long usage or discrete deposits. The early material, in particular, is very elegant and must have come from an elite household. In 1785, Dr. Joseph Redman and his family lived at 229 High Street, and it is possible that Feature G relates to their occupation. Redman was well known in elite circles and is mentioned in Elizabeth Drinker's diary (Smith 1995:150). David McCormick, an ironmonger, was at 229 High Street by 1795, and the Feature G deposit may represent a change in residency. There is also a chance that Rachel Emlen and her husband lived at the corner of Sixth Street and South Alley before they moved to High Street. They, too, belonged to elite Philadelphia society and would have had the kinds of elegant china found in Feature G. Rachel was the granddaughter of William Hudson, who originally subdivided the block.

3.2.5 CONCLUSIONS, CERAMICS FROM BLOCK 2 (FEATURES B, E, AND G)

The ceramic assemblages recovered from Feature B (1790-1856), Feature E (1790-1800), and Feature G (1750-1830) on Block 2 reflect the standard of living among some Philadelphians over a 60-year period. The lifestyle of the prosperous tenants and merchant owners at 225 High Street around the turn of the nineteenth century was very different than that of their neighbor, civil servant William Simmons, who lived at 9 North Sixth Street at approximately the same time. The lot sizes facing High Street (later Market) were wider and deeper than those facing Sixth Street, and the houses were correspondingly larger. Many city houses built at the end of the eighteenth century were made to house both family and business under one roof, which was the case at 225 High Street. A series of large families lived at 225 High Street, while William Simmons's household included only himself, probably a housekeeper, and occasional boarders. Later nineteenth-century residents at 225 High Street, e.g., two generations of the Everly family, were also relatively well-to-do and probably counted as members of Philadelphia's upper middle class.

An estimate of the market value of the Block 2 ceramic assemblages, presented in Table A-10, shows a greater expenditure on teawares than on tablewares across the board. The William Everly household spent less on teawares than his parents had and less than half of what was spent by the earlier tenants. This decrease over time may be a result of a decrease in the costs of ceramics due to trade restraints during this period (Miller 1984:40). However, it may also relate to the fact that William Everly's teawares were probably used to serve customers of his business rather than at home or to impress family friends. Even more striking is the difference in expenditures on teawares between the contemporaneous tenants (6.54) on High Street and William Simmons (2.65) on Sixth Street. The tenants, who spent approximately three times as much on teawares, sipped tea from mostly Chinese Export porcelain while Simmons sipped tea from an assortment of tin-glazed earthenware and pearlware imitations of the few prized pieces of Chinese Export porcelain that he did own.

Table A-10. Index Values for Block 2 Ceramic Assemblages

FEATURE	DATE RANGE	ASSOCIATION	TEAWARE	TABLEWARE
Fea B, AS II	1790-1816	Tenants	6.54	1.44
Fea B, AS III	1816-1830s	Adam Everly	5.65	2.19
Fea B, AS V	1830s-1856	William Everly	3.68	1.86
Fea E, AS I–II	1790-1800	William Simmons	2.650.	1.57
Fea G	1790-(1830)	Unknown	3.92	2.26

Since the index values for tablewares exclude serving vessels, which were costlier, the slightly higher cost of Simmons's tablewares compared to the tenants is not accurate because the tenants discarded 43 serving vessels, while Simmons discarded five. However, one similarity between the two assemblages was a rather unique vessel form, the saucer dish, which is a dish in the form of a saucer but larger. The tenants owned one and Simmons owned three. All four vessels were Chinese porcelain decorated with stylized dragons in underglaze blue. Aside from the unique form, which may have been used for serving either cake at teatime or meals at the dinner table, the pattern is unlike any of the other Chinese Export porcelains from Block 2. The style resembles Wan Li or Transitional wares traded with the Dutch from 1620 to the end of the eighteenth century (Howard 1984:62, D2). Overall, the tablewares belonging to Adam Everly and those found in Feature G were the most expensive.

A tangible difference between the earliest deposit (AS II) in Feature B and the deposits relating to the Everly family (AS III and V) was the presence of discarded sets, both for tableware and teaware. The presence of matched sets in the homes of the tenants and later owners at 225 High Street and the owners associated with Feature G reflects their high status. The presence of sets is a sign of more formal dining rather than the one dish meal of the eighteenth century, consumed in individual bowls or plates taken from a communal pot (Wall 1994:262). Eighteenth-century vessel forms such as porringers and trenchers were found in Features B and G, and porringers were found in Feature E although trenchers were absent. The increase in trenchers thrown out by the William Everlys is probably due to the fact that this vessel form was replaced by platters. Porringers were replaced by small bowls and soup plates. A range of flatware vessel forms in various sizes—muffins, twifflers (desert plates), supper plates, and dinner plates—reflect increasingly elaborate dining practices. This shift in focus to the presentation of food emphasized the social aspect of meal consumption, and the move from one-dish dining to dining in several courses created a corresponding set of behaviors and expectations by people who could afford this luxury.

The ceramics in Features B and G reflect occupants who were avid consumers of all things English and Chinese. They used local wares in the kitchen, but their tables were set with English plates, and tea was served in even more expensive tea sets, preferably painted Chinese Export porcelain and later, transfer-printed English porcelain. They could and did afford two or three different table settings, plain or molded creamware for everyday use, and porcelain for entertaining. Later in time, the undecorated creamware settings were replaced by edge-decorated wares in green or blue for everyday use and blue-transfer-printed table sets for entertaining.

The kitchen was equipped with locally made redwares, with vessels used for eating or serving colorfully slip decorated. Common redware vessel forms such as pitchers, milk pans, and tankards were also made in miniature sizes by Philadelphia potters for children's play (Figure A-81). Chamber pots in the earlier deposits were predominantly redware but in later deposits at least

half were made of the slightly more expensive creamware. The advantage of creamware chamber pots is they were lightweight, easier to clean, and therefore probably considered more sanitary. However, as the study of wear patterns revealed, the creamware chamber pots were thinner walled and tended to break when they were upturned and tapped to empty the contents. The local redware chamber pots, though heavier, were also probably sturdier, as none had this pattern of breakage.

Four well-made redware mixing bowls with a single beaded band and distinctive brown splotch decoration resemble pots made or sold at the Philadelphia pottery of Thomas Haig. Thomas Haig arrived in Philadelphia around 1810 and operated his pottery business at "N. 4th above Poplar" from 1819 until his death in 1831 (Myers 1980:41). Haig received a bronze medal for the best red earthenware at an 1826 exhibition of American manufactures held at the Franklin Institute (Myers 1980:44). His pots were well potted, made in the English tradition, glazed on both surfaces, and were characterized by dark-brown manganese decorative stains. A set of three of these mixing bowls was found in William Everly's privy and one was found in Feature G.

The transformation of running a business in the home, combining workplace with the domestic sphere, is crystallized in the Everlys. Here the business was passed down from father to son, and in the final period of use of Feature B, 1830-1856 (AS V), the family moved and the house was converted to commercial use exclusively. This transformation is perhaps seen in the greater frequency of jugs in this deposit. Jugs supplied the employees and clients with beverages in the course of the workday, the equivalent of the water fountain found in offices today. Most of the jugs were dipped pearlware in annular and mocha patterns made popular between 1830 and 1840.

The Philadelphia Anthony, Wistar, Kunkle, Henry, Helmuth, Everly, and Simmons families lived in a city that was not only the capital of the nation for a brief time, but was also a capital of commerce. These families set up home, and in some cases shop, one city block from the State House where the Declaration of Independence was signed, but by the nineteenth century, the block was becoming the heart of the commercial district. Much of the block burned in 1856, and most of the houses were replaced with four- and five-story commercial buildings. In the 1950s, these buildings were torn down and the block was transformed into a green mall, which for another 50 years covered the buried shaft features in the backyards of High and Sixth Streets. Their 200-year-old trash allows us but a peek into the lives of these early Philadelphians. As city dwellers, they strove to have all the refinements of life that money could buy. Dishes, apart from being tools used to consume food, became symbols of newfound wealth and status, disposable property subject to the whims of fashion.

3.3 THE BLOCK 2 GLASS ASSEMBLAGE

3.3.1 METHODS

The glass assemblages were examined in several different ways. To begin with, after the fragments were washed and a preliminary labeling was done, the bases of the vessels found in each feature were sorted into their various functional groups (alcohol, beverage, medicine, etc.). An attempt was then made to mend the remaining fragments to the bases to get a better idea of the age, function, and size of the vessels. Mending was also used to understand the interrelationships between the different natural strata of the feature and the relationships between them, if any. The bases of the vessels were further examined for wear, which provides an idea of the lag time between the manufacture of a vessel and its deposition into an archeological context. With all of this information in hand, the vessels (and the analytical strata) were then related to the

owners and occupants of the lot in which the feature was found, as determined by the time of the deposition of the AS level of the associated feature.

3.3.2 FEATURE B

3.3.2.1 Introduction

The glass vessel assemblage found in the fill of Feature B contained a wealth of information relative to the early commercial history of Market Street. More specifically, it sheds light on the lives of several well-to-do families and merchants including Smith & Helmuth and dry-goods-store owners Adam and later William Everly, from the opening of the privy or cesspool in the last years of the eighteenth century until just before the Great Fire of 1856.

AS I
AS I was encountered at the base of the privy. This stratum was a rich, somewhat hard and dry nightsoil. This nightsoil appeared to be a discrete deposit, which had a TPQ of 1790. The stratum was somewhat semicircular shaped, with its long axis trending north-south. This linear and somewhat irregular shape was likely created because of the cleaning of the feature, during which parts of this nightsoil were missed. Very few glass vessels were recovered from this analytical stratum. Of these were five wine bottles, one food bottle, and two chemical bottles, for a total of eight bottles. Only one tableware vessel was found: a plain tumbler.

Not much can be said about this analytical stratum, as it contained such a small assemblage. Given the TPQ of 1790, this analytical stratum would have been associated with either Joseph Anthony, a merchant-captain from Newport, Rhode Island, or with Dr. Caspar Wistar, of the same family that founded the Wistarburg Glass Factory. Wistar, from a prominent Philadelphia family, lived at 225 High Street (527 Market Street) from 1795 to 1801.

AS II
AS II consisted of a grayish brown to dark brown silt loam to loamy sand, with very large quantities of artifacts. Based on ceramics, this analytical stratum has a TPQ of 1820; the glass TPQ of this deposit is 1816, based on a mustard bottle embossed “LONDON” (v.113). These TPQs suggest that the deposit relates to the occupation of Smith & Helmuth, merchants who did business at 225 Market Street from 1807 to ca. 1818. As discussed in Section 3.2 above it may also have included vessels left by previous residents. The large number of artifacts found in this analytical stratum, as well as the almost complete lack of nightsoil, lends support to the idea that this stratum was deposited in order to function as a percolation fill, which would allow for the excreta to drain from the privy more easily.

One of the most unusual things about AS II was the sheer quantity of glass vessels. A total of 245 vessels was recovered. Of these, 69 were for wine and spirits (alcohol) (Table A-11), 6 were for condiments, 68 were medicinal/chemical, 3 were for snuff, and 9 were unidentifiable, for a total of 155 bottles. Not surprisingly, most of the tableware consisted of drinking vessels (46 tumblers, 24 wine glasses, 6 goblets, and 5 miscellaneous glasses). Only a small portion of the tableware was composed of serving vessels (3 decanters, 1 sugar bowl, 1 cruet, and 10 unidentifiable tableware vessels), for a total of 96 tableware vessels (Table A-12).

Table A-11. Alcohol Bottles from Feature B, AS II

Function/Subfunction	Count	Percent of Tot. No. of Bottles (155)
Alcohol		
Wine	55	35.5
Porter/Ale	1	0.6
Case Gin	3	1.9
Demijohn	2	1.3
Whiskey	3	1.9
Flask	3	1.9
Misc. Liquor	2	1.3
TOTAL	**69**	**44.4**

Table A-12. Glass Tableware from Feature B, AS II

Function/Subfunction	Count	Percent
Drinking		
Tumbler	46	47.9
Wine Glass	24	25.0
Misc. Glass	5	52.1
Goblet	6	6.3
Subtotal	81	84.4
Serving		
Decanter	3	3.1
Bowl	1	1.0
Cruet	1	1.0
Subtotal	5	5.2
Unid. Tableware	10	10.4
TOTAL	**96**	**100**

Both wine and chemical bottles were predominant in AS II. It appears that John Keppele Helmuth, who lived on the lot, had a large wine collection (Figure A-82). Indeed, out of 155 vessels from AS II, 55 were wine bottles, or 35.5 percent of the bottles from AS II, an unusually high percentage. Also unusual is that many of these vessels had significant wear on their basal surfaces, implying that they were in use or in storage for a long period of time. Out of the 55 wine bottles examined for this study, nine had what is considered to be “moderate” base wear. An additional vessel (V. 22) had extremely heavy base wear, indicating that it was used and stored for an unusually long period of time. Not coincidentally, this vessel had the largest base diameter of any of the wine bottles in the entire Feature B assemblage (10 cm); earlier wine bottles tend to have larger base diameters than later ones. The presence of this early vessel supports the idea that the deposit contains some things that belonged to the earliest residents at 225 Market Street. Two

demijohns were also found in AS II (V. 81a and 82). These vessels were probably used to store wine, again suggesting that a wine aficionado lived on the premises.

Predictably, the tableware supports a heavy reliance on the use of wine. Out of 96 tableware vessels, 24 wine glasses were identified (25.0% of the tableware). The AS II assemblage includes two different sets of wine glasses: one undecorated (V. 382-388) and one paneled of cut glass (V. 391-396). It should be noted that each set contained a matching vessel found in AS III; these were likely found in this overlying stratum as a result of either an intrusion or an excavation error. Regardless of the reason, they were included in the analysis of Adam Everly's sets, discussed below.

Forty-six tumblers were also found in AS II. This is more unexpected, as only four porter/ale or whiskey bottles and three case-gin bottles were found in this analytical stratum. One would have expected these other products to be better represented, considering the large number of tumblers found in the stratum. It is of course possible that Helmuth had other means of storing porter/ale or liquor that would not manifest themselves as glass vessels, such as barrels and the like. In addition, barrels were probably not thrown out, and if they did find their way into the archeological record, they may not have survived the almost 200 years of burial.

The large number of medicine bottles in AS II includes 76 chemical bottles and 1 patent medicine bottle (Figure A-83). The number of chemical bottles is especially unusual. It may be that Smith & Helmuth were putting up various chemicals for sale in these vessels, as none showed any basal wear, indicating that they did not sit in storage for any significant period of time. This lack of wear is more consistent with a commercial deposit, where goods would normally not sit on a shelf for long, in contrast to a household deposit, where unused bottles would be stored in basements or in cabinets, sitting on hard surfaces where they would likely become worn over time.

When one considers both the wine and medicine bottles together (a total of 132 vessels), only 23 vessels remain that are not from either of those categories! Of these vessels, four were for porter/ales and whiskeys, three for gin, three were flasks, two for miscellaneous liquors, six were condiment bottles, three were snuff jars, and two were demijohns. These would have likely been used by Smith & Helmuth or their employees during lunch or some other break. It should be noted that the large quantity of vessels appears to have been deposited within a relatively short period of time. As mentioned earlier, Smith & Helmuth were located at 225 Market Street from 1811 until 1818. With a TPQ of 1820, it is quite likely that AS II represents a final deposit from Smith & Helmuth, and from John Helmuth's household. Perhaps the large quantity of vessels reflects the emptying of the store and dwelling of all unwanted items before both the business and residents moved.

Before continuing on to a discussion of Analytical Stratum III (AS III), several vessels that were recovered from AS II should be mentioned. Of the condiment bottles, one is of particular interest (V. 113). It has "LONDON" embossed on one panel and apparently held mustard (Zumwalt 1980:282). These "LONDON" bottles (Figure A-84) were produced by the Dyottville Glass Factory in Kensington starting in the first quarter of the nineteenth century and continued to be produced until after ca.1875 (McKearin 1970:86, Zumwalt 1980:282).

A second vessel of interest is the lid of a cobalt-blue sugar bowl (V. 435, Figure A-85). This would have been a very elegant and relatively expensive vessel, represented by a cobalt-blue lid decorated with a honeycomb motif and a swirled knob. George S. and Helen McKearin describe this motif as "a definite Stiegel characteristic." This kind of vessel was produced by William

Stiegel at his glass furnace in Manheim, Pennsylvania, from ca. 1769 to 1800 (McKearin and McKearin 1948:85).

One other noteworthy vessel from AS II was a case bottle for dispensing liquor (perhaps brandy or some similar liquor, V. 425). This handblown bottle is clear, with an engraved Dutch style motif of tulips. The vessel dates to the eighteenth century and tentatively originates in the New York-Philadelphia area. Like the sugar bowl, the vessel would have been relatively expensive.

Not surprisingly, John Helmuth owned several sets of fine glass tableware, almost all of it relating to drinking. Indeed, he had two sets of tumblers; one was a set with cut panels, the other, with fine engraved loops. There were also two sets of wine glasses. Both sets are of high quality. One is composed of simple, undecorated drawn glasses; the other is a high-quality collection of glasses with cut panels around the bases of the bowls, as well as around the stems. This glass tableware assemblage indicates a rather elite lifestyle, which is consistent with what we know about Helmuth and the other residents of 225 Market Street.

In sum, John Helmuth and/or the residents who preceded him at 225 High Street had a fairly large wine stock, while downstairs, they were purveying, among other things, a large quantity of chemicals, before moving out in approximately 1820.

AS III

AS III was the second in a series of rich nightsoil deposits. This very dark gray nightsoil did not contain quantities of glass bottles that even came close to those found in AS II. Still, it is an important deposit and bears discussion.

AS III contained a total of 40 vessels, providing a TPQ of 1830. This TPQ would associate this analytical stratum with Adam Everly, who was manufacturing decorative combs at 225 Market Street by 1823. Of the glass vessels, 25 were bottles, including 11 for wine and one for porter/ale or whiskey. There were two flasks, one miscellaneous liquor bottle, two food bottles, one patent medicine bottle, six chemical bottles, and one household bottle. Some tableware vessels, most of them relating to alcohol, were also identified. They included five tumblers, six wine glasses, two unidentified glasses, one sugar bowl, and one unidentified vessel, for a total of 15 tableware vessels.

One of the more interesting patterns associated with the Adam Everly deposit was its lack of sets (this same lack of sets was noted in the ceramic analysis). There were no glass tableware sets; of the 17 glass tableware vessels, none matched. This is quite the opposite of the AS II assemblage, and of the later assemblage also associated with the Everly family, which was found two natural strata above the Adam Everly deposit. Also interesting here is that the tableware from Adam Everly's deposit contained many highly decorated vessels, while the earlier AS II contained very few.

AS IV

AS IV consisted of an almost completely sterile fill, probably dating to sometime shortly after the deposition of AS III. Fragments representing six glass bottles were recovered from this analytical stratum. Of these, five were alcohol (three wine, two miscellaneous) and one was medicine. This stratum appears to have been deposited to cover the nightsoil below.

AS V

AS V was a rich nightsoil deposit with large quantities of densely packed artifacts. The deposit appears to have belonged to an Everly household although it is not clear whether it was the

household headed by Adam Everly in his later years or by his son William, who took over the Plain and Fancy Combs business from his father. It may be that the stratum includes artifacts from both households. The TPQ for AS V is 1850, based on the embossed date on a "Fancy Cologne" bottle (V. 250). Among the glass vessels were 18 alcohol (12 wine, 2 porter/ale/whiskey, and 4 miscellaneous spirits) bottles (Table A-13). Other vessels were 1 beverage, 4 food (condiments), 15 medicine (chemical), 1 household, 23 cologne, and 15 unidentified bottles (Table A-14). As with AS II, most of the tableware consisted of drinking vessels (38 tumblers, 15 wine glasses, 4 other drinking glasses, and 1 goblet). Two vessels were unidentifiable tableware vessels.

Table A-13. Alcohol Bottles from Feature B, AS V

Function/Subfunction	Count	Percent
Alcohol		
Wine	12	15.6
Porter/Ale	2	2.6
Case Gin	0	0.0
Flask	0	0.0
Whiskey	0	0.0
Misc. Liquor	4	5.2
Subtotal	18	23.4
Non-Alcohol	59	76.6
TOTAL	**77**	**100**

Table A-14. Glass Tableware from Feature B, AS V

Function/Subfunction	Count	Percent
Drinking		
Tumbler	38	63.3
Wine Glass	15	25.0
Glass	4	6.7
Goblet	1	1.7
Subtotal	58	96.7
Serving		
Sugar Bowl	0	0.0
Misc. Frags	2	3.3
Subtotal	2	3.3
TOTAL	**60**	**100.0**

For the most part, it is difficult to separate out the glass vessels that belonged to William Everly's family from those relating to his dry-goods store. However, there is one notable exception. Feature B contained 23 "Fancy Colognes", all of them being excavated from AS V. Indeed, almost one third of the glass bottles found in AS V were "Fancy Colognes." It is unlikely that

these many types of cologne would have been used by even a large number of individuals. The cologne was probably being sold at Mr. Everly's dry-goods store (Figure A-86). As with the chemical bottles in AS II, the lack of base wear on the "Fancy Colognes" indicates that the vessels were not used over a long period of time. This lack of wear is consistent with the vessels being filled by Mr. Everly, and then quickly sold. It should be mentioned that Mr. Everly imported some of his colognes as well. Two of these vessels (V. 230 and 231) are clear and hexagonal and have "a PARIS" embossed vertically on their sides. It is not known, however, if the cologne bottles themselves were actually manufactured in Paris, or if they were manufactured locally (perhaps by the Dyottville Glass Factory) to be filled with cologne from Paris.

The "Fancy Colognes" themselves are quite noteworthy. Seven of them have the initials "P D" towards the base of the vessel, and in some cases, the "D" is backwards. These vessels were likely made from the molds of Philip Doflein, a German who in 1842 set up his mold-making shop at 84 North 5th Street (McKearin and Wilson 1978:134, 386). It is not known whether Mr. Doflein made only molds, or if he blew some of the vessels himself. In any case, his mold-making shop was in operation until at least 1900. Also, several of the "Fancy Colognes" have been attributed to the Dyottville Glass Factory, which had its factory in Kensington on the Delaware River, several miles north of Block 2. One pattern that has been attributed to this factory is the "urn" pattern, which is shown on vessels 220 and 221 and would have been made no earlier than 1830, the time during which "Fancy Colognes" came into vogue. The Dyottville Glass Factory also had a warehouse at the northeast corner of Fourth and Race Streets (McKearin 1970:76). This is in close proximity to William Everly's Dry Goods Store and would have been quite a convenient place for him to obtain his "Fancy Cologne" bottles, which he would then fill, in addition to bottles made for other functions.

One functional group that is peculiarly missing from the Everly assemblage is beverage bottles, the kinds of bottles used for soda and mineral water. No beverage bottles were found in AS V. This is particularly unusual because by 1850, the TPQ for the deposition of this analytical stratum, soda and mineral bottles (almost all of them would have had graphite pontils) contained beverages that were very popular and had been since about 1830 (Ketchum 1975:119). For example, in the data recovery conducted in Block 866 in the Dublin neighborhood of Paterson, New Jersey, a stone-lined privy (Feature 127) dating to about the same time period contained nine beverage bottles out of a total of 73 vessels (Yamin 1999:135). Other urban deposits in the mid-Atlantic dating to the mid-nineteenth century almost always contain some beverage bottles.

As with AS II, AS V contained many drinking vessels. Tumblers (n=38) made up 63.3 percent of the tableware, while wine glasses (n=15) made up 25.0 percent. Unidentifiable glasses (n=4) made up an additional 6.7 percent of the tableware, with one goblet contributing another 1.7 percent. This means that the drinking vessels make up 96.7 percent of the glass tableware! Again, as with AS II, it is surprising that so many tumblers show up in this analytical stratum, since only two porter/ale/whiskey bottles were identified. As with the Smith and Helmuth deposit (AS II), the Everly deposit also included two sets of wine glasses. One set had no decorations except for a knop on the stem. The other set consisted of wine glasses with fine-cut panels at the base of the bowls. Although these vessels (and the Everly tableware in general) were of some quality, this quality did not even come close to the quality found in AS II. In general, William Everly seemed to prefer the simpler, less complex motifs on his tableware. The vast majority had little or no decorative motifs, as opposed to the delicate and complex designs found on the Smith and Helmuth tableware.

AS VI
AS VI consisted of brick, mortar, and plaster rubble in a matrix of dark yellowish brown sandy loam. Also present were some scattered quantities of charcoal and melted window glass. This analytical stratum appears to represent rubble from the Great Fire of 1856, although the TPQ based on artifacts was 1816, as determined from an unidentified bottle embossed "LONDON" (V. 255). Only three bottles were found in the stratum, including a miscellaneous liquor bottle, a household bottle, and the unidentifiable "LONDON" bottle (V. 255). This bottle is embossed in a similar fashion to V. 113, but it is much smaller. It is doubtful that it held mustard, or was even related to the consumption of food.

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AS VII
AS VII covered the brick and rubble fill from the Great Fire. The analytical stratum consisted of a small lens of coal ash and slag, having a tentative TPQ of 1870, based on two Graeber and Son beverage bottles from Philadelphia (V. 273 and 274). Not much can be said about this deposit except that the ash stratum was probably deposited by John Richardson, the owner of the lot after 1856, or his tenants, clothiers Brown, Kunkel & Co., who were located at 527 (previously 225) Market Street until at least 1870. By this time, the feature was no longer being used as a privy/cesspool and had recently been truncated by the extension of the building at 527 Market Street back to Commerce Street. The placing of the ash fill was probably the last time that the presence of the feature had been "acknowledged" by anyone.

AS VIII
AS VIII consisted of the 1953 demolition debris (brick, plaster, mortar, and wood fragments) that overlay Feature B. No glass vessels were recovered from the fill.

3.3.2.2 Summary and Conclusions of Feature B

Significant numbers of glass vessels were recovered from the several large, primary deposits (AS I, II, III, and V) in Feature B.

The first (AS I) was likely deposited by Caspar Wistar after 1790, the TPQ of the earliest analytical stratum. The second (AS II) was probably deposited by merchants Smith & Helmuth, shortly before they moved from 225 Market Street in 1818. This deposit possibly served as a percolation fill for the privy. The glass vessels appear to represent a combination of residential discard and materials relating to Smith & Helmuth's shop, including large numbers of chemical bottles, the vast majority of them showing little or no base wear. A small overlying deposit of nightsoil (AS III) appears to relate to Adam Everly's family and business. The cesspool/privy was then cleaned and covered with sterile soil, AS IV. A fourth primary deposit accumulated above AS IV between 1850, the TPQ of this deposit (AS V), and the Great Fire of 1856. This deposit relates mainly to William Everly and his dry-goods store, but it also included some household goods belonging to the Everlys. As with AS II, AS V illustrates two sources for the deposit, one commercial and the other residential.

3.3.3 FEATURE C

3.3.3.1 Introduction

Although Feature C contained very few glass vessels, enough were identified that a vessel analysis was warranted. It appears that Feature C contained several commercial deposits starting after 1842, with some residential contributions.

Feature C was a brick-lined privy, with an exterior diameter of 4.9 feet and a truncated depth of roughly 4.6 feet. The top third of the privy consisted of a single course of brick, while the bottom two-thirds had two independent columns of bricks. Approximately 0.75 feet below the top of the inner column of brick was a cement cap. AS I consisted of a dark brown to very dark grayish brown nightsoil. Overlying this was AS II, a strong brown silt loam with brick, mortar, and slag. AS III contained two natural strata, the deeper consisting of slag with iron deposits and the shallower being a sterile sand. Overlying this was the cement cap, which varied from 0.25 to 0.35 feet in thickness. Finally, above the cap was AS IV, a homogeneous grayish brown slag mottled with iron. The feature has a TPQ of 1842, based on a white granite ceramic vessel.

AS I
A total of nine bottles was identified from AS I, including six medicine/chemical bottles, two tumblers, and a stemmed wine glass. The stratum appears to have been primarily a commercial deposit, with a residential component. The lack of any bottles, other than ones for chemicals, is indicative of its commercial nature (Figure A-87). It is unknown what kind of business was associated with this deposit, but it appears that it would have been related to the dispensing of medicines, chemicals, oils, or perhaps paints, or other similar items. The two tumblers recovered were undecorated and could have easily related to the commercial or residential component of the deposit. The wine glass, however, was clearly from a residence. A fairly large number of ceramics including a red-transfer-printed saucer with “forget me not” on the base was also found in this deposit.

AS II
AS II was a strong brown silt loam with brick, mortar, and slag. Although no diagnostic artifacts were found in this stratum, which could provide a TPQ, it was clearly later than AS I, which had a TPQ of 1842. Five vessels were recovered, all of them medicine or chemical bottles. It is probable that this stratum was deposited by the same commercial establishment that deposited AS I.

AS III
AS III contained a grayish brown, brown, and pale brown slag with iron deposits. No glass vessels were recovered from this level. Overlying AS III was the cement cap.

AS IV
AS IV contained a grayish brown slag mottled with iron. Only one vessel was found in this fill: a commercial jam/jelly jar. Although this vessel is not very diagnostic, it is much later than the rest of the feature, dating almost positively after 1890.

3.3.3.2 Summary and Conclusions

Feature C was a dry-laid, brick-lined privy consisting of four analytical strata, the earliest dating to approximately 1842. It appears that for most of the life of the privy, the shaft was being filled with a combination of commercial and residential material. For some reason, this privy was sealed with a cement cap approximately 5 feet below the surface sometime before 1890 and then finally filled with a clean layer of coal slag and ash.

3.3.4 FEATURE H

3.3.4.1 Introduction

The glass vessels from Feature H suggested that the feature had been open for an unusually long time. Commercial deposits recovered from the feature spanned a 90-year period beginning after1845 and lasting until the demolition of Block 2 in 1953-1954. Shaft features are rarely left unfilled for this long a period.

Feature H was a brick-lined privy constructed at the rear of 5/9 North Sixth Street. The feature was encountered during the removal of Feature F, a deposit of wood boards and rubble dating to the demolition of Block 2. Feature H was under the debris and was overlain by the wall of the rear of 9 North Sixth Street, as well as by a brick arch trending north-south. As Feature H was located in close proximity to Features C and D, it was decided only to partially excavate it, because the complete excavation of the feature risked undermining the shoring box enclosing Features C and D. One quadrant of the upper portion of Feature H was excavated by hand, while the deeper part of the feature was removed by backhoe. Four deposits were identified; AS I consisted of nightsoil dating to after 1845; AS II, dating to approximately 1880, contained a matrix of brick fragments and plaster; AS III, dating later than 1925, contained mostly sandy loam or loam with brick fragments; and AS IV, post- 1940, contained mostly loam and some slag. Two vessels (V. 10 and 27), a beverage bottle fragment and a cobalt blue ink bottle, respectively, were found on the surface of the feature. Although these vessels were assigned vessel numbers, they were not included in the calculations because they could not securely be related to a specific stratum.

AS I
AS I consisted of the privy nightsoil encountered at a depth of 8.5 feet below datum. Dating to after 1845, this stratum would most likely date to the occupancy of J.B. Moore, who ran a furnishings store at 5 North Sixth Street. Only five vessels were recovered, including two graphite pontilled mineral water bottles embossed “McKinney/ Philada// Rice &/ Mineral Waters” and one graphite pontilled beverage bottle embossed “E. Roussel/Philada” (Figure A-88). These three vessels, which date after 1845, were probably manufactured around 1855, just prior to the Great Fire of 1856. The two remaining vessels were a miscellaneous beverage bottle (V. 14) and an olive-green liquor bottle (V. 3).

Although few were vessels found in this stratum, some conclusions can still be made as to the deposit’s associated occupants and its age. To begin with, it appears as though the deposit is a commercial one, based on the almost complete lack of ceramics. The TPQ of 1845 would associate the deposit with J.B. Moore’s furnishing shop. Perhaps the several mineral water and beverage bottles were from J.B. Moore or his employees having lunch. Based on the mineral water bottles, the deposit dates to just before the Great Fire. Although the manufacturing technique used to make these vessels dates to after 1845, the extremely heavy wear on the Roussel bottle could have easily taken another five or 10 years to develop, placing the time of the deposition of the bottle closer to the date of the Great Fire.

AS II
AS II was the first of three trash-filling episodes. The matrix consisted of brick, rubble, and mortar fragments. Again, very few glass vessels were recovered; only four were identified. Of these, one was a mineral water bottle, one was a “pony” beverage bottle, one was an unidentified bottle, and the last was a moldblown tumbler with arched panels. AS II appears to date to approximately 1880. At about the time of the deposition of this first filling episode, Enos R.

Artman & Company opened a carpet shop at 9 North Sixth Street. The opening of the business in 1878 coincides nicely with the estimated TPQ of 1880 for the stratum. Thus, it is very likely that the extensive amount of rubble found above the nightsoil came from the carpet shop. Perhaps the rubble resulted from the relocation of interior walls, which might have been necessary because some of the larger carpets would have undoubtedly required large spaces to store and sell them. The Artman carpet shop continued to do business on this lot until 1893, when they moved to 718 Market Street.

Both glass and ceramic mineral bottles were recovered from AS II, the domestic ones being glass and the imported ones being stoneware. The style of the tapered-top mineral water bottle (V. 6) embossed "G.../ Sa[ratoga Springs/ NY]" is typical of the period around 1880. Indeed, the bottle was likely manufactured at the height of the mineral water craze, which lasted from about 1850 to 1890 in Saratoga Springs. It is likely that this container was manufactured by the Saratoga Mountain Glass Works, originally located in Mount Pleasant, New York, and after 1865, in Congressville, New York. This glass works was in operation until 1890 (Ketchum 1975:115). The stoneware mineral water bottles found in this deposit appeared to originate in Nassau, in western Germany around Weisbaden, and are stamped "Selter/Nassau." As with AS I, the bottles found in AS II were probably discarded by employees at 5 and later 9 North Sixth Street.

AS III

AS III consisted of loam in various shades of brown as well as black. The 1925 TPQ for this stratum came from a Breyers Ice Cream Company milk bottle (V. 19). In all, four beverage bottles (one vinegar and three milk), one geometric glue bottle, one ink bottle, one petroleum jelly bottle, one prescription bottle, and three miscellaneous glass vessels were identified during the excavation and subsequent vessel analysis, for a total of 11 vessels from AS III. During this time, a tailor was on the property.

As with AS II, many of the vessels were related to the consumption of beverages. Indeed, two miscellaneous beverage bottles and three milk bottles were identified. The three milk bottles all dated to the mid-1920s and were from local dairies (Figure A-89). The Breyer's milk bottle mentioned above was manufactured in 1925 by the Birney-Bond Glass Co. in several possible locations in western Pennsylvania and Ohio, the dairy plant being on South 42nd Street in West Philadelphia until the mid-1990s (Toulouse 1972:70). The other two milk bottles were from the Abbotts Dairies, which had numerous branches, with their main plant at 32nd and Chestnut Streets. One dates from 1923; the other is undated but would date from the early 1920s. In addition to these milk bottles were two more beverage bottles. One was a machine-made amber bottle, perhaps for ginger ale, the other was a fragment of aqua beverage bottle. There was also a vinegar bottle. This would have been manufactured by the Owens Bottle Company for the H.J. Heinz Company, between 1911 and 1929 (Toulouse 1972:393). As shown by the predominance of glass vessels, especially beverage bottles, this assemblage is once again consistent with a commercial deposit. Generally, it appears that it was produced by employers and/or employees having their lunch and then throwing their trash into the retired privy.

After 1925, the property became vacant and remained so until 1928, when the Merchantile Jobbing House moved in. This establishment was owned by David Banks, and was related to clothing. The firm was located at 9 North Sixth Street until 1931.

AS IV

AS IV represents the final filling of Feature H before the demolition of Block 2 in 1953 and 1954. This rather late deposit contained the majority of the vessels found in the feature. The 23 vessels were situated in silty and sandy loams in various shades of brown. Of these, two liquor bottles,

three beverage bottles, four milk bottles, eight unidentified bottles, and one tumbler were found, along with five other miscellaneous fragments. The TPQ for this stratum was 1940, based on a partial date on the base of a milk bottle (V. 24). The Independent Electrical Wire Supply Company was located on this property from 1938 into the 1940s, and the stratum probably relates to their occupancy.

Most of the vessels in this analytical stratum were highly fragmentary and had probably been first deposited in another location. As with the milk bottles in AS III, the milk bottles from AS IV were also primarily from the Philadelphia area. The Quaker Maid quart milk bottle originated in southwest Philadelphia, at 220 Manton Street. Also supporting the idea of a tertiary deposit is the fact that several bottles were moldblown and, again, were quite fragmentary. By 1940, almost all bottles were machine made. Even in 1917, only an estimated 5 to 10 percent of glass bottles were still being mold blown (Miller and Sullivan 1991:105). In the case of AS IV, five out of the 23 vessels recovered were moldblown, or 21.8 percent of the vessels. Considering the late date of this deposit, this is a huge percentage. The moldblown vessels (V. 31, 32, 34, 36, and 37), which dated to an earlier time, probably derived from the final clean up of the lot before the buildings were demolished in the 1950s. If, indeed, the beverage bottles in AS IV were left by employees of the business on the premises, it is interesting that they drank more milk on the job than anything else (Table A-15).

Table A-15. Feature H Glass Vessels

TPQ	**1845**		**c.1880**		**1925**		**1940**	
Function	AS I	%	AS II	%	AS III	%	AS IV	%
Alcohol	1	20.0	0	0	0	0	2	8.7
Beverage	4	80.0	2	50.0	3	21.4	3	13.0
Milk	0	0	0	0	3	21.4	4	17.4
Food	0	0	0	0	1	7.1	0	0
Medicine	0	0	0	0	1	7.1	0	0
Household	0	0	0	0	2	14.3	0	0
Cosmetic	0	0	0	0	1	7.1	0	0
Unid. Bottle	0	0	1	25.0	0	0	8	34.8
Tableware	0	0	1	25.0	0	0	1	4.3
Unid./Misc. Glass	0	0	0	0	3	21.4	5	21.7
TOTALS	**5**	**100.0**	**4**	**100.0**	**14**	**99.8**	**23**	**99.9**

3.3.4.2 Summary and Conclusions

The glass vessels found in Feature H related to four depositional events associated with a commercial property at 9 North Sixth Street, from just prior to the Great Fire of 1856 until shortly before the demolition of the buildings on Block 2 in 1953 and 1954. As Table A-15 clearly shows, the vast majority of vessels in all strata related to the consumption of beverages, probably by employees of the various businesses that operated on the property. Although some alcohol was consumed at work, milk appears to have been the beverage of choice in the twentieth century; perhaps because there were so many local dairies.

3.3.5 FEATURE E

3.3.5.1 Introduction

Feature E was the earliest shaft feature encountered during the Block 2 excavations. Located in the rear of 13 North Sixth Street (9 North Sixth Street before 1856), the privy would have been filled by William Simmons, an accountant for the War Department at the turn of the nineteenth century. The glass vessel analysis suggests that Mr. Simmons consumed a substantial amount of alcohol, as alcohol bottles and tableware relating to drinking were the most prevalent vessels in his assemblage.

Feature E was a truncated dry-laid brick privy at the rear of 9 (13) North Sixth Street. Three analytical strata were defined in the feature, including AS I, a light olive brown sandy loam with brick fragments at the base; AS II, which contained mostly yellowish brown sandy loam, with some coarse brown sand towards the base; and AS III, a brown silt loam with rubble and a dark brown silt loam mottled with strong brown loam.

AS I
The deepest deposit, AS I, contained three wine bottles, a chemical bottle, a miscellaneous freeblown bottle, a stemmed wine glass, and a decanter, for a total of seven vessels. Although the TPQ for this analytical stratum, 1770, predates Simmons's occupation on the lot, the deposit is probably associated with him because the presence of alcohol-related vessels is so similar to the strata that do date to his occupation in the 1790s. The tobacco pipe assemblage also supports this, as a distinctive pipe style was found in both AS I and AS II. Six out of the seven vessels (85.7%) identified in AS I are associated with alcohol consumption. The onion wine bottle (V. 14) found in this stratum is a very diagnostic form, which stopped being produced in about 1750. This is exactly the same time that the area now known as Block 2 was first developed. Thus, it is possible that the privy was dug and the bottle deposited during the very early years of occupation on the block.

AS II
AS II contained the bulk of the glass vessels identified during the excavation and analysis of Feature E. Having a TPQ of approximately 1790, the deposit would have almost certainly been created by William Simmons while he was a principal clerk in the U.S. Auditor's office and subsequently the chief accountant in the War Department. Four case-gin bottles, 14 wine bottles, 4 ale bottles, 12 miscellaneous liquor bottles, 2 sauce bottles, 3 condiment bottles, 3 chemical bottles, 1 snuff bottle, and 3 miscellaneous or unidentified bottles were found. Tablewares included 4 tumblers, 2 flip glasses, 1 stemmed wine glass, 2 carafes, 4 decanters, 2 cruets, and 2 miscellaneous glasses for a total of 17. The total number of vessels found in this stratum was 63.

Alcohol-related bottles and tableware predominated and were of an impressive quality. Out of the 63 vessels, 34 bottles (53.9%) related to alcohol (Figure A-90). An additional 12 (19.0%) of the 63 vessels were used in some way in the consumption of alcohol. Thus, approximately 73 percent of the 63 vessels were in some way connected to alcohol usage (Table A-17). It appears that Mr. Simmons, his boarders, or both, did a good deal of drinking.

Table A-16. Glass Vessels from Feature E, by Analytical Stratum

(TPQ)	AS I (1770)	%	AS II (1790)		AS III (1795)		Total	%
Alcohol								
Case Gin	0	0.0	4	11.8	1	50.0	5	9.4
Wine	3	60.0	14	41.2	0	0.0	17	32.1
Ale/Porter	0	0.0	4	11.8	0	0.0	4	7.5
Liquor	0	0.0	12	35.3	1	50.0	13	24.5
Food								
Sauce	0	0.0	2	4.3	0	0.0	2	3.8
Condiment	0	0.0	3	6.5	0	0.0	3	5.7
Medicine								
Chemical	1	20.0	3	6.5	0	0.0	4	7.5
Snuff	0	0.0	1	2.2	0	0.0	1	1.9
Unidentified	1	20.0	3	6.5	0	0.0	4	7.5
TOTAL	**5**	**100.0**	**46**	**99.9**	**2**	**100.0**	**53**	**99.6**
Drinking								
Tumbler	0	0.0	4	23.5	1	100.0	5	23.8
Flip	0	0.0	2	11.8	0	0.0	2	9.5
Wine Glass	1	33.3	1	5.9	0	0.0	2	9.5
Firing Glass	1	33.3	0	0.0	0	0.0	1	4.8
Misc.	0	0.0	2	11.8	0	0.0	2	9.5
Serving								
Carafe	0	0.0	2	11.8	0	0.0	2	9.5
Decanter	1	33.3	4	23.5	0	0.0	5	23.8
Cruet	0	0.0	2	11.8	0	0.0	2	9.5
TOTAL	**3**	**99.9**	**17**	**99.8**	**1**	**100.0**	**21**	**99.9**
Table wares								
TOTAL Vessels	**8**	**10.8**	**63**	**85.1**	**3**	**4.1**	**74**	**100.0**

It also appears that someone in the Simmons household needed to take his drink with him when traveling, as one of the miscellaneous liquor bottles was a pocket flask. This delicate light olive-green flask was likely made by the Pitkin glass works in Keene, New Hampshire, between 1783 and 1830 (McKearin and Wilson 1978:328). Perhaps the whiskey, gin, or similar alcoholic beverage would have calmed Simmons's nerves during an unusually stressful day.

Before moving on to a discussion of the tableware, one last observation should be made about the Simmons bottles. As can be seen in Table A-16, not many medicine bottles are represented in AS II. It is highly unusual to find so few medicine bottles in a residential deposit. Indeed, of 46 bottles identified during the analysis, only three of them fell under the function of "medicine," for a percentage of 6.5 percent. William Simmons was apparently quite a healthy individual in the years he lived on Sixth Street.

Simmons's tableware was also impressive (Figure A-91), in terms of quality, not necessarily quantity. In particular, several of the tumblers and flips are of extremely high quality and would have been relatively expensive. For example, V. 55, decorated with highly intricate engraved floral designs, is probably Bohemian and dates to slightly after 1790. V. 59, a large flip decorated with a wave, loop, and mesh motif, is similar to vessel 51 illustrated in *Glass in Early America* (Palmer 1993:101). The vessel in the text is identified as probably Bohemian and dates to 1790 to 1820. Several of Simmons's Bohemian vessels have moderate to high base wear, indicating that they were used for a long period of time. Perhaps Simmons collected these vessels piecemeal, since they do not appear to belong to sets. The flips would have been used for a mixture that was made up of approximately two-thirds beer or rum, with a sweetener such as molasses, sugar, or dried pumpkin mixed in to take the edge off. Finally, a burnt taste was achieved by mixing the flip with a red-hot iron stirring rod (Brown 1966:19). Indeed, this beverage would have been ideal for a cold winter's night, as the December 1704 issue of the New England Almanac suggests:

> *The days are short, the weather's cold,*
> *By tavern fires tales are told.*
> *Some ask for dram when first come in.*
> *Others with flip and bounce begin* (Brown 1966:19).

One can imagine Simmons enjoying a flip before going to bed in front of a roaring fire, or sharing them with local dignitaries stopping by.

The glass tableware from AS II of Feature E also indicated that Simmons was a drinker. Out of 17 glass tableware vessels, all but four of them related to drinking. Thus, the four tumblers, two flip glasses, one wine glass, two carafes, and two decanters were all used for drinking alcoholic beverages.

AS III
This analytical stratum was largely devoid of glass vessels; only two were identified including one case gin bottle and one miscellaneous liquor bottle.

3.3.5.2 Summary and Conclusions

As a whole, the Feature E fills appear to relate to William Simmons and possibly his boarders, who were often politicians in town for only short periods of time. From the opening of the shaft sometime after 1750, until at least 1795, the TPQ for the latest deposition, the glass vessels represented tended to be disproportionally related to the consumption of alcohol. To serve and

drink these beverages, Simmons used high-quality flips, tumblers, and wine glasses, vessels that, in some cases, were held on to for a long period of time.

3.3.6 FEATURE G

3.3.6.1 Introduction

Feature G was a truncated, dry-laid brick privy that was encountered during the excavation surrounding Feature E. Unfortunately, the backhoe sliced through the southern half of the privy, destroying the archeological integrity of the fill. The remaining north half of the fill retained its repose for some length of time, then eventually slumped into the excavated area surrounding Feature E. Thus, although approximately four ft. of the privy were left after it had been truncated, no completely intact deposit remained after the slumping occurred. The vast majority of the artifacts were salvaged, however, by removing the slumped fill out of the excavated area to a more secure location. At this point, the spoil was picked through to find as many of the artifacts as possible. Since all of the artifacts came from a disturbed context, all of the fill was considered to have come from a single analytical stratum, although there would have almost undoubtedly been more before the collapse of the privy fill into the excavation. Like Feature E, Feature G would have come from the rear of 9 (later 13) North Sixth Street.

Large quantities of glass vessels were recovered from the redeposited fill of Feature G. Among them were: 24 wine bottles, three case gin bottles, three condiment bottles, ten medicine bottles, one snuff bottle, and three miscellaneous bottles. The identified tableware included 30 tumblers, 10 wine glasses, one decanter, one stopper, one case bottle, one cruet, one mug, one small plate and two miscellaneous fragments, for a total of 92 vessels. Out of 92 vessels, 27 (29.3%) of them were bottles that contained alcohol, and another 43 of the 92 vessels (46.7%) were alcohol-related tableware. This would include the tumblers, wine glasses, the decanter, stopper, and case bottle. The somewhat tentative TPQ for this feature is 1825, based on the approximate date when pressed glass was first manufactured, and is represented by a pressed glass plate (V. 92). It should be noted, however, that the plate could have been introduced into the Feature G fill when the fill collapsed into the excavated area.

Thomas Crilly was operating a boardinghouse at 9 North Sixth Street in 1828; he purchased the property in 1831. The inn or tavern, as it was referred to in deed books, was in operation into the 1840s. Table A-17 summarizes the glass vessels recovered from Feature G.

Table A-17. Percentages of Glass Vessels from Feature G

Bottles	No.	%
Alcohol		
Wine	24	26.0
Case Gin	3	3.2
Ale/Porter	0	0.0
Misc. Liquor	0	0.0
Food		
Condiment	3	3.3
Medicine		
Patent	2	2.1
Chemical	8	8.7
Tobacco		

Snuff	1	1.1
Unid. Bottle	3	3.3
Subtotal	44	47.7
Tableware:		
Drinking		
Tumbler	30	32.6
Wine Glass	10	10.9
Mug	1	1.1
Serving		
Decanter	1	1.1
Case Bottle	1	1.1
Stopper 1	1.1	
Cruet	1	1.1
Other Tableware:		
Plate	1	1.1
Misc. Glass	2	2.1
Subtotal	48	52.1
TOTAL	**92**	**99.8**

Of the non-alcohol-related bottles, two patent medicines (V. 31 and 32) are worth mentioning in more detail. The first vessel (V. 32) is embossed "BY THE/ KINGS/ ROYAL/ PATENT/ GRANTED/ TO// ROBT/TURLI/ NGTON/ FOR HIS/ INVENTED/ BALSAM/ OF/ LIFE// LONDON//JANY 26 1734" (Figure A-92). This bottle is one of the earliest-known embossed bottles and existed in embossed form by 1754. It was touted as "'A Friend of Nature, which it strengthens and corroborates when weak and declining, vivifies and enlivens the Spirits, mixes with the Juices and Fluids of the Body and gently infuses in its kindly Influence into those Parts that are most in Disorder'" (McKearin and Wilson 1978:291). These vessels were manufactured in both the United States and in England. The other (V. 31) is embossed "Dr. D. JAYNE'S// OLEAGINOUS/ HAIR TONIC// PHILADA." This hinge-molded vessel would have contained an oily or greasy hair preparation and would have come from Dr. Jayne's factory, which was located at 84 Chestnut Street. This vessel is apparently quite rare and/or unusual, as no mention of it turned up in any discussion of early- to mid-19th-century glass bottles. Apparently, someone from the Crilly household was concerned with dressing or restoring his hair.

The vast majority of the glass tableware vessels in Feature G were undecorated tumblers (Figure A-93). However, several embossed tumblers were also found. Two of them (V.72 and 74) are fairly small, moldblown tumblers with improved pontils. Embossed on these vessels are diamond and fan motifs. Similar tumblers are illustrated in *Glass in America* (V.63 and 65). These tumblers have the same diamond and fan motif and date to approximately 1825 (Palmer 1993:110). They are similar enough in appearance to be considered a set, although V. 74 has a base with arched panels, while V. 72 does not. The other notable vessel was one of the few that is not related to the consumption of alcohol. V. 89 was a small, moldblown cruet with an improved pontil. It probably belonged to a set of six cruets, similar to the set illustrated by Palmer (1993:266, 268). The set was made in the United States between 1815 and 1835 and had a silver-plated copper frame, with an "egg" motif around the edges (Palmer 1993:268). This cruet set is of very high quality and would have cost a lot of money even though the stand was silver plated, rather than sterling. It is unclear why the cruet found in Feature G was thrown out, as it is

complete. Perhaps it was discarded because it had lost its stopper. None was found among the other Feature G vessels.

3.3.6.2 Summary and Conclusions

Although the archeological integrity of Feature G was severely compromised by the slumping of the feature into the shoring excavation for Feature E, the artifacts reveal something about the occupants of the property who ran a tavern from the late 1820s into the mid 1840s. The many liquor bottles and tumblers recovered appear to relate to the Crilly tavern, although they were mixed with material that probably belonged to the Crilly household.

3.4 THE BLOCK 2 SMALL FINDS

3.4.1 INTRODUCTION

Small finds as defined here include all categories of artifacts that were not discussed in the glass and ceramic analyses. These small finds came from features associated with a wide variety of occupants, from an eighteenth-century residential deposit (Feature E) to a mid-nineteenth-century deposit with both commercial and residential components (Feature B) to an early-twentieth-century commercial deposit (Feature H). The following section uses tables to summarize the small finds from each analytical stratum. Particularly unusual artifacts are briefly discussed.

3.4.2 FEATURE B SMALL FINDS

During the excavation and subsequent analysis of the artifacts from Feature B, many small finds were identified that helped to shed light on the lives of the occupants of 225 High (later 527 Market) Street from 1790 to the Great Fire of 1856. Feature B contained three primary deposits (AS I, III, and V), and one large secondary deposit (AS II). The remaining deposits consisted of either rubble or slag (AS VI, VII, and VIII), or were almost completely sterile (AS IV). Table A-18 summarizes the small finds from Feature B by analytical stratum. Unusual finds are discussed following the table.

Table A-18. Feature B Small Finds from AS I, II, III, and V

	AS I (1790)	%	AS II (1816)	%	AS III (1830)	%	AS V (1850)	%	Total	%
Tobacco										
Pipes, Stem/bowl	0	0.0	19	2.8	7	0.8	2	0.6	28	1.4
Activities										
Fish Hooks	0	0.0	2	0.3	0	0.0	0	0.0	2	0.1
Toys and Games										
Marbles	0	0.0	1	0.1	1	0.1	1	0.3	3	0.2
Dolls	0	0.0	0	0.0	1	0.1	0	0.0	1	0.05
Wheels	0	0.0	1	0.1	1	0.1	0	0.0	2	0.1
Dominos	0	0.0	1	0.1	0	0.0	1	0.3	2	0.1

Tea Sets /Miniatures	0	0.0	8	1.2	1	0.1	0	0.0	9	0.5
Doll H'se Goblet	0	0.0	0	0.0	1	0.1	0	0.0	1	0.05
Clothing										
Beads	2	2.3	19	2.8	72	8.6	0	0.0	93	4.7
Belts	0	0.0	2	0.3	2	0.2	0	0.0	4	0.2
Buckles	0	0.0	2	0.3	2	0.2	0	0.0	4	0.2
Buttons	4	4.5	50	7.3	27	3.2	15	4.3	96	4.9
Cloth Frag	1 lot	1.1	1	0.1	2+1 lot	0.4	0	0.0	5	0.3
Leather Frag	1	1.1	93	13.5	2	0.2	0	0.0	96	4.9
Shoe Whole /Frag	12	13.6	27	3.9	461	55.1	0	0.0	500	25.4
Textile Frag	0	0.0	0	0.0	1	0.1	0	0.0	1	0.05
Sewing										
Straight Pins	20	22.7	56	8.1	90	10.7	14	4.0	180	7.6
Writing										
Slates	0	0.0	3	0.4	0	0.0	0	0.0	3	0.2
Slate Pencils	0	0.0	10	1.5	1	0.1	0	0.0	11	0.6
Pencil Leads	0	0.0	0	0.0	3	0.4	1	0.3	4	0.2
Pens	0	0.0	0	0.0	1	0.1	0	0.0	1	0.05
Ink Bottles	0	0.0	0	0.0	0	0.0	2	0.6	2	0.1
Personal										
Comb	1	1.1	0	0.0	1	0.1	51	14.7	53	2.7
Com+Frag										
Counter	1	1.1	8	1.2	11	1.3	0	0.0	20	1.0
Coin	0	0.0	1	0.1	0	0.0	0	0.0	1	0.05
Fan Frag's	0	0.0	10	1.5	4	0.5	0	0.0	14	0.7
Pocket Knife	0	0.0	1	0.1	0	0.0	0	0.0	1	0.05
Miscellaneous	0	0.0	0	0.0	6	0.7	1	0.3	7	0.4
Magnif. Glass	0	0.0	0	0.0	0	0.0	1	0.3	1	0.05
Kitchen										
Teaspoon	0	0.0	2	0.3	0	0.0	0	0.0	2	0.1
Lid	0	0.0	1	0.1	0	0.0	1	0.3	2	0.1
Cork	2	2.3	3	0.4	49	5.9	0	0.0	54	2.7
Wax Seal Frag.	20	22.7	5	0.7	3	0.4	0	0.0	28	1.4
Utensil Frag's	0	0.0	0	0.0	2	0.2	2	0.6	4	0.2
Hygiene										
Lice Comb (Com+Frag.)	1	1.1	0	0.0	0	0.0	10	2.9	11	0.6
Pumice Stone	0	0.0	0	0.0	0	0.0	1	0.3	1	0.05
Toothbrush	0	0.0	0	0.0	0	0.0	29	8.4	29	1.5
Syringe	0	0.0	0	0.0	0	0.0	1	0.3	1	0.05

Household										
Roach Trap	0	0.0	0	0.0	1	0.1	0	0.0	1	0.05
Broom	0	0.0	0	0.0	1	0.1	0	0.0	1	0.05
Flower Pots	0	0.0	2	0.3	0	0.0	0	0.0	2	0.1
Basket	0	0.0	1	0.1	0	0.0	0	0.0	1	0.05
Figurine Frag.	0	0.0	1	0.1	0	0.0	0	0.0	1	0.05
Cask Bung	0	0.0	1	0.1	0	0.0	0	0.0	1	0.05
Scrub Brush	0	0.0	0	0.0	3	0.4	0	0.0	3	0.2
Furnishing										
Chair Leg	2	2.3	0	0.0	0	0.0	0	0.0	2	0.1
Mirror Frag's	7	8.0	94	13.7	7	0.8	20	5.8	128	6.5
Upholst'y Tacks	0	0.0	3	0.4	5	0.6	0	0.0	8	0.4
Knobs	0	0.0	2	0.3	0	0.0	0	0.0	2	0.1
Finial	0	0.0	1	0.1	1	0.1	0	0.0	2	0.1
Screw	0	0.0	1	0.1	0	0.0	0	0.0	1	0.05
Drawer Pull	0	0.0	1	0.1	0	0.0	0	0.0	1	0.05
Bed Bolt Cover	0	0.0	0	0.0	1	0.1	0	0.0	1	0.05
Wooden Disk	0	0.0	0	0.0	1	0.1	0	0.0	1	0.05
Escutcheon	0	0.0	0	0.0	0	0.0	1	0.3	1	0.05
Lighting										
Lamp Chimney	0	0.0	1	0.1	0	0.0	0	0.0	1	0.05
Architectural										
Window Glass (Frag.)	12	13.6	243	35.3	59	7.0	167	48.1	481	24.5
Nails	2	2.3	5	0.7	2	0.2	9	2.6	18	0.9
Stone Bldg Frags	0	0.0	4	0.6	0	0.0	0	0.0	4	0.2
Screw	0	0.0	1	0.1	0	0.0	0	0.0	1	0.05
Brick	0	0.0	1	0.1	0	0.0	2	0.6	3	0.2
Wood Shingles	0	0.0	0	0.0	3	0.4	0	0.0	3	0.2
Roofing Slate	0	0.0	0	0.0	1	0.1	8	2.3	9	0.5
Tack	0	0.0	0	0.0	1	0.1	0	0.0	1	0.05
Plaster/Mortar	0	0.0	0	0.0	0	0.0	4	1.2	4	0.2
Hardware										
Pulley	0	0.0	0	0.0	2	0.2	0	0.0	2	0.1
Worked Wood	0	0.0	0	0.0	1	0.1	0	0.0	1	0.05
Miscellaneous										
Witch Ball	0	0.0	1	0.1	0	0.0	0	0.0	1	0.05
Totals	**88**	**99.8**	**688**	**100.3**	**842**	**100.1**	**347**	**99.4**	**1965**	**98.55**

AS I

AS I, a primary deposit (TPQ 1790), relates to Caspar Wistar, who moved into 225 High Street in around 1793. A wooden counter was one of the small finds recovered from this stratum. It is possible that the counter, which was a small wooden chit a little larger than a modern quarter, was used in place of coins to count money. It is known that when a severe coin shortage occurred in the 1820a, such counters were substituted (Yeoman 1978:9), and they may also have been used earlier for the same purpose.

Twenty-two kitchen-related small finds were found in AS I. Of note were 20 wax seal fragments, some with legible impressions. Several of the fragments mended to make the seal, "BY THE KINGS (PATE)NT" around the perimeter, with "JNO (CO)OPER/ ...EM ALE" in the center (Figure A-94). This stamp would have sealed an ale bottle; the exact date or location of when the proprietor was in business is not known. The "By the kings patent" suggests that the seal was either English in origin, or that it was American and dated to not much after the Revolutionary War, when the English still had great influence over the Colonies, both economically and socially.

AS II

AS II, possibly a percolation fill, contained 19 pipebowl and pipestem fragments representing a minimum of five pipes. Four of them were decorated, three with "stitches" along the mold seams, and one with fluting. The last pipe was undecorated. All of the pipes were made of white ball clay, and all but one had no maker's marks. The fluted pipe appeared to be English in origin because the bowl was thick walled (Davey 1983:213-215) and the flutes continued up to the rim of the bowl, with a gap approximately 7.5 mm below the rim. The maker's mark was a "...W" with a circle of stars surrounding it. This pipebowl fragment could not be positively attributed to any pipe manufacturer.

AS II also included three snuff bottles (V. 243, 244, and 245). These freeblown, light olive-green vessels would have had a volume of approximately one-half pint each. Apparently, the occupants of 225 High Street used tobacco in a number of ways.

Eleven artifacts classified as toys were recovered from AS II. The toys included a domino carved from stone, a pewter wheel, a marble, and eight miniature ceramic vessels. Among the miniature vessels were three jugs, three milk pans, one porringer, and one tankard. Seven children—three boys and four girls under the age of 10—lived in the Helmuth household, which was probably responsible for this deposit, and the toys may well have belonged to them. The miniature vessels, in particular, would have been used by the girls to play "house," one way children were (and still are) taught gender roles.

AS II also contained 10 bone fan parts, a counterfeit coin, and eight wooden counters like the one found in AS I. The counterfeit coin was made of a copper "shell" surrounding a lead core. Based on its diameter, the coin was most likely supposed to represent a United States Large Cent, but is now severely corroded. The fan parts presumably belonged to the women in the Helmuth household. In 1810 there were three in the house, one between 26 and 45 and two over 45.

Probably the most interesting and unusual small find from AS II was a hollow ball, with a translucent dark-green hue, and a diameter of roughly 3 inches (7.5 cm) (V. 272). This ball was likely a "witch ball," which would have been hung from an opening such as a fireplace, door, or window to ward off evil spirits. These balls were apparently used as early as the seventeenth century, if not earlier, and their use continued well into the mid-nineteenth century. It is not unlikely that the use of witch balls gradually changed to a present-day use as Christmas

ornaments (Ketchum 1975:200-201). Even more unusual is the fact that another, almost identical, ball was found in Feature G (V. 45), the only real difference being that the ball found in Feature G was aqua (Figure A-95). These balls seldom turn up in archeological contexts, probably because they are so delicate, so the discovery of two of them in such close proximity is extremely unusual.

AS III

In 1823, Adam Everly and his family moved into 225 High Street, where he opened a "manufactory" and store selling "Plain and Fancy Combs." The TPQ for AS III is 1830; by 1835, Adam Everly was the grandfather of two daughters by his son, William. These children (Mary and Louisa) both died of scarlet fever in December 1837, not long before both Adam and William Everly moved their families to Mulberry (now Arch) Street.

Five toys were found in AS III including a wooden doll, a stone marble, a machine-cut (?) miniature goblet, a solid wooden wheel for a toy cart or wagon, and a wooden notched building log similar to a modern-day "Lincoln log." The most notable toy that appeared in the stratum was the doll. Although poorly preserved, the doll appears to have been the Queen Anne type (identification from the Chester County Historical Society), which would have been made in approximately 1810 (Figure A-96). The excavated doll is represented by a wooden head and torso. A similar doll is in the Williamsburg collection (personal communication, Emily Williams, 2001). The Williamsburg doll and others like it are called "Hagar" and were made in England in the late-eighteenth century out of wood, with a molded plaster head and cotton or wool clothing (Williamsburg Curator Work Sheet, Accession Number:1958-242).

Many shoes and shoe fragments were found in the AS III fill. A total of 461 shoes and shoe parts was recovered. Of these shoes and shoe fragments, 25 represented men's shoes, at least 13 represented women's shoes, two were from boys' shoes, and four were either from women's or children's shoes. The identified parts belonged to a minimum of 44 shoes; 417 shoe fragments were unidentified.

The 11 counters found in AS III were probably used in the Everly business during the coin shortage of the 1820s and 30s. Unfortunately, these counters were decomposed to the point that it was impossible to know the value of the coins that would have been represented. No counters were recovered from the later (AS V) Everly deposit. According to Yeoman (1978):

> There was only a negligible coinage of quarters, dimes and half-dimes from 1794 to 1834. It has been estimated that there was less than one piece for each person in the country in the year 1830. This period has been described as one of nondescript currency made up of banknotes, underweight foreign gold coins, foreign silver coins of many varieties, and domestic fractional silver coins. Notes of 'wildcat banks' flooded the country before 1830 and were much more common than silver coins (Yeoman 1978:9).

A redware roach trap (Figure A-97) was also recovered from AS III. This trap could have originated either from the Everly dry-goods store or from the dwelling above. The roach trap is similar to a spittoon in appearance, with several minor differences. One of these is that, unlike most spittoons, the trap has straight sloping sides with horizontal ridges. In addition, an opening is just above the base of the vessel. The hole above the base of the vessel would have been used to fill the trap with molasses and water, or some other similar sticky sweet substance. The hole would then be corked. With this, the trap was set; a cockroach or other insect would climb the coarse exterior of the trap to reach the sweet reward inside the trap. The victim would then slide

down the slippery slope of the opening, similar to that found in a spittoon, to find itself trapped (Guilland 1971:271; Lasansky 1979:52). This vessel reveals that although life seemed fairly good for the Everlys as a whole, they still struggled with many of the same sanitation problems found all over Philadelphia during this time.

AS V

The vast majority of the personal small finds found in Feature B came from AS V, and it is very possible that many of them represent things that were being sold in the dry-goods store. For instance, 51 combs or comb fragments, a coral fragment, and a magnifying glass were among the things found. The 51 combs and comb fragments were almost all made of tortoiseshell (a few were bone). Several different styles were represented, including lice combs as well as fancy combs used to hold ladies' hairstyles in place.

A total of 29 bone toothbrushes, including four that were complete, one with half of the brush area removed by sawing, and one stamped "Chapman" came from AS V. Perhaps the sawn toothbrush was altered to make it smaller for a child's use. The remainder of the toothbrushes would have been much too large and unwieldy for small children. Among the incomplete toothbrushes and fragments was one stamped "silverwire," while several others were highly decorative and delicately crafted. The brush surfaces of the toothbrushes did not look as if they had ever been used, and it is likely that they were among the items being offered for sale in William Everly's dry-goods store. A pearlware toothbrush holder (Figure A-98) with a mulberry-transfer-printed motif was also in this stratum, and the four tin-glazed earthenware ointment pots recovered were probably for tooth powder.

Discussion

The small finds from Feature B provided information on the personal lives of the residents at 225 High (later 527 Market) Street, but they also provided new information on the commercial activities on the property. The wooden counters recovered from the deposits associated with both Caspar Wistar (AS I) and Adam Everly (AS III) reflect the coin shortage that businessmen in the early years of the nineteenth century would have had to contend with. The presence of so many toothbrushes in AS V suggests that the Everlys changed the focus of their store away from solely the sale of combs to a shop that carried a broad range of goods. Several receipts for batches of toothbrushes were found at the Winterthur Library, which confirms this transition. Hygiene had become a major middle-class concern by the mid-nineteenth century, and it would appear that William Everly was catering to this interest.

3.4.3 FEATURE E SMALL FINDS

Table A-19 summarizes the small finds from Feature E and notable finds are briefly discussed below.

Table A-19. Small Finds from Feature E, the William Simmons Assemblage

	TPQ:1770		TPQ:1790		TPQ:1795	
Function/Subfunction	AS I	%	AS II	%	AS III	%
Tobacco						
Pipebowls and stems	4	2.2	20	11.6	2	1.2
Clothing						
Buckle	0	0.0	5	2.9	0	0.0

Button	0	0.0	42	24.4	0	0.0
Chain	0	0.0	4	2.3	0	0.0
Kitchen						
Utensil	0	0.0	4	2.3	0	0.0
Toys	0	0.0	2	1.2	1	0.6
Sewing						
Straight Pins	0	0.0	94	54.6	0	0.0
Writing						
Slate	0	0.0	1	0.6	0	0.0
Totals	**4**	**2.2**	**172**	**99.9**	**3**	**1.8**

White ballclay pipebowls and pipestems were found in all three of the analytical strata in Feature E. Four pipebowl and stem fragments representing no fewer than two pipes came from AS I, both with maker's marks just above the heel. In one case, the mark is totally illegible; in the other case, a stamped crown and "1…" below it within a circle are evident. No manufacturer has been attributed to these marks, although the delicate rouletting and thin walls of both pipebowls suggest that they were both Dutch in origin.

Pipebowls with the same maker's marks were found in AS II, which contained the majority of the pipes found in the feature. A total of 20 pipebowl and stem fragments was found, representing a minimum of six pipes. Two fragments were found representing an incomplete pipe similar to that found in AS I. In this case, the stamped maker's mark is in extremely good condition and bears a stamp with a crown and "16" below it, in a circle. It was the only pipe from the stratum with a legible mark (Figure A-99).

The only small find relating to writing found in Feature E was a heavily used writing slate from AS II (Figure A-100). The writing slate has very coarse scribbles on either side, possibly made by a child. One side appears to have a rectangle with either Ps or Ds in the interior.

Two unglazed clay marbles were found in AS II, and an additional glazed marble was found in AS III. Although marbles are usually associated with children, there is no record of children in the household. Simmons appears to have been unmarried during his years in Philadelphia. However, the marbles might have belonged to his housekeeper's children or even to an adult game of some kind.

Three bone utensil handles, two of them decorated with delicately incised cross-hatching, were recovered from Feature E. The undecorated handle most likely represents a carving knife. It was hollow inside and had a threaded, small "stopper" to finish off the end of the handle.

3.4.4 FEATURE H SMALL FINDS

Table A-20 summarizes the small finds from all four analytical strata of Feature H. A large majority of the small finds from this feature came from a deposit (AS IV) that dated after 1940. The deposit appeared to relate to an electrical supply store. Hardware stores were prevalent on this block in the 20 years or so before the Mall was created.

Table A-20. Feature H Small Finds by Analytical Stratum and Function

	AS I (TPQ: c.1845)	%	AS II (TPQ: c.1880)	%	AS III (TPQ: 1925)	%	AS IV (TPQ: 1940)	%	Totals
Function/ Subfunction									
Architecture									
Window/ Privacy Glass	1	100.0	2	100.0	8	25.0	44	21.5	55
Nails	0	0.0	0	0.0	9	28.1	94	42.9	103
Pipes	0	0.0	0	0.0	0	0.0	7	2.9	7
Wire	0	0.0	0	0.0	0	0.0	4	1.7	4
Etc.	0	0.0	0	0.0	1	3.1	6	2.9	7
Total Architecture	**1**	**100.0**	**2**	**100.0**	**18**	**56.25**	**155**	**75.7**	**176**
Hardware	0	0.0	0	0.0	0	0.0	6	2.9	6
Lighting	0	0.0	0	0.0	0	0.0	1	0.5	1
Kitchen	0	0.0	0	0.0	7	21.9	5	2.4	12
Gardening	0	0.0	0	0.0	1	3.1	1	0.5	2
Clothing	0	0.0	0	0.0	1	3.1	0	0.0	1
Miscellaneous/ Unidentified	0	0.0	0	0.0	5	15.6	37	18.0	42
Totals	**1**	**100.0**	**2**	**100.0**	**32**	**99.9**	**205**	**100.0**	**240**

3.4.5 FEATURE C SMALL FINDS

Table A-21 summarizes the small finds from Feature C. The most interesting small find recovered from this feature was a toothbrush handle decorated with a machine-cut diamond pattern. A second toothbrush was undecorated. A lice comb also came from AS II of Feature C. The stratum, which had a TPQ of 1842, apparently relates to tenants living at 9 North Sixth Street in the middle of the nineteenth century. They may well have bought their combs and toothbrushes from the Everlys around the corner, although the Everlys sold mainly to wholesale customers.

Table A-21. Feature C Small Finds from AS II

Function/Subfunction	**Ct.**	**%**	**Total**	**%**
Architectural				
Window Glass	10	50.0	10	50.0
Privacy Glass	1	5.0	1	5.0

Hygiene				
Toothbrush	2	10.0	2	10.0
Lice Comb	1	5.0	1	5.0
Writing				
Pencil Lead	1	5.0	1	5.0
Miscellaneous				
Coal	1	5.0	1	5.0
Iron Fragment	3	15.0	3	15.0
Glass Fragment	1	5.0	1	5.0
Totals	**20**	**100.0**	**20**	**100.0**

3.4.6 FEATURE G SMALL FINDS

The small finds recovered from AS I of Feature G (Table A-22) appear to relate to Thomas Crilly and his family. Crilly operated a tavern at 9 North Sixth Street from about 1831 until his death in 1842 and lived upstairs with his wife, Elizabeth, and their children. Elizabeth took over the business when her husband died, staying in business until 1849.

Among the small finds were four toys, including a clay marble, a miniature pearlware teapot lid, a miniature pearlware child's saucer, and a miniature creamware child's plate. There was undoubtedly a little girl in the household who was being taught to be a lady through play. Six kitchen-related small finds were also recovered, including three bone knife handles, two pewter spoon fragments that mended into one spoon, and a fragment of coral.

Table A-22. Small Finds from the Crilly Household and Tavern (Feature G)

	AS I	%	Total	%
Tobacco				
Pipe Bowls and Stems	3	6.0	3	6.0
Toys				
Marbles	1	2.0	1	2.0
Miniatures	3	6.0	3	6.0
Total Toys	**4**	**8.0**	**4**	**8.0**
Clothing				
Buttons	5	10.0	5	10.0
Sewing				
Straight Pins	16	32.0	16	32.0
Kitchen				
Utensils	5	10.0	5	10.0
Coral	1	2.0	1	2.0
Total Kitchen	**6**	**12.0**	**6**	**12.0**

Architectural				
Tacks	1	2.0	1	2.0
Roofing Slate	1	2.0	1	2.0
Window Glass	11	22.0	11	22.0
Total Architectural	**13**	**26.0**	**13**	**26.0**
Rifle				
Gunflint	1	2.0	1	2.0
Gardening				
Flower Pot	1	2.0	1	2.0
Miscellaneous				
Coal	1	2.0	1	2.0
Totals	**50**	**100.0**	**50**	**100.0**

The small finds recovered from Feature G did not appear to relate to the tavern on the premises. One would have expected considerably more pipes if they had. However, many liquor bottles and tumblers were found in the deposit. Perhaps broken pipes were swept out the door and discarded elsewhere.

3.4.7 CONCLUSIONS

Although they generally receive less analysis than ceramics and glass, small finds tend to include personal items that connect to people's personal lives in ways that their table settings do not. The toys found at 9 North Sixth Street and at 225 High bring to life the children who lived there in the nineteenth century. The clay pipes found in the Simmons privy make us think of the political conversations that must have taken place in his household. The toothbrushes from the Everly's store speak to the increasing concern with hygiene, especially among the middle classes, during the nineteenth century, and the roach trap attests to the realities of urban life. We cannot know what life was really like for the people who lived on Block 2 in the late-eighteenth and nineteenth centuries, but we can at least begin to imagine their lives through their personal possessions.

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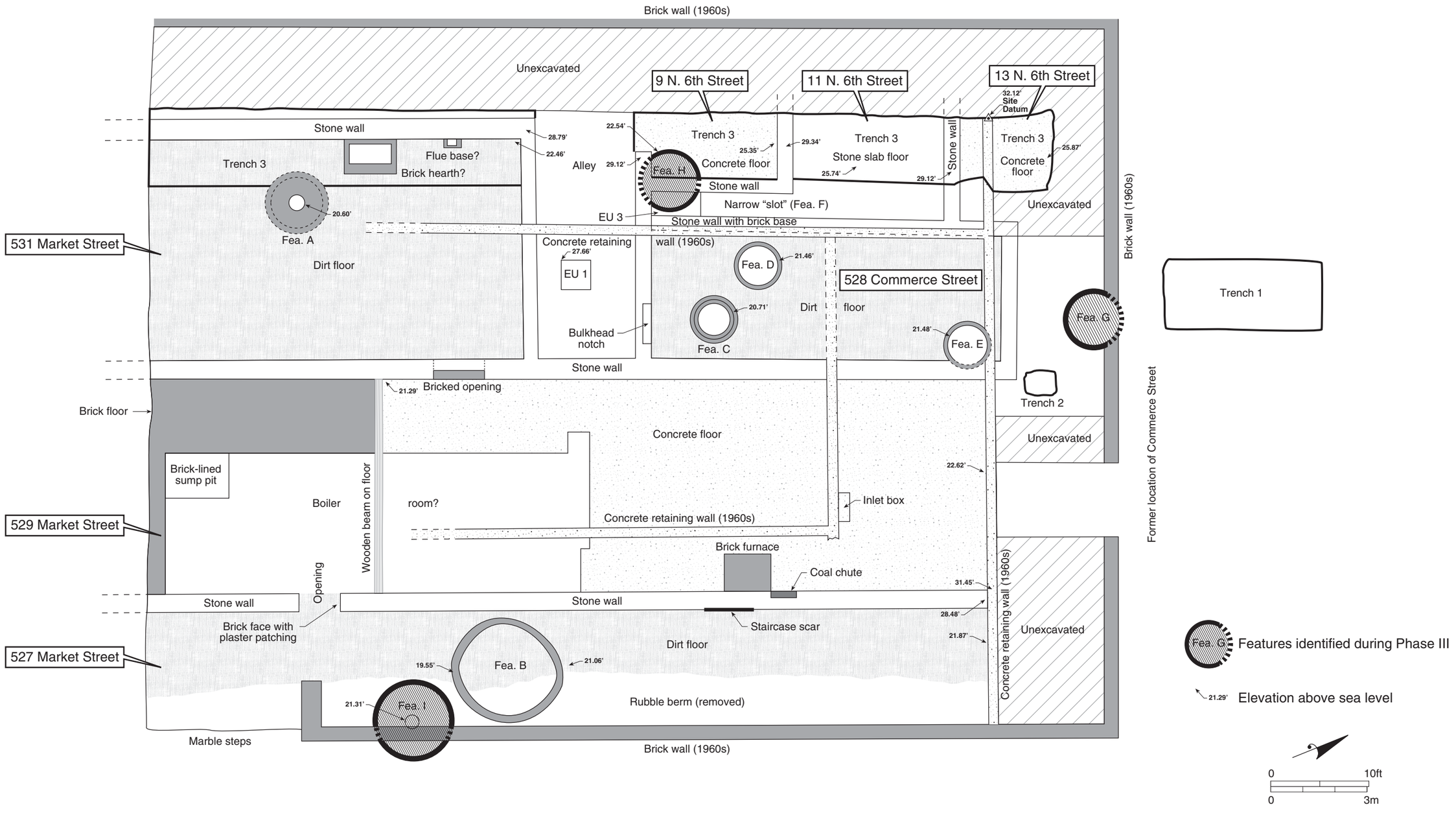


A-1. Area of archeological testing, showing location of architectural/archeological features.

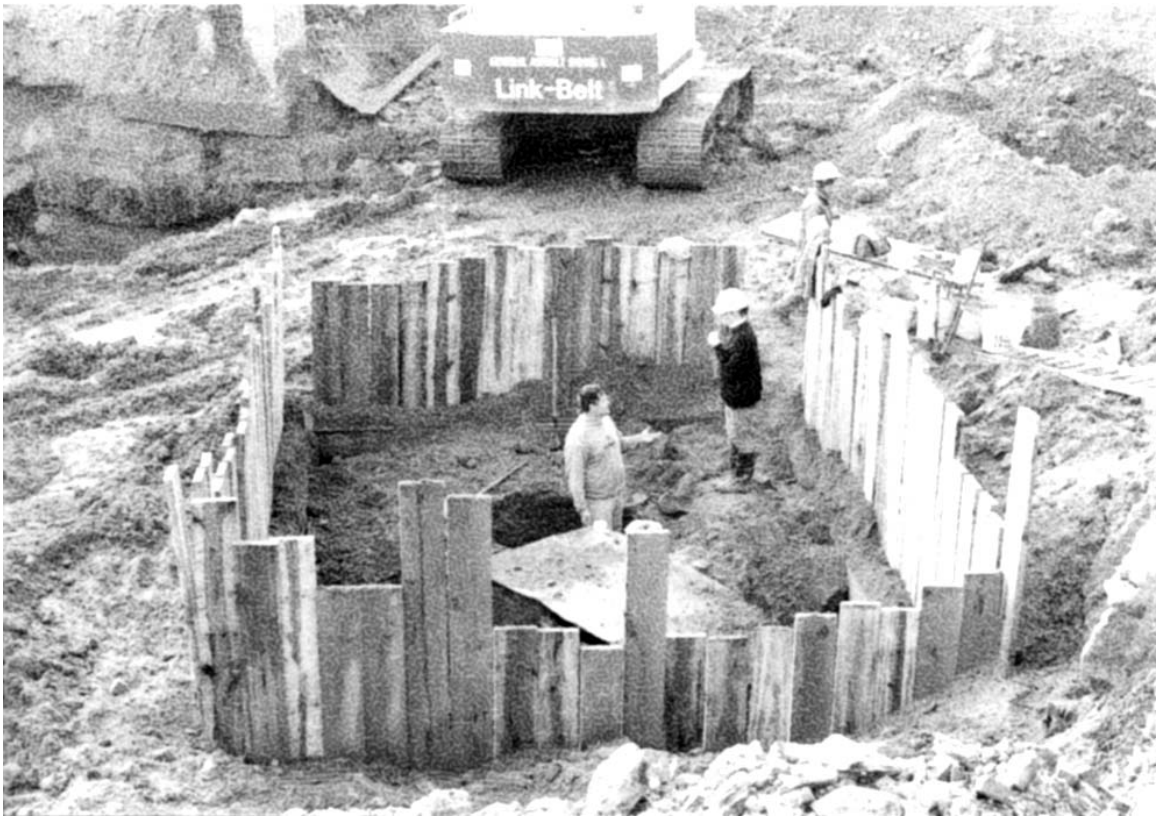
A-2. Initial backhoe (Case 580) used to excavate trenches.

A-3. Link-Belt LS-3400 trackhoe removing rubble from basement of 529 Market Street, view south.

A-4. Manual cleaning of basement floors.

A-5. Initial Phase II testing of Feature B (Excavation Unit 2), view west.

A-6. Steel shoring box placed around Feature A during Phase III, view northeast.

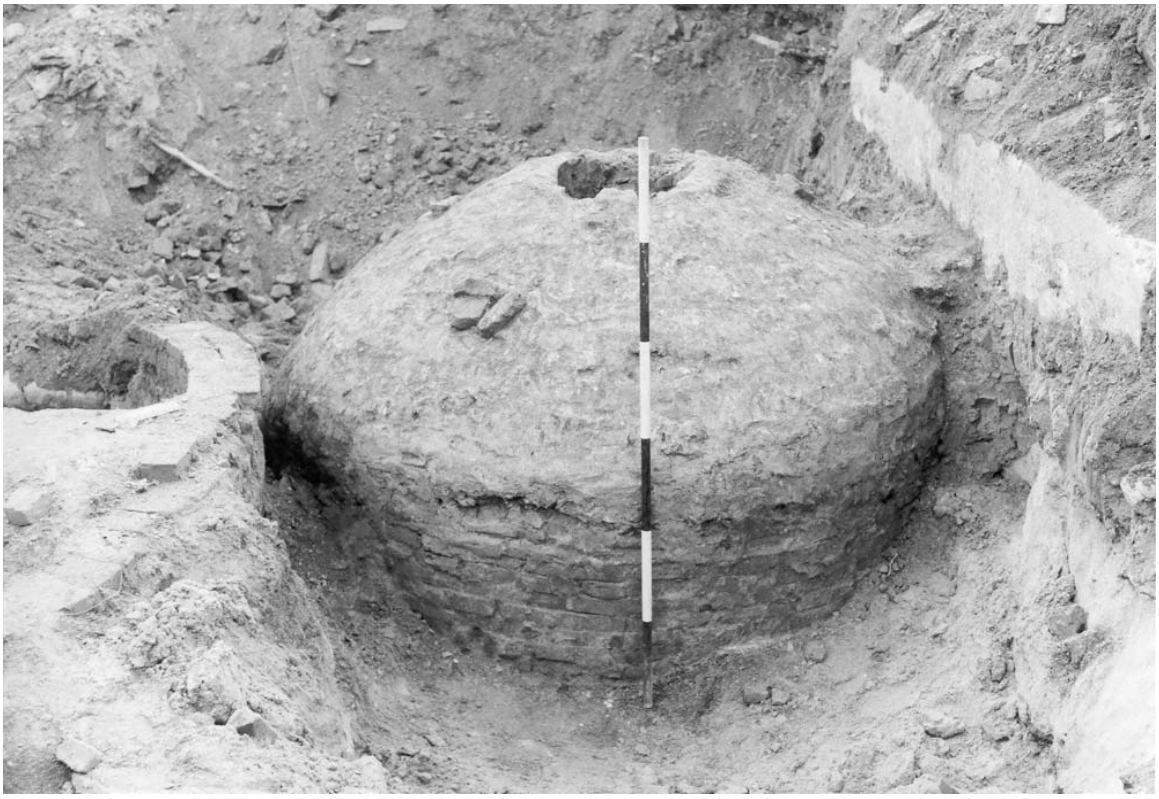


A-7. Wooden plank-and-beam shoring box around Features C and D during Phase III, view south-southeast.

A-8. Exterior of Feature E exposed during Phase III, view northeast.

A-9. Feature G (exposed during Phase III shoring excavation) after collapse of its interior fill, view northeast.

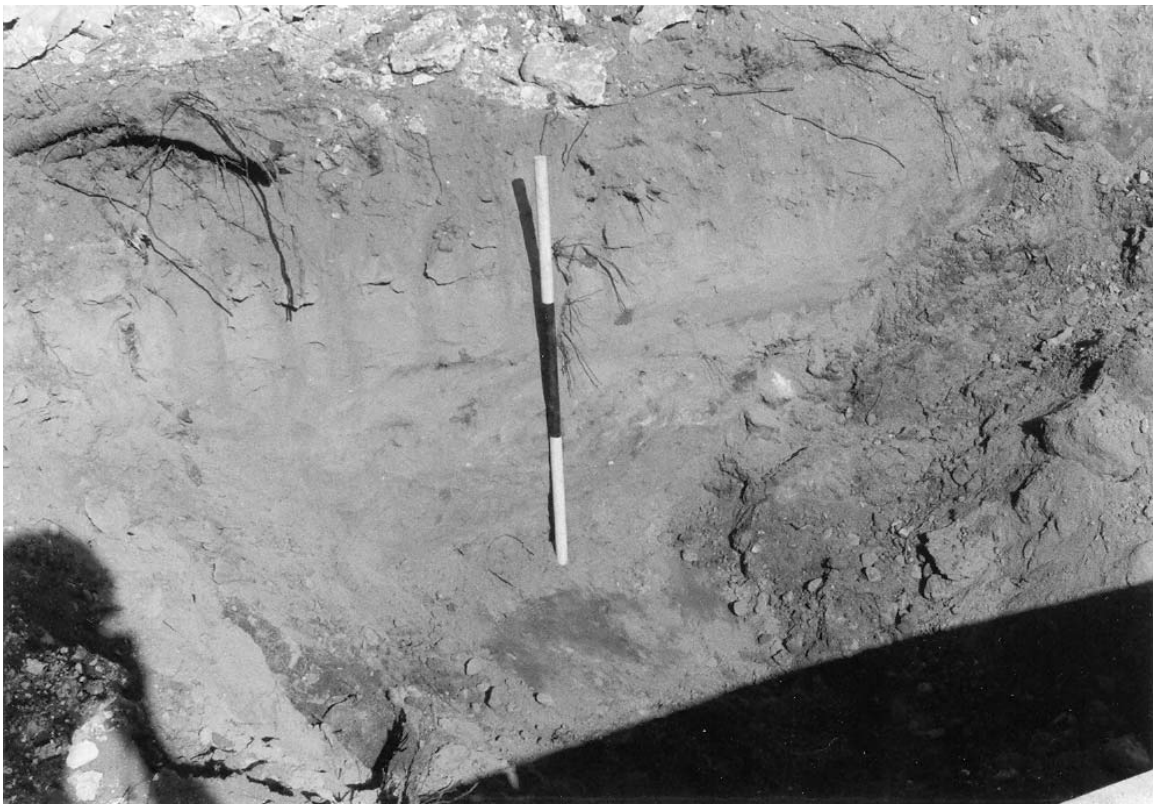
A-10. Feature H extending under east and south walls of 9 North Sixth Street, view west-southwest.



A-11. Feature I, exposed directly southwest of Feature B during Phase III, view southeast.

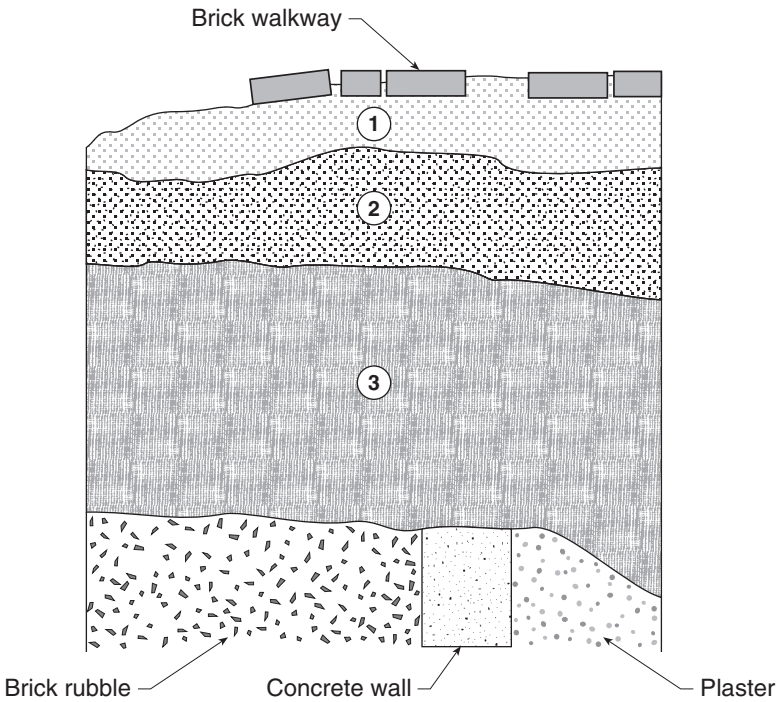
A-12. Construction of wooden shoring box around Feature B during Phase III.

A-13. Waterscreening nightsoil excavated from Feature B during Phase III.



A-14. West profile of Trench 1, excavated within former location of Commerce Street, view west-northwest.

Trench 3
Segment of East Profile



1 7.5YR 6/8 reddish yellow coarse sand

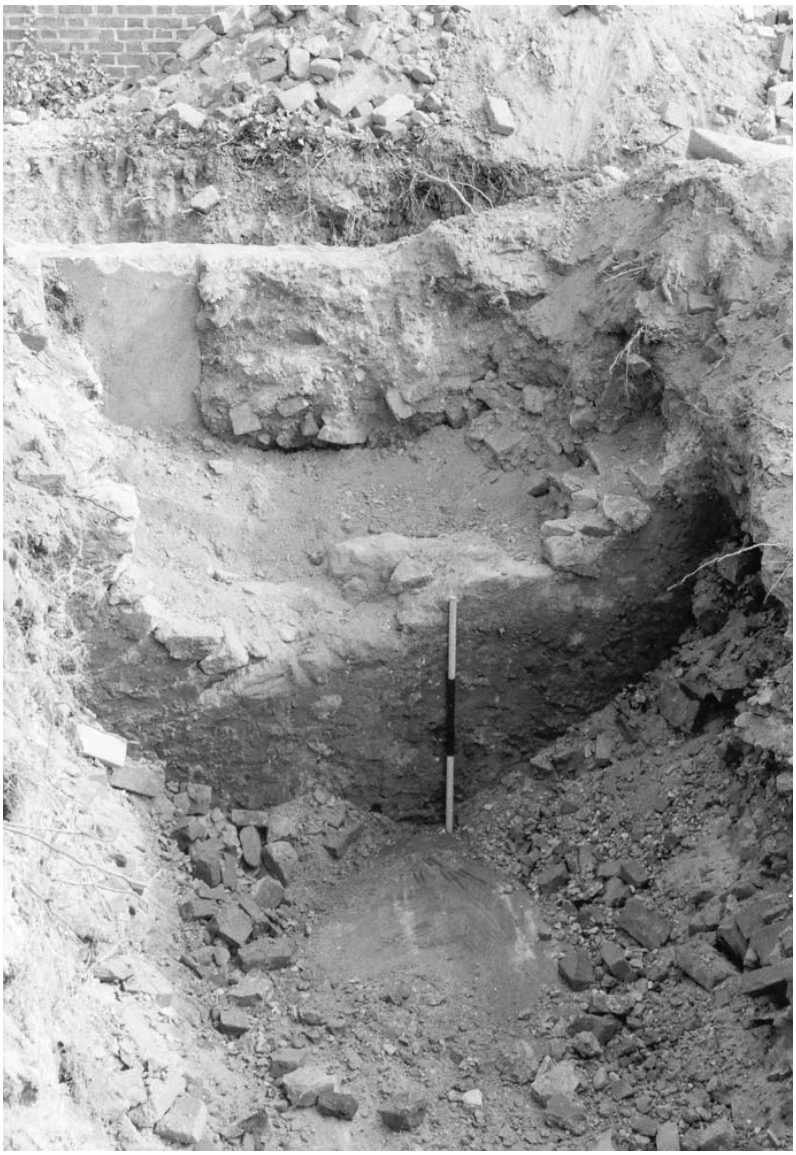
2 7.5YR 2.5/2 very dark brown coarse sand with crushed cinder

3 7.5YR 4/6 strong brown sandy loam

A-15. Trench 3, segment of east profile.

A-16. Trench 3 (Phase II), south face of stone wall between 13 and 11 North Sixth Street (top), south face of plastered stone wall between 11 and 9 North Sixth Street (middle), exposure of concrete basement floor in 9 North Sixth Street, view north-northeast.

A-17. Interior east wall (plastered) of 529 Market Street basement, showing exposed concrete floor; demolition rubble within 527 Market Street in background, view east-southeast.



A-18. Trench 3 (Phase II), showing south face of 1960s concrete retaining wall (top), south face of stone wall between 13 and 11 North Sixth Street (middle), and stone slab floor of 11 North Sixth Street (bottom), view north-northeast.

A-19. 528 Commerce Street and 9-13 North Sixth Street, view south-southwest, Features C and D under plastic sheeting.

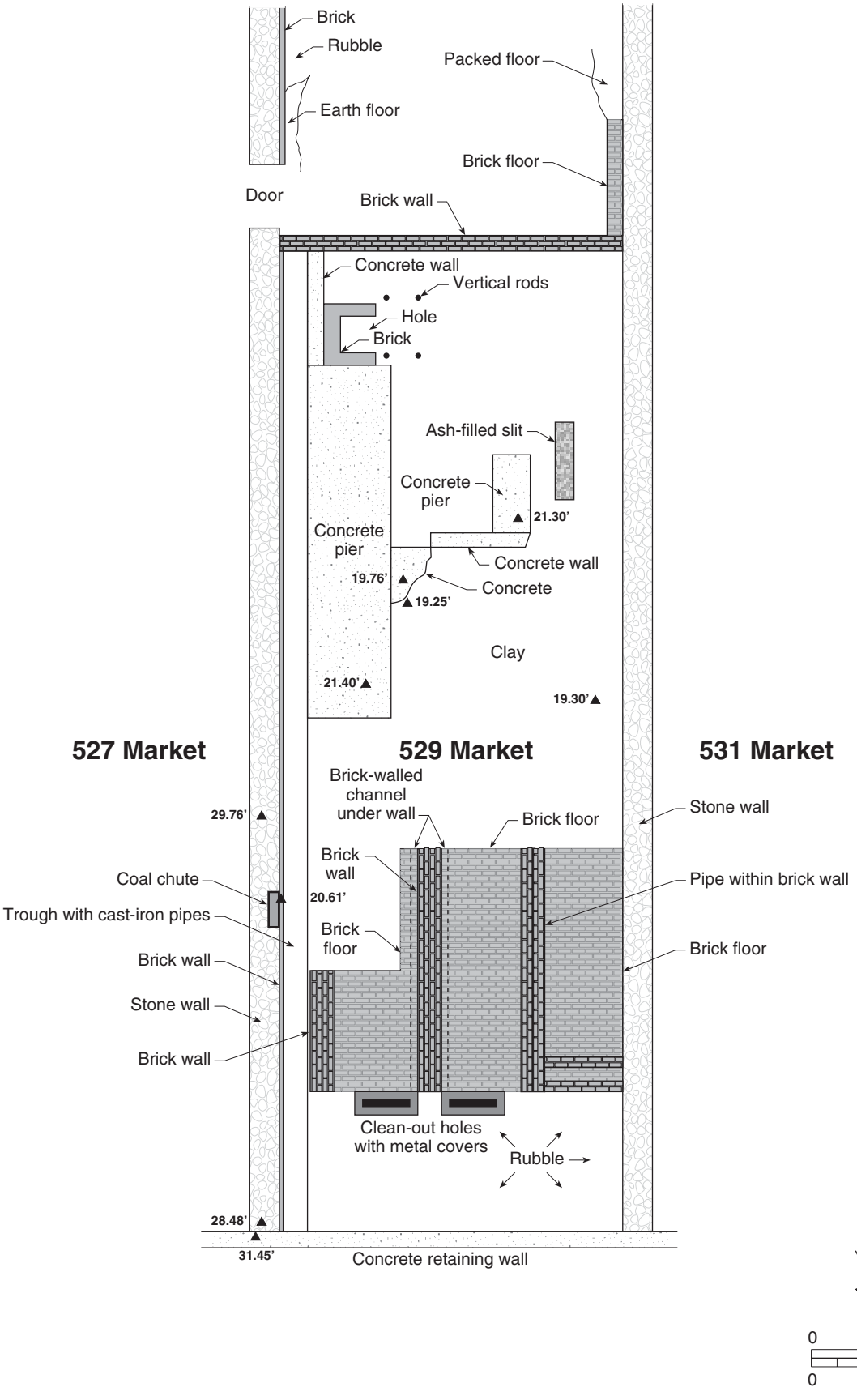
A-20. Butt joint at southwest corner of 528 Commerce Street, view west-northwest.

A-21. Stairway scar on interior west wall of 527 Market Street basement, view west-northwest.

A-22. Graffiti on west interior wall of 529 Market Street basement, view west-northwest.

A-23. Coal chute and brick furnace on east interior wall of 529 Market Street basement, view south-southeast.

A-24. Probable sump pit set into concrete basement floor of 529 Market Street, view north-northeast.

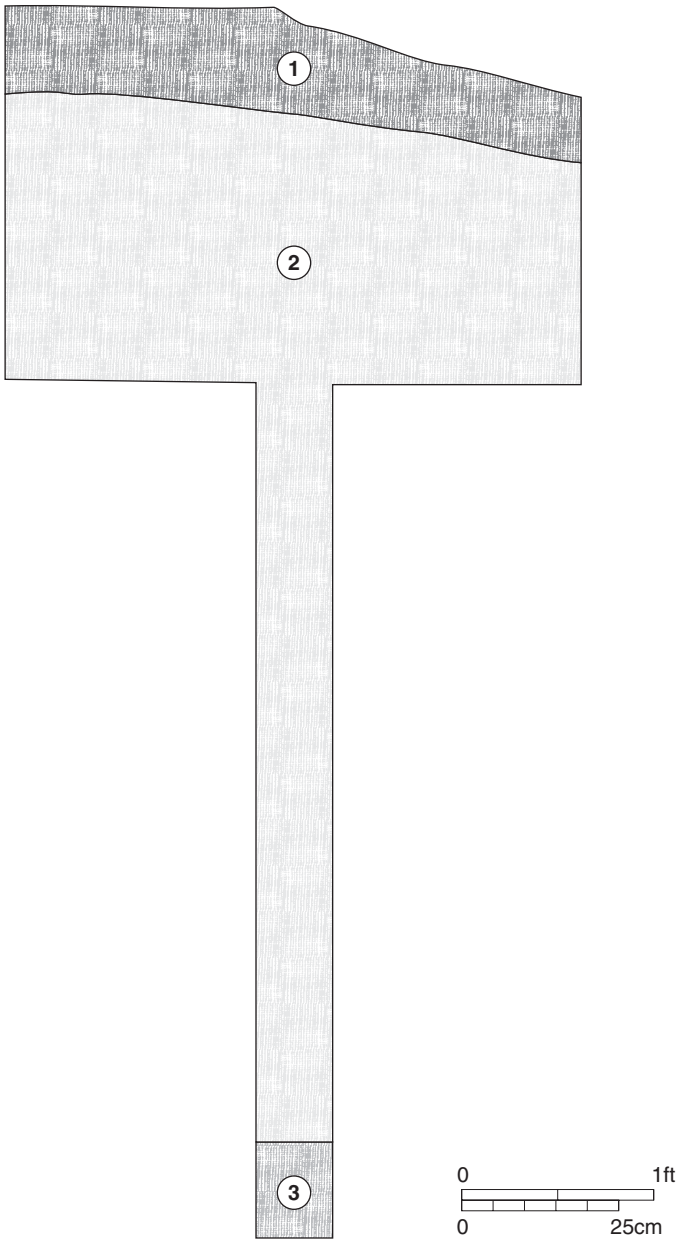


A-25. Plan of drainage and storage features exposed below concrete floor of 529 Market Street.

A-26. Drainage and storage features under concrete basement floor, 529 Market Street, view south-southwest.

A-27. Drainage and storage features under concrete basement floor, 529 Market Street, view east-northeast.

Excavation Unit 1
West Profile



1 7.5YR 5/8 strong brown and 7.5YR 6/8 reddish yellow loamy sand-sandy loam (fill)

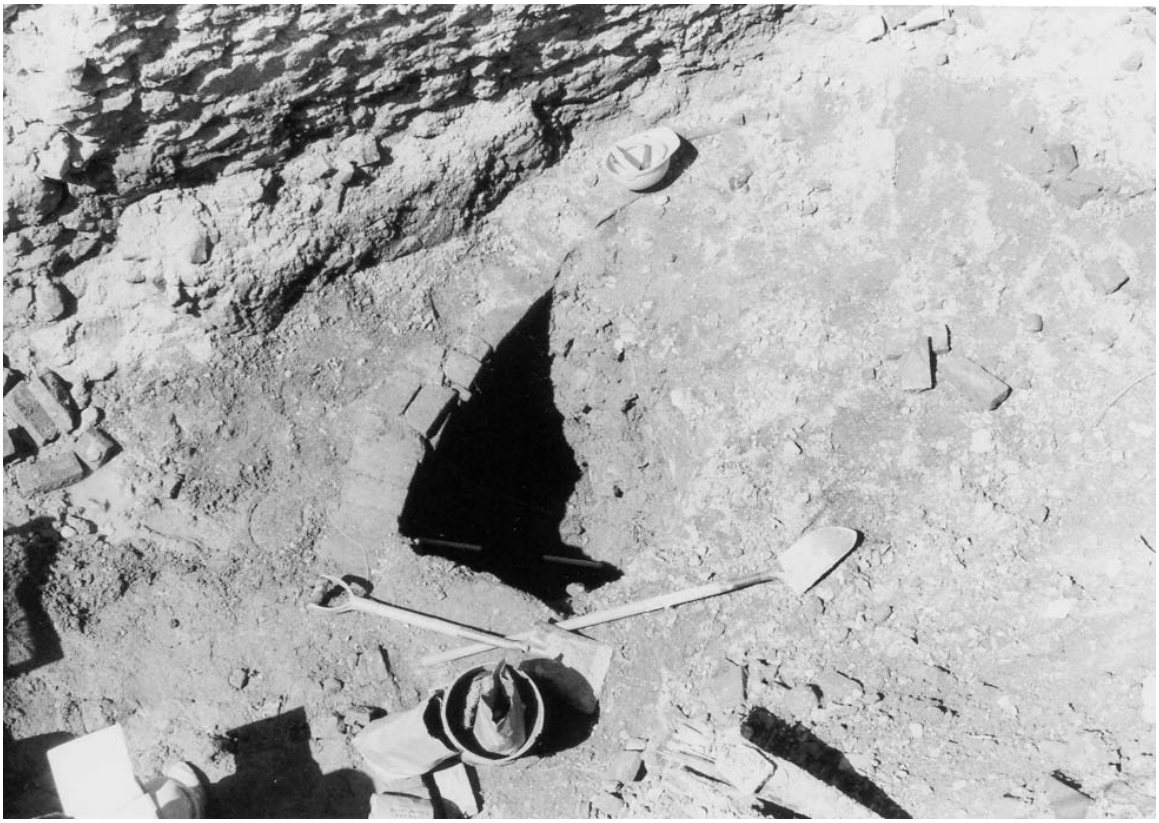
2 10YR 6/4 light yellowish brown fine sandy loam with 7.5YR 5/8 strong brown loamy fine sand lamina and redoximorphic features (2BC-horizon?)

3 2.5Y 6/2 light brownish gray fine sandy loam with 7.5YR 5/6 strong brown redoximorphic features (2Cg-horizon?)

A-28. Excavation Unit 1, west profile (Phase II).

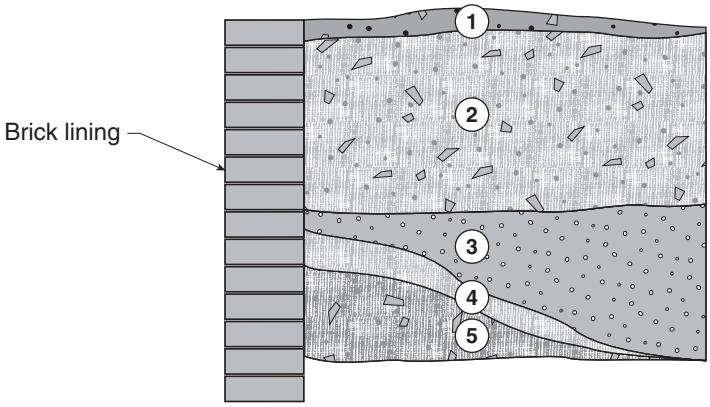
A-29. Excavation Unit 1, west profile, showing fill over intact soils.

A-30. Feature A, Phase II exposure of plaster cap, brick collar (top course of privy shaft), and 1883 Indian Head cent (bottom left of shaft opening), view southeast.



A-31. Excavation Unit 2 within Feature B, after completion of Phase II testing.

Feature B
North Profile



1 10YR 3/4 dark brown coal ash with brick fragments

2 10YR 4/3 brown to 10YR 4/4 dark yellowish brown gravelly silt loam with brick, mortar, and plaster

3 10YR 4/6 dark yellowish brown gravelly silt loam with brick, mortar, and plaster

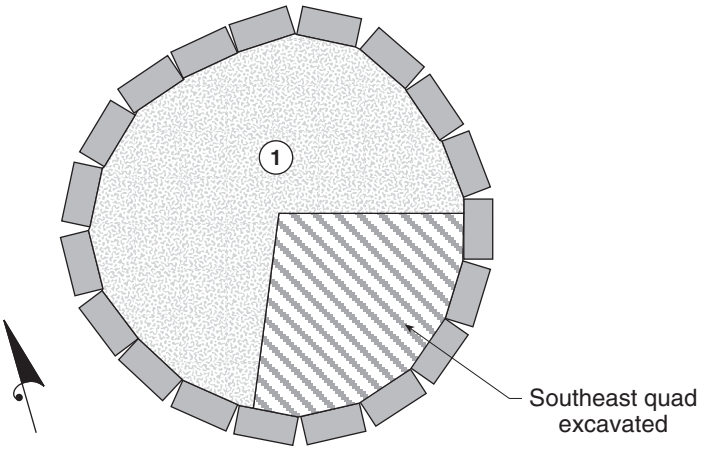
4 10YR 4/3 brown to 10YR 4/4 dark yellowish brown very moist silt loam

5 10YR 3/2 very dark grayish brown silt loam with some plaster and brick fragments; nightsoil

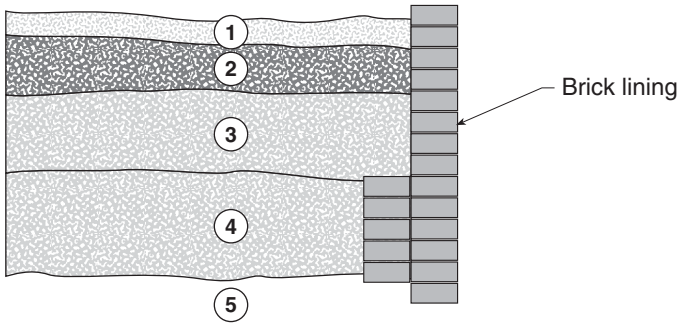
A-32. Feature B, north profile (Phase II).

A-33. Feature C after Phase II excavation of quarter section, view north-northeast.

Feature C
Plan



Feature C
North Profile



1 2.5Y 5/3 light olive brown silt loam mottled with 10YR 5/8 yellowish brown sandy loam

2 10YR 3/2 very dark grayish brown to 10YR 4/2 dark grayish brown loam with slag

3 10YR 6/1 gray slag

4 10YR 6/1 gray slag

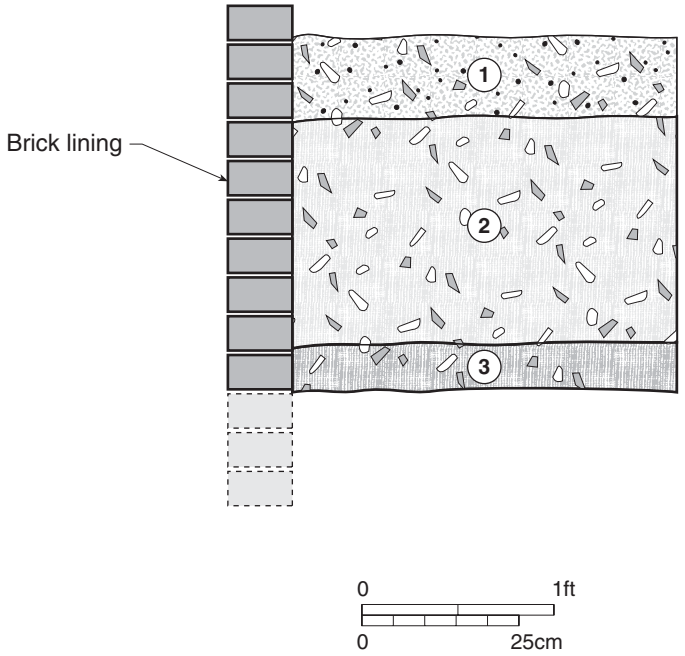
5 Cement floor

A-34. Feature C, plan and profile (Phase II).

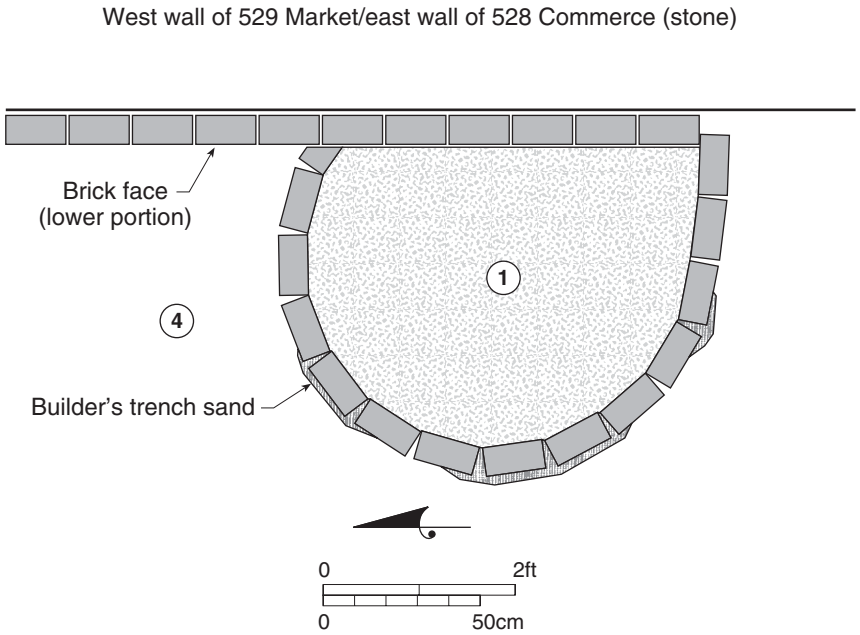
A-35. Feature D after Phase II cleanup, view north-northeast.

A-36. Feature E after Phase II cleanup, view east-southeast.

Feature E
North Profile



Feature E
Plan



1 10YR 5/4 yellowish brown loamy sand with mortar fragments, charcoal fragments and flecks, and brick fragments; occasional medium-sized building stones

2 10YR 6/4 light yellowish brown silt loam with brick and mortar fragments and occasional building stone

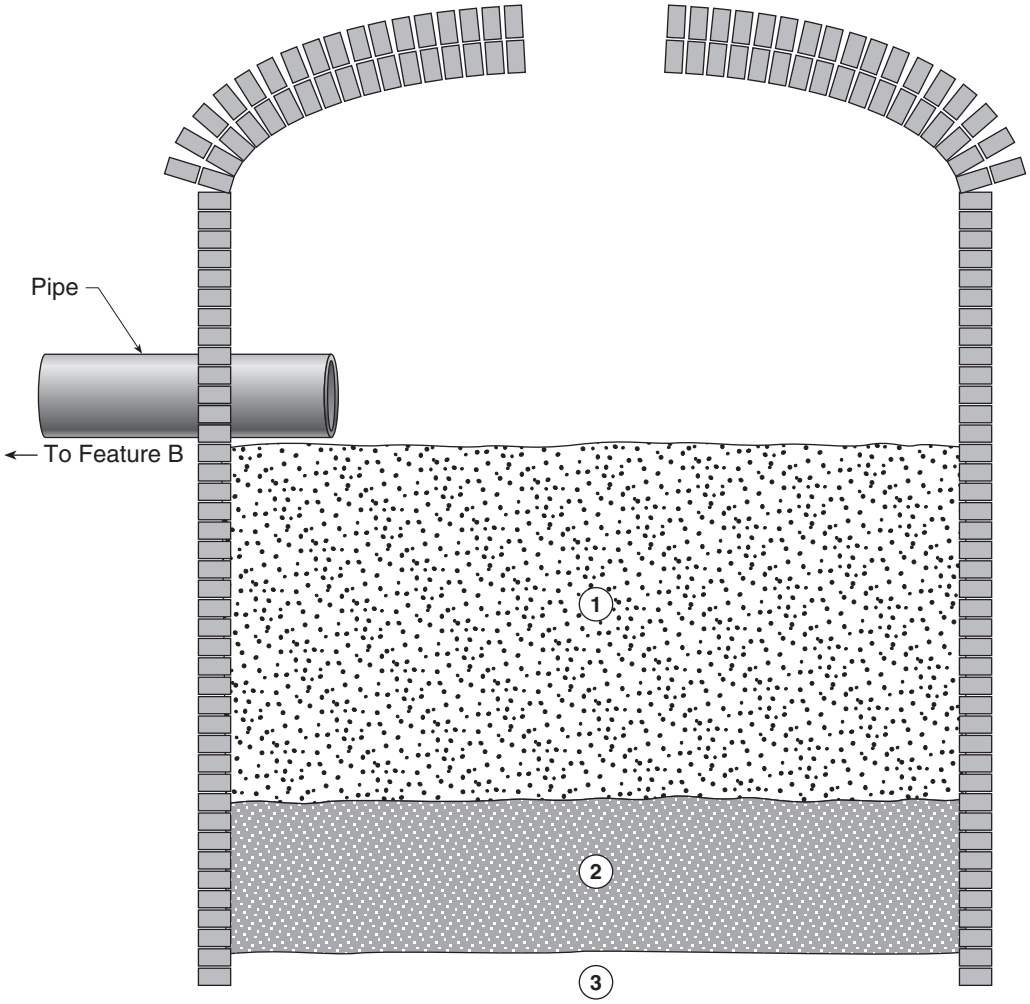
3 10YR 6/6 brownish yellow silt loam with brick and mortar fragments and sparse building stone

4 Sandy subsoil

A-37. Feature E, plan and profile (Phase II).

A-38. Phase II exposure of Feature F between east wall of 9 North Sixth Street and west wall of 528 Commerce Street, showing wooden boards within brick rubble, view south-southwest.

Feature I
East Profile



0 2ft

0 50cm

1 Cinders

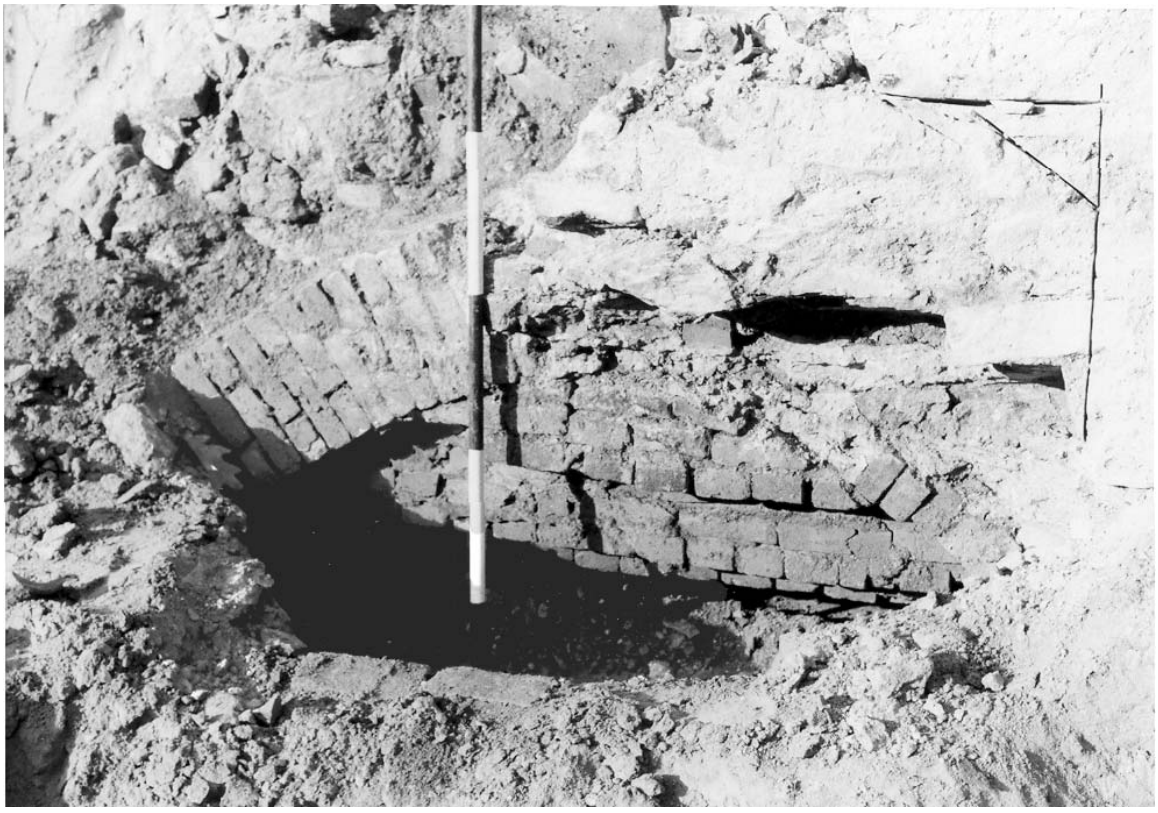
2 7.5YR 4/4 brown sandy clay loam

3 7.5YR 5/8 strong brown very gravelly sand

A-39. Feature I, east profile (Phase II).

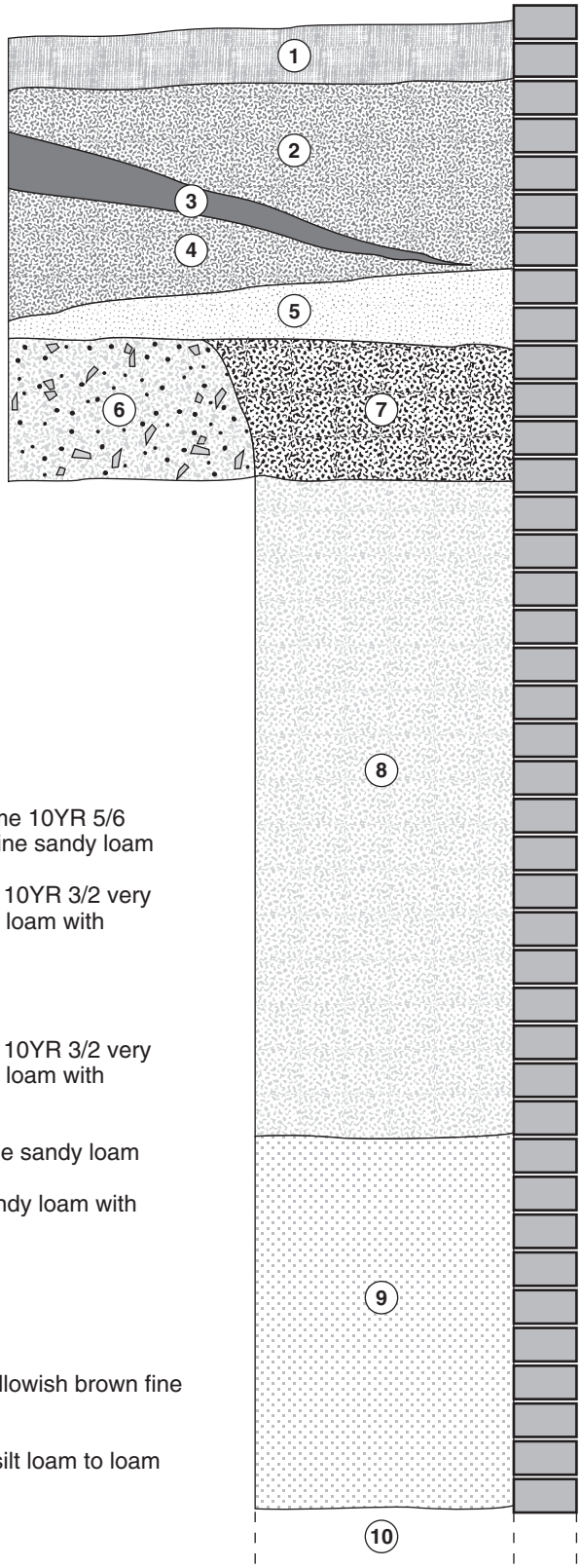
A-40. Feature I after removal of west side of plastered brick dome, view east-southeast.

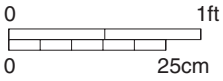
A-41. Terra-cotta pipe entering Feature I from Feature B, view east.



A-42. Bricked-in arch over Feature H, exposed when east wall of 9 North Sixth Street was removed, view west.

Feature H
East Profile





1 10YR 5/3 brown silt loam with some 10YR 5/6 yellowish brown silt loam to very fine sandy loam

2 10YR 4/2 dark grayish brown and 10YR 3/2 very dark grayish brown mottled sandy loam with cinders and slag

3 2.5Y 5/4 light olive brown loam

4 10YR 4/2 dark grayish brown and 10YR 3/2 very dark grayish brown mottled sandy loam with cinders and slag

5 10YR 5/5 yellowish brown very fine sandy loam

6 10YR 5/6 yellowish brown fine sandy loam with cinders, slag, and brick fragments

7 10YR 2/1 black sandy loam

8 2.5Y 4/4 olive brown sandy loam

9 10YR 5/3 brown and 10YR 5/6 yellowish brown fine sandy loam

10 10YR 3/1 very dark gray mottled silt loam to loam (nightsoil)

A-43. Feature H, east profile of southwest quarter (Phase II).

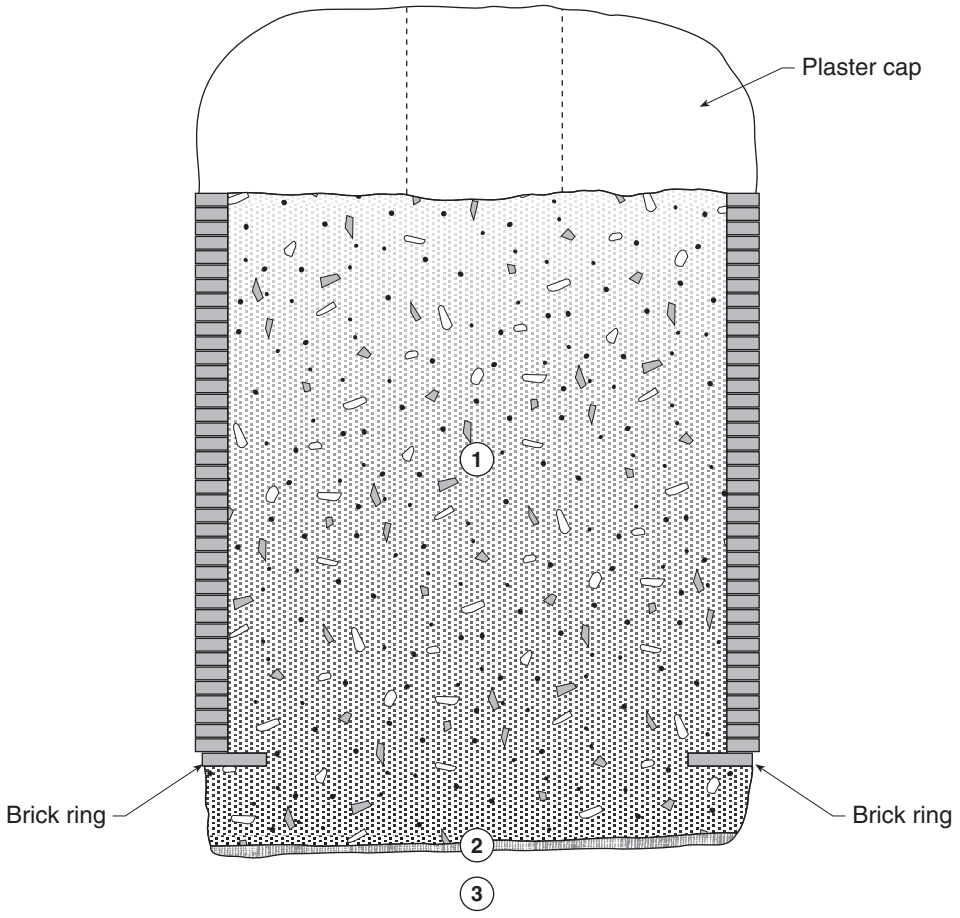
A-44. Feature H, bottles in situ at top of Stratum 7, view southwest

A-45. Feature H, bottom of hand-excavated deposit, view east-southeast.

A-46. Southeast side of Feature H after removal of brick shaft and exposure of interior fill, view north-northwest.

A-47. Feature H, nightsoil deposit exposed at base of trackhoe excavation, view north-northwest.

Feature A
East Profile



1 10YR 3/4-3/6 dark yellowish brown sandy loam with gravel, mortar, brick bats, and slag gradually changing to 7.5YR 5/6-4/6 strong brown sand with same inclusions

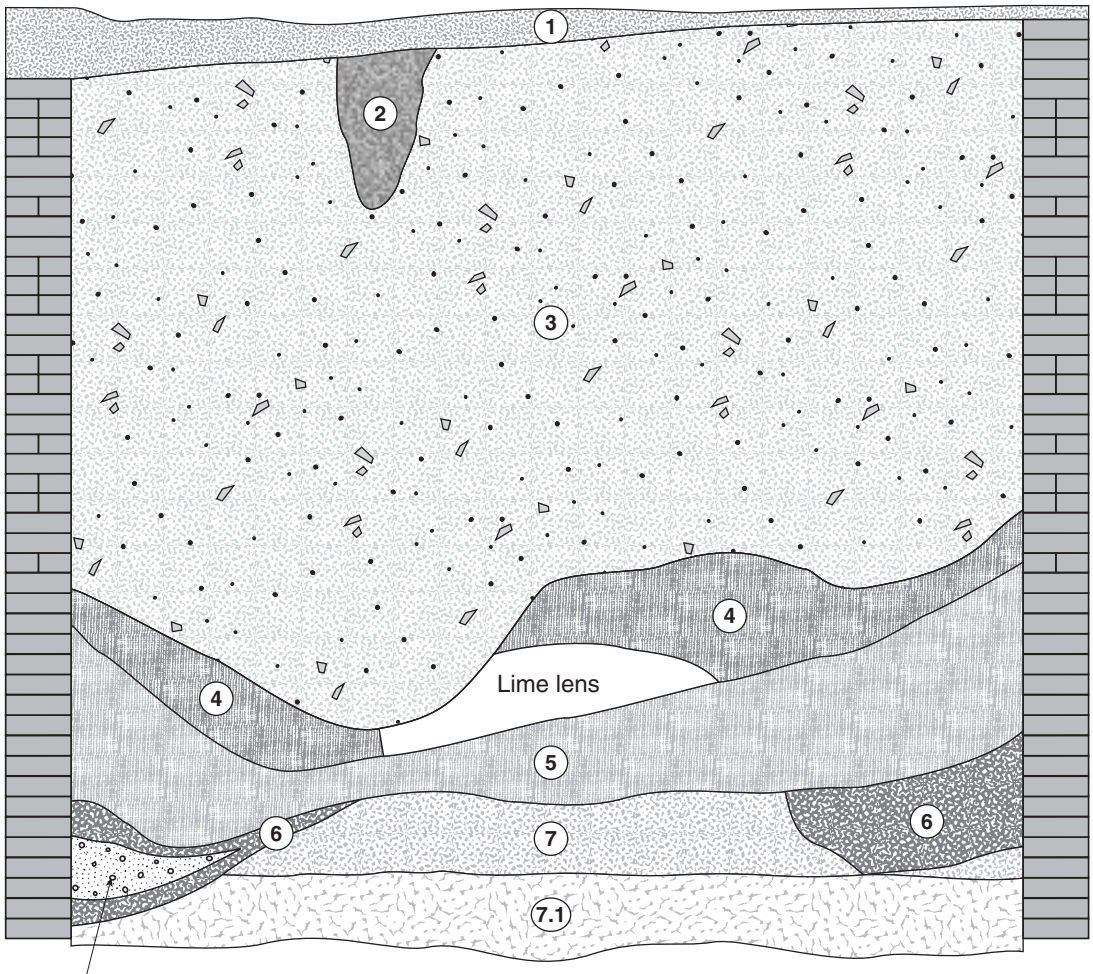
2 10YR 2/2 very dark brown sandy loam

3 2.5Y 5/6 light olive brown loamy sand; intact substratum

A-48. Feature A, east profile (Phase III).

A-49. Feature A, brick sill exposed at base of shaft, view southeast.

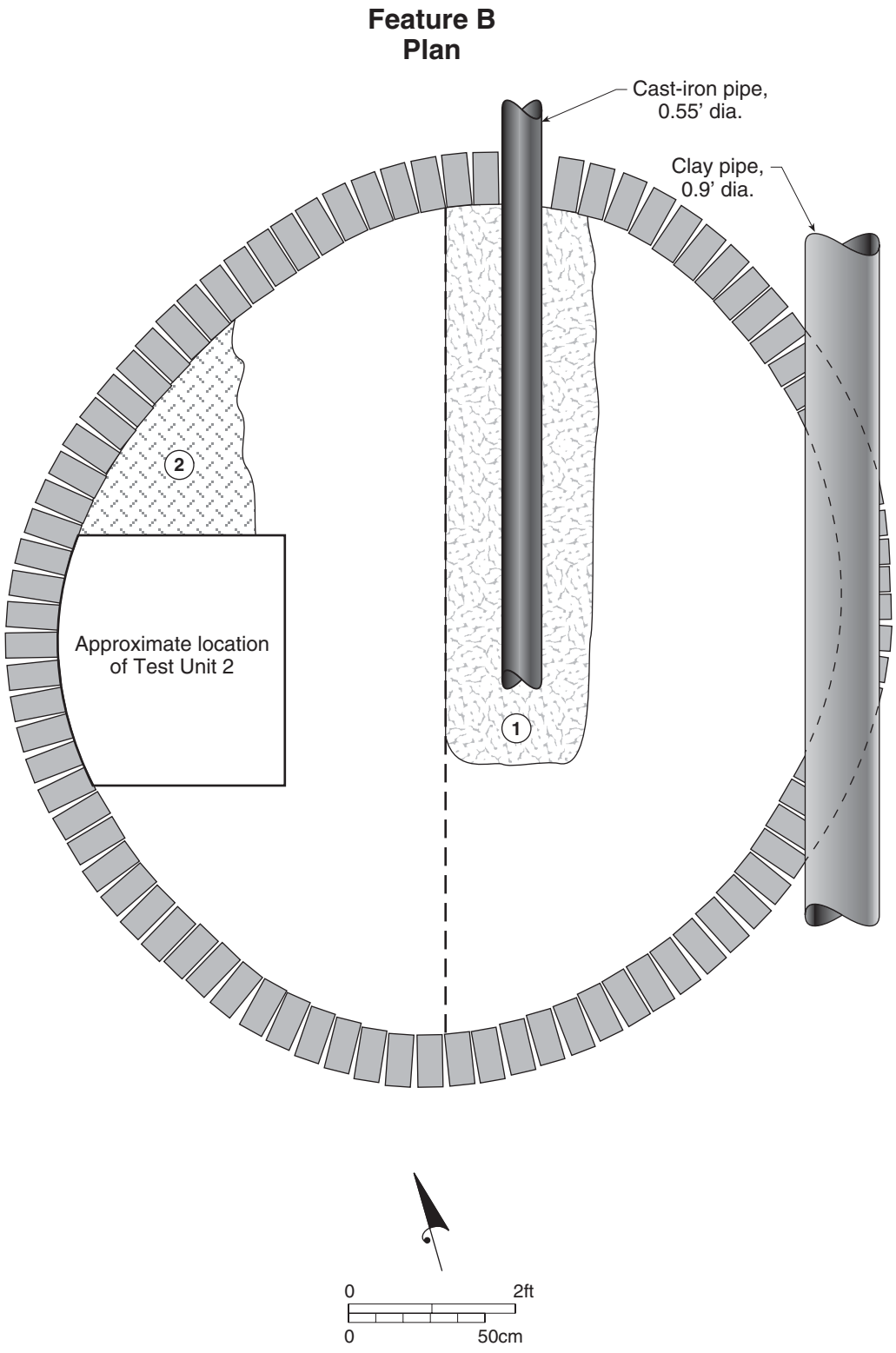
Feature B
West Profile



AS VIII	**1**	10YR 4/3 brown to 10YR 5/3 brown sandy loam with bricks, mortar, and 1954 debris
AS VII	**2**	10YR 5/2 grayish brown to 10YR 6/2 light brownish gray slag and ash
AS VI	**3**	10YR 4/6 dark yellowish brown sandy loam with mortar, bricks, and charcoal
AS V	**4**	10YR 3/2 very dark grayish brown to 10YR 4/2 dark grayish brown silt loam (nightsoil)
AS IV	**5**	2.5Y 4/4 olive brown silt loam
AS III	**6**	10YR 3/1 very dark gray loam (nightsoil); very moist and greasy
AS II	**7**	50% 10YR 3/3 dark brown and 50% 10YR 5/2 grayish brown silt loam
	7.1	60% 10YR 5/2 grayish brown loamy sand mottled with 40% 10YR 3/3 dark brown silt loam
AS I	**8**	2.5Y 2.5/1 black loam (nightsoil); not in profile

A-50. Feature B, west profile (Phase III).

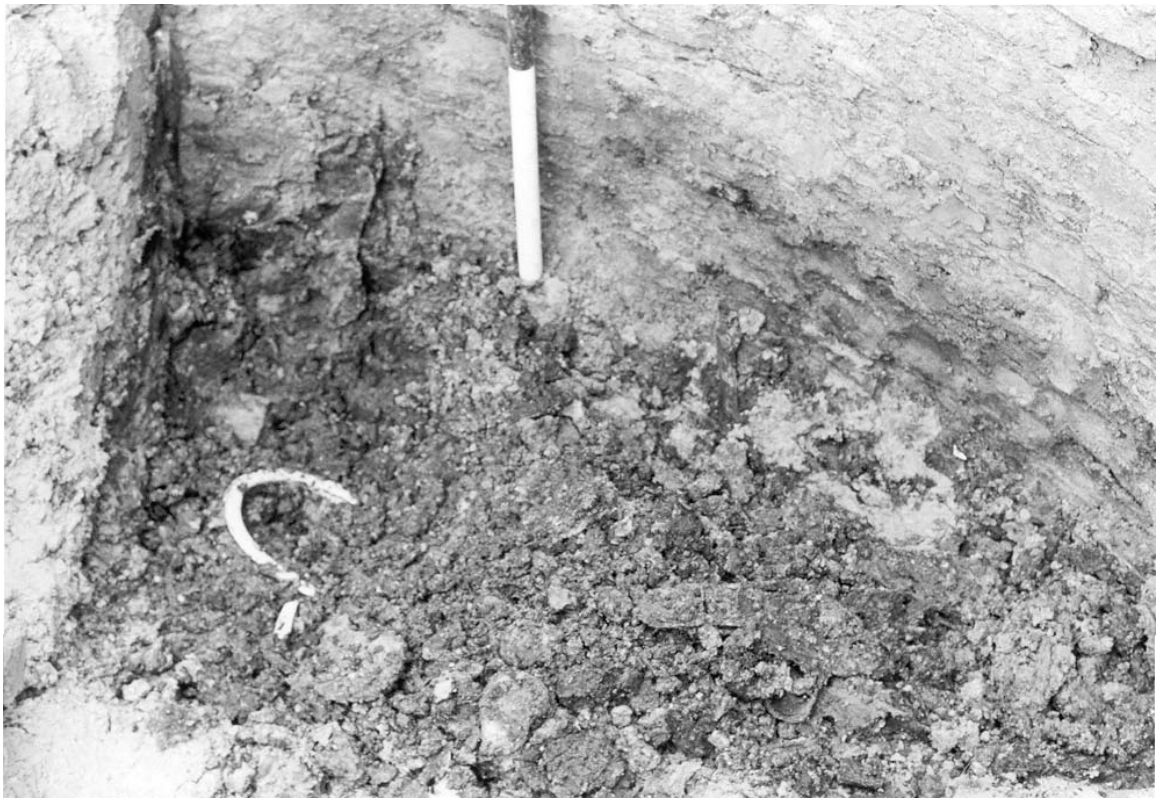
A-51. Excavation of east half of Feature B during Phase III, view north-northeast.



1 33% 10YR 5/3 brown, 33% 10YR 5/4 yellowish brown, 33% 10YR 6/4 light yellowish brown sandy loam

2 Looted area

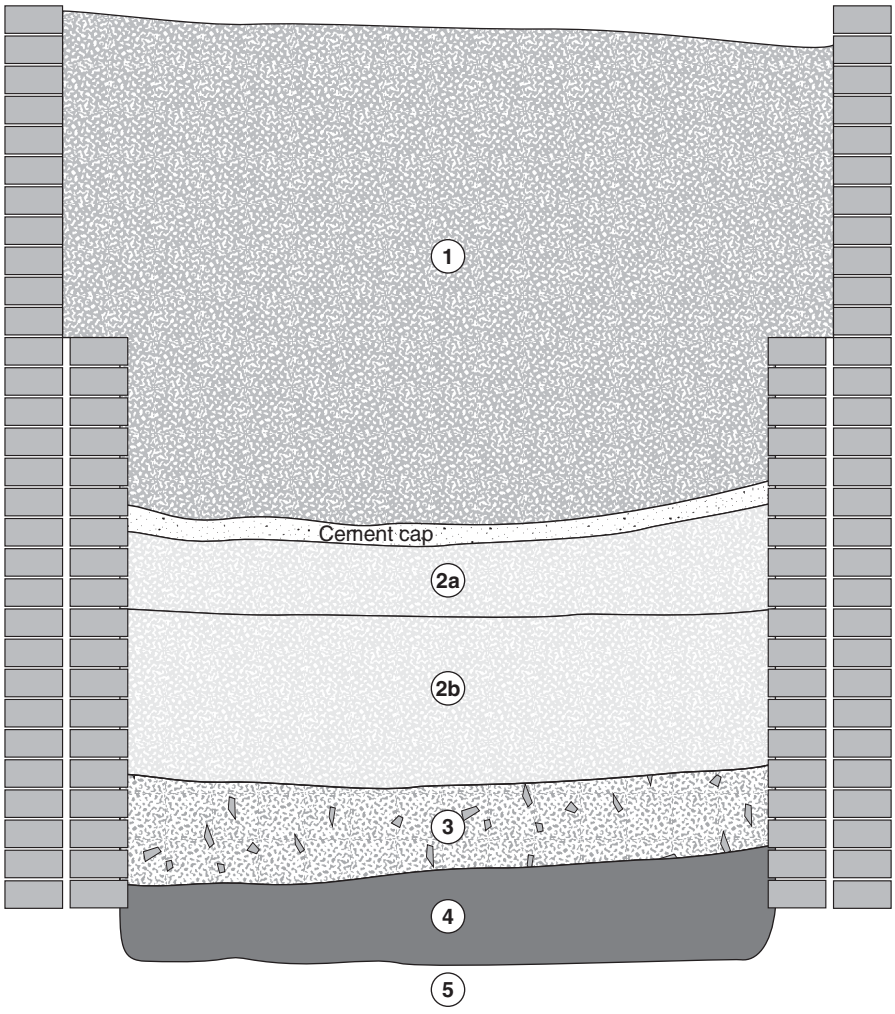
A-52. Feature B, plan, base of overburden, showing cast-iron and terra-cotta pipes (Phase III).



A-53. Northeast portion of Feature B, AS VI, showing chamber pot in situ, view north-northeast.

A-54. Feature B, base of artifact-packed Level 7 (AS II), view north-northwest.

Feature C
West Profile

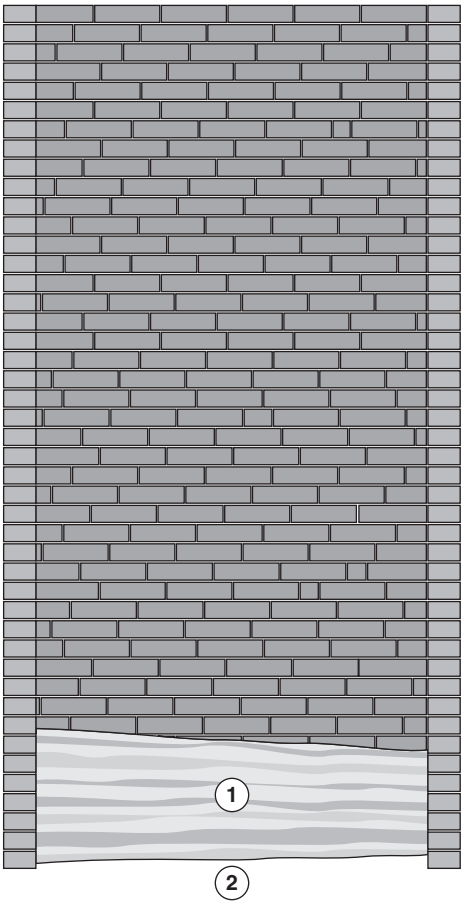


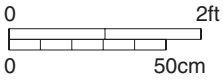
AS IV	**1**	10YR 5/2 grayish brown slag mottled with iron
AS III	**2a**	10YR 5/1-5/2 gray to grayish brown fine sand, sterile
	2b	10YR 5/2 grayish brown, 10YR 5/3 brown, and 10YR 6/3 pale brown slag with iron deposits
AS II	**3**	7.5YR 4/6 strong brown silt loam with brick, mortar, and some slag
AS I	**4**	10YR 2/2 very dark brown to 10YR 3/2 very dark grayish brown loamy nightsoil
	5	10YR 5/2 grayish brown sand

A-55. Feature C, west profile (Phase III).

A-56. Feature C, top of concrete cap, view northwest.

Feature D
East Profile





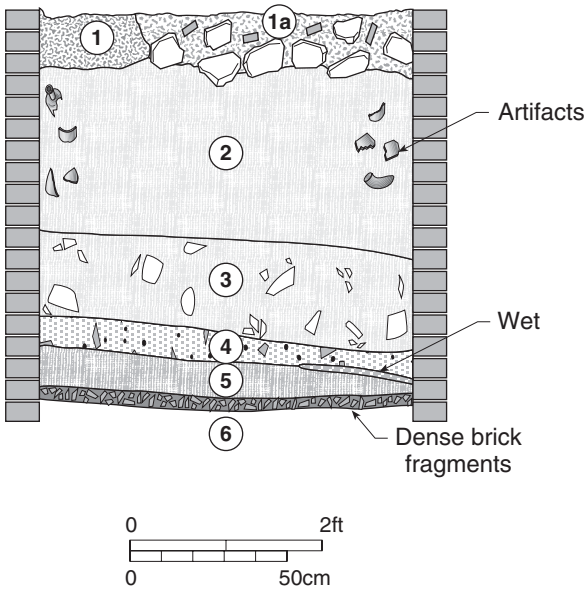
1 Alternating layers of 2.5Y 4/3 olive brown and 2.5Y 6/4 light yellowish brown sandy loam with small lens of 10YR 3/2 very dark grayish brown silt loam from water percolation at base

2 2.5YR 3/6 dark red sand; intact substratum

A-57. Feature D, east profile (Phase III).

A-58. Feature D, Phase III excavation completed, view south-southeast.

Feature E
East Profile



AS III

- **1** 10YR 3/3 dark brown silt loam mottled with 7.5YR 5/8 strong brown loam
- **1a** 10YR 5/3 brown silt loam with stone rubble, mortar and brick fragments

AS II

- **2** 10YR 5/4 yellowish brown sandy loam with artifacts along edges; arbitrary break
- **3** 10YR 5/4 yellowish brown sandy loam with many artifacts
- **4** 10YR 5/3 brown coarse sand with charcoal and brick fragments; wet with depth

AS I

- **5** 2.5Y 5/6 light olive brown sandy loam
- **6** 5YR 6/3 light reddish brown sand; intact substratum

A-59. Feature E, east profile (Phase III).

A-60. Feature E, porcelain vessel exposed in situ within Level 3, view west-northwest.

A-61. Expensive, gilded floral soft-paste porcelain tea set (Set #7) made in England and owned by tenant Alexander Henry or owner John Helmuth. Sixteen pieces of this set were found in Feature B, AS II.

A-62. Expensive, English porcelain tea set (Set #6) made in imitation of German Meissen from either the Henry or Helmuth households. Feature B, AS II.

A-63. Pieces of green-shell-edge table settings (Sets 18, 19, and 20) found in Feature B, AS II, showing a variety of dining and serving vessels for daily use by the tenants or owners of 225 High Street.

A-64. Green-shell-edged plate and sauceboat from Feature B, AS II. Note knife cuts on interior surface of plate, showing heavy use.

A-65. Philadelphia slip-decorated red earthenware pudding pans were the most prevalent utilitarian form in the kitchen at 225 High Street. Feature B, AS II.

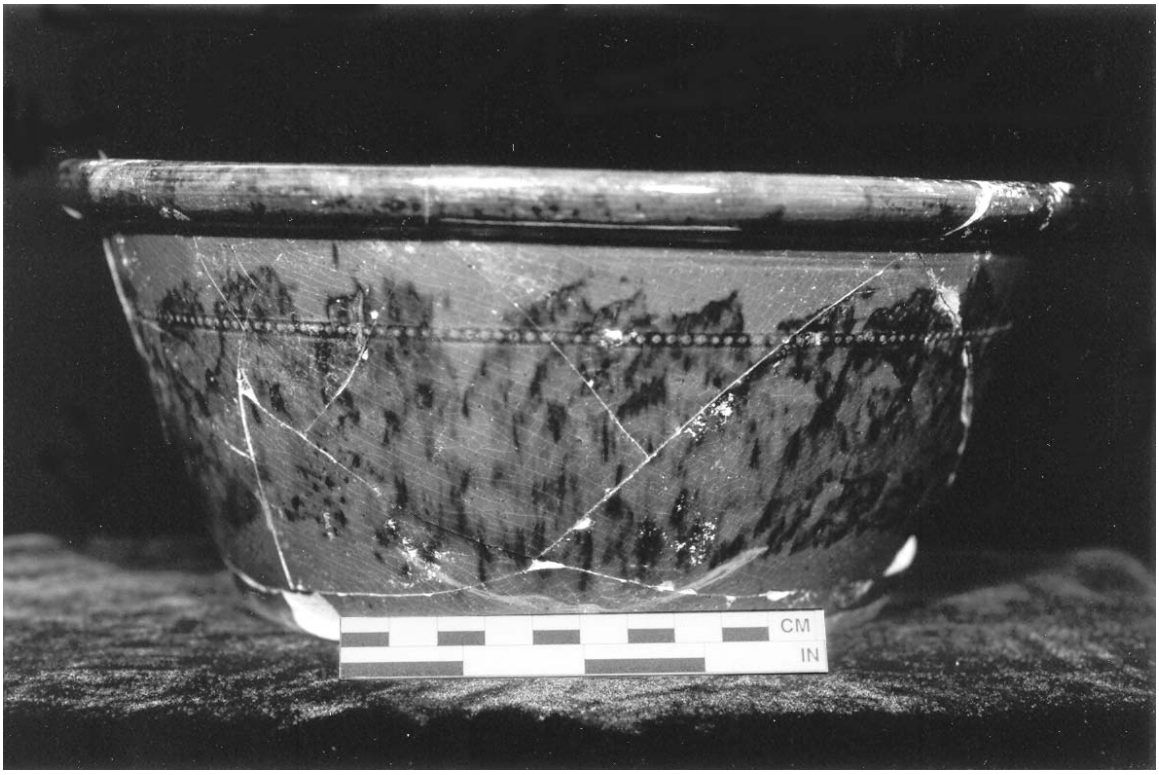
A-66. Locally made redware tableware used for eating and serving food in the kitchen. Feature B, AS II.

A-67. Creamware cups and punch bowls for serving syllabub, an eighteenth-century concoction of wine, sugar, spices, and whipped cream. The punch bowls were found in Feature B, AS II, and a matching set of fluted cups was found in AS III.

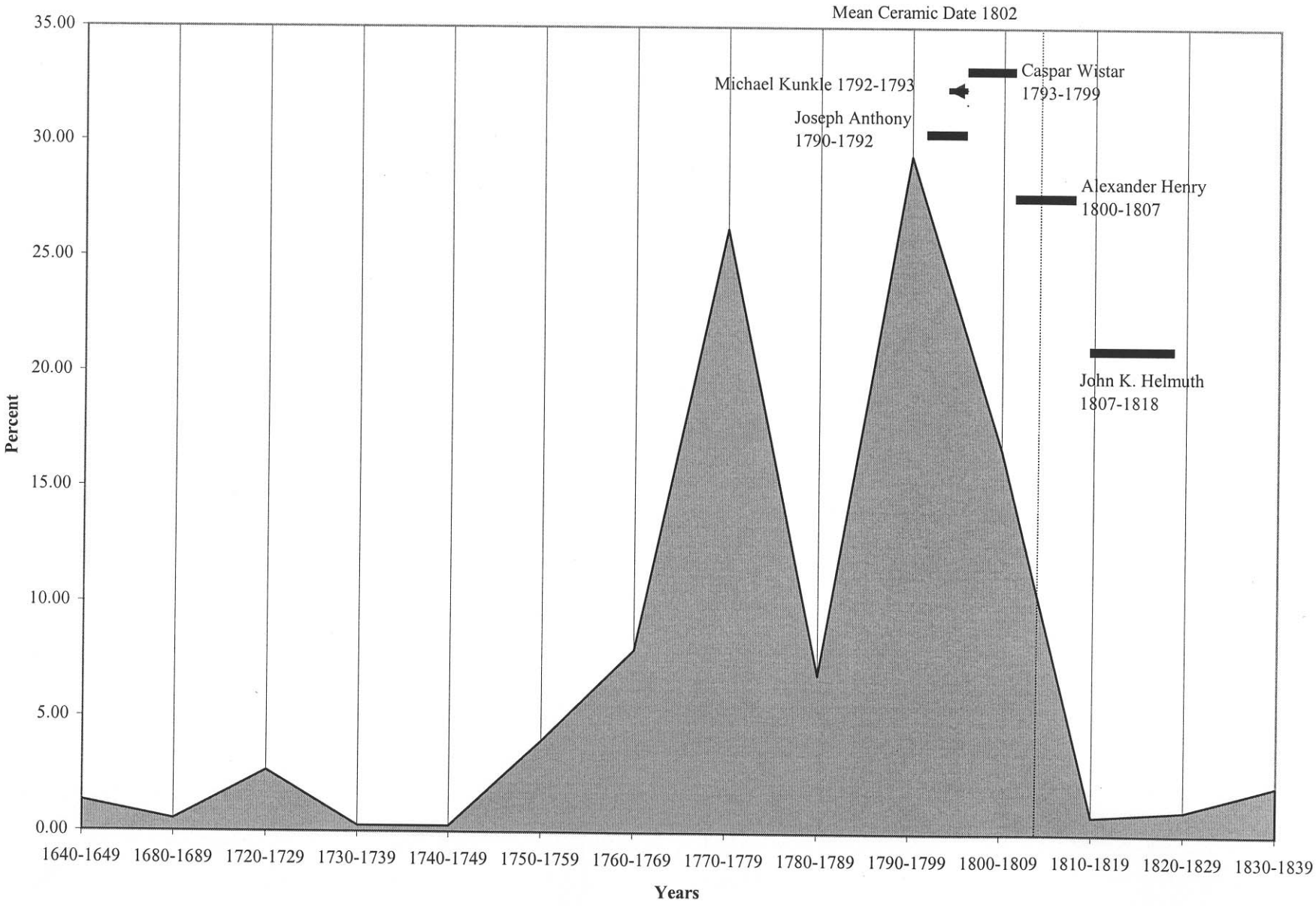
A-68. William Everly threw out pieces of a blue-transfer-printed tea set in the "Lady of the Lake" pattern made in Staffordshire, England, between 1823 and 1842. Feature B, AS V.

A-69. Pieces from three complementary tea sets decorated in overglaze black-transfer-printed patterns owned by the Everlys (Feature B, AS V). These three sets had matching line borders and London-shaped cups, popular between 1812 and 1825.

A-70. Chinese Export porcelain teacup and saucer with gold monograms found in Feature B, AS V.



A-71. Well-potted redware mixing bowl with manganese splotches and beaded band. Possibly made or sold by Scottish-born potter Thomas Haig, who operated a pottery in Philadelphia from 1819 to 1831. Feature B, AS V.

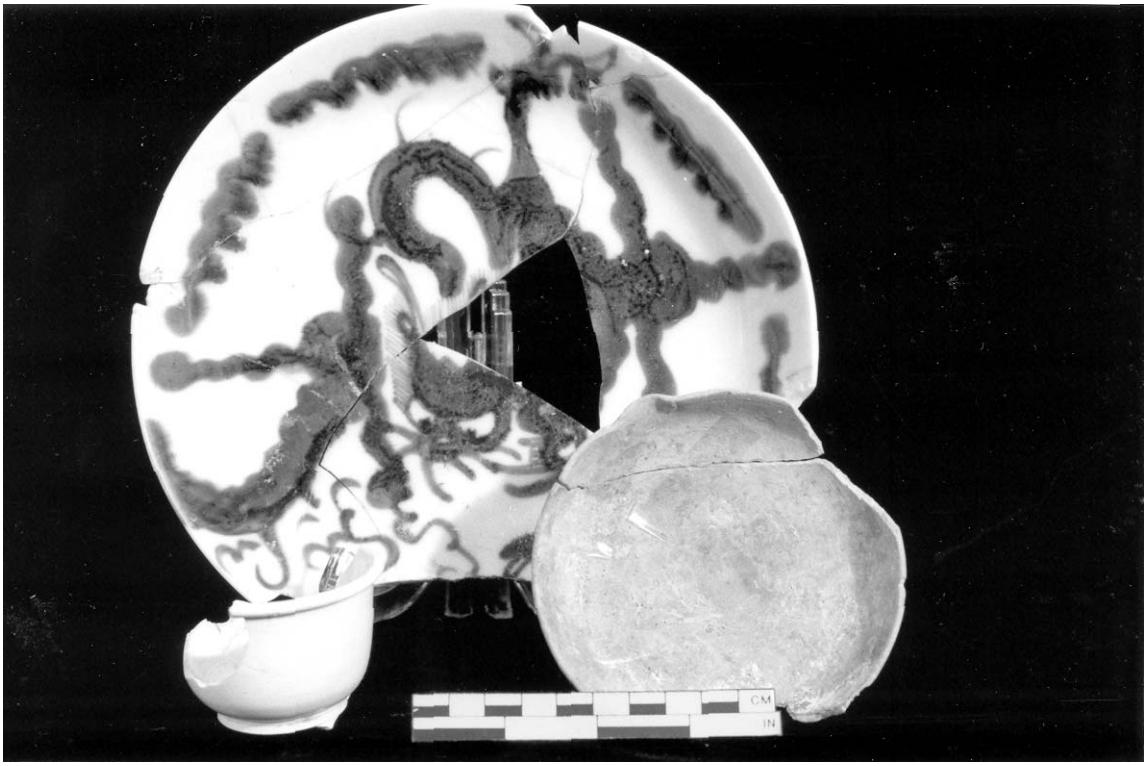


A-72. Feature B, AS II Ceramic Beginning Dates and Occupants.

A-73. Creamware chamber pots with consistent breakage pattern. Feature B, AS II-V.

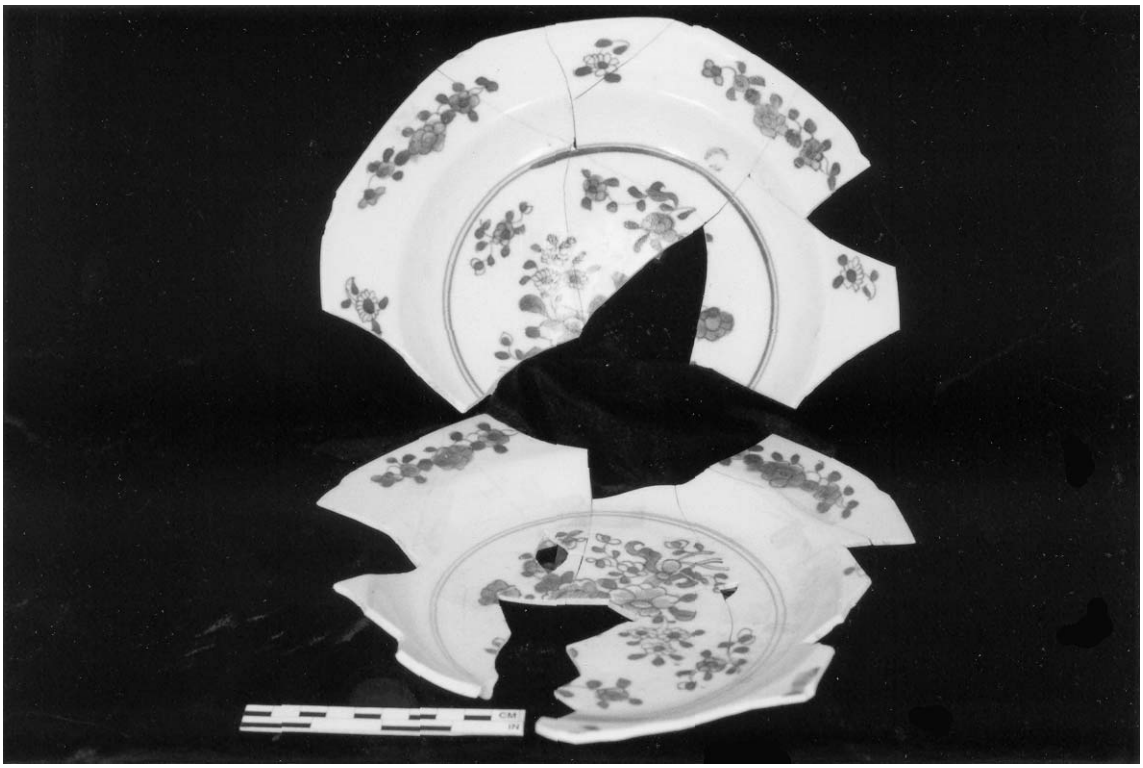
A-74. Slip-decorated redware vessels made in Philadelphia and belonging to the Simmons household. Rear: large pudding pan; front left: tulip bowl; and front right: pie plate. Feature E, AS II.

A-75. Fragments of a pie plate heavily scored with cut marks, and the nibbled rim of a porringer worn from extremely heavy use. Feature E.

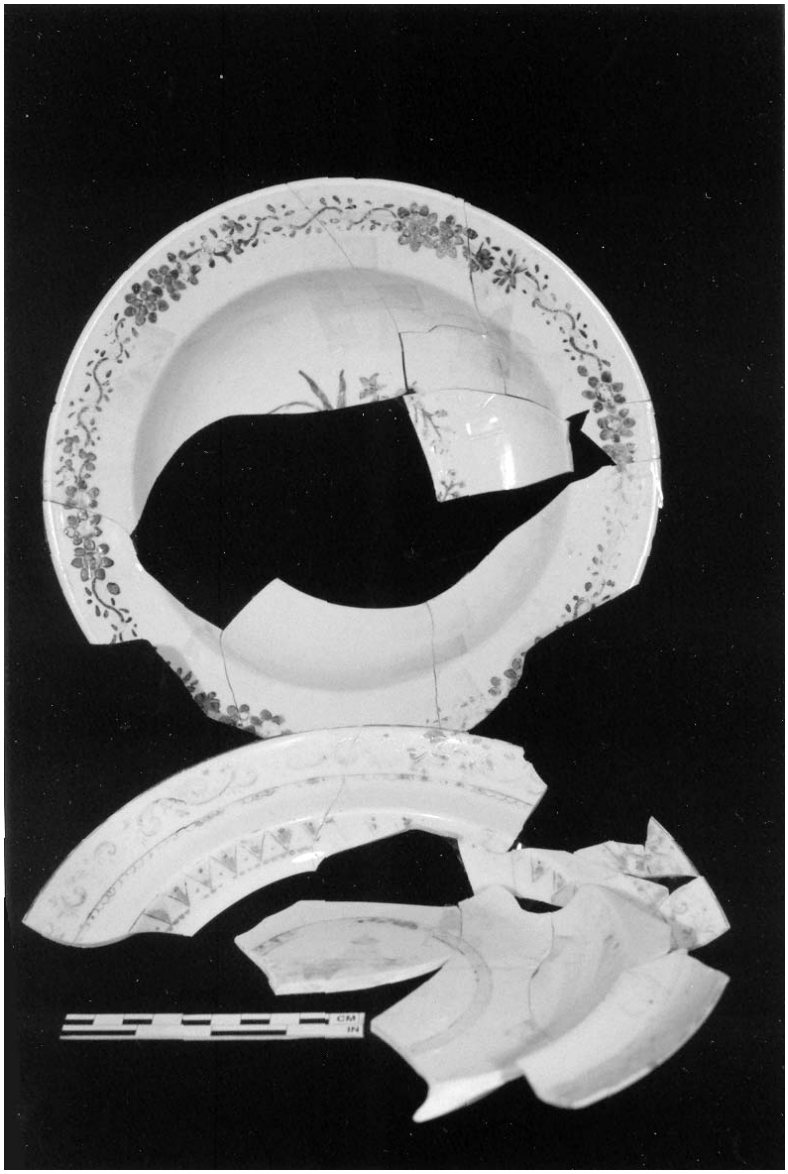


A-76. In the background, one of a set of three Chinese porcelain saucer dishes with blue stylized dragon motif, possibly Wan Li, 1620-late eighteenth century. Foreground, left: a white saltglazed stoneware medicine cup, and right: unglazed spouted saucer of unknown function and origin. Feature E.

A-77. Teawares belonging to William Simmons (Feature E). The pearlware teabowl in the right foreground is a copy of the more expensive Chinese Export porcelain teabowl on the left. The teapot, cream jug, saucer, and muffin are creamware.



A-78. Set of English octagonal porcelain supper plates made in Worcester around 1751. Feature G.



A-79. Chinese Export porcelain plates with very fine overglaze enamel decoration. Feature G.

A-80. Philadelphia redware stool pots found in Feature G.

A-81. Utilitarian vessel forms made in miniature sizes by Philadelphia potters for children's play. The three in the foreground were found in Feature B, AS II, and may have belonged to the Henry or Helmuth children living at 225 High Street in the first quarter of the eighteenth century.

A-82. Wine bottles, Feature B, AS II.

A-83. Medicine bottles from Feature B, AS II.

A-84. London Mustard, Feature B, AS II.

A-85. Lid of sugar bowl, Feature B, AS II.

A-86. Cologne bottles, Feature B, AS V.

A-87. Chemical bottles, Feature C, AS I.

A-88. Mineral water bottles, Feature H, AS I.

A-89. Milk bottles, Feature H, AS III.

A-90. Alcohol bottles, Feature E, AS II.

A-91. Glass tableware, Feature E, AS II.

A-92. Turlington Balsam medicine bottle, Feature G.

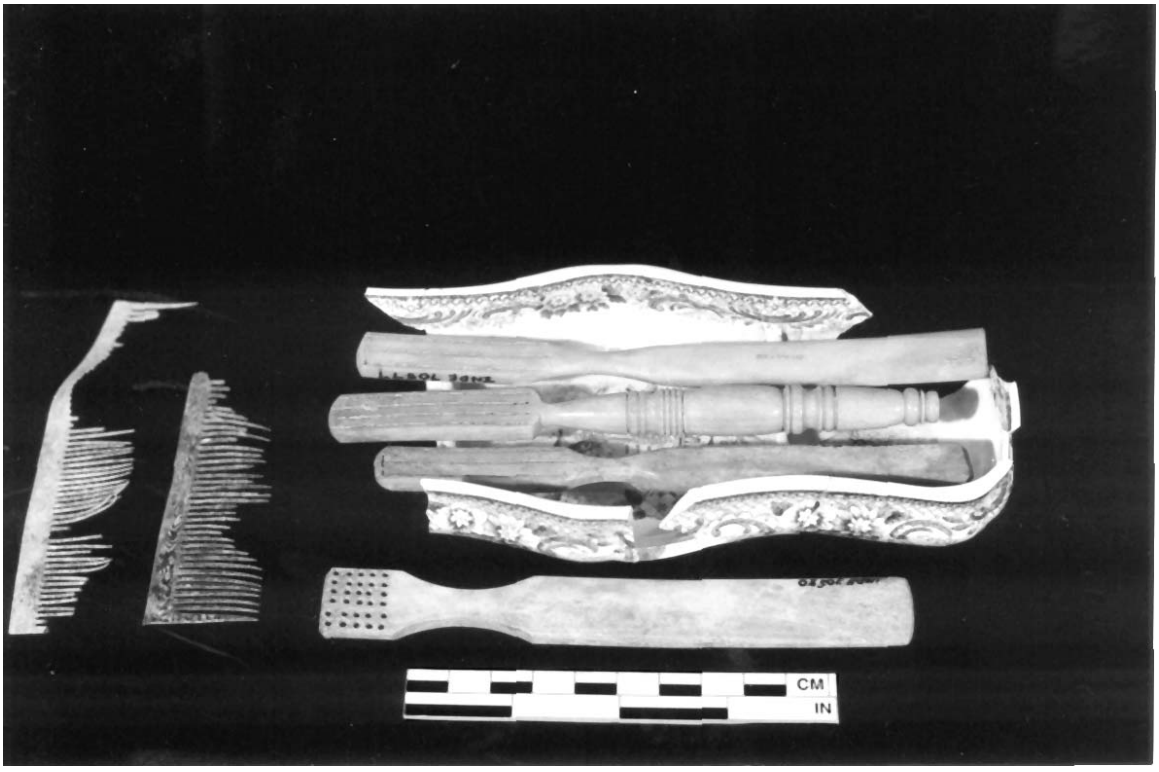
A-93. Undecorated tumblers, Feature G.

A-94. Wax seal, Feature B, AS I.

A-95. Witch ball, Feature G.

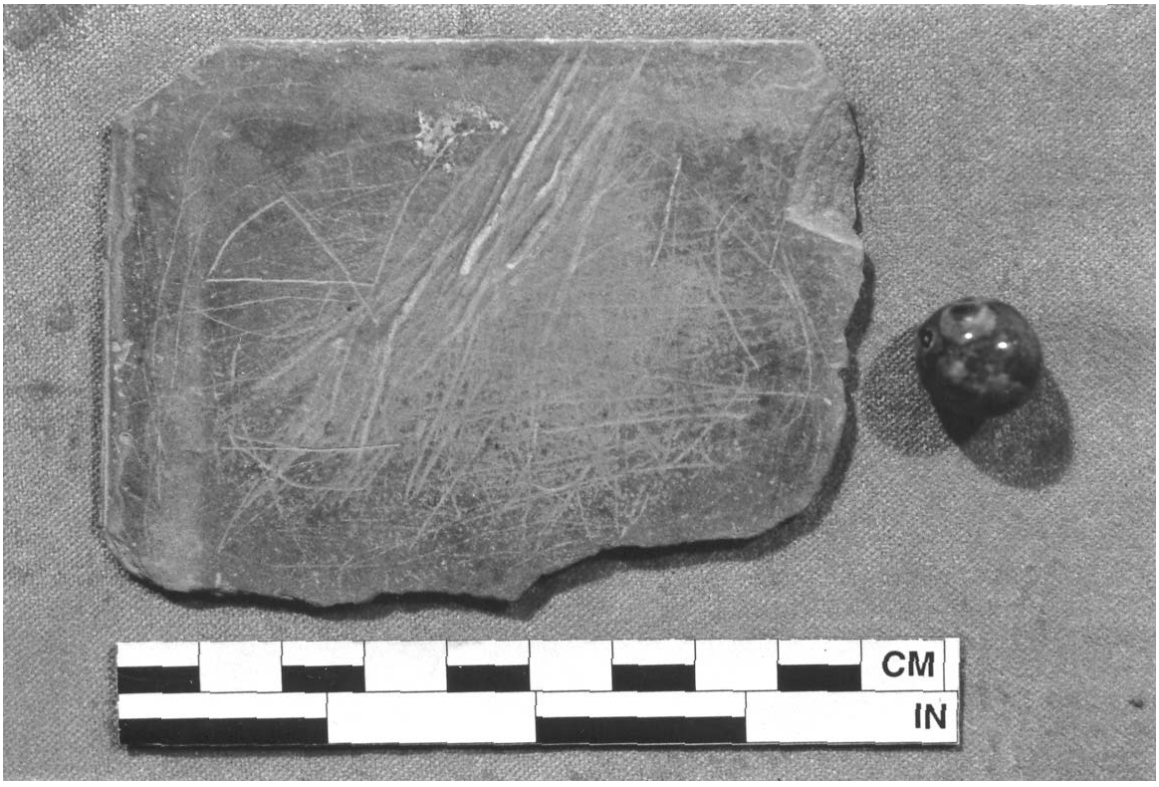
A-96. Queen Anne-type doll, Feature B, AS III.

A-97. Roach trap, Feature B, AS III.



A-98. Pearlware toothbrush holder, Feature B, AS V.

A-99. Pipebowl with maker's mark, Feature E, AS II.



A-100. Writing slate, Feature E, AS II.

APPENDIX B:

THE PUBLIC MARKETS AND THE DEVELOPMENT OF PUBLIC WORKS IN THE CITY OF PHILADELPHIA

APPENDIX B: THE PUBLIC MARKETS AND THE DEVELOPMENT OF PUBLIC WORKS IN THE CITY OF PHILADELPHIA

by Reginald H. Pitts

TABLE OF CONTENTS

1. HISTORICAL DOCUMENTATION AND METHODS

The historical research for this report was primarily conducted in Philadelphia. Primary source material concerning the establishment and governing of the public markets (including city ordinances and Board of Health Reports) in the city and county of Philadelphia was reviewed at the Philadelphia City Archives and the Historical Society of Pennsylvania. Maps of the areas where the city markets were located were examined at the Free Public Library of Philadelphia and the Historical Society of Pennsylvania. Copies of city ordinances and governmental publications referring to the city markets, public works, and other related topics were examined at the Historical Society of Pennsylvania and the Theodore F. Jenkins Law Library of the Philadelphia Bar Association. Secondary sources were studied at the above repositories and additionally at the Van Pelt Library of the University of Pennsylvania.

2. PUBLIC BUILDINGS, PUBLIC WORKS, AND PUBLIC MARKETS

2.1 INTRODUCTION

In its earliest incarnation, the city of Philadelphia, "by modern standards…was hardly governed at all" (Warner 1968:15). The municipal corporation of Philadelphia, established in 1691, wielded little power or influence in the daily lives of its citizens. Its major purpose in the early years was the management of the public market system and the operation of the Recorder's Court. Little more was ventured or accomplished by the city government, with the result that "most streets went unpaved, the public wharves little repaired" with "no public schools, no public water, and at best thin charity" (Warner 1968:17).

This study will attempt to explore the public market system in Philadelphia, showing how the organization and operation of the markets led to the development and implementation of the public works system, with a look at the municipal ordinances and regulations enacted for the good of all of its citizens. This study will also discuss how the municipal government (that of the city of Philadelphia, as well as the townships and boroughs that are now incorporated into the city, and the governmental agencies that were devised to manage these markets as they are presently composed) controlled the market activity by means of ordinances and other laws. The legislation that was devised to regulate and manage the markets will be discussed in some detail.

2.2 OVERVIEW OF THE PUBLIC MARKET SYSTEM

Public markets remain a staple of many urban areas throughout the world. Traditionally, a public market has been defined in the United States as a municipally owned and operated building in which vendors sell fresh food from open stalls (Spitzer and Baum 1994). The establishment and implementation of the public market system in the United States significantly influenced developmental patterns of urban settlement and commerce as the young republic expanded across the North American continent. It has been noted that "at one time, nearly every city in America had at least one public market; hence the ubiquitous Market Street in most modern downtowns" (Spitzer and Baum 1994).

The form and function of public markets in the United States descended most directly from European colonial influences, which in turn were derived from ancient Greece. The leaders of the Greek city-states placed open-air markets at centrally located areas within cities and towns. There, those officials who controlled the governmental activities of these urban areas could oversee and control the unpredictable course of the markets' activity. As it developed from these beginnings, the ancient *agora* became a marketplace for both goods and ideas, at the center of economic and political life in Greek cities (Spitzer and Baum 1994).

Aspects of the ancient marketplace endured in Europe into the Middle Ages. Local authorities continued to feel compelled to retain tight control over market activity. In England, for example, local officials sanctioned trade in predetermined areas of a town, where they could oversee the transactions. The Crown maintained the right to grant market charters, many of which were held by local churches (Power [1926] 1973). As in Europe, the buying and selling of food in colonial cities was restricted to public markets, giving city or religious officials the ability to watch over the trading process, to regulate weights and quality, and to ensure that the local population received sustenance before outsiders did (Spitzer and Baum 1994).

The public market as a type of building was firmly established by the seventeenth century. Indoor market halls organized buyers and sellers of food products in orderly and consistent patterns, and provided protection from inclement weather. Typically, public markets were built in the center of town (Dunn and Dunn 1982:7). The various colonies in America followed the European public market traditions, with indoor halls accompanying the northern Europeans and outdoor markets in town squares following the Spanish (Spitzer and Baum 1994). In colonial America, the "Market Place was the one civic centre, the one place of all public and common endeavor and the seat of authority" (Lippincott 1917:91)

Growing populations and expanding boundaries led municipal governments to create public market systems to meet the increased demand for food. A large central market would be supplemented by a number of smaller market halls scattered throughout a city's neighborhoods. Public markets retained their status as the principal places to buy food into the early decades of the twentieth century. Some cities, such as Baltimore, still maintain a network of city-owned and operated market halls governed by a municipal department of markets. In most cities, however, the system of market halls no longer survives (Spitzer and Baum 1994; Balkin et al. 2000).

Today, public markets come in many shapes and settings, offer a broad range of products, and are owned and operated by various types of organizations, not just city governments. In addition to the old-fashioned public market buildings, today's definition of public markets also embraces many farmers' markets, craft markets, and even some flea markets. At their most basic, markets include vendors or merchants who meet regularly at the same location; a sponsoring entity that holds legal and financial responsibility and that oversees operations; and, in some cases, the structures or facilities in which the market activity is housed (Spitzer and Baum 1994; Balkin et al. 2000).

2.3 ESTABLISHMENT AND SUBSEQUENT DEVELOPMENT OF THE PUBLIC MARKET SYSTEM IN PHILADELPHIA

William Penn originally platted out his "Greene Countrie Town" of Philadelphia with two fronts, one facing the Delaware River, and the other facing the Schuylkill River, with the intent that one front would serve the approaches from the ocean and the other the hinterlands to the west (Dunn and Dunn 1982:8). Penn established building lots in a semblance of north-south symmetry, with a "desire to construct an orderly system of thoroughfares and lots…as an example of order" (Hunter 1979:33). Penn "designated a central square [where City Hall is presently located] or plaza of ten acres to be bordered by the principal public buildings such as the Quaker meetinghouse, the state house, the market house and the schoolhouse" (Dunn and Dunn 1982:7). The central location of these buildings followed existing European urban thought (Power [1926] 1973). However, Penn was forced to abandon his vision of "Center Square" as the hub of urban activity as the early settlers of Philadelphia congregated around the Delaware River waterfront. The area from about Fourth Street west to the Schuylkill River remained relatively undeveloped for quite some time (Kelley 1973:75; Yamin and Pitts 1998:3-4).

In 1683, Robert Turner, a wealthy merchant, lot owner, and friend of William Penn's, complained that his landholdings at Front and Mulberry (later Arch) Streets were located too far away from the center of Philadelphia commerce (Front and Dock Streets) (Dunn and Dunn 1982:17). Penn arranged to establish the city's public market and the yearly market fair in front of Turner's lot "on the west side of Delaware Front Street within High Street [later known as Market Street]" (Watson 1884:3:183), "where butchers have movable stalls" (Lippincott 1917:80). Farmers bringing in their produce or any other "goods from the country" (Andrews 1999:30) would ship it

by boat and land at Turner's wharf in order to get to the marketplace (Watson 1884:3:183), where a bell was to be rung whenever the farmers and other tradesmen arrived to transact business (Philadelphia Charter of 1701 as cited in Lowber 1812:8).

In 1693, the Philadelphia Common Council decided to move the site of the market and also to revise the regulations by which the market was governed. The market was temporarily moved to "Market Hill, in Delaware Front Street" until a new site at Second and High could be found, a "bell-house be built and erected, and the bell hung in the same place" (Watson 1884:3:183; Lippincott 1917:80).

The Council established a list of rules and regulations to control the activity of the market. The office of Clerk of the Market was established; the duties of this position, as cited in the ordinance, were to "have assize of bread, wine, beer and other things and do execute and perform all things belonging to the office of clerk of market within the said city " (Philadelphia City Charter of 1701, as cited in Lowber 1812:5). The "all things" that the clerk would perform involved overseeing the daily activities of the market and collecting the fees the farmers and tradesmen paid for the privilege of occupying space in the market:

Cattle to be killed…….sixpence per head
Calves and lambs ditto…..……twopence per head
Hogs ditto…….……three pence per head

Nevertheless, for animals that had been previously slaughtered before being brought into the market, nothing was paid (Lippincott 1917:80).

"Market Days" were set by the Common Council for Wednesdays and Saturdays (Philadelphia City Charter of 1701 as cited in Lowber 1812:8), with no sales being permitted "before the ringing of the town bell from six to seven o'clock in the morning from April 1st to September, and an hour later during the remainder of the year" (Watson 1884:III:314). To aid the Clerk of the Market, Robert Brett, in going about his duties, "beadles" were appointed to collect rents (five pounds a year) and other fees as well as keeping order (Philadelphia City Charter of 1701 as cited in Lowber 1812:9).

2.4 ESTABLISHMENT OF COMMITTEE SYSTEM OF GOVERNMENT AND DEVELOPMENT OF PUBLIC WORKS PROJECTS

As it can be seen, then, the public market was a very important aspect of Philadelphia life as well as a valued source of needed revenue for the city. However, despite its work in governing the market, the municipal government showed a "lack of concern for public management of the community" (Warner 1968:9). Although there is little remaining of the ordinances and other regulations enacted by the Philadelphia Common Council between 1691 and 1701, what does remain suggests that the Council did not concern itself much with the welfare of the inhabitants of the city (Dunn and Dunn 1982:26).

The municipal government of Philadelphia was relatively weak, with its major interests being the operation of the market and the court. Based on the model of the English borough (Warner 1968:7-8), Philadelphia's municipal officers were a Mayor, a Recorder, or magistrate, and aldermen and councilmen who were appointed for a year at a time (Lowber 1812:1-12). "These officials, acting together, passed ordinances and meted out justice" (Still 1974:39), but did not accomplish much more than that (Franklin 1964:173-175).

It appears that no provision was made for the disposal of waste. Philadelphia's "streetscape presented a scene of dirt, mud, garbage, animal excrement, and general disorderliness all pervaded by the odor of decaying garbage and seething in accordance with the season with flies, mosquitoes, and roaches" (Bronner 1982:57). Trash and other offal were dumped in the streets and "watercourses" of the city. Dock Creek was known as a foul sewer, while pigs, goats, and other scavengers were suffered to run at large in the streets (Bronner 1982:59). It also appears that farmers bringing in livestock from the countryside were able to butcher the meat at the stalls with no thought as to how the waste products were to be disposed (Lippincott 1917:78).

As yet there was no sewer system in place in Philadelphia, and to get potable water, many homes and businesses had private wells located either in the front or in the rear of their buildings (Gillingham 1932:276), while "public and private wells lined High Street's marketplace teeming with people and horses during business hours" (Thayer 1982:69). Most homes and some businesses had privies, primarily located in the rear of the lot next to the boundary line; however, no record is left determining if the location or depth of the privies was ever set by law during this early period (McCarthy 1984:11, Blomberg et al.1990a:19-21; Blomberg et al. 1990b:23-26; Nylander 1993:114-116).

The condition of the streets was also of much concern. Benjamin Franklin, the personification of a civic-minded citizen, noted that Philadelphia "had the Disgrace of suffering [its] Streets To remain long unpav'd, and in wet Weather the Wheels of heavy Carriages ploughed them into a Quagmire, so that it was difficult to cross them. And in dry Weather the Dust was offensive" (Franklin 1964:174).

This lack of interest on the part of the municipal government to rectify or even address any of these civic problems became notable to the extent that, in 1700, the Pennsylvania Provincial Assembly forced William Penn to supersede the municipal corporation and draft a new city charter. The charter, dated 25 October 1701 (Lowber 1812:1-3), granted "full powers of justice within the city and the right to issue laws and ordinances, as well as to regulate markets and fairs" to the mayor, aldermen, and councilmen, but granted them no power to tax (Dunn and Dunn 1982:27).

In order to govern the city, the charter called for the formation of a number of independent committees, called "commissions." These committees, staffed by members of a revamped Common Council, were established to perform specific tasks needed to effectively run the city and would report to the Mayor at monthly council meetings (Philadelphia Charter of 1701, as cited in Lowber 1812:1-23; Diamondstone 1966:185-188; Warner 1968:21; Dunn and Dunn 1982:29-30).

Realizing the importance of the public market, the new city charter kept it in place with very little change. Robert Brett continued as Clerk of the Market and was given additional duties including the "assize of bread, wine, beer, wood, and other things, and to act as regulator of weights and measures" (Philadelphia Charter of 1701, as cited in Lowber 1812:5), and on Wednesdays and Saturdays, the market bell continued to ring, calling vendors and shoppers alike (Lippincott 1917:77-79).

However, change was coming as to how the city was to be run. The first committee to be formed was a Board of Assessors, "established to raise money to pay the debts of the corporation and to require that wharves and streets be repaired and a workhouse erected." Other committees were organized and staffed. These included the Overseers of the Poor, who operated the city almshouse

and public hospital; the "Commissioners for Paving Streets" whose job was to insure that the city streets were able to be traversed at all times; and the "City Wardens" who controlled the night watch and the lighting of the streets (Warner 1968:19-26).

To emphasize the fact that the market was to be seen as the center of the city's activity, the Common Council subsequently established several public buildings near the market, along with "a pillory, stocks, and whipping post" in 1709 (Lippincott 1917:80-81). Two years later, a permanent two-and-one-half-story structure of brick was constructed at the eastern end of the old market house on High between Second and Third Streets; the ground floor was to be used for the market, but the upper stories were to be set aside for "public use," becoming the "first City Hall" (Lippincott 1917:79, 81-82).

With the development of the countryside surrounding the small city into farmland, along with the growth of the city creating more of a demand for fresh meat and farm produce (Bronner 1982:62), an expansion of the existing market building was first contemplated in 1718. In 1722 Alderman Thomas Redman proposed the construction of 30 stalls with brick pillars for 400 pounds (Lippincott 1917:82). To accommodate those farmers from New Jersey, the "Jersey Market," consisting of 20 stalls running eastward 100 feet from the steps of the courthouse down to the Delaware River waterfront, was built in 1730 (Scharf and Westcott 1884:2:378; Lippincott 1917:83-84).

2.5 BEGINNINGS OF MUNICIPAL REGULATION OF WASTE DISPOSAL AND SANITATION

As noted above, it appears from the lack of information regarding this subject in surviving records and municipal ordinances before 1701 that almost nothing was done regarding the cleansing of the streets and the disposal of waste. The Pennsylvania Colonial Assembly, through the new Common Council, first began to address the question of municipal cleanliness in 1705, when they passed a law "suffering swine not to run at large" on pain of a sizeable fine to the owner (Act of Assembly 1705 Chapter I, Section 4, as cited in Lowber 1812:10). This was soon followed by a like restriction on the activities of goats (Clarkson, Fisher and Kuhl 1790:72). It does appear, however, that the owners of these animals were allowed to keep them on their premises; no language restricted their being kept in a private home.

It should be noted, however, that despite the legal restrictions placed on them, many pigs and goats had free range over certain of the city's streets and thoroughfares. As the city expanded, many folks who kept pigs, goats, chickens, and the like moved farther away from the center of the city into outlying districts, so into the next century and well into the second succeeding century "[p]igs still scavenged for garbage in some of the streets and carved out their wallows; hog raisers, driven from the central districts, still colonized foul precincts in…the peninsula between the Delaware and the Schuylkill south of the old city" (Weigley 1982:373) as well as in other areas throughout Philadelphia.

It also appears that when the market was first established, the butchers were permitted to butcher cattle, hogs, and other "meat" right at the stalls. There is no mention in any existing ordinance as to how waste products were to be disposed. However, by 1722, the Common Council declared that the leaving of "dirt and offal" as well as the actual butchering of animals in the market was prohibited (although the latter was only declared a nuisance eight years later) (Act of Assembly 1722 Chapter I, Section 3, as cited in Lowber 1812:16; Lippincott 1917:83).

Subsequently, the butchers and other purveyors of fresh meat were restricted to a separate area in the market (Lippincott 1917:83); after some attempts on the butchers' part to return to their old stalls, the Assembly passed a law stating that "it will not be lawful for any person whatsoever to sell any beef in the western moiety or shambles in High Street between Third and Fourth streets…nor for any person exercising the trade of a butcher or victualler to occupy any stall or sell any meat of any kind within the said western moiety of the shambles" (Act of Assembly, 23 March 1786, as cited in *Ordinances of the City of Philadelphia* 1800:55). At about this time, Mary Whitteker was hired to sweep out the courthouse and the market stalls twice a week for two shillings. In addition, the smoking of tobacco products was prohibited "in the market or Market House or in any of the stalls" (Lippincott 1917:83).

Subsequent ordinances governing the maintenance of the area around the marketplace included the paving of the area about the stalls; Benjamin Franklin, then an Alderman, also supported a measure calling for the regular sweeping of the city streets around that area (Franklin 1964:173-175). The stated duties of the Clerk of the Market "and his deputies" now included the direct supervision of Mary Whitteker and the other "scavengers" hired to sweep out the stalls and the market building itself (Clarkson, Fisher, and Kuhl 1790:30-31). By 1762, most of the streets had brick or flagstone sidewalks, and a number of merchants began to emulate the city market and arrange for the placing of cobblestones or paving blocks laid in the streets in front of their stores (Thayer 1982:69).

Franklin observed that the merchants and their customers noticed "so much Dirt not being brought in by People's Feet," and along with the fact that "All of the Inhabitants of the City were delighted with the Cleanliness of the Pavement that Surrounded the Market, it being a Convenience to all; this rais'd a general desire to have all the Streets paved and made the People more willing to submit to a Tax for that purpose" (Franklin 1964:174). As Horace Mather Lippincott noted, "so we see the beginnings of street paving, street cleaning and traffic regulations to have originated in the Market Place" (Lippincott 1917:84).

The Common Council had noted that, despite the brick construction of most of the structures in Philadelphia, there was always the threat of fire; volunteer fire companies were formed and were ready to go into service upon the call of the night watch. To that end, in order to insure a supply of water to extinguish fires, in 1756 the Colonial Assembly had given the city the authority to take over the street pumps and place them under the control of the city wardens. These worthies were authorized to inspect the pumps and insure that they remained in good working order, to have new well shafts sunk should the need arise, to buy up privately owned pumps, and to collect an assessment from those residents and homeowners who used the pumps (Act of Assembly, cited in Lowber 1812:19; Gillingham 1932:372; Jackson 1932:4:1172). However, most householders still drew their pure water from their own wells located on the property they owned or occupied.

Privies also came under the purview of the city fathers. In 1763, the Colonial Assembly received a request from citizens of the city of Philadelphia who complained that their well water was being polluted by the contents of the privies located nearby. The residents stated in part that "the Vaults or Wells for Privies or Necessary Houses throughout the City are dug so deep as to injure the Waters, and render them unwholesome for drinking." They requested that the Assembly pass a law that would remove the privies from the proximity of well water and prevent any recurrence of "said aforementioned Nuisance" (*Pennsylvania Archives [Eighth Series 1931]).*

To that end, the Assembly passed legislation limiting the depth of privies within the city of Philadelphia from six feet to 20 feet, with the allowable depth being set every half block from the

surface of the nearest north-south street (*Pennsylvania Statutes at Large* 6:230). However, five years later (in 1769), the Assembly authorized the Commissioners for Paving Streets to regulate "the depth of all vaults, wells, and sinks….to be dug in the built parts of [Philadelphia] for privies or necessary-houses," with the depths to range from six feet (in the area around Front and Dock Streets) to 20 feet (the north side of High Street) and the allowable depth being set every half block from the surface of the nearest north-south street. Fines were authorized to penalize noncompliance with the legislation, which affected both existing privies and future construction (Act of Assembly 1769, as cited in Lowber 1812:28). In 1797, this ordinance was strengthened with, among other things, the restriction that privies could not be located less than two feet from the boundary of the lot (Act of Assembly 1787, as cited in Lowber 1812:30).

2.6 LATTER DAYS OF THE MARKET

As the city continued to expand, residents of other sections of the city decided to establish other marketplaces for the convenience of those residents. In 1745, the residents of what is now Society Hill requested and received permission to establish a market on Second Street between Pine and Cedar (now South) Streets. Eight stalls were located on Second Street between Pine and Lombard, and eight additional stalls located on Second Street between Lombard and Cedar (*Ordinances of the City of Philadelphia* 1800:30-38; Lippincott 1917:85).

In answer to complaints about the offensive smell of fish being sold in the market, in 1764 the Common Council authorized the construction of the "Fish Market." This would be located farther east of the market, on High Street between Water Street and the Delaware River docks (Lowber 1812:23; Lippincott 1917:86). There were also complaints about the cattle and other livestock being sold in the High Street Market to the extent that women and children were found to be in danger as the cows and horses proffered for sale would sometimes get loose and run about. The city established a "cattle market" on "the north side of Dock Street between Third and Walnut streets" (Clarkson, Fisher, and Kuhl 1790:28), where livestock was offered for sale.

The restriction against butchering livestock in the area of the markets appears to have applied to the cattle market also. Much later, a city ordinance stated, "No person shall sell or expose for sale within the public markets and market-places, any live animals, except poultry, game, small pigs, and fish, nor any strong beer or spirituous liquor, mixed or unmixed, nor any meat or fish be cured or salted, nor fish be cleaned, nor shall any pickle, garbage, rough fat, unclean tripe, cattle feet, or offal matter be laid, placed, or thrown out in said market-houses or places"; violation of any of these stipulations was seen as a penal offense (Section 6, Ordinance of 12 December 1865, as Section IX, Paragraph 574 of "Public Works and Markets" in the Philadelphia City Charter as cited in Brightly 1887:327).

With the new Philadelphia City Charter of 1789, more change came to the workings of the municipal government. The old Board of Assessors was abolished, as the new Charter gave the power to tax and otherwise raise revenue to the Mayor, Recorder, Councilmen, and Aldermen (Clarkson, Fisher, and Kuhl 1790:xxix). The Aldermen and Councilmen (or Members of the "Select and Common Council," respectively (Clarkson, Fisher, and Kuhl 1790:12-14) would staff the remaining committees and continue to report back to the Mayor (Clarkson, Fisher, and Kuhl 1790:113-140).

The City Wardens were empowered, among other things, to "limit descent and appoint the depths of all wells, vaults, and sinks hereafter to be dug within the city for privies or necessary houses, which regulation being so made and approved in Select and Common Councils shall be

advertised in two or more newspapers of the City and then deposited in the Office of the Clerk of the Mayor's Court for the inspection of any inhabitant of the city" (Clarkson, Fisher, and Kuhl 1790:118).

Meanwhile, the market buildings at High and Second Streets continued to be extended west on High Street. By 1786, they reached Fourth Street; by 1816, Eighth Street; by 1831, Seventeenth Street (Lippincott 1917:87; Kelley 1973:63). From about 1795 on, stores began to appear in the houses on High Street west of Fourth (Kelley 1973:75).

With the market stalls in the center of High Street, more and more of Philadelphia's residents and visitors began referring to it as Market Street, and soon the name stuck (Richardson 1982:270). As the neighborhood began to change from primarily residential to a mixed use (residential and commercial) to largely commercial by the 1820s (Jackson 1918:62; Yamin and Pitts 1998:10-11), both residents and business owners began to note the difficulty of traversing Market Street due to the stalls in the center of the street.

When the Pennsylvania Railroad desired to lay track down Market Street, it soon became clear that the stalls would have to be removed (Lippincott 1917:87). This was finally done in 1859 (Watson 1884:3:187), although two markets remained on Market Street at Twelfth. They were known as the Farmers' Market and the Franklin Market, forerunners of what would become the Reading Terminal Market in 1892 (Highsmith and Holton 1994).

However, new markets were being established to serve an expanding population. The Second Street Market remained active, and the "Fish Market" would continue in operation until 1864 (Lippincott 1917:82; Jackson 1918). As the townships, boroughs, and districts that made up the county of Philadelphia before the Consolidation Act that brought together the city of Philadelphia and the various municipalities in Philadelphia County into one metropolitan city in 1854 (Geffen 1982:359-369) were organized and settled, the residents also wished to have public markets.

The Borough of Germantown had a market in their "Market Square" on Main Street (Germantown Avenue) at Lukens Mill Road (now School House Lane) as early as 1689 (Lippincott 1917:91-93). The District of the Northern Liberties had a public market located first on Second Street between Coates (now Fairmount Avenue) and Poplar Streets (Act of Assembly 16 March 1819, as cited in Brightly 1887:334), and later on Callowhill Street between Fourth and Sixth Streets (Act of Assembly 10 April 1826, as cited in Brightly 1887:334). Still later, a market was established on Girard Avenue between Sixth and Lawrence Streets (Act of Assembly 15 May 1850, Public Law 763, and Act of Assembly 5 May 1852, Public Law 611, as cited in Brightly 1887:334).

The District of Kensington, by city ordinance, established a market at Beach and Laurel Streets in 1820; this market was authorized to be held "throughout the year." Butchers could not "slaughter or kill any beast within the limits of the said market, nor lay any garbage, dung, or offal therein, under the penalty of forfeiting three dollars, and to be at the further expense of removing the same" (Philadelphia City Ordinance, dated 1 July 1820, as cited in Brightly 1887:337).

The Penn District's market was established on Girard Avenue between Tenth and Thirteenth Streets in 1847 (Act of Assembly 17 February 1847, Section 20, Public Law 119, as cited in Brightly 1887:338). The District of Southwark established two markets: the "Wharton Market," located on the east side of Second Street at the present Moyamensing Avenue (Act of Assembly 26 March 1813, as cited in Brightly 1887:340), and the "Washington Market" at Shippen (now

Bainbridge) Street between Passyunk Avenue and Third Street (Act of Assembly 11 December 1835, as cited in Brightly 1887:343).

After the Consolidation Act, nearly all the public markets continued in business, but were placed under the control of the City Department of Market Houses from 1856, and later the Department of Public Works, Bureau of Markets and City Property (Brightly 1887:310). The department was headed by a Commissioner, who also had under his jurisdiction "wharves and landings, Independence Hall, parks and squares" as well as the operation and regulation of the markets (Brightly 1887:310-330).

The city of Philadelphia established new markets, including the Ridge Avenue Farmers' Market on Ridge Avenue above Twentieth Street (1875), the "New Farmers' Market" at the northwest corner of Broad Street and Columbia (now Cecil B. Moore) Avenue (1877), and one in West Philadelphia on Fortieth Street north of Market (Lippincott 1917:87). The "Italian Market" at Ninth and Christian Streets was also in operation before the turn of the last century (Burt and Davies 1982:491) and thrives to this day.

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APPENDIX C:

THE FAUNAL ASSEMBLAGES FROM THE BLOCK 2 FEATURES

APPENDIX C: THE FAUNAL ASSEMBLAGES FROM THE BLOCK 2 FEATURES

by Claudia Milne

1. INTRODUCTION

Altogether, 13,769 animal bones and bone fragments were recovered from six features at the Independence Visitor Center site in Philadelphia. Analysis focused on Feature B because the majority of the bones, 12,317 in all, came from the four analytical strata of that feature. Another 1,216 bones were recovered from Feature E.

The deposits recovered from Feature B date from about 1790 (AS I, Level 8) to 1850 (AS V, Level 4). At this time, a specialized urban procurement system such as those described by Bowen (1998) and Henn (1985) was already in place in most cities of northeastern America. In this system animals were raised primarily for market slaughter and not for other products such as wool, milk, or hides. Generally, the system included a narrow range of animal types, in terms of species and age, as well as parts that were available. This range became smaller as the nineteenth century progressed. These changes were first seen in the large domestic mammals and then, as technology improved and production became even more specialized, with the gradual disappearance of certain game species and smaller, local fishes from the archeological record.

At the beginning of the period represented by AS I (Level 8) in Feature B, most of the middle-class residents of Philadelphia were unlikely to be raising much of their own livestock. At this time, the city's market system for meat, fish, and fowl was well developed and well known. Like other municipalities in the northeast, however, the markets of Philadelphia could not keep up with growing demand and a rapidly expanding city. Centrally located markets were not efficient in cities that were developing distinctly separate and widespread neighborhoods. Between 1800 and 1850, the centralized market system in Philadelphia was in accelerated decline. The faunal assemblages recovered from the Block 2 features provide a glimpse into this period of market transformation in Philadelphia.

1.1 METHODS AND MATERIALS

The faunal assemblages discussed in the following report were recovered from sealed shaft features on Block 2 of the Independence Visitor Center archeological site (Philadelphia Land Block 1600). Most of the assemblages were recovered from sealed features, and the condition of the recovered bones was excellent. Very few show any evidence of weathering or other damage. During the fieldwork, all excavated soils were screened through ¼-inch mesh. Additional soil samples from several features were retained for flotation in a controlled environment at John Milner Associates' (JMA) laboratory in West Chester, Pennsylvania. Recovery was excellent and numerous small rodent and fish bones and hundreds of fish scales were collected.

1.1.1 IDENTIFICATION

The assemblages were analyzed using conventional zooarcheological techniques (e.g., von den Driesch 1976; Grayson 1979; 1984; Bull 1982; Grant 1982; Klein and Cruz-Uribe 1984). Where possible, each bone or bone fragment was identified to species level. Measurements of the bones were taken following the standard outlined by von den Driesch (1976). Where this level of identification was not possible, a series of higher-order taxonomic categories was used. The category sheep/goat was used for almost all caprine remains, although no goat was identified. Where possible, bone fragments that could not be identified to species or family were assigned to categories such as large, medium (mostly rib and vertebral fragments that might be either sheep or pig), or small mammal (generally vertebral fragments belonging to either dog, cat, or rabbit). Other small bone fragments were simply assigned to class (e.g., mammal, bird, or fish). The

comparative collections at the American Museum of Natural History and the Bioanthropology Laboratory at Hunter College, City University of New York, as well as the author's own collection housed at the JMA facility in Croton-on-Hudson, New York, were used to identify this assemblage.

1.1.2 METHODS OF QUANTIFICATION

Several methods were used to quantify the relative importance of various species. All methods are subject to criticism, but when taken together they provide a more complete assessment of faunal assemblages. The NISP or number of identified specimens per taxon was used to calculate the relative abundance of a given species by simply adding all the fragments identified as that species. This method fails to account for problems of element interdependence (different bones that may have come from the same animal or a single cut of meat) or for variability in the identification of certain elements. The MNI or minimum number of individuals provides an estimate of the relative importance of species, using the most common element identified. This quantification sometimes results in overestimations of the importance of less common species. MNI calculations may also react unpredictably when archeological contexts are combined to form meaningful analytical units (Grayson 1984; Klein and Cruz-Uribe 1984). Problems with both NISP and MNI may be exacerbated with historical faunal assemblages, since small fauna such as fish and poultry were often sold whole, while larger animals were often sold as individual cuts of meat. A preference for a particular cut of beef may result in an MNI calculation that does not accurately represent the relative amount of beef (in terms of meat weight) that was consumed. The potential meat weight that a given animal provided was also calculated, but this calculation did not accurately account for those meals purchased as partial animals or smaller cuts of meat.

The biomass or "skeletal mass allometry" method of quantification arrives at a percentage of meat weight based on the weight of the archeological bone. The method assumes that any two dimensions of an animal can grow at an exponential rate rather than a linear one. Therefore, an estimate of body size and body weight may be determined from the size of a bone element, since a specific quantity of bone represents a predictable amount of tissue (Reitz and Cordier 1983).

In historical contexts, the cycle of meals or pattern of consumption may be visible in the cuts of meats chosen and species present (Goode et al. 1984; Branster and Martin 1987:308; Cheek and Friedlander 1990:36). With respect to historic-period assemblages, the minimum number of retail meat cuts (MNMC) rather than the MNI or the NISP is frequently found to be the most meaningful unit of analysis (Schulz and Gust 1983; Lyman 1987). Where possible the bones of the large domestic mammals were assigned to specific cuts of meat, based upon the National Meat Board's detailed instructions on the fabrication and butchering of animal carcasses (Ashbrook 1955; Romans and Ziegler 1977; Mettler 1986). The major problem with this method is that the archeological record includes only those cuts of meat with the "bone in." Some of the least expensive cuts (e.g., bacon, flanks, and chopped and stew meats) are not represented. All methods of quantification are presented below for the species considered food animals. Complete tables of all the species recovered and the various methods of quantification are included in tables at the end of this appendix, which begin with a table (C-13) showing all fauna present.

1.2 PROVISIONING IN PHILADELPHIA

Most of Philadelphia's residents obtained some portion of their food from the city's markets. By the early 1700s, like other cities of the northeast, Philadelphia had a well-developed and increasingly specialized urban provisioning system. Areas of the city were set aside for the

slaughtering and marketing of animals, and much of the food supply was controlled and centered in city-licensed markets (see Appendix B). Prior to 1720, a market with stalls was located at Second and High Streets. This market was open on Wednesdays and Saturdays, with hours and prices set by the Common Council (Watson 1884, Vol. 3, as cited by Andrews 1999:30-31). The first city market building was built along High Street between Front and Second Streets in 1708. Within 10 years, additional accommodations were needed and another building was built along High Street, west of the old courthouse. Half the stalls were "let to the people of the country" and the other half to butchers. In 1729, another 20 stalls were erected east of Second Street for provisions brought from New Jersey. Another market was needed for the southern part of the city as early as 1745 (Watson 1884, Vol. 3, as cited by Andrews 1999:31). By 1811, another market at South Second Street between Pine and Cedar Streets was built for the southern city (Smith 1995; Roberts 1998:23; Andrews 1999:31). Despite emphasis on city-run market systems, alternative methods of provisioning were also available. Even in growing urban areas, some kept their own livestock on backyard lots while others may have had connections with nearby farms (Henn 1985; Bowen 1998:141; Milne and Crabtree 2001).

Numerous nineteenth-century travelers and reporters described the abundance that was available from the sea. A reporter from New York even found that the markets of Philadelphia were superior to those in his home city, as

> "…the markets of Philadelphia are constantly supplied, from the river, the bay, and the sea, with almost every desirable variety …The shad caught in the vicinity of Philadelphia are generally esteemed in flavor and more delicate than those caught elsewhere. It is supposed that the situation of the fishing-places influences the size and flavor of the shad. But the abundance, cheapness and excellence of provision in Philadelphia are conceded [as] *The New York Tribune* of May 1, 1857 stated" (Freedley 1867).

The first of the fish markets consisted of open stalls that ran from the middle of Market Street from Water Street to the Wharf. A market house was constructed at that location around 1709 and stood for the next hundred years (Jackson 1918). Around 1811 the hill on Market Street was designated solely for the sale of fish and run mainly by the wives of the fishermen (Roberts 1998:23). Prior to the 1840s, most of the fish caught off the Atlantic coast were consumed locally, sold at whatever price local inhabitants were willing to pay. This small trade took care of demand in the coastal areas and for a short distance inland. Small quantities were shipped as far west as Pittsburgh, but time and transportation charges made the cost of shipping fresh fish prohibitive (Debow 1866:473; Ackerman 1941:149-150). Locally, fish wives, peddlers, and other vendors sold fresh fish in city-run markets. One observer described the unloading of herring boats as a "curious spectacle" with groups of

> wretched looking old women clustered around a tin weighing-scale pan, holding about a bushel. You observe them each receiving, in a coarse bag, 'half a hundred' or so of the rigid little fish. Inquiring if these women run boarding houses, you are informed that they are buying them to sell again… (Leavitt 1871:472).

The central markets continued to supply much of the city's food until the middle of the nineteenth century, but the markets were in continual decline. Small butchers, groceries, and other food-related businesses rapidly replaced them. The markets continued to operate into the 1850s, but the buildings along Market Street were finally demolished around 1860. Similar market

transformations took place in New York and other cities of the northeast (Jackson 1918; Milne 1998:5; Andrews 1999:31).

Unquestionably, ethnic, economic, and market forces all influenced dietary choices (e.g., Reitz 1987; Singer 1987; Crabtree 1990; Bowen 1992). A survey of reported nineteenth-century urban faunal assemblages from Detroit, New York City, Philadelphia, Boston, and Brooklyn revealed some general patterns. When sites were attributed to the artisan or middle class, the remains of poultry and birds made up between one-quarter to one-third of the total food NISP. Meat bones, usually mutton and beef, accounted for another 30 to 50 percent of the food animal NISP, with varying amounts of fish bone present (see Salwen and Yamin 1990; Geismar 1989, 1992; Andrews 1999). Assemblages attributed to the working class generally contained greater quantities of pig bones, large numbers of fish remains, and much smaller amounts of poultry (Branster and Martin 1987; Landon 1989; Milne and Crabtree 2001). The types of fish varied with location and date of deposition. On sites dating pre-1840, a greater reliance on a variety of local, inshore fishes was evident. Later in the nineteenth century, the species' diversity declined and codfishes were more prevalent (Rothchild and Balkwill 1993; Milne 1998). Time, in terms of both seasonality and transportation, affected species' availability in particular market places. For example, improvements in both rail and refrigeration technology after 1840 allowed a greater number of fresh-frozen New England codfish into the markets of the northeast. At the same time, reliance on a small number of domestic mammal and bird species, and declining "wild" habitats surrounding the cities, led to a decrease in the number of wild or game species that were previously available.

2. THE BLOCK 2 ASSEMBLAGE

2.1 SPECIES PRESENT IN THE BLOCK 2 FAUNAL ASSEMBLAGE

A total of 44 species was identified in the faunal assemblage from the Independence Visitor Center features. These included 9 mammal species, 15 bird species, 14 fish species, two types of turtle, and four types of shellfish. Historically, the colonial reliance on game animals continued into the early nineteenth century. By that time, the American diet relied heavily on the three large domestic mammals (cattle, sheep, and pigs) as important sources of protein, and the meat from these animals came to dominate the diet of nineteenth-century Americans. Pork was especially easy to preserve and still remained palatable. Beef, veal, mutton, and lamb were all commonly found in the markets of the northeastern cities. Information about the availability and economic importance of each species follows.

2.2 MAMMAL SPECIES

2.2.1 White-Tailed Deer: Venison was so plentiful in colonial America that a quarter deer could be bought in New England for just nine pence (Root and de Rochemont 1976:73). Large numbers of deer bones (*Odocoileus virginianus*) were found at the earliest historic sites; however, deer populations steadily declined throughout the seventeenth and eighteenth centuries and were rarely recovered from sites of later periods. Six bones identified as deer were recovered from Feature B, AS V (Level 4). Two tibiae identified as deer were recovered from Feature H.

2.2.2 Domestic Cattle: The remains of domestic cattle (*Bos taurus*) were identified in all of the Block 2 features except Feature F. These were mostly the remains of mature animals, but a large quantity of veal bones was recovered from Feature B, AS II. Cattle were imported into the country in the early colonial period, and by the late-eighteenth century, beef was a mainstay in the American diet. Modern beef cattle were generally slaughtered between one and three years of age. These were animals raised solely for meat products. Animals raised for other purposes (breeding, milk, hides, or use as draft animals) were slaughtered at a much older age. Meat considered veal comes from animals that vary in age. True “milk” veal was from animals two to three months old that have not been weaned. Milk-fed veal may come from animals as old as five months as long as they have not been weaned to grass, but animals younger than three months were generally preferred (Time-Life Books 1978:6; Mettler 1986:62).

2.2.3 Sheep and Lamb: Mutton comes from sheep older than a year. Between 12 and 24 months, it is considered “yearling” mutton while those animals older than two years are “true” mutton (Mettler 1986:77). Mutton is less common today than it was in the past. This is partially due to changing tastes, as well as the designation of animals solely for food rather than wool production. True or “spring” lamb is that meat that comes from animals slaughtered between three and 10 months of age. These were solely food animals not mature enough for a first shearing of wool (Bowen 1998). “Milk Lamb” were those animals slaughtered at less than 6 weeks and 20 pounds or less in total weight (Pepin 1987:235). Both mature animals and spring lamb were present in these deposits. The bones recovered from the Block 2 features come from all parts of the sheep. At least one stratum (Feature B, AS V) was dominated by sheep, particularly bones from the skull. In other analytical strata, meat from sheep was less prevalent than that from cows (Feature B, AS II and III) and chicken (Feature B, AS III). Generally, roast cuts from the limbs appear to be preferred.

2.2.4 Pig: Throughout the eighteenth and nineteenth centuries, domestic pig (*Sus scrofa*) was an important food source because it is an inexpensive animal to raise. The meat of the pig takes well to salt preservation and is an excellent year-round source of protein. Although not insignificant, the amount of pig bone recovered from the Block 2 features was less than expected. In all strata of the two analyzed features, pig bones made up less than five percent of the total NISP. This is similar to the pattern observed at the Merchants' Exchange/Chiller Plant sites, also in Philadelphia (Andrews 1999:18).

2.2.5 Rabbit: The rabbit (*Sylvilagus floridanus*) was an extremely popular small game animal, and recipes were included in all cookbooks of the period. Small numbers of rabbit bones were identified in all strata of Feature B. Younger smaller rabbits were preferred, but it does not matter what age they were as long as they were cooked until tender. Cooking methods should vary accordingly. At less than three months of age or about 2.75 pounds, a rabbit requires about an hour of cooking time. Larger and older animals require more time (Mettler 1986:95; Pepin 1987).

2.3 COMMENSAL SPECIES

These were species that lived in close association with human beings and benefit from that association. None of the following were considered food animals. For that reason, quantification of these animals was not included in the following discussion. Total numbers of bones from these species may be found in the tables at the back of this appendix.

2.3.1 Dog: Dogs (*Canis familiaris*) had two roles in eighteenth- and nineteenth-century cities. Some were kept as pets, but many more wandered the streets as scavengers, were considered a general nuisance, and were in some cases a danger. No dog bones were recovered from Feature B, but Feature E presents an unusual deposition pattern with respect to canine remains. A small number of bones was recovered from Feature E, AS II, but AS III had a total of 114 bones representing at least two dogs. These bones accounted for 65 percent of the total NISP for the feature and 40 percent of the biomass.

2.3.2 Cat: Like dogs, the domestic cat (*Felis domesticus*) had two roles. Small numbers of cat bones were recovered from all strata of Feature B. This pattern has been observed in other urban assemblages. Once again, however, Feature E presented an interesting pattern. In AS II of that feature, the bones of cats accounted for 27 percent of the total NISP, second only to the chicken bones recovered. No cat remains were recovered from Feature E, AS III.

2.3.3 Rat: The remains of rats (*Rattus* species) were found in every strata of Feature B and in AS II of Feature E. They are extremely common in both urban and rural settings and in the resulting archeological assemblages as long as care is taken in the field recovery. Rats feed on organic garbage, grains, plants, and other animal remains. They are found everywhere humans dispose of such waste. Varying quantities of rat bones were recovered from the Block 2 features. The lowest levels of Feature B (AS I and II) contained relatively few. However, eight individual rats (133 bones, all parts of the skeleton present) were recovered from AS III. This number may be related to deposition processes, as the filled feature may have remained open at this level for a period of time, allowing rats to have access to the trash within. Alternately, this may have been a level in which dead rats were disposed off. Five additional rats were identified in AS V of the same feature.

2.3.4 Mouse: Like the rats, mice (*Mus musculus*) were common scavengers in both urban and rural settings. Twenty-four mouse bones were recovered from the various strata of Feature B. Most of these bones were recovered from flotation samples, and the small number is not entirely representative of the number of mice that may have been present.

2.4 DOMESTIC AND GAME BIRDS

There is a good deal of variety in the avian assemblage recovered from Feature B. Both domestically raised birds as well as wild-game birds were part of the diet. While chicken seems to have been the most important, perhaps even more important than beef when AS III of Feature B is considered, several other species were favored. These are enumerated as follows.

2.4.1 Chicken: Chickens (*Gallus gallus*) were readily available in the marketplaces, although they were sometimes more costly per pound than beef. Chickens were especially easy to care for and were frequently raised on urban back lots for both eggs and meat. The overwhelming majority of the bird bones recovered from Feature B, particularly AS II and III, were those of domestic chicken. All parts of the chicken were present, and in AS III as many as 21 mostly whole, intact skulls were recovered. At least three different birds from AS III had tarsometatarsus bones with unmodified, intact spurs. No signs of modification (removal or shortening) of these spurs were present, but one set belonged to an older bird, because distinct osteophytic growths occurred along the bone. Andrews (1999:15) mentions the popularity of cockfighting among the middle and upper classes in the city, but no tarsometatarsus bones with modified spurs were noted in the Block 2 features.

In addition to domestic chicken, other *Galliformes* (i.e., turkey, pheasant, and quail) were consumed. There were great similarities in the bones of the birds from this family. The large number of bones and fragments recovered from closely related species sometimes made identification beyond family level difficult. When identification to species level was not possible, broader categories were used (“large galliforme” for turkeys and larger chickens such as roosters and capons and “small galliforme” for smaller hens not easily distinguished from the pheasants). Additionally, the category “medium bird” served as a catchall for the chicken, hen, and duck bones that were not identifiable to family level. Unidentifiable fragments from the smaller birds (quail, pigeon, crows/jays, and perching birds) were coded as “small bird.”

2.4.2 Turkey: Small amounts of turkey (*Meleagris gallopavo*) were recovered from all levels of Feature B. These were extremely common food birds in both wild and domestic forms. No osteological distinctions can easily be made between the two. With respect to the faunal remains from Feature B, turkey was less frequently consumed than chicken, but certainly more than goose. As mentioned above, there was a preference for chicken and related birds.

2.4.3 Pheasant and Quail: The birds of the Family *Phasianidae* include the ring-necked pheasant (*Phasianus colchicus*), the common bobwhite quail (*Colinus virginianus*), and several grouse species. Generally, the hunting season for most of these birds runs from mid-autumn through the first months of winter. Several game cookbooks recommend that pheasant be aged or “hung” for seven days to a week in order to be at its best (Edinburgh Cookery), while the quail, a small bird 4 to 8 ounces in size, was best consumed fresh or “at the point of a gun barrel” (Pepin 1987:190). Either pheasant or quail was identified in all strata of Feature B.

2.4.4 Grouse: Just a small number of grouse bones was identified in AS II of Feature B. Ruffed grouse (*Bonasa umbellus*) is a common game bird from the Family *Tetraonidae*. This family is

comprised of several ground-dwelling, chicken-like birds lacking the long tails of the pheasants. Grouse season runs from late summer through December (Edinburgh College of Domestic Science [ECDS] 1932; Peterson 1980:145; Leopold et al. 1981:40-41).

2.4.5 Guinea Fowl: Natives of Africa, these unusual-looking birds are related to chickens and turkeys. The guinea hen (*Numida melegris*) was brought to Europe in the sixteenth century and promptly confused with the North American turkey. The guinea hen was "popular" during the colonial period, but only a few recipe references can be found. The guinea fowl was slightly smaller than the American turkey, but it is likely the term "turkey" was used interchangeably for both species (Hess 1981:61-62). The guinea hen or fowl has become more common in recent years, revered for its consumption of the ticks that carry Lyme disease.

2.4.6 Duck: Waterfowl were the most important game birds in North America, and the remains of ducks were recovered from all levels of Feature B, AS II of Feature E, and Feature G. These common birds were found in almost all urban archeological assemblages although they were seemingly less popular or less available than the domestic *Galliformes.* It is possible some of the ducks from the Block 2 assemblages were raised for domestic consumption, but these birds were also common in wetlands, marshes, and all along the Atlantic coastline and were hunted during specific seasons (Leopold et al. 1981:75-80). Four species were identified within the Feature B assemblage. All were dabbling or surface-feeding ducks, the American black duck (*A. rubripes*), the small green-winged teal (*A. crecca*), the blue-winged teal (*A. dicors*), and the common mallard (*A. platyrhynchos*).

2.4.7 Goose: Small numbers of domestic goose (*Anser anser*) bones were identified in all strata of Feature B. These birds were commonly raised for feathers, but also were consumed. Wild geese were generally lean, but those raised domestically grew quite fat (Trager 1970:199; Andrews 1999:13).

2.4.8 Woodcock/Snipe: Other game birds present in limited numbers include those of the Family *Scolopacidae,* the native American woodcock (*Philohela minor*) and the closely related snipe (*Gallinago gallinago*). Both were about the size of the bobwhite quail and were found in wet thickets and woods as well as marshlands (Peterson 1980:134). Considered the finest of the game birds, the taste of woodcock improves with age. A modern game cookbook recommends chilling the bird for at least three days, ungutted and with the feathers intact (Pepin 1987:193).

2.4.9 Pigeon: Large numbers of pigeons were available in colonial Philadelphia. During annual migrations, some river towns lived exclusively on pigeons for weeks at a time. The hunting of them must have been relatively common because the Council of Philadelphia stated in 1720 anyone shooting pigeon, partridge, doves, or other fowl in the streets of the city would be fined (Andrews 1999:15). As late as the Civil War, pigeons were still so plentiful that a dozen could be had for between $0.15 and $0.25 in the major cities of the east coast (Root and de Rochemont 1976:69-70). Generally, the season on pigeons ran from early spring through late autumn. The now-extinct passenger pigeon (*Ectopistes migratorius*) was widely available through the first part of the nineteenth century, with an estimated population of as many as five billion (Root and de Rochemont 1976:69-70). Domestic pigeon or rock dove (*Columba livia*), the urban bird widely known today, was also consumed. A small number of pigeon bones was identified in each of the strata of Feature B. A sample of these bones was compared with specimens at the American Museum of Natural History. Most were subsequently classified as *Columba livia* or the domestic pigeon. No passenger pigeon bones were identified specifically.

2.4.10 Jays/Crows: Bones belonging to birds of the Family *Covidae* were identified in analytical strata II, III, and V of Feature B. One tarsometatarsus was identified as that of a blue jay (*Cyanocitta cristata*), while other bones seemed more like that of the American crow (*Corvus brachyrhynchos*). Both birds were common in the cities of the northeast, including Philadelphia.

2.5 FISH AND SHELLFISH

Almost all of the fish present in the Block 2 features were available in local waters at some time of the year. Certain species, including herring and mackerel, were more readily available or preferred in a preserved or salted state. Others, such as shad and Atlantic cod, were available both fresh and preserved. The distribution of fish bones provided information as to which form of the fish was likely to be present.

2.5.1 Atlantic Cod: The bones of Atlantic cod (*Gadus morhua*) were recovered from Feature B, AS II and AS V. The fish represented in AS II mainly consisted of bones of the skull. Singer (1987) has documented the potential of skeletal ratio analysis as a way to relate fish consumption to economic status. The ratio of cranial to vertebral elements for the codfish in this deposit is 3.9 cranial bones to each vertebra. This may indicate the purchase of fish heads or differential disposal practices. No other members of the Family *Gadidae* (i.e., haddock or pollack) were identified in the Block 2 features. Codfish winter at inshore grounds from Nova Scotia to New Jersey. As the waters warm, the cod migrate north to the cooler waters of New England in dense schools easily taken advantage of by fishermen. In both the spring and fall, they can be taken with hand lines, relatively close to shore. At mid-summer cod were present in large numbers along the hard bottom of the Gulf of Maine and on the banks off Nova Scotia. Until the early part of the nineteenth century, cod were fished with handheld lines "jiggled" to attract the fish. At the end of each day, the fish was dressed and split, washed clean, and salted. The practice of "hand-lining" or trawling for codfish was introduced in the late 1850s. This involves baiting a long cable with hundreds of hooks. The cable would be hauled up with a winch, then the fish were picked and loaded onto a larger, "mother" ship for processing (Goode 1887; Innis 1940:6-7; Ackerman 1941:12; Jensen 1972:34-35, 113, 148).

2.5.2 Shad: The bones of the American shad (*Alosa sapidissima*) were recovered from all levels of Feature B. Shad, an anadromous species, was most valuable at spawning. Until the early-twentieth century, shad was "the most valuable river fish of the Atlantic Coast" (Jordan and Evermann 1969:107). In the early spring, the spawning stocks of mature fish would run on all the rivers from the St. Johns in Florida to the St. Lawrence in Canada. The peak runs generally occurred between April and May, with fish averaging between one and eight pounds (Goode 1887; MacKenzie 1992:6). In Philadelphia, shad was the fish to feed the urban masses. During the spring runs, they were fished around the clock from small boats with lanterns mounted to the bows. The fish were quickly brought to market in Philadelphia and Camden by market boats that sailed out to meet the fishermen each day (Hardy 1998:5). Large commercial operations were established on the Delaware River in the 1830s. Shore-mounted windlasses, often horse drawn, were used to haul the heavy cotton nets. Over a thousand men were employed, and on a good day during the height of the spring spawning runs, they could haul in 20,000 fish every 24 hours (Hardy 1998:4). Although the spring abundance of shad in the local rivers caused much excitement, catches steadily declined throughout the nineteenth century. By the 1890s, various states and the federal government began artificial-hatcheries programs in hopes the shad populations would rebound (Jordan and Evermann 1969:107).

2.5.3 Herring: The Atlantic or "true" herring (*Clupea harangus*) spawns in the ocean, first appearing at the end of May. There were local fisheries, but the principal herring fishing grounds were north of Cape Cod. Some of the catch was sold fresh, but they were generally considered too oily and bony to be popular in traditional fresh-fish markets. Most of these fish were smoked, salted, or pickled for shipment (Jordan and Evermann 1969:97-98).

2.5.4 Striped Bass: The bones of striped bass (*Morone saxatilis*) were recovered from all levels of Feature B. These common fish spawn in the local rivers and streams during the summer and remain inshore and available throughout the year. Commercial fishing on the rivers for striped bass as well as shad was a springtime activity timed to coincide with the fishes' spawning runs up the river. They were also taken with nets in the local bays from June through September, when striped bass were present from the Chesapeake Bay to Cape Cod.

2.5.5 Black Sea Bass: Smaller than the striped bass, the black sea bass, averaging a half to three-quarters of a pound, entered the bays in the late spring. They preferred deep channels with hard bottoms (i.e., mussel beds). The black population of sea bass seriously declined throughout the nineteenth century and was not even mentioned in the U.S. Government's 1887 fisheries report as an important species (Goode 1887). Based on the Feature B remains, the black sea bass was a popular fish choice and, along with the shad, dominated the fish assemblage recovered from this feature.

2.5.6 White Perch: One of the temperate basses, the white perch (*Morone americana*) is a common food fish. In early spring, they moved from saltwater upstream to waters that are more brackish. They remained in the rivers throughout the spring and summer before returning to salt water in the winter months.

2.5.7 Mackerel: Like herrings, mackerel (*Scomber scombus*) were marketed as pickled fish and were available fresh only for a short season. They traveled in great schools throughout the western North Atlantic, from Cape Hatteras through the Gulf of St. Lawrence, "coming in from the sea from a southerly or southeasterly direction" (Ackerman 1941:31-32). Spawning season extended from May to July, in the deeper waters of the bays along the coastline. Prior to and immediately after spawning, mackerel were "lean and poor and do not make No.1 fish when salted" (Jordan and Evermann 1969:274). Traditionally the mackerel catch was made with hook and line near the shore. Declining resources in the 1860s encouraged use of the "purse seine," enabling fishermen to fish more than three miles offshore where mackerel were still abundant (Innis 1940:325-327).

2.5.8 Salmon: Atlantic salmon (*Salmo salar*) suffered much the same fate as other anadromous fish. Esteemed for the delicacy of its flesh, salmon was once abundant in the streams and rivers of the Atlantic coast. Fishing was confined to the short season when the fish were in brackish water; those caught in fresh water have an "inferior taste." Increasing industrialization discouraged fish from entering the rivers to spawn, and the declining supply resulted in salmon becoming one of the most expensive fish in the nineteenth-century marketplace. Only the fish's size (6 to 20 pounds) and high price kept the industry going (Debow 1866:479; Ackerman 1941:29).

2.5.9 Bluefish: Local bluefish and blackfish were considered the "small man's game fish." Bluefish (*Pomatomus saltatrix*) ranged along the coast from Nova Scotia to Texas, swimming in groups of similarly sized fish, and moving south as the water grows cooler in the fall. Bluefish feed on smaller fish, as well as shrimp, crabs, and worms. At four years of age, they weigh about five pounds, but rarely live beyond nine years. Smaller bluefish can be found in local bays from early May through October, while larger fish, from six to 12 pounds, remain in the open sea year

round (Jordan and Evermann 1969:320; MacKenzie 1992:6). A small number of bluefish vertebrae was recovered from Feature B, AS III.

2.5.10 Blackfish: Small numbers of blackfish or tautog (*Tautoga onitis*) bones were recovered from the three lower analytical strata of Feature B. In the nineteenth century, these fish were abundant along the southern New England coast and could be caught from the shoreline, but they were the least commercially important of the fish that migrate inshore. Tautog were bottom dwellers, preferring rough surfaces with mussels or oysters or barnacle-covered wrecks. Within local bays, they average about a pound and a half while offshore catches were generally about three pounds. Inlet and inshore fishing begins around April and continues through November (Ackerman 1941:40; Jordan and Evermann 1969:477).

2.5.11 Porgies: Sensitive to cold water, porgies (*Stenotomus chrysops*) were inshore fish. They were uncommon in New England, but plentiful from Long Island throughout coastal New Jersey and down into the Chesapeake Bay. They are bottom-dwelling fish that feed on worms, small crustaceans, and mollusks, with a preference for rocky spots, shipwrecks, and channels. They generally travel in large schools in water at least 10 inches deep with strong currents and are easily caught in traps as they run along the coast. From May through August, porgies spawn along the ocean shore and in various bays. In late fall they migrate south to offshore winter grounds on the continental shelf between southern New Jersey and Cape Hatteras (Ackerman 1941:40; MacKenzie 1992:7-8). Unfortunately, by the end of the nineteenth century the silver porgy or scup was in decline (McHugh 1977:33).

2.5.12 Sheepshead: The popular striped Sheepshead porgy (*Archosargus porbatocephalus*) was once plentiful in all the waters of the eastern seaboard, with similar range and habits as the silver porgy. Although still available in the Chesapeake Bay, this fish had just about disappeared from the northern part of its range by the nineteenth century (McHugh 1977:33). It was rarely identified in New York archeological collections of that period (Rothchild and Balkwill 1993). Two sheepshead porgies with a total of 129 bones were recovered from AS II of Feature B.

2.5.13 Flounders: "Flat" fish were divided into two categories, "halibut" and "flounders," but is no significant amount of flounder was in any of the deposits from the Independence Visitor Center site. Just two vertebrae, tentatively identified as halibut or *H. hippoglossus,* were recovered from Feature B, AS V (Level 4). Halibut is the only flounder around which a sizable commercial fishery developed. During the height of the halibut fishery (1840-1900), fish weighing as much as 700 pounds were landed, but by 1840 the halibut population was in serious decline (Ackerman 1941:23-24).

2.5.14 Shellfish: The remains of shellfish may have been deposited in the features for a variety of reasons. First, like the animal bones, they may represent the remains of meals. It is also likely that the deposition of the shells had a functional purpose. Shell layers were deposited to facilitate drainage, to neutralize the odors, and/or to seal off privy deposits with lime. With the exception of Feature B, all excavated shell was saved. Due to the great quantities of oyster shells within Feature B, only whole, intact shells were retained. The majority of this sample was recovered from AS II. Oysters were an economy unto themselves up and down the Atlantic coast, but the harvesting of hard-shell clam and scallops was restricted to localized, small-boat fisheries (Ackerman 1941:254-256). A collection of clamshells weighing 220 kg was recovered from Feature E, AS II.

2.6 THE FAUNA FROM THE BLOCK 2 FEATURES

In the following sections, the relative importance of the food animals from each analytical stratum of Features B and E is presented with several methods of quantification. With respect to cattle, sheep, and pigs, this includes the cuts of meat present as well as an estimation of the age at which the animals were slaughtered. The kill-off patterns for these animals changed through time depending on the species. Most of the animals consumed by the residents of Philadelphia at the end of the eighteenth century and into the nineteenth century were raised solely for sale as meat products. This specialized form of animal husbandry left a different "kill-off' signature than what was found in more rural or "primary" settings, where animals were raised for other products (e.g., wool and milk). Additionally, because this assemblage was from a city with a developed market system, the expectation was that the meat assemblage would show an irregular distribution of body parts skewed toward the axial skeleton and limbs. There would be a low number of bones commonly associated with butchery waste (Bowen 1998:138).

A total of 12,317 bones and bone fragments was recovered from Feature B, but only those bones that were identified as the remains of meals are included in the following discussion. A complete list of bones recovered can be found in Table C-14 at the back of this appendix. Feature B was divided into six analytical strata (AS) based on an analysis of deposition and other classes of artifacts. Each of the four analytical strata that contained faunal remains is discussed below. This section of the report is organized chronologically with the earliest or lowest stratum, AS I (ca. 1790), discussed first.

2.6.1 FEATURE B, AS I (LEVEL 8, TPQ 1790)

Altogether, 719 bones and bone fragments were recovered from the lowest or earliest level of Feature B (Table C-15). The following text and table deal with the 489 bones identified as the remains of meals. The remains of food mammals account for 13 percent of the NISP and 14 percent of the MNI, but 55 percent of the biomass. Conversely, the bones of food birds make up 60 percent of the NISP (57 percent of the MNI), but just six percent of the biomass. Fish were 27 percent of the NISP, 26 percent of the MNI, and about 10 percent of the biomass. With respect to fish, only the identifiable bones from the skull and body were included in the following analysis. Scales, spines, and rays were counted separately so as not to inflate the total fish count.

If only available meat weight and potential biomass were considered, it would appear that the three large domestic animals have an advantage. With a few rare exceptions, however, it is unlikely these animals were purchased whole or complete; thus the potential or available meat weight calculations were misleading when applied to cattle, sheep, and pigs.

Table C-1. Food Remains from Feature B, AS I (Level 8)

	NISP	% NISP	MNI	% MNI	Meat Weight (lbs)	% Meat Weight	Bio-mass (kg)	% Bio-mass
Cow; *Bos Taurus*	15	3.1	1	2.9	400.0	61.5	5.79	33.4
Sheep/Goat; *Ovis/Capra*	17	3.5	1/1	5.7	50.0	7.7	2.29	13.2
Pig*; Sus scrofa*	7	1.4	1	2.9	100.0	15.4	0.39	2.3
Rabbit; *Sylvilagus floridanus*	1	0.2	1	2.9	2.5	0.4	0.03	0.2
Medium Mammal	22	4.5	---	---	---	---	1.11	6.4
Chicken; *Gallus gallus*	31	6.3	5	14.3	12.5	1.9	1.11	6.4
Turkey; *Meleagris gallopavo*	19	3.9	2	5.7	15.0	2.3	2.14	12.3

Sm. Hen/Pheasant; Sm. *Galliforme*	14	2.9	4	11.4	8.0	1.2	0.44	2.5
Quail; *Colinus virginianus*	1	0.2	1	2.9	0.5	0.1	0.02	0.1
Duck; *Anas* species	6	1.2	2	5.7	4.0	0.6	0.07	0.4
Goose; *Anser* species	3	0.6	1	2.9	7.0	1.1	0.02	0.1
Pigeon; *Columbidae* species	1	0.2	1	2.9	0.5	0.1	0.02	0.1
Snipe/Woodcock; *Scolopacidae*	4	0.8	1	2.9	0.5	0.1	0.02	0.1
Large Galliforme	37	7.6	--	---	---	---	0.95	5.5
Medium Bird	141	28.8	--	---	---	---	0.95	5.5
Medium Bird – Immature	36	7.4	3	8.6	---	---	0.28	1.6
Shad; *Alosa sapidissima*	24	4.9	2	5.7	6.0	0.9	0.45	2.6
Striped Bass; *Morone saxatilis*	10	2.0	1	2.9	7.5	1.2	0.32	1.9
Black Sea Bass; *C. striata*	40	8.2	4	11.4	24.0	3.7	0.30	1.7
Mackerel; *Scomber scombus*	1	0.2	1	2.9	4.0	0.6	0.18	1.0
Tautog; *Tautoga onitis*	1	0.2	1	2.9	5.0	0.8	0.18	1.0
Indet. Fish	57	11.7	---	---	---	---	0.21	1.2
Turtle; Family *Emydidae*	1	0.2	1	2.9	3.0	0.5	0.07	0.4
TOTAL	489	100.0	35	100.4	650.0	100.1	17.34	99.9

At 60 percent of the NISP, most parts of eleven different birds of eight different species were present (n = 293). These were distributed relatively evenly between game birds and domestic fowl (chicken, turkey, goose, and duck). At least five chickens were present in the stratum along with four smaller hens or pheasants and two turkeys. One of these turkeys was rather small. The other was a male with spurs on the tarsometatarsus bone. A small quail was represented by a single sternum, and least two ducks and a goose were present. One of the ducks was a domestic or mallard, the other a smaller specimen. One pigeon and a single snipe or woodcock were also present. Pigeon bones were recovered from every level of Feature B, while snipe or woodcock were present in all levels from which faunal bones were recovered except for AS V (Level 4).

Five species of fish were recovered from AS I. Fish bones account for 27 percent of the food NISP (n = 133) and about nine percent of the biomass. Black sea bass was most prevalent, with an MNI of four and a total of 40 bones or bone fragments. Two individual shad were identified, totaling 24 bones and fragments. A single tautog vertebra was also identified. Black sea bass and tautog remained in local waters year round, but all of the species present in this stratum would have been readily available in local waters at varying times from the early spring through early winter. Species such as shad and mackerel also would have been available year round either pickled or smoked.

The meat available from the three large domestic mammals was quantified by the NISP or bone count, the minimum number of individuals, the minimum number of meat cuts, and the biomass or meat weight determined from recovered bone weights (Table C-2). It is unlikely most of these animals were purchased whole, so total available meat weight for a given animal was not included. The number of domestic mammal bones recovered was somewhat limited, and no distinctive pattern of meat cuts was identified. Most parts of the cow were represented in this stratum, including a skull fragment as well as single phalanx or toe bone. The other cow bones were small fragments from the limbs, including the humerus and tibia. The sheep were represented by multiple meat cuts from at least two animals. Most of the meat was from the legs of mature animals, but a single tibia or shank was from a very immature animal or young spring lamb. The distribution of pig bones suggests either the presence of a whole animal or differential disposal of the carcass. A small number of skull fragments and teeth was identified as were four toe bones and a single tibia or lower leg bone.

Table C-2. Large Domestic Animals Recovered from Feature B, AS I

	NISP	% NISP	MNI	% MNI	MNMC	% MNMC	Bio-mass (kg)	% Bio-mass
Cow; *Bos taurus*	15	38.5	1	20.0	4.0	33.3	5.79	68.4
Sheep/Goat; *Ovis/Capra*	17	43.6	2/1	60.0	5.0	41.7	2.29	27.0
Pig*; Sus scrofa*	7	18.0	1	20.0	3.0	25.0	0.39	4.6
TOTAL	39	100.1	5	100.0	12.0	100.0	8.47	100.0

Four distinct cuts of beef were identified in the stratum. These came from various places on the animal. A single skull fragment was present, as were roast cuts from the distal tibia or shank, and a midshaft of a humerus that was chopped or split axially. Although a single vertebra and a couple of ribs were sawn through, the other bones with butchery marks were either chopped or hacked.

Five separate cuts of meat were identified from the sheep. Four were shank portions of "legs" of lamb or mutton. The midshafts of two right tibiae were present, one of which was "very immature." A right carpal/metacarpal combination may indicate a third leg or shank of mutton, and a single left astragulus may indicate the presence of a fourth. A portion of an unfused acetabulum/ischium or pelvis may be a portion of the "butt" end of leg of mutton or may indicate that the immature tibia was part of a complete leg roast. Several ribs and vertebrae were indicative of a rack roast or mutton chops. Animals of at least three ages were present. One tibia is completely fused at the proximal end, indicating an animal greater than three years of age. The unfused pelvis fragment and the very immature tibia belong to an animal fewer than 10 months of age while the adult-sized, but unfused, metacarpal is that of an animal between a year and three years of age.

The pork in this stratum is limited. Four toe bones (proximal unfused) and just two skull fragments were present. A mid-portion of a tibia was unfused on the proximal end and coded as "immature." There was no evidence of butchery on any of the pig bones.

2.6.2 FEATURE B, AS II (LEVELS 7 & 7.1, TPQ 1820)

Altogether, 5,797 bones and bone fragments were recovered from AS II. This analytical stratum combined two levels distinguished during the data recovery, Level 7 (1,253 bones) and Level 7.1 (4,544 bones). The bones recovered from each level are included in Tables C-16 and C-17 at the end of this appendix. The 4,087 bones identified as food remains from these two levels have been combined for analysis (Table C-3). This was the largest deposit recovered from Feature B as well as the most diverse in terms of species present. It is similar in number, variety, and distribution to the overlying stratum, AS III (Level 6).

Altogether, 1075 mammal bones were identified as part of the food assemblage. These account for 26 percent of the NISP, but 85 percent of the biomass. The remains of food birds make up 44 percent of the NISP (n = 1,819) and 58 percent of the MNI for this stratum, but just 11 percent of the biomass. The 1,181 fish bones were 29 percent of the NISP, but just 16 percent of the individual animals identified in the stratum.

Table C-3. Food Remains from Feature B, AS II (Levels 7 and 7.1)

	NISP	% NISP	MNI	% MNI	Meat Weight (lbs)	% Meat Weight	Bio-mass (kg)	% Bio-mass
Cow; *Bos taurus*	259	6.3	2	2.0	800.0	34.5	94.68	41.4
Cow - Immature; *Bos taurus*	193	4.7	7	6.9	525.0	22.7	35.86	15.7
Sheep/Goat; *Ovis/Capra*	173	4.2	6	5.9	140.0	6.0	21.13	9.2
Pig; *Sus scrofa*	132	3.2	4	4.0	400.0	17.3	18.47	8.1
Pig - Immature; *Sus scrofa*	49	1.2	4	4.0	200.0	8.6	2.38	1.0
Rabbit; *Sylvilagus floridanus*	13	0.3	2	2.0	5.0	0.2	0.09	<0.1
Large Mammal	86	2.1	---	---	---	---	14.16	6.2
Medium Mammal	170	4.2	---	---	---	---	7.13	3.1
Chicken; *Gallus gallus*	324	7.9	18	17.8	45.0	1.9	6.54	2.9
Turkey; *Meleagris gallopavo*	100	2.4	5	5.0	37.5	1.6	6.37	2.8
Pheasant; *Phasianus colchicus*	22	0.5	4	4.0	8.0	0.3	0.53	0.2
Quail; *Colinus virginianus*	55	1.3	6	5.9	3.0	0.1	0.21	0.1
Guinea Fowl; *Numida melegris*	1	<0.1	1	1.0	2.0	0.1	0.06	<0.1
Grouse; *Bonasa umbellus*	3	0.1	2	2.0	4.0	0.2	0.02	0.0
Duck; *Anas* species	109	2.7	6	5.9	12.0	0.5	1.65	0.7
Sm. Duck; *Anas* species	12	0.3	3	3.0	6.0	0.3	0.14	0.1
Goose; *Anser* species	22	0.5	2	2.0	28.0	1.2	1.22	0.5
Pigeon; *Columbidae* species	8	0.2	2	2.0	1.0	<0.1	0.06	<0.1
Snipe/Woodcock; *Scolopacidae*	8	0.2	3	3.0	1.5	0.1	0.08	<0.1
Large Galliforme	48	1.2	---	---	---	---	1.70	0.7
Indet. Galliforme	55	1.3	---	---	---	---	0.62	0.2
Large Bird	149	3.7	---	---	---	---	1.47	0.6
Medium Bird	802	19.6	---	---	---	---	4.06	1.8
Medium Bird – Immature	101	2.5	6	5.9	---	---	1.31	0.5
Atlantic Cod; *Gadus morhua*	85	2.1	2	2.0	20.0	0.9	2.18	1.0
Herring; *Clupea harengus*	13	0.3	1	1.0	0.5	<0.1	0.06	<0.1
Shad; *Alosa sapidissima*	75	1.8	2	2.0	6.0	0.3	0.26	0.1
Striped Bass; *Morone saxatilis*	31	0.8	2	2.0	15.0	0.6	0.77	0.3
Black Sea Bass; *C. striata*	135	3.3	3	3.0	18.0	0.8	1.37	0.6
Indet. Bass; *Serranidae*	33	0.8	---	---	---	---	0.18	0.1
Small Indet. Bass; *Serrandidae*	16	0.4	---	---	---	---	0.05	<0.1
Mackerel; *Scomber scombus*	13	0.3	1	1.0	4.0	0.2	0.08	<0.1
Salmon; *Salmo salmar*	10	0.3	1	1.0	10.0	0.4	0.14	0.1
Tautog; *Tautoga onitis*	8	0.2	1	1.0	5.0	0.2	0.08	<0.1
Porgy; Family Sparidae	6	0.2	1	1.0	1.0	<0.1	0.03	0.0
Sheepshead; *A. Probatocephalus*	129	3.2	2	2.0	15.0	0.6	1.98	0.9
Indet. Fish	627	15.3	---	---	---	---	1.47	0.6

Lobster; *Homarus Americanus*	4	0.1	1	1.0	1.5	0.1	---	---
Turtle; Family Emydidae	8	0.2	1	1.0	3.0	0.1	0.35	0.2
TOTAL	4087	99.9	101	100.3	2317.0	99.8	228.94	99.7

The remains of 58 birds account for 44 percent of the food bones recovered from this stratum and 11 percent (26.04 kg) of the biomass. Of the total of 1,819 bones and bone fragments recovered, 18 percent (n = 324) were the remains of domestic chicken. Forty-four percent of the bird bones were classified as "medium bird," many of which were probably also the remains of chickens. All parts of these birds were present, including 11 skulls and the tarsometatarsus bones from 18 chickens. These lower-leg bones were generally removed along with the skull in the primary stage of butchery. Six percent of the bird bones (n = 101) were coded as immature. Based on the unfused tarsometatarsus bones, a number of these were also the remains of younger chickens. The chicken bones from this assemblage varied greatly in size (this and the number of closely related species present made identification to the species level somewhat difficult). Historically, chickens were classified by weight, and size was an important factor in considering the meal cooked. Broilers and fryers, for example, may be birds fewer than 14 weeks of age and fewer than two pounds in pre-butchery weight. Roasters were generally five to nine months old and over 3½ pounds in weight. Capons and roosters were specifically male birds. The capons, smaller "de-sexed" birds, were generally over four pounds while the roosters ranged in size from three to six pounds (Trager 1970: 201; Mettler 1986:117).

Relatively similar amounts of turkey and duck bones were present in AS II. With a hundred bones, parts of five turkeys make up about six percent of the bird bones present, but about a quarter of the bird biomass. The MNI of five was based on the proximal end of the left humerus. It is likely that some of the fragments coded as "large galliforme" were actually those of the turkey. The turkey bones were the only bones in the bird assemblage to show any evidence of butchery. One tarsometatarsus was chopped obliquely through the midshaft, and a tibiotarsus had knife marks.

A total of 121 duck bones made up about seven percent of the bird NISP and seven percent of the bird biomass. There were six larger ducks (proximal right humerus), black ducks, and mallards as well as three smaller ducks (proximal tibiotarsus), both green- and blue-winged teals. Compared with the chicken, very few tarsometatarsus or skull bones were identified as duck. This may be indicative of a different system of procurement or different methods of processing. It seems likely that the ducks may have initially been butchered or dressed off-site, while all processing of the chickens took place on-site.

Other game birds including the smaller galliformes, pheasant, and quail were present. Twenty-two pheasant bones comprised one percent of the bird NISP while the 55 bones of the quail made up about three percent of the bird assemblage. The eight pigeon bones account for less than one percent of the bird NISP and although both snipe and woodcock were present in small quantities, together, their bones account for less than one percent of the bird NISP.

Including the 16 bones of a small bass, 11 fish species (NISP= 1,181) were identified. The bones from 13 different fish make up slightly less than one-third of the food bones recovered from this stratum. The three black sea bass (n = 135) were most common, followed by the sheepshead porgy (n = 129), the Atlantic cod (n = 85), and shad (n = 75). Together these four species accounted for 35 percent of all the fish bones recovered from AS II. The vertebrae of two

commonly pickled or salted fish, herring and mackerel, made up only two percent of the total fish assemblage for this stratum.

The bones of Atlantic cod were about 11 percent of the fish bones. These were almost entirely bones from the skull and of a size that suggests "stock" or commercially sized fish (Perdikaris 1996, 1998). If the cod were salted or dried, it would be represented by vertebrae as well as a split cleithrum, but the presence of mostly skull bones might indicate the fish were purchased whole or as heads for soup or broth. Generally, no part of the cod went to waste. Tongues were dried and salted and considered a delicacy when battered and fried. The air bladders or "sounds" were salted for preservation and yielded a high-quality gelatin used for glues and jellies, as a thickening agent in cooking, and to settle sediment in brewing (Jensen 1972:55, 57-60). Hooker (1981:16) even included a recipe for roasting called "Cod's Sounds dressed to look like Small Chickens." The distribution of bones from the head might also indicate differential disposal of waste, with the skull bones as a primary butchery deposit while the axial skeleton or spine traveled with the cod fillets and were disposed of elsewhere.

Beef and veal bones made up about 56 percent of the large animals NISP for AS II (Table C-4), 39 percent of the large animals present, and 75 percent of the biomass of the large food animals. The mature beef was purchased as separate cuts, while the veal appeared to have been purchased as larger cuts or half-to-whole animals. Sheep account for about a quarter of the large animal assemblage in terms of NISP, MNI, and individual meat cuts. Kill-off data suggest sheep ranged in age from slightly less than a year (unfused distal scapula), under three years (unfused distal tibiae), or older than three years (fused distal tibiae).

Table C-4. Large Domestic Animals from AS II (Levels 7 and 7.1)

	NISP	% NISP	MNI	% MNI	MNMC	% MNMC	Biomass (kg)	% Bio-mass
Cow; *Bos Taurus*	259	32.1	2	8.7	29	21.0	94.68	54.9
Cow - Immature; *Bos taurus*	193	24.0	7	30.4	34	24.6	35.86	20.8
Sheep/Goat; *Ovis/Capra*	173	21.5	6	26.1	32	23.2	21.13	12.3
Pig*; Sus scrofa*	132	16.4	4	17.4	24	17.4	18.47	10.7
Pig - Immature; *Sus scrofa*	49	6.1	4	17.4	19	13.8	2.38	1.4
TOTAL	806	100.1	23	100.0	138	100.0	172.52	100.1

The cattle were divided into mature and immature animals. The bones of the mature cattle in this stratum consisted of bones from the axial skeleton (ribs and vertebrae) as well as from the limbs (the femur, tibia, metapodia, and phalanges). The immature animals were those less than a year old, while the standard kill-off age for mature beef cattle is between 18 and 30 months.

Altogether beef and veal make up 46 percent of the meat cuts and 75 percent of the biomass from AS II. The bones of mature cattle account for 21 percent of the identified meat cuts. A variety of steaks and roast cuts was present, and almost all of the mature cattle bones showed evidence of butchery, sawing, chopping, or knife marks. There were four roast and two steak cuts from the sirloin (pelvis and upper femur), two short loin cuts (lumbar vertebrae), four large roasts from the upper hindshank (femur, tibia, astragalus/calcaneous), five cuts from the feet (phalanges), and at least one large roast cut from the arm or humerus of the animal. There were no cuts from the metapodia bones or lower shanks of the mature animals. Five separate meat cuts were identified

from the ribs and chuck. Those cuts taken from the axial skeleton of the animals (sacrum, ribs, and vertebrae) were mostly cleanly sawn through with a metal blade.

The bones identified as immature cow had an unusual distribution. Thirteen of the bones were from the maxilla/mandible (jawbone) of the cow. The age of these animals is based on the molar eruption on the mandibles. In all cases, the first molar (or M1) was in the primary or secondary stage of eruption. These were cattle that were fewer than six months of age (Grigson 1982:23). Other immature cattle bones were those from the shank. The MNI is based on the presence of the proximal end of seven left metatarsals. These animals were purchased whole, because most parts of these immature cattle were represented in the assemblage. In addition to seven metatarsal bones from immature cows (less than six months), the combination of metapodial, carpal, and tarsal bones indicates as many as 17 separate lower-shank veal roasts may be present. Four of the tibiae (upper shank) were either sawn or chopped through. Although almost all parts of the animal were present (including 46 skull fragments), the preferred cut was a roast from the shank or lower limb. Other bones, including a single mandible, showed evidence of knife marks, but none of the metapodial bones were split, cut, or chopped.

The bones of pigs and sheep were recovered in relatively equal quantities from this stratum of Feature B. All parts of the pig, head to toes, were present in this assemblage, but it does not appear that the sheep were purchased as completely whole animals. Only one skull fragment and no phalanges were present. The bones were from mature animals represented primarily by the limbs and axial skeleton. Eight tibiae and seven metatarsals account for eight separate hindshank cuts. Sheep bones account for roughly a quarter of the large mammal NISP, MNI, and MNMC, but just 12 percent of the large mammal biomass.

Like the beef in this stratum, there was a preference for mutton cuts from the shank or shank end of the whole leg cut. Sixty-five percent of the mutton/lamb cuts (21 of 32) were from the legs of the animal. Eight distal tibiae and seven metatarsals account for eight separate hindshank cuts. Although many parts of the sheep were present, there was only one skull fragment and no phalanges, and it does not appear that the sheep were purchased as whole or half animals. Most of the sheep were mature animals. Four shank or leg cuts came from animals with unfused distal tibiae (under 3 years) while two others came from animals older than three years. Five cuts of meat, either rack of mutton or chuck roast, accounted for 45 thoracic vertebrae fragments. All of these were split or chopped in half. Only one appeared to have been sawn in half. Three separate chuck roast as represented by the scapulae were present. These bones were unfused and probably represent animals slightly less than a year old.

The bones of the mature and immature pigs yield a biomass calculation of about 12 percent of the large mammal biomass, but 22 percent of NISP to about 31 percent of the meat cuts present. Parts of at least eight separate pigs, four mature and four immature (left humerus midshaft), were recovered from this stratum. The “immature” animals were those fewer than six months of age, and there were just a few bones from the head and feet of the immature animals.

Almost all of the pork represented in this assemblage came from pigs less than a year in age (unfused humeri and radii). Parts of at least eight separate animals, four mature and four immature (left humerus, midshaft), were recovered in this stratum. The “immature” animals were those fewer than six months of age. With the exception of two skull fragments and a couple of phalanges, there were no products from the head and feet of the immature animals. There was a preference for the meaty roasts or hams from the tibia (n = 6), but no steak cuts or “rounds” were represented. The four mature animals were still under a year in age (pigs were viable for slaughtering at 24 weeks or 6 months of age). All parts of the mature animals were present, from

head to toes. Just about every cookbook included a recipe for whole roast pig. The animal could be stuffed with bread and spices and then "spitted," with the lower limbs removed for the gravy. A good-sized pig needed to be roasted for three hours. The pig was half done when "the eyes drop out." When it was nearly done, it was basted with butter. The head was then cut off and split open between the eyes. The brains were removed and finely chopped with the liver and some sweet marjoram and sage. This mixture was added to melted butter and boiled a few minutes before it was added to the gravy in the dripping pan (Child 1833:50).

2.6.3 FEATURE B, AS III (LEVEL 6, TPQ 1830)

A total of 4,170 bones and bone fragments was recovered from this level of Feature B. This number includes the commensal species as well as those bone fragments only identifiable to general class (see Table C-18 at the end of this appendix). Of the total number of bones recovered from AS III, 62 percent (n = 2,576) were identified as possible food remains (Table C-5). The bones of large food mammals were just 12 percent of the food animal NISP, while the remains of birds made up fully half of the food NISP and 60 percent of the individual animals identified. The 910 fish bones accounted for 35 percent of the food bones recovered.

Table C-5. Food Remains Recovered from Feature B, AS III (Level 6)

	NISP	% NISP	MNI	% MNI	Meat Weight (lbs)	% Meat Weight	Bio-mass (kg)	% Bio-mass
Cow; *Bos taurus*	92	3.6	3	3.7	1200.0	72.1	33.22	46.7
Sheep/Goat; *Ovis/Capra*	66	2.6	2	2.4	70	4.2	8.21	11.5
Pig*; Sus scrofa*	50	1.9	1	1.2	100	6.0	4.33	6.1
Pig - Immature; *Sus scrofa*	8	0.3	1	1.2	50	3.0	0.56	0.8
Rabbit; *Sylvilagus floridanus*	25	1.0	2	2.4	5	0.3	0.17	0.2
Medium Mammal	77	3.0	---	---	---	---	3.72	5.2
Chicken; *Gallus gallus*	402	15.6	21	25.6	52.5	3.2	4.57	6.4
Turkey; *Meleagris gallopavo*	83	3.2	6	7.3	45	2.7	4.24	6.0
Quail; *Colinus virginianus*	12	0.5	3	3.7	1.5	0.1	0.09	0.1
Duck; *Anas* species	43	1.7	3	3.7	6.0	0.4	0.76	1.1
Sm. Duck; *Anas* species	4	0.2	1	1.2	2.0	0.1	0.02	<0.1
Goose; *Anser* species	8	0.3	2	2.4	14.0	0.8	0.51	0.7
Pigeon; *Columbidae* species	11	0.4	4	4.9	2.0	0.1	0.07	0.1
Snipe/Woodcock; *Scolopacidae*	7	0.3	2	2.4	1.0	0.1	0.02	<0.1
Large Bird/Galliforme	78	3.0	---	---	---	---	1.41	2.0
Medium Bird	580	22.5	---	---	---	---	2.74	3.9
Medium Bird - Immature	87	3.4	7	8.5	---	---	0.89	1.3
Herring; *Clupea harengus*	74	2.9	2	2.4	1.0	0.1	0.07	0.1
Shad; *Alosa sapidissima*	227	8.8	6	7.3	18.0	1.1	0.65	0.9
Striped Bass; *Morone saxatilis*	12	0.5	1	1.2	7.5	0.5	1.75	2.5
Black Sea Bass; *C. striata*	129	5.0	4	4.9	24.0	1.4	1.14	1.6
White Perch; *Morone Americana*	8	0.3	1	1.2	1.0	0.1	0.05	0.1
Indet. Bass; *Serranidae*	63	2.5	---	---	---	---	0.20	0.3
Mackerel; *Scomber scombus*	21	0.8	1	1.2	4.0	0.2	0.05	0.1
Salmon; *Salmo salmar*	10	0.4	1	1.2	10.0	0.6	0.05	0.1

Bluefish; *Pomatomus saltatrix*	2	0.1	1	1.2	10.0	0.6	0.02	<0.1
Tautog; *Tautoga onitis*	2	0.1	1	1.2	5.0	0.3	0.05	0.1
Lobster; *Homarus americanus*	7	0.3	2	2.4	3.0	0.2	---	---
Indet. Fish	362	14.1	---	---	---	---	0.65	0.9
Turtle; *Emydidae*	14	0.5	1	1.2	3.0	0.2	0.26	0.4
Turtle; *Cheludridae*	12	0.5	3	3.7	30.0	1.8	0.68	1.0
TOTAL	2576	100.3	82	99.7	1665.5	100.2	71.15	100.2

Altogether, 1,315 bones belonging to 49 different food birds were recovered from AS III of Feature B. This number accounts for 51 percent of the bones identified as possible food remains, but just 22 percent of the biomass. Similar to the deposit from AS II, the remains of chicken (n = 402) made up 30 percent of the bird assemblage and accounted for 43 percent of individual birds identified in the assemblage. When combined, the remains of the "medium birds" (n = 580) and the chicken accounted for 75 percent of the bones of food birds. Seven immature "medium" birds were also present (left distal humerus). Based on similar morphology and size, most of these were probably also chicken. Six individual turkeys were identified (12 percent of bird assemblage) and likely also accounted for some of the 78 bones coded as "large bird/galliforme."

Ducks and geese accounted for just four percent of the bird bones recovered. Four ducks (premaxilla) and two geese were identified. The three larger ducks were common mallards and the fourth was a small teal. All parts of the ducks were present, with both complete skulls and tarsometatarsus bones. Three bones were marked by knife cuts, and a single ulna had what appeared to be a puncture made by a carnivore.

Four separate pigeons (left tarsometatarsus) made up eight percent of the birds identified in this stratum. In the urban marketplace, it was likely that domestically raised pigeon was available year round. These were brought into the market by the "cartload" (Trager 1970:133). Pigeon was consumed in all ways and might be boiled or roasted and served with a "boatful" of butter and parsley (Randolph 1860:76-77). Child (1833:56) recommended "potting" the birds in water and spices as the "best and the least trouble," while another recipe for "Pigeons Transmogrified" called for the birds to be wrapped in "Puff Paste," tied in cloth, and "boiled in a great deal of water" (Hooker 1981:35). Two snipe were also identified (4% of the total number of birds). Only a few recipes specific to snipe and woodcock were located. One author included both birds, along with teal, capon, pheasant, and turkey, in her recommendations of birds that could be dressed with a sauce of broth lemon, bread crumbs, claret wine, a little butter, and possibly "a little anchovy," all boiled together (Hess 1981:61).

The recovered fish bones (n = 910) account for 35 percent of the food animal bones and 22 percent of the individual animals identified, but slightly less than seven percent of the biomass calculated for this stratum. This percentage did not include the 349 fish scales that were coded separately (see Table C-17 at the end of this appendix). A minimum number of 10 different fish was identified. The locally available and popular shad and black sea bass dominated the fish assemblage. The bones from six shad (left opercle) account for 25 percent of the fish bones as well as 33 percent of the individual fish identified. Both cranial and spinal elements were present in a ratio of roughly two skull bones for every vertebra. Whole shad likely were consumed, because salted fish were usually preserved without their heads and thus would present a different distribution in the archaeological record.

The plentiful and popular shad became even more sought after in the 1830s and 1840s. Whole shad nailed or "planked" to an oak board and cooked alongside a charcoal pit became fashionable, although the practice probably dated back to the Delaware Indians. Eventually certain restaurants in Chester and Philadelphia came to specialize in this method of cooking. Local fishermen also set up cabins and camps along the river for trainloads of springtime vacationers from Philadelphia and as far away as Pittsburgh. They would eat planked shad, listen to music, dance, and relax on the banks of the river. Hardy (1998:8) contends that the fishing and "cooking of shad became rituals around which sportsmen drawn from the Philadelphia gentry could engage in rugged male bonding." In addition to the spring spawning runs, shad was available year round either smoked or salted. Like mackerel, it was recommended that these naturally oily fish be put in a "deep plate and covered with boiling water for about ten minutes." The fish should then be "thoroughly" broiled and buttered. "This makes it tender, takes off the coat of salt and prevents the strong oily taste, so apt to be unpleasant in preserved fish" (Child 1833:59-60).

The small herrings, relatives of the shad, were recovered in relatively small quantities (n = 74), about eight percent of the fish bones present. Twenty-one mackerel vertebrae made up just two percent of the fish bones present. In the underlying and slightly earlier stratum of AS II, the herring and mackerel accounted for just two percent of the total fish when combined. Herrings and mackerel are small, tender, and oily fish. They were generally not able to withstand air drying so they were salted in barrels and allowed to cure in their own pickle. Mackerel were filleted before curing, but the very plentiful and inexpensive herrings were generally "pickled round," as gutted but whole fish (Ackerman 1941:161, 188).

The 129 bones from black sea bass made up 14 percent of the total fish bones. All parts of these fish were present. White perch, striped bass, and a number of indeterminate bass bones accounted for another 10 percent of the fish bones. Bass species declined in many of the waters of the northeast throughout the nineteenth century, victims of overfishing and loss of viable habitats. The local bass species virtually disappeared from New York City faunal assemblages around 1830, replaced by the small silver porgies and later by the commercially dominant Atlantic codfish (Rothchild and Balkwill 1993:72; Milne 1998). Only small amounts of salmon vertebrae (n = 10), bluefish (n = 2), and blackfish or tautog (n = 2) were present in this stratum.

Portions of three snapping turtles were also recovered (intact mandibles). One of the turtles was quite large and the entire skull was recovered. The shell of the turtles may have been used for manufacturing purposes, but the turtles themselves were likely consumed. One recipe called for the turtle meat to be baked in the "breast shell" (Hooker 1981:20). Fortunately for the turtles, particularly the diamondback, their meat never became extremely popular, and relatively high prices rendered terrapin somewhat exclusive and inaccessible. Nevertheless, some nineteenth-century estimates suggest as many as 90,000 pounds of turtle might have been taken from Chesapeake Bay in a single year (Trager 1970:128).

The bones of the large domestic mammals made up just 12 percent of the food bones recovered from this stratum, but 71 percent of the biomass (Table C-6). In terms of the total number of bones, number of individuals, and the number of meat cuts, the assemblage of large domestic mammals from AS III is fairly evenly divided. Cow was slightly more prevalent than the other two animals when the NISP and MNI were calculated, but beef bones account for a little more than 70 percent of the large animal biomass.

Table C-6. Large Domestic Animals, Feature B, AS III (Level 6)

	NISP	% NISP	MNI	% MNI	MNMC	% MNMC	Biomass (kg)	% Bio-mass
Cow; *Bos Taurus*	92	42.6	3	42.9	13	36.1	33.22	71.1
Sheep/Goat; *Ovis/Capra*	66	30.6	2	28.6	11	30.6	8.21	17.7
Pig; *Sus scrofa*	50	23.2	1	14.3	9	25.0	4.33	9.3
Pig-Immature*; Sus scrofa*	8	3.7	1	14.3	3	8.3	0.56	1.7
TOTAL	216	100.1	7	100.1	36	100.0	46.32	99.8

Meat cuts from the large domestic mammals were present in relatively equal proportions and in similar cuts (roasts from the hind leg and shank). The cattle were processed differently from the pig and sheep. Although numerous beef roasts were present, smaller steak cuts account for a good portion of the beef assemblage. The ribs and sacrum of the animal were cleanly sawn through with a metal blade, as were two sirloin steaks (cut from the ilium). One roast from the upper hind limb was chopped at the proximal end as if the bone were split for marrow extraction. Bones from the tibia, calcaneous-astragalus, and proximal metatarsal represent four additional hindshank roasts. Three were from mature cattle and one was from an immature animal. An unfused acetabulum/ischium came from a calf fewer than 10 months of age.

From a total of 66 bones, 11 mutton and lamb cuts were distinguished. The bones were distributed fairly evenly across the body of the sheep. Three distinct cuts, the neck, the rack, and the loin, were from the axial portion of the skeleton, and the vertebrae were split in half axially. Skull and mandible fragments may indicate a cut from the head, but the other eight cuts were from the limbs. There was a single steak or chop cut from the femur (18 mm) and four separate leg roasts, two from the "butt" end and two from the shank. There were also four lower shank cuts. These may have belonged to the larger leg cuts or been sold separately as smaller roasts or meat for braising. An unfused scapula and phalanx indicated at least one animal under a year in age while a fused calcaneous belonged to an animal older than three years. Two right tibiae unfused at the distal end belonged to animals between 12 and 24 months of age.

Bones from the pig made up about a quarter of the large mammal NISP and MNI as well as 33 percent of the meat cuts present. In terms of biomass, however, the pig accounts for just 11 percent of the large mammal total. Parts of at least two pigs including bones from the head and feet were identified. Both pigs were under a year of age, but the bones of one were much smaller and unformed. As most parts of the older animal were represented, it is not possible to determine if the animal was purchased whole, halved, or in separate cuts. Only a few bones had evidence of butchery. A humerus with an unfused proximal end was sawn through at midshaft (possible butt or Boston rib roast). A radius was also sawn through at midshaft and again sawn obliquely at the distal end. Most of one tibia (proximal unfused) or a large shank ham was also present.

2.6.4 FEATURE B, AS V (LEVEL 4, TPQ 1850)

Feature B's analytical stratum V is comprised of just one level or stratum (Level 4) as distinguished during laboratory analysis. A total of 1,631 bones and bone fragments was recovered from this stratum. A complete list of the bones recovered from this stratum can be found in Table C-19 at the end of this appendix. At least six (n = 86) rats were recovered

(proximal right femora) and eight mouse bones were recovered, mostly from soil saved for flotation. Almost all parts of two individual cats were also present.

Of the total number of bones recovered, 930 (57%) were determined to be the remains of food (Table C-7). The bones of sheep make up the greatest proportion of the food assemblage at 39 percent of the NISP and 40 percent of the biomass. When all the food mammals including rabbit were considered, sheep bones composed 56 percent of the NISP, 50 percent of the individual animals, and about 94 percent of the biomass.

Bird bones (n = 229) made up about 25 percent of the food bones recovered, but just four percent of the biomass. Chicken (n = 90) dominated the bird assemblage along with those bones and fragments classified as "medium bird" (n = 104). Turkey, quail, duck, and pigeon were also identified in much smaller amounts. The remains of fish (n = 201) accounted for 22 percent of the NISP and 20 percent of the MNI, but just less than two percent of the biomass from this level of Feature B. Similar to the earlier, underlying stratum (AS III), shad (n=65) was the most numerous fish recovered.

Table C-7. Food Remains Recovered from Feature B, AS V

	NISP	% NISP	MNI	% MNI	Meat Weight	% Meat Weight	Bio-mass (kg)	% Bio-mass
Deer; *Odocoileus virginianus*	6	0.6	1	2.5	100.0	4.7	2.25	2.7
Deer/Sheep; *Cervid/Ovis*	6	0.6	---	---	---	---	1.21	1.5
Cow; *Bos Taurus*	110	11.8	3	7.5	1200.0	56.0	32.91	40.0
Cow-Immature; *Bos taurus*	8	0.9	1	2.5	75.0	3.5	2.50	3.0
Sheep/Goat; *Ovis/Capra*	365	39.2	10	25.0	350.0	16.3	33.02	40.0
Pig*; Sus scrofa*	16	1.7	3	7.5	300.0	14.0	3.02	3.7
Pig – Immature; *Sus scrofa*	5	0.5	1	2.5	50.0	2.3	0.50	0.6
Rabbit; *Sylvilagus floridanus*	4	0.4	1	2.5	---	---	0.03	<0.1
Medium Mammal	31	3.3	---	---	---	---	1.81	2.2
Chicken; *Gallus gallus*	90	9.7	5	12.5	12.5	0.6	1.84	2.2
Turkey; *Meleagris gallopavo*	13	1.4	2	5.0	15.0	0.7	0.59	0.7
Quail; *Colinus virginianus*	6	0.6	1	2.5	0.5	<0.1	0.02	<0.1
Duck; *Anas* species	6	0.6	1	2.5	2.0	0.1	0.17	0.2
Pigeon; *Columbidae* species	5	0.5	2	5.0	1.0	<0.1	0.06	0.1
Large Bird	5	0.5	---	---	---	---	0.15	0.2
Medium Bird	104	11.2	---	---	---	---	0.59	0.7
Indet. Herring; *Clupidae* Family	17	1.8	---	---	---	---	0.03	<0.1
Herring; *Clupea harengus*	2	0.2	1	2.5	0.5	<0.1	0.03	<0.1
Shad; *Alosa sapidissima*	65	7.0	3	7.5	9.0	0.4	0.18	0.2
Atlantic Cod; *Gadus morhua*	10	1.1	1	2.5	10.0	0.5	0.19	0.2
Striped Bass; *Morone saxatilis*	4	0.4	1	2.5	7.5	0.3	0.19	0.2
Black Sea Bass; *C. striata*	8	0.9	1	2.5	6.0	0.3	0.08	0.1
Indet. Bass; *Serranidae*	15	1.6	---	---	---	---	0.25	0.3
Mackerel; *Scomber scombus*	7	0.8	1	2.5	4.0	0.2	0.03	<0.1
Large Flat Fish'	2	0.2	1	2.5	---	---	0.38	0.5

Pleurondectidae								
Unident. Fish	20	2.2	---	---	---	---	0.19	0.2
TOTAL	930	99.7	40	100.0	2143.0	99.9	82.22	99.5

Chicken was the most prevalent bird in this stratum (n = 90) and accounted for 39 percent of the bird bones recovered. All parts of the chicken, including skulls and foot bones, were present. Five chickens were identified (right humerus). Both mature and immature birds were present with small variations in size among these birds. Based on tarsometatarsus spurs, at least one mature male bird was present. This may indicate the presence of breeding pairs, cocks for fighting, or just a dietary preference for an older and larger stewing or roasting bird. In addition to the bones identified as chicken, 104 bones and bone fragments were classified as "medium bird." Bones in this category included long bone fragments, phalanges, and ribs that likely belonged to chicken.

The remains of turkey in this portion of the feature consisted of 13 different bones representing most parts of two different birds. These bones made up just six percent of the bird bones present, but a quarter of the individual birds identified. Additionally, five fragments, which might have been turkey, were classified as "large bird" because they were not complete enough to permit identification. One quail, one pigeon, and a duck were represented by just a few bones each.

The remains of fish (n = 201) constituted 22 percent of the bones identified as food and about 20 percent of the individual animals. Shad was again the most common with 32 percent of the total fish assemblage and three separate fish identified. The distribution of shad bones in a ratio of 2.3 skull bones to every vertebra indicated that whole fish were present. Two herring vertebrae were identified, and another 17 skull fragments were classified only as *Clupidae*, the general herring and shad family.

This was the second deposit from which Atlantic cod was recovered. Cod bones included nine vertebrae and a single ceratohyal. The ceratohyal often traveled with the split and processed body of the fish and may indicate the presence of split, salted, or dried fish. The bones of the striped bass, the black sea bass, and some fragments identified only as general bass family made up 13 percent (n = 27) of the fish assemblage. Two vertebrae and two skull fragments were identified as striped bass. This was a relatively large fish, probably upwards of 15 pounds in total weight. Two small indeterminate bass-family members were also present. A single mackerel vertebra was recovered as were two large vertebrae from an indeterminate large flounder.

When only the large food mammals were considered, the bones identified as sheep made up 72 percent of the NISP, 53 percent of the MNI (with 10 individuals), and 58 percent of the MNMC (Table C-8). The bones of the sheep account for about 45 percent of the biomass, just a tiny bit less than the cattle biomass. By comparison, the bones of mature cattle were just 22 percent of the large animal NISP, although they also contributed 44 percent of the biomass.

Table C-8. Large Food Mammals, Feature B, AS V (Level 4)

	NISP	**% NISP**	**MNI**	**% MNI**	**MNMC**	**% MNMC**	**Biomass (kg)**	**% Bio-mass**
Deer; *O. virginianus*	6	1.2	1	5.3	2	4.7	2.25	3.0
Cow; *Bos Taurus*	110	21.8	3	15.8	8	18.6	32.91	44.4
Cow; *Bos Taurus*– Immature	8	1.6	1	5.3	2	4.7	2.50	3.4
Sheep/Goat; *Ovis/Capra*	365	72.3	10	52.6	25	58.1	33.02	44.5

Pig*; Sus scrofa*	11	2.2	3	15.8	4	9.3	3.02	4.1
Pig*; Sus scrofa*-Immature	5	3.2	1	5.3	2	4.7	0.50	0.7
TOTAL	505	100.1	19	100.1	43	100.1	74.2	100.1

In this analytical stratum, six elements were identified as deer. All were from the hind limb (acetabulum, femur, tibia, and tarsals) and represent two haunches of venison. No butchery marks were on any of the bones. Six other bones were classified as sheep/deer (*Ovis/Cervid*) because the differences between the two could not be distinguished in the fragments recovered. The presence of deer bones in a mid-nineteenth-century deposit is unusual. Deer populations around the northeastern cities declined significantly throughout the eighteenth century, and deer bones were rarely identified in later urban assemblages. Nevertheless, period cookbooks contained basic venison recipes. These included Miss Leslie's *Directions for Cookery*, published in Philadelphia in 1828, and the 1896 book *Ye Gentlewoman's Housewifery*, which recommended it be under- rather than overdone (Root and de Rochemont 1976:134, 139; Hooker 1981:28).

The remains of four cows (118 bones) were identified, consisting of three mature animals (greater than 12 months) and one calf. The bones of the mature cattle were almost entirely those from the axial skeleton, vertebrae, and the ribs (n = 96). Thirty percent of these bones were cervical vertebrae and most were split axially. Twelve bones were from the limbs, almost entirely from the foot and ankle. There was one butchered femur from which a large roast (137.1 mm) was sawn. In spite of the butchery, all parts of this femur were present. This may indicate some degree of secondary butchery on site or that a larger cut was utilized and later disposed of as two separate parts. Additionally, there were two fragments of horn or horn core. The presence of the horn along with the foot bones may also indicate some processing of whole animals on site, but the sample was very small and butchery evidence extremely limited. It is equally likely that both the head and foot bones represent meat purchased in specific cuts. Like the sheep, recipes using cow and calf heads and tongues appeared frequently in cookbooks, with a preference for the roasted heads of calves (Simmons 1796:17; Hooker 1981:37). Eight bones were from an immature cow or calf. These included bones from the lower and upper limbs as well as the spine. The limb bones all showed evidence of butchery. A femur was chopped through at the distal end, a large section of a tibia was sawn through at the distal end, and a scapula blade (or chuck cut) was sawn through the neck.

Bones classified as sheep were the most plentiful of the large domestic food mammals. Sixteen identifiable bones were from the fore and hind limbs (two distal humeri, a radius/ulna set, two metacarpals, two left proximal tibiae, a left metatarsal, and a single patella). As many as six separate leg cuts were present, if the "butt" and shank ends were considered separately, or three large whole leg cuts. In addition to the legs, there were another three lower "shank" cuts. With the exception of an acetabulum that was chopped through and a metacarpal chopped through at the distal-midshaft, no butchery was in evidence on the long bones. Twenty-three vertebrae and rib fragments were either chopped or sawn through. Several of the lumbar vertebrae were split in half axially and further sawn transversely through the centrum and main body of the vertebra as steak or chop cuts.

Most of the sheep present in this assemblage came from the head of the animal and included general skull fragments (n = 34), teeth (n = 196), and portions of the mandible and maxilla (n = 92). None of these bones exhibited any evidence of butchery. Altogether, 58 mandible fragments were identified, from which a minimum number of 10 sheep was determined to be present (from left ramus). Of the 58 mandible fragments, 10 right elements and 8 left elements provided data for

age determinations (after Grant 1982). Based on the wear of the teeth, the age range of these animals was relatively evenly distributed. Of the 18 mandible fragments, two were from animals less than a year old (unerupted second molar), four belonged to animals about a year old, seven mandibles were from animals about 22 months old, and five mandibles came from animals that were older than 30 months at the time of death. Fusion data available for five long bones suggested most of the sheep from this stratum were between 12 and 36 months at time of death. A single tibia fused at the proximal end suggests at least one older animal was butchered. Although there was variability in ages, the majority of the animals were from the midrange of one to three years, or animals raised primarily for meat rather than wool production (Bowen 1998:148). This age distribution was a similar pattern to two faunal assemblages from the latter half of the eighteenth century in Philadelphia, but very different from an early-nineteenth-century assemblage from the same location (Andrews 1999:38).

Fourteen of the 25 identified potential meat cuts were from the head of the sheep. This may represent a refuse disposal pattern associated with primary-stage butchery, or more likely, a preference for a specific food. A number of cookbooks included recipes for lamb's head soup in which a broth was made from the head, heart, and lights (i.e., lungs) of the animal along with numerous root vegetables, as no "good Housewife has any pretensions to Rational Economy who boils Animal Food without converting the Broth into some sort of soup" (Hooker 1981:1). Flour dumplings could be added near the end of the cooking (Simmons 1796:20). A book of "plain cookery" (ECDS 1932) included three separate recipes for head of mutton. The first is a simple broth or stock made from the split head with the brains removed. The brains were retained along with the cooked head. After removing the head from the broth, it was placed on a baking pan, covered with breadcrumbs and [fat] drippings, and baked until brown. Serving recommendations included placing it on a bed of "mince" prepared from the cooked heart and liver or garnishing with "brain cakes" and the fried liver. The sliced tongue was suggested as an additional garnish, or it could be smoked for preservation if not immediately consumed. Brain cakes were made much like other meat or fish cakes. Cooked and chopped brain meat was mixed with breadcrumbs, drippings, and parsley and quickly fried on the stovetop (ECDS 1932: 26, 71-72; Lobel and Lobel 1975:173, 175).

Although pig bones made up less than six percent of the large mammal assemblage, parts of four separate animals were present. All were under a year of age, but three of the four were considered "mature" or older than six months, the viable age for slaughtering. The bones of the fourth animal were small and unformed. Of the mature animal bones, nine were from the hind limb (e.g., femur, tibia, and fibula). The other two were fragments of the premaxilla or upper jaw. These premaxilla fragments had yet to fuse to the remainder of the jaw. At least four large hams, three from the shank (tibia/fibula) and one from the upper hind limb, were present. One ham (midshaft of right femur) had knife marks on the diaphysis of the bone. The five bones of the very immature animal were from the neck, pelvis, and hind limb, possibly representing an entire animal. No butchery marks were on this animal.

2.7 FEATURE C

The faunal remains from Feature C did not merit detailed discussion. They are summarized in Table C-20 at the back of this appendix.

2.8 FOOD REMAINS RECOVERED FROM FEATURE E

Feature E was a privy composed of dry-laid brick. When in use (ca. 1790s), this privy was located in the rear yard of 9 North Sixth Street (later 13 North Sixth). This property was the residence of William Simmons between 1790 and 1800. Simmons was the clerk in the U. S. Auditor's Office in 1790 and later served as an accountant with the U. S. War Department (ca. 1795). Simmons took in boarders who were also government employees. In 1798, Hezekiah Hosmer, a U. S. Representative from New York, and Samuel Livermore, a U. S. Senator from New Hampshire, were listed as residents of the household.

Three analytical strata (AS) were identified within Feature E. The first, AS I, was identified as "overburden" or rubble that covered the privy. Just four animal bone fragments were identified in this stratum. AS II included those strata identified in the field as Levels 2, 3, and 4 (FS 49, 50, and 51 respectively). It was from this stratum that the majority of the food remains were recovered, and analysis focused on it. A final analytical stratum, AS III, was identified at the base of the privy. This stratum was made up entirely of the bones and artifacts from Level 5 or FS 52.

Excluding the rubble or overburden (FS 48), a total of 1,216 bones and bone fragments was recovered from Feature E, AS II and III (Tables C-21 and C-22). Where possible within a single archeological context, bones that could be mended during the course of analysis were counted as a single element. Most of the bones in the assemblage were identified as the remains of chicken as well as commensal species, including cat and dog. Most of two puppies were represented, and there were a few bones (a mandible and ulna) indicating the presence of a third animal. If AS II and AS III were considered to be completely separate deposits with no relation to one another, based on the MNI as many as five dogs may be present.

2.8.1 FOOD REMAINS RECOVERED FROM FEATURE E, AS II (LEVELS 2, 3, AND 4)

Eighty-five percent of the bones from Feature E were recovered from AS II, a total of 1,042 bones and bone fragments (Table C-21). The portion of the assemblage relating to food was dominated by chicken (n = 425) (Table C-9). Ten individual chickens were identified (left tarsometatarsus), six of them male. The remains of three pigeons, a duck, and a turkey were also identified. The three large domestic food mammals (cattle, sheep, and pig) were represented in relatively limited quantities.

Table C-9. Food Remains Recovered from Feature E, AS II

	NISP	% NISP	MNI	% MNI	Meat Weight (lbs)	% Meat Weight	Bio-mass (kg)	% Bio-mass
Cow; *Bos Taurus*	10	1.65	1/1	9.09	475.0	68.25	3.90	23.69
Sheep/Goat; *Ovis/Capra*	11	1.81	1	4.55	35.0	5.03	1.66	10.09
Pig*; Sus scrofa*	14	2.31	1/1	9.09	150.0	21.55	0.19	1.15
Medium Mammal	6	0.99	---	---	---	---	0.34	2.07
Chicken; *Gallus gallus*	425	70.25	10	45.55	25.0	3.59	6.70	40.70
Turkey; *Meleagris gallopavo*	1	0.17	1	4.55	7.5	1.12	0.36	2.19
Pigeon; *Columbidae* species	27	4.46	3	13.63	1.5	0.22	0.15	0.91
Duck; *Anas* species	1	0.17	1	4.55	2.0	0.29	0.02	0.12
Medium Bird	86	14.21	---	---	---	---	3.00	18.23
Turtle; Family	24	3.97	2	9.09	---	---	0.14	0.85

Emydidae								
TOTAL	605	99.99	22	100.01	696.0	100.00	16.46	100.00

About 83 percent of the bones were identifiable to the family or species level. Eleven different species were present. The remains of birds were predominant due to the large amount of domestic chicken bones (425 bones, 10 birds). Most of the 86 bones identified as "medium bird" likely were also domestic chicken. Four cats were present with a total of 283 bones and bone fragments. There were also three dogs represented by 45 bones, three pigeons (27 bones), and two turtles (24 bones).

The large food mammals were a relatively small portion of the total assemblage. There were just 35 bones identified as cow, sheep, or pig. Together the bones of these three animals comprise slightly less than three percent of the NISP, about 17 percent of the MNI, and 22 percent of the total biomass (see Table C-21 at the back of this appendix). There were only a few identifiable cuts of meat from each animal. For all three, the cuts were from the head, foot, and axial skeleton, and no pattern was discernable in the small sample. The six bones and fragments identified as "medium mammal" could be either sheep or pig.

It was not unusual to find relatively large numbers of commensal species in urban deposits. Cats, dogs, and rats were recovered in great quantities from shaft features at New York's Five Points site (Milne and Crabtree 2001) and the Merchants' Exchange and Chiller Plant site in Philadelphia (Andrews 1999). The presence of these animals was a function of how the deposits were formed. Many of the shaft features were utilized as garbage receptacles after their primary purpose had been retired. Everything from food remains to dead household pets was deposited. The role of these animals as urban scavengers may also have served to introduce them into the faunal assemblage.

The assemblage from AS II was fairly homogenous. Eight species of food animals were present (Table C-9). These include four common birds: the domestic chicken, turkey, duck, and domestic pigeon or rock dove. All three of the large domestic food mammals were present in the assemblage in relatively equal quantities. All were represented by bones from the head, foot, and the axial skeleton. Both immature cow and immature pig were present, and no fish remains were recovered.

A single bone, an intact humerus, was identified as turkey. In addition to the turkey, 10 individual chickens were identified. Of these, five were male with spurs on the tarsometatarsus bones. All parts of the birds were present, from skull to feet. Chicken made up 75 percent of the bones identified as potential food remains, 46 percent of the individual animals identified, and 41 percent of the available biomass at Feature 3 Philadelphia's Chiller Plant had similar large numbers of chickens as did an early-nineteenth-century assemblage (Feature AF) at Five Points (Andrews 1999:20; Milne and Crabtree 2001).

Twenty-seven pigeon bones were also identified. The bones represented relatively complete skeletons although the larger and sturdier bones were more prevalent. Both passenger pigeons and rock doves were plentiful in Philadelphia throughout the eighteenth and nineteenth centuries. Most were subsequently classified as *Columba livia* or the domestic pigeon.

The cattle bones came from the mandible (n = 2), the hindshank (n = 2), and the ribs and vertebral column (n = 6). At least two animals were present. The animal represented by the mandible fragments was under 24 months as the permanent third molar had not yet erupted. Additionally,

the metatarsal present in the assemblage was unfused at the distal end. The ribs, from a mature animal, were sawn through at the midshaft and distal ends. Cow bones composed less than two percent of the total NISP for the deposit, but due to the density of the bones, about 24 percent of the biomass identified as food remains.

Half of the pork was represented by bones from the head (n = 2) and foot (n = 6) of the pig. The other six bones were vertebrae, five cervical and one thoracic. The latter came from a mature animal. The thoracic vertebra had been split axially, a common signature of primary-stage butchery in which the smaller meat animals (e.g., sheep and pigs) were split along the spine. The proximal epiphyses of the phalanges were unfused, indicating the hock-cut came from an animal less than a year in age. Additionally, the cervical vertebrae had a "spongy" and unformed appearance indicating they came from a very young animal.

A variety of sheep bones was present. Similar to the remains of the other large domestic mammals, sheep were represented by skull bones (premaxilla and a tooth fragment), the metacarpals of the foot (n = 1), the ribs (n = 5), and the scapula (n = 2). Only two bones showed evidence of butchery: a thoracic vertebra was chopped in half axially and the metacarpal was split longitudinally at an oblique angle at midshaft.

2.8.2 FOOD REMAINS FROM FEATURE E, AS III (FS 52)

Altogether, 174 bones and bone fragments were recovered from the bottom of this feature (see Table C-22 at the back of this appendix). This small assemblage was comprised solely the bones recovered as FS 52. Of the total number of bones, 114 (66%) were the remains of dogs. At least two dogs were present (based on mandible fragments, humeri, and radii). Other animal bones include those of the cow (n=4), sheep (n=5), and one pigeon bone (n=1). Twenty-seven bone fragments were classified as unidentifiable mammal and another nine as unidentifiable bird.

2.9 FEATURES G AND H

The faunal remains from Features G and H did not merit detailed analysis. They are summarized in Tables C-23 and C-24 at the back of this appendix.

2.10 SUMMARY OF THE FAUNAL REMAINS FROM FEATURES B AND E

At the time the faunal remains were deposited in the Block 2 features, a specialized procurement system was already in place in most cities of northeastern America. Animals were raised primarily for market slaughter and not for other products such as wool, milk, or hides. Within this system, a range of animals, in terms of species, body parts, and age, was available. This range became even narrower as the nineteenth century progressed. As technology improved and production became even more specialized, game animals and smaller, local fishes were less common in the archaeological record.

At the beginning of the period represented by AS I (Level 8) in Feature B, most of the middle-class residents of Philadelphia were not likely to be raising much of their own livestock. At this time, the city's market system for meat, fish, and fowl was well developed and well known. Like other municipalities in the northeast, however, the markets of Philadelphia could not keep up with growing demand and a rapidly expanding city. Centrally located markets were not economical in cities that were developing distinctly separate and widespread neighborhoods. Between 1800 and

1850, the centralized market system in Philadelphia was in an accelerated decline replaced by smaller businesses and neighborhood stores.

The faunal assemblages recovered from the Block 2 features illuminate a period of market transformation in Philadelphia. In Feature B, the deposits include early short-term elite residents (AS I and II) and multiple generations of a single middle-class family (AS III and V) and span the period from 1790 through 1850. The assemblage from Feature E was associated with a government clerk and accountant and his Congressional boarders during the last decade of the eighteenth century. In historical contexts, the cycle of meals or pattern of consumption may be visible in the cuts of meats chosen, the species present, and the age of the animals eaten. Examination of the faunal assemblage from the Block 2 features provided a glimpse into the diet of Philadelphia tradesmen during the first half of the nineteenth century, and that of a government employee during the last decade of the eighteenth century.

Many forces influence people's dietary choices. Common influences include ethnic background, social and economic status, and market availability of certain items. Sometimes these influences are visible in the archeological record. General patterns of consumption have been observed in several nineteenth-century assemblages. In assemblages attributed to the artisan or middle classes, the remains of poultry and birds tend to compose between one-quarter to one-third of the total NISP of identified food remains. Meat bones, usually mutton and beef, account for another 30 to 50 percent of the NISP, and varying amounts of fish bone are usually present. Assemblages attributed to the working class generally contain greater quantities of pig bones, large numbers of fish, and much smaller amounts of poultry.

On sites dating before 1840, there tends to be a greater reliance on local, inshore fishes. Later in the century, species diversity declined and codfishes dominated the assemblages (Rothchild and Balkwill 1993; Milne 1998). Time, in terms of both seasonality and transportation, affected species availability in particular market places. For example, improvements in both rail and refrigeration technology after 1840 allowed a greater number of fresh-frozen New England codfish into the markets of the northeast. At the same time, reliance on a small number of domestic mammal and bird species, and declining “wild” habitats surrounding the cities, led to a decrease in the number of wild or game species that were previously available. This decrease in variation may be visible in the Feature B assemblage. In AS II, which dated to sometime after 1830, 13 different types of birds and 12 fish species were present. In the overlying AS III, which dated after 1840, there were 11 kinds of bird and 10 species of fish. The assemblage from AS V, post-1850, had even less variation, with just six bird species and eight types of fish.

The Block 2 fauna followed the general pattern observed for middle-class assemblages. In all strata of Feature B, the bones of birds make up between 23 percent (AS V) and 60 percent (AS I) of the identified food bones (Table C-10). According to these numbers, the importance of fish and mammals varied. The greater numbers of fish bones in these strata may be a function of the greater number of bones in a fish compared to the number of bones in a beef or mutton roast.

Table C-10. Food Remains Recovered from Feature B

	B-AS I	% AS I	B-AS II	% AS II	B-AS III	% AS III	B-AS V	% AS V	E-AS II	% AS II
Mammal	62	12.6	1075	26.3	318	12.4	551	56.2	41	6.8
Bird	293	59.9	1819	44.5	1315	51.1	229	23.3	540	89.3
Fish	133	27.2	1181	28.9	910	35.3	201	20.5	0	0.0
Reptile	1	0.2	8	0.2	26	1.0	0	0.0	24	4.0
Lobster	0	0.0	4	0.1	7	0.3	0	0.0	0	0.0
TOTAL	489	99.9	4087	100.0	2576	100.1	981	100.0	605	100.1

In almost all strata, when the biomass and meat weight were considered, the remains of the large mammals remained the most important sources of protein. Due both to declines in population in urban areas and the growing popularity and availability of beef, deer bones were rarely identified in urban nineteenth-century assemblages. The small amount of deer bone identified in Feature B, AS V, was somewhat unusual, but it appeared to have been just two distinct cuts of venison. After all, it was the meat from the large domestic mammals, particularly the cow, that remained most important. In all of the strata of Feature B, cow bones accounted for the largest percentage of the calculated biomass. In the assemblages from AS I and AS II, however, the combined bones of chicken and turkey, closely followed by those of sheep, were second and third in terms of total biomass. In AS V, the amount of sheep bones in the assemblage greatly outnumbered the cow bones, although the calculated biomass for the two animals was relatively equal. This was the stratum with the unusual distribution of sheep bones from the skull.

In all strata from Feature B, the cuts from the hindshank of all three domestic mammals were preferred. Few steak or chop cuts were anywhere in the assemblage. Many of the identifiable meat cuts were roasts from the hindshank (tibia/fibula combination) and the lower shank (metapodial bones). With the exception of the veal calves from Feature B, AS II, the beef was mostly purchased in cuts from the body. This included the roasts from the shanks as well as the upper limbs (femur and humerus). The cow recovered from both AS I and AS II was predominantly from the body of the animal (Table C-11), and many of the mature cow bones in AS II were from the ribs and vertebrae. For the following tables the category "feet" includes the metacarpal and metatarsal bones as well as the phalanges or toe bones. The metapodia accounted for most of the foot bones in both AS II and AS III as calculated for Table C-11. The bones of the calves followed a normal distribution pattern and may have been purchased as whole or halved animals with head and feet intact.

Table C-11. Element Distribution of Cow

	% HEAD	**% BODY**	**% FEET**	**NO. OF BONES**
NORMAL DISTRIBUTION	**29.7**	**42.2**	**28.1**	
Feature B – AS I (Level 8)	6.7	86.7	6.7	15
Feature B – AS II (Levels 7 and 7.1)	0.7	74.5	24.7	259
Feature B – AS II - Immature Cow	25.9	42.5	31.6	193
Feature B – AS III (Level 6)	3.3	75.0	21.7	92
Feature B – AS V (Level 4)	1.8	90.9	7.3	110

The category of "feet" for mutton and lamb was mostly comprised of the metapodial bones and tarsals/carpals that make up the lower-shank roasts (Table C-12). These were marrow-rich bones,

which make the best bones for soup. In the assemblages from both AS II and AS III, all parts of the animal were present, but they did not follow a normal distribution. Cuts of meat from the body, including large roasts from the upper limbs and midshank (16 separate tibiae), accounted for most of the "body" parts although 45 separate thoracic vertebrae were also sawn or split in half. Most of the foot cuts in AS II and AS III were those that included the lower shank or metapodial bones. Only five actual toe bones were in the AS II assemblage. Apparently, the mutton was also purchased in parts or cuts, with a definite preference for shank roasts. The sheep in both AS II and AS III varied greatly in age, including animals slightly less than a year to animals greater than three years old. About half the sheep in the strata were between a year and 22 months or "yearling" mutton. A quarter of the animals were older than three years or "true" mutton.

Table C-12. Element Distribution of Sheep/Goat

ASSEMBLAGE	% HEAD	% BODY	% FEET	NO. OF BONES
NORMAL DISTRIBUTION	**29.7**	**42.2**	**28.1**	
Feature B – AS I (Level 8)	-----	47.1	52.9	17
Feature B – AS II (Levels 7 and 7.1)	0.5	71.1	28.3	173
Feature B – AS III (Level 6)	18.2	59.1	22.7	66
Feature B – AS V (Level 4)	88.2	10.1	1.6	365

Sheep was the most predominant animal in the AS V assemblage, and the majority of the identified bones came from the head, skull fragments, teeth, and portions of the mandible and maxilla (Table C-12). None of these bones exhibited any evidence of butchery. The distribution of sheep bones in this stratum is interesting, as 14 of the 25 identified potential meat cuts were from the head. This may represent a refuse-disposal pattern associated with primary-stage butchery, or more likely, a preference for a specific food.

The distribution of pig bones was not very much different from that of the other domestic mammals (Table C-13). With the exception of AS II, few pig bones were in these assemblages. The roasts from the hind limb and shank seemingly were preferred. Although all parts of the animal were present, the emphasis of "body" suggested that the pork was purchased mostly as cuts rather than whole animals. The greater number of pigs' feet found in AS III was the result of including both metapodial bones that make up the lower-shank cuts and the tarsals and carpals in this category.

Table C-13. Element Distribution of Pig

ASSEMBLAGE	% HEAD	% BODY	% FEET	NO. OF BONES
NORMAL DISTRIBUTION	**29.7**	**42.2**	**28.1**	
Feature B – AS I (Level 8)	28.6	57.1	14.3	7
Feature B – AS II (Levels 7 and 7.1)	14.5	58.7	26.8	179
Feature B – AS III (Level 6)	27.6	29.3	43.1	58
Feature B – AS V (Level 4)	18.9	56.3	25.0	16

Large numbers of fish scales were recovered from Feature B in AS I, II, and III. In each case, the scales made up between three and eight percent of the total NISP for each deposit (see tables at the end of this appendix). The presence of the scales and the distribution of skull bones and vertebrae from shad, sea bass, and Atlantic codfish indicate these fish were purchased whole and probably processed on site.

When all the fish from Feature B was considered, a slight increase in the percentage of shad bones occurred as the individual deposits got later in date. A total of 75 shad bones made up just six percent of the fish in the stratum with the 1830 TPQ (AS II). In the overlying stratum, however, a total of 227 shad bones made up 25 percent of the recovered fish bones and 33 percent of the individual fish present. This pattern continued with the assemblage recovered from AS V (1850 TPQ). In this stratum, 65 shad bones from three different fish accounted for 32 percent of the fish bones and 33 percent of the individual fish recovered. Both cranial and spinal elements from popular fish were present, indicative of consumption of whole, fresh fish. If these animals were purchased split and preserved, they would more than likely come without their heads and only vertebral elements would be present. Shad grew in popularity throughout the nineteenth century, aided by technological improvements (ca. the 1830s) that allowed for large numbers to be brought efficiently to market.

The move away from the sheepshead porgies and black sea bass (which remained popular and available for a time) to an emphasis on American shad may be reflective of changing personal tastes in the residents of the house associated with Feature B, but it was more likely due to the changing nature of the fishing industry around Philadelphia in the 1830s. Large extractive fishing operations were established on the Delaware River in the late 1830s. Although in slow decline, shad supported these fisheries for most of the nineteenth century. Other species suffered more dramatically. The sheepshead porgy was fished to near extinction along the north Atlantic coast and is rarely found in nineteenth-century collections from New York City. The same was true of the black sea bass. Evidence of the consumed fish reflected changes taking place in both the fishing industries and the commercial market place in the first half of the century.

The dates of the Block 2 assemblages correspond to a small and unique window in Philadelphia's provisioning system. This was a time before the centralized markets were completely eliminated, but in which signs of increasing mechanization in the fishing and butchery industries were visible. In the second half of the nineteenth century, innovations in refrigeration and processing resulted in more-standardized and uniform products. The variation in types of animals, the quantities of local fish, and the age ranges of the sheep, pig, and chickens recovered from the Block 2 features were evidence of a system that was not yet completely standardized.

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Table C-14. Fauna from the Independence Visitor Center Features

	B-AS I	B-AS II	B-AS III	B-AS V	C-All	E-AS II	E-AS III	E-AS IV	G-All	H-All
Deer; O. virginianus				X						X
Cow; Bos Taurus	X	X	X	X	X	X	X		X	X
Cow - Immature; Bos taurus		X		X					X	
Sheep/Goat; Ovis/Capra	X	X	X	X		X	X		X	X
Pig; Sus scrofa	X	X	X	X	X	X			X	
Pig - Immature; Sus scrofa		X	X	X						
Rabbit; Sylvilagus floridanus	X	X	X	X						
Dog; Canis familiaris						X	X			
Cat; Felis domesticus	X	X	X	X		X				
Rat; Rattus species	X	X	X	X		X				X
Mouse; Mus musculus		X	X	X						
Large Mammal		X								
Medium Mammal	X	X	X	X		X	X		X	X
Small Mammal			X	X		X				
Indet. Mammal	X	X	X	X	X	X			X	X
Chicken; Gallus gallus	X	X	X	X	X	X			X	X
Turkey; Meleagris gallopavo	X	X	X	X		X			X	X
Pheasant; Phasianus colchicus	X	X							X	
Quail; Colinus virginianus	X	X	X	X						
Guinea Fowl; Numida melegris		X								
Grouse; Bonasa umbellus		X								
Duck; Anas species	X	X	X	X		X			X	
Sm. Duck; Anas species		X	X							
Goose; Anser species	X	X	X							
Pigeon; Columbidae species	X	X	X	X		X	X			
Snipe/Woodcock; Scolopacidae	X	X	X							
Crow/Jay; Covidae species		X	X	X						
Large Galliforme	X	X								
Indet. Galliforme		X								
Large Bird		X	X	X						X
Medium Bird	X	X	X	X		X	X			X
Medium Bird - Immature	X	X	X							
Small Bird	X	X	X	X						
Indet. Bird	X	X	X			X			X	
Indet. Bird – Eggshell	X		X							
Atlantic Cod; Gadus morhua		X		X						
Indet. Herring; Clupidae				X						
Herring; Clupea harengus		X	X	X						
Shad; Alosa sapidissima	X	X	X	X						
Striped Bass; Morone saxatilis	X	X	X	X						
Black Sea Bass; C. striata	X	X	X	X						
White Perch; Morone Americana			X							
Indet. Bass; Serrandidae		X	X	X						
Small Indet. Bass; Serrandidae		X								
Mackerel; Scomber scombus	X	X	X	X						
Salmon; Salmo salmar		X	X							
Bluefish; P. saltatrix			X							
Tautog; Tautoga onitis	X	X	X							
Porgy; Family Sparidae		X								
Sheepshead Porgy; A. probatoces		X								

Large Flat Fish				X					
Indet. Fish	X	X	X						X
Indet. Fish – Scales	X	X	X						
Lobster; Homarus americanus		X	X						
Turtle; Family Emydidae	X	X	X						X
Turtle; Family Cheludridae			X						
Indet. Fragments	X		X	X			X		
Oyster Shell	X	X	X	X			X	X	X
Clam Shell		X	X	X		X	X	X	X
Scallop Shell		X	X						
Coral			X						X
Snail		X							
Whelk/Barnacle		X	X	X			X		

Table C-15. Faunal Remains from Feature B, Level 8 (AS I, FS 41)

	NISP	% NISP	MNI	% MNI	Meat Weight (lbs)	% Meat Weight	Biomass (kg)	% Bio-mass
Cow; *Bos taurus*	15	2.1	1	2.7	400.0	60.9	5.79	29.8
Sheep/Goat; *Ovis/Capra*	17	2.4	1/1	5.4	50.0	7.6	2.29	11.8
Pig*; Sus scrofa*	7	1.0	1	2.7	100.0	15.4	0.39	2.0
Rabbit; *Sylvilagus floridanus*	1	0.1	1	2.7	2.5	0.4	0.03	0.1
Cat; *Felis domesticus*	12	1.7	1	2.7	---	---	0.19	1.0
Rat; *Rattus* species	7	1.0	1	2.7	---	---	0.03	0.2
Medium Mammal	22	3.1	---	---	---	---	1.11	5.7
Indet. Mammal	46	6.4	---	---	---	---	1.75	9.0
Chicken; *Gallus gallus*	31	4.3	5	13.5	12.5	1.9	1.11	5.7
Turkey; *Meleagris gallopavo*	19	2.6	2	5.4	15.0	2.3	2.14	11.0
Sm. Hen/Pheasant; Sm. *Galliforme*	14	1.9	4	10.8	8.0	1.2	0.44	2.3
Quail; *Colinus virginianus*	1	0.1	1	2.7	0.5	0.1	0.02	0.1
Pigeon; *Columbidae* species	1	0.1	1	2.7	0.5	0.1	0.02	0.1
Duck; *Anas* species	6	0.8	2	5.4	4.0	0.6	0.07	0.4
Goose; *Anser* species	3	0.4	1	2.7	7.0	1.1	0.02	0.1
Snipe/Woodcock; *Scolopacidae*	4	0.6	1	2.7	0.5	<0.1	0.02	0.1
Large Galliforme	37	5.1	--	---	---	---	0.95	4.9
Medium Bird	141	19.6	--	---	---	---	0.95	4.9
Medium Bird - Immature	36	5.0	3	8.1	---	---	0.28	0.1
Small Bird	8	1.1	--	---	---	---	0.02	2.0
Indet. Bird	11	1.5	---	---	---	---	0.10	0.5
Indet. Bird - Shell	30	4.2	---	---	---	---	---	---
Shad; *Alosa sapidissima*	24	3.3	2	5.4	6.0	0.9	0.45	2.3
Striped Bass; *Morone saxatilis*	10	1.4	1	2.7	7.5	1.2	0.32	1.7
Black Sea Bass; *C. striata*	40	5.6	4	10.8	24.0	3.7	0.30	1.5
Mackerel; *Scomber scombus*	1	0.1	1	2.7	4.0	0.6	0.18	0.9
Tautog; *Tautoga onitis*	1	0.1	1	2.7	5.0	0.8	0.18	0.9
Indet. Fish	57	7.9	---	---	---	---	0.21	1.1
Indet Fish - Scales	32	4.5	---	---	---	---	---	---
Turtle; Family *Emydidae*	1	0.1	1	2.7	10.0	1.5	0.07	0.4
Indet. Fragments	84	11.7	---	---	---	---	---	---
TOTAL	719	99.8	37	99.9	657.0	100.3	19.43	100.6

Table C-16. Faunal Remains from Feature B, Level 7.0 (AS II, FS 39)

	NISP	% NISP	MNI	% MNI	Meat Weight (lbs)	% Meat Weight	Biomass (kg)	% Bio-mass
Cow; *Bos taurus*	111	8.9	2	3.8	800.0	46.5	46.67	42.53
Cow - Immature; *Bos taurus*	72	5.7	4	7.7	300.0	17.4	21.64	19.72
Sheep/Goat; *Ovis/Capra*	72	5.7	3	5.8	105.0	6.1	9.65	8.79
Pig*; Sus scrofa*	44	3.5	3	5.8	300.0	17.4	6.46	5.89
Pig - Immature; *Sus scrofa*	13	1.0	2	3.8	100.0	5.8	0.60	0.55
Rabbit; *Sylvilagus floridanus*	7	0.6	1	1.9	2.5	0.1	0.05	0.05
Cat; *Felis domesticus*	4	0.3	1	1.9	---	---	0.09	0.08
Rat; *Rattus* species	14	1.1	2	3.8	---	---	0.03	0.03
Mouse; *Mus musculus*	4	0.3	1	1.9	---	---	0.03	0.03
Large Mammal	18	1.4	---	---	---	---	2.78	2.53
Medium Mammal	47	3.8	---	---	---	---	2.52	2.30
Small Mammal	12	1.0	---	---	---	---	0.05	0.05
Indet. Mammal	199	15.9	---	---	---	---	8.49	7.74
Chicken; *Gallus gallus*	121	9.7	4	7.7	10	0.6	2.96	2.70
Turkey; *Meleagris gallopavo*	31	2.5	4	7.7	30	1.7	2.42	2.21
Pheasant; *Phasianus colchicus*	7	0.6	2	3.8	4.0	0.2	0.33	0.30
Duck; *Anas* species	17	1.4	4	7.7	8.0	0.5	0.41	0.37
Goose; *Anser* species	3	0.2	1	1.9	7.0	0.4	0.27	0.25
Pigeon; *Columbidae* species	1	0.1	1	1.9	0.5	0.0	0.02	0.02
Snipe/Woodcock; *Scolopacidae*	1	0.1	1	1.9	0.5	0.0	0.02	0.02
Crow/Jay; *Covidae* species	1	0.1	1	1.9	---	---	0.02	0.02
Large Galliforme	7	0.6	---	---	---	---	0.20	0.18
Large Bird	25	2.0	---	---	---	---	0.86	0.78
Medium Bird	204	16.3	---	---	---	---	1.49	1.36
Medium Bird - Immature	19	1.5	4	7.7	---	---	0.33	0.30
Small Bird	20	1.6	---	---	---	---	0.07	0.06
Herring; *Clupea harengus*	1	0.1	1	1.9	0.5	0.0	0.03	0.03
Shad; *Alosa sapidissima*	21	1.7	2	3.8	6.0	0.3	0.07	0.06
Striped Bass; *Morone saxatilis*	12	1.0	1	1.9	7.5	0.4	0.37	0.34
Black Sea Bass; *C. striata*	38	3.0	3	5.8	18.0	1.0	0.42	0.38
Mackerel; *Scomber scombus*	1	0.1	1	1.9	4.0	0.2	0.03	0.03
Salmon; *Salmo salmar*	2	0.2	1	1.9	10.0	0.6	0.03	0.03
Tautog; *Tautoga onitis*	1	0.1	1	1.9	5.0	0.3	0.03	0.03
Indet. Fish	101	8.1	---	---	---	---	0.14	0.13
Turtle; Family *Emydidae*	2	0.2	1	1.9	3.0	0.2	0.15	0.14
TOTAL	1,253	100.4	52	99.6	1721.5	99.7	109.73	100.03

Table C-17. Faunal Remains from Feature B, Level 7.1 (AS II, FS 40)

	NISP	% NISP	MNI	% MNI	Meat Weight (lbs)	% Meat Weight	Biomass (kg)	% Biomass
Cow; *Bos taurus*	148	3.3	2	2.1	800.0	42.5	48.01	32.5
Cow - Immature; *Bos taurus*	121	2.7	6	6.4	450.0	23.9	14.22	9.6
Sheep/Goat; *Ovis/Capra*	101	2.2	3	3.2	105.0	5.6	11.48	7.8
Pig*; Sus scrofa*	88	1.9	2	2.1	200.0	10.6	12.01	8.1
Pig - Immature; *Sus scrofa*	36	0.8	2	2.1	100.0	5.3	1.78	1.2
Rabbit; *Sylvilagus floridanus*	6	0.1	1	1.1	2.5	0.1	0.04	<0.1
Cat; *Felis domesticus*	61	1.3	2	2.1	---	---	0.94	0.6
Rat; *Rattus* species	28	0.6	5	5.3	---	---	0.15	0.1
Mouse; *Mus musculus*	1	0.0	1	1.1	---	---	0.02	<0.1
Large Mammal	68	1.5	---	---	---	---	11.38	7.7
Medium Mammal	123	2.7	---	---	---	---	4.61	3.1
Indet. Mammal	511	11.2	---	---	---	---	15.81	10.7
Chicken; *Gallus gallus*	203	4.5	8	8.5	20.0	1.1	3.58	2.4
Turkey; *Meleagris gallopavo*	69	1.5	5	5.3	37.5	2.0	3.94	2.7
Pheasant; *Phasianus colchicus*	15	0.3	4	4.3	8.0	0.4	0.20	0.1
Quail; *Colinus virginianus*	55	1.2	6	6.4	3.0	0.2	0.21	0.1
Guinea Fowl; *Numida melegris*	1	0.0	1	1.1	2.0	0.1	0.06	<0.1
Grouse; *Bonasa umbellus*	3	0.1	2	2.1	4.0	0.2	0.02	<0.1
Duck; *Anas* species	92	2.0	5	5.3	10.0	0.5	1.24	0.8
Sm. Duck; *Anas species*	12	0.3	3	3.2	6.0	0.3	0.14	0.1
Goose; *Anser* species	19	0.4	3	3.2	21.0	1.1	0.95	0.6
Pigeon; *Columbidae* species	7	0.2	2	2.1	1.0	0.1	0.04	<0.1
Snipe/Woodcock; *Scolopacidae*	7	0.2	3	3.2	1.5	0.1	0.06	<0.1
Crow/Jay; *Covidae* species	4	0.1	1	1.1	---	---	0.02	<0.1
Large *Galliforme*	41	0.9	---	---	---	---	1.50	1.0
Indet. *Galliforme*	55	1.2	---	---	---	---	0.62	0.4
Large Bird	124	2.7	---	---	---	---	0.61	0.4
Medium Bird	598	13.2	---	---	---	---	2.57	1.7
Medium Bird - Immature	82	1.8	8	8.5	---	---	0.98	0.7
Small Bird	59	1.3	---	---	---	---	0.12	<0.1
Indet. Bird	657	14.5	---	---	---	---	2.76	1.9
Atlantic Cod; *Gadus morhua*	85	1.9	2	2.1	20.0	1.1	2.18	1.5
Herring; *Clupea harengus*	12	0.3	1	1.1	0.5	0.0	0.03	<0.1
Shad; *Alosa sapidissima*	54	1.2	2	2.1	6.0	0.3	0.19	0.1
Striped Bass; *Morone saxatilis*	19	0.4	2	2.1	15.0	0.8	0.40	0.3
Black Sea Bass; *C. striata*	97	2.1	4	4.3	24.0	1.3	0.95	0.6
Indet. Bass; *Serrandidae*	33	0.7	---	---	---	---	0.18	0.1
Small Indet. Bass; *Serrandidae*	16	0.3	---	---	---	---	0.05	<0.1
Mackerel; *Scomber scombus*	12	0.3	1	1.1	4.0	0.2	0.05	<0.1
Salmon; *Salmo salmar*	8	0.2	1	1.1	10.0	0.5	0.11	0.1
Tautog; *Tautoga onitis*	7	0.2	1	1.1	5.0	0.3	0.05	<0.1
Porgy; Family *Sparidae*	6	0.1	1	1.1	1.0	0.1	0.03	<0.1
Sheepshead Porgy; *A. probatoces*	129	2.8	2	2.1	15.0	0.8	1.98	1.3
Indet. Fish	526	11.6	---	---	---	---	1.33	0.9
Indet. Fish - Scales	135	3.0	---	---	---	---	---	---
Lobster; *Homarus americanus*	4	0.1	1	1.1	1.5	0.1	---	---
Turtle; Family *Emydidae*	6	0.1	1	1.1	10.0	0.5	0.20	0.1
TOTAL	4544	100	94	100.2	1883.5	100.1	147.8	99.3

Table C-18. Faunal Remains from Feature B, Level 6 (AS III, FS 38)

	NISP	% NISP	MNI	% MNI	Meat Weight (lbs)	% Meat Weight	Biomass (kg)	% Bio-mass
Cow; *Bos taurus*	92	2.2	3	3.1	1200.0	72.1	33.22	40.16
Sheep/Goat; *Ovis/Capra*	66	1.6	2	2.1	70.0	4.2	8.21	9.93
Pig*; Sus scrofa*	50	1.2	1	1.0	100.0	6.0	4.33	5.23
Pig - Immature; *Sus scrofa*	8	0.2	1	1.0	50.0	3.0	0.56	0.68
Rabbit; *Sylvilagus floridanus*	25	0.6	2	2.1	5.0	0.3	0.17	0.21
Cat; *Felis domesticus*	90	2.2	2	2.1	--	---	0.87	1.05
Rat; *Rattus* species	133	3.2	8	8.3	---	---	0.61	0.74
Mouse; *Mus musculus*	11	0.3	3	3.1	---	---	0.03	0.04
Medium Mammal	77	1.9	---	---	---	---	3.72	4.50
Small Mammal	14	0.3	---	---	---	---	0.07	0.09
Indet. Mammal	412	9.9	---	---	---	---	8.72	10.54
Chicken; *Gallus gallus*	402	9.6	21	21.7	52.5	3.2	4.57	5.52
Turkey; *Meleagris gallopavo*	83	2.0	6	6.2	45	2.7	4.24	5.13
Quail; *Colinus virginianus*	12	0.3	3	3.1	1.5	0.1	0.09	0.11
Duck; *Anas* species	43	1.0	3	3.1	6.0	0.4	0.76	0.92
Sm. Duck; *Anas* species	4	0.1	1	1.0	2.0	0.1	0.02	0.02
Goose; *Anser* species	8	0.2	2	2.1	14.0	0.8	0.51	0.62
Pigeon; *Columbidae* species	11	0.3	4	4.1	2.0	0.1	0.07	0.08
Snipe/Woodcock; *Scolopacidae*	7	0.2	2	2.1	1.0	0.1	0.02	0.02
Crow/Jay; *Covidae* species	4	0.1	2	2.1	---	---	0.02	0.02
Large Bird/Galliform	78	1.9	---	---	---	---	1.41	1.70
Medium Bird	580	13.9	---	---	---	---	2.74	3.31
Medium Bird - Immature	87	2.1	7	7.2	---	---	0.89	1.08
Small Bird	116	2.8	---	---	---	---	0.26	0.31
Indet. Bird	180	4.3	---	---	---	---	0.99	1.20
Indet. Bird - Eggshell	200	4.8	---	---	---	---	---	---
Herring; *Clupea harengus*	74	1.8	2	2.1	1.0	0.1	0.07	0.09
Shad; *Alosa sapidissima*	227	5.4	6	6.2	18.0	1.1	0.65	0.79
Striped Bass; *Morone saxatilis*	12	0.3	1	1.0	7.5	0.5	1.75	2.12
Black Sea Bass; *C. striata*	129	3.1	4	4.1	24.0	1.4	1.14	1.38
White Perch; *Morone americana*	8	0.2	1	1.0	1.0	0.1	0.05	0.06
Indet. Bass; *Serranidae*	63	1.5	---	---	---	---	0.20	0.24
Mackerel; *Scomber scombus*	21	0.5	1	1.0	4.0	0.2	0.05	0.06
Salmon; *Salmo salmar*	10	0.2	1	1.0	10.0	0.6	0.05	0.06
Bluefish; *Pomatomus saltatrix*	2	0.1	1	1.0	10.0	0.6	0.02	0.02
Tautog; *Tautoga onitis*	2	0.1	1	1.0	5.0	0.3	0.05	0.06
Lobster; *Homarus americanus*	7	0.1	2	2.1	3.0	0.2	---	---
Indet. Fish	362	8.7	---	---	---	---	0.65	0.79
Indet. Fish - Scales	349	8.4	---	---	---	---	---	---
Turtle; *Emydidae*	14	0.3	1	1.0	3.0	0.2	0.26	0.31
Turtle; *Cheludridae*	12	0.3	3	3.1	30.0	1.8	0.68	0.82
Indet. Fragments	85	2.0	---	---	---	---	---	---
TOTAL	4170	100.3	97	100.2	1665.5	100.2	82.72	100.01

Table C-19. Faunal Remains from Feature B, Level 4 (AS V, FS 35)

	NISP	% NISP	MNI	% MNI	Meat Weight	% Meat Weight	Biomass (kg)	% Bio-mass
Deer; *Odocoileus virginianus*	6	0.4	1	2.0	100.0	4.7	2.25	2.38
Deer/Sheep; *Cervid/Ovis*	6	0.4	---	---	---	---	1.21	1.28
Cow; *Bos Taurus*	110	6.7	3	6.1	1200.0	55.9	32.91	34.77
Cow-Immature; *Bos taurus*	8	0.5	1	2.0	75.0	3.5	2.50	2.64
Sheep/Goat; *Ovis/Capra*	365	22.4	10	20.4	350	16.3	33.02	34.89
Pig*; Sus scrofa*	16	1.0	3/1	8.2	350	16.3	3.52	3.72
Rabbit; *Sylvilagus floridanus*	4	0.3	1	2.0	---	---	0.03	0.03
Cat; *Felis domesticus*	47	2.9	2	4.1	---	---	0.56	0.59
Rat: *Rattus* species	86	5.3	6	1.2	---	---		
Mouse; *Mus musculus*	8	0.5	1	2.0	---	---	0.03	0.03
Medium Mammal	31	1.9	---	---	---	---	1.81	1.91
Small Mammal	3	0.2	---	---	---	---	0.39	0.41
Indet. Mammal	463	28.4	---	---	---	---	11.28	11.92
Chicken; *Gallus gallus*	90	5.5	5	10.2	12.5	0.6	1.84	1.94
Turkey; *Meleagris gallopavo*	13	0.8	2	4.1	15.0	0.7	0.59	0.62
Quail; *Colinus virginianus*	6	0.4	1	2.0	0.5	<0.1	0.02	0.02
Duck; *Anas* species	6	0.4	1	2.0	2.0	0.1	0.17	0.18
Pigeon; *Columbidae* species	5	0.3	2	4.1	1.0	<0.1	0.06	0.06
Crow/Jay; *Covidae* species	3	0.2	1	2.0	---	---	0.02	0.02
Large Bird	5	0.3	---	---	---	---	0.15	0.16
Medium Bird	104	6.4	---	---	---	---	0.59	0.62
Small Bird	21	1.3	---	---	---	---	0.14	0.15
Indet. Herring; *Clupidae* Family	17	1.0	---	---	---	---	0.03	0.03
Herring	2	0.1	1	2.0	0.5	<0.1	0.03	0.03
Shad	65	4.0	3	6.1	9.0	0.4	0.18	0.19
Atlantic Cod	10	0.6	1	2.0	10.0	0.5	0.19	0.20
Striped Bass	4	0.3	1	2.0	7.5	4.0	0.19	0.20
Black Sea Bass	8	0.5	1	2.0	6.0	0.3	0.08	0.08
Indet. Bass	15	0.9	---	---	---	---	0.25	0.26
Mackerel;	7	0.4	1	2.0	4.0	0.2	0.03	0.03
Large Flat Fish	2	0.1	1	2.0	---	---	0.38	0.40
Indet. Fish	20	1.2	---	---	---	---	0.09	0.10
Indet. Fish – Scales and Spines	51	3.1	---	---	---	---	0.10	0.11
Unidentifiable Fragments	24	1.5	---	---	---	---	---	---
TOTAL	1631	100.3	49	99.5	2143.0	100.0	94.64	99.97

Table C-20. Faunal Remains from Feature C

	NISP	% NISP	MNI	% MNI	Meat Weight	% Meat Weight	Biomass (kg)	% Biomass
Cow; *Bos Taurus*	2	10.0	1	33.3	400.0	79.6		
Pig*; Sus scrofa*	3	15.0	1	33.3	100.0	19.9		
Indet. Mammal	4	20.0	---	---	---	---		
Chicken; *Gallus gallus*	11	55.0	1	33.3	2.5	0.5		
TOTAL	20	100.0	3	99.9	502.5	100.0		

Table C-21. Faunal Remains from Feature E, AS II

	NISP	% NISP	MNI	% MNI	Meat Weight	% Meat Weight	Biomass (kg)	% Biomass
Cow; *Bos taurus*	10	0.96	1/1	6.67	175.0	43.5	2.90	15.28
Sheep/Goat; *Ovis/Capra*	11	1.06	1	3.33	35.0	8.7	1.66	6.39
Pig*; Sus scrofa*	14	1.34	1/1	6.67	150.0	37.3	0.19	0.73
Cat; *Felis domesticus*	283	27.16	4	13.33	---	---	5.38	20.73
Dog; *Canis familiaris*	45	4.32	3	10.00	---	---	1.05	4.05
Rat; *Rattus* species	8	0.77	1	3.33	---	---	0.02	<0.01
Medium Mammal	6	0.58	---		---	---	0.34	1.33
Small Mammal	11	1.06	---		---	---	0.11	0.42
Indet. Mammal	31	2.98	---		---	---	2.50	9.63
Chicken; *Gallus gallus*	425	40.79	10	33.33	25.0	6.2	6.70	26.19
Turkey; *M. gallopavo*	1	<0.01	1	3.33	7.5	1.9	0.36	1.39
Pigeon; *Columbidae* sp.	27	2.59	3	10.00	1.5	0.4	0.15	0.58
Duck; *Anas* species	1	<0.01	1	3.33	2.0	0.5	0.02	<0.01
Medium Bird	86	8.25	---		---	---	3.00	11.56
Indet. Bird	59	5.66	---		---	---	0.43	1.66
Turtle; Family *Emydinae*	24	2.30	2	6.67	6.0	1.5	0.14	0.54
TOTAL	1042	99.84	30	99.99	402.0	100.0	25.95	100.50

Table C-22. Faunal Remains from Feature E, AS III

	NISP	% NISP	MNI	% MNI	Meat Weight	% Meat Weight	Biomass (kg)	% Biomass
Cow; *Bos Taurus*	4	2.30	1	20.00	400.0	91.9	0.070	20.59
Sheep/Goat; *Ovis/Capra*	5	2.87	1	20.00	35.0	8.0	0.018	5.29
Dog; *Canis familiaris*	114	65.51	2	40.00	---	---	0.137	40.29
Medium Mammal	14	8.05	---	---	---	---	0.052	15.29
Indet. Mammal	27	15.51	---	---	---	---	0.013	3.82
Pigeon*; Columbidae* species	1	0.57	1	20.00	0.5	0.1	<0.001	0.29
Medium Bird	9	5.17	---	---	---	---	0.052	14.86
TOTAL	174	99.98	5	100.00	435.5	100.0	0.340	100.40

Table C-23. Faunal Remains from Feature G

	NISP	% NISP	MNI	% MNI	Meat Weight	% Meat Weight	Biomass (kg)	% Biomass
Cow; *Bos Taurus*	50	40.7	2	18.2	800.0	73.8		
Sheep/Goat; *Ovis/Capra*	20	16.3	2	18.2	70.0	6.5		
Pig; *Sus scrofa*	13	10.6	2	18.2	200.0	18.5		
Medium Mammal	5	4.1	---	---	---	---		
Indet. Mammal	10	8.1	---	---	---	---		
Chicken; *Gallus gallus*	4	3.3	1	9.1	2.5	0.2		
Turkey; *Meleagris gallopavo*	4	3.3	1	9.1	7.0	0.6		
Duck; *Anas* species	1	0.8	1	9.1	2.0	0.2		
Pheasant; *Phasianus colchius*	2	1.6	1	9.1	2.0	0.2		
Indet. Bird	9	7.3	---	---	---	---		
Indet. Fish	2	1.6	---	---	---	---		
Turtle; Family *Emydinae*	3	2.4	1	9.1	---	---		
TOTAL	123	100.1	11	100.1	1083.5	100.0		

Table C-24. Faunal Remains from Feature H

	NISP	% NISP	MNI	% MNI	Meat Weight	% Meat Weight	Bio-mass (kg)	% Biomass
Deer; *O. virginianus*	2	4.8	2	20.0	200.0	26.8		
Cow; *Bos taurus*	4	9.5	1	10.0	400.0	53.5		
Sheep/Goat; Ovis/Capra	4	9.5	1	10.0	35.0	4.7		
Pig; Sus scrofa	1	2.4	1	10.0	100.0	13.4		
Rat; *Rattus* species	5	11.9	2	20.0	---	---		
Medium Mammal	4	9.5	---	---	---	---		
Indet. Mammal	5	11.9	---	---	---	---		
Chicken; *Gallus gallus*	7	16.7	2	20.0	5.0	0.7		
Turkey; *Meleagris gallopavo*	2	4.8	1	10.0	7.0	0.9		
Large Bird	5	11.9	---	---	---	---		
Medium Bird	3	7.1	---	---	---	---		
TOTAL	42	100.0	10	100.0	747.0	100.0		

APPENDIX D:

MORE THAN JUST A MEAL: PALEOETHNOBOTANY OF THE INDEPENDENCE VISTOR CENTER, BLOCK 2, INDEPENDENCE MALL, PHILADELPHIA, PENNSYLVANIA

APPENDIX D.
MORE THAN JUST A MEAL: PALEOETHNOBOTANY OF THE INDEPENDENCE VISITORS' CENTER, BLOCK 2, INDEPENDENCE MALL, PHILADELPHIA, PENNSYLVANIA

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I. INTRODUCTION

John Milner Associates, Inc., under the direction of Rebecca Yamin, implemented a program of Phase III data recovery at Block 2 of Independence Mall in preparation for the construction of the Independence Visitors' Center (originally called Gateway Visitor Center). Flotation samples from nine contexts (8 dated and 1 indeterminate) from four privy features were submitted to the author for archeobotanical analysis (Table 2). Additionally, four lots of waterscreened material from three dated contexts within Feature B were submitted (Table 3).

The macroplant samples that are examined in this study are derived from four late-eighteenth- through mid-nineteenth-century privies associated with an upper-middle-class residential neighborhood located within the footprint of Independence Mall in Philadelphia, Pennsylvania. Eleven 5 liter flotation samples from four cultural features (Features B, C, E, H) were collected during Phase III data recovery for archeobotanical analysis. The privies dated to residential and commercial use of the Block 2 locality between 1790 and 1855 (on the basis of artifact dates and historical records).

The Block 2 project area (originally Tax Block 1600 in the Sixth Ward of the City of Philadelphia) was one of the original city blocks platted by Thomas Holme for William Penn when Philadelphia was established in 1683. The original plat indicates that the block measured 396 feet by 660 feet. William Hudson (merchant and future Philadelphia mayor) purchased the tract bordered by High Street, North Fifth Street, North Sixth Street, and Mulberry (later Arch) Street by 1714. The block was as-yet undeveloped when Hudson died in 1742. Hudson left the parcel to his wife, Hannah, with the stipulation that it be divided into 23 lots for future development. After her death in 1759 at the age of 99, the Block 2 locality began to experience initial development. William Hudson, Jr. had his residence on the block at this time; however, the remainder of the parcel was being used for pasture.

The parcel was first surveyed for building lots in 1759. As of 1762, the only structures on the block were a pair of frame houses. At this time, the Hudson heirs sold the property to developers, and residences and businesses began to spring up. The Block 2 project area was appealing to tradesmen, artisans, and small shopkeepers because of its central location within the city and the growing importance of Philadelphia as an economic center in the Delaware Valley. Initial development of the project locality in the 1760s consisted of residences of artisans such as a coachmaker and baker, who located their homes and businesses along Sixth Street. John Garrigues purchased eight lots between 1760 and 1770.

The Block 2 locality was fully developed by the 1790s. The configuration of the lots as it was manifested in the 1790s was stable over time. The same properties, and many of the same structures, were still in use in the 1830s. During the 1790s, the Block 2 locality was largely populated by well-to-do owner occupants (artisans and tradesmen) who built substantial houses on High (later Market) Street. Occupants of the locality at this time included physicians, an ironmonger, a cooper, a tailor, a notary, an accountant, and well-to-do merchants. Two privies (Feature B, Level 8, and Feature E, Levels 4/5) associated with the 1790s occupation were sampled for macroplant remains. The Feature B privy, which was located at 225 Market Street, was associated with the residence of Caspar Wistar, a well-to-do merchant who occupied the property at this time. Wistar, a doctor, was wealthy and influential in eighteenth-century Philadelphia. Plant food remains associated with Wistar's ownership of this property bear witness to his high-status lifestyle. Wistar's tenancy was short lived, and it is possible that other elite families contributed to this deposit.

The Feature E privy was associated with a residence located at the southeast corner of South Alley. During the 1790s, this privy was used by the household of an accountant, William Simmons. Simmons was apparently not married when he lived in Philadelphia; he was a workaholic and lived a simple, uncluttered life. The simplicity of his lifestyle is reflected in the artifact assemblage recovered from Feature E, which consisted of extremely plain china. The macroplant assemblage associated with Simmons's ownership of this property is also reflective of the simplicity of his lifestyle and diet.

The nature of occupation of the project area began to change in the early 1800s. Market Street was transformed from a fashionable residential street to a business thoroughfare in the first quarter of the nineteenth century. Occupancy of Block 2 became more mixed during this time. Two layers of the Feature B privy (Levels 6, 7) date to the 1820s to 1830s. The 225 Market address was occupied in the 1820s by the household and business of Adam and William Everly, two well-to-do merchants who manufactured and marketed plain and fancy combs. Plant food remains associated with the Everly occupation are reflective of these merchants' wealth and status.

By the early 1840s, residential occupation of Block 2 had decreased markedly, and much of the land use was exclusively commercial. This mixed commercial and residential use of Block 2 extended from the 1840s until 1856, when a massive fire destroyed over 44 buildings in the project area. At this time, features and yardlots associated with the ca. 1790 through 1855 occupation were capped, and the Block 2 locality was rebuilt as an exclusively commercial district. Most of the mid-nineteenth-century buildings were demolished in 1953 prior to the construction of Independence Mall.

Four privy deposits are associated with the commercial occupation of Block 2 from D (1840 to 1855). These consist of Feature B, Level 4 (225 Market, ca. 1850 deposit), Feature E, Level 3 (corner of South Alley, ca.1845-1855 deposit), Feature C, Level 4 (ca. 1842), and Feature H (ca. 1845-1855). Presumably, macroplant remains deposited within these mid-nineteenth-century contexts were primarily associated with business owners and their employees who worked at the addresses where these features were located. Macroplant assemblages associated with this time period are certainly lacking in diversity and indicators of a rich, leisurely diet such as fancy nuts and exotic imports (coconuts, English walnuts, olives, peanuts). Macroplant remains associated with mid-nineteenth-century commercial use of Block 2 consist of a limited array of fruits, vegetables, and condiments that are probably reflective of midday meals eaten at these addresses by owners and their employees.

The primary objectives of the archeobotanical analysis are to examine subsistence patterns, fuel-use practices, and land-use practices of the late-eighteenth- through mid-nineteenth-century inhabitants. Key research questions are the following:

(1) Do patterns of plant use change over time?
(2) Are there differences in diet and other plant use between affluent owner-occupants who initially lived in the neighborhood and middle-class businessmen and their employees who occupied the project locality in the mid-nineteenth century?
(3) Does the macroplant assemblage provide evidence of home gardening, gathering of locally available wild plants on the lots, and/or ornamental plantings on the lots?
(4) Were plant foods purchased at local markets or produced at home (grown in gardens, stored through home canning, etc.)?

(5) What patterns of fuel use are manifested in the macroplant assemblage? Does the macroplant assemblage offer evidence of what the local environment was like?

II. PROCEDURES OF ANALYSIS

PROCESSING TECHNIQUES

Eleven 5-liter soil samples from four features (9 dated contexts) were floated by John Milner Associates, Inc., staff members. The samples were subjected to machine-assisted water separation in a Shell Mound Archaeological Project (SMAP)-type flotation machine (Pearsall 1989; Watson 1976). The heavy-fraction insert of the system was screened with 0.8-mm mesh. Additionally, four lots of macroplant remains from four contexts (Appendix A) were waterscreened through 1/16-inch mesh.

LABORATORY PROCEDURES

In the laboratory, each floated light fraction was weighed and then passed through nested geologic sieves (4.0 mm, 2.0 mm, 1.0 mm, 0.71 mm, 0.5 mm). Each size-graded light fraction was fully sorted under low magnification (6-25x). All of the material that was greater than 2.0 mm was pulled from the sample matrices and was quantified by material type, weight, and count. Material that was smaller than 2.0 mm was sorted, but only charred and uncharred seeds were removed. The greater-than-2.0-mm fraction of each of the 11 floated heavy fractions was sorted in order to verify the flotation separation, which was verified as excellent.

Identifications were attempted on greater-than-2.0-mm wood charcoal fragments from every sample. Whenever possible, wood specimens were identified to genus. Segments that were too fragmentary or poorly preserved to identify specifically were placed in the more general categories of ring porous hardwood, diffuse porous hardwood, and indeterminate hardwood. Wood taxa were identified by comparison with charred and natural transverse, tangential, and radial thin sections of modern wood, as well as textbook illustrations. The transverse view was emphasized due to magnification limitations, size of the specimens, and time constraints. As needed, dichotomous keys were employed. Since these are geared toward fresh wood, they are of limited use, but by employing both the microscopic and macroscopic keys, following multiple paths, and referring frequently to the comparative collection, a genus can generally be determined.

ANALYTICAL PROCEDURES

Four comparison ratios (species ubiquity, species richness, species density, relative proportions of identified wood) were utilized to study the macroplant remains. The analytical procedures of species ubiquity, richness, and density were employed to study the seed assemblage. In ubiquity analysis, the occurrence of each plant type is expressed as a percentage of the total number of proveniences in which a particular taxon is present. This measure ascribes equal weight to the physical presence of a given taxon, regardless of the abundance of that plant type in a particular sample. Therefore, a sample that contains one seed of a given taxon is equivalent to a sample containing several hundred of the same seed. This offers a way to assess the relative importance of various plant species and gives an indication of how common each plant type is at the site. Ubiquity analysis is used in the analysis of plant food remains to assess the relative importance and meaning of the seed assemblage.

The richness of the macroplant assemblage from the Block 2 privies was calculated and graphically displayed to compare and contrast dietary richness of the occupants of the Block 2 with the eighteenth- and nineteenth-century diet of high- and low-income individuals from other urban settings. This was accomplished by counting the number of plant taxa recovered from eight

strata within four privies at Block 2 and 38 privies from other eighteenth- and nineteenth-century urban sites, and organizing the plant data by presumed economic importance of each plant taxon.

The analytical procedure of Species Density was used to quantify the macroplant remains associated with each temporal unit. Species Density measures the count or weight of a plant taxon per liter of processed soil. This measure allows a comparison of the relative densities of different plant taxa and is useful for standardizing raw-count/weight data. In this study, density measures were used to calculate the count density of each category of macroplant remains based on presumed economic importance and the entire seed assemblage from each temporal component per liter of floated soil.

Finally, the relative proportions of each identified wood charcoal taxon associated within each temporal component of each feature and the entire population of sampled features are presented. These data allow an assessment of differential wood use at this eighteenth-through nineteenth-century urban occupation. The macroplant remains recovered during this analysis are summarized in Tables 1 through 10 and Figures 1 and 2. The Latin nomenclature, principal uses, and habitats of the macroplant assemblage are presented in Table 1. Macroplant remains other than wood charcoal recovered from the flotation and waterscreened samples are presented in Tables 2 through 4.

The identified wood charcoal assemblage is presented in Tables 5 and 6. Wood charcoal counts are tabulated in Table 5. The relative proportions of the entire identified wood charcoal assemblage from flotation samples, including indeterminate hardwoods (indeterminate hardwood, ring porous, diffuse porous) and specifically identified wood fragments, are presented in Table 6. Percentage values presented in this table list each taxon as a percentage of all identified wood fragments.

The total number of seeds associated with each economic plant category is in Table 7. The relative proportions of economically important plant categories are presented in Table 8. The counts and species density (expressed as number of seeds per liter) of plant remains associated with each time period are presented in Tables 9 and 10. The ubiquity of all plant taxa is graphically displayed in Figures 1 (overall ubiquity) and 2 (ubiquity of plant remains associated with early [1790-1830] and late [1842-1855] occupations of Block 2). Finally, the burning characteristics of common fuelwoods are presented in Table 11.

Table 1. Common Names, Latin Nomenclature, and Economic Uses of Block 2 Macroplant Assemblage.

Major Use	Common Name	Scientific Name	Family	Vegetative Type	Major Use	Edible	Edible Part	Medicinal	Ornamental
Exotic	Coconut	*Cocos nucifera*	Palmaceae	Tree	Vegetable	X	Nut		
Exotic	Coffee Bean	*Coffea arabica*	Rubiaceae	Shrub	Beverage	X	Bean	X	
Exotic	English Walnut	*Juglans regia*	Juglandaceae	Tree	Edible nut	X	Nut	X	
Exotic	Olive	*Olea europaea*	Oleaceae	Shrub/Tree	Oil, snack	X	Fruit	X	
Exotic	Peanut shell	*Arachis hypogaea*	Fabaceae	Domesticate	Vegetable	X	Seed	X	
Condiment	Coriander	*Coriandrum sativum*	Apiaceae	Annual herb	Condiment	X	Greens, Spice	X	X
Condiment	Mustard	*Brassica sp.*	Cruciferae	Annual/perennial herb	Condiment	X	Greens, Spice	X	
Condiment	Pepper	*Capsicum annuum*	Solanaceae	Annual herb	Condiment	X	Spice, vegetable	X	
Condiment	Sage	*Salvia sp.*	Labiatae	Perennial herb	Condiment	X	Seasoning, meat	X	X
Fruit	Apple	*Malus pumila*	Rosaceae	Small tree	Fruit	X	Fruit	X	X
Fruit	Blackberry/Raspberry	*Rubus sp.*	Rosaceae	Shrub	Fruit	X	Fruit	X	
Fruit	Blueberry	*Vaccinium sp.*	Ericaceae	Shrub	Fruit	X	Fruit	X	X
Fruit	Canteloupe/Muskmelon	*Cucumis sp.*	Cucurbitaceae	Domesticate	Fruit	X	Fruit	X	
Fruit	Cherry	*Prunus sp.*	Rosaceae	Small tree	Fruit	X	Fruit	X	X
Fruit	Possible Chokeberry	*Aronia sp.*	Rosaceae	Shrub	Fruit`	x	Fruit (jelly)		X
Fruit	Elderberry	*Sambucus canadensis*	Caprifoliaceae	Shrub	Fruit	X	Fruit	X	X
Fruit	Fig	*Ficus sp.*	Moraceae	Shrub	Fruit	X	Fruit	X	
Fruit	Grape	*Vitis sp.*	Vitaceae	Vine	Fruit	X	Fruit	X	
Fruit	Huckleberry	*Gaylussacia sp.*	Ericaceae	Shrub	Fruit	X	Fruit	X	
Fruit	Mulberry	*Morus rubra*	Moraceae	Small tree	Fruit	X	Fruit	X	X
Fruit	Peach	*Prunus persica*	Rosaceae	Small tree	Fruit	X	Fruit	X	
Fruit	Persimmon	*Diospyros virginiana*	Ebenaceae	Tree	Fruit	X	Fruit, leaves	X	X
Fruit	Plum	*Prunus sp.*	Rosaceae	Small tree	Fruit	X	Fruit	X	X
Fruit	Strawberry	*Frageria sp.*	Rosaceae	Herb	Fruit	X	Fruit	X	
Fruit	Watermelon	*Citrullus vulgaris*	Cucurbitaceae	Domesticate	Fruit	X	Fruit	X	
Vegetable	Ground Cherry	*Physalis sp.*	Solanaceae	Domesticate	Vegetable	X	Fruit	X	
Vegetable	Squash	*Cucurbita sp.*	Cucurbitaceae	Domesticate	Vegetable	X	Fruit	X	
Vegetable	Sunflower	*Helianthus sp.*	Compositae	Domesticate	Vegetable	X	Grain	X	X
Vegetable	Tomato	*Lycopersicon esculentum*	Solanaceae	Domesticate	Vegetable	X	Fruit		
Vegetable	Wheat	*Triticum aestivum*	Gramineae	Domesticate	Vegetable	X	Grain		

Nut	Acorn Shell	*Quercus sp.*	Fagaceae	Tree	Nut	X	Nutmeat	X	X
Nut	Black Walnut	*Juglans nigra*	Juglandaceae	Tree	Nut	X	Nutmeat	X	X
Nut	Hazelnut	*Corylus sp.*	Betulaceae	Tree	Nut	X	Nutmeat		X
Nut	Hickory/Pecan Shell	*Carya sp.*	Juglandaceae	Tree	Nut	X	Nutmeat	X	X
Edible Herb	Clover	*Trifolium sp.*	Fabaceae	Perennial herb	Edible Herb	X	Leaf, flower, seed	X	
Edible Herb	Dock	*Rumex sp.*	Polygonaceae	Annual/perennial herb	Edible Herb	X	Greens	X	
Edible Herb	Goosefoot	*Chenopodium sp.*	Chenopodiaceae	Annual herb	Edible Herb	X	Greens, Seeds	X	
Edible Herb	Knotweed	*Polygonum sp.*	Polygonaceae	Annual/perennial herb	Edible Herb	X	Greens, Seeds	X	X
Edible Herb	Pigweed	*Amaranthus sp.*	Amaranthaceae	Annual herb	Edible Herb	X	Greens, Seeds	X	X
Edible Herb	Pokeweed	*Phytolacca americana*	Phytolaccaceae	Perennial herb	Edible Herb	X	Greens	X	
Ornamental	Bottle Gourd Seed	*Lagenaria sp.*	Cucurbitaceae	Domesticate	Container				
Ornamental	Tupelo	*Nyssa sp.*	Nyssaceae	Shrub/Tree	Ornamental	X	Acidic fruit	X	X
Ornamental	Gray Dogwood	*Cornus racemosa*	Cornaceae	Shrub	Ornamental				X
Weed	Jimsonweed	*Datura stramonium*	Solanaceae	Annual herb	Weed			X	X
Weed	Nightshade	*Solanum sp.*	Solanaceae	Weed				X	
Weed	Ragweed	*Ambrosia sp.*	Compositae	Annual/perennial herb	Weed			X	
Weed	Sumpweed	*Iva xanthifolia*	Asteraceae	Annual/perennial herb	Weed				
Weed-Grass	Grass Family	Gramineae	Gramineae	Grass	Grass				
Unknown-Other	c.f. *Medicago*								
Unknown-Other	Unidentifiable charred frag.								
Unknown-Other	Unidentifiable fragment								
Unknown-Other	Unknown								

Table 2. Macroplant Remains from Flotation Samples (Count).

	Stratum	ASI	ASI/II	ASII	ASII	ASI	ASII	ASI	ASV	ASIV	
	Age	1790	1790	1820	1830	1842	1845-55	1845-55	1850	?	
	Sample Number	41	51/52	39/40	38	46	50	64	35	36	
	Feature	B	E	B	B	C	E	H	B	B	
	Level	8	4/5	7, 7.1	6	4	3		4	5	Total
Fruit											
	Apple	18		21	125		1	27	4		196
	Blackberry/Raspberry	1000	3940	1778	664	1438	1248	1168	1484	8	12728
	Blueberry	1568		234	128			689			2619
	Cherry	85		107				18			210
	Possible Chokeberry	23	28	7	48	8		22	28		164
	Elderberry		207	8	15		36		68		334
	Fig	620	7	836	487	652	1	687	216		3506
	Grape	26	4	70	263	4		66	83	1	517
	Huckleberry	60		55	48			56	4		223
	Cantaloupe/Muskmelon			4	54			25			83
	Mulberry							8			8
	Peach	3		1							4
	Persimmon			1							1
	Plum	17		6							23
	Strawberry	948	4	585	1123	55	7	3213	32	1	4957
	Watermelon	25		25	3			3			56
	Subtotal:	4393	4190	3738	1947	2157	1293	5982	1919	10	25629
Condiment											
	Coriander			1	11			4			16
	Mustard	12		2		2					16
	Pepper	8		14	91			4			117
	Sage				1						
	Subtotal:	20		17	103	2		8			149
Vegetable											
	Ground Cherry			3							3
	Squash	2		1	8			2			13
	Sunflower	1									1
	Tomato			24	59	106		1207			1396
	Wheat (ch)		8				1				9
	Subtotal:	3	8	28	67	106	1	1209			1422
Ornamental Tree											
	Gray Dogwood			1							1
	Subtotal:			1							1
Nut-Bearing Shade Tree											
	Hazelnut	4									4
	Black Walnut	1									1
	Hickory			2							2
	Oak Acorn			1							1
	Subtotal:	5		3							8
Edible Herb											
	Clover		9								9
	Dock (ch)		4	2			1				7
	Goosefoot						1		4		5
	Goosefoot (album)			4							4

	Knotweed	4		2							6
	Pigweed	32		3							35
	Pokeweed	4		1							5
	Subtotal:	40	13	12			2		4		71
Herbaceous Weed/Grass											
	Jimsonweed								8	1	9
	Nightshade	3									3
	Ragweed	4		4	3						11
	Sumpweed	4		1							5
	Grass Family		16			3					19
	Subtotal:	11	16	5	3	3			8	1	47
Other											
	C.f. Medicago										
	Unid. Fragment (ch)									1	1
	Unid. Fragment		3								3
	Unknown	2		1		3		2			8
	Subtotal:	2	3	1		3		2		1	12
	Total:	4474	4230	3805	2120	2271	1296	7201	1931	12	27339

Table 3. Macroplant Remains from Block 2 Waterscreened Samples (Count).

	Stratum	ASI	ASII	ASIII	
	Age	1790	1820	1830	
	Feature	B	B	B	
	Level	8	7/7.1	6	Total
Exotic	Coconut Husk		3	40	43
Exotic	Coffee Bean			1	1
Exotic	English Walnut Shell	19		38	57
Exotic	Olive			2	2
Exotic	Peanut Shell	7	2	80	89
	Total:	26	5	161	192
Fruit	Apple	5	1	93	99
Fruit	Cherry	318	303	2720	3341
Fruit	Cantaloupe/ Muskmelon	9	3	160	172
Fruit	Grape	53	3	160	216
Fruit	Peach	32	63	169	264
Fruit	Persimmon	1	2	92	95
Fruit	Plum	42	32	353	427
Fruit	Watermelon	50			50
	Total:	510	407	3747	4664
Vegetable	Squash/ Pumpkin	2	29	800	831
Vegetable	Pumpkin		2	102	104
	Total:	2	31	902	935
Nutshell	Acorn Shell	5	2	42	49
Nutshell	Black Walnut Shell	7	7	36	50
Nutshell	Hazelnut Shell	11	8	95	114
Nutshell	Hickory Shell		6	77	83
Nutshell	Pecan Shell	3		11	14
	Total:	26	23	261	310

Edible Herb	Smartweed	1			1
Ornamental	Bottle Gourd			1	1
Ornamental	Tupelo			1	1
	Total:			2	2
Other	Pine Cone Scale			1	1
Other	Stem		1	1	2
Other	Desiccated Fruit Skin			5	5
Other	Unknown	15	2	13	30
	Total	580	469	5093	6142

Table 4. Macroplant Remains from Flotation and Waterscreened Samples (Presence/Absence).

	Stratum	ASI	ASI/II	ASII	ASIII	ASI	ASII	ASI	ASV	ASIV	
	Age	1790	1790	1820	1830	1842	1845-55	1845-55	1850	?	
	Sample Number	41	51/52	39/40	38	46	50	64	35	36	
	Feature	B	E	B	B	C	E	H	B	B	
	Level	8	4/5	7, 7.1	6	4	3		4	5	Total
Exotic											
	Coconut			X	X						
	Coffee Bean				X						
	English Walnut	X			X						
	Olive				X						
	Peanut Shell	X		X	X						
Fruit											
	Apple	X		X	X		X	X	X		X
	Blackberry/Raspberry	X	X	X	X	X	X	X	X	X	X
	Blueberry	X		X	X			X			X
	Cherry	X		X	X			X			X
	Possible Chokeberry	X	X	X	X	X		X	X		X
	Elderberry		X	X	X		X		X		X
	Fig	X	X	X	X	X	X	X	X		X
	Grape	X	X	X	X	X		X	X	X	X
	Huckleberry	X		X	X			X	X		X
	Cantaloupe/Muskmelon	X		X	X			X			X
	Mulberry							X			X
	Peach	X		X	X						X
	Persimmon	X		X	X						X
	Plum	X		X	X						X
	Strawberry	X	X	X	X	X	X	X	X	X	X
	Watermelon	X		X	X			X			X
Condiment											
	Coriander			X	X			X			X
	Mustard	X		X		X					X
	Pepper	X		X	X			X			X
	Sage				X						
Vegetable											
	Ground Cherry			X							X
	Squash	X		X	X			X			X
	Sunflower	X									X
	Tomato			X	X	X		X			X
	Wheat (ch)		X				X				X
Ornamental											
	Bottle Gourd				X						
	Tupelo				X						
	Gray Dogwood			X							X
Nut-Bearing Shade Tree											
	Hazelnut	X		X	X						X
	Black Walnut	X		X	X						X
	Hickory			X	X						X
	Oak Acorn			X	X						X
	Pecan	X			X						
Edible Herb											
	Clover		X								X
	Dock (ch)		X	X			X				X
	Goosefoot						X		X		X
	Goosefoot (album)			X							X
	Knotweed	X		X							X
	Pigweed	X		X							X
	Pokeweed	X		X							X
Herbaceous Weed/Grass											
	Jimsonweed								X	X	X
	Nightshade	X									X
	Ragweed	X		X	X						X
	Sumpweed	X		X							X
	Grass Family		X			X					X
Other											
	C.f. Medicago										
	Unid. Fragment (ch)									X	X
	Unid. Fragment		X								X
	Unknown	X		X		X		X			X

Table 5. Wood Charcoal from Flotation Samples.

Stratum	ASV	ASIV	ASIII	ASII	ASII	ASI	ASI	ASI	ASII	ASII	ASI	
Age	1850	?	1830	1820	1820	1790	1842	1845-55	1845-55	1790	1790	
Sample Number	35	36	38	39	40	41	46	64	50	51	52	
Feature	B	B	B	B	B	B	C	H	E	E	E	
Level	4	5	6	7	7.1	8	4		3	4	5	Total
Unidentifiable		3					2					5
Indeterminate Hardwood	4		2			2			5	1		14
Oak	2											2
Red Oak	7		3	12	8	8			6	5	2	51
White Oak	1		4	3	7	7				2		24
Hickory	5		1	1	8	10			2	8		35
Elm/Hackberry									1			1
American Basswood				1	1	1						3
Dogwood					1							1
Maple				2								2
Pine	1			1	1				1	4		8
Total	20	3	10	20	26	28	2		15	20	2	146

Table 6. Relative Proportions of Identifiable Wood Charcoal.

Stratum	ASV	ASIV	ASIII	ASII	ASII	ASI	ASI	ASI	ASII	ASII	ASI	
Age	1850	?	1830	1820	1820	1790	1842	1845-55	1845-55	1790	1790	
Sample Number	35	36	38	39	40	41	46	64	50	51	52	
Feature	B	B	B	B	B	B	C	H	E	E	E	
Level	4	5	6	7	7.1	8	4		3	4	5	Total
Indeterminate Hardwood	20.0%		20.0%						33.3%	5.0%		9.9%
Oak	10.0%											1.4%
Red Oak	35.0%		30.0%	60.0%	30.8%	7.1%			40.0%	25.0%	100.0%	36.2%
White Oak	5.0%		40.0%	15.0%	26.9%					10.0%		17.0%
Hickory	25.0%		10.0%	5.0%	30.8%	28.6%			13.3%	40.0%		24.8%
Elm/Hackberry						25.0%			6.7%			0.7%
American Basswood				5.0%	3.8%	35.7%						2.1%
Dogwood					3.8%							0.7%
Maple				10.0%		3.6%						1.4%
Pine	5.0%			5.0%	3.8%				6.7%	20.0%		5.7%
Total	100.0%	NA	100.0%	100.0%	100.0%	100.0%	NA	NA	100.0%	100.0%	100.0%	100.0%

Table 7. Total Macroplant Remains (Floats and Waterscreens) by Economic Category.

Stratum	ASI	ASI/II	ASII	ASIII	ASI	ASII	ASI	ASV	ASIV	
Age	1790	1790	1820	1830	1842	1845-55	1845-55	1850	?	
Feature	B	E	B	B	C	E	H	B	B	
Level	8	4/5	7/7.1	6	4	3		4	5	Total
Exotics (5 taxa)	161		5	26						192
Fruits (16 taxa)	4903	4190	4145	5694	2157	1293	5982	1919	10	30293
Condiments (4 taxa)	20		17	103	2		8			150
Vegetables (5 taxa)	5	8	59	969	106	1	1209			2357
Ornamental Trees (3 taxa)			1	2						3
Nut-Bearing Shade Trees (4 taxa)	31		26	261						318
Edible Herbs (6 taxa)	40	13	12			2		4		71
Weeds/Grasses (4 taxa)	11	16	5	3	3			8	1	47
Total (47 taxa):	5171	4227	4270	7058	2268	1296	7199	1931	11	33431

Table 8. Relative Proportions of Each Economic Plant Category.

Sample Number	41	51/52	39/40	38	46	50	64	35	36	
Feature	B	E	B	B	C	E	H	B	B	
Level	8	4/5	7/7.1	6	4	3		4	5	Total
Exotics (5 taxa)	3.1%		0.1%	0.4%						0.6%
Fruits (16 taxa)	94.8%	99.1%	97.1%	80.7%	95.1%	99.8%	83.1%	99.4%	90.9%	90.6%
Condiments (4 taxa)	0.4%		0.4%	1.5%	0.1%		0.1%			0.4%
Vegetables (5 taxa)	0.1%	0.2%	1.4%	13.7%	4.7%	0.1%	16.8%			7.1%
Ornamental Trees (3 taxa)			0.02%	0.03%						0.0%
Nut-Bearing Shade Trees (4 taxa)	0.6%		0.6%	3.7%						1.0%
Edible Herbs (6 taxa)	0.8%	0.3%	0.3%			0.2%		0.2%		0.2%
Weeds/Grasses (4 taxa)	0.2%	0.4%	0.1%	0.04%	0.1%			0.4%	9.1%	0.1%
Total (47 taxa):										

Table 9. Macroplant Remains from Each Time Period.

Age	1790	1820-1830	1842-1855	?	
Feature	B/E	B	B/E/H	ASIV	Total
Volume	15	15	20	5	55
Fruit	8583	5685	11351	10	25629
Condiment	20	120	10		149
Vegetable	11	95	1316		1422
Ornamental Tree		1			1
Nut-Bearing Shade Tree	5	3			8
Edible Herb	53	12	6		71
Herbaceous Weed/Grass	27	8	11	1	47
Total:	8699	5924	12694	11	27327

Table 10. Density (No. Seeds per Liter) of Macroplant Remains from Each Time Period.

Age	1790	1820-1830	1842-1855	?	
Feature	B/E	B	B/E/H	ASIV	Total
Volume	15	15	20	5	55
Fruit	572.20	379.00	567.55	2.00	244.09
Condiment	1.33	8.00	0.50		1.42
Vegetable	0.73	6.33	65.80		13.54
Ornamental Tree		0.07			0.01
Nut-Bearing Shade Tree	0.33	0.20			0.08
Edible Herb	3.53	0.80	0.30		0.68
Herbaceous Weed/Grass	1.80	0.53	0.55	0.20	0.45
Total:	579.93	394.93	634.70	2.20	260.26

Table 11. Burning Characteristics of Common Woods.

Taxon	Weight Per Cord (lbs)	BTU's Per Cord (mil-lions)	Recoverable BTU's per Cord (millions)	Heat	Ease of Starting	Coaling Qualities	Sparks	Smoke	Overall Quality
Hickory	4327	27.7	19.39	Very High	Fair-Difficult	Excellent	Moderate	Low	Excellent
Apple	4100	26.5	18.55	High-Medium	Difficult	Excellent	Few	Low	Excellent
White Oak	4012	25.7	17.99	Very High	Difficult	Excellent	Few	Low	Excellent
Sugar Maple	3757	24	16.8	High	Difficult	Excellent	Few	Low	Excellent
Red Oak	3757	24	16.8	High	Difficult	Excellent	Few	Low	Excellent
Beech	3757	24	16.8	High	Difficult	Excellent	Few		Excellent
Yellow Birch	3689	23.6	16.52	High-Medium	Easy	N/A	Moderate		Excellent
White Ash	3689	23.6	16.52	High	Fair-Difficult	Good	Few	Low	Excellent
Red Maple	2924	23.2	13.09	High-Medium	Fair-Difficult	Excellent	Few	Low	Excellent
Hackberry	3247	20.8	14.56	High	Unknown	Good	Few	Low	Good
Paper Birch	3179	20.3	14.21	Medium	Easy	Good	Moderate	Medium	Fair
Cherry	3121	20	14	Medium	Difficult	Excellent	Few	Low	Good
Sycamore	3300	19.5		Medium	Fair	N/A	Few	Medium	Good
Elm	3052	19.5	13.65	Medium	Fair	Good	Very Few	Medium	Good
Black Ash	2992	19.1	13.37	High	Fair-Difficult	Good	Few	Low	Good
Yellow Pine	2610			High-Medium	Easy	Fair	Moderate		Fair
Poplar	2080	18		Low	Easy	Fair	Moderate		Fair
Hemlock	2482	15.9	11.13	Medium-Low	Easy	Poor	Many		Fair
Black Spruce	2482	15.9	11.13	Low	Easy	Poor	Many	Medium	Fair
Ponderosa Pine	2380	15.2	10.64	Medium-Low	Easy	Fair	Moderate	Medium	Fair
Aspen	2290	14.7	10.29	Low	Easy	Good	Few		Fair
White Pine	2236	14.3	10.01	Medium-Low	Easy	Poor	Moderate	Medium	Fair
Balsam Fir	2236	14.3	10.01	Low	Easy	Fair	Moderate	Medium	Fair
Cottonwood	2108	13.5	9.45	Low	Easy	Good	Moderate	Medium	Fair
Basswood	2108	13.5	9.45	Low	Easy	N/A	Few	Medium	Fair

References: Oregon Department of Agriculture Website-Fuelwood Characteristics; Cooperative Extension, Institute of Agriculture and Natural Resources, University of Nebraska, Lincoln Website-Heating with Wood; Sims 1981;

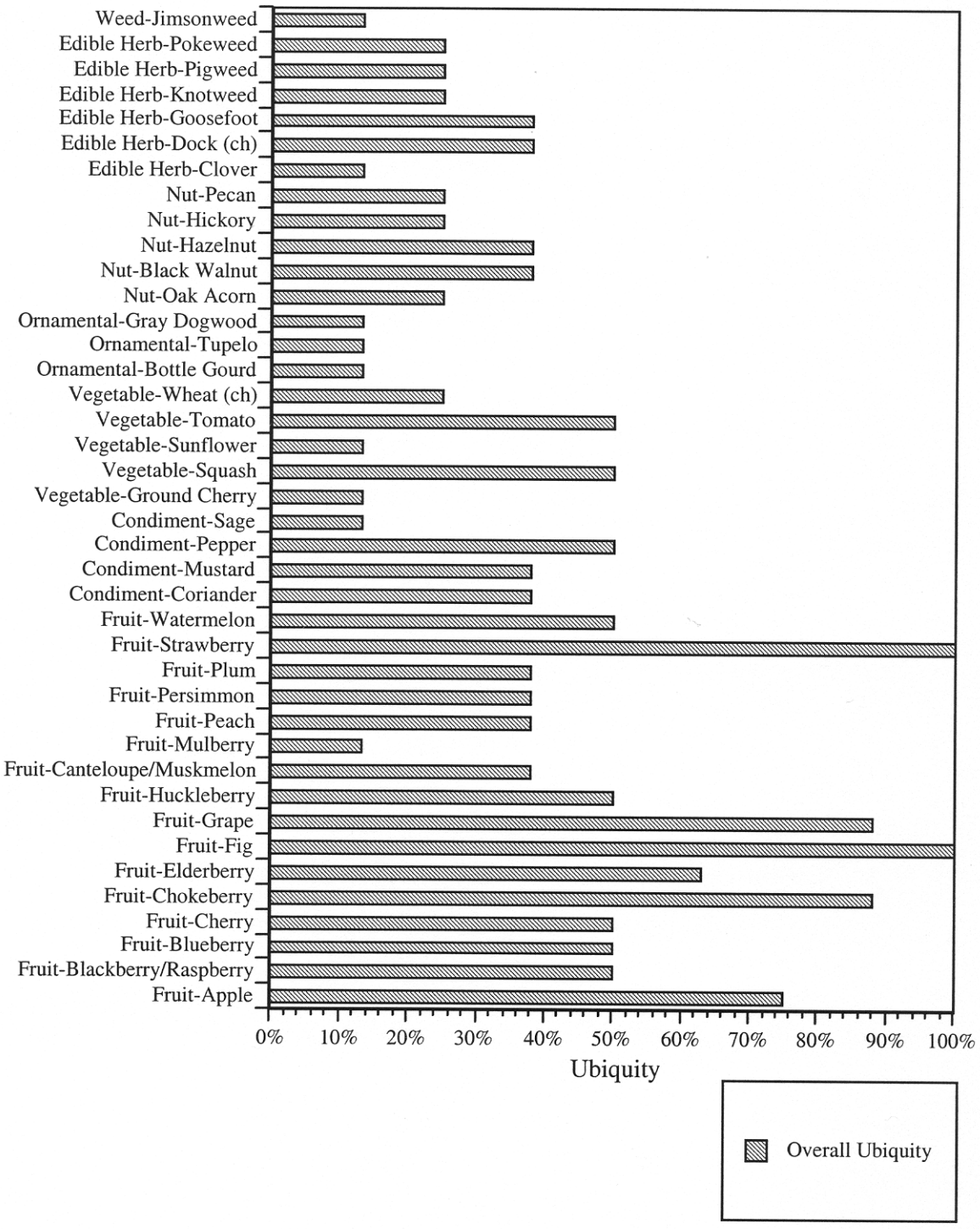

Figure 1. Overall Ubiquity of Gateway Macroplant Assemblage.

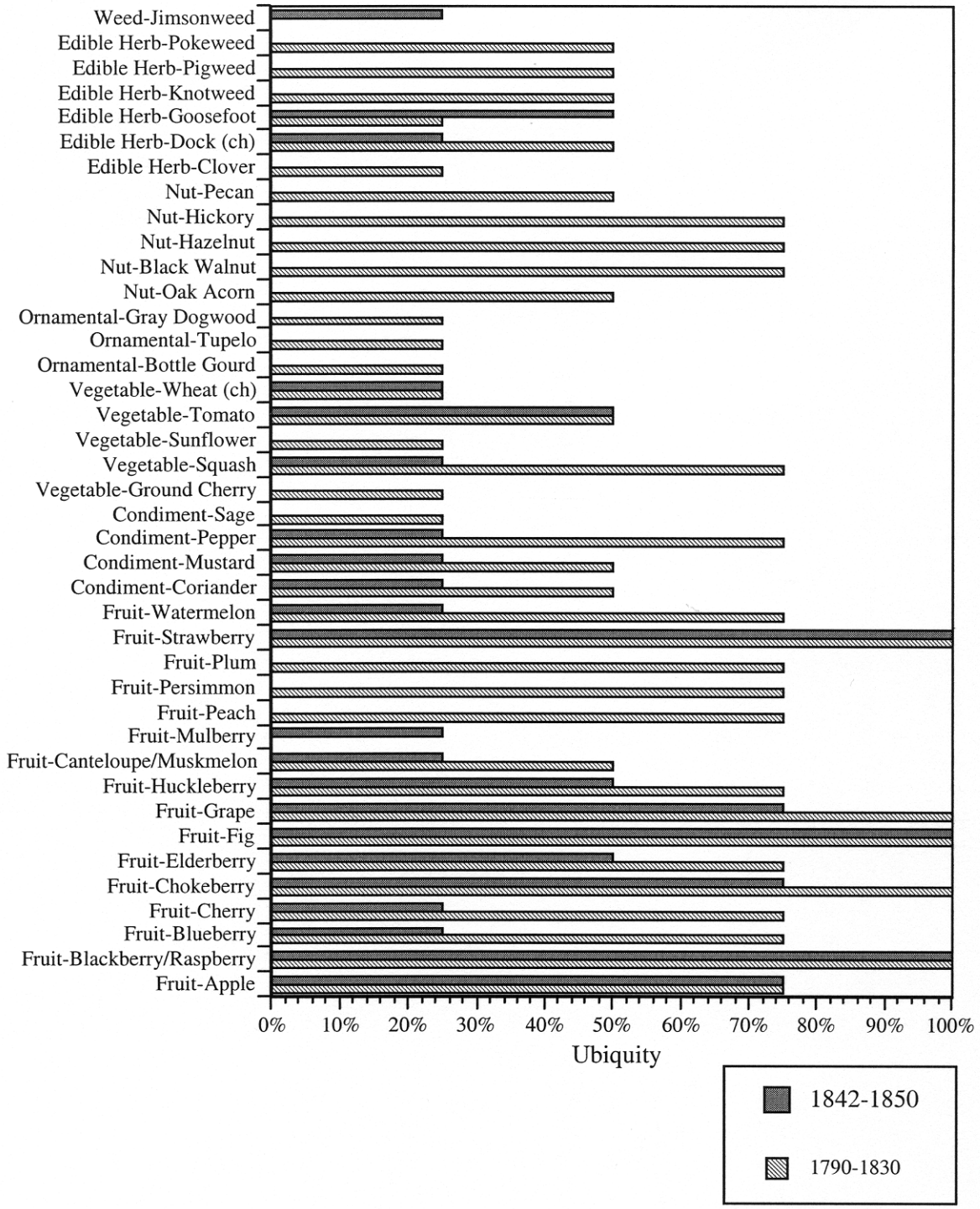

Figure 2. Ubiquity of Gateway Macroplant Assemblage from Early and Late Occupations.

III. MACROPLANT ANALYSIS AND INTERPRETATION

OVERALL RECOVERY

The recovery of macroplant remains was excellent and provided important clues about changes in plant use over time, subsistence practices, patterns of fuel use, and changes in the local ecology. Macroplant remains recovered through flotation included minor quantities of wood charcoal, 8 unknown seeds, 4 unidentifiable seeds, and 27,327 specifically identifiable seeds and other reproductive structures (nutshell, cucurbit rind). This recovery yields an overall count density of 260 seeds per liter of floated soil (see Table 10). Identifiable macroplant remains consisted of 8 fragments of nutmast and 27,319 seeds and fruit pits (Table 2). The wood charcoal probably originated from a variety of sources, including household fuel from heating and cooking fires. Other remains found in the flotation samples included a variety of small artifacts and abundant zooarcheological remains (discussed elsewhere in this report).

Macroplant remains recovered through waterscreening produced 30 unknown seeds, 1 pine cone scale, 2 stems, 5 fragments of desiccated fruit skins, and 6,104 specifically identifiable seeds and other reproductive structures (nutshell, coconut husk). Identifiable macroplant remains consisted of 367 fragments of nutmast, 43 fragments of coconut husk, 89 peanut shells, and 5,605 seeds and fruit pits (Table 3). Eight macroplant taxa were found exclusively in the waterscreened samples from the 1790 through 1830 deposits in Feature B. They consist of all of the exotics (coconut, coffee bean, English walnut, olive, peanut shell), all of the pumpkin seeds, the bottle gourd, and tupelo seeds. Exotics are likely underrepresented in the ca. 1850 Feature B context and Features C, E, and H, since no waterscreened samples were collected from these contexts.

The macroplant assemblage is diverse as well as abundant. Forty-eight categories of seeds and other plant parts were identified and include 5 exotic imports, 5 vegetables, 16 fruits, 4 condiments, 5 nuts, 3 ornamentals, 6 edible herbs, 1 medicinal herb (jimsonweed), and 4 herbaceous weeds/grasses (Table 4). Many of these taxa are common, if not virtually ubiquitous, in both rural and urban eighteenth- and nineteenth-century Euroamerican archeological deposits. Undeniably archeological, uncharred specimens of the majority of these taxa are often preserved in eighteenth- and nineteenth-century features, particularly in deep shaft features such as privies and wells (Wheaton et al. 1990; Cummings 1993; Raymer and O'Steen 1993, 1994; Cummings and Puseman 1994; O'Steen et al. 1995a, 1995b; O'Steen and Raymer 1995; Raymer 1993, 1995, 1996, 1997a, 1997b, 1998, 1999, 2000; Raymer et al. 1997).

Thirty-five of these taxa represent definite economic plants (exotics, fruits, condiments, vegetables, nutmast, ornamental bottle gourd). With the notable exception of bottle gourd, a likely ornamental planting, all of these taxa are plant food remains (Table 4). Many, if not most, of these plant foods likely were acquired through market purchases. Others, particularly the fruits and nutmast, may have originated from ornamental plantings in the yards and/or gathered wild resources in the project area. All of the exotics (which were acquired through a long-distance trading network) and vegetables likely represent market purchases of the wealthy Block 2 inhabitants. The exotics were not locally available, and vegetable gardens require substantial spaces for successful cultivation. The condiments could have been grown in herb gardens planted by the wealthy residents; however, the small size of the yards associated with these dwellings coupled with the relative rarity of these spices in urban archeological deposits (Appendix B) suggest these taxa represent market purchases as well.

The sixteen fruit taxa and four nut taxa could have been collected from ornamental plantings in the yardlots and/or naturally occurring trees and shrubs in the project locality. On the other hand, all of these taxa can also represent market purchases. Four nut taxa, including hazelnut, black

walnut, hickory/pecan, and oak acorns, may represent ornamental plantings in the yardlots or market purchases. These trees require lots of space for successful cultivation. In the absence of compelling evidence to the contrary, the nutmast remains are interpreted as indicators of market purchases of the wealthy Block 2 residents.

Six edible herbs (clover, dock, goosefoot, knotweed, pigweed, pokeweed) may represent gathered foodstuffs, and two tree species, tupelo and gray dogwood, may have originated from ornamental plantings in the yardlots. Neither of these tree species produces edible fruits. These seeds likely document yard plantings or naturally occurring trees that grew in the vicinity of Feature B in the 1830s. Six edible herbs may represent gathered foodstuffs that functioned as seasonally available dietary supplements. These taxa minimally are indicators of local disturbance, documenting economically useful weeds growing on the Block 2 yardlots in the late-eighteenth and early nineteenth centuries. The low abundance and ubiquity of the edible herbs suggest that these remains represent nonutilized, naturally deposited seed rain. Five weedy taxa (4 herbs and 1 grass) found in the flotation samples are not edible (Table 1).

Wood charcoal was present in small quantities in all contexts. Identifications were attempted on 146 pieces of floated sample wood charcoal. The identified fragments were placed into 11 categories (Tables 5-6). The wood charcoal assemblage was well preserved; only 3.4 percent of wood fragments were unidentifiable and 9.5 percent were not specifically identifiable. The proportion of indeterminate wood specimens is usually much higher in Eastern Woodlands wood charcoal assemblages. By itself, the ability to segregate hardwoods, softwoods, and monocots provides a window on the human ecology. Generic and specific identifications enhance this picture. The high percentage of wood that was specifically identified in this collection accentuates the excellent degree of preservation of macroplant remains at this site. The entire seed assemblage is analyzed in this historical study. Often, only carbonized seeds are interpreted as being unquestionably associated with archeological deposits. Uncharred seeds are frequently excluded from macroplant analyses because they are interpreted as modern intrusions into archeological deposits (Lopinot and Brussell 1982; Miller 1989; Minnis 1981).

Several studies have assessed problems associated with the long-term preservation of uncharred seeds in open-air sites in mesic environments (Miksicek 1987; Miller 1989). Uncharred seeds are rarely preserved for many years in open-air, moist soils and are poorly preserved in open-air, dry soils (Miksicek 1987). However, when suitable environmental conditions exist, fresh seeds will last for long periods of time (Miller 1989:50).

Because the project locality was occupied in the late-eighteenth through mid-nineteenth centuries, the likelihood of recovering uncharred seeds from the archeological deposits is greatly increased. Extensive studies of macroplant assemblages from eighteenth and nineteenth-century archeological sites conducted by the author and others have shown that even the most fragile seeds are frequently preserved in both features and midden deposits, particularly when the sites are rapidly and deeply buried (Cummings 1993; Cummings and Puseman 1994; O'Steen et al. 1995a, 1995b; O'Steen and Raymer 1995; Raymer 1993, 1995, 1996, 1997a, 1997b, 1998, 1999, 2001; Raymer et al. 1997; Raymer and O'Steen 1993, 1994; Wheaton et al. 1990). With this in mind, the origins and antiquity of each plant taxon are carefully assessed.

With the exception of one wheat grain, one sunflower achene, and seven dock seeds, the entire seed assemblage is uncharred. Analyzed features consist of four privies, all of which were sealed over 150 years ago. Moreover, the conditions of the site locality indicate that the deposit was waterlogged throughout much of its postdepositional history. Consequently, these buried features approximate many wet sites, wherein organic remains survive in an excellent state of preservation

due to the inundated condition of the archeological deposits. These sealed contexts provide optimal conditions for the long-term preservation of uncarbonized seeds. Additionally, all of the features were deeply buried, which greatly reduces the chance of the postdepositional intrusion of modern seeds into the archeological deposit.

The thick layer of overlying fill that was put down when the archeological deposit was sealed in 1856 reduces the possibility of the insertion of modern seeds into these features after they were abandoned. Keepax (1977) and Bocek (1986), in separate studies of agents of postdepositional bioturbation, have shown that the majority of modern seeds are found in the upper 50 cm of a given soil column. The features were covered by far more than 50 cm of fill. The evidence suggests that the entire uncharred seed assemblage dates to the time of the site's occupation and use. Privies provide particularly excellent microenvironments for the long-term preservation of uncharred seeds. The privies were lined, which would have reduced the chances of postdepositional disturbance by rodents and tree roots.

Further evidence lies with the seeds themselves. Much of the seed assemblage, with particular emphasis placed on the fruits and certain vegetables, originated from food remains that were obviously directly deposited in fecal material. The blackberry/raspberry, blueberry, elderberry, fig, huckleberry, cantaloupe/muskmelon, strawberry, and squash seeds were ingested and later expelled by the site inhabitants. Indeed, these taxa are virtually ubiquitous in historic-period privies (Raymer 1998). Also, the majority of the seeds were mineralized, and most of the seeds had fecal material directly adhering to them.

ASSEMBLAGE COMPOSITION

This section presents a discussion of the nutshell fragments, fruit pits, and seeds recovered from the Block 2 shaft features (Table 3). The specifically identified seed taxa are broken into eight broad categories based on their presumed economic importance. These are exotics, fruits, condiments, vegetables, nut-bearing shade trees, ornamentals, edible herbaceous plants, and herbaceous weeds/grasses. The first five categories represent definite economically important food plants. Evidence will be presented that the edible herbaceous plants and ornamentals may also represent utilized plant remains. The herbaceous weeds and grasses probably represent naturally deposited yard weeds. The number, distribution, uses, and natural environments of each plant taxon are discussed in this section.

Exotics

The first plant category consists of five plant resources that were acquired through a long-distance trading network. These are coffee bean, coconut, olive, English walnut, and peanut (Table 1). All of these plants would have been purchased at local markets. Coffee and coconuts were imported into the Northeast from the tropics, probably via commercial ships off-loading cargo in northeastern ports. The fruits of these tropical plants became important commercial imports in the nineteenth century (Hedrick 1972; Root 1980). Olives were probably imported into the Americas from southern Europe. English walnuts were first introduced into the United States during the Colonial period; however, this European native was never very successful in the Northeast. The walnuts found in the ca. 1790 and 1830 deposits of Feature B likely represent European imports that were purchased in local Philadelphia markets. Like the tropical imports, the peanuts were probably delivered to Philadelphia markets from the southern United States on commercial ships. Peanuts were not commonly imported into the Northeast until the mid-nineteenth century.

Coffee beans were recovered by waterscreening from the ca. 1830 deposit of Feature B, which was associated with the early residential occupation of Adam Everly’s family. This deposit contained the greatest variety and density of exotic imports found during this archeobotanical

study. Other exotic imports found in Feature B, Level 6, included 40 fragments of coconut husk, 38 fragments of English walnut shell, two olive pits, and 80 fragments of peanut hull. Peanuts were also found in the 1790 and 1820 deposits of Feature B. The ca. 1790 deposit was associated with the Caspar Wistar household, and the ca. 1820 deposit dates to the ownership of the 225 Market Street property by the Everly family. English walnuts were recovered from the ca. 1790 Wistar household deposit, and coconut husk was found in the ca. 1820 deposit. These exotic plant foods probably represented table snacks consumed by the wealthy inhabitants of these households.

The recovery of these five exotic imports from late-eighteenth- and early-nineteenth-century deposits at Block 2 indicates that wealthy residents of Philadelphia had phenomenal access to plant foods from throughout the world at a much earlier date than other northern cities. These exotic plant foods were imported from far-flung regions of the world, including northern and southern Europe, from the southern United States, and from Latin America.

Exotic imports such as these taxa are essentially nonexistent in other urban habitations prior to 1850 in the United States (Appendices B-1, B-2, B-3). Examination of the macroplant assemblages from 20 middle-class owner-occupant and 18 working-class tenement and renter contexts from New York (New York City, Albany, Schnectady), Maryland, West Virginia, New Jersey, Michigan, Georgia, and North Carolina indicates that exotic plant foods were rarely imported into the United States before the 1850s. Coffee beans were the only exotic import recovered from pre-1850 middle- and upper-class archeological assemblages (Appendices B-1, B-3). Exotics became more common in post 1850-archeobotanical assemblages associated with working-class and tenement housing in New York, New Jersey, and Michigan (Appendix B-2).

The early appearance of these exotics in Philadelphia attests to the early importance of this city as an international market city. The common occurrence of these presumably expensive imports in domestic refuse in Block 2 attests to the wealth and prestige of the local inhabitants in the first quarter of the nineteenth century.

Coconut

Coconut palms, which are now cultivated in tropical regions throughout the world, are native to tropical regions bordering the Indian and Pacific Oceans (Hedrick 1972). Coconut trees will grow anywhere in the tropics where the proper temperature range and rainfall are found (Root 1980). Pizarro described coconuts in Indian villages on the Peruvian cost in the 1520s. Coconuts became naturalized in Florida after they were introduced by the wrecking of a ship in the Florida Keys in 1840. Coconuts are consumed fresh (palm milk and sweet kernels) and processed as a source of vegetable oil, and the kernels are dried and eaten (Hedrick 1972). Coconuts were common imports into Northeastern port cities in the nineteenth century. Coconut husks are relatively common in nineteenth-century urban sites (Raymer 1998). This tropical import apparently was not used as a medicinal remedy by eighteenth- and nineteenth-century Europeans (Angier 1978; Coon 1963; Cox 1985; Crellin and Philpott 1989; Duke 1992; Foster and Duke 1990; Grieve 1931; Justice 1939; Krochmal and Krochmal 1973; Krochmal et al. 1969; Massey 1942; Millspaugh 1884).

Coffee

Coffee plants are evergreen shrubs and small trees that are native to tropical Africa and Asia (Hedrick 1972; Root 1980). Coffee was introduced into Constantinople in 1554. This stimulating beverage began to gain popularity among Europeans in the early- to mid-seventeenth century and was first brought to England in either the late 1630s or early 1640s. Domesticated coffee plants were introduced into the Caribbean and Central and South America in the early-eighteenth

century (Hedrick 1972). Hedrick (1972:184) reports that all of the coffee raised in the West Indies and Brazil today likely originated from a single imported plant. In the eighteenth and nineteenth centuries, coffee was valued primarily as a beverage; however, contemporary medical references extol its virtues as a stimulant, digestive aid, diuretic, and cathartic (purgative). Traditional herbalists used green coffee as a kidney stimulant and to induce vomiting; black coffee was used as a topical treatment for poison ivy and other skin ailments (Crellin and Philpott 1989). Coffee was imported from the American tropics into the Northeast throughout the eighteenth and nineteenth centuries (Raymer 1998).

English Walnut

English walnuts were first brought to the eastern United States by English settlers during the Colonial period (Hedrick 1972). Jefferson cultivated walnuts in Virginia in the eighteenth century (Leighton 1976). This nut-bearing shade tree was also introduced into California by Spanish missionaries. The tree, whose native range extends from Greece and Asia Minor to Persia and the Himalayan Mountains, never became widely naturalized in the United States. It is not mentioned in two major taxonomic keys of wild plants examined by the author (Britton and Brown 1970; Radford et al. 1968). Wild specimens are present in California, Washington, Michigan, and New York today. Hedrick (1972) reports that English walnuts are occasionally grown as lawn trees in western New York. The nuts are eaten fresh, dried, and pressed for their oil. Crellin and Philpott (1989) report that this tree sustained a reputation as an herbal medicine in eighteenth-century Europe and England, where all parts of the tree were utilized as medicine. English walnut was utilized as a topical astringent for wounds, as a poisoning cure, and as a gastrointestinal aid. Medicinal use of this taxon was never popular in the Americas; its popularity also faded in nineteenth-century Europe (Crellin and Philpott 1989). The nuts found in eighteenth- and nineteenth-century contexts in the project area probably represent exotic imports that were purchased at market by the wealthy residents of Block 2.

Olive

Olives are extremely long-lived (up to 600 years), small evergreen trees that grow to a maximum of 20 feet in height (Grieve 1931; Hedrick 1972). The oily fruits from this tree, which has been domesticated for thousands of years, have shaped the character of the cuisine throughout the Mediterranean region (Root 1980). Olive trees were first imported into the Americas in 1560, when three trees were introduced into Peru. One of these initial cultivars was stolen and taken to Chile. Successful plantations were established in both countries and Argentina. Olives were introduced into South Carolina in the 1750s (Hedrick 1972), and Jefferson planted olive cuttings at Monticello in 1774 (Root 1980). Greek colonists tried to grow olives in southern Florida in the 1760s. Olive trees were planted by Franciscans in California in the 1700s (Hedrick 1972; Root 1980). Olive cultivation has never been successful in the eastern United States (Root 1980). Numerous attempts to establish groves were made throughout the eighteenth and nineteenth centuries. Olives have never become a staple in American cuisine; the fruits are consumed as an appetizer and the oil is commonly used as an ingredient in salad dressings (Root 1980). Olives sustain a minor reputation in Europe as a medicinal remedy (Grieve 1931). Its leaves are used as a topical antiseptic. A decoction of the leaves was taken internally to reduce fevers. The oil is used as a laxative and mixed with other materials for liniments. Hedrick (1972) reports that most olive products in use in other countries are exported from southern Europe. The olives found in the ca. 1830 stratum of Feature B undoubtedly represent a table snack consumed by the wealthy residents living at this address.

Peanut

Peanuts are leguminous, annual herbs that are cultivated in temperate regions throughout the world. This member of the bean family, which grows best in well-drained sandy soils, requires a

long growing season (4-5 months) in a temperate climate with frequent rain. Authorities have concluded that peanuts originated in South America and offer evidence that they were first domesticated over 3,500 years ago in Peru. Peruvian Indians in historical times used this domesticate as a form of currency, an herbal medicine, and a status symbol. Peanuts reached North America during the 1600s. European slave traders used peanuts as a cheap source of food to feed captured Africans who were being transported to North America. Jefferson was cultivating peanuts in Virginia in 1781, and they were introduced into France in 1802 (Hedrick 1972).

Peanuts became an important agricultural commodity in the southern United States in the mid-nineteenth century. The commercial history of peanuts began with the advent of the Civil War, when northern troops serving in the South discovered that roasted peanuts were a tasty snack food (Lehner and Lehner 1962; Root 1980). Peanuts are a highly nutritious source of vegetable protein and oil. Peanut shells are high in cellulose fiber and can be used as boiler fuel or in producing particle board along with many other uses. The vines and leaves are used as a nutritious livestock feed. With the exception of their oil, which was termed arachis oil, peanuts were not widely regarded as having medicinal value. The oil was used in the nineteenth century as a substitute for olive oil in the commercial manufacture of ointments, liniments, and plasters. Traditional herbalists have touted peanuts as an excellent mild laxative if eaten daily (Crellin and Philpott 1989).

Condiments

Four condiments were found in the Block 2 privies, including coriander, mustard, pepper, and sage (Table 4). These seeds probably represent cooking accidents that were dumped into the privies. Coriander seeds were found in the ca. 1820-1830 Everly privy (Feature B) and in the ca. 1845-1855 deposit of Feature H, which was associated with the mid-nineteenth-century commercial occupation of Block 2. Mustard seeds were recovered from the ca. 1790 Wistar privy deposit (Feature B), the ca. 1830 Everly occupation (Feature B), and the ca. 1842 deposit of Feature C, which was associated with commercial use of Block 2. Pepper came from the ca. 1790 Wistar privy, the ca. 1820-1830 Everly privy, and the ca. 1845-1855 commercial deposit in Feature H. A single sage seed was recovered from the ca. 1830 Everly deposit in Feature B.

The recovery of these condiments documents probable seasonings and vegetables that were consumed by the eighteenth- and nineteenth-century Block 2 inhabitants. The common occurrence of these spices in the ca. 1790 to 1830 archeological deposits indicates that spices were more commonly consumed by the early-nineteenth-century residential occupants of Block 2 than they were by the commercial interests using the project locality in the 1840s and 1850s. However, the identification of three of the four condiments in two mid-nineteenth-century commercial deposits (Feature C and H) indicates that these spices were still a common component of mid-nineteenth-century diet.

The common occurrence of these relatively “exotic” condiments in the late-eighteenth- and early-nineteenth-century Block 2 residential occupations and their continued presence in mid-nineteenth-century commercial occupations offers additional evidence of the exceptional access that late-eighteenth- and early-nineteenth-century Philadelphians had to expensive, hard-to-obtain plant foods. Examination of the occurrence of condiments in other eighteenth and nineteenth-century urban archaeological deposits (Appendices B1-B3) is suggestive of the rarity of exotic spices in American cuisine. First, condiments are extremely rare in mid- to late-nineteenth-century working-class contexts (Appendix B-2).

Only 4 of 18 "working-class privies" examined as part of this study contained condiments, including chives/onion, mint, mustard, and pepper. Second, condiments also are rather rare in nineteenth-century middle- and upper-class archeobotanical assemblages (Appendices B-1, B-3). Coriander and sage are particularly poorly represented in late-eighteenth- and early-nineteenth-century deposits. Sage was found only in one of 20 middle- and upper-class archeobotanical assemblages (Harper's Ferry Hotel). Coriander was identified in deposits from the same hotel and from a residential privy in Cumberland, Maryland.

Only two other pre-1840 archeobotanical assemblages contained more than one condiment each: a stone-lined privy associated with a middle-class occupation in the Five Points district of New York City (1808-1837) and a high-class hotel dating to the 1830s in Harper's Ferry, West Virginia (Raymer 1998; Cummings and Puseman 1994). The assemblage from the high-class hotel, which would be expected to contain a greater proportion of exotic foods than residential assemblages, contained coriander, mint, mustard, pepper, and sage.

Coriander

Coriander is native to Europe and the Orient (Hedrick 1972). This annual herb, which fruits from May through July, is naturalized from eastern Massachusetts southward to North Carolina and throughout the western United States (Britton and Brown 1970). Coriander has a long history of use as a culinary herb (Hedrick 1972; Root 1980). It was first introduced into South America by the Spanish in the sixteenth century (Root 1980) and was cultivated in North American herb gardens from the mid-seventeenth through the eighteenth centuries (Favretti and Favretti 1990; Hedrick 1972). The young leaves (also called cilantro) of this genus are eaten as fresh greens and used in soups. Coriander is grown chiefly for its seeds, which have been a popular fragrant seasoning for centuries in Europe (Grieve 1931; Hedrick 1972; Root 1980). It is added as a flavoring to curries and chutneys and is used as a spice for meat and seafood dishes. Coriander retains a minor reputation as a medicinal herb. It was most commonly used to hide the disagreeable taste of certain medicines (Grieve 1931). Coriander was taken internally to improve digestion, to stimulate the appetite, and to relax the muscles of the digestive tract. The recovery of coriander from three Block 2 deposits shows that it was a popular spice in early-nineteenth-century Philadelphia.

Mustard

Approximately 100 species of mustard (*Brassica* sp.) are found in the northern temperate parts of the eastern hemisphere (Bailey 1949). The mustards, many of which were introduced from Europe and Asia, are annual herbaceous plants that are common noxious weeds of old fields, roadsides, and other waste places. Bailey (1949) discusses 18 domesticated species of *Brassica*, including cabbage, cauliflower, broccoli, cresses, radishes, and brussel sprouts. The young leaves of mustard plants are consumed as a salad green and cooked as a potherb. The seeds are used as a seasoning for meats and salads and in the production of table mustard (Gillespie 1959; Hall 1976).

Mustards were widely used folk remedies and commonly prescribed by nineteenth-century physicians. Indeed, mustard was so popular among physicians that it is mentioned in virtually every medical text published in the nineteenth century (Crellin and Philpott 1989). The most common use for mustard seeds was in the application of heat-producing poultices for the topical treatment of respiratory ailments, lumbago, rheumatism, and strains (Angier 1978; Crellin and Philpott 1989). The seeds were taken internally as a cough medicine, emetic, and laxative (Angier 1978; Krochmal and Krochmal 1973).

Pepper

Peppers are native annual and perennial herbs of Central and South America that have been cultivated for centuries by both Native Americans and Europeans. This popular spice and fresh vegetable was transported to Spain by Columbus in 1493. It was first cultivated in England in 1548 (Hedrick 1972; Ward 1941). Favretti and Favretti (1990) report that peppers were a popular garden crop in eighteenth-century North America. Jefferson first cultivated peppers in 1768 (Leighton 1976). Pepper plants are naturalized as rare garden escapes from New York to Florida and in Texas, Louisiana, Arizona, and New Mexico (Radford et al. 1968). Peppers were used in eighteenth- and nineteenth-century America as a medicinal remedy (Crellin and Philpott 1989). Not surprisingly, peppers were used principally as a stimulant.

Sage

Seven species (both naturalized and native) of sage are found in the northern United States (Britton and Brown 1970). These perennial herbs, which fruit from May through July, are common constituents of dry woods, thickets, and old fields. Sage was a popular spice and medicinal herb that was commonly grown in seventeenth- through nineteenth-century gardens in the United States (Leighton 1976, 1987; Favretti and Favretti 1990). Sage was also planted in the eighteenth and nineteenth centuries as a perennial border plant and garden ornamental. It was more commonly grown as an ornamental than culinary herb in nineteenth-century gardens (Favretti and Favretti 1990). The principal use of sage as a spice was as a meat seasoning. It was particularly popular as a stuffing for turkeys and ducks (Coon 1963). Sage was used medicinally in nineteenth-century America as a treatment for sore throats, fever reduction, intestinal worms, skin sores (topically), and cough abatement (Crellin and Philpott 1989; Krochmal and Krochmal 1973).

Fruits

Sixteen varieties of economically important fruits were retrieved by flotation (Table 4). Forty-two percent of the fruit seeds and pits derived from a single taxon, blackberry/raspberry. Fig, blueberry, and strawberry collectively accounted for 37 percent of the seed assemblage. All of these fruits were once cultivated, but more than half of the taxa are widely distributed in the wild as well (blackberry/raspberry, blueberry, cherry, chokeberry, elderberry, fig, grape, huckleberry, mulberry, persimmon, plum, strawberry).

These fruits were consumed fresh, were used as ingredients in pies, and were commonly preserved in a variety of ways, most notably as jellies and jams. Several fruits, including cherries, plums, grapes, elderberries, and blackberries/raspberries, were made into wine (Fernald and Kinsey 1958; Medve and Medve 1990). All 16 varieties of fruits were utilized in the eighteenth and nineteenth centuries as medicines by both professional physicians and laymen. These seeds document the use of fruits that were either purchased at local markets, grown in kitchen gardens, and/or planted as lawn trees by the site inhabitants.

Ninety percent of the macroplant assemblage identified during this analysis was derived from these 16 taxa. Six taxa, including apple, chokeberry, elderberry, fig, grape, and strawberry, were found in more than 50 percent of the flotation contexts (Figure 1). Watermelons, huckleberries, cherries, blueberries, and blackberry/raspberries were found in 50 percent of the samples (Figure 1). Four fruits, plum, persimmon, peach, and cantaloupe/muskmelon, were recovered from 38 percent of the features. Mulberries were restricted to a single mid-nineteenth-century commercial occupation (Table 2). Fruits, like the condiments, were significantly more ubiquitous in the early (ca. 1790 to 1830) residential occupation of Block 2 than they were in the later mid-nineteenth-century commercial occupation.

The recovery of these 16 economically important fruit-producing species indicates that the well-to-do owner-occupants of Block 2 relied on seasonal fresh fruits and preservation of these fruits through home canning and/or winemaking for a significant portion of their diet. The recovery of these economically important fruit-producing species from both early and late features indicates that the residents relied upon seasonal fresh fruits throughout the occupational history of the site. The density and variety of fruits associated with the Block 2 occupation are similar to other high-status households in the Northeast (Bonhage-Freund et al. 2002; Raymer 1998, 2001).

Apple

The common apple, *Malus pumila*, a member of the rose family, is a common domesticate throughout Europe, Asia, and North America (Root 1980). Bailey (1949) states that approximately 25 species grow wild in the northern temperate zone of both hemispheres. The common apple was introduced to the New World by the first European colonists. The Pilgrims apparently planted apples shortly after their arrival in Massachusetts. The governor of the Plymouth Colony purchased 200 acres of land from another colonist in 1649 that contained a three-year-old apple orchard made up of 500 trees. By 1741, apples were being exported from New England to the West Indies (Root 1980). Since its introduction, this small domesticate, which seldom exceeds 20 feet in height, has escaped cultivation and become widely naturalized in the eastern United States (Bailey 1949; Britton and Brown 1970; Radford et al. 1968). Apple trees were commonly planted in the nineteenth century as lawn and garden ornamentals and as a source of seasonal fresh fruit (Favretti and Favretti 1990; Leighton 1987). Apples were consumed fresh and prepared as jams, jellies, wines, ciders, vinegars, fresh juices, applesauces, apple butter, brandies, pies, and cakes. They may also be baked, fried, stewed, spiced, candied, or used in mincemeat or chutney (Angier 1974; Gillespie 1959; Hall 1976; Peterson 1977).

Apples have long been prized as a health preservative; the fresh fruits, apple cider, apple vinegar, and bark have been used as home cures for ailments such as diarrhea, constipation, upset stomach, bilious ailments, fever, and scurvy. Apple bark was apparently in regular use in the eighteenth century (Crellin and Philpott 1989). Rafinesque (1828-1830) stated in his early-nineteenth-century medical treatise that the bark had medicinal properties similar to cherry bark. The pharmaceutical company Parke-Davis marketed an extract of apple bark in the 1890s as a tonic and a medicine for the reduction of fevers. In addition to the fresh fruit and bark of this popular domesticate, apple cider and apple vinegar enjoyed minor medical reputations in the nineteenth century. Apple cider was regarded as a treatment for “putrid fever,” and vinegar was sometimes sprinkled in sickrooms as an air purifier (Crellin and Philpott 1989:61).

Blackberry/Raspberry

Shrubs of the genus *Rubus* (refers to all *Rubus* sp., including blackberries, dewberries, raspberries, etc.) were apparently a prized fruit in nineteenth-century American households, as blackberry/raspberry seeds are virtually ubiquitous in nineteenth-century archeobotanical assemblages in the United States (Cummings 1993; Cummings and Puseman 1994, O'Steen et al. 1995; O'Steen and Raymer 1995; Raymer 1993a and b, 1995; Raymer and O'Steen 1993, 1994). Blackberries/raspberries, which are distributed throughout the eastern United States, commonly form thickets along fence rows and roadsides, within old fields, and within other disturbed habitats. The succulent berries are available for harvest from the late spring through midsummer (Bailey 1949; Radford et al. 1968). The berries are eaten fresh, prepared as a fresh fruit beverage, and made into jellies, jams, pies, and wine (Fernald and Kinsey 1958; Gillespie 1959; Hall 1976; Medve and Medve 1990; Peterson 1977).

Rubus fruits were highly regarded as a virtual medicinal panacea throughout the nineteenth century, both by professional medical practitioners and in folk medicine. Griffith, in his influential *Medical Botany* (1847), extolled the value of blackberry root as an astringent medicine (diarrhea treatment). Teas made from the bark of dried blackberry/raspberry root were used to control diarrhea, as a blood purifier, and as a spring tonic. Dried blackberry roots were sold commercially in the nineteenth century. Finally, decoctions of the roots were gargled to ease sore throats and to cure mouth ulcers. Berry juice, which was used as a diarrhea cure and to control upset stomachs, was stored in the form of blackberry brandy and a thick syrup. (Angier 1978; Coon 1963; Crellin and Philpott 1989; Krochmal and Krochmal 1973). Blackberry/raspberry seeds were highly ubiquitous in the Block 2 privies. *Rubus* sp. berries may either have been collected from plants growing on the lots and/or purchased from local fruit stands.

Blueberry

Blueberries, *Vaccinium* sp., were apparently a prized fruit in nineteenth-century American households, as blueberry seeds are common constituents of nineteenth-century archeobotanical assemblages in the eastern United States (Cummings 1993; Cummings and Puseman 1994; O'Steen et al. 1995; O'Steen and Raymer 1995; Raymer 1993, 1995; Raymer and O'Steen 1993, 1994). Approximately 150 species are found in the United States, several of which are cultivated for their edible fruit and as ornamentals (Bailey 1949). Blueberries favor acidic soils and flourish in a wide variety of habitats including both dry and moist woodlands, swamps, and dry, rocky settings at high altitudes. These shrubs and small trees often form dense thickets in the wild, in both upland and lowland settings (Bailey 1949; Britton and Brown 1970).

Bailey (1949) discusses nine species that are cultivated in the United States. The blueberry, along with huckleberry, is a member of the heath family (Ericaceae). In the wild, blueberry fruits are available for harvest in June and July (Britton and Brown 1970). Blueberries were eaten fresh, preserved by drying and as jams and jellies, and used as ingredients in a variety of prepared dishes. Blueberries were stewed, added to fruit pies, made into muffins and tarts, and mixed with other fruits in summer puddings (Angier 1974; Gillespie 1959; Hall 1976; Peterson 1977). Root (1980) reports that wild blueberries are consumed as often as domesticated varieties in the United States.

Blueberries were chiefly valued as a folk medicine in nineteenth-century America; however, their medicinal value was also mentioned in such influential medical treatises as Griffith (1847) and Rafinesque (1828-1830). Blueberries were used in the nineteenth century as an astringent and diuretic medicine (Crellin and Philpott 1989; Krochmal and Krochmal 1973). Griffith (1847) stated that the fruit, leaves, and root bark were useful in the treatment of mouth sores, diarrhea, and other bowel complaints. Rafinesque (1828-1830) discussed this taxon as a diarrhea cure. The berries were formerly rendered into a syrup-like beverage that was consumed for chronic dysentery. The leaves and root bark were made into a tea that was administered as a treatment for sore throats and diarrhea (Angier 1978; Krochmal and Krochmal 1973). The blueberry seeds found in the Block 2 samples likely originated from commercial fruit stalls.

Cantaloupe/Muskmelon

Thirty species of *Cucumis* are found worldwide; the majority of these taxa are found in warm areas of Africa. Bailey (1949) discusses four cultivated varieties, two of which are cucumber (*Cucumis sativus*) and cantaloupe/muskmelon (*C. melo*). All melons fall within the same species, *Cucumis melo.* Three principal groups of melons are recognized by taxonomists: muskmelons, *Cucumis melo* var. *reticulatus*; cantaloupes, *C. melo* var. *cantalupensis;* and winter melons, *C. melo* var. *inodorus.* Melons, which are not native to North America, were brought to the New World by European colonists.

Cucumis sp. melons appear to have been imported to the United States in the nineteenth century. The Navajo Indians in the southwestern United States first appear to have cultivated melons in the mid-nineteenth century. The first officially recorded melon variety found in the United States, the netted gem, was imported from France in 1881 (Root 1980).

According to Crellin and Philpott (1989), melons were never very popular as an herbal remedy among professional medical doctors. A few medical references discuss *Cucumis* sp. (both muskmelons and cucumbers) as an adequate diuretic (Crellin and Philpott 1989; Grieve 1931; Phelps Brown 1993).

Cherry

Cherry trees, which grow to a height of 40 or more feet, are common understory trees in deciduous forests throughout the eastern United States. These small fruit trees, which were widely cultivated in the nineteenth century and also widespread in the wild, were popular lawn and garden trees in the eastern United States (Favretti and Favretti 1990; Leighton 1987). Wild cherry trees, including both Native American and naturalized European species, favor a variety of habitats including streambanks, pastures, alluvial woods, roadsides, fence rows, and old fields (Radford et al. 1968). European colonists developed cultivated varieties of native American wild cherries shortly after they arrived in the New World. The principal varieties were the common American wild cherry (*Prunus virginiana*) and the black cherry (*Prunus serotina*). Domesticated European cherries, which included the common cooking cherry (*Prunus cerasus*) and sweet cherry (*Prunus avium*), were transported to the Americas with the first European colonists. These domesticates frequently escaped cultivation and have become widely naturalized in the eastern United States (Radford et al. 1968; Root 1980).

Both domesticated and wild cherries were eaten fresh and made into wines, pies, jellies, and cold drinks (Angier 1974; Gillespie 1959; Hall 1976; Peterson 1977). Wild cherry bark (*Prunus serotina* and *P. virginiana*) was widely used in the nineteenth century in a variety of medicinal remedies. According to Crellin and Philpott (1989), it was once one of the most popular home remedies in America. Cherry bark was frequently a primary ingredient in commercially produced cough medicines. Bark tea was widely touted as a treatment for coughs, colds, measles, intestinal worms, indigestion, and tuberculosis (Crellin and Philpott 1989; Krochmal and Krochmal 1973). The berries were used as a treatment for diarrhea (Angier 1978; Krochmal and Krochmal 1973). In Appalachia, bark tea was administered to women during childbirth to relieve pain and muscular soreness (Coon 1963; Krochmal and Krochmal 1973). Although the recovery of these fruits may be indicative of deliberately planted ornamentals on the Block 2 lots, more likely the cherries originated from domesticates purchased from local fruit vendors.

Plum

Approximately 150 to 175 species of plum, most of which produce edible fruits, occur in the northern temperate zone, Asia, and the American tropics. Nine species of these small trees and shrubs, which grow to a maximum height of 35 feet, grow wild in the northern United States and Canada. Plums were principally grown in the nineteenth century for food, shade, and ornamentation. The fruits also had a minor reputation as a medicinal remedy for constipation. The fruits provide a rich and reliable food source for many animal species. Plum trees favor dry, sandy soils and are commonly found in dry woods, in sandy soils in waste places, and along the coast and on beaches (Bailey 1949; Britton and Brown 1970; Radford et al. 1968).

These small fruit trees were popular lawn and garden trees in the nineteenth century (Favretti and Favretti 1990; Leighton 1987). Bailey (1949) discusses 12 species of domesticated plums and

asserts that these economically important stone fruits, second only to the peach in commercial production, are mainly valued as ornamentals and for their succulent fruits. Four species of plums account for the majority of commercially marketed fruits in the United States: the European, or common plum (*Prunus domestica*); the Japanese plum (*P. salicina*); the native American plum (*P. americana*); and the damson plum (*P. insititia*), another European variety (Root 1980).

One hundred and fifty types of plum were listed in nineteenth-century nursery catalogs. The European plum was imported into the United States by the first British and French colonists. A memorandum dated March 16, 1629, was issued by the Massachusetts Bay Colony, requesting the transshipment of domesticated European plum pits (Root 1980). The native American plum, whose natural range extends from Maine to Florida and to the west as far as Utah and Manitoba, was first encountered by the Pilgrims in 1621 (Hedrick 1972; Root 1980). Native wild plums were deliberately planted by New England Indians and to the south by the Cherokees around their dwellings, but the Indians did not cultivate the trees. Domesticated varieties of *Prunus americana* were developed by Euroamerican immigrants in the eighteenth and nineteenth centuries (Root 1980). Virtually all of the imported European plum species have escaped cultivation and now grow wild in the East.

Like cherries, domesticated and wild plums were eaten fresh and prepared as conserves, desserts, and beverages. Plums were made into jams and jellies, mixed with sweeter fruits in pies, and added to fruit compotes. They were used to make sweet wine and have been used to flavor liquor (Angier 1974; Gillespie 1959; Hall 1976; Peterson 1977). Crellin and Philpott (1989) found little evidence that plums were a popular medicine in nineteenth-century America. Unlike cherries, which were highly regarded by both professional doctors and laymen as a virtual medical panacea, plums were recommended only as a laxative, in the form of prunes.

Possible Chokeberry

Chokeberries are small perennial shrubs that are native throughout the eastern United States. Three taxa are found in the northern United States and Canada (Britton and Brown 1970). Chokeberries are common understory components of wet woods, swamps, and floodplain habitats (Radford et al. 1968). Chokeberries were grown in eighteenth-century gardens both for ornamentation (principally as a hedging) and as a wildlife food (Favretti and Favretti 1990). The fruits, which are available for harvest from March through June, were occasionally made into jellies (Fernald and Kinsey 1958). Chokeberries apparently were not utilized as a medicinal home remedy in historic America (Angier 1978; Coon 1963; Cox 1985; Crellin and Philpott 1989; Duke 1992; Foster and Duke 1990; Grieve 1931; Justice 1939; Krochmal and Krochmal 1973; Krochmal et al. 1969; Massey 1942; Millspaugh 1884).

Elderberry

Like blackberry/raspberry, elderberry seeds are found in most nineteenth-century archeobotanical assemblages in the East (Cummings 1993; Cummings and Puseman 1994; O'Steen et al. 1995; O'Steen and Raymer 1995; Raymer 1993, 1995, 1998, 1999; Raymer and O'Steen 1993, 1994). Elderberries are ubiquitous in privy contexts and sparse in non-privy features. About 20 species of elderberries (*Sambucus* sp.) occur in the temperate and subtropical regions of both hemispheres. Five species are commonly cultivated (Bailey 1949). Elderberries grow in moist soils bordering field edges or swamps. This deciduous shrub or small tree, which grows from 5 to 30 feet tall, bears flowers in the spring and fruit in October. Elderberry trees are found throughout North America and Europe in moist woods, roadside ditches, thickets, stream banks, and marsh edges (Angier 1974; Coon 1963; Radford et al. 1968).

Elderberries were principally grown in the nineteenth century for food, medicine, and ornamentation. Both native and imported varieties were planted as garden and yard ornamentals in the late-eighteenth and nineteenth centuries (Favretti and Favretti 1990; Leighton 1987). Crellin and Philpott (1989) report that elderberry bushes were planted around American homes so that the plant would be readily available for the production of medicine. Both imported European *elder (Sambucus nigra*) and native elderberry (*S. canadensis*) were employed in nineteenth-century domestic medicine in America. Elderberry was used to treat skin conditions, as a purgative, and as a diuretic (Crellin and Philpott 1989). Its popularity apparently declined in the latter half of the nineteenth century (Griffith 1847). The dried inner bark was commonly prescribed as a purgative in the past. Ointments made from the crushed leaves were applied to bruises and sprains, and thickened fruit juice was administered internally for coughs and colds. The dried flowers, which were once listed in the *United States Pharmacopoeia*, were used as a topical treatment to relieve sunburn and itching and to remove freckles (Coon 1963). Elderberry has been used in folk remedies as a cureall for "abrasions, asthma, bronchitis, bruises, burns, cancer, chafing, cold, dropsy, epilepsy, fever, gout, headache, neuralgia, psoriasis, rheumatism, skin ailments, sores, sore throat, swelling, syphilis, and toothache" (Duke 1992:423).

The primary edible portions of the elderberry are its fruits and flowers. The fruits were eaten fresh, made into wine and tea, processed for jellies and jams, added to pancake and muffin batter, and used as pie filling. The flower clusters were added to pancake, waffle, and muffin batter, made into tea, battered and fried as fritters, and made into sweet-smelling wine (Fernald and Kinsey 1958; Gillespie 1959; Hall 1976; Medve and Medve 1990; Peterson 1977). Green blossoms were pickled and served in place of capers (Bryan and Castle 1974; Hedrick 1972). Elderberries may have been planted on the lots, since these weedy shrubs are easily propagated in crowded urban settings. The fruits were probably also available for purchase in city markets.

Fig

Fig seeds are almost ubiquitous in nineteenth-century contexts and are particularly prevalent in privies (Cummings 1993; Cummings and Puseman 1994, O'Steen et al. 1995; O'Steen and Raymer 1995; Raymer 1993, 1995; Raymer and O'Steen 1993, 1994). The genus *Ficus* includes trees, shrubs, and climbing vines and consists of more 2,000 species in tropical and subtropical countries. One species of fig, *Ficus carica*, is grown for its edible fruit, while many other varieties are cultivated for shade and as ornamentals (Bailey 1949). Figs occasionally persist in old gardens and yards from Virginia south to Florida and westward to Texas (Britton and Brown 1970). Archeological evidence has shown that figs were cultivated by the Egyptians, and numerous references to the fig occur in the Bible. Figs were also a favorite fruit of the Greeks and Romans. They were first cultivated in England in the sixteenth century. By the time of Elizabeth I, dried figs were kept in practically every English household to make sweet puddings (Root 1980).

European varieties of fig trees were first introduced into the New World in 1520, when they were imported by the Spanish (Condit 1947). Cultivated figs were first mentioned in the British colonies in Virginia in 1669; Bartram noted figs growing in the ruins of Fort Frederica, Georgia, in 1773 (Hedrick 1972). Figs are preserved in a variety of ways, including canning, candying, and as jams. Low-grade figs are sometimes distilled into alcohol (Condit 1947). Figs can be eaten raw or dried, but are more commonly used as a sweetener in desserts. According to Bryan and Castle (1974), these succulent fruits are most commonly consumed dried in the United States.

Figs had a limited reputation as a medicine in the 1800s. According to Crellin and Philpott (1989), the fruits were always more highly regarded as a nutritious food than as a medicinal remedy. During the nineteenth century, the principal medicinal value attributed to figs was as a

gentle laxative. Griffith (1847:576) discussed the use of figs in cases of habitual constipation and mentioned their use in poultices.

Grape

Wild grapes are found throughout Europe, Asia, and the Americas bordering watercourses and within deciduous forests. Virtually every variety of Old World grape, both wild and domesticated, is derived from a single species, *Vitis vinifera.* Approximately two dozen species of grapes are native to North America. The most well-known eastern varieties are the fox grape, *Vitis labrusca*, and the muscadine, *Vitis rotundifolia.* The European grape was imported into the Americas by the first colonists. Columbus introduced this variety to Haiti in 1494. European grapes were introduced into California, where they flourished, in the late-eighteenth and early-nineteenth centuries by Spanish missionaries. Numerous attempts were made to establish European grapes in the eastern United States in the seventeenth and eighteenth centuries, all of which failed due to the susceptibility of this species to phylloxera and mildew. Native fox grapes were crossed with the European grape to produce such well-known domesticated varieties as Catawba, Concord, and Delaware grapes. Muscadines, which are native to the southeastern United States, were domesticated by European colonists and are popular as a table grape and in domestic winemaking (Hall 1976; Hedrick 1972; Radford et al. 1968; Root 1980; Ward 1941).

Domesticated grapes were grown throughout the United States and Mexico in the nineteenth century in kitchen gardens and in commercial vineyards. Grapes were consumed fresh and also made into jelly, juice, wine, raisins, and pies (Hall 1976; Hedrick 1972; Root 1980). Although grapes were chiefly prized as a fresh fruit and in the production of wine, Hedrick (1972) notes that the fruits were used in the treatment of scurvy, and Coon (1963) and Angier (1978) claim that the fruits aid the body in removing toxins from the kidneys by neutralizing uric acid. According to Crellin and Philpott (1989), the primary medicinal use of grapes involved imbibing wine as a stimulant and mixing other medicines with wine, presumably to make the medicines more palatable. The recovery of grape seeds likely indicates the purchase of these fruits from local fruit stalls.

Huckleberry

Approximately 40 species of huckleberrry (*Gaylussacia* sp.), all of which have edible berries, are native to North America. This genus of the heath family (Ericaceae) is not found in Europe. These branching shrubs form thickets in a variety of habitats, including both dry and moist woodlands, sandy and rocky soils, and swamps and bogs. Five species of huckleberry, which are available for harvest in July and August, are commonly found in the northern United States and Canada (Britton and Brown 1970). Huckleberry fruits are berrylike drupes containing 10 hard, seedlike nutlets that are so similar to blueberries in taste and appearance that they are prepared in much the same way as *Vaccinium* sp. fruits (Britton and Brown 1970; Hall 1976). Unlike blueberries, huckleberries were rarely grown in kitchen gardens, and the fruits have been little altered by husbandry over the years (Root 1980). These plants apparently were not favored as ornamentals in eighteenth- and nineteenth-century gardens; no mention of *Gaylussacia* sp. is made in either Favretti and Favretti's (1990) or Leighton's (1987) listings of popular historical garden plants.

Huckleberries were apparently quickly added to British colonists' diets. An early Virginia immigrant noted an abundance of huckleberries, cherries, mulberries, strawberries, and other fruits growing at the mouth of the James River in 1607. Huckleberries were sold in nineteenth-century markets, because Hedrick (1972) noted that fruits of the species *Gaylussacia frondosa* were more valued in late-nineteenth-century commercial markets than other varieties. Huckleberry apparently was not utilized as a medicinal remedy in the eighteenth and nineteenth

centuries, as this taxon was not recorded as a medicinal herb in the historical literature reviewed for this report (Angier 1978; Coon 1963; Cox 1985; Crellin and Philpott 1990; Foster and Duke 1990; Grieve 1931; Justice 1939; Krochmal and Krochmal 1973; Krochmal et al. 1969; Massey 1942).

Mulberry

The mulberry is a small deciduous tree that was popular as a medicine, for its edible fruit, and as an ornamental (Bailey 1949; Crellin and Philpott 1989; Fernald and Kinsey 1958; Krochmal and Krochmal 1973; Medve and Medve 1990). Its fruits ripen from June to July and its favored habitat is rich soil horizons in alluvial woods (Britton and Brown 1970; Radford et al. 1968). Britton and Brown (1970) discuss 10 species that are found in the northern United States and Canada. Three species of mulberry are common in the United States: the red mulberry (*Morus rubra*), which is native to the eastern United States; the white mulberry (*Morus alba*), which is a native Asian species that was introduced by the British when they attempted to establish a silk industry in the southern colonies in the seventeenth century; and the black mulberry (*Morus nigra*), which is an introduced species that is planted as a yard tree and windbreak and was once used in herbal medicines. Mulberries are commonly grown as ornamentals and also are widely distributed in the wild as well. Mulberries were popular lawn trees in the nineteenth century (Angier 1974; Bailey 1949; Crellin and Philpott 1989; Leighton 1987, Medve and Medve 1990; Radford et al. 1968; United States Department of Agriculture [USDA] 1974).

White and black mulberries were introduced to the Americas by the first wave of British colonists arriving in the 1600s. Mulberry trees were not grown commercially in the eighteenth and nineteenth centuries for human consumption, because the fruits were difficult to gather, extremely fragile (easily bruised), and difficult to keep or store (Medve and Medve 1990; Root 1980). However, mulberries were widely planted as a food source for silk worms when the British tried to establish a silk industry in the southern colonies. White mulberry trees were first planted in the Virginia colony in 1623 for this purpose. William Bartram recorded the presence of large groves of white mulberries grafted onto native red mulberries around Charleston in the 1770s. Repeated attempts to establish silk industries in the United States in the early-nineteenth century all failed. Native red mulberries apparently were deliberately planted by American Indian groups, because early explorers in Virginia noted these small trees growing around Indian dwellings (Hedrick 1972). The mulberry was so important to the Natchez of Louisiana that they named one of their 13 months for it (Root 1980).

Mulberry fruits were eaten fresh, dried, and made into pies, jams, and jellies. The fruits were also crushed and made into a beverage. The young shoots can be boiled and eaten as a green vegetable (Angier 1974; Gillespie 1959; Hall 1976; Peterson 1977; Fernald and Kinsey 1958; Medve and Medve 1990). Mulberries are often difficult to collect, because the fruits are avidly sought by songbirds (Angier 1974). Due to its perishability, this fruit was not commonly sold in markets. The difficulty of shipping and preserving fresh mulberry fruits restricted the use of this plant to a locally grown garden or yard ornamental whose fruits were consumed by the property owners (Hedrick 1972; Root 1980).

Mulberries have a variety of medicinal uses. Griffith (1847) discussed the medicinal properties of mulberry fruits and bark in his influential *Medical Botany*. Beverages made from red, white, and black mulberries were used as a laxative and to lower fevers. The fruits were also rendered into cough syrup. Medicines made from the roots were used to treat diarrhea and expel intestinal worms (Angier 1978; Coon 1963; Krochmal and Krochmal 1973). The native American species, red mulberry, apparently was never very popular as a medicinal plant (Crellin and Philpott 1989).

Crellin and Philpott (1989) report that the popularity of mulberry as a medicinal herb waned in the late-nineteenth century, because more palatable alternatives were developed.

Peach

The Spanish first brought the peach to the New World where it was immediately adopted by the Native Americans (Root 1980). Peach pits were transported to New England in 1629 by the Massachusetts Bay Colony. By the mid-seventeenth century, European explorers reported Native American groups cultivating peaches in such widely separated regions as Pennsylvania and Florida. Indeed, peaches were so widely distributed in the East by the mid-eighteenth century that Bartram regarded this fruit as a native American plant (Hedrick 1972). Peach trees were grown in the nineteenth century as ornamentals and as a source of their edible fruits (Leighton 1987).

Peaches were consumed as a fresh dessert fruit and also made into jams and jellies, juice, wine, and pies. Although principally prized for their edible fruit, peaches were also used in a variety of home medicinal remedies by eighteenth- and nineteenth-century Americans (Crellin and Philpott 1989; Krochmal et al. 1969). The flowers were described as a treatment for fever and pains in the Colonial period. In the nineteenth century, the fruits, leaves, kernels, and flowers were used as home remedies for stomach ailments and liver problems, and as a laxative (Crellin and Philpott 1989). Peaches apparently were not highly regarded by nineteenth-century American physicians, as this fruit was not even mentioned in such influential nineteenth-century medicinal texts as Griffith (1847) and Johnson (1884). The peach pits found in the Block 2 deposits almost certainly derived from fruits purchased from local vendors.

Persimmon

This small deciduous tree, which grows to a maximum height of 45 feet, is a common understory tree of dry deciduous forests, pinelands, and old fields throughout the Eastern Woodlands (Britton and Brown 1970; Radford et al. 1968). Persimmons were grown in eighteenth and nineteenth-century gardens both for ornamentation and for their edible fruits (Leighton 1976, 1987). Jefferson planted persimmons in his gardens in the late-eighteenth century. The edible fruits, which are available for harvest in September and October, were eaten fresh and added to jams, puddings, and nut breads. The dried leaves reputedly make an excellent tea (Fernald and Kinsey 1958; Peterson 1977). Persimmon was also used as a coffee substitute (Fernald and Kinsey 1958). Persimmon was used in a variety of home medicinal remedies by eighteenth- and nineteenth-century Americans (Crellin and Philpott 1989). The inner bark and unripe fruits were extolled by Rafinesque (1828) as a astringent, tonic, and fever treatment. The fruits were also employed in the treatment of bowel problems and hemorrhages.

Strawberry

Strawberry fruits, which grow wild in old fields and along woodland borders, ripen from March to June (Angier 1974; Medve and Medve 1990; Radford et al 1968). Strawberries have appeared throughout world history as a source of food and medicine. Root (1980) reports that wild strawberries were first grown in European gardens in the fourteenth century. They became popular dessert fruits in the seventeenth and eighteenth centuries. Early explorers reported dense strawberry patches in the meadows and woodlands of the eastern United States and Canada.

The native North American wild strawberry is regarded as having better coloring, a richer flavor, and a larger size than its European cousins (Root 1980). Strawberries were not readily available in urban markets in the United States until the mid-nineteenth century due to their perishability. Prior to this time, this berry was commonly grown in kitchen gardens for home consumption. Strawberries became common in New York City after the opening of the Erie Railroad in 1847, because the rail line enabled large quantities of the perishable fruit to be shipped quickly and

cheaply to urban markets. For example, 80,000 baskets of strawberries were delivered to New York in one night in 1847. New York became the largest market in the world for strawberries in the latter half of the nineteenth century (Root 1980).

Strawberries are eaten fresh and used to make jellies and jams, pies, fresh drinks, and wine (Fernald and Kinsey 1958; Medve and Medve 1990). The young leaves can be consumed fresh in salads or cooked as a spinach-like potherb (Angier 1974). Like blackberry/raspberry, strawberries were highly regarded in nineteenth-century folk medicine as a panacea, with almost every portion of the plant having a reported medicinal value (Crellin and Philpott 1989; Duke 1992). The berries were used as a mild laxative, to reduce fevers, to treat kidney stones and gout, and as a cosmetic (Angier 1978; Coon 1963; Crellin and Philpott 1989; Krochmal and Krochmal 1973). Teas made from the leaves were used as a preventative for scurvy and to treat diarrhea. Infusions made from the roots were used in the treatment of urinary disorders (Coon 1963; Krochmal and Krochmal 1973). Strawberry leaves were used in Appalachia as a gout remedy and refrigerant (Krochmal et al. 1969).

Watermelon

Watermelon seeds, *Citrullus vulgaris*, probably originated from fruits purchased from local fruit stands. The recovery of watermelon seeds from late-eighteenth- through nineteenth-century contexts at Five Points in New York shows that watermelons were available throughout the site's occupational history. Four species of *Citrullus* are native to tropical regions of Africa. Watermelons are grown all over the world today for their edible fruits (Bailey 1949). The fruit which is not native to North America, was brought to the New World by European colonists.

Like cantaloupe/muskmelon, watermelons were not a highly esteemed herbal remedy among nineteenth-century professional medical doctors. The only medical property regularly attributed to watermelons was their value as a diuretic (Crellin and Philpott 1989; Grieve 1931). According to Grieve (1931), watermelon seeds were useful as a treatment for urinary tract disorders and constipation. She also claims that both watermelon seeds and cantaloupe/muskmelon seeds are useful remedies for intestinal worms, having the same properties as pumpkin (*Cucurbita* sp.) seeds. She notes that pumpkin seeds were a popular worm treatment, particularly in the case of tapeworm infestations.

Vegetables

Two thousand three hundred and fifty-seven seeds from five vegetables (ground-cherry, squash/pumpkin, sunflower, tomato, wheat) were found in the privies. Fifty-nine percent of the vegetable seeds assemblage derived from tomato seeds and 40 percent of the assemblage was either squash or pumpkin (Tables 2-3). Tomato and squash/pumpkin were ubiquitous as well as abundant (present in 50 percent of the samples). In contrast, ground-cherry (tomatillo), sunflower, and wheat were found in one feature each.

Tomatoes and squash/pumpkin were consumed by both the early residential occupants of Block 2 (1790-1830) and the later mid-nineteenth-century commercial occupants. Tomato seeds were associated with the macroplant assemblage from the ca. 1820s Everly occupation of 225 Market Street (Feature B). Squash/pumpkin was documented in both the ca. 1790s Wistar and ca. 1820s Everly deposits (Feature B). Squash was found in a single mid-nineteenth-century commercial privy (Feature H), and tomatoes came from both Features C and H. Three ground-cherry seeds derived from the Everly deposit of Feature B. A charred wheat grain was found in the ca. 1790s Simmons privy (Feature E). Finally, a single sunflower achene was found in the ca. 1790 Wistar deposit.

All of these domesticates derived from either discarded, burned kitchen trash (sunflower, wheat) or fecal material (squash/pumpkin, tomato, tomatillo). The sunflower and wheat were undoubtedly purchased at market, because it is highly unlikely that these field crops were grown in the confined spaces of Block 2 urban gardens. Tomatoes, squash/pumpkin, and tomatillos, on the other hand, are easily propagated in small gardens. These domesticates could have been purchased at market, grown by the inhabitants, or both.

The recovery of tomato from the early Everly deposit documents early consumption of this vegetable by the residential inhabitants of Block 2. This adds further support to our contention that the wealthy residents of Philadelphia had exceptionally early access to foods that were not common elsewhere in the eastern United States until the mid-nineteenth century.

Tomatoes were first widely consumed in the mid-nineteenth century in the United States. They are thought to have originated in South America and migrated north into Central America. Tomato cultivation became very common in the United States by the 1800s, when the fruits were used in sauces and stews and preserved for later use by canning. Tomato seeds are commonly found in mid- to late-nineteenth-century contexts. Medicinal uses are also attributed to the tomato, which added to the "tomato mania" that existed in the mid-1800s in the United States. Nineteenth-century medical references claimed that the tomato was useful in the treatment of diarrhea, dyspepsia, and cholera. Pills were made from tomato essence that the makers claimed could restore vigor, enhance regularity, and "tone" the system (Smith 1994). The seeds of this plant are almost ubiquitous in mid- to late-nineteenth-century privies, which attests to the popularity of this vegetable (O'Steen and Raymer 1995).

The scarcity of tomato in late-eighteenth- through early-nineteenth-century privies is to be expected, because tomatoes were not commonly consumed in the United States until the mid-nineteenth century. This pattern is also noted in late-eighteenth- and early-nineteenth-century owner-occupant contexts in the Five Points and Broadway blocks of New York City (Raymer 1998; Raymer and Bonhage-Freund 2000). Tomatoes were documented only in one of sixteen 1787 to 1807 contexts in the Broadway Block. One hundred and ninety-four tomato seeds were associated with artisan contexts dating to the first quarter of the nineteenth century, and 1,585 came from mid- to late-nineteenth-century contexts at the Five Points (Raymer 1998).

Tomatillo, which produces edible fruits, favors disturbed habitats and is widely regarded as a noxious weed (Radford et al. 1968). In the past the berries were eaten fresh and made into jellies and pies. Ground-cherry was once cultivated to a limited extent and was sold in city markets (Fernald and Kinsey 1958; Medve and Medve 1990).

Nut-bearing Shade Trees

Five varieties of economically important, domestically grown nut taxa were retrieved by flotation and waterscreening, including oak acorns, black walnut, hazelnut, hickory, and pecan. Pecans and other hickory trees, black walnuts, and oaks were commonly grown around nineteenth-century habitations as shade trees and for their nuts (Radford et al. 1968). Hazelnuts are shrubby trees that commonly grow in thickets in the edge zone between forest and field and were also grown in eighteenth- and nineteenth-century gardens.

The nuts and vegetative portions of these trees were also employed as medicinal remedies in nineteenth-century America. Hickory bark was used as a tonic and laxative and to make a topical salve. In the nineteenth century, the medicinal properties of hickory attracted little attention outside of regions where they grew naturally. Oak bark tea was consumed in the nineteenth century as a remedy for sore throat, skin problems, and diarrhea. Oaks also were used in the

production of external astringents and antiseptics (Crellin and Philpott 1989). Black walnut, unlike oaks and hickories, was never a very popular medicinal remedy.

These nut taxa may represent either ornamental plantings in the yardlots or market purchases. These trees, like the aforementioned fruit trees, require lots of space for successful cultivation. In the absence of compelling evidence to the contrary, the nutmast remains are interpreted as indicators of market purchases of the wealthy Block 2 residents. It is likely that all or most of these nuts are incidental inclusions in the privies (discarded kitchen trash).

Nutshell was sparse in the deposits. Nutmast composed one percent of the Block 2 archeobotanical assemblage (Tables 2 and 3). Less than one percent (0.6%) of the ca. 1820 Feature B assemblage was mast. Four percent of the ca. 1830 Everly plant food remains were nutshell. Nutshell ubiquity was also low. Pecan, hickory, and oak were found in two contexts each. Hazelnut and black walnut were recovered from 38 percent of the dated contexts (Figure 1). None of these taxa were associated with the mid-nineteenth-century commercial occupation of Block 2 (Figure 2).

Three hundred and eighteen fragments were found in the Wistar and Everly deposits of Feature B (Table 7). The archeobotanical assemblage from the Wistar deposit contained black walnut, hazelnut, and pecan. The Everly deposit yielded black walnut, hickory, hazelnut, pecan, and oak. Pecans and hazelnuts are rare in other urban historical archeobotanical assemblages. Pecan shell was absent from all of the comparative data sets presented in Appendix B. Hazelnut has been identified in only two of 46 eighteenth- and nineteenth-century archeobotanical assemblages known to the author (this report, and one privy from the Picotte-DEC site, Albany, New York [Bonhage-Freund et al. 2002]).

These remains likely represent table snacks that were consumed by the affluent middle- and upper-class residents of the locality in the 1790s through the 1830s. The exclusive association of these taxa with the 1790 to 1830 archeological deposits indicates that nuts commonly adorned the tables of the early-nineteenth-century residential occupants of Block 2 and that mast was not eaten by the commercial interests using the project locality in the 1840s and 1850s. The absence of mast offers indirect support to our contention that the mid-nineteenth-century inhabitants of Block 2 were less affluent than the early-nineteenth-century occupants.

The common occurrence of these nutritious, rather “exotic” snack foods in the late-eighteenth- and early-nineteenth-century Block 2 residential occupations offers additional evidence of the exceptional access that late-eighteenth and early-nineteenth-century Philadelphians had to expensive, hard-to-obtain plant foods. Examination of the occurrence of mast in other eighteenth- and nineteenth-century urban archeological deposits (Appendices B1-B2) is suggestive of the rarity of mast in urban American’s diet in the first quarter of the nineteenth century. First, nutmast is extremely rare in mid- to late-nineteenth-century working-class contexts (Appendix B-2); only 1 of 18 working-class privies examined as part of this study contained nutshell. Second, nutshell is also rather rare in late eighteenth- and early-nineteenth-century middle- and upper-class archeobotanical assemblages (Appendix B-1, B-3). Nutshell was found only in three of 14 such assemblages presented in Appendix B-1 Mast (acorns and hickory) was found in one middle-class residential privy and one brothel (high-class clientele) privy in early-nineteenth-century occupations of the Five Points area of New York, and in one high-class, late-nineteenth-century residential privy (black walnut) in Cumberland, Maryland (Cheek et al. 1994; Raymer 1998).

Finally, mast was common in six well-to-do residential contexts dating between 1750 and 1860 at the Picotte-DEC site, located along the waterfront in Albany, New York (Bonhage-Freund et al.

2002). The exceptionally high occurrence of mast in the Albany privies likely reflects the occupations of the residents, who were mostly merchants and ships' captains.

Black Walnut

Two species of walnut are native to the eastern United States; the black walnut, *Juglans nigra*, and the butternut, *Juglans cinerea.* Black walnuts were once abundant in rich woodlands throughout the Southeast, and the nuts are available for harvest in October (Radford et al. 1968). Like the oaks, walnuts were an important source of fuel, building materials, food, shade, ornamentation, and medicine in the past (USDA 1974). The nuts were eaten raw as well as pickled, boiled, roasted, and prepared as nut butter. The sap was collected in the spring and rendered into syrup and sugar. Young, immature fruits were collected and made into pickles with vinegar, sugar, and spices. The nutmeats were roasted and ground into flour, which was used in the same manner as acorn flour. Whole nuts were crushed and boiled; this process caused the hulls and nutmeats to sink and the nut oil to float to the surface, where it was skimmed off and saved as vegetable oil (Gillespie 1959; Peterson 1977).

Like oaks, walnuts were also utilized as medicines in the nineteenth century (Crellin and Philpott 1990; Krochmal et al. 1969; Krochmal and Krochmal 1973). Black walnut was the least popular of three American walnut species that were once commonly discussed in medical texts. Butternut (*Juglans cinerea*) was highly valued as a laxative by early American medical authorities. The inner bark was prescribed as a purgative in the nineteenth century. Black walnut was discussed as being efficacious for the treatment of the same ailments as butternut, but it was not considered as effective (Crellin and Philpott 1990). According to Krochmal and Krochmal (1973), the inner bark of black walnut was used as a mild laxative during the Revolutionary War. Black walnut fruit peels and fruit juice were utilized as a home remedy for the treatment of ringworm, psoriasis, and other skin ailments and was used to expel intestinal worms (Crellin and Philpott 1990; Krochmal and Krochmal 1973).

Hazelnut

Hazelnuts are distributed throughout the Eastern Woodlands region of the United States and Canada. Two species of hazelnuts (*Corylus americana, C. rostrata*) are native to the northern United States and Canada (Britton and Brown 1970). Hazelnuts are available for harvest from July to September. These shrubby trees form thickets in the edge zone between forest and field. Hedrick (1972) reports that a European variety of hazelnut, *Corylus avellana,* was imported into the Massachusetts Bay Colony in 1629. Hazelnuts were planted in American gardens from the seventeenth through the nineteenth centuries (Leighton 1976; Favretti and Favretti 1990). Jefferson planted both American and European varieties in his gardens in 1774. Hazelnuts, which are also known as filberts, were eaten as a snack food from colonial times. The sweet nuts are eaten raw, roasted, candied, and ground into flour for bread. This taxon apparently was not used as a medicinal home remedy in the Americas (Coon 1963; Fernald and Kinsey 1958; Crellin and Philpott 1989).

Hickory/Pecan

Like the oaks, hickories (*Carya* sp.) are found in both dry upland habitats and wet alluvial bottomlands throughout the eastern United States (Radford et al. 1968). Twelve species, which fruit between September and November, occur naturally in the northern United States and Canada (Britton and Brown 1970). Hickories provide a rich source of fuel, building materials, food, and medicine and also are deliberately planted in yards and gardens as shade trees and for their succulent nuts. Pecans *(Carya illinoensis)* are widely cultivated in orchards in the southern and southwestern states. Hickory nuts provide a rich and reliable food source for both humans and wildlife (USDA 1974). The nuts are eaten raw, crushed and boiled for their oil, roasted and

ground for flour, and candied. According to Gillespie (1959), hickory nuts were seldom pickled. The sap was collected in the spring and made into syrup. Shagbark hickory *(Carya ovata)* syrup is considered a delicacy.

Hickories were not as highly esteemed as walnuts as a source of medicine in the past. Rafinesque, in his *Medical Flora: or Manual of the Medical Botany of the United States of North America* (1828-1830), was the first American medical authority to record the medicinal uses of hickories. He stated that hickory could be used in the same manner as walnut. Evidence indicates that hickories were somewhat popular as a folk remedy in the nineteenth and early-twentieth centuries. The most commonly mentioned use is the internal consumption of a mixture of hickory ashes and water for reducing fevers and curing dyspepsia. Hickories were widely used by the Cherokees and other southern Indians as a diuretic, a laxative, a treatment for skin ailments, a tonic, and for gynecological problems (Moerman 1986).

Oak

Oaks (*Quercus* sp.) are one of the most economically important hardwood species found in North America. Approximately 70 taxa are found in the United States, 58 of which are trees. Britton and Brown (1970) discuss 25 species that are commonly found in the northeastern United States. Oaks grow in virtually every ecological niche in the Eastern Woodlands, from dry upland ridges to rich alluvial bottomlands (Britton and Brown 1970; Radford et al 1968). Oaks are used for fuel, building materials, food, medicine, shade and ornamentation, tannin, and cork (USDA 1974). Oak acorns provide a rich and reliable food source for both humans and wildlife. The nuts are ground into flour, which made excellent muffins and pancakes. Acorns can be roasted and used as a coffee substitute. Acorns from white oaks are more palatable than those of red oaks, due to the higher levels of tannic acid found in the red oak acorns. Red oak acorns are more bitter and must be soaked several times in boiling water prior to their consumption (Angier 1974; Gillespie 1959; Peterson 1977). Oaks were deliberately planted around dwellings in the nineteenth century as shade trees and for their acorns (Favretti and Favretti 1990; Leighton 1987).

Oaks have a long history of medicinal use in America, both as a home remedy and by professional medical doctors. Oak bark tea was consumed as a treatment for sore throat and diarrhea. Concoctions of oak bark and leaves were also used as external astringent and antiseptic medications for the treatment of burns, skin sores, and ulcers (Crellin and Philpott 1989; Krochmal and Krochmal 1973). Acorns were used medicinally only when bark and leaves were unavailable. Griffith, in his influential *Medical Botany* (1847), provided detailed descriptions on the medical value and uses of oaks. White oak *(Quercus alba)* and black oak *(Quercus velutina)* were considered the most valuable species for medical uses in nineteenth-century America (Crellin and Philpott 1989).

Ornamentals

Three possible ornamentals, including two trees (gray dogwood and tupelo) and a cucurbit (the bottle gourd), were retrieved from the ca. 1820 and 1830 Everly privy deposits (Tables 2 and 3). The gray dogwood and tupelo seeds minimally document wild trees growing in the project locality and may represent ornamental shade trees planted at 225 Market Street in the first quarter of the nineteenth century. The bottle gourd seed may have originated from ornamental or garden plantings of bottle gourds on the Everly family property in the first quarter of the nineteenth century.

Bottle Gourd
The bottle gourd is a native of the Old World tropics that is widely cultivated for its woody fruits and as a garden ornamental. Bottle gourd fruits are used to make containers and utensils. They were not used for medicine and, although edible, are not particularly palatable (Hedrick 1972).

Gray Dogwood
Gray dogwood is a native, thicket-forming shrub that fruits from August to September. Leighton (1976) reports that this shrub was planted in eighteenth-century gardens as a hedge plant and garden border. This shrub is not recorded as edible, and no mention of its use as a medicinal herb was found in the literature reviewed for this project (Angier 1978; Coon 1963; Cox 1985; Crellin and Philpott 1989; Duke 1992; Favretti and Favretti 1990; Foster and Duke 1990; Grieve 1931; Justice 1939; Krochmal and Krochmal 1973; Krochmal et al. 1969; Leighton 1987; Massey 1942; Millspaugh 1884; Phelps Brown 1993).

Tupelo
Tupelos, or blackgums, are middle-sized trees that may attain a height of 90 feet. They produce an acidic, ovoid, blue-black fruit that is an important wildlife food. Tupelos are found in both moist and dry, rich soils. While these trees grow at high elevations, they favor lower ground. Tupelos are most common east of the Alleghenies (Strausbaugh and Core 1977). These native trees flower between April and June and fruit from August to October. Three species are native in the northern United States and Canada (Britton and Brown 1970). Tupelos are mentioned as an ornamental lawn tree in eighteenth-century gardens (Favretti and Favretti 1990; Leighton 1976). No mention is made of these trees occurring in nineteenth-century gardens (Leighton 1987; Favretti and Favretti 1990). The acidic fruit of tupelos was collected and used by historic-period Americans to make preserves and jellies (Fernald and Kinsey 1958; Hedrick 1972). Crellin and Philpott (1989) state that the medicinal use of tupelo is little mentioned in either eighteenth- or nineteenth-century published medical texts; however, there is an oral tradition of use of this taxon as a tonic and cure for kidney ailments.

Naturally Occurring Edible Herbaceous Plants
Six plants are recorded as edible herbs. All of these herbs have a long history of use as edible wild plant foods, both by Native Americans and immigrants of European and African descent, and all of these plants are recorded as historical dietary supplements. All six have been used historically as potherbs, and the seeds of three can be ground for flour. Additionally, all six are recorded as medicinal herbs. Edible herb seeds were sparse within the Block 2 privies.

Seventy-two edible herb seeds were collected from the five dated privy contexts (ca. 1790 Wister deposit, ca. 1790 Simmons deposit, ca. 1820 Everly deposit, ca. 1845-1855 Feature E, ca. 1850 Feature B). Sixty-five seeds from six taxa were found in the 1790 to 1830 residential privies. Two mid-nineteenth-century commercial privies contained six edible herb seeds (Tables 2-3).

The context and condition of the seeds, as well as other plants associated with the edible herbaceous weed seeds found within the privies, suggest that these macroremains date to the eighteenth- and nineteenth-century occupations. The condition of the seeds is suggestive of relative age, because most of the seeds appear old, some are mineralized, and some have fecal material adhering to them.

These plants may represent naturally deposited seed rain. On the other hand, these plants may represent remains of gathered plant foods. Ample evidence in the historical record indicates that both urban and rural Americans supplemented their diets to some degree with gathered greens in

the eighteenth and nineteenth centuries. There was also a great deal of interest in naturally occurring medicinal remedies during this period. Minimally, these seeds document what potentially economically useful plants were available for harvest in the urban landscape in the early to mid-nineteenth century.

The distribution of edible herbs in the sampled features indicates a distinct trend of decreasing abundance with the passage of time (Table 2). This pattern is repeated in the distribution of other taxa (inedible herbaceous weeds, ornamentals, nuts) that would have been growing wild in open spaces on the lots (weeds and grasses) or deliberately planted in the yardlots (nuts, ornamentals). This pattern of a decrease in naturally occurring wild plants and economically useful trees and shrubs corresponds to the increasing commercialization of the Block 2 locality in the 1840s. The lower density and ubiquity of naturally occurring plant taxa and ornamentals found in mid-nineteenth-century features illustrate how increasing commercialization restricted the amount of open space (and wild plants) in the project area.

The loss of naturally occurring plants suggests that open spaces were increasingly built upon, paved, or otherwise enclosed. The loss of open space limited the later Block 2 dwellers' dietary choices, since they no longer had the option of gathering wild plants (the evidence indicates the presence of naturally occurring plants was severely restricted after ca. 1830) or planting gardens and economically useful trees and shrubs on their lots. By the mid-nineteenth century, the procurement of plant resources was probably restricted to market purchases.

Clover

Clover, *Trifolium* sp., is a biennial or perennial herbaceous legume that is a common constituent of disturbed habitats such as old fields, clearings, and roadsides. Fourteen species of *Trifolium* are naturally occurring in the northern United States and Canada. Clovers found growing wild in the Northeast include both native American and naturalized European varieties. Clover fruits are available for harvest from April through September (Radford et al. 1968; Britton and Brown 1970). Clover grows throughout North America and is a favored forage of many types of wildlife, including grazing ungulates, birds, and bears (Angier 1974). Clover has been utilized by humans as both a food source and herbal medicinal remedy (Cox 1985; Peterson 1977). European red clover, *Trifolium pratense,* is widely planted as a livestock feed in the United States (Hedrick 1972).

Native Americans ate both raw and cooked clovers. The roots were steamed or smoked, while the leaves were quickly cooked and eaten (Angier 1974; Hedrick 1972). The seed-filled dried blossoms were used in Ireland to make breads that were used as famine foods (Hedrick 1972; Krochmal and Krochmal 1973). The entire plant can be harvested when in full bloom. Clover greens can be boiled and eaten as a protein-rich potherb. The dried flowerheads make a flavorful herbal tea and can be ground for flour (Cox 1985; Peterson 1977). Cox (1985) discusses three naturalized European clover species (*Trifolium agrarium,* hop clover; *T. pratense,* red clover; *T. repens,* white clover) as both edible and medicinal herbs. He states that the dried flower heads were once used as an herbal remedy for whooping cough and as an astringent medicine for skin sores.

Krochmal and Krochmal (1973) list red clover as a treatment for coughs and sores. Clovers have long been employed as an expectorant and an ointment for ulcers (Coon 1963). Clovers were marketed in the nineteenth century by Shaker communities as remedies for cancerous ulcers, corns, and burns (Crellin and Philpott 1989:161). The Parke-Davis company sold preparations of red clover in the 1890s as a sedative, as an external treatment for skin ulcers, and as a treatment for whooping cough (Crellin and Philpott 1989).

Dock

Seventeen species of the *Rumex* genus, all of which are edible, are found in the northern United States and Canada (Britton and Brown 1970). This taxon, which is distributed throughout the United States, is an endemic weed of old fields, pastures, and other disturbed habitats (Britton and Brown 1970; Cox 1985; Medve and Medve 1990; Radford et al. 1968). The young leaves of dock are eaten raw in salads, cooked as a potherb, and added to soups. The older leaves must be cooked "in several changes of water" to remove the bitter taste (Cox 1985:248). The seeds can be ground for flour, which is then mixed with other kinds of flour prior to baking (Angier 1974; Cox 1985; Gillespie 1959; Hall 1976). Dock has been cultivated and gathered from the wild for centuries in Europe (Hedrick 1972). Yellow dock, *Rumex crispus*, is a perennial herbaceous weed that was introduced from Europe. Yellow dock fruits are available for harvest from May through July (Cox 1985; Medve and Medve 1990; Radford et al. 1968).

Dock has been used as a medicinal remedy for centuries. Docks were commonly used as folk medicines and were also highly favored in nineteenth-century pharmaceutical and medical literature. N. S. Davis, a highly respected nineteenth-century physician, claimed that dock was among the most valuable herbal remedies in America. Yellow dock, *Rumex crispus*, was the most valued species among nineteenth-century medical practitioners. Dock was highly regarded as a laxative, a blood purifier, and a treatment for skin conditions, leprosy, venereal disease, and tumors. Like pokeweed, yellow dock was collected in the nineteenth century for commercial sale by pharmaceutical companies (Crellin and Philpott 1989).

Euroamerican settlers consumed dock tea as a laxative, a tonic, a blood purifier, and an appetite stimulant (Angier 1978). Dock was used to make poultices and to treat ringworm (Krochmal et al. 1969; Krochmal and Krochmal 1973; Millspaugh 1884). Medical interest in dock diminished rapidly in the twentieth century (Crellin and Philpott 1989).

Goosefoot

Goosefoot (*Chenopodium album*), also known as lambsquarters, has long been valued as a nutritious wild plant food. This annual herbaceous plant, which grows in disturbed habitats, is a common weed growing around human habitations throughout the continental United States (Britton and Brown 1970; Radford et al. 1968). A single plant can produce up to 100,000 seeds.

Young goosefoot leaves are cooked as a spinach-like potherb, eaten raw in salads, or added to soups, and the seeds can be ground for flour or consumed as a cereal (Cox 1985; Fernald and Kinsey 1958; Hall 1976; Gillespie 1959; Hedrick 1972; Medve and Medve 1990; Peterson 1977). Goosefoot greens and seeds have been used historically as a gathered dietary supplement. Euroamerican pioneers reportedly added goosefoot flour to breads, cookies, muffins, and pancakes (Duke 1992). Goosefoot seeds were mixed with wheat to extend the crop in times of famine in Europe (Krochmal and Krochmal 1973). Several species of *Chenopodium* were cultivated in the nineteenth century as medicinal herbs and garden ornamentals (Coffey 1993; Favretti and Favretti 1990; Leighton 1987), but *Chenopodium album* was not specifically recorded in the literature reviewed for this report as a medicinal herb (Angier 1978; Coon 1963; Cox 1985; Crellin and Philpott 1989; Duke 1992; Foster and Duke 1990; Grieve 1931; Justice 1939; Krochmal and Krochmal 1973; Krochmal et al. 1969; Massey 1942; Millspaugh 1884).

Knotweed

The knotweeds/smartweeds, *Polygonum* sp., which are available for harvest in the summer, are common herbaceous weeds of disturbed habitats throughout the United States and Canada (Britton and Brown 1970; Radford et al. 1968). Britton and Brown, in their *Illustrated Flora of*

the Northern United States and Canada (1970), discuss 14 species of *Polygonum*. Smartweeds are common throughout the eastern United States in alluvial settings and disturbed areas (Britton and Brown 1970; Radford et al. 1968).

The seeds and greens of these herbaceous plants have long been utilized as gathered dietary supplements in the United States, with the roots, seeds, and bulbs all being used for food. The smartweeds are most highly prized for their seeds, which are ground into flour for baking or parched and eaten as a cereal. The leaves and shoots are eaten fresh in salads and cooked as a potherb. The rootstalks of some species are valued as a potato substitute (Angier 1974; Gillespie 1959). Gillespie (1959) states that some varieties of smartweed were also used as a pepper substitute.

The smartweeds, particularly *Polygonum hydropiper* and *Polygonum aviculare*, have a reputation in folk medicine as an astringent, a diuretic, and a tonic. The smartweeds were best known in nineteenth-century America for their supposed diuretic and astringent qualities (Crellin and Philpott 1989). Smartweed was apparently not a very popular herbal medicine among nineteenth-century medical professionals, since it was generally only briefly mentioned in medical treatises, and Griffith (1847) stated that this taxon was rarely prescribed as a medicinal remedy.

Pigweed

Pigweed is an annual herbaceous plant that sometimes grows over eight feet tall. Pigweed fruits are available for harvest from June until first frost. This plant is a common weed in old fields, pastures, and other disturbed habitats (Britton and Brown 1970; Medve and Medve 1990; Radford et al. 1968). The young leaves of pigweed can be eaten raw or cooked as a spinach-like potherb. Dried leaves are added to soups. The dehusked seeds are ground into flour, which is used to make porridge, muffins, and hotcakes (Angier 1974; Cox 1985; Gillespie 1959; Hall 1976). Duke (1992) reports that pigweed flowers can be boiled and eaten and that the seeds of some species can be roasted and popped like miniature popcorn. Pigweeds (*Amaranthus hybridus, A. caudatus, A. hypochnodriacus, A. tricolor*) were grown as garden ornamentals from the late-eighteenth through the nineteenth centuries (Favretti and Favretti 1990; Leighton 1987).

Pigweed, particularly *Amaranthus hybridus* and *A. retroflexus*, has a minor reputation as a medicinal plant, largely because of its mildly astringent qualities (Coon 1963). It was apparently not highly regarded by the medical profession, as it is not even mentioned in Crellin and Philpott's (1989) exhaustive monograph on medicinal herbs. Pigweed was formerly used to quell internal bleeding, dysentery, and diarrhea (Angier 1978; Coffey 1993; Coon 1963; Krochmal and Krochmal 1973). It was believed to reduce excessive menstrual flows and internal hemorrhaging and was also administered as a treatment for stomach ulcers (Angier 1978; Krochmal and Krochmal 1973).

Pokeweed

Pokeweed, *Phytolacca americana*, is an indigenous North American herbaceous weed that grows along the entire eastern seaboard, from Quebec to Florida. Pokeweed favors rich, low ground in open wooded areas, pastures and fields, and disturbed areas. The crimson berries, whose juice has been used as a food and wine coloring, paint pigment, dye, and ink substitute, are available for harvest from May until first frost (Cox 1985; Radford et al. 1968).

Young pokeweed shoots and leaves are harvested and consumed as a potherb. The young stalks can be cooked and eaten like asparagus or pickled and stored for later consumption. The leaves are cooked as a spinach-like potherb (Cox 1985; Gillespie 1959; Hall 1976). The young leaves are canned and stored in the Appalachians (Krochmal and Krochmal 1973). The shoots of this

herb have been, and still are, cultivated in the United States. Cox (1985) found gardeners cultivating pokeweed in southern Missouri, and Gillespie (1959) stated that this plant was still sold commercially in West Virginia in the 1950s. Pokeweed was imported into Europe, where it is still cultivated as a garden vegetable (Angier 1974; Cox 1985; Hall 1976).

Pokeweed was widely used as a folk remedy during the eighteenth and nineteenth centuries in the United States (Cox 1985; Crellin and Philpott 1989; Justice 1939; Krochmal and Krochmal 1973; Massey 1942). Indeed, this plant was in such high regard among both laymen and professional medical practitioners that it became known as a virtual cure-all during the nineteenth century. The principal medicinal value attributed to this plant was as a cure for rheumatism. In eighteenth- and nineteenth-century America, pokeweed roots and berries were widely prescribed as treatments for rheumatism, skin conditions, syphilis, and constipation (Crellin and Philpott 1989).

A 1912 survey of physicians referenced in Crellin and Philpott's (1989) monograph on herbal medicine found that pokeweed was still a popular botanical remedy in the early-twentieth century. Early settlers used pokeberry juice to treat skin conditions; dried leaves were used to make poultices that were applied as a topical treatment for sore eyes, wounds, and ulcers (Coon 1963; Krochmal and Krochmal 1973). The roots were once gathered by pharmaceutical companies for commercial sale as an emetic (Angier 1978).

Noneconomic Weeds and Grasses

Twenty-eight seeds from four probable noneconomic herbaceous weeds (jimsonweed, nightshade, ragweed, sumpweed) and 19 seeds from an unknown taxon of the grass family were found in five dated and one undated Block 2 context (Table 2). One of the herbaceous plants (sumpweed) is a weedy species with no recorded economic value. Although three of these taxa (jimsonweed, nightshade, ragweed) have documented uses as ornamental and/or medicinal plants, the low number and distribution of these plants are more suggestive of naturally growing yardweeds.

Forty-six herbaceous weed/grasses were collected from the five dated privy contexts (ca. 1790 Wistar deposit, ca. 1790 Simmons deposit, ca. 1820 Everly deposit, ca. 1830 Everly deposit, ca. 1842 Feature C, ca. 1850 Feature B). Thirty-five seeds were found in the ca. 1790 to 1830 residential privies and two mid-nineteenth-century commercial privies contained 11 edible herb seeds (Tables 2 and 3).

All of the herbaceous weeds and grasses are adventive weeds that favor disturbed habitats and that grow abundantly around human habitations and in agricultural fields (Cox 1985; Kay and Lees 1913; Radford et al. 1968). They are interpreted as probable yard weeds with no economic value. Although these plants probably served no economic function and therefore are not directly related to human activities, their occurrence in the privy deposits can be used as indicators of how the inhabitants used outdoor space in the project area. Specifically, the distribution and abundance of these noneconomic weeds, coupled with that of other naturally occurring plants and ornamentals, provide indirect evidence of the effect of increasing population density and commercialization as the nineteenth century progressed.

In the case of the noneconomic weeds and grasses, a distinct trend of decreasing abundance and ubiquity occurs with the passage of time. Whereas 19 herbaceous weed seeds were found in contexts that date to the first quarter of the nineteenth century, only eight came from mid-nineteenth-century features. Sixteen grass grains were found in early-nineteenth-century contexts, and three came from artisan features. The one to three ratio of weed and grass seeds in mid-

nineteenth-century commercial contexts versus early-nineteenth-century residential contexts illustrates how urbanization restricted the amount of open space in the project area.

Jimsonweed

Jimsonweed, *Datura stramonium,* is a widely naturalized endemic weed that was imported from Europe and grows abundantly on garbage heaps (Millspaugh 1884). This taxon, which is extremely poisonous, was planted in nineteenth-century gardens as an ornamental flower and is recorded as a narcotic, medicinal herb (Crellin and Philpott 1989; Leighton 1987). Jimsonweed is recorded as a medicinal herb that, although extremely poisonous, was used as an antispasmodic, a topical treatment for skin conditions, an antiasthmatic, and a sedative (Crellin and Philpott 1989; Krochmal and Krochmal 1973; Krochmal et al. 1969). All parts of the plant are to some degree toxic, especially the seeds. The most common use of this herbaceous weed was as a treatment for the spasmodic coughing associated with asthma. The plant was burned and the smoke was inhaled by the asthma sufferer. The plant juices, flowers, leaves, and roots were also made into salves and poultices that were variously used as topical treatments for sores, boils, pimples, swellings, and skin ulcers (Crellin and Philpott 1989; Krochmal and Krochmal 1973). Crellin and Philpott (1989) reiterate the value of this plant as an inhalant for asthma patients and state that jimsonweed cigarettes are available today in some parts of the world.

Nightshade

Nightshade (*Solanum* sp.) is a highly poisonous weed that is a common invader of disturbed areas (Britton and Brown 1970; Radford et al. 1968). Britton and Brown (1970) discuss nine species that grow wild in the northern United States and Canada. Nightshade is inedible, and this taxon is not planted as a garden ornamental. Indeed, this plant is widely regarded as a noxious weed. Nightshade has a minor reputation as a medicinal remedy. Authors of nineteenth-century medical texts discuss this genus as a treatment for diarrhea and rheumatism (Crellin and Philpott 1990). Millspaugh (1884) recommends nightshade as a resolvent to treat dropsy, gastritis, nervous afflictions, and syphilis. Nightshade was listed in the *United States Pharmacopoeia* in 1880.

Ragweed

Ragweed, *Ambrosia* sp., is an endemic weed that is widespread throughout the continental United States. Although ragweed is not edible, it has been utilized as a medicinal home remedy and to some degree by professional medical practitioners. It was used in nineteenth-century America as a topical astringent for the treatment of wounds and taken internally as a treatment for hay fever. Parke-Davis marketed a liquid extract of ragweed mixed with goldenrod in the late-nineteenth century as a tonic and astringent medicine (Crellin and Philpott 1989). It was also used in the United States as a treatment for gonorrhea, and digestive disorders such as diarrhea and upset stomach (Cox 1985; Crellin and Philpott 1989; Krochmal and Krochmal 1973). Cox (1985) and Krochmal and Krochmal (1973) report that ragweed is reputedly a valuable treatment in Mexico for intestinal worms and the reduction of fevers. Medical interest in ragweed declined in the early-twentieth century (Crellin and Philpott 1989).

Sumpweed

Sumpweeds are annual and perennial herbaceous weeds that are found in sandy, damp soils of streambeds and floodplains. Fifteen species are found in the northern United States and Canada (Britton and Brown 1970). These plants, which are indicators of wet conditions, fruit from July to September. It is not uncommon to find such wetland indicators in archeobotanical assemblages from historical sites. This plant is not recorded as edible, and no mention of its use as a medicinal herb or garden ornamental was found in the literature reviewed for this project (Angier 1978; Coon 1963; Cox 1985; Crellin and Philpott 1989; Duke 1992; Favretti and Favretti 1990; Foster

and Duke 1990; Grieve 1931; Justice 1939; Krochmal and Krochmal 1973; Krochmal et al. 1969; Leighton 1987; Massey 1942; Millspaugh 1884; Phelps Brown 1993).

Grass Family

Nineteen grass-family seeds from a single unknown taxon were found in two dated privy contexts. These seeds likely derived from weedy grasses growing naturally in the locality.

WOOD CHARCOAL ANALYSIS

Presumably the wood charcoal that was found within the Block 2 privies represents spent fuelwood that was used for cooking and heating the residents' homes. Wood charcoal found in fire-related features may not be representative of the full spectrum of tree species growing in the site locality at the time this site was occupied, since the inhabitants likely selectively utilized certain species for fuel and/or building materials. For instance, numerous studies of macroplant assemblages conducted by the author and others indicate that oaks and hickories were consistently selected for fuelwoods throughout the eastern United States. These species are therefore often dominant in fire-related features.

The effects of selective gathering can be somewhat mitigated by examining the entire wood charcoal assemblage from a given time period or excavation area within a site. When this is done at a site with a broad spectrum of sampled features, then it is more likely that many of the tree taxa growing in a site locality will be represented in the overall wood charcoal assemblage. Therefore, examination of the overall wood charcoal assemblage and wood charcoal associated with each time period (1790s, 1820-1830, 1842-1855) offers a general picture of patterns of fuel use and changing local forest composition during the eighteenth- through mid-nineteenth-century occupation of Block 2.

Wood charcoal is examined in an effort to reconstruct the local environment, as an independent measure of anthropogenic effects on the environment, and in an effort to discern patterns of selective resource exploitation. In this analysis, wood counts, rather than weights, are used to evaluate the significance of taxa. This is in recognition of varying properties of different wood types, resulting in more or less thorough combustion, and ultimately differential archeological preservation. Wood charcoal is analyzed from temporal, spatial, and functional perspectives.

The archeological wood charcoal assemblage is comprised of two major categories of taxa, namely, hardwoods (dicotyledons or dicots) and softwoods (conifers). In cases where the size and condition of a charcoal fragment precluded more precise identification, it was identified to this general level. In other cases, charcoal fragments were classified by growth pattern—either diffuse porous or ring porous. In some cases, however, wood charcoal was completely devoid of distinguishing characteristics and was thus classified as unidentifiable (Table 5).

The number and percentage of identified wood specimens from each flotation context are presented in Tables 5 and 6. Table 5 presents the number of identified fragments from each dated context. Table 6 presents the relative proportion of the identified wood charcoal assemblage (exclusive of unidentifiable fragments) associated with each dated context within each feature.

Nine wood charcoal taxa are identified in the Block 2 features. Oaks represent the highest proportion of specifically identified wood, accounting for 55 percent of the wood specimens from flotation samples (Table 6). Oaks were the most ubiquitous and abundant taxon identified in the wood charcoal assemblage. Oak is a highly prized fuelwood that was identified in 73 percent of the features. The next most abundant taxon identified at this site was hickory, which is also an excellent fuelwood. Hickory accounted for 25 percent of the overall wood charcoal assemblage

and was identified in 64 percent of the sampled features. Ten percent of the wood charcoal assemblage was classified as indeterminate hardwood. It is likely that most, if not all, of these fragments were either oaks or hickories.

Therefore, oaks and hickories together account for 80 to 90 percent of the identified wood specimens. The high proportion of these two superlative fuelwoods, in combination with their high ubiquity, suggests that the Block 2 residents purchased much of their firewood at market locally. This is not surprising, given the high economic status of the Block 2 neighborhood in the early-nineteenth century. Hardwoods such as oaks and hickories are generally preferred fuel sources, because of their superior burning characteristics. These, and other common hardwood fuel sources such as maple and elm, produce high heat values, have excellent coaling qualities, and produce few sparks and little smoke (Table 11).

Pine, which is generally considered a rather inferior fuelwood, represented 6 percent of the identified wood. In spite of its rather minor proportion within the identified wood charcoal assemblage, pine was ubiquitous in the Block 2 privies. This conifer was identified in 45 percent of the samples. Pines have relatively low heat values and poor to fair coaling qualities (Table 11). Most conifers also produce moderate to high quantities of sparks and smoky fires. The very qualities that make pines a poor fuel make it an excellent source of tinder. The high ubiquity of pine, in combination with its low proportions in the sampled features, suggests that the inhabitants may have been using this conifer for tinder.

Four hardwood taxa, American basswood, maple, elm/hackberry, and dogwood, account for the remaining five percent of the identified wood charcoal specimens. Three of these taxa exhibited low overall ubiquities ranging from nine percent (dogwood) to 18 percent (elm/hackberry, maple). All three of these taxa, like oaks and hickories, make excellent fuelwoods (Table 11). Basswood, which is an extremely poor fuelwood (Table 11), exhibited a higher ubiquity of 27 percent. This fuelwood exhibits extremely low heat values (the poorest on Table 11) and produces smoky fires. It is unlikely that this basically lousy fuel would have been purchased at market.

Therefore, the three samples that contained this taxon (Table 6) may offer evidence of some local foraging for firewood. Interestingly, these samples all occur in the earliest of the privy deposits (1 from ca. 1790 and 2 from ca. 1820). Poor fuelwoods (pines and basswood) account for eight to 36 percent of the identified wood charcoal in four ca. 1790 and 1820 flotation samples (Table 6). Basswood accounts for 36 percent of the identified wood charcoal in one ca. 1790 sample. In contrast, oaks account only for seven percent of this sample. Pine accounts for 20 percent of the wood from the other ca. 1790 sample. Basswood and pine together comprise from 8 to 10 percent of the two ca. 1820 samples. Basswood drops out of the wood charcoal assemblage in samples postdating ca. 1820, and the percentage of pines is much less. These proportions suggest that the first inhabitants of Block 2 relied on gathered woods for a portion of their household fuel. This finding is in keeping with the evidence of decreasing presence of naturally occurring weedy taxa in the project locality by the mid-nineteenth century. The post-1830 occupants, whose fuelwoods contained much higher proportions of oaks and hickories, likely purchased most if not all of their fuelwood from local markets.

IV. INTERSITE COMPARISONS OF FLORAL ASSEMBLAGES FROM NINETEENTH-CENTURY PRIVIES

Introduction

Figure 3 tabulates the number of economic taxa associated with the four elite residential contexts (Feature B, Level 8; Feature E, Level 4/5; Feature B, Levels 7/7.1, 6) and four middle-class commercial contexts (Feature C; Feature E, Level 3; Feature H; Feature B, Level 4) contexts at Block 2. The residential contexts date between ca. 1790 and 1830 and the commercial contexts date from ca. 1842 through 1856, when the Block 2 area was destroyed by a catastrophic fire. Figure 6 tabulates the number of economic plant taxa recovered from six eighteenth- and nineteenth-century, middle- to upper-class privies at the Picotte-DEC Site in Albany, New York (Bonhage-Freund et al. 2002). Figures 4 and 5 and Appendix B tabulate the number of economic plant taxa recovered from 32 privies from the early-nineteenth century through the early 1900s.

These graphs organize the plant data by presumed economic importance of each taxon. Individual plant taxa found in each privy are tabulated in Appendix B. The data are used to compare and contrast dietary richness of the occupants of the Block 2 site with the nineteenth-century diet of high- and low-income individuals from Picotte-DEC in Albany (Figure 6) and other urban settings (Figures 4-5). Data from privies and other deeply buried shaft features are exclusively used because these features generally provide an excellent preservational environment. Additionally, plant remains found in the privies provide direct evidence of diet.

Macroplant remains included in Figures 4 and 5 derive from: (1) two tenant features (nineteenth century) and an upper-class well (1780s), State University Construction Site (SUCF), Albany, New York; (2) Feature 10, Broadway/State Street, Schenectady, New York; (3) seven tenement privies and eight owner-occupant artisan privies in the Five Points area of New York City; (4) nine tenant privies and four owner-occupant privies from Paterson, New Jersey; (5) a privy associated with a late nineteenth-century working-class hotel in Fayette, Michigan; (6) a privy associated with a high-status artisan's household in Cumberland, Maryland; (7) three privies from middle- to upper-middle-income contexts and one from a middle- to low-income context from Harper's Ferry, West Virginia; (8) a privy associated with probable Euroamerican working-class occupation in Augusta, Georgia; and (9) an African American privy from James City, North Carolina (Appendix A).

Figure 4 illustrates plant taxa numbers associated with eight lower middle class owner occupant privies (New York City and Paterson), one high class brothel privy (New York City), three upper-middle-class owner occupant privies (Albany-SUCF, Cumberland, Harper's Ferry), one high-class hotel privy (Harper's Ferry), and one middle-class saloon privy (Harper's Ferry). Figure 5 illustrates the number of economic plant taxon found in the working-class Broadway/State Street (Albany) privy, six multi-family immigrant tenement privies in New York City (Five Points), eight privies from immigrant-tenant housing in Paterson, New Jersey, two tenement privies in Albany (SUCF), two privies associated with working-class and African American housing in the Southeast, twp working-class commercial establishments (New York City, Paterson), a boarding house (Harper's Ferry), and a working class hotel (Fayette). Figure 6 illustrates plant taxa numbers associated with five high-status residential occupations (Privies 7, 1, 3, 10, 11) and one middle-class commercial (Privy 12) occupation at the Picotte-DEC site in Albany, New York.

Figure 7 evaluates similarities and differences between lower- to upper-middle-class owner-occupant and relatively poor immigrant-tenant and working-class diet and plant use through ubiquity analysis. Figure 7 and Appendix C illustrate the percentage-presence of each identified

economic plant taxon found in the 14 owner-occupant and 18 tenant/working-class privies in Broadway/State Street, Schenectady, New York; the Five Points Area of New York City; the SUCF, Albany, New York; Paterson, New Jersey; Fayette, Michigan; Cumberland, Maryland; Harper's Ferry, West Virginia; Augusta, Georgia; and James City, North Carolina. In this figure, the occurrence of each plant type is expressed as a percentage of the total number of proveniences in which a particular taxon is present. Ubiquity analysis ascribes equal weight to the physical presence of a given taxon, regardless of the abundance of that plant type in a particular feature or context. This statistic offers a way to assess the relative importance of various plant species and gives an indication of how common each plant type is in a given site, time period, or other larger context. Data presented in Appendix D were used to prepare Figure 7.

Privy Contexts

Picotte-DEC Site, Albany, New York

Six mid-eighteenth- to mid-nineteenth-century wood-lined privies were associated with a middle-class residential neighborhood located along the Hudson River in the northern part of Albany, New York (Figure 4; Bonhage-Freund et al. 2002). The earliest privy sample in this study (Privy 7, 1750-1760) is associated with a community of tanners and shoemakers who built their residences and shops outside the city walls in the mid-seventeenth century, after they were forced outside the town's stockade due to the high risk of fire associated with their livelihood. This wood-lined feature dates from 1750 to 1760 and was probably associated with the residence of a tanner/shoemaker living outside the city walls in the 1740s.

Albany became a major import and export center in the 1780s. Second-tier traders whose livelihood focused upon the burgeoning import/export business had their residences and warehouses in the project locality. These upper- and middle-class merchants occupied the project locality from the 1780s through the 1820s. Two privies (Privies 1 and 3) are associated with the 1780-1830 residential occupation. Privy 3 was used by the household of upper-class professionals, and Privy 1 was used by slaves owned by a merchant seaman. Buildings in the project locality were completely destroyed in a catastrophic fire in 1797.

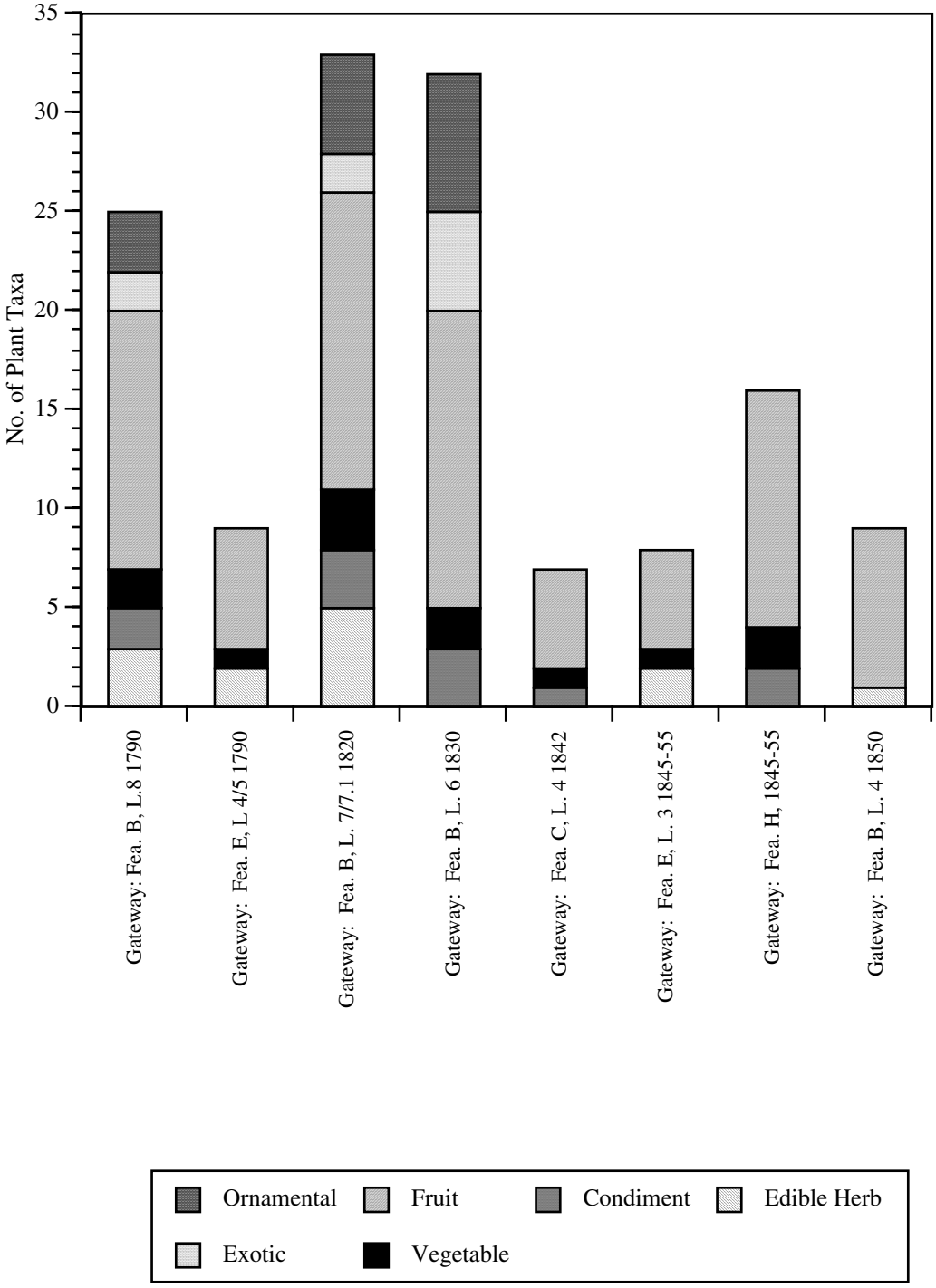

Figure 3. Floral Assemblages from Gateway Middle and Upper Income Privies.

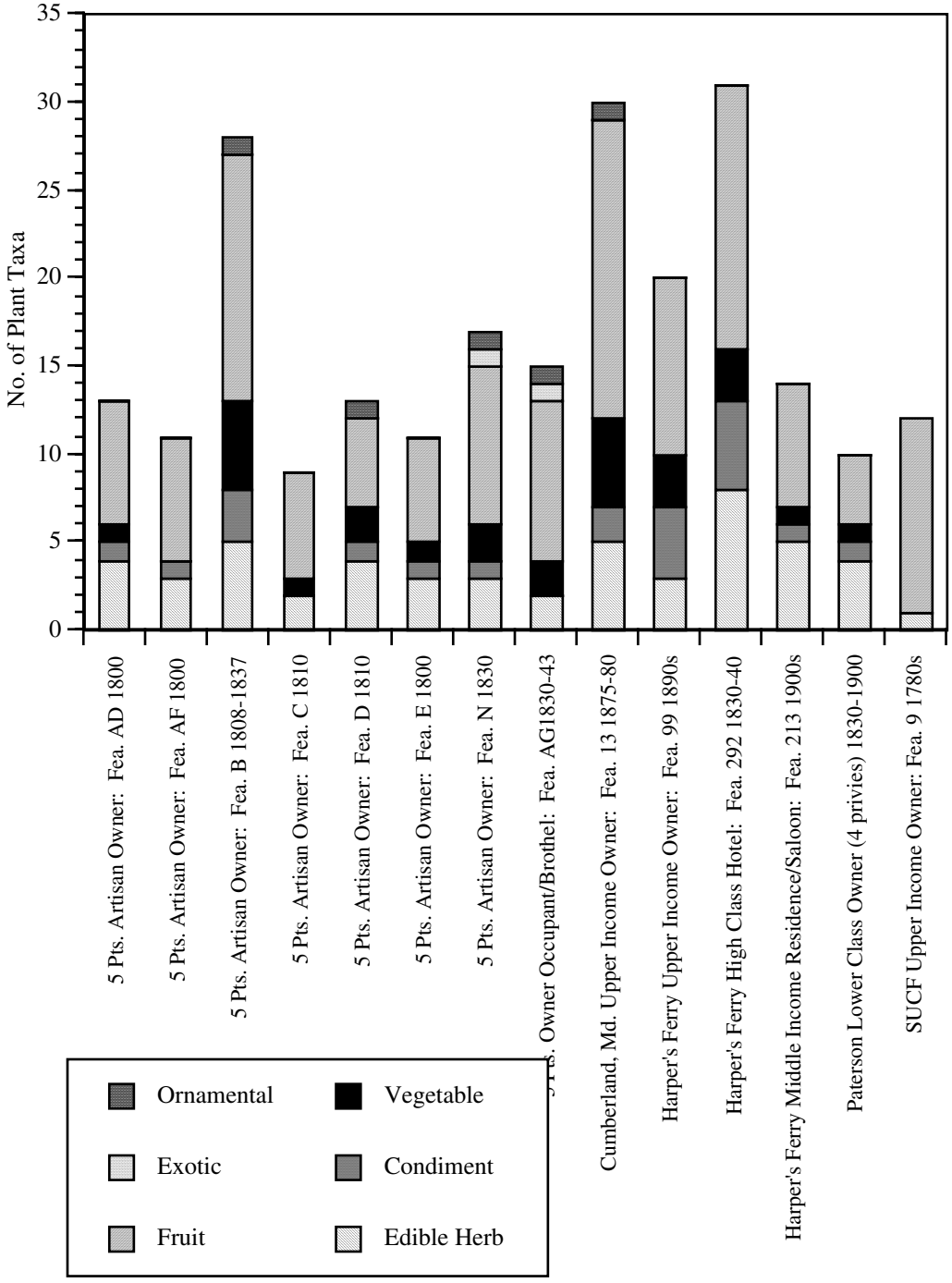

Figure 4. Floral Assemblages from Lower, Middle and Upper Income Owner Occupant and Commercial Privies.

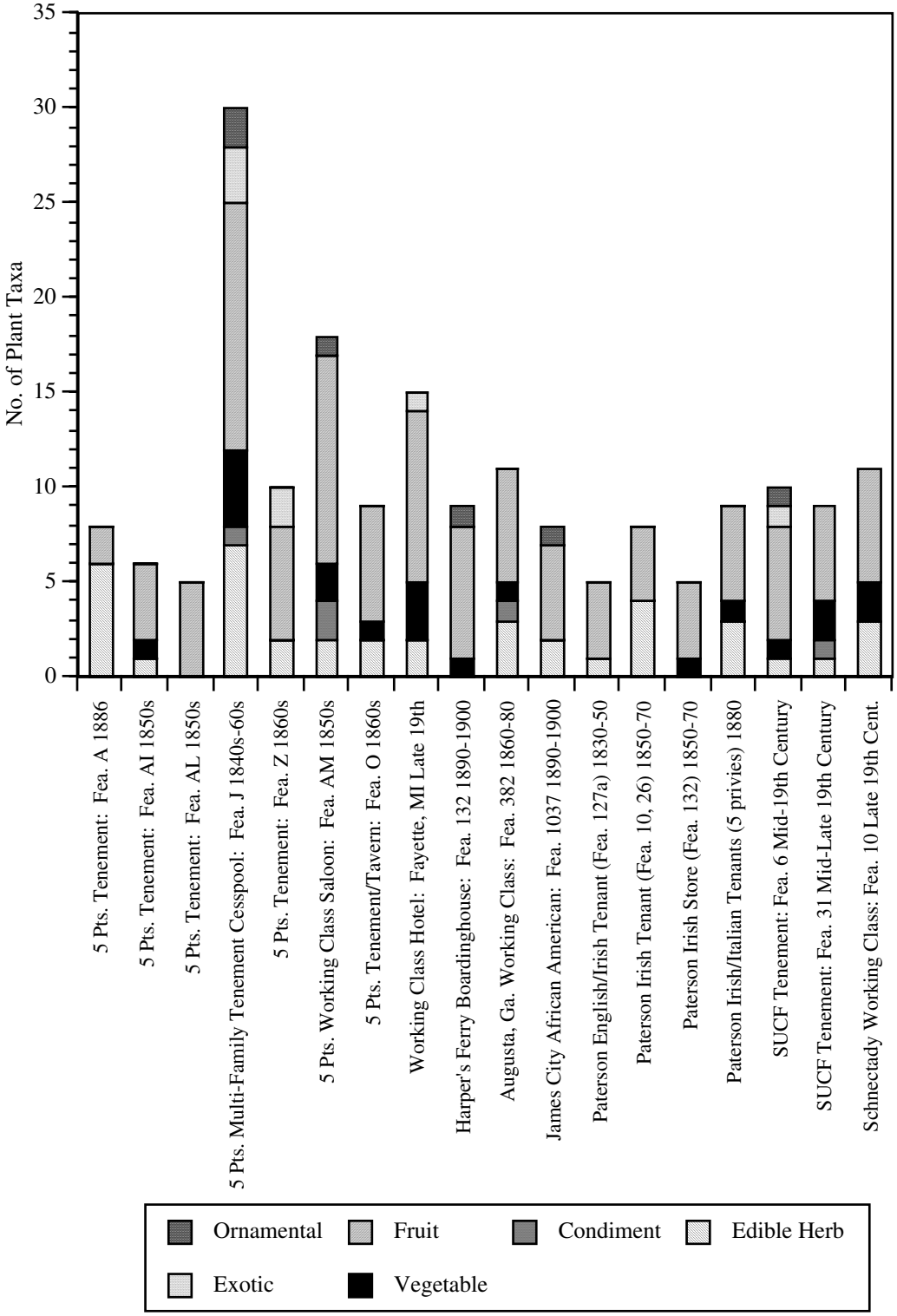

Figure 5. Floral Assemblages from Tenement and Working Class Privies.

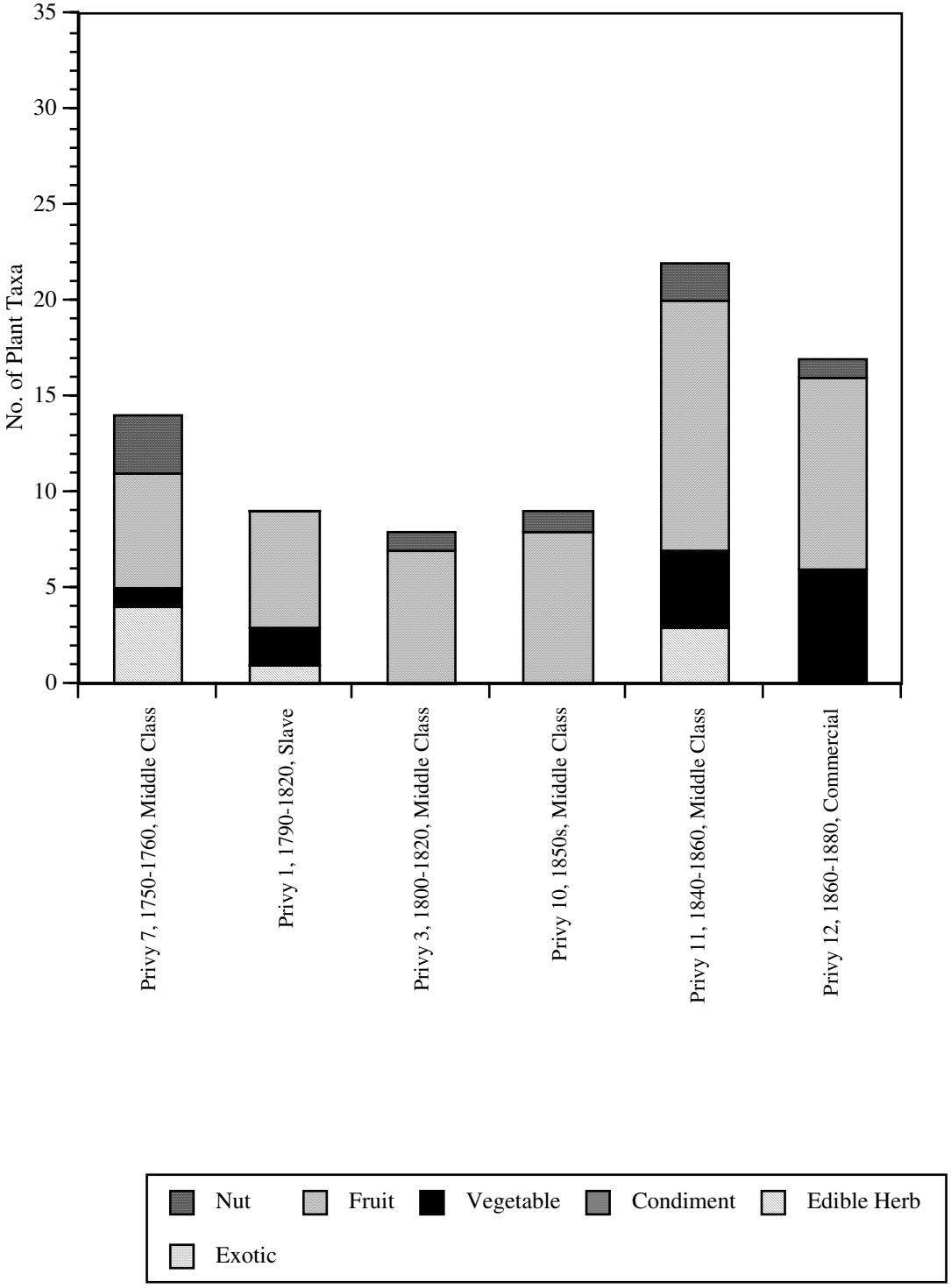

Figure 6. Floral Assemblages from Middle and Upper Class Occupations, Picotte DEC Project, Albany New York.

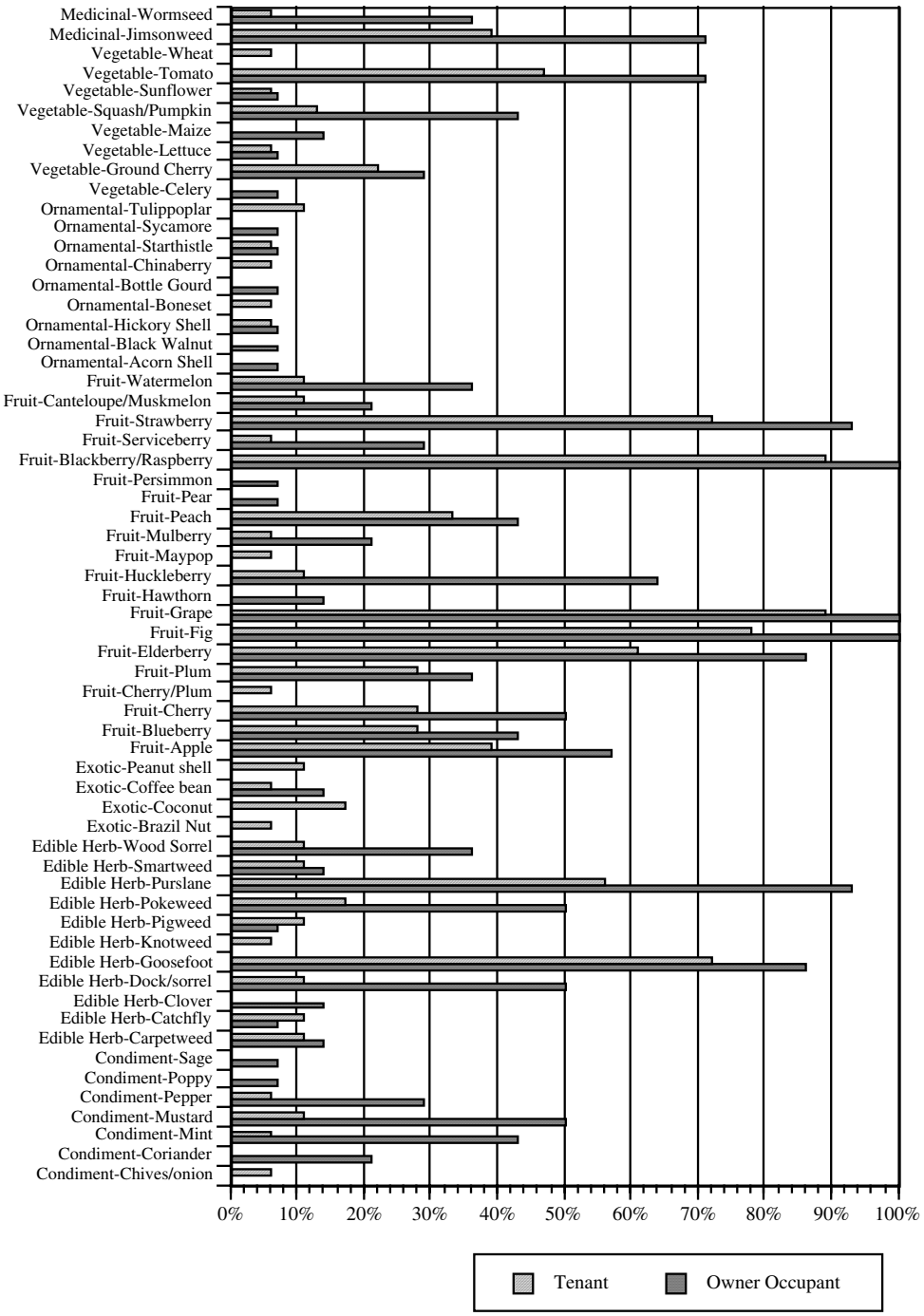

Figure 7. Ubiquity of Macroplant Remains from 14 Owner-Occupant and 18 Tenant Privies.

Residential occupancy remained middle class until the 1830s. Two features (Privies 10 and 11) are associated with this circa 1830 to 1860, middle and lower middle class residential occupation. Residential occupation of the locality ended in the 1860s with the development of the railroad industry. A single feature, Privy 12, is associated with the post 1860 commercial occupation of the Picotte-DEC locality.

State University Construction Fund Site, Albany, New York

Three privies were found during Hartgen Archeological Associates' Phase III data recovery excavation of eighteenth- and nineteenth-century components at the SUCF site in Albany, New York (Raymer 2001). Two of these features were associated with mid- to late-nineteenth-century working class-boarding houses/tenements occupied by immigrant renters. The third feature was a late-eighteenth-century well associated with the residence of an upper-middle-class merchant who occupied the property with his family and three slaves from 1776 until 1809. The project area was first developed in the 1750s. The earliest feature found during data recovery excavations was a 300-foot section of the 1750s stockade located along the river bank. Eighteenth-century occupation of the locality consisted of well-to-do merchants' residences and commercial establishments. By the nineteenth century, the waterfront advanced further into the river channel, beyond the project area. Domestic occupation of the area shifted from wealthy owners to poor immigrant renters living in boarding houses and tenements.

Broadway/Schenectady, New York

A late-nineteenth-century privy (Feature 10) was identified during Phase II/III data recovery excavations at 126-128 Broadway in Schenectady, New York (Figure 5). This feature was likely associated with working-class housing located in the project area in the late-nineteenth and early-twentieth centuries. The project area was first developed in the mid- to late-nineteenth century. By the late-nineteenth century, the neighborhood had developed into a combination of commercial and residential buildings. Commercial establishments located within or adjacent to the project area included a hotel, oyster house, firehouse, and grocery store. The portion of the project area adjacent to the rail lines contained a coalyard, hay depot, and lumberyard between 1880 and 1920. The Union National Bank and Schenectady Gazette offices were built at the beginning of the twentieth century. The 126-130 Broadway address was likely the location of the E. G. Lofquist & Co. boot and shoe store from 1910 until 1923 (Raymer and Reinhard 2000).

Five Points Area, New York City

Fifteen shaft features found during 1991-1992 Phase III data recovery excavation of the nineteenth-century components at Block 160 of the Five Points site in New York City were analyzed (Raymer 1998). Three periods of occupancy are evidenced within the nineteenth-century Five Points neighborhood. The project area was initially occupied ca. 1800 to 1820 by artisans who built their homes on lots purchased when the neighborhood was first developed. These artisans operated their businesses on their properties and lived on the premises with their families and workers. Population densities within Block 160 were low during the first quarter of the nineteenth century; only 175 individuals resided in the area at the time of the 1810 census. Seven privies, Features AD, AF, B, C, D, E, and N, are associated with the early-nineteenth-century artisans who built their homes and places of business in Block 160.

By the early 1820s, the Five Points neighborhood was undergoing significant changes. The relatively wealthy artisans and merchants who initially settled in the area were gradually being replaced by working-class immigrant-tenants, many of whom came to the United States from Poland and Germany. Feature AG, a stone-lined privy, is associated with a brothel located at 10-12 Orange Street from ca. 1830 to 1843. The prostitutes who occupied 10-12 Orange, and their guests, apparently lived a lavish lifestyle, dining on expensive meat cuts, consuming coffee and fine wines, and using elegant china and glassware.

As more and more recent immigrants settled in Block 160, the initial owner-occupants left the neighborhood and moved elsewhere in the city. To accommodate the influx of immigrant-tenants, the original owner-occupants' houses were subdivided and converted into rental housing.

Eventually, many of these houses were replaced by multistory tenements that were densely packed with renters, their families, and boarders who sublet space from the apartment dwellers.

By the 1840s, most of the original owner-occupants of the Five Points neighborhood had moved away, and their residences were either subdivided into apartments or torn down and replaced by multistory tenements occupied by immigrant-tenants and their families. During the 1850s and 1860s, the majority of the immigrant-occupants of the project area were of Irish extraction. Seven features were associated with the mid-nineteenth-century immigrant-tenant occupation (Features A, AI, AL, J, Z, AM, O). A stone-lined cesspool, Feature J, was associated with an integrated septic system servicing a multifamily Irish tenement that was constructed about 1840 and occupied by the Irish until the 1860s. The Feature J cesspool served as the sump for fecal material and household trash for approximately 30 households (totaling almost 100 individuals) that occupied a five-story brick tenement. Feature A, a school sink (multiseat privy with running water to wash waste into sump), was constructed in the 1860s. Feature AM, a stone-lined icehouse, served as a storage facility for Conlon's Eating House, a working-class restaurant and saloon that was in operation from circa 1840 to 1857. Feature O, a stone-lined privy, served an immigrant working-class tavern and tenement in the 1860s. The other features were either single privies (Features AI, Al, O) or a cistern (Feature Z) associated with renter occupations in the project area.

Paterson, New Jersey

Thirteen privies were found during John Milner Associate's Phase III data recovery excavation of nineteenth-century components at Blocks 863 and 866, Paterson, New Jersey (Raymer 1999). These features range in age from ca. 1830 to 1920. Three periods of occupation were defined during the excavations: early-nineteenth century (1830-1850), mid-nineteenth century (1850-1870), and late-nineteenth/early-twentieth centuries (1870-1920). Three shaft privies (Features 91, 127A, 31) dated to the early-nineteenth-century occupation. Five privies (Features 68, 10, 26, 132, 80) belonging to the mid-nineteenth-century occupation were sampled for flotation. The late-nineteenth-century archeobotanical remains were derived from five privies (Features 111B, 36, 61, 120, 83). These six features dated between 1870 and 1886. Nine privies (Features 127A, 10, 26, 132, 80, 36, 61, 120, 83) were associated with housing utilized by tenants and four (Features 91, 31, 68, 111B) were located at owner-occupied residences.

Fayette, Michigan

A late-nineteenth-century privy (Figure 5) was identified during 1991 archeological excavations in the historic iron-smelting town of Fayette, Michigan (Landon 1995). This privy was associated with the town's working-class hotel. Fayette was established by the Jackson Iron Company in 1867 for its iron-smelting operations. The company constructed worker housing, stores, and a hotel in addition to the iron-smelting plant. The town was occupied from 1867 until the 1890s, when the company closed the smelting facility. The site is now a state historical park.

Cumberland, Maryland

A late-nineteenth-century privy (Feature 13) was identified during John Milner Associates' excavation of four house lots in Cumberland, Maryland, that were occupied from 1813 to the 1890s by both resident-owners and tenants. Cumberland is a small rural town that grew up in the Maryland interior in the late-eighteenth and nineteenth centuries to service surrounding farms. Feature 13 was associated with a family of high-status owner-occupants who lived and worked in the project area in the 1870s. The owners of the lot on which this privy was located were prosperous artisans who also took in boarders during the latter part of the nineteenth century (Cheek et al. 1994).

Harper's Ferry, West Virginia
Four privies were associated with excavations at the Harper's Ferry National Historical Park in West Virginia (Cummings 1993; Cummings and Puseman 1994). Three of these privies (Features 99, 292, 213) appear to have been associated with middle- to upper-income occupations (Figure 4), while the fourth (Feature 132) was associated with low-income occupants of a boardinghouse (Figure 5). One privy (Feature 99) was associated with the high-status master armorer's house, which was occupied by the same individual from 1884 to 1920. A second privy (Feature 292) was associated with a hotel that had a wealthy clientele. This feature was in use from the 1830s through the 1840s. A third high-status Harper's Ferry privy (Feature 213) was associated with a middle-income residence and attached saloon. The boardinghouse privy (Feature 132), which was in use from 1890 until 1900, was probably used by relatively low-income and low-status tenants.

Augusta, Georgia, and James City, North Carolina
A privy (Feature 382) was identified and excavated during data recovery operations at the Augusta Riverfront Site in Augusta, Georgia (Figure 5). This privy was in use from ca. 1860 to 1880 and was apparently associated with working-class housing located along one edge of the excavated area (Raymer 1993). The seventh privy feature used in this comparative analysis (Feature 1037) was associated with the African American freedmen's community of James City, North Carolina (Figure 5). This privy was in use from approximately 1890 until 1900 (Wheaton et al. 1990).

Analysis and Discussion

Middle-Class Owner-Occupant Versus Working-Class Tenant
Examination of the number and ubiquity of recovered taxa from the 14 artisan and lower- to upper-middle-class owner-occupied contexts and 18 working-class/poor immigrant and African American tenant features illustrated in Figures 4 and 5 and five middle-class and one slave context (Figure 6) in Albany, New York (Picotte-DEC site), reveals striking similarities and differences in the macroplant remains from these features. Comparison of these data with four upper-class shaft features dating to the ca. 1790 to 1830 residential occupation of Block 2 (Figure 3) and four middle-class shaft features dating to the ca. 1842 to 1855 commercial occupation of Block 2 (Figure 3) indicates that the same pattern revealed in Figures 4 through 6 is present in Philadelphia in the eighteenth and nineteenth centuries.

First, privy floral assemblages from the higher-status contain a much greater diversity of plant types than the lower-status privies (Figures 4-6). With five exceptions (Features J and AM, Five Points; Fayette; Augusta; Schnectady), all of the working-class contexts illustrated in Figure 5 contained 10 or fewer taxa. Eleven of the privies contained fewer than 10 taxa. Additionally, 67 percent of the working-class privies contained three or fewer classes (out of a possible six, see legends to Figures 5-6) of plant remains. This pattern is repeated in the slave context from Picotte (Privy 1, Figure 6). The Picotte low-status privy contained only nine economically important plant taxa. Edible herbs were particularly sparse in these features (Appendix B).

In contrast, 86 percent of the upper-class-owner contexts illustrated in Figure 4 contained 10 or more taxa. Forty-three percent of the owner privies had 15 or more taxa, and 29 percent had 20 or more taxa. Unlike the tenant privies, 79 percent of the owner privies contained four or more classes of plant remains. Thirty-six percent had five or more classes of plant remains. No owner privies had fewer than three plant classes. The Dean well found in the SUCF, like these high-status features from other urban contexts, contained 13 plant food taxa. The diversity of classes of plant remains found within the Dean Well (Figure 4), however, was much lower than the other

high status contexts illustrated in Figure 4. Three of the five (Privies 7, 11, 12) middle- to upper-class Picotte privies match our expectations for high-status plant food assemblages (Figure 6, Appendices B1-B3). These facilities contained from 14 to 22 taxa from three to four economically important plant food categories (Figure 6). Two Picotte features, Privies 3 and 10, are anomalous. These facilities will be discussed in detail in the following section.

The Block 2 privies, like the Picotte-DEC shaft features, offer evidence that not all upper-class archeobotanical assemblages match the pattern exhibited in Figure 4. Four of the eight Block 2 privies match our expectations for high-status plant food assemblages (Figure 3; Appendices B1-B3). These facilities contained from 16 to 37 taxa from three to six economically important plant food categories (Figure 3). Three of these features were associated with the eighteenth- to early-nineteenth-century, high-class residential occupation of the project area. The fourth feature, Feature H, was associated with mid-nineteenth-century commercial occupation of the locality. One of the residential privies associated with the first occupation of Block 2 and three of the commercial privies associated with mid-nineteenth-century occupation are anomalous. These facilities will be discussed in detail in the following section.

Five of the working-class tenant contexts (Features J and AM, Five Points; Fayette; Augusta; Schenectady) superficially resemble the owner-occupant features. Two of these working-class features were associated with commercial establishments (Feature AM, a saloon; Fayette, Michigan, a hotel) that included restaurants. Privies associated with restaurants would likely contain a greater variety of economic plant taxa, since meals were prepared on these premises for a large number of patrons. The Augusta and Schenectady privies contained 11 economic taxa, and Feature J, a tenement cesspool in the Five Points neighborhood, contained 30 economic taxa. The richness and variety of Feature J require explanation.

At first glance, the macroplant assemblage found in Feature J, a cesspool associated with a mid-nineteenth-century septic system servicing an Irish tenement located at Five Points, suggests that some poor immigrants had the same access to plant foods as the more affluent artisans who occupied the Five Points in the first quarter of the nineteenth century. The macroplant assemblage found in this Irish immigrant tenement cesspool was surprising, since previous studies conducted by the author and others (Wheaton et al. 1990; Cummings 1993; Raymer and O'Steen 1993, 1994; Cummings and Puseman 1994; O'Steen et al. 1995a, 1995b; O'Steen and Raymer 1995; Raymer 1993, 1995, 1996, 1997a, 1997b, 1998, 1999; Raymer et al. 1997) comparing macroplant assemblages from middle- to-upper-income households to those from poor working-class residences found a much lower diversity of economic plants associated with working-class contexts.

Although the species diversity of economic plants associated with the Irish immigrant tenement is greater than that of the well-to-do artisans, there is a significant difference between these occupations (Raymer 1998). The overall density (numbers) and variety of plant remains are much greater in Five Points artisan contexts associated with single-family occupations. Many more people were living on the Five Points lots during the 1840s to 1860s tenement occupation and utilizing the Feature J sanitary facilities. When one considers that the cesspool serviced over 30 households comprising more than 100 individuals, as opposed to the artisan residential privies that were used by single families with a few adult tenants and/or workers, the disparity in the density of economic plants found in the features becomes even more significant.

It is apparent that fruits, condiments, and other “expensive” plant foods were more common in the Five Points artisans’ diet than they were in the diet of the mid-nineteenth-century Irish tenants whose household waste flowed into the Feature J cesspool. The recovery of presumably

expensive exotics, fruits, and vegetables from working-class contexts in Five Points shows that recent immigrants desired and consumed “high status” foodstuffs in New York. However, the greater density of fruits and other economic plants associated with artisan contexts at Five Points indicates that affluent property owners in nineteenth-century New York had greater access to and consumed more fruits and other “expensive” plant foods than poor immigrants. Whereas these plants were probably an everyday table food in early-nineteenth-century artisan households in Five Points, they likely represented an occasionally consumed special treat in mid nineteenth-century immigrant-laborer households. This pattern is also evident in rural centers such as Harper's Ferry, West Virginia (Features 132, 99, 292, 213 in Figures 4-5).

Second, Figures 4 and 5 illustrate the high degree of similarity between owner-occupant and tenant privies at Paterson, New Jersey. Unlike the pattern evidenced at Five Points and Harper's Ferry, there were no discernible differences between the diet of working-class owners and tenants occupying the Paterson project area (Raymer 1999). Comparison of the Paterson privies with those from other working-class tenant contexts (Figure 5) and higher-income owner-occupant contexts (Figure 4) reveals that the diet of the Paterson occupants (both owners and tenants) more closely resembled that of poor working-class-tenants than it did that of middle- to upper-class owners. Both Paterson owners and renters consumed a limited variety of fruits and vegetables. The macroplant assemblage from Paterson owner-occupant and tenant contexts is more similar to that of extremely poor tenement dwellers in New York City and other poor working-class settings than it is to more well-to-do owners in urban settings. This similarity indicates (1) that the economic position of the Paterson owners and renters was approximately the same; and (2) the occupants of the Paterson project area were poor throughout the nineteenth century.

Third, examination of the number (Figures 3-6) and ubiquity (Figure 7) of economic plants associated with working-class and owner privies presented in the figures indicates both disparities and similarities in diet and plant use between middle- and upper-class owner-occupants and working-class tenants. Classes of definite economically important plants were more common in the higher-status residential and commercial privies. The greater diversity of macroplant remains in high status contexts indicates that the relatively wealthy residents living in dwellings associated with these privies had greater access to a rich variety of foods and thus had a more-varied diet. Examination of macroplant ubiquity presented in Figure 7 highlights this point. The ubiquity of virtually every definite economically important plant taxon (condiments, vegetables, fruits) is greater in owner-occupant contexts. This is particularly true of condiments and vegetables. While the percentage-presence of many of the fruits in owner and tenant privies is more similar, the percentage of owner contexts is greater for all of the recovered fruit taxa. However, high ubiquities of certain fruits in tenement/renter contexts (elderberry, fig, grape, peach, blackberry/raspberry, strawberry) indicate that these plant foods were popular with and accessible to rich and poor alike.

Similarities in the plant assemblages from both poor and rich people's privies suggest that some of the same foods that were consumed in large quantities by well-to-do Euroamerican owners were also desired by immigrant working-class tenants and African Americans. This examination of the richness and ubiquity of floral assemblages from owner and renter privies indicates that although high-status households had greater access to a wide variety of plant foods, many of the same plant taxa appear in significant quantities in nineteenth-century privies irrespective of geographic region, status, or ethnicity.

Comparison of Late-Eighteenth and Early-Nineteenth-Century Philadelphia (Block 2) Plant Use and Preservation with Albany, New York (Picotte-DEC) Occupations

The Picotte-DEC component from Albany (Bonhage-Freund et al. 2002) was selected for more detailed comparison to the Block 2 (Philadelphia) component because the occupational history of these two localities is very similar. Both sites were initially occupied by well-to-do merchants in the late-eighteenth century. This high-status residential use of both localities continued through the first quarter of the nineteenth century. Occupation of both Picotte and Block 2 changed from residential to a higher-density mixed-use commercial and residential occupation in the 1840s and 1850s. Comparison of the four upper-class shaft features dating to the 1790 to 1830 residential occupation of Block 2 (Figure 3), four middle-class shaft features dating to the 1842 to 1855 commercial occupation of Block 2 (Figure 3), three middle-class residential privies from Picotte-DEC (Figure 6), one slave privy from Picotte (Figure 6), and one middle-class commercial privy from Picotte (Figure 4) indicates that the same pattern revealed in Figures 4 and 5 is present in both Philadelphia and Albany in the eighteenth and nineteenth centuries.

However, careful appraisal of the plant food assemblages from these two occupations (Figures 3 and 6) and the 14 middle- to upper-class components in Figure 4 also indicates significant differences between Block 2 and other contemporary eighteenth- and nineteenth-century middle- and upper-class occupations (Appendices B1-B3). Comparison of macroplant remains from the Block 2 high-status residential occupation (Feature B, Level 8; Feature E, Levels 4/5; Feature B, Levels 7/7.1; Feature B, Level 6) with other middle- and upper-class urban occupations (both residential and commercial) dating to the late-eighteenth and early- to mid-nineteenth centuries (Figures 4-6; Appendices B1-B3) offers evidence of the exceptional early access that upper-class residents in Philadelphia in the late-eighteenth century had to exotic trade goods (in the form of imported plant foods from as far afield as Europe and Latin America) and high-status foodstuffs such as spices and nuts relative to other contemporary urban occupations.

With the notable exception of coffee, exotic plant foods obtained through international trade are absent from all other middle- and upper-income contexts dating from the late-eighteenth through the early-nineteenth centuries (Appendices B1-B3, Figures 4-6). Condiments were absent or less well represented in other early-nineteenth-century contexts (absent from Picotte: Figure 6, rare in others: Figure 4; Appendices B-C). Finally, nuts were rare in 14 middle- and upper-class settings in New York (Five Points, SUCF); Cumberland, Maryland; Harper's Ferry, West Virginia; and Paterson, New Jersey (Figure 4); and common at Block 2. Mast was common at the Picotte-DEC site (Figure 6).

The single low-status context found at Picotte derived from enslaved house servants (Figure 6). Based on comparative data presented in Figure 5, the macroplant assemblage from this feature should exhibit low diversity relative to privies associated with higher-status owner-occupant housing (Figure 4). The Albany slave privy, in spite of the connection of these slaves with an extremely wealthy merchant's household, is virtually indistinguishable from each of 18 later-nineteenth-century tenement and working-class features presented in Figure 5 in both overall numbers of economic plant taxa and classes of plant remains. Nine taxa were identified within the slave context. The slave privy contained three economic classes of plant food remains.

The low diversity of macroplant remains found within the Picotte slave privy matches patterns noted in nineteenth-century working-class contexts in Albany (SUCF), Schenectady, and New York City, New York; Harper's Ferry, West Virginia; Paterson, New Jersey; James City, North Carolina; and Augusta, Georgia. Exotic imports such as Brazil nuts, coconut, peanuts, and coffee

and condiments were absent from the Picotte feature. The low diversity of macroplant remains found in these privies, combined with the lack of exotic imports that were found in other working-class contexts (see Broadway/Schenectady and Five Points, New York; and Fayette, Michigan), suggests that poor and enslaved residents of Albany in the late-eighteenth and nineteenth centuries had limited access to a rich and varied diet.

Three of the five (Privies 7, 11, 12) middle- to upper-class Picotte privies and four of the Block 2 privies (3 from ca. 1790-1830 residential and 1 from ca, 1850 commercial) match our expectations for high-status plant food assemblages (Figures 3 and 6). Two Picotte and four Block 2 privies are anomalous. The three Picotte facilities contained from 14 to 22 taxa from three to four economically important plant categories (Figure 6). All three Picotte privies contained nutmast, but lacked exotics and condiments. The four Block 2 privies contained from 16 to 33 taxa from three to six plant food categories (Figure 3). The three Block 2 residential privies contained 25 to 33 economically important plant taxa from five to six plant categories; all three shaft features included multiple nuts, exotics, and condiments.

One early residential (ca. 1790-1830) and three later commercial privies (ca. 1850) do not meet the expectations generated by Figures 4 and 5. The ca. 1790 Simmons privy, unlike other high-class residential households at Block 2 (Wistar and Everly households) and other urban settings, exhibited low numbers and diversity of economically important plant taxa (Figures 3 and 4). The Simmons privy was associated with a residence used by the household of an accountant, William Simmons, who wasn't married, was a workaholic, and lived a simple, uncluttered life. The simplicity of his lifestyle is reflected in the artifact assemblage recovered from Feature E, which consisted of extremely plain china. The macroplant assemblage associated with Simmons ownership of this property also shows that the simplicity of his lifestyle extended to his diet. The Simmons archeobotanical assemblage consisted of only six fruits, wheat, and three naturally occurring herbaceous weeds (Table 4).

Three of the four Block 2 commercial privies, like the Simmons privy, also exhibit low numbers and diversity of economically important macroplant taxa. These features contained seven to nine taxa from two to three classes of plant remains (Figure 3; Table 4). Macroplant remains deposited within these mid-nineteenth-century contexts were primarily associated with business owners and their employees who worked at the addresses where these features were located. Macroplant assemblages associated with this time period are certainly lacking in diversity and indicators of a rich, leisurely diet such as fancy nuts and exotic imports (coconut, English walnut, olive, peanuts) found in the early-nineteenth-century residential contexts. Macroplant remains associated with mid-nineteenth-century commercial use of Block 2 consist of a limited array of fruits, vegetables, and condiments that are probably reflective of midday meals eaten at these addresses by owners and their employees.

Two Picotte features, Privies 3 and 10, are also anomalous. These early- (Privy 3) to mid-(Privy 10) nineteenth-century facilities contained eight to nine taxa from two categories, fruits and nuts. Herbaceous plants (edible and inedible) are scarce in these features. The number of macroplant remains found in Privy 3 is also remarkably low. The low diversity and number of plant food remains found in this feature suggest that this feature was cleaned out just prior to abandonment. Privy 10, in contrast, had low diversity of plant foods but high numbers of seeds found in the flotation sample. Fruit pits found in this facility likely originated from both fecally deposited seeds and kitchen waste dumped into the privy (Appendix B-3).

The lack of exotic imports such as coconut, peanuts, and Brazil nuts from the Picotte mid-nineteenth-century, high-status contexts suggests that these foods were not readily available in the

nineteenth century, since these exotics are found in both low- and high-status contexts dating after the mid-nineteenth century in other cities (Raymer and O'Steen 1993, 1994; O'Steen et al. 1995a, 1995b; O'Steen and Raymer 1995; Raymer 1993, 1995, 1996, 1997a, 1997b, 1998, 1999; Raymer and Bonhage-Freund 2000; Raymer et al. 1997). This suggests that imports received into this more northerly port may have been more restricted than those coming into cities such as Philadelphia and New York.

V. SUMMARY

The primary objectives of the archeobotanical analysis are to examine subsistence patterns, fuel-use practices, and land-use practices of the late-eighteenth- through mid-nineteenth-century inhabitants. Key research questions are the following:

(1) Do patterns of plant use change over time?
(2) Are there differences in diet and other plant use between affluent owner-occupants who initially lived in the neighborhood and middle–class businessmen and their employees who occupied the project locality in the mid-nineteenth century?
(3) Does the macroplant assemblage provide evidence of home gardening, gathering of locally available wild plants on the lots, and/or ornamental plantings on the lots?
(4) Were plant foods purchased at local markets or produced at home (grown in gardens, through home canning, etc.)?
(5) What patterns of fuel use are manifested in the macroplant assemblage?
(6) Does the macroplant assemblage offer evidence of what the local environment was like?

This analysis concluded that the entire seed assemblage dates to the time of the site's occupation and use. Forty-eight categories of seeds and other plant parts were identified, and include five exotic imports, five vegetables, 16 fruits, four condiments, four nuts, three ornamentals, six edible herbs, and five herbaceous weeds/grasses (Table 4). Thirty-five definite economically important plant foods, six possibly utilized edible herbaceous plants, and three possibly deliberately planted ornamentals were identified. Five probable noneconomic herbaceous weeds and grasses were also identified. Additionally, most of the identified plant taxa could have provided the residents with locally procured herbal remedies, since many of these taxa were utilized in nineteenth-century America as medicines. Evidence of diet is provided by the identification of two domesticated grains (sunflower, wheat), three garden vegetables (tomato, ground cherry, squash/pumpkin), eight probable domesticated fruits (grape, strawberry), eight domesticated or gathered fruits (blackberry/raspberry, blueberry, chokeberry, elderberry, fig, huckleberry, mulberry, persimmon) and 6 naturally occurring edible herbs: clover, dock, goosefoot, knotweed, pigweed, and pokeweed.

Many, if not most, of these plant foods were likely acquired through market purchases. Others, particularly the fruits and nutmast, may have originated from ornamental plantings in the yards and/or gathered wild resources in the project area. All of the exotics (which were acquired through a long-distance trading network) and vegetables probably represent market purchases of the wealthy Block 2 inhabitants. The exotics were not locally available, and vegetable gardens require substantial space for successful cultivation. The condiments could have been grown in herb gardens planted by the wealthy residents; however, the small size of the yards associated with these dwellings coupled with the relative rarity of these spices in urban archeological deposits (Appendices B1-B3) suggest these taxa represent market purchases as well.

The sixteen fruit taxa and four nut taxa could have been collected from ornamental plantings in the yardlots and/or naturally occurring trees and shrubs in the project locality. On the other hand, all of these taxa can also represent market purchases. Eight of the fruit taxa, including apple, cherry, grape, cantaloupe/muskmelon, peach, plum, strawberry, and watermelon, almost certainly represent domesticated plant food remains. The apples, cherries, peaches, and plums could have derived from fruit trees planted on the yardlots; however, all of these species require substantial space for successful cultivation. Therefore, these domesticates likely represent market purchases. Grapes are space-intensive domestics whose vines are planted in arbors. Cantaloupes/

muskmelons, strawberries, and watermelons are all garden crops. It is unlikely that these three garden crops were planted on the small urban lots of Block 2.

Eight fruit taxa, including blackberry/raspberry, blueberry, chokeberry, elderberry, fig, huckleberry, mulberry, and persimmon, may either represent domesticates or gathered plant foods. These shrubs and small trees, which require much less space for successful cultivation than fruit trees such as apples and peaches, are commonly deliberately planted in urban yards as ornamentals and as a source of their nutritious fruits for both people and wildlife. These plants could also have been purchased from local fruit stalls.

Four nut taxa, including hazelnut, black walnut, hickory/pecan, and oak acorns, may represent either ornamental plantings in the yardlots or market purchases. These trees, like the aforementioned fruit trees, require lots of space for successful cultivation. In the absence of compelling evidence to the contrary, the nutmast remains are interpreted as indicators by market purchases of the wealthy Block 2 residents. It is likely that all or most of these nuts are incidental inclusions in the privies (discarded kitchen trash). These remains likely represent table snacks that were consumed by the affluent middle- and upper-class residents of the locality.

Six edible herbs (clover, dock, goosefoot, knotweed, pigweed, pokeweed) may represent gathered foodstuffs, and two tree species, tupelo and gray dogwood, may have originated from ornamental plantings in the yardlots. Single uncharred seeds from tupelo and gray dogwood were found in the ca. 1830 deposit of the Feature B privy. Neither of these tree species produces edible fruits. These seeds likely document yard plantings or naturally occurring trees that grew in the vicinity of Feature B in the 1830s. Six edible herbs may represent gathered foodstuffs that functioned as seasonally available dietary supplements. However, these edible herbs may represent incidentally deposited natural seed rain, since these taxa are common invaders of disturbed habitats. These taxa minimally are indicators of local disturbance and document economically useful weeds growing on the Block 2 yardlots in the late-eighteenth and early-nineteenth centuries.

Five weedy taxa (4 herbs and 1 grass) found in the flotation samples are not edible (Table 1). The herbaceous weeds and weedy grasses probably originated from naturally occurring weeds that were growing in the yards and surrounding area. The edible herb and herbaceous weedy herbs and grasses are neither abundant (71 edible herb seeds and 47 noneconomic weed seeds; Table 2) nor ubiquitous in the floated feature samples (Table 2; Figure 1). The overall ubiquity of these weedy taxa ranges from 11 to 38 percent (Figure 1). The low abundance and ubiquity of the edible herbs suggest that these remains represent nonutilized, naturally deposited seed rain.

The distribution of edible herbs and weeds in the sampled features indicates a distinct trend of decreasing abundance with the passage of time (Table 2). This pattern is repeated in the distribution of other taxa that would have been growing wild in open spaces on the lots or deliberately planted in the yardlots (nuts, ornamentals). This pattern of decreasing naturally occurring wild plants and economically useful trees and shrubs corresponds to the increasing commercialization of the Block 2 locality in the 1840s. The lower density and ubiquity of naturally occurring plant taxa and ornamentals found in mid-nineteenth-century features illustrate how increasing commercialization restricted the amount of open space (and wild plants) in the project area.

The loss of naturally occurring plants suggests that open spaces were increasingly built upon, paved, or otherwise enclosed. The loss of open space limited the later Block 2 dwellers' dietary choices, since they no longer had the option of gathering wild plants (the evidence indicates the presence of naturally occurring plants was severely restricted after ca. 1830) or planting gardens

and economically useful trees and shrubs on their lots. By the mid-nineteenth century, the procurement of plant resources was probably restricted to market purchases.

Wood analysis offered evidence of fuel use. Wood charcoal is presumed to represent wood used either for cooking or heating. Examination of the overall wood charcoal assemblage and wood charcoal associated with each time period (1790s, 1820-1830, 1842-1855) offers a picture of patterns of fuel use and changing local forest composition during the eighteenth- through mid-nineteenth-century occupation of Block 2. Nine wood charcoal taxa are identified in the Block 2 features. Oaks represent the highest proportion of specifically identified wood. The next most abundant taxon identified at this site, which is also an excellent fuelwood, was hickory. Ten percent of the wood charcoal assemblage was classified as indeterminate hardwood. It is likely that most, if not all, of these fragments were either oaks or hickories. The high proportion of these two fuelwoods, in combination with their high ubiquity, suggests that the Block 2 residents purchased much of their firewood at market rather than foraging for it locally.

Pine, which is generally considered a rather inferior fuelwood, represented 6 percent of the identified wood. In spite of its rather minor proportion within the identified wood charcoal assemblage, pine was ubiquitous in the Block 2 privies. The inhabitants may have been using this conifer for tinder. Four hardwood taxa, American basswood, maple, elm/hackberry, and dogwood, account for the remaining five percent of the identified wood charcoal specimens (Table 6). Basswood, which is an extremely poor fuel used (Table 11), exhibited a higher ubiquity of 27 percent. Interestingly, samples dating to the early occupations of the project area contained a higher proportion of poor fuelwoods such as pine and basswood. Basswood drops out of the wood charcoal assemblage in samples postdating 1820, and the percentage of pines is much less. These proportions suggest that the first inhabitants of Block 2 relied on gathered woods for a portion of their household fuel. This finding is in keeping with the evidence of decreasing presence of naturally occurring weedy taxa in the project locality by the mid-nineteenth century. The post-1830 occupants, whose fuelwoods contained much higher proportions of oaks and hickories, likely purchased most if not all of their fuelwood from local markets.

Comparison of the Block 2 macroplant assemblage with working-class renters and well-to-do owner-occupant macroplant assemblages from other eighteenth- and nineteenth-century urban sites indicates that the same pattern revealed in 20 other upper- and middle-class contexts is also present in Philadelphia in the eighteenth and nineteenth centuries.

However, careful appraisal of the plant food assemblages from Block 2 also indicates significant differences between Block 2 and other contemporary eighteenth- and nineteenth-century middle- and upper-class occupations. The Block 2 macroplant assemblage offers evidence of the exceptional, early access that upper-class residents in Philadelphia in the late-eighteenth century had to exotic trade goods and high-status foodstuffs such as spices and nuts relative to other contemporary urban occupations. With the notable exception of coffee, exotic plant foods obtained through international trade are absent from all other middle- and upper-income contexts dating from the late-eighteenth through the early-nineteenth centuries.

One early residential (ca. 1790-1830) and three later commercial privies (ca. 1850) do not meet the expectations generated by this comparative study. The ca. 1790 Simmons privy deposit, unlike other high-class residential households at Block 2, exhibited low numbers and diversity of economically important plant taxa. The Simmons privy was associated with a residence used by the household of an accountant who lived a simple life. The macroplant assemblage associated with Simmons' ownership of this property also shows that the simplicity of his lifestyle extended

to his diet. Three of the four Block 2 commercial privies, like the Simmons privy, also exhibit low numbers and diversity of economically important macroplant taxa.

Macroplant remains deposited within these mid-nineteenth-century contexts were primarily associated with business owners and their employees who worked at the addresses where these features were located. Macroplant assemblages associated with this time period lacked diversity and indicators of a rich, leisurely diet such as fancy nuts and exotic in Block 2 residential contexts. Macroplant remains associated with mid-nineteenth-century commercial use of Block 2 are probably reflective of midday meals eaten at these addresses by owners and their employees.

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Appendix A. Macroplant Remains from Gateway Waterscreened Samples.

NPS No.	Feature	Level	Watermelon	Unknown	Stem	Squash/ Pumpkin	Smartweed	Pumpkin	Plum	Pine Cone Scale	Persimmon	Pecan Shell	Peanut Shell	Peach	Olive	Hickory Shell	Hazelnut Shell	Grape	English Walnut Shell	Desiccated Fruit Skin	Coffee Bean	Coconut Husk	Cherry	Cantaloupe/ Muskmelon	Bottle Gourd	Blackgum	Black Walnut Shell	Apple	Acorn Shell	Total
72828	B	6																					2720							2720
72829	B	6							353																					353
72830	B	6				800																								800
72831	B	6											80																	80
72832	B	6												169																169
72833	B	6																								36				36
72834	B	6																									93			93
72835	B	6																				40								40
72836	B	6														77														77
72837	B	6																					160							160
72838	B	6						102																						102
72839	B	6																											42	42
72840	B	6																	38											38
72841	B	6																160												160
72842	B	6									92																			92
72843	B	6															95													95
72844	B	6										11																		11
72845	B	6								1																				1
72846	B	6																							1					1
72847	B	6			1																									1
72848	B	6																						1						1
72849	B	6																			1									1
72850	B	6																		4										4
72851	B	6		1																										1
72852	B	6													2															2
72853	B	6		3																										3
72855	B	6		1																										1
72856	B	6		2																										2
72857	B	6																		1										1
72858	B	6		1																										1
72859	B	6		2																										2
72860	B	6		2																										2
72861	B	6		1																										1
72802	B	7		1																										1
72803	B	7											2																	2
72804	B	7														2														2
72805	B	7		1																										1
72806	B	7																										1		1
72807	B	7																								2				2
72808	B	7																3												3
72809	B	7																					81							81
72810	B	7												9																9
72811	B	7																				2								2
72812	B	7							7																					7
72813	B	7				8																								8
72814	B	7.1																									1			1
72815	B	7.1														4														4
72816	B	7.1																										1		1
72817	B	7.1															8													8
72818	B	7.1							25																					25
72819	B	7.1				21																								21
72820	B	7.1																				1								1

72821	B	7.1												54																54
72822	B	7.1																					222								222
72823	B	7.1									2																				2
72824	B	7.1																						3							3
72825	B	7.1																										3			3
72826	B	7.1							2																						2
72827	B	7.1			1																										1
72862	B	7.1																										2			2
72783	B	8																					318								318
72784	B	8												32																	32
72785	B	8		2																											2
72786	B	8		11																											11
72787	B	8		2																											2
72789	B	8										3																			3
72790	B	8											7																		7
72791	B	8																53													53
72792	B	8																	19												19
72793	B	8																										7			7
72794	B	8								42																					42
72795	B	8	50																												50
72796	B	8																						9							9
72797	B	8																											5		5
72798	B	8															11														11
72799	B	8				2																									2
72800	B	8																												5	5
72801	B	8									1																				1
72863	B	8					1																								1
			50	30	2	831	1	104	427	1	95	14	89	264	2	83	114	216	57	5	1	43	3341	172	1	1	50	99	49	6142

Appendix B-1. Macroplant Remains Found in Artisan and Other Upper Income Owner Occupant Contexts

Major Use	Common Name	Scientific Name	5 Points, NY Feature AD Privy circa 1800 Artisan Owner Raymer 1998	5 Points, NY Feature AF Wood-lined Privy circa 1800 Artisan Owner Occupant Raymer 1998	5 Points, NY Feature B Stone-lined Privy 1808-1837 Artisan Owner Occupant Raymer 1998	5 Points, NY Feature C Wood-lined Privy circa 1810 Artisan Owner Occupant Raymer 1998	5 Points, NY Feature D Wood-lined Privy circa 1810 Merchant Owner Occupant Raymer 1998	5 Points, NY Feature E Wood-lined Privy circa 1800 Artisan Owner Occupant Raymer 1998	5 Points, NY Feature N Wood-lined Privy circa 1830 Artisan Owner & Boarders Raymer 1998	Cumberland, MD Feature 13 Privy 1875-1880 Residence Upper Class Owner Cheek et al. 1994	Harpers Ferry, WV Feature 99 Privy 1890's Residence Upper Class Owner Cummings 1993	Harpers Ferry, WV Feature 292 Privy 1830-1840 Hotel Upper Class Cummings and Pearman 1994	Harpers Ferry, WV Feature 213 Privy Ealy 20th Residence/Saloon Middle Class	5 Points Feature AG Privy 1830s-1843 Residence/Brothel Commercial Raymer 1998	Paterson, NJ 4 Features Privies 1830-1900 Residence Lower Class Owner Raymer 1999	Albany, NY Feature 9 Privy 1780S Residence Upper Class Own Raymer 2001
Condiment	Chives/onion	*Allium sp.*								X	X	X				
Condiment	Coriander	*Coriandrum sativum*														
Condiment	Mint	*Mentha sp.*	X		X			X			X	X	X			
Condiment	Mustard	*Brassica sp.*		X	X		X		X	X	X	X				
Condiment	Pepper	*Capsicum sp.*			X							X			X	
Condiment	Poppy	*Papaver sp.*			X											
Condiment	Sage	*Salvia sp.*										X				
Edible Herb	Carpetweed	*Mollugo verticillata*			X								X			
Edible Herb	Catchfly	*Silene sp.*										X				
Edible Herb	Clover	*Trifolium sp.*		X								X				
Edible Herb	Dock/sorrel	*Rumex sp.*	X	X	X		X			X		X				X
Edible Herb	Goosefoot	*Chenopodium sp.*	X		X	X	X	X	X	X	X	X	X	X	X	
Edible Herb	Knotweed	*Polygonum sp.*														
Edible Herb	Pigweed	*Amaranthus sp.*	X													
Edible Herb	Pokeweed	*Phytolacca americana*			X			X	X	X		X	X		X	
Edible Herb	Purslane	*Portulaca oleracea*	X	X	X	X	X	X	X	X	X	X	X	X	X	
Edible Herb	Smartweed	*Polygonum pensylvanicum*								X		X				
Edible Herb	Wild Buckwheat	*Polygonum convolvus*														
Edible Herb	Wood Sorrel	*Oxalis stricta*					X				X	X	X		X	
Exotic	Brazil Nut	*Bertholletia excelsa*														
Exotic	Coconut	*Cocos nucifera*														
Exotic	Coffee bean	*Coffea arabica*							X					X		
Exotic	Peanut shell	*Arachis hypogaea*														
Fruit	Apple	*Malus sp.*	X	X	X				X	X	X	X				X
Fruit	Blueberry	*Vaccinium sp.*			X				X	X	X	X				X
Fruit	Cherry	*Prunus sp.*			X					X	X	X	X	X		X
Fruit	Cherry/Plum	*Prunus sp.*														
Fruit	Plum	*Prunus sp.*			X					X		X		X		X
Fruit	Elderberry	*Sambucus canadensis*	X	X	X	X	X		X	X		X	X	X	X	X
Fruit	Fig	*Ficus sp.*	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fruit	Grape	*Vitis sp.*	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fruit	Hawthorn	*Crataegus sp.*								X		X				
Fruit	Huckleberry	*Gaylussacia sp.*	X	X	X				X	X	X	X	X			X
Fruit	Maypop	*Passiflora incarnata*														
Fruit	Mulberry	*Morus rubra*			X			X		X						
Fruit	Peach	*Prunus persica*			X	X		X	X	X				X		
Fruit	Pear	*Pyrus sp.*										X				
Fruit	Persimmon	*Diospyros virginiana*								X						
Fruit	Blackberry/Raspberry	*Rubus sp.*	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fruit	Serviceberry	*Amelanchier sp.*			X					X		X		X		
Fruit	Strawberry	*Fragaria sp.*	X	X	X	X	X	X	X	X	X	X	X	X		X
Fruit	Canteloupe/Muskmelon	*Cucumis sp.*								X	X	X				
Fruit	Watermelon	*Citrullus vulgaris*			X					X	X	X				X
Ornamental	Acorn Shell	*Quercus sp.*							X							
Ornamental	Black Walnut	*Juglans nigra*								X						
Ornamental	Hickory Shell	*Carya sp.*												X		
Ornamental	Boneset	*Eupatorium sp.*														
Ornamental	Bottle Gourd seed	*Lagenaria sp.*			X											
Ornamental	Chinaberry	*Melia azedarach*														
Ornamental	Starthistle	*Centaurea sp.*					X									
Ornamental	Sycamore	*Platanus occidentalis*														
Ornamental	Tulippoplar	*Liriodendron tulipifera*														
Vegetable	Celery	*Apium graveolens*									X					
Vegetable	Ground Cherry	*Physalis sp.*	X							X	X	X				
Vegetable	Lettuce	*Lactuca sativa*			X											
Vegetable	Maize	*Zea mays*							X	X						
Vegetable	Squash/Pumpkin seed	*Cucurbita sp.*			X	X	X			X		X		X		
Vegetable	Sunflower	*Helianthus annus*								X						
Vegetable	Tomato	*Lycopersicon esculentum*			X		X	X	X	X	X	X	X	X	X	
Vegetable	Wheat	*Triticum aestivum*														
Weed	Bulrush	*Scirpus sp.*	X				X					X				
Weed	Chickweed	*Stellaria sp.*										X	X			
Weed	Cinquefoil	*Potentilla sp.*														
Weed	Composite Family	*Compositae*									X					
Weed	Copperleaf	*Acalypha virginica*					X			X						
Weed	Flatsedge	*Cyperus sp.*	X	X			X		X							
Weed	Flax	*Linum sp.*										X				
Weed	Jimsonweed	*Datura stramonium*	X	X	X	X	X	X	X	X				X	X	
Weed	Lespedeza	*Lespedeza sp.*														
Weed	Mallow	*Malva sp.*										X				X
Weed	Nightshade	*Solanum sp.*			X				X	X		X	X	X		
Weed	Pink Family	*Caryophylleceae*										X				
Weed	Ragweed	*Ambrosia sp.*														
Weed	Rattlebox	*Crotalaria sp.*										X				
Weed	Sea Purslane	*Sesuvium sp.*										X				
Weed	Sedge	*Carex sp.*					X									
Weed	Sedge Family	*Cyperaceae*	X		X	X	X			X	X					
Weed	Velvetleaf	*Abutilon theophrasti*								X						
Weed	Wormseed	*Chenopodium ambrosioides*		X	X			X	X					X		
Weed-Grass	Bromegrass	*Bromus sp.*									X					
Weed-Grass	Crabgrass	*Digitaria sp.*	X				X		X		X	X				
Weed-Grass	Foxtail Grass	*Setaria sp.*			X		X						X			
Weed-Grass	Goosegrass	*Eleusine indica*			X		X				X	X			X	
Weed-Grass	Panic Grass	*Panicum sp.*														
Weed-Grass	Grass Family	*Gramineae*		X	X		X								X	

Appendix B-2. Macroplant remains found in tenement and other working class contexts.

Major Use	Common Name	Scientific Name	5 Points, NY Feature A School Sink 1886 Irish/Italian Tenement Raymer 1998	5 Points, NY Feature AI Privy 1850s Irish/Italian Tenement Raymer 1998	5 Points, NY Feature AL Privy 1850s Irish Tenement Raymer 1998	5 Points, NY Feature J Cesspool 1840s-1860s Irish (30 families) Tenement Raymer 1998	5 Points, NY Feature Z Cistern 1860s Irish/Italian Tenements Raymer 1998	5 Points, NY Feature AM Icehouse 1850s Irish-Conlon's Saloon Raymer 1998	5 Points, NY Feature O Privy 1860s Irish-Lysaight's Tavern/Tenement Raymer 1998	Fayette, Mich. Privy Late 19th Working Class Hotel Landon 1995	Harpers Ferry Feature 132 Privy 1890-1900 Working Class Boardinghouse Cummings 1994	Augusta, GA Feature 382 Privy 1860-1880 Working Class Raymer 1993	James City, NC Feature 1037 Privy 1890-1900 Afr. American Residential Wheaton et al. 1990	Paterson, NJ Feature 127a Privy 1830-1850 English/Irish Tenants Raymer 1999	Paterson, NJ Fea. 10, 26 2 Privies 1850-1870 Irish Tenants Raymer 1999	Paterson, NJ Feature 132 Privy 1850-1870 Irish Grocery Store Raymer 1999	Paterson, NJ 5 Privies 1870-1920 Irish/Italian Tenants Raymer 1999	Albany, NY Feature 6 Privy Mid-19th Immigrant Tenants Raymer 2001	Albany, NY Feature 31 Privy Mid-Late 19th Immigrant Tenants Raymer 2001	Schnectady, NY Feature 10 Privy Late 19th Working Class Commercial Raymer 2000
Condiment	Chives/onion	*Allium sp.*						X												
Condiment	Coriander	*Coriandrum sativum*																		
Condiment	Mint	*Mentha sp.*				X														
Condiment	Mustard	*Brassica sp.*						X												
Condiment	Pepper	*Capsicum sp.*																		
Condiment	Poppy	*Papaver sp.*										X							X	
Condiment	Sage	*Salvia sp.*																		
Edible Herb	Carpetweed	*Mollugo verticillata*																		
Edible Herb	Catchfly	*Silene sp.*				X						X	X							
Edible Herb	Clover	*Trifolium sp.*								X										
Edible Herb	Dock/sorrel	*Rumex sp.*	X			X														
Edible Herb	Goosefoot	*Chenopodium sp.*	X			X	X	X	X	X		X	X	X	X		X	X		X
Edible Herb	Knotweed	*Polygonum sp.*	X																	
Edible Herb	Pigweed	*Amaranthus sp.*				X														X
Edible Herb	Pokeweed	*Phytolacca americana*				X														
Edible Herb	Purslane	*Portulaca oleracea*	X	X		X	X	X	X						X				X	
Edible Herb	Smartweed	*Polygonum pensylvanicum*	X			X						X			X		X			X
Edible Herb	Wild Buckwheat	*Polygonum convulvus*	X																	
Edible Herb	Wood Sorrel	*Oxalis stricta*																		
Exotic	Brazil Nut	*Bertholletia excelsa*				X									X		X			
Exotic	Coconut	*Cocos nucifera*				X	X			X										
Exotic	Coffee bean	*Coffea arabica*																		
Exotic	Peanut shell	*Arachis hypogaea*				X	X											X		
Fruit	Apple	*Malus sp.*				X	X	X		X	X									
Fruit	Blueberry	*Vaccinium sp.*				X		X	X	X	X							X	X	
Fruit	Cherry	*Prunus sp.*				X	X	X		X			X							
Fruit	Cherry/Plum	*Prunus sp.*			X															
Fruit	Plum	*Prunus sp.*				X	X	X		X										
Fruit	Elderberry	*Sambucus canadensis*				X	X	X	X		X									X
Fruit	Fig	*Ficus sp.*		X	X	X		X	X		X		X	X	X	X	X	X		X
Fruit	Grape	*Vitis sp.*		X	X	X		X	X	X	X	X	X	X	X	X	X	X		X
Fruit	Hawthorn	*Crataegus sp.*						X	X	X	X	X	X	X	X	X	X	X	X	X
Fruit	Huckleberry	*Gaylussacia sp.*				X														
Fruit	Maypop	*Passiflora incarnata*						X												
Fruit	Mulberry	*Morus rubra*											X							
Fruit	Peach	*Prunus persica*	X		X	X	X	X					X							
Fruit	Pear	*Pyrus sp.*								X										
Fruit	Persimmon	*Diospyros virginiana*																		
Fruit	Blackberry/Raspberry	*Rubus sp.*		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Fruit	Serviceberry	*Amelanchier sp.*								X										
Fruit	Strawberry	*Frageria sp.*	X	X		X	X	X	X	X	X	X								
Fruit	Canteloupe/Muskmelon	*Cucumis sp.*				X						X					X	X	X	X
Fruit	Watermelon	*Citrullus vulgaris*				X						X								
Ornamental	Acorn Shell	*Quercus sp.*										X								
Ornamental	Black Walnut	*Juglans nigra*																		
Ornamental	Hickory Shell	*Carya sp.*									X									
Ornamental	Boneset	*Eupatorium sp.*						X												
Ornamental	Bottle Gourd seed	*Lagenaria sp.*																		
Ornamental	Chinaberry	*Melia azedarach*											X							
Ornamental	Starthistle	*Centaurea sp.*				X														
Ornamental	Sycamore	*Platanus occidentalis*																		
Ornamental	Tulip Poplar	*Lirodendron tulipfera*				X												X		
Vegetable	Celery	*Apium graveolens*																		
Vegetable	Ground Cherry	*Physalis sp.*		X						X		X								
Vegetable	Lettuce	*Lactuca sativa*				X														X
Vegetable	Maize	*Zea mays*																		
Vegetable	Squash/Pumpkin seed	*Cucurbita sp.*				X		X		X								X		
Vegetable	Sunflower	*Helianthus annus*																		
Vegetable	Tomato	*Lycopersicon esculentum*				X		X	X	X	X								X	
Vegetable	Wheat	*Triticum aestivum*				X										X	X		X	X
Weed	Bulrush	*Scirpus sp.*	X	X																
Weed	Chickweed	*Stellaria sp.*																		
Weed	Cinquefoil	*Potentilla sp.*								X										
Weed	Composite	*Compositae*	X			X														
Weed	Copperleaf	*Acalypha virginica*						X												
Weed	Flatsedge	*Cyperus sp.*	X			X														
Weed	Flax	*Linum sp.*																		
Weed	Jimsonweed	*Datura stramonium*	X	X		X	X	X	X											
Weed	Lespedeza	*Lespedeza sp.*																		
Weed	Mallow	*Malva sp.*																X		X
Weed	Nightshade	*Solanum sp.*			X	X	X	X												
Weed	Pink Family	*Caryophyllaceae*									X	X	X							X
Weed	Ragweed	*Ambrosia sp.*				X														
Weed	Rattlebox	*Crotalaria sp.*																		
Weed	Sea Purslane	*Sesuvium sp.*																		
Weed	Sedge	*Carex sp.*																		
Weed	Sedge Family	*Cyperaceae*	X			X	X													
Weed	Velvetleaf	*Abutilon theophrasti*																		
Weed	Wormseed	*Chenopodium ambrosoides*				X														
Weed-Grass	Bromegrass	*Bromus sp.*																		
Weed-Grass	Crabgrass	*Digitaria sp.*				X		X												
Weed-Grass	Foxtail Grass	*Setaria sp.*				X		X												
Weed-Grass	Goosegrass	*Eleusine indica*				X		X												
Weed-Grass	Panic Grass	*Panicum sp.*												X			X			
Weed-Grass	Grass Family	*Gramineae*				X							X							

Appendix B-3. Macroplant Remains from Each Picotte DEC Privy, Albany, New York.

	Privy #	7	1	3	10	11	12	
	Context	6029	3124 L	5045/5047	8049 L	10008 L	12046 L	
	Mean Ceramic Date	1746	1794	1804	1861	1857	1860	
	Date Range	1750-1760	1790-1820	1800-1820	Mid 19th	1840-1860	1860-1880	
Historic Use	Taxa							Total
Vegetable	Barley (*Hordeum* sp.)						17	17
Vegetable	c.f. Bean Pod Count					1		1
Vegetable	c.f. Oats (Avena sp.)						3	3
Vegetable	c.f. Rice						1	1
Vegetable	c.f. Squash/Pumpkin Rind (Cucurbita sp.)						7	7
Vegetable	c.f. Squash/Pumpkin seed coats (Cucurbita					4		4
Vegetable	European Cereal Grain (*Graminae*)		2			2	6	10
Vegetable	Groundcherry (*Physalis* sp.)						2	2
Vegetable	Maize (*Z. mays*) Kernels	6	1					7
Vegetable	Maize (*Zea mays*) Cupules	1				1		2
	Total Vegetables	7	3			8	36	54
Fruit	Blackberry/Raspberry (*Rubus* sp.)	6	2383	9817	382	3687	37089	53364
Fruit	Blueberry (*Vaccinium sp.*)	1	2594	1180	16	63	63	3917
Fruit	c.f. Grape (*Vitis* sp.)	3						3
Fruit	Cherry (*Prunus* sp.)	6		665		22	1	694
Fruit	Elderberry (*Sambuccus* sp.)	1			1	45	2046	2093
Fruit	Fig (*Ficus* sp.)		223	774	25	379	2046	3447
Fruit	Grape (*Vitis* sp.)		2	204	41	316	148	711
Fruit	Hawthorn (*Cratageous* sp.)					13		13
Fruit	Huckleberry (*Gaylussacia sp.*)		1105	589	1	578	50	2323
Fruit	Peach (*Prunus persica*)				8	1	1	10
Fruit	Pear (Pyrus sp.)					1		1
Fruit	Plum (*Prunus* sp.)	2				4	1	7
Fruit	Strawberry (*Frageria sp.*)		3752	6756	15	96	1277	11896
Fruit	Watermelon (*Citrullus* sp.)					1		1
	Total Fruits	19	10059	19985	489	5206	42722	78480
Nut	Black Walnut Shell or Husk	2						2
Nut	Hazelnut (c.f. *Corylus* sp.)					1		1
Nut	Hickory Shell (*Carya* sp.)	18		19	5		1	43
Nut	Oak Acorn (*Quercus* sp.)	8				1		9
	Total Nut	28		19	5	2	1	55
Possible Ornamenta	Violet (*Viola* sp.)		2					2
Edible Herb	Clover (*Trifolium* sp.)	2						2
Edible Herb	Knotweed (*Polygonum sp.*)					6		6
Edible Herb	Pennsylvania Smartweed					1		1
Edible Herb	Pigweed (*Amaranthus* sp.)	1						1
Edible Herb	Pokeweed (*Phytolacca americana*)	24						24
Edible Herb	Purslane (*Portulaca* sp.)	1						1
Edible Herb	Smartweed (Polygonum sp.)					2		2
Edible Herb	Verbena (*Verbena* sp.)		1					1
	Total Edible Herb	28	1			9		38
Medicinal Herb	Jimson Weed (*Datura* sp.)		10				1	11
Weed	Bullrush (*Paspalum* sp.)		13					13
Weed	Doveweed (*Croton* sp.)	8						8
Weed	*Dulichium* sp.		7					7
Weed	Sedge (*Cyperus sp.*)	4	125					129
Weed	*Sumpweed* (Iva *sp.*)					4		4
Weed	Thistle (*Cirsium* sp.)			4				4
Weed-Grass	Goosegrass (*Eleusine* sp.)	2						2
Weed-Grass	Grass Family (*Graminae*)		8	1		5	3	17
Weed-Grass	Grass Family-small seed (*Graminae*)					5		5
Weed-Grass	Panic Grass (*Panicum* sp.)		8			1		9
	Total Weed/Weedy Grass	14	171	5		15	4	209
	Total:	96	10236	20009	494	5241	42763	78839

Appendix C. Ubiquity of Macroplant Remains from 14 Owner Occupant and 18 Renter Contexts.

Common Name	*Scientific Name*	Owner Occupant	Tenant
Condiment-Chives/onion	*Allium sp.*		6%
Condiment-Coriander	*Coriandrum sativum*	21%	
Condiment-Mint	*Mentha sp.*	43%	6%
Condiment-Mustard	*Brassica sp.*	50%	11%
Condiment-Pepper	*Capsicum sp.*	29%	6%
Condiment-Poppy	*Papaver sp.*	7%	
Condiment-Sage	*Salvia sp.*	7%	
Edible Herb-Carpetweed	*Mollugo verticillata*	14%	11%
Edible Herb-Catchfly	*Silene sp.*	7%	11%
Edible Herb-Clover	*Trifolium sp.*	14%	
Edible Herb-Dock/sorrel	*Rumex sp.*	50%	11%
Edible Herb-Goosefoot	*Chenopodium sp.*	86%	72%
Edible Herb-Knotweed	*Polygonum sp.*		6%
Edible Herb-Pigweed	*Amaranthus sp.*	7%	11%
Edible Herb-Pokeweed	*Phytolacca americana*	50%	17%
Edible Herb-Purslane	*Portulaca oleracea*	93%	56%
Edible Herb-Smartweed	*Polygonum pensylvanicum*	7%	11%
Edible Herb-Wood Sorrel	*Oxalis stricta*	36%	11%
Exotic-Brazil Nut	*Bertholletia excelsa*		6%
Exotic-Coconut	*Cocos nucifera*		17%
Exotic-Coffee bean	*Coffea arabica*	14%	6%
Exotic-Peanut shell	*Arachis hypogaea*		11%
Fruit-Apple	*Malus sp.*	57%	39%
Fruit-Blueberry	*Vaccinium sp.*	43%	28%
Fruit-Cherry	*Prunus sp.*	50%	28%
Fruit-Cherry/Plum	*Prunus sp.*		6%
Fruit-Plum	*Prunus sp.*	36%	28%
Fruit-Elderberry	*Sambucus canadensis*	86%	61%
Fruit-Fig	*Ficus sp.*	100%	78%
Fruit-Grape	*Vitis sp.*	100%	83%
Fruit-Hawthorn	*Crataegus sp.*	14%	
Fruit-Huckleberry	*Gaylussacia sp.*	64%	11%
Fruit-Maypop	*Passiflora incarnata*		6%
Fruit-Mulberry	*Morus rubra*	21%	6%
Fruit-Peach	*Prunus persica*	43%	33%
Fruit-Pear	*Pyrus sp.*	7%	
Fruit-Persimmon	*Diospyros virginiana*	7%	
Fruit-Blackberry/Raspberry	*Rubus sp.*	100%	89%
Fruit-Serviceberry	*Amelanchier sp.*	29%	6%
Fruit-Strawberry	*Frageria sp.*	93%	72%
Fruit-Canteloupe/Muskmelon	*Cucumis sp.*	21%	11%
Fruit-Watermelon	*Citrullus vulgaris*	36%	11%
Ornamental-Acorn Shell	*Quercus sp.*	7%	
Ornamental-Black Walnut	*Juglans nigra*	7%	

Ornamental-Hickory Shell	*Carya sp.*	7%	6%
Ornamental-Boneset	*Eupatorium sp.*		6%
Ornamental-Bottle Gourd	*Lagenaria sp.*	7%	
Ornamental-Chinaberry	*Melia azedarach*		6%
Ornamental-Starthistle	*Centaurea sp.*	7%	6%
Ornamental-Sycamore	*Platanus occidentalis*		
Ornamental-Tulip Poplar	*Liriodendron tulipifera*		11%
Vegetable-Celery	*Apium graveolens*	7%	
Vegetable-Ground Cherry	*Physalis sp.*	29%	20%
Vegetable-Lettuce	*Lactuca sativa*	7%	7%
Vegetable-Maize	*Zea mays*	14%	
Vegetable-Squash/Pumpkin	*Cucurbita sp.*	43%	13%
Vegetable-Sunflower	*Zea Mays*	7%	
Vegetable-Tomato	*Lycopersicon esculentum*	71%	47%
Vegetable-Wheat	*Triticum aestivum*		6%
Medicinal-Jimsonweed	*Datura stramonium*	71%	39%
Medicinal-Wormseed	*Chenopodium ambrosoides*	36%	6%

APPENDIX E:

ARCHEOPARASITOLOGY OF FEATURES FROM INDEPENDENCE VISITOR CENTER SITE, PHILADELPHIA, PA

APPENDIX E:

Archeoparasitology of Features from Independence Visitor Center Site, Philadelphia, PA

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Abstract

Parasite eggs were found in all 10 samples of sediment from features excavated at the Independence Visitor Center site on Block 2 of Independence Mall. The eggs are consistent in morphology with those of the most-common human roundworm parasites, *Ascaris lumbricoides* and *Trichuris trichiura*. The conditions of preservation within the features varied greatly. Sediments from some features were nearly free of organic material. In such sediments, the parasite eggs were poorly preserved. In other samples, the sediments contained a large amount of organic debris. In these samples, the eggs were very well preserved and contained the delicate larvae of the parasites. This provides some insight into the effects of different preservation conditions on parasite eggs. Importantly, identifiable eggs can be recovered from even the worst preservation conditions at the Visitor Center site. These findings verify previous work that shows parasite eggs are nearly as durable as pollen grains and can be recovered from a variety of sediments. Parasite egg counts were higher than recorded during previous research in Philadelphia at the Meadows site.

Introduction

The evaluation of parasitism in archeological sites is a long-standing research area as reviewed by Reinhard (1990, 1992). Studies have revealed a variety of parasites in historical populations. These include three species of tapeworm and four species of roundworm. Two species of roundworm, *Trichuris trichiura* and *Ascaris lumbricoides*, are most important for assessing the general sanitation conditions affecting health patterns. Indeed, Jones (1985) devised a method of using *T. trichiura* egg counts to evaluate the fecal content of archeological sediments.

In North America, several historic urban and proto-urban sites have been evaluated. Previously, analysis of the Meadows site in Philadelphia revealed a long-standing pattern of parasitism with *T. trichiura* and *A. lumbricoides* (Reinhard, unpublished a). Eggs of these parasites were found in seventeenth- and nineteenth-century contexts. The eggs were present in earlier barrel latrines and later pit latrines.

Materials and Methods

Ten samples of nightsoil were submitted for analysis (Table 1). The samples were processed following the parasite recovery methods of Warnock and Reinhard (1992), which were developed from laboratory experimentation with techniques in the 1980s (Reinhard et al. 1986a). Thirty milliliters of sediment were measured from each sample, and three *Lycopodium* spore tablets were added to each sample. The samples were treated with hydrochloric acid to dissolve calcium carbonate. The samples were then swirled three times to separate light remains from heavier sand particles. The sediments were washed through a 300-micrometer mesh to filter out large organic and inorganic components. Following the screening, the microscopic remains were washed three times with distilled water. Then, preliminary scans were made of the samples to determine if further chemical processing was necessary. Samples 2, 4, and 5 needed no further processing, but for the other samples the high content of fine silicates required further processing. The samples were then treated for 48 hours in 42 percent, cold hydrofluoric acid. Afterwards, the sediments were washed three times in distilled water, and the samples were examined again. It was found that the hydrofluoric acid removed the vast majority of the sediments, which allowed immediate microscopic examination without need for further fine screening or heavy-density flotation. At least four slides were counted for each sample. The parasite eggs and the added *Lycopodium* spores were counted. By calculating the ratio of eggs to spores, the numbers of parasite eggs per ml of sediment were calculated.

The nature of the sediments with regard to organic material preservation was assessed by microscopic examination. The amount of organic material present relative to inorganic remains was qualitatively determined. The preservation of parasite eggs was also evaluated. The comparison of the sediment nature and egg preservation allows the researcher to make a general assessment of the potential of discovering parasite eggs in different soils.

Results

Laboratory samples 2, 3, 4, and 5 exhibited good to excellent preservation of eggs and, in the analyses of 3, 4, and 5, embryos were observed within the eggs (see Table 1 for provenience and analytical stratum designation). The highest egg counts were from sample 3, which had 60,201 eggs per ml of sediment of both *Ascaris* and *Trichuris* species (Table 2). This exceeds the egg counts for other latrines previously analyzed from Philadelphia.

It is apparent that the sediments with better preservation or organic remains had higher egg counts (Table 3). Those sediments that exhibited excellent preservation of organic content contained 5.3 times more *Ascaris* eggs and 5.2 times more *Trichuris* eggs than samples that exhibited poor

preservation of eggs. It was apparent that the parasite eggs decayed significantly in less well preserved samples. In such samples the eggs were eroded, decorticated, and lacked embryos. Thus, sediments that have poorer preservation of organic content may exhibit reduced egg counts due to decomposition of the eggs. Therefore, the lower egg counts from sediments of poor preservation do not necessarily reflect lower levels of parasitism in the past.

Discussion

The egg counts indicate that fecal debris was sampled and that the level of sanitation at the Visitor Center site was poor. The fact that all sediment samples contained parasite eggs, despite the conditions of preservation, indicates that parasitism with geohelminths was a ubiquitous aspect of life at the site. The high egg concentration in sample 3 is one of the highest recorded for any historical sediments with the exception of Albany, New York, which exhibited counts exceeding 200,000 eggs per ml in one latrine (Reinhard, unpublished b). Health problems associated with these parasites could have included pulmonary problems, hyperallergic responses, intestinal problems including fatal obstructions and appendicitis, and reduced growth in children. *Ascaris* worms are particularly noticeable when they are passed, or when they exit the oral, nasal, or anal orifices during their migrations.

An important aspect of this analysis is the presence of reduced numbers of eggs in samples with poor organic preservation. The same samples also exhibit relatively low fungal presence, and therefore an anaerobic decomposition environment can be inferred. Previous work by Reinhard and Herrmann (Reinhard et al. 1986b) had shown that fungal decomposition of parasite eggs occurred in an aerobic decomposition environment. The analysis of the Visitor Center samples suggests other anaerobic mechanisms for parasite egg decay and raises the need for its controlled experimental, long-term study in different sediment types of decomposition conditions.

It is noteworthy that samples 9 and 10 produced very different egg concentrations even though these samples came from the same latrine feature. Sample 10 had higher concentrations of eggs and was taken from dirt adhering to a ceramic artifact. This raises the possibility that artifacts created microenvironments more conducive for egg preservation than surrounding sediments. This observation also indicates a need for controlled studies that will reveal the nature of preservation conditions related to different types of artifacts.

Table 1: Lab numbers and field provenience information for the Independence Visitors Center site

Lab #	Field provenience	Analytical Stratum (AS)
1	FS 35, Fea. B, Level 4	V
2	FS 38, Fea. B, Level 6	III
3	FS 39, Fea. B, Level 7	II
4	FS 40, Fea. B, Level 7.1	II
5	FS 41, Fea. B, Level 8	I
6	FS 46, Fea. C, Level 4	I
7	FS 50, Fea. E, Level 3	II
8	FS 51, Fea. E, Level 4	II
9	FS 52, Fea. E, Level 5	I
10	FS 52, Fea. E, Level 5, sediment adherent to ceramic artifact	I

Table 2: Parasite Egg Concentrations in terms of number of eggs per milliliter of sediment. *Ascaris* eggs are consistent with *Ascaris lumbricoides*. Truchuris eggs are consistent with *Trichuris trichiura*

Lab #	Ascaris	Trichuris	Notes on egg preservation
1	0	40	Poor, eggs eroded
2	84	0	Good, eggs intact
3	51422	8779	Excellent, larvae preserved
4	4447	2166	Excellent, larvae preserved
5	2119	908	Excellent, larvae preserved
6	0	314	Poor, eggs eroded
7	179	2329	Poor, eggs eroded
8	12124	5017	Moderate, eggs w/out larvae
9	57	684	Poor, eggs eroded
10	3637	753	Very poor, eggs decorticated

Table 3: Average egg counts by preservation condition

Condition	*Ascaris*	Trichuris
Excellent	19329	3951
Good	84	0
Moderate	12124	5017
Poor	80	842
Very Poor	3637	753

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APPENDIX F:

ARTIFACT CONSERVATION AND TREATMENT SUMMARY FOR BLOCK 2, PHILADELPHIA, PA

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By

Emily Williams

The conservation of selected artifacts from the excavations at Block 2 was undertaken by the Colonial Williamsburg Foundation's Archaeological Conservation Laboratory over a 15-month period from June 2000-August 2001. The criteria for selection were as follows:

- Artifacts that needed immediate stabilization to ensure preservation (e.g., waterlogged organics)
- Artifacts that required cleaning and stabilization prior to photography and/or exhibition
- Artifacts that were typical of the site

Overall, 131 artifacts were selected and conserved. Many artifacts consisted of more than one component, for example, three buttons or four wooden fragments.

Each artifact was documented prior to treatment either photographically (both black-and-white and color-slide film were used), or through drawings of the piece, or, in some cases, by both methods. Treatment reports were generated for each artifact treated in accordance with the Code of Ethics and Guidelines for Practice of the American Institute for Conservation of Historic and Artistic Works. The specific details of each treatment, including the condition of each artifact prior to treatment, the chemicals and solutions used during treatment, as well as any markings or technical information revealed by the treatment, are recorded on these reports, copies of which reside with the collection at Independence National Historical Park, Philadelphia.

Summary of Conservation Treatments

Metals

The surviving metal artifacts from Block 2 consisted primarily of objects made from copper alloy, including several "white metal" objects made from high tin/copper alloys. Once recovered the metals were dried on site and stored in polyethylene "ziplock" bags until a determination had been made about their treatment.

Very few iron objects survived on the site, and those that did were highly mineralized. The condition of the copper-alloy artifacts ranged from heavily mineralized pieces covered in a thick layer of carbonate corrosion, which incorporated organic materials such as seeds and wood chips, through well-preserved items covered with only a thin layer of sulphides. One tin-alloy tea caddy had sustained a significant amount of mechanical damage, including losses, tearing, and crushing, but was in good condition overall.

Treatment

Soil, concretions, and corrosion were removed where appropriate using mechanical aids such as scalpels, brushes, wooden cocktail sticks, and needles. All work was conducted under a microscope to ensure that traces of gilding, silvering, and mineral-preserved organics that might add to the understanding of the object and its use were not removed. Occasionally, chemical methods were used to remove stubborn concretion. The chemical methods used were limited to the copper-alloy and tin artifacts and typically employed either three percent citric acid followed by neutralization with five percent sodium sesquicarbonate, or formic acid followed by prolonged rinsing in deionized water or five percent di-Sodium Ethylene Diamine Tetraacetic acid (EDTA) followed by prolonged rinsing with deionized water.

Organic Artifacts

Objects made from leather, wood, bone, textile, and tortoiseshell were all preserved in the waterlogged layers. Following excavation, all organic material was placed in a polyethylene

"ziplock" bag containing water and stored in a refrigerator, to minimize the potential for biological activity. Since organic material is very vulnerable to physical change, abrasion, shrinkage, and cracking as well as to further biological attack such as fungal tunneling and mold growth after excavation, it is difficult to store in an untreated state for any length of time. As a result, it was decided that all waterlogged material that showed signs of being worked should be treated. Tree limbs and botanical samples that showed no signs of tool marks or recognizable alteration were allowed to air dry slowly for future study or identification.

Wood

Overall, 56 wooden objects ranging from toys to fragments of furniture and architectural hardware, such as window sash elements, were treated. Wood identification suggested that the vast majority of the artifacts were made of yellow pine. There was one piece of tulip poplar and several unidentified hardwoods. In general, the wood was fairly robust; however, a significant amount of iron staining occurred on the surface of nearly 50 percent of the pieces, and some objects incorporated small pieces of mineralized and metallic iron, such as rivets, nails, and wires. Some objects, such as the three scrub brushes, incorporated bristles.

When possible, the Umax (maximum moisture content of the wood) was calculated prior to treatment, using the weight of the object in air and in water. The typical Umax scores were between 200 percent-300 percent. Two artifacts were in poor condition, felt spongy to the touch, and had a Umax value of 500 percent.

Attempts to use PEGCON (a computer program designed to help determine a treatment protocol for waterlogged wood) were hampered by the mineral content of the wood. However, the author's experience with similarly deteriorated pieces of wood from contexts in Virginia, and consultation with the conservator responsible for treating the wood recovered from the Chiller Plant site in Independence National Historical Park, indicated that a treatment regimen consisting of stepped baths of Polyethylene Glycol (PEG) 400 and PEG 3350 culminating in a final concentration of 10 percent PEG 400 and 25 percent PEG 3350 in deionized water would be appropriate (Young 2001). Prior to treatment selected artifacts that had heavy iron staining on the surface were treated for one week with five percent w/v Sodium Dithionite in deionized water followed by two percent w/v Di-ammonium citrate in deionized water. The artifacts were then rinsed in several baths of deionized water and impregnated with Polyethylene Glycol. When the impregnation portion of the treatment was completed the wooden artifacts were removed, frozen for a week, and then transferred to a freeze dryer. The weight of the artifacts was monitored, and the artifacts were removed from the freeze dryer when the weight loss stabilized over three consecutive measurements. They were allowed to equilibrate with ambient conditions for 48 hours, excess PEG was then removed from the surface using hot air and/or small amounts of hot water, and the success of the treatment was assessed. Overall shrinkage rates were less than five percent and the treatments appeared to be successful with the one exception of the two most degraded fragments, which would have benefited from a greater amount of PEG 3350.

Leather

Thirty objects were conserved; however, since each object consisted of multiple components the number of individual leather pieces treated was closer to 300. Most of the leather appeared to be shoe-related items such as soles, upper fragments, and seams. Overall the leather was in fair condition, with thick accretions of nightsoil on most surfaces and a significant amount of iron staining. Almost all the leather fragments exhibited some degree of mechanical damage including tears, abrasion, and losses. In a few cases, tears and losses threatened the integrity of the piece, but most of the leather was fairly robust.

Treatment
The leather was carefully washed to remove as much of the nightsoil that was adhering to it as possible. It was then soaked in 30 percent v/v PEG 400 in deionized water. When the PEG had impregnated the leather (approximately six weeks after soaking had begun) the leather was removed, frozen, and placed in the freeze dryer. Selected pieces from throughout the chamber were weighed daily during the course of the freeze dryer's run. The objects were removed from the freeze dryer when no weight loss was measured over three consecutive days. The leather was allowed to equilibrate with ambient conditions for 48 hours after it was removed from the freeze dryer. Any necessary repairs were undertaken then, and the objects were housed on acid-free cardboard supports in acid-free boxes.

Several markings that had not been visible prior to treatment became apparent after drying, including a floral motif on one of the three soles composing INDE 69169.

Bone
Eight bone artifacts including several combs, a toothbrush, a fan blade, and several cutlery handles were treated. Of these objects, seven were wet and one had dried in storage. The bone was generally in good condition although there was evidence of both organic and iron staining on the surfaces of the artifacts and several pieces exhibited some spalling and surface loss. Additionally, cracking and checking were visible on the surface of several pieces, especially when examined under magnification.

Treatment
The waterlogged bone was gently cleaned with brushes and swabs and then dewatered via a series of stepped solvent/water baths that culminated in a bath of 100 percent ethanol and another bath of 100 percent acetone. If the artifacts exhibited signs of cracking, splitting, or spalling, the artifacts were transferred directly from the acetone bath to a beaker containing five percent Acryloid B-72 (an ethyl-methacrylate/methacrylate copolymer often used by conservators as both a consolidant and an adhesive) in 50:50 acetone: ethanol. The beaker was placed in a vacuum chamber, and a vacuum of –22 psi was drawn and maintained for several hours. The artifact was then removed from the vacuum chamber and dried over a reservoir of the 50:50 acetone: ethanol to avoid pooling of the consolidant on the artifact surfaces.

Tortoiseshell
Several tortoiseshell combs and comb fragments were recovered from the site. The tortoiseshell was waterlogged and its condition ranged from excellent to highly deteriorated.

Treatment
Due to the rarity of the material, considerable work and research had to be undertaken to ensure that the combs were stabilized effectively and safely. The research methodology and results have been published elsewhere (Williams and Eklund, forthcoming).

Textile
Three waterlogged textile objects were also recovered from the site. Two of the artifacts consisted of multiple pieces of ribbon. The third object was a piece of fabric with an intact seam. The textile fragments were very fragile and dirty, with large clumps of dirt adhering to the surface.

Treatment
No dye analysis, fiber identification, or weave analysis could be carried out due to time constraints. As a result, it was important to choose a treatment method that would stabilize the textile fragments but would not compromise the potential for future analysis.

The textile fragments were cleaned with brushes under a gentle stream of water. The textile was then arranged on acid-free card, weighted, and allowed to air dry.

Glass

One very delaminated, molded-glass pharmaceutical vial was treated. The vial was inscribed "BY TH…INGS PAT…R."

Treatment

The glass vial was consolidated with 10% Acryloid B-72 in 50:50 acetone and ethanol under a vacuum of –22 psi. Once the vial had been consolidated, individual laminae that had separated from the piece were laid down with Acryloid B-72 adhesive.

Wax

Fragments of at least one and possibly two wax seals were found on site. The wax was red in color and quite brittle. One set of seal fragments had no decorative markings or inscriptions on it, while the second set could be pieced together to form a circular seal inscribed "BY THE KINGS……..NT" along its exterior. The interior of the seal bore the inscription " JN^{O}… OPERS…EMALE."

Treatment

The fragments were adhered together with Acryloid B-72 adhesive. The joins were supported by silk crepe line, which was adhered to the back of the fragments using 10% Acryloid B-72 in 50:50 acetone and ethanol. The edges of the silk crepe line were trimmed so that fibers would not be visible from the front of the seal, and a specialized support was constructed to minimize handling of the artifact.

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