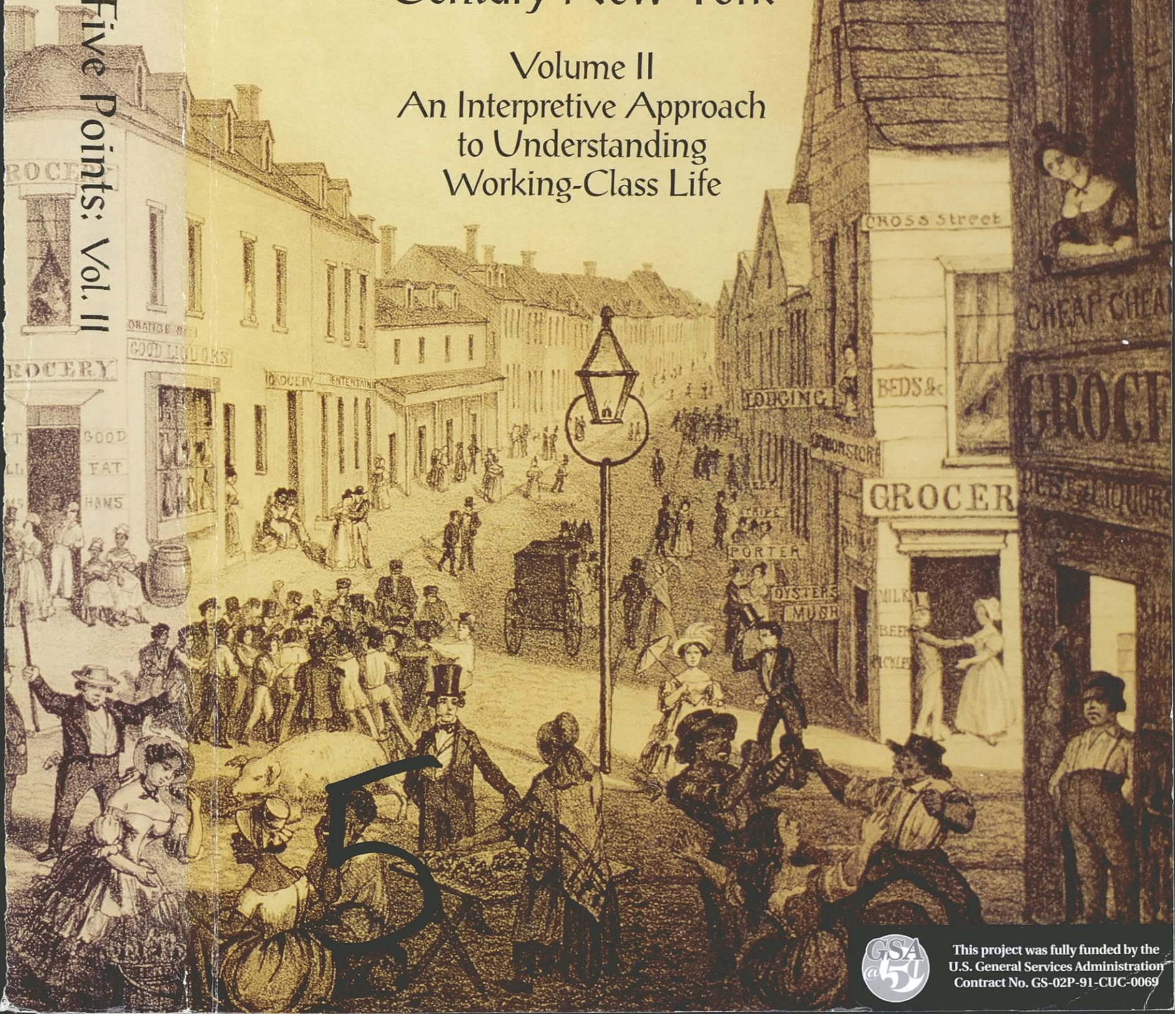


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Tales of Five Points: Working-Class Life in Nineteenth- Century New York

Volume II
An Interpretive Approach
to Understanding
Working-Class Life

Tales of Five Points: Vol. II



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**TALES OF FIVE POINTS: WORKING-CLASS LIFE IN
NINETEENTH-CENTURY NEW YORK**

**VOLUME II. AN INTERPRETIVE APPROACH TO
UNDERSTANDING WORKING-CLASS LIFE**

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Cover illustration:

Artist's conception of the Five Points intersection, teeming with activity and lined with nefarious haunts, appeared in Valentine's Manual of Old New York 1855.

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PREFACE

In 1993, John Milner Associates, Inc. (JMA) and Howard University developed two research designs under the auspices of the General Services Administration (GSA) — one for a block that was part of Five Points, New York's most celebrated nineteenth-century slum, and one for a portion of the eighteenth-century African Burial Ground that once covered approximately seven acres of lower Manhattan (the map on the following page shows the locations of the two project areas). Collectively, the two projects are referred to as the Foley Square project. Spurred by the construction of two federal buildings, a courthouse and an office tower, the related projects span two centuries in New York City's history. The African Burial Ground was in use from about 1720 until the 1790s, when its contested site was covered with fill and developed for residential use. Five Points began as an industrial-artisan district on the shores of the Collect Pond and grew into an enclave of rental housing for New York's burgeoning working class. The African Americans, who were a significant segment of the Five Points population in the early decades of the nineteenth century, may well have been the direct descendants of the Africans buried in the burial ground. As the nineteenth century progressed, one wave of immigrants after another swelled the population of Five Points, making it one of the poorest and most overcrowded districts in the city. The African Americans moved uptown, first to a neighborhood on the southern margin of Greenwich Village that became known as "Little Africa," subsequently to the Tenderloin and San Juan Hill districts in midtown (Osofsky 1996:12), and finally to Harlem.

These two projects have provided an opportunity to examine the history and experiences of nameless New Yorkers who are not in the history books. They are the people who built New York: enslaved and free, they were its carpenters and masons, dock workers and laundresses. They leveled the ground for the city streets, carted away the refuse, waited on the wealthy, and ran the sewing machines. This volume is about the portion of that population that left remnants of their lives on Block 160 where the new courthouse now stands. The block, which is bounded by Pearl Street on the south, Park Row on the east, Worth Street on the north, and the New York County courthouse on the west, was part of the "bloody ould sixth," an Irish neighborhood that encompassed the entire Sixth Ward from Canal Street to City Hall Park, from Broadway to the Bowery. But Block 160 also had its share of German Jews and other immigrants who crowded into the tenements that lined its streets. It was a place to begin life in an alien city, to learn new occupations and customs, and to forge new identities and allegiances.

This volume is organized as a series of edited papers grouped into five research domains. All members of the Foley Square research team contributed to the effort, and their hard work is gratefully acknowledged. For some of the authors represented here, this is their first paper, and for several it is the beginning of a chosen profession. In the spirit of the population we were studying, we not only turned to well-known specialists for this study. Instead, we also looked as well to young scholars who were passionately interested in Five Points and committed to doing whatever was necessary to find out what really happened there. This volume is a companion to Volume I, "A Narrative History and Archeology of Block 160." Although a certain amount of redundancy could not be avoided, this volume is considerably more technical and includes the presentation of data, tables, and graphs that were not included in Volume I. Like its companion, however, this volume also represents a postprocessual approach. We are most interested in what the things that were excavated on the Courthouse Block meant to the people who used them.



Project area location, USGS 7.5 minute series, Jersey City, NJ-NY, quadrangle, photorevised 1981.

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While a comprehensive acknowledgments section may be found at the beginning of Volume I, the studies included here benefited from the very specific expertise of a number of people. With respect to the analysis of the faunal material from the Five Points site, the following individuals were generous with both their time and expertise: Douglas Campana (independent computer consultant), Sophia Perdikaris, Tom McGovern, Jim Woollett, Jene Romeo, and Tom Amorosi (all of the Department of Anthropology/NABO at Hunter College, CUNY), Clifford Jolly and Terry Harrison (both of the Department of Anthropology, New York University), and Alison Anders (Department of Ornithology, American Museum of Natural History). Molly A. Hickey assisted with skeletal identifications for the neonate study, and Arthur Washburn identified the teeth.

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Peter Sneed, who served as the General Service Administration's (GSA) liaison and contracting officer's representative to the Foley Square project, took a particular interest in the technical studies that are reported here. He supplied the support necessary to conduct them and cared about their conclusions. We are all very grateful to him. Lastly we wish to thank Tom King, Diana Wall, and Nan Rothschild for reviewing the final manuscript. We have attempted to respond to as many of their comments as possible.

CONTRIBUTORS

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Damian Blanck	artifact processing, data management, and Web page development
Michael C. Bonasera	senior glass analyst
Stephen A. Brighton	senior ceramics analyst
Thomas A. J. Crist	physical anthropologist
Robert K. Fitts	historical research and artifact tables
Amy Goldberg	architectural materials analyst
Heather J. Griggs	artifact processing, historical research, and sewing-materials analyst
Janet Hawkins	assistant conservator
Tarik Holmes	artifact processing and tabletop photography
Larry Jepson	data management
Tamara Kelly	artifact processing and small-finds analysis
Cheryl J. LaRoche	conservator
Gary S. McGowan	laboratory director and senior conservator
Claudia Milne	historical research and faunal analysis
Tom Naughton	ceramics analyst
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Liz Vogel	assistant conservator

Subconsultants to the project:

Pamela Crabtree of New York University	faunal analysis
Diane Dallal of the South Street Seaport Museum	clay pipe analysis
James Davidson of FlatIron Solutions	database development
Leslie Raymer of New South Associates	floral analysis
Karl J. Reinhard of the University of Nebraska	parasite analysis



1.0 THE FEDERAL COURTHOUSE AND FIVE POINTS: SYMBOLS IN MULTICULTURAL CONTEXT

by Rebecca Yamin

Through symbols we confront the experiential chaos that envelops us and create order
(David Kertzer 1988:4).

1.1 Introduction

The present and the past we are trying to understand have much in common. Both are periods of social upheaval and change; but, most of all, both are periods in which cultural heterogeneity is a conspicuous component of the urban landscape. In late-twentieth-century New York, just as in the second half of the nineteenth century, the population seems to have diversified kaleidoscopically. Russian and Japanese may be heard in the street as often as German and French, and shops and restaurants cater to a myriad of tastes from Burmese to Ethiopian. Tensions between groups (e.g., Asians and African Americans, Latinos and white Euro-Americans, Arabs and Jews) are not so different from the tensions between nativists and Irish immigrants, Irish Catholics and African Americans, and German Jews and White Anglo-Saxon Protestants that were rife in the nineteenth-century city. Even sweatshops have reappeared, absorbing newly arrived immigrants (both legal and illegal) who, just as they did 150 years earlier, are willing to work for exploitive wages under miserable conditions to get a foothold in this “land of opportunity.” Except for the players, the debate over the rights of illegal immigrants that fills today’s newspapers is not very different from the anti-immigration rhetoric that filled Horace Greeley’s *New York Tribune* in the 1850s.

The issue of race, too, is still with us, causing deep divisions between individuals and, more significantly, between political interest groups. From the perspective of this project, which is a companion to the African Burial Ground project, the African-American struggle for power is a palpable force in late-twentieth-century New York. While African-American concerns were somewhat different in the nineteenth century, racial prejudice fueled bourgeois fears of Five Points and other neighborhoods where newly emancipated African Americans and poor Euro-Americans lived side by side (Blackmar 1989:175). The Civil War made former allies into enemies (Ignatiev 1995) and pitted members of the working class against each other in a battle for low-wage employment.

All of this has influenced the approach we have taken to the Five Points analysis. The multiculturalism of the present is the context in which we have studied the multiculturalism of the past. Surrounded by expressions of ethnic diversity and the creative appropriation of symbols (an Indian nose ring becomes an X-generation mark of identity), we could not have settled for an approach that ignored the dynamic capacity of subordinate groups to formulate their own ideologies (Beaudry et al. 1991:157). We could neither accept an acculturation model, which assumes the gradual loss of culture traits as a population assimilates the practices of its adaptive culture (Howson 1990:82), nor the dominant ideology model (Leone et al. 1987), which also expects subordinate groups to absorb uncritically the ideology of the ruling class. To portray the working-class residents of Five Points as oppressed by the structure of industrial capitalism, or scrambling to imitate the middle class, would do little to bring to life a neighborhood that has only been known as a symbol of all that was dark and depraved in the nineteenth-century city.

1.2 Symbols Past and Present

Five Points symbolized the underbelly of the nineteenth-century city, the negative side of industrialization—poverty, debauchery, criminality. As a symbol, it provided the middle class with a construct against which to measure its own values. There was no need to know the neighborhood from the inside; it was more useful to take for granted the attendant evils of being Irish or Catholic or African or Jewish, to symbolically represent those evils as confined to a physical space, and to describe the space as if it were an alien land outside the bounds of the civilized city. This perspective blamed the physical conditions on the residents, whose inferior nature allowed them to live like animals, and the physical conditions for producing the residents. The circularity of the argument left no room for considering the relationship between the

exploitation of labor for profit and the tenement districts that housed the labor force. Well-meaning middle-class women focused on reforming the depraved rather than winning higher wages for their own husbands' employees. There was no positive side to Five Points as a symbol. Its multicultural population was feared and maligned while in actuality its people energized the city and ultimately created the heterogeneity that has since characterized New York.

"Symbols," says David Kertzer (1988:4), provide a "shield against terror. They are a means, indeed the primary means, by which we give meaning to the world around us; they allow us to interpret what we see, and indeed, what we are." For mid-nineteenth-century New Yorkers, symbols were essential to organizing an environment that had become frighteningly diverse. The journalist George Foster (1990 [originally published 1850]) equated discrete neighborhoods with the class that inhabited them (Broadway/Wall Street and the upper class, Chatham/the Bowery and the native-born working class, Five Points and the immigrant lower class), leaving out the confusing, newly developed, districts in between. Stuart Blumin (1990:60) claims Foster was unconsciously clinging to an earlier version of the city, one that was not yet "incomprehensible or unmanageably large."

Parts of New York are still linked symbolically with segments of the population: the chic and wealthy with the upper East Side, the intelligentsia with the upper West Side, old bohemians with Greenwich Village, and a newer version with Soho. But the modern city represents itself as a pluralistic place. Its diversity is symbolized in a post-modern architectural style that is, by definition, pluralistic (Jencks 1989:7), drawing on all traditions and all times. The courthouse that stands where the excavated portion of Five Points once was speaks to the past and to the heterogeneity of the present. The classical motifs that adorn its facade (Figure 1) have a timeless quality (Muschamp 1994); they echo elements of the earlier courthouses on Foley Square, but they are attached to a modern skyscraper. They blend the past and the present, making the past available and history a "dimension of fundamental importance in a pluralistic world" (Norberg-Schultz 1993:220).

Post-modern architecture also incorporates elements of the "honky-tonk" present; it recognizes the commonplace—the billboards of Times Square, for instance—as a source of "variety and vitality" (Venturi 1979:44). It caters not only to an educated elite public, but to everyone. Symbolically, the non-elite (racial minorities, women, immigrants) are no longer outside the mainstream; they are the lifeblood of a diverse society. If the Foley Square courthouse speaks to this issue, it is not so much in the building's design as in its openness to the public. Unlike the earlier courthouses that face Foley Square, the entrance to the new building does not sit high above street level at the top of an intimidating staircase. Instead, gentle, broad steps lead to multiple doorways that are barely higher than the street (Figure 2). There are benches for sitting in front of the building and a set of sculptures (by Mai Lin) that can be peered into and touched. While the design may have more to do with handicap access than ideology, it is undeniably inclusive.

Curiously, and perhaps in defiance of post-modern principles, the new courthouse ignores the tenements of Chinatown to the north (not very different from the old Five Points, we suspect) and the Metropolitan Corrections Center—a grim, brick-faced building—to the south. For the architects (Kohn, Pederson, and Fox), the context was Foley Square, a civic center, and the problem was to connect the building to the square even though it was behind another courthouse. The solution was to create an open space between the old courthouse and the new and orient the latter to the space which, like an apron, opens from the main entrance to the building (Figure 2). Except for "heights and lines," Chinatown and the prison were ignored (James von Klemperer, January 17, 1997, personal communication).

What is significant is that the courthouse achieves the monumentality appropriate to its function through symbols that are accessible to everyone. It fits snugly among the courthouses of another era by repeating their architectural elements, but it is definitely the creation of another time. Its exterior may look like a gray flannel suit to the *New York Times* architecture critic (Muschamp 1994), but it is all underwear inside. The white-marble-lined interior and the rare woods chosen for judges' chambers and courtrooms are sensual. By creating elegance with materials instead of esoteric classical references, the architects have designed a building that is not so formal as to exclude anyone. It is impressive and yet unintimidating.



Figure 1. Facade of the new courthouse at Foley Square, Block 160. Photograph by Peter Sneed.



Figure 2. Plaza in front of the new courthouse at Foley Square, Block 160.

The exhibit of artifacts from the Five Points excavation, mounted for the dedication of the courthouse in a gallery next to the main lobby, contributed another dimension to the post-modern aesthetic. As authentic remnants of a past that happened on the very same spot where the courthouse stands, they brought that past into contact with the present. Not unlike the flags, robed judges, political dignitaries, and various other patriotic symbols that were very much in evidence on dedication day, the exhibit symbolized the American dream. A senator of Irish heritage saw his roots in the humble things on display—Staffordshire teacups, ink bottles, chamber pots, scraps of cloth—and celebrated how far he—and his people—had come.

An exhibit about a multicultural community and an archeology of multiculturalism are products of the present. Our purpose, however, is to know something about the past, a task that, like architecture, requires close attention to context.

1.3 Context and the Interpretive Approach

Archeologists construct contexts to recover the meaning of the things and texts they retrieve from the past. “Context is where meaning is located and constituted and provides the key to its interpretation” (Beaudry et al. 1991:160). The problem, then, is to recover context as well as artifacts and features, a task that involves an interdisciplinary effort—historical, anthropological, genealogical, geographical, cartological, culinary, biological, botanical; the list goes on. Only some experts in some of those fields were represented on the Foley Square/Five Points staff, but all of the subjects, and more, became relevant to constructing contexts that would allow us to understand (or try to understand) the past “in its own terms” (Hodder 1991:7–13).

On the cultural/historical side, all kinds of documents—maps, census records, directories, newspaper articles, bank records, church records, graphic images—were analyzed for both their etic and emic content, i.e., for factual information as well as for people’s perceptions, for the organizing principles of their lives which would provide insights into what their possessions (artifacts) meant to them. Secondary sources, especially the solid social histories that have already been written about this period in New York’s past, contributed significantly to building relevant contexts for understanding the archeological data. A focus on the working class distinguishes this body of work, making it particularly pertinent to exploring life at Five Points.

On the physical side, a parasitologist analyzed sediment samples for evidence of disease, which provided a perspective on the relationship between disease and worsening conditions in the tenements that was previously unavailable. The paucity of certain expected parasites required an explanation which led to asking different questions of other categories of data. What were the plants that might have been used to prevent or control disease? How did the bottled remedies found relate to the particular parasites that were either absent or present? A tremendous advantage of looking at many lines of evidence is the feedback between one discipline and another. Because of the parasitologist’s results, the floral analyst had to look at her data differently, and she, in turn, collaborated with the glass and faunal analysts to understand the medicinal and dietary implications of the floral remains.

A contextual approach is necessarily dialectical. There is the interplay between categories of data from the past, but the activity of constructing the past also involves a kind of interplay with the present. As already pointed out, the questions we have asked of the Five Points data have a great deal to do with the time in which we are asking them. What we finally know about past reality derives “both from the reality of the past and the social context of the researcher. Such knowledge is intricately made and not reducible to either the subjectivities of the researcher or the reality we study” (McGuire 1992:15). As McGuire and others have pointed out, this does not mean that we don’t learn anything about the past or that we make it up. It simply implies that the present is part of the context in which the past is constructed. Using his own experience as an example, Ian Hodder (1991:11) explains, “in my analysis of Neolithic Çatal Hüyük I interpreted the site in my own terms, but in the experience of trying to understand the ‘other’ of Çatal Hüyük ‘my own terms’ changed.” To know the past is a dialectical process of question and answer which never arrives at absolute truth, but reaches for the most complete explanation possible. That the explanation is framed in the interests of the present does not mean that it does not have anything to do with the past. In fact, Hodder argues (1991:10), “a guarded objectivity of the past needs to be retained so that subordinate groups can use the archeological past to empower their knowledge claims in the present.”

The interpretive approach is essentially anthropological. It attempts to bring to life the "other" in the past. "It allows for a relevant human story to be told" (Hodder 1991:10). In the case of Five Points, the story is relevant in terms of hearing the voices of the actual residents of the neighborhood rather than only those of their contemporaries, who judged them so harshly from outside. It is also relevant for understanding neighborhoods described as slums in the present. In New York, for instance, Harlem and Bedford Stuyvesant call up immediate images of crime-ridden, drug-infested districts inhabited by nothing but single mothers, juvenile delinquents, and junkies. The complex reality of life in low-income neighborhoods is rarely available to people who live elsewhere. Bringing into focus a neighborhood that was similarly portrayed in the past raises questions about the present, questions about the different ways people live in present-day slums and about the system that creates them.

1.4 Agency and the Working Class

The immigrant workers who poured into New York in the decades preceding the Civil War transformed the urban working class. What had been a primarily native-born labor force became a multi-ethnic mix of workers, half of whom had been born abroad (Wilentz 1984; Levine 1996). Different groups brought different cultural perspectives and experiences with regard to class to their new society. The Irish apparently derived their major sense of group identity from their Catholicism and were despised for it; Germans had some experience with social and political radicalism (Levine 1996:7). It would not be possible to define what working class meant to the mid-nineteenth-century residents of Five Points and we have not tried. As Herbert Gutman (1977) has shown, in the years between 1845 and 1893, the American working class was constantly being nourished by waves of immigrants who brought with them traditional customs, rituals, and beliefs that shaped their adaptation to industrializing America. Strong familial and kin ties, in addition to the maintenance of ethnic traditions and communities, softened the anomie that has been assumed for uprooted populations and created diverse and constantly changing working-class identities. The construction of identity can be approached archeologically, and it is a major focus of this study.

Such an approach grants individuals a certain amount of agency in their own self-creation (Williams 1981; Cook et al. 1996; Douglas and Isherwood 1996). The consumer goods that were the peoples' possessions are interpreted as constituent parts of their self-images as well as of group allegiances. Without denying the existence of economic constraints and a dominant ideology, the approach looks at consumption as a kind of empowerment (Miller 1995a:41). Consumption is social action which transforms objects from an "alienable to an unalienable condition; that is, from being a symbol of estrangement and price value to being an artifact invested with particular connotations" (Miller 1987:190). Ownership endows goods with meanings that may differ from one individual to another and, more importantly, from one group to another. Newly arrived immigrants did not necessarily imitate their economic betters with their purchases, but they may have used consumption, as Daniel Miller (1995b:290) has suggested for recent populations, "in the struggle by which people re-evoked their pluralism in the face of new massive and often distant institutions."

Other scholars have suggested that material possessions are used in strategies of resistance. Enslaved Africans used pots to express a distinctly non-Georgian (non-segmented, non-hierarchical) ideology (Ferguson 1991:36) and untidy houselots to affront planters' expectations (McKee 1992:207); Lowell textile workers consumed alcohol in defiance of company regulations and control over leisure time (Beaudry et al. 1991:109). While it is possible that some consumer goods were used this way in a capitalist context, it is more likely that working-class consumption had more to do with gaining access to resources than resisting control (Miller 1995a:29). A recent study of working-class fiction, 1890–1945 (Fox 1994:3), warns that "well intentioned theories which categorically condemn the reproduction of dominant values and celebrate 'counter-hegemonic' acts run the danger of obscuring or devaluing the desires of those who belong to such subcultures." They disallow or disapprove of a working-class person's desire for mainstream goods and signs of status instead of finding meaning in those very desires. Fox suggests that "a tradition of lack or loss as well as revolt" comes with working-class culture (Fox 1994:9). The shame that working-class people sometimes feel when they find their own manners or clothes lacking, for

example, can lead to class consciousness because such feelings reveal oppressive societal norms and values (Fox 1994:9). Consumption that is imitation is not necessarily uncreative; it may be an expression of the anger that comes with thought (Henry 1963:146) and ultimately nurtures creativity.

The seductiveness of materialism is well known to all of us, and to deny its attractions to impoverished workers who arrived in New York looking for a better life would be a mistake. However, workers in nineteenth-century New York, and elsewhere in the industrialized world, did not necessarily need to buy into the dominant ideology to feel that they deserved a piece of the pie. The study of the Five Points assemblage has allowed us to ask all sorts of questions about what life was like for these workers—why they spent their limited incomes on the things they did, how they endured the unsanitary, overcrowded conditions that were their lot, where they found pleasure, how they dealt with pain, and what goals were worth the struggle. Out of what was probably an overzealous determination to take full advantage of this first opportunity to look at a nineteenth-century working-class neighborhood archeologically, we posed more questions than we could possibly answer, but we have tried our best.

1.5 The Research Design

The interdisciplinary research program outlined in the research design (John Milner Associates and Howard University 1993) identified five broad domains of research:

- 1) the socioeconomic and ideological processes that contributed to the social construction of the Five Points slum;
- 2) the construction of class, race, and ethnicity in an urban context;
- 3) the nature of family, kinship, and household organization;
- 4) work and industry in a developing capitalist economy;
- 5) health and hygiene in an urban context.

While the papers in this volume are grouped under the original five domains, the order of presentation has been changed. Research Domain 1, having to do with the construction of the slum, has been left for last since it is dependent on an understanding of everything else. Domains 2 and 3 have been reversed, allowing for a discussion of family and household organization to precede class, race, and ethnicity. Each of the five sections opens with an introduction by the principal investigator who is also the editor of this volume. These introductions summarize the results of the research that is discussed in the individual papers. The papers were authored by members of the Foley Square team, John Milner Associates' (JMA) physical anthropologist, and the four project consultants. For ease of reference, Appendix A includes the feature profiles, which show how layers excavated in the field were grouped into analytical strata and the catalog numbers associated with those strata. A more detailed discussion of the stratigraphic analysis may be found in Appendix A of Volume I. A second appendix (B) includes additional data on bottle embossments, and Appendix C lists faunal remains not discussed in the body of the text.

In the final chapter, the principal investigator synthesizes what we have learned about working-class life in nineteenth-century New York in the context of what was already known. See Volume III for primary documentary data, Volume IV for an inventory of vessels and small finds organized by archeological feature, Volume V for a technical conservation manual, and Volume VI for an illustrated compendium of the clay smoking pipes found on the Courthouse Block. The detailed artifact inventory including exhaustive artifact descriptions and fragments that could not be assigned to vessels is available on the Web through the Five Points Web page (<http://r2.GSA.GOV/fivept/fphome.htm>) and on one or more forms of digital storage media yet to be determined. These volumes are available from the General Services Administration (GSA) on request.

2.0 FAMILY AND NEIGHBORHOOD LIFE ON BLOCK 160

2.1 Introduction (Rebecca Yamin)

When Carol Groneman Pernicone (hereafter referred to as Groneman) finished her dissertation in 1973, her work was the only study that could be used to dispute the prevailing image of Five Points as a “nest of vipers.” The data she derived from the 1855 New York state census, particularly with regard to family structure, called into question virtually everything that had ever been written about Five Points. The Five Points district, it turned out, was not a community made up only of single men prone to banding together in rowdy gangs; it was a community of multigenerational families where the marriage rate was higher than in the rest of the city (Groneman 1973:204) and where single-parent households were not significantly more common than elsewhere. The studies included in this section of the report begin where Groneman left off. She saw respectability in family structure; we have the artifacts that were used to construct respectable households; she saw workers struggling against the odds of low wages and seasonal employment; we have looked at the bank accounts (only available since 1995) of some of those workers. Nothing we have found contradicts Groneman’s work, nor is the new information redundant. Instead, it adds to a picture of family and neighborhood life at Five Points that comes closer to an insider’s and, we hope, a more accurate view than previous accounts.

Brighton’s analysis (Section 2.2) of the ceramic vessels recovered from two archeological features associated with the tenement at 472 Pearl Street that housed newly arrived Irish immigrants in the 1850s does more than describe potsherds. He shows how a typical family probably set its table and decorated its apartment, and he also reveals something about spending patterns within the constraints of working-class wages and shopping opportunities in the neighborhood. He compares the value of ceramic assemblages from middle-class and rural sites with the values calculated for the Five Points materials and considers the implication of being at the market center. Brighton’s analysis of what ceramics meant to their owners focuses on Victorian values and the pressure to assimilate to American middle-class behaviors that the established Irish and the Catholic Church put on newly arrived immigrants. In this vein, he discusses the implications of ceramic styles and decorative household objects, including a cup that is transfer printed with the image of Father Mathew, the founder of the Total Abstinence Movement in Ireland. Ceramics are seen as actively contributing to the construction of the kind of respectability that was noted in Groneman’s documentary study.

Primary documents, such as deeds, census records, and tax lists, are often frustratingly stingy with personal information. They note an individual’s existence, age, sex, sometimes race, and sometimes occupation, but little more. It takes a creative effort—and a large sample—to bring a neighborhood to life with these dry statistics. Heather Griggs’s study of the marriage records from the Church of the Transfiguration of Our Lord and savings account records from the Emigrant Industrial Savings Bank (Section 2.3) gets inside the community we are trying to understand. In contrast to the stereotypical images of the pathetic Irish, many had savings accounts at the Emigrant Bank in 1855, a large number of them belonging to women. Contrary to expectation, unskilled workers are better represented than other occupational groups, and women listing no occupation are very much in evidence, probably as managers of family income, which included their own contributions from miscellaneous tasks (keeping boarders, doing laundry and sewing as outwork) that were considered part of a married woman’s responsibilities. Accounts of Block 160 residents reveal probable connections to Tammany Hall and a variety of savings patterns that suggest more economic variation, and possibly social diversity, within the neighborhood than is generally assumed for a working-class district.

Griggs’s study of the 1855 marriage records from the Transfiguration Church contradicts previous studies which have claimed that the Irish tended to marry late. She suggests that early marriage may have been an economic strategy specific to the Sixth Ward, where the struggle to survive might have been eased by joining forces. The tendency for marrying couples to share a county of origin reinforces many other lines of evidence which suggest that ethnicity and ethnic ties continued to play a major role in Irish immigrants’

lives in New York. Recorded marriages of couples living at the same address may reflect the formalization of ties forged in Ireland, where priests were not always available, to qualify for charity. Marriages of people living on Block 160 mentioned in the records point to the weakness of relying on census data for population estimates in areas where people often changed residences. Of the 34 individuals recorded between 1854 and 1860, only one is mentioned in the census. As demonstrated by this study, bank records and church records, like archeological data, provide a more intimate picture of people's lives than is possible from more commonly referenced documents.

Bottle embossments have traditionally been used by archeologists to trace trade networks and neighborhood connections. Because outsiders' views of the Five Points neighborhood were so distorted, it was hoped that connections with the outside world would be more straightforwardly revealed by examining this class of archeological data which almost speaks for itself. However, the data make it clear that product availability was so great in New York that anyone could get almost anything as long as he or she could pay for it. Ponz's study of bottle embossments (Section 2.4) shows that Block 160 residents used imported goods when they were affordable and local or regional goods when industrialization had spurred their manufacture. The embossments do not suggest that Five Points, as represented by Block 160, was cut off from the rest of the city or that its residents were limited to local products. Nor is there anything in the data to suggest that Five Points residents did not consume the mainstream products that were being consumed by everyone else: Batchelor's Liquid Hair Dye, Barry's Tricopherous for the Skin, Dr. W. Evans Teething Syrup, Philadelphia Porter and Ale, J. E. Peterman's Ink. Five Points residents were as much a part of the culture as anyone else, no matter what the local missionaries thought.

The Irish working class could hardly be understood without a discussion of Tammany Hall. In Section 2.5 Pitts explores the relationship between city government and ordinary men living below 14th Street from the beginning of the nineteenth century through the evolution of the Democratic Party which became virtually synonymous with Tammany Hall. Tammany cultivated Irish workingmen, and Pitts's study reveals the active participation of many Block 160 residents in one form or another. He introduces personalities like Mike Walsh ("the first Irish grass-roots working man's politician"); Archbishop Hughes, who championed the rights of Catholics to get school funding for their schools; and, of course, Boss Tweed. He also shows how important the institution of the saloon, including some on the project block, was to the politics of the day. The power of the ungentle Irish leadership casts a different light on the working-class residents of Five Points, some of whom rose in the ranks of Tammany, than is cast when they are described by bourgeois reformers. That Tammany helped the poor—many at Five Points—in exchange for patronage is considered realistically and evaluated in the context of the struggles faced by immigrants who did not have the education or access to what Pitts calls "respectable channels."

Block 160 was part of the heavily Irish ward known as the "bloody ould Sixth." Although it was not intentional, the studies in this section of the report address mainly the Irish. But there were other groups represented on Block 160—African Americans in the beginning of the nineteenth century, Germans, Poles, and Russian Jews after 1830, and Italians at the end of the century. These other groups are discussed in subsequent chapters.

2.2 Prices That Suit the Times: Shopping for Ceramics at Five Points (Stephen A. Brighton)

2.2.1 Introduction

Five Points emerged as a distinct neighborhood within New York City's Sixth Ward during the first decade of the nineteenth century. Throughout the century, the area offered crowded living conditions to the city's poorest, largely immigrant population. By 1855 nearly 95 percent of the inhabitants of the Five Points district were newly or recently arrived immigrants who had been there for no more than five years (New York State Census 1855). Housing was substandard, a condition reflected in names of tenements such as "Gates of Hell" or "Brickbat Mansion." Contemporary writers, including Charles Dickens, described the neighborhood as a "nest of vipers," a "plague spot," and the inhabitants as thieves, prostitutes, and drunkards.

The ceramics discussed in this chapter were excavated from two shaft features located within one of the fourteen lots that were investigated on the site of the new Foley Square courthouse. Features J and Z were associated with a septic system behind the tenement at 472 Pearl Street (Figure 3). Profiles of Features J and Z are included in Appendix A to this volume. In this study, 717 ceramic vessels that were recovered from the septic system are used to explore issues relating to the procurement and availability of fancy ceramics and their meaning to the tenants who used them.

2.2.2 472 Pearl Street and Its Inhabitants

The single-family dwelling that stood at 472 Pearl Street during the first decades of the nineteenth century was replaced by a large five-story tenement in about 1850. By 1855 about 132 people, comprising 31 households, lived in the tenement. Ninety-seven percent of the families were Irish and 3 percent were German. Irish heads of households were generally employed as unskilled laborers, such as porters, stone pavers, hucksters, and day laborers. Irish unskilled labor comprised 87 percent of the total work force in New York City (Ignatiev 1995:111). Newly arrived Irish were advised by their established compatriots to "do everything that they (i.e., native and other immigrant workers) do, no matter how degrading, and do it for less than they can afford to do it" (Ignatiev 1995:110). Some educated middle-class Irish arriving in America started off working side by side with the uneducated Irish digging and constructing railroads (Mooney 1850:69). The German men living in the tenement were more likely to be employed in skilled occupations, such as shoemaking, brewing, and tailoring, and thus earned higher wages than their Irish neighbors.

In 1853 the *New York Times* printed an article suggesting a budget to aid the average working-class family in handling its finances. The *Times* article estimated the average income at \$600 a year. A family, it claimed, could live moderately on this income, although with some "tight squeezing." Thirty percent of the families at 472 Pearl Street earned less than the income prescribed by the *New York Times*, and at least 13 percent of the families earned less than half of the six hundred dollar average (Fitts 1995:23). The remaining 57 percent were at or near the moderate income level. Savings accounts from the Emigrant Savings Bank suggest that the largely Irish immigrant households living in the Sixth Ward were very resourceful and somewhat thrifty. The accounts of three individuals living at 472 Pearl Street illustrate that unskilled and skilled workers alike earned and saved their money to better provide for themselves and their families. Although the savings varied, all depositors had at least four hundred dollars in their accounts by the end of the 1850s, and with that amount saved, it would have been possible to afford ceramics similar to those prescribed by contemporary literature.

A book entitled *Six Hundred Dollars a Year*, published in 1867, demonstrated to a female head of household how to furnish a dining room on a modest income (Kasson 1990:187-188). The author allotted \$10 for a white granite dinner set and \$5 for a white French china tea set. The prices in an advertisement from a New York crockery dealer (Figure 4) were generally comparable to those quoted in this 1867 book. At these prices, it would have been possible, but not without difficulty, for those near the poverty level to obtain the recommended dinnerware. What they did own is demonstrated by the assemblage recovered from Features J and Z and by a few published descriptions from the period. In a book by the New York

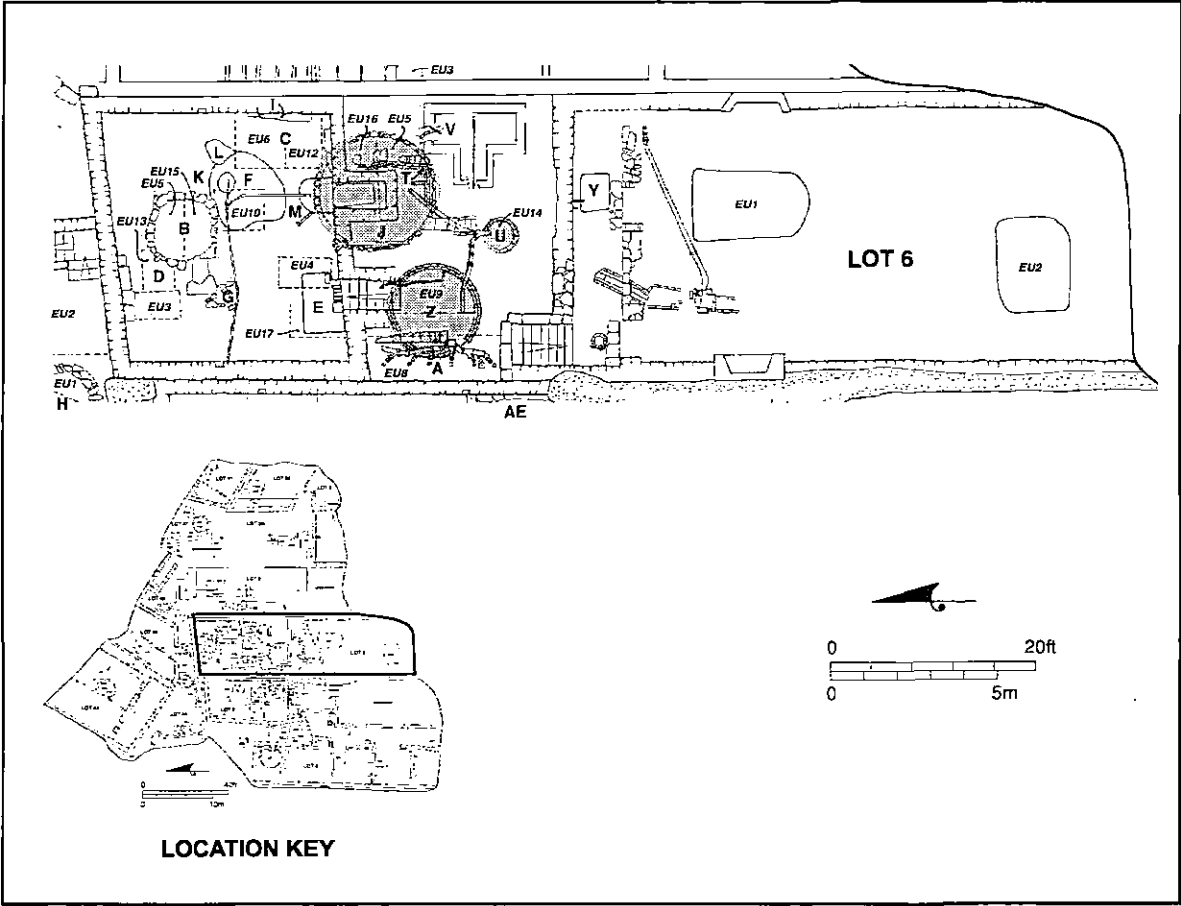


Figure 3. Detail of site plan showing locations of Features J, Z, and U.

CHINA, GLASS AND EARTHEN WARE -
 S ASTOR HOUSE.

French Porcelain Dinner Services.	\$25 00
White Granite " "	13 00
French or English Porcelain Tea Sets 32 pieces.	4 00
French Porcelain Plates per doz.	1 94
White Granite.	1 00
Blue.	1 00
Soup Plates, Granite, Blue or White.	1 00
Egg Cups.	37

GLASS.

Cut Wines, per doz. from	1 50
Cut Tumblers " "	2 00
Lemonades, hand'd " "	2 25

TABLE CUTLERY,

In sets, dozens or half dozen - A superior article is now offered at the low price of \$12 00 the set of 51 pieces.
 Just opened a handsome assortment of Toilet Ware.

R. SIMPSON.

N. E. Agent for the sale of Simpson's Ear Cornets, for
 the relief of deafness Bl

Figure 4. Advertisement from a New York crockery dealer (New York Evening Post 1842).

Ladies' Home Missionary Society of the Methodist Episcopal Church, some "worthy" poor Five Points households are portrayed as owning sets of "various colored crockery, some blue, some pink, some white" (Ladies of the Mission 1854). Sets of white granite and printed Staffordshire tea- and tableware in various colors were found in the collection. The transfer-printed wares came mainly from deposits dating after 1850 (Feature J, AS V, and Feature Z, AS II) while most of the white granite came from a deposit dating after 1870 (Feature J, AS III). Due to the large and transient nature of the tenement population, and the large number of ceramic vessels, not all of the vessels can be attributed to only those at the moderate income level. Moreover, the sheer number of vessels suggests that many of the tenement's households are represented in the collection. In addition to the sets mentioned, there were also over 70 different printed Staffordshire tea- and tableware vessels (Figure 5), as well as European and Chinese porcelain vessels.

2.2.3 Availability and the CC Index

Studies by Terry Klein and Charles LeeDecker and others (LeeDecker et al. 1987; Klein 1991) have shown that there is no simple correlation between the value of a ceramic assemblage and the social affiliation to which a household belongs. Outside influences and other variables greatly affect the size and quality of an assemblage. One such influence is availability of goods which, in turn, depends on proximity to the marketplace. Nineteenth-century households in or near the city's core, regardless of class or wealth, had equal spatial access to consumer goods. The greater the access to goods, the higher the average CC index value will be (LeeDecker et al. 1987:235).

The CC index, developed by George Miller (1991), reflects the expenditure patterns represented in archeological assemblages. Values of assemblages are estimated by calculating the worth of an assemblage in comparison to the least expensive ceramic type (cream-colored ware or CC ware). In comparison to other contemporary middle- and artisan-class New York archeological sites (e.g., Sullivan Street [Salwen and Yamin 1990]; Mugavero [Geismar 1992]; 153 West 12th Street [Brighton 1996]) the CC index for the Five Points assemblage, although lower than the middle-class assemblages, is relatively high (Figure 6). The average index for the tea- and tableware from the tenement at 472 Pearl Street is 2.40, which is higher than one would expect for a neighborhood portrayed as a down-and-out slum. In fact, the ceramic assemblage based on the CC index values is comparable to an assemblage recovered from the Greenwich Mews (2.35) (Geismar 1989), which is believed to represent a mid-nineteenth-century American-born artisan/shopkeeper tenement neighborhood.

The average index value for Features J and Z, however, when compared to rural sites is slightly below that of a merchant household in California (2.69) (Spencer-Wood and Heberling 1987:44), above an American-born working-class household in Ohio (1.99), and considerably higher than that of a tenant farmer in Maryland (1.45) (Klein 1991:82) (Figure 7). Rural households had limited access to the major markets and therefore the total ceramic assemblage value is lower than those households near or within these markets.

In the nineteenth century, New York was one of the largest marketplaces in America, and by the 1850s the city contained an abundance of crockery shops. These shops dealt in French and English porcelains, white granite, and various contemporary refined earthenwares. The dealers stretched from the South Street Seaport to as far north as Greenwich Village. In the Five Points area there were at least nine crockery dealers, and three of the nine were within the project block (Figure 8). Two of three crockery stores on the block were located a few doors west of 472 Pearl Street. The remaining six dealers within Five Points were no more than a block from the tenement's doorstep.

Advertisements for ceramic goods from the *New York Evening Post* represent a small fraction of the crockery shops that seemed to cater to those households with modest incomes. D. Collamore, located at 601 Broadway, had a very simple advertisement stating "crockery store—cheap for cash." A good portion of the ads claimed to be selling contemporary wares with all types of decoration at reduced and/or competitive prices, either by the set or piece (Figure 9).

It is also possible that ethnic ties affected the affordability of goods in the immigrant community of the Five Points area. For example, an established Irish-American crockery dealer, Edward Rourke, located



Figure 5. Staffordshire teawares, Feature J (AS V).

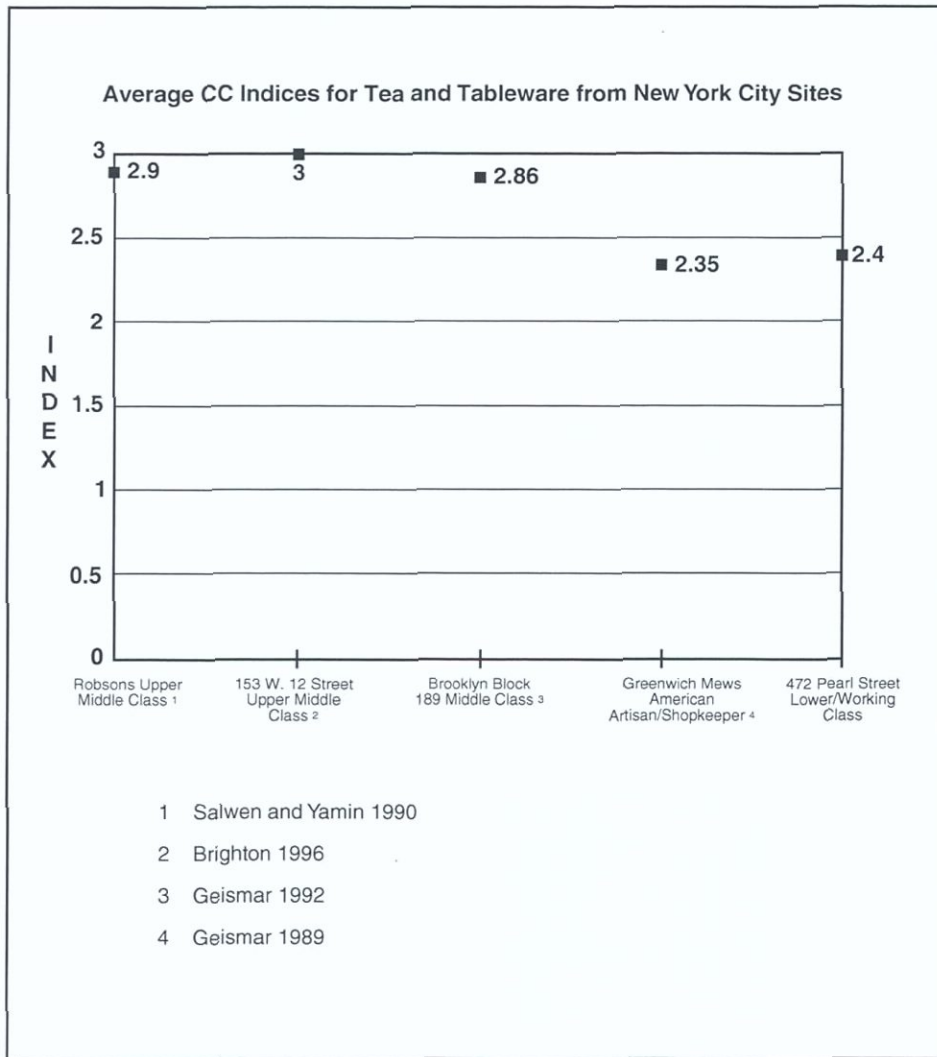


Figure 6. Comparative CC indices for 472 Pearl Street assemblage and contemporary New York City assemblages.

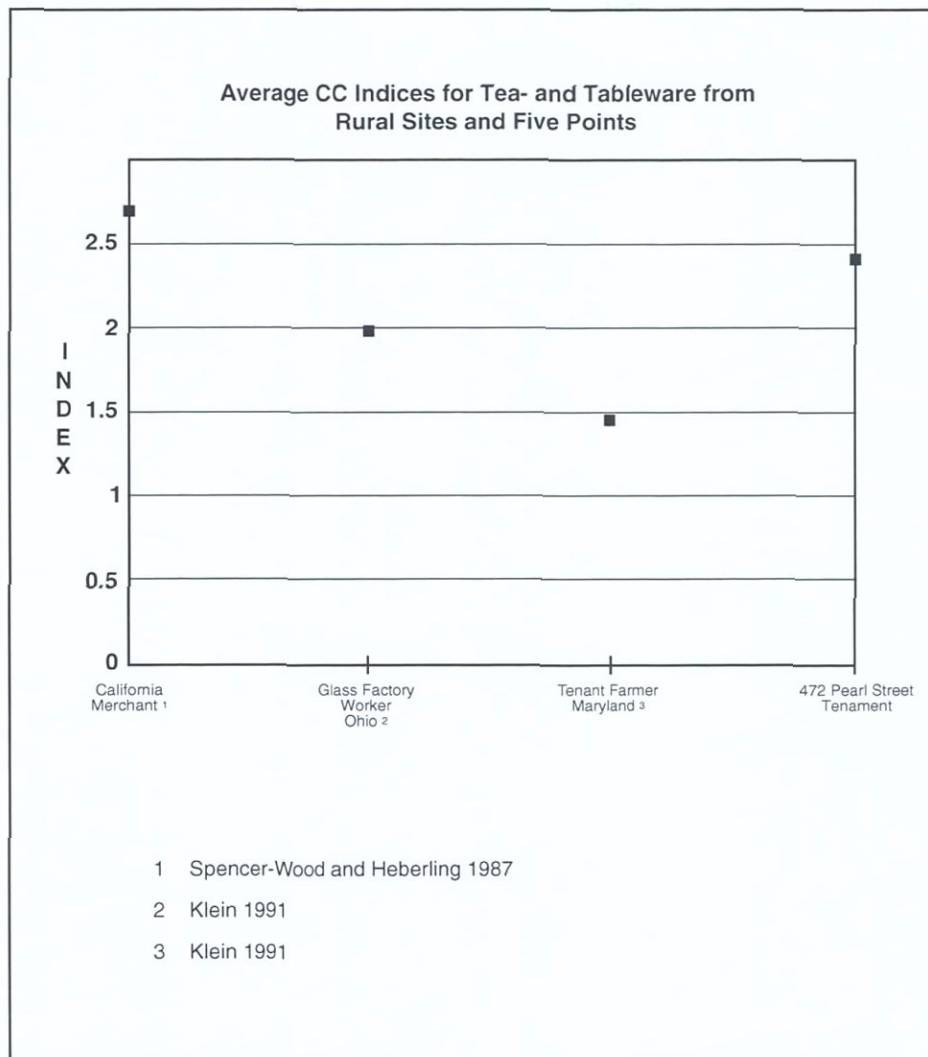


Figure 7. Comparative CC indices for 472 Pearl Street assemblage and rural assemblages.

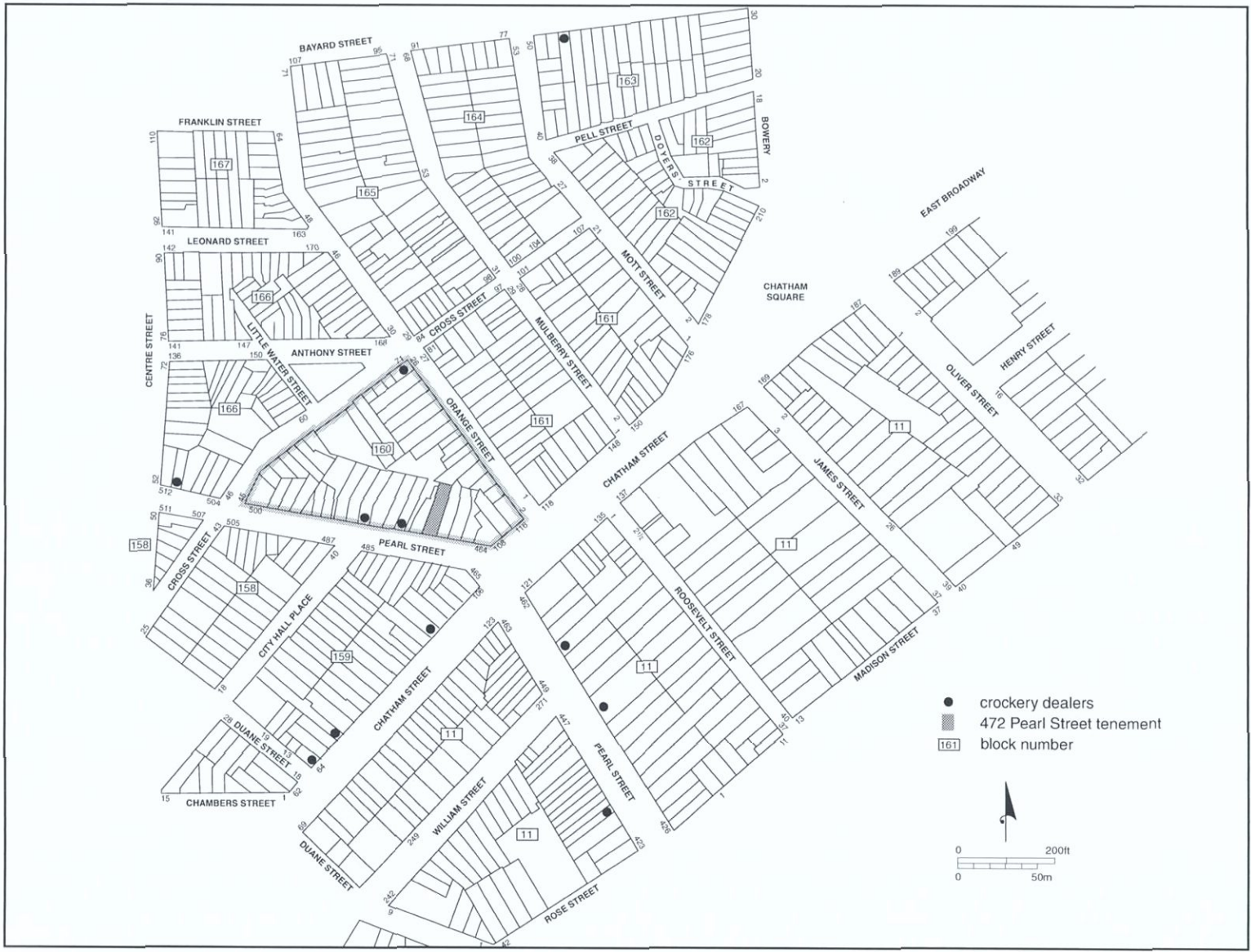


Figure 8. Crockery dealers in Five Points and vicinity.

NEW GOODS.
FRENCH GLASS.
RICH DECORATED PORCELAIN.
EBENEZER COLLAMORE,
NO. 403 BROADWAY,
BELOW CANAL STREET.
HAS JUST RECEIVED AN INVOICE OF
FRENCH GLASS,
ENTIRELY NEW PATTERNS AND VERY BEAUTIFUL,
to which he would invite the attention of buyers. It can
be engraved to any pattern desired, with initials or
crest.
—ALSO—
A LARGE ASSORTMENT OF
FRENCH DINNER, DESSERT AND TEA SETS,
WHICH ARE OFFERED AT UNUSUALLY
LOW PRICES.
BLUE CANTON CHINA,
IN COMPLETE SETS OR BY THE PIECE.
Wedgwood,
Terra Cotta
and Parian
ARTICLES, IN GREAT VARIETY, TOGETHER WITH
other FANCY GOODS, suitable for the season.
dec 22 up 1/2 Jai
FRENCH PORCELAIN.
Dinner, Tea, Dessert, Tete-a-Tete,
and Toilet Sets.
Vases, Mantel Ornaments,
BISQUE FIGURES, &c.,
IN GREAT VARIETY,
Some of which are of Exquisite Decoration.
These goods are decorated at our establishment in France
are of very recent importation, and will compare favorably
with any in the market. For sale by
HAVILAND, BROTHERS & CO.

Figure 9. Newspaper advertisement for French and Chinese porcelain available by the set or piece at low prices (New York Evening Post 1858).

at 40 Barclay, was apparently giving greater discounts to his Irish compatriots. Rourke's advertisement in the *New York Irish Citizen Weekly* (Dec. 21, 1867) read "Importer of China and Earthenware...Splendid Assortment sold at a 'Liberal' discount." Newly arrived Irish looked to the Irish press for opportunities in the alien city and news of current events at home. It appears that Rourke's advertisement was run exclusively in Irish newspapers.

Aside from the crockery shops and importers there were other ways of acquiring ceramics at lower prices in nineteenth-century New York, such as at public auctions. Public auctions were a good way, not only for country merchants but also for the average family, to acquire better-quality ceramics. Advertisements such as that for the auction of wet goods from the wreck *Petriae* described "several crates of fine quality ceramic vessels to be sold at low discount prices" (Figure 10). Families were urged to partake of the great savings. The "street auction" (Figure 11), held every spring, was a likely place for recently arrived immigrants to purchase goods, and it generally attracted throngs of people. *Harper's Weekly* wrote "that every spring the return of pleasant weather brought out the street auctioneers whose informal sales could be attended on many corners throughout the city" (*Harper's Weekly* May 16, 1868, cited in Grafton 1977:211). In a letter to Dublin, Thomas Mooney writes of the opportunity to purchase "odd or damaged bargains" at the Pearl Street auctions, which could be kept or resold to another family within the neighborhood (1850:85).

2.2.4 Working-Class and Victorian Values

The quality of ceramics associated with the tenants at 472 Pearl Street raises the question of why households with limited incomes needed or wanted them. It is suggested here that the ceramics represented more than utilitarian objects—they were valued instead for what Praetzellis and Praetzellis (1992:75) call their didactic power to reinforce appropriate Victorian attitudes. Victorianism replaced the values of the old aristocracy with a new set of values drawn from the commercialism of the middle class (Praetzellis and Praetzellis 1992:75). The middle class was drawn from America's largely native-born, white-collar households. By the mid-nineteenth century, a middle-class ideology was based, in part, on the concept of what was considered respectable or genteel. Literature, such as etiquette books and manuals, informed women of the skills and morals that were necessary to make the home environment a sanctuary, emphasizing beauty and nature and imbuing their children with proper values.

Before reaching America, immigrants were exposed to the concept of commercialism and lured by the promise that American streets were paved with silver and gold. English packet ships distributed pamphlets to Irish families depicting a typical Irish family, starving, dirty, and homeless on one side; on the other, the same family upon their arrival to America has fresh clean clothes and is drinking tea out of fancy ceramics. Letters from Irish emigrants to family back in Ireland, such as Thomas Mooney wrote, extol the many job opportunities in the cities and rural areas as well as cheap land available in the burgeoning West (1850:81).

Irish Catholic priests and educated Irish encouraged newly arrived immigrants to assimilate and adhere to American middle-class behaviors (Kraut 1996:163). The established Irish and the Catholic Church believed that the negative perception of their newly arrived brethren might be changed by assimilating. Assimilation was the Catholic Church's prescribed method for producing hard-working and sober parishioners with which to battle Protestant reformers. The upward mobility of established Irish would not be thwarted by the assumed wanton ways of their emigrating countrymen. This is not to say that the Irish immigrants living in the tenement were trying to emulate the American middle class, but rather that they adopted elements of Victorianism and fused them with their own concepts of morality and aesthetics.

According to Praetzellis and Praetzellis (1992:90), Victorians stressed symmetry in the display and use of their ceramics in the public arena. Matching patterns were the ideal when accessible. The people in the tenement at 472 Pearl Street were no exception. The Block 160 assemblage includes fragmented matching tea- and tableware in Staffordshire printed patterns such as Florentine, Aladdin, and Oregon. The households also shared an interest in the Gothic style (Figure 12) and the concept of naturalism. The Gothic style brought the sanctity and communal aspects of Gothic churches into the home by employing many

WET GOODS
FROM THE WRECK PETRAE.

A LARGE INVOICE OF
C H I N A,
Saved from the above vessel. will be sold.

WHOLESALE OR RETAIL,
AT
LOW PRICES, FOR CASH ONLY!
AT
O. O. LEIGH'S
CHINA HALL,
561 & 563 BROADWAY,
BETWEEN THE METROPOLITAN AND ST. NICHOLAS
HOTELS.

Figure 10. Newspaper advertisement for wet goods, New York City (New York Evening Post 1858).



Figure 11. Street auction, 1868 (Grafton 1977:211).



Figure 12. Gothic-style ceramics, Feature J (AS III).

elements on ceramic tea- and tableware (Wall 1991:25–26). Mid- to late-nineteenth-century households also commonly surrounded themselves with foliar and floral motifs on furniture and other domestic materials to create an environment evoking nature. The concept of naturalism is manifested in such shapes as the Wheat (Figure 13) and Prairie shapes. Despite impoverished conditions, the Pearl Street households were apparently interested in the latest fashions in table settings, as there were over one hundred different types of decorated tea- and tableware. The large number of complete or nearly complete ceramic vessels in the tenement assemblage demonstrates the rapid rate at which households chose to replace their ceramic possessions with the new styles and patterns. The presence of matching and similarly decorated vessels in a variety of specialty forms (i.e., slop bowls, serving platters, soup plates, and creamers) of tea- and tableware indicates the desire to acquire the proper setting which was dictated by the Victorian middle class. In her study “Sacred Dinners and Secular Teas,” Diana Wall differentiated between tea sets used by the upper and lower ends of the middle-class spectrum, suggesting that there was “less competition or need to impress one’s peers in the lower middle class” (Wall 1991:79). The Five Points material suggests that at least some of the working-class households owned more than one set and they, too, may have differentiated the role of tea- and tableware in familial and non-familial settings.

Good taste in the home environment was prevalent in other ways besides setting the table. Ceramic figurines, an omnipresent component of Victorian house decor, exhibit the Victorian value of keeping an “artistic” house (Clark 1987:171). Figurines and other knickknacks afforded individuals the opportunity to express their distinctive tastes and views. Five Points households included ornaments such as the Staffordshire dog (Figure 14) as well as other pieces which served to extend gentility from the table to other aspects of the public arena (Praetzellis and Praetzellis 1992:91). Perhaps the most significant ornament in the Five Points assemblage is a “Father Mathew” teacup (Figure 15). Father Mathew founded the Total Abstinence Movement and exerted a great deal of influence on the poor in Ireland (see Section 3.8 for more information on Father Mathew). His main objective was to rid the working class of intemperance, thereby helping it to better itself spiritually, emotionally, and physically. Father Mathew’s message implored drinkers to think of their health, the health of their families, and to “free themselves from the bondage of a degrading and deadly habit” (Maguire 1864:111).

Father Mathew’s message of temperance influenced some of the immigrants living at the Five Points. Father Felix Varela, known as the “Vicar-General of the Irish” and founder of the Transfiguration Church near the project area, created a “temperance league” when the health of his flock diminished due to the “ravages of alcohol” (Transfiguration Church 1977:8). Throughout the 1830s and 40s there was a strong belief that diseases such as cholera were caused by intemperance and excesses in nature (Kraut 1996:156). The Transfiguration Church’s temperance movement included one thousand men, most of whom were Irish Catholic from the Five Points area. Father Varela invited Father Mathew to speak to his parishioners on temperance and to “refresh their personal worth and dignity” (Transfiguration Church 1977:8). It is uncertain whether Father Theobald Mathew included Five Points in his tour during the mid-nineteenth century, but the cup does reinforce his positive message of temperance and might reflect the household’s association to the Transfiguration Church and its ideals concerning contemporary health issues that were affecting the surrounding community. During the nineteenth century, there were several serious cholera epidemics that plagued the Five Points, as well as other areas of Manhattan.

In addition to honoring Father Mathew, the cup reflects Victorian, as well as Catholic, values of hard work, diligence, and perseverance (Figure 16). Diligence was considered “the mother of good luck and God gives all things to Industry” (Praetzellis and Praetzellis 1992:93). American middle-class Protestants changed their beliefs from the eighteenth-century Calvinistic concept of predestination to possible redemption through hard work and doggedness. The Ladies of the Mission (middle-class Protestants) relentlessly pursued moral reform in the Five Points community, harshly judging the inhabitants and aiding only those considered to be worthy after their conversion to Protestantism (Ladies of the Mission 1854).

The Catholic Church also stressed industry, sobriety, and thrift to help mold parishioners into respectable citizens and healthy members of the Catholic Church (Kraut 1996:163). Saint Patrick was cited as an example of industry and patience among Irish Catholics. He was taken into slavery as a boy where he persevered, became

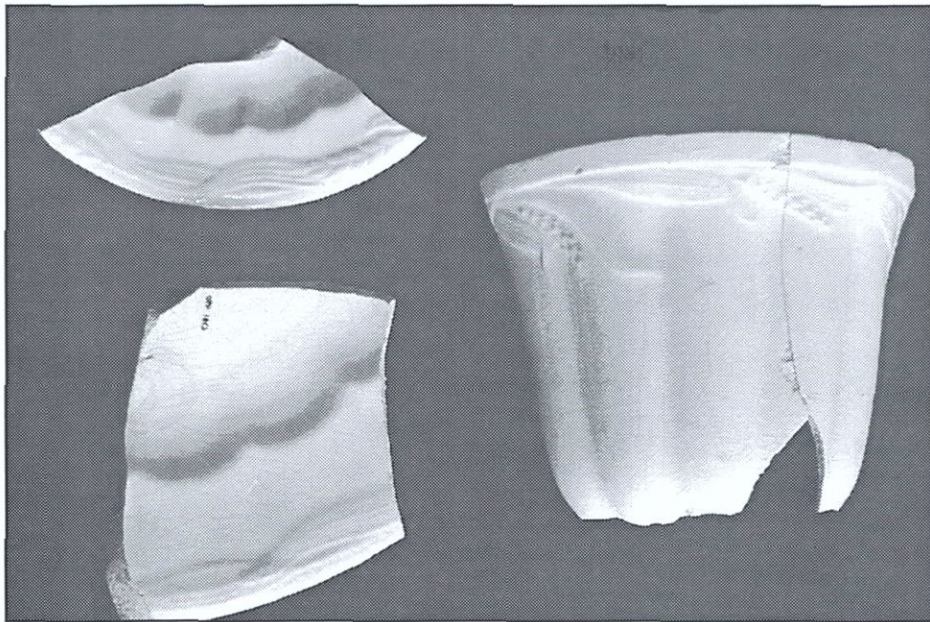


Figure 13. White granite plate and cup decorated with the Wheat pattern (Feature J, AS III).



Figure 14. Staffordshire figurines, including dog (far left), Feature J.



Figure 15. Staffordshire cup decorated with the image of Father Theobald Mathew administering the temperance oath. From Feature J.

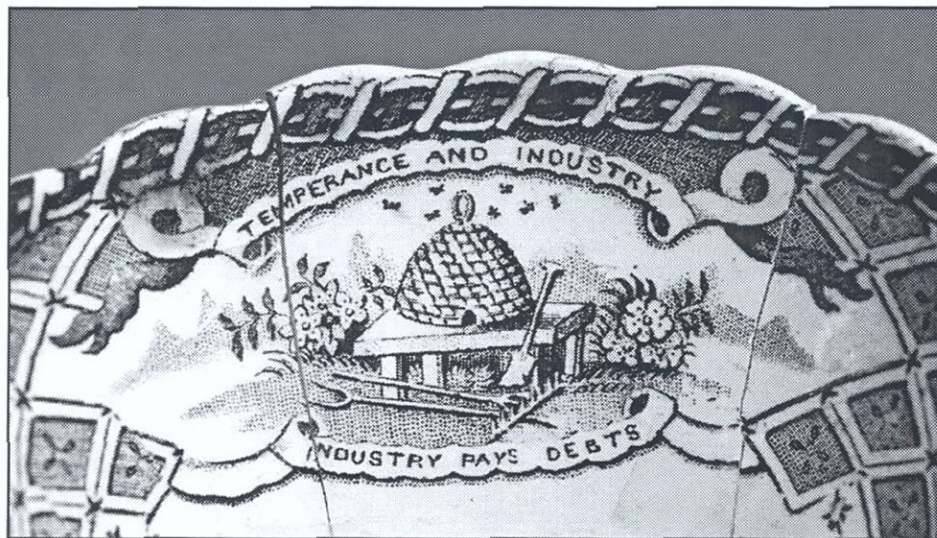


Figure 16. Interior design on the cup decorated with the image of Father Theobald Mathew.

educated, and eventually led Ireland into a revolution of ideas that ended in universal conversion to Catholicism (Mooney 1850:69). The cup might reflect this Catholic example and was displayed as an overt, defiant message against the social and moral pressures applied by Protestant missionaries. Moreover, it may have served as a daily reminder of the family's religious beliefs, work ethic, and personal values.

Public or civic values were displayed by Victorians through the treatment of the exterior of their property (Praetzellis and Praetzellis 1992:85). Richard Bushman (1992:260) in *The Refinement of America* quotes the nineteenth-century writer John Barber as saying: "There is much taste displayed by citizens about their residence in the collection of choice shrubs and plants." Bushman and Barber are referring to a rural setting in which any residence lacking shrubs failed to show taste. According to the views of the day, the grooming of the exterior grounds was an extension of the culture and furnishings of a home's interior which was adorned with natural themes and hanging plants. Although the quote and the concept refer to private property owners, an effort at beautification was also made by the Pearl Street tenement dwellers. The presence of about 30 flower pots indicates that some households used flowers and plants that could be grown on the window sill or at the backs of the exterior stairs to beautify their surroundings.

The flower pots also may have had a more practical use among the Irish immigrant families. Herbs were commonly used in homeopathic remedies, being a large part of the Irish psyche and religion—the resulting cure was proof of God's existence (Glassie 1982:821). Irish folklore credits God with the creation of herbs for medicinal use, thus providing "solutions out of the soil" and a "consolation that herbal cures were an assurance that there is an end to pain and life beyond death" (Glassie 1982:655, 821). This use of nature was handed down from generation to generation and carried over to America with the millions of Irish throughout the nineteenth century.

The Pearl Street tenement dwellers may have often used herbal medicines because they had neither the resources nor the desire to seek medical attention offered by nativist institutions. Immigrants faced extreme prejudice from the American public and, more importantly, from the medical profession (Kraut 1996:154). Many diseases were thought to have been foreign-born and carried by newly arrived and despised immigrants. Furthermore, many nativists considered numerous illnesses to be caused by excess in drink, food, and other abuses of nature that were portrayed as the way of life of Catholic Irish immigrants (Kraut 1996:154). To avoid the stigmas and social prejudices, traditional herbal remedies may have been employed to cure everyday ailments within the privacy of the home.

While reformers and journalists decried the condition and care of children in New York City's nineteenth-century slums, the ceramic evidence suggests that the Five Points residents subscribed to Victorian values in this area too. Victorians were deeply concerned with the education and moral upbringing of their children. Contemporary writers describe education "as the mental railway, beginning at birth and running into eternity and no hand can lay it in the right direction but the hand of the mother. The mother's heart is the child's schoolroom" (Praetzellis and Praetzellis 1992:92). Parents were encouraged to treat their children as individuals and to teach them about private property. This was done at an early age so that as adults they would respect the rights of others. Items such as mugs with the child's name may have been used to reinforce the perception of private property, as well as distinctions among siblings, such as age and status within the family (Praetzellis and Praetzellis 1992:92). Personal mugs, like the one from Feature J (Figure 17), would have prevented jealousy among children by granting clear ownership.

Special attention was paid to daughters, who were taught the customs, manners, and morals of Victorian home culture (Praetzellis and Praetzellis 1992:92). Cloth patterns were used by girls to sew clothes for their dolls, and civilized table manners could be mastered with ceramic toy tea and table sets (Figure 18). This provided a girl the necessary practice to make her future household a "domestic heaven" (Praetzellis and Praetzellis 1992:92). The educational process for girls living in tenements was not solely for their own future households, but, like their own mothers, to have marketable employment skills. Female children who did not possess vocational skills were considered a burden as they could not contribute financially to the family's welfare. Thomas Mooney advises that young girls should learn the duties of a "house servant" which would pay \$4 to \$5 a month, and if skilled in cooking, serving, and "doing up" fine washing, then \$6 to \$7 a month (Mooney 1850:38).



Figure 17. Children's cup with John inscribed on it. From Feature J.



Figure 18. Ceramic toy tea set from Feature J.

2.2.5 Summary and Conclusions

In conclusion, the excavation of Block 160 uncovered more than just nineteenth-century features: it uncovered a misunderstood community of newly arrived immigrants. The 717 ceramic vessels recovered from two features in the rear of one of the tenements reflect not only the immense availability of ceramic wares and types to all New Yorkers, but also the symbolic meaning and values of these items to working-class households. That New York was one of the largest market centers in the country gave the households of 472 Pearl Street equal access to goods that would have been only available to the middle class in other areas. The ceramic index value for the assemblage reflects this. The assemblage is at the low end when compared to assemblages from the middle class and equal to artisan-class households during the same period in New York, but the value is equal to that of the middle class in rural areas that were removed from the marketplace.

In addition to understanding how these households acquired such goods, it is also important to know why they obtained the particular vessels recovered. Contemporary writers depicted the residents of Five Points as less than human and the buildings they inhabited as dismal and dilapidated. With little first-hand experience, they assumed the people living in such circumstances were corrupt and devoid of values. The ceramic assemblage illustrates another picture, one in which working-class households spent a portion of their limited incomes on possessions that stressed the importance of hard work and diligence, beautified their homes, allowed them to participate in the genteel rituals of the day, and contributed to imbuing their children with appropriate values. The people of Five Points incorporated commercialism, as well as certain other aspects of Victorianism, into their own cultural identity, and being at the market center's core, they were afforded the opportunity to do so.

2.3 Emigrant Bank and Transfiguration Church Records as Supplementary Historical Sources: A Statistical Analysis (Heather J. Griggs)

2.3.1 Introduction

Historical data for Block 160 came from a variety of primary sources including census records, city directories, insurance maps, newspapers, journals, and books which offer accounts of daily life in the working-class neighborhood near Five Points. However, many of these data were originally collected by people who lived outside Five Points and are biased by the attitudes, opinions, and mistakes of those who compiled them: census takers missed and/or avoided buildings and households; speculators and surveyors made real estate estimates based on their observations of the quality of life and ethnic makeup of the neighborhood; and journalists and missionaries exploited the worst qualities of the neighborhood to boost charitable contributions or to sell more newspapers. Data from two alternative primary sources, marriage records from the Church of the Transfiguration of Our Lord and savings account records from the Emigrant Industrial Savings Bank, offer a different look at the personal lives of occupants of this neighborhood.

The Church of the Transfiguration of Our Lord was founded in 1827 by the Reverend Felix Francisco José María de la Concepción Varela y Morales, a Cuban immigrant and priest who dedicated his life's work to helping immigrants in the poorer areas of New York in the nineteenth century. The congregation, led by Father Varela, met at various sites between 1827 and 1853, before the church found a permanent home in its current location. Located two blocks north of the project area on the corner of Mott and Cross Streets, the church was suited to the largely Irish, mostly Catholic, neighborhood. There, immigrants could receive communion, be married, and have their children educated at the church's school.

Church records from the years 1853 through 1860 yield a wealth of information about the people who were married in the church. Between 1853 and 1860, 1,430 couples were married at Transfiguration Church (Groneman 1973:72). The presiding priest registered each individual's name, marital status (single or widowed), age, address, and the town and county of his or her birth in the church ledger. The priest also noted in the margin whether the couple had been married by dispensation, i.e., a relaxation of church law in the event that one or both parties were previously married, not baptized, or were of another faith. Some entries denoted a payment for a marriage certificate, the price of which ranged from \$1.50 to \$4.00. The data presented here are the result of a survey of all couples married between 1854 and 1860, with an emphasis on those who were living on or close to Block 160 in the year 1855. The data surveyed include the notation of all personal information recorded by the priest.

Account ledgers from the Emigrant Industrial Savings Bank provide insight into the ways that immigrants from a mostly rural economy organized an economic strategy within the bounds of a society that was industrializing at a breathtaking pace. However, the information is not limited to a purely economic view of an ethnic community, but also offers personal details about the recently arrived Irish and their experience in the New World. In 1840, the *British Mechanic's and Laborer's Handbook* (Stott 1990:164) noted that "the working class of the American people...are, generally speaking, of saving habits....This perhaps may arise from the very great necessity [in the north]...of making provision for a possibly lengthy winter season." For those who settled into the working-class neighborhoods of New York in the nineteenth century, savings provided protection against unemployment and the merciless fluctuations of the economy of a port city. Additionally, for recently settled immigrants, savings accounts afforded a safe haven for money and valuables brought from the Old World and for the earnings that would bring other family members and friends to America. Perceiving the need for such a service for the thousands of famine Irish arriving daily between 1845 and 1855, the wealthier members of the growing Irish-American community, urged on by Archbishop John Hughes, opened the Emigrant Industrial Savings Bank on September 30, 1850 (Mooney 1995).

Initially, depositors were slow to open accounts at the newly formed bank; fewer than 20 Sixth Ward occupants opened accounts in the first four months the bank was open. In 1850, personal information about

depositors included little more than a name, address, and occupation. However, as the bank grew and the organization was formalized, bank officials began to record detailed personal information including name, address, occupation, date of arrival, ship name, port of origin, parents' statuses and names, siblings' statuses and names, marriage status, spouse's name, and number and names of children. Additionally, bank employees often recorded extraneous information about depositors, such as whether they spoke English or their relationships to other depositors. (For an index of bank accounts surveyed, see Volume III of this report.)

These two sources offer an opportunity to observe the important rituals and actual economic situations of a whole community of people. Furthermore, they improve our understanding of the demographics of this neighborhood. Census records do not include the vast numbers of people in the highly mobile working-class community who moved in and out of dwellings on Block 160 during the 5- to 10-year intervals between censuses. The records of people not found in the censuses provide a more detailed narrative of the way the neighborhood changed and grew against the panorama of nineteenth-century New York.

2.3.2 Emigrant Bank Records

2.3.2.1 Irish Immigrants by County—1855

In 1855, one hundred ninety men and women from the Sixth Ward were listed as holding accounts at Emigrant Bank. Although as many as 30 of the accounts were joint accounts shared between husbands and wives, siblings, or parents and children, these 190 individuals were registered with the previously listed personal information. In 1855, eighty-seven percent of Emigrant Bank account holders were Irish, 51 percent were male, and 36 percent were female. Other immigrant groups enumerated include German males (4.7%), German females (.5%), English males (1.6%), Prussian males (1.6%), Prussian females (.5%), Polish males (.5%), American males (1.6%), French males (.5%), and Scottish females (1%). While it is useful to observe that other immigrant groups are using the Emigrant Bank in the 1850s, the bank's services were promoted and tailored to the needs of the recently arrived Irish.

As the tidal wave of Irish potato-famine refugees poured into the city in the early 1850s, many settled in the First, Fourth, Fourteenth, and Sixth Wards of lower Manhattan because of the availability of cheap housing (Diner 1996:94). In 1855, ten thousand eight hundred forty-five, or six percent of the citywide total, lived within the Sixth Ward (New York State Census 1855). Most of the famine Irish had emigrated from the rural west and southwest of Ireland. Modern Ireland is divided into 32 counties (Figure 19), which find their places within four larger regional divisions that have existed, albeit with some fluidity, since Celtic kings ruled ancient Ireland (O'Brien and O'Brien 1972:25). A breakdown of the origins of Sixth Ward Irish immigrants by region and county (Table 1) drawn from the bank records is consistent with historian Kerby Miller's (1985) survey of Irish emigration by region and county.



Figure 19. Map of Ireland.

Table 1. Irish Immigrants by County, 1855

LEINSTER

COUNTY	MALES	FEMALES	TOTAL	%
Carlow	2	1	3	10
Kilkenny	2	2	4	13
Westmeath	1	2	3	10
Longford	2	1	3	10
Meath	4	1	5	16
Dublin	2	5	7	22
Kildare	3	2	5	16
Louth	1	0	1	3
TOTAL	17	14	31	100
PERCENTAGE	55	45	100	

MUNSTER

COUNTY	MALES	FEMALES	TOTAL	%
Cork	11	8	19	21
Kerry	28	23	51	55
Limerick	11	6	17	19
Tipperary	3	2	5	5
TOTAL	53	39	92	100
PERCENTAGE	58	42	100	

CONNAUGHT

COUNTY	MALES	FEMALES	TOTAL	%
Roscommon	3	3	6	22
Leitrim	1	2	3	11
Galway	3	2	5	19
Sligo	8	3	11	41
Mayo	2	0	2	7
TOTAL	17	10	27	100
PERCENTAGE	63	37	100	

ULSTER

COUNTY	MALES	FEMALES	TOTAL	%
Fermanagh	3	0	3	30
Armagh	1	1	2	20
Cavan	2	0	2	20
Down	2	0	2	20
Monaghan	1	0	1	10
TOTAL	9	1	10	100
PERCENTAGE	90	10	100	

Between 1851 and 1855, Munster had the highest emigration rate (55%), and rates from Leinster (18%) and Connaught (18%), though considerably lower than Munster, are equal to each other during this period, the same pattern reported by Miller (1985:576).

In fact, the counties from which the most Sixth Ward inhabitants hailed, Kerry, Cork, and Limerick, are all located in Munster. These counties ranked numbers one, two, and seven (respectively) in a survey of the highest emigration rates from Ireland between 1856 and 1910 (Miller 1985:578).

Calculation of the average length of time Emigrant Bank account holders in 1855 had lived in New York when they opened a bank account conforms with information found in the 1855 New York state census for Block 160. Census records show that 17 percent of the families on Block 160 had lived in New York for three years. The median number of years the entire population of Block 160 had been living in New York City was five, and among the Irish the median number of years was six (New York State Census 1855). Table 2 displays the number of years Sixth Ward Emigrant Bank account holders had been in New York when they opened accounts.

Table 2. Length of Time in New York, 1855

MALES

Years	Irish	Ger	Eng	Prus	Pol	Fren	Total	%
< 1		1	2				3	2.8
1-5	63	6		3	1	1	74	67.9
6-10	21	1	1				23	21.1
11-20	4	1					5	4.6
20 +	3						3	2.8
30 +	1						1	0.9
TOTAL	92	9	3	3	1	1	109	100.1
PERCENT	84.4	8.3	2.8	2.8	.9	.9	100.1	

FEMALES

Years	Irish	Ger	Pru	Scot	Total	%
< 1	1	1			2	2.8
1-5	49		1	1	51	70.8
6-10	15			1	16	22.2
11-20	1				1	1.4
20 +	2				2	2.8
TOTAL	68	1	1	2	72	100.0
PERCENT	94.4	1.4	1.4	2.8	100.0	

Sixty-eight percent of males and 71 percent of females had lived in New York between one and five years when they opened savings accounts. Similarly, 68 percent of Irish male account holders and 72 percent of Irish female account holders fit into this bracket. This corresponds with emigration patterns for the famine and post-famine periods: the majority of Irish immigrants who opened accounts in 1855 arrived during the 10 years of the famine, 1845 to 1855. The sample of German and Prussian account holders falls into the 1-5 year bracket, corresponding with data from Block 160 in the 1855 New York State Census, which shows that most German and Eastern-European occupants of the block had lived in New York for five years.

Account holders at Emigrant Bank appear to be as varied in occupation as the immigrant population itself. A survey of all account holders living in the Sixth Ward in 1855 illustrates this point (Table 3). However, collapsing these occupations into larger aggregates based on job type reveals that of all the occupations, unskilled workers had a slight majority over those who worked in service-oriented industries like cleaning, food service, and civilian protection, and a larger majority over skilled workers and artisans (Table 4).

Table 3. Occupations of Emigrant Bank Account Holders, Sixth Ward, 1855

Occupation	Irish M	Irish FM	Ger M	Ger FM	Eng M	Am M	Prus M	Fre M	Pol M	Unk M	Scot FM	Prus FM	Total
Liquor dealer	4									1			5
Boardinghouse	1	3						1					5
Porter	5		1										6
Housekeeper		1											1
Clerk	4		1		1	1							7
Domestic		9		1									10
Bread dealer	1												1
Shoemaker	4						1						5
Clothier		1			1								2
Laborer	34												34
Blacksmith	3												3
Washerwoman		10											10
Barkeeper	2												2
Carpenter	2												2
Tailor	4	2					1						7
Engravings dealer	1												1
Victualler	1												1
Apothecary	2												2
Longshoreman	3												3
Shipsawyer/ Saloonkeeper	1												1
Tinsmith	1												1
Pedlar	2						1		1				4
Marketman	1												1
Bookkeeper	1												1
Daguerrotypist						1							1
Grocer		1											1
Picklemaker	1												1
Fruit seller		2											2
Navy pensioner	1												1
Saloonkeeper			1										1
Sexton	1												1
Brewer			1										1
Bartender	1		1										2
Painter	1												1
Compositor	1												1
Junk store	1	1											2
Machinist			1										1
Fireman	2												2
Physician	1												1
Butcher					1								1
Furniture dealer	1												1
Jeweler			1										1
Cushion maker	1												1
Capmaker		1											1
Dressmaker		2											2
Tailoress		1											1
Wheelwright	1												1
Musician	1												1
None	5	38									2	1	46
TOTAL	96	70	9	1	3	2	3	1	1	1	2	1	190

Ger=German, Eng=English, Am=American, Prus=Prussian, Fre=French, Pol=Polish, Unk=Unknown, Scot=Scottish

Table 4. Occupational Grouping, 1855

Occupation	Irish M	Irish FM	Ger M	Ger FM	Eng M	Am M	Prus M	Fre M	Pol M	Unk M	Total	%
Business owner	8	5	1					1		1	16	11.1
Skilled worker/Artisan	18	5	5		1	1	2				32	22.2
Unskilled worker	43		1								44	30.6
Semi-skilled worker	5		1		1	1					8	5.6
Service industry	13	22	1	1	1		1		1		40	27.8
Professional	1										1	0.7
Other	3										3	2.1
TOTAL	91	32	9	1	3	2	3	1	1	1	144	100.1

Business Owner: Liquor dealer, Boardinghouse, Engravings dealer, Grocer, Saloonkeeper, Furniture dealer.

Skilled worker: Shoemaker, Clothier, Blacksmith, Carpenter, Tailor, Shipsawyer, Tinsmith, Brewer, Machinist, Jeweler, Cushion maker, Copmaker, Dressmaker, Tailoress, Wheelwright, Daguerrotypist, Compositor.

Unskilled: Porter, Laborer, Longshoreman, Painter.

Semi-skilled: Clerk, Bookkeeper.

Service Industry: Housekeeper, Domestic, Bread dealer, Barkeeper, Victualler, Apothecary, Pedlar, Marketman, Picklemaker, Fruit seller, Washer, Bartender, Fireman, Junk store, Butcher.

Professional: Physician.

Other: Navy Pensioner, Sexton, Musician.

Note: Sixth Ward occupants with no occupation are not included here.

The most unexpected figures to emerge from the Emigrant Bank records are the number of women who held or shared bank accounts, but disclosed no occupation. In fact, 36 of 74 women who held or shared accounts in the Sixth Ward in 1855 listed no occupation. This is 49 percent of the sampled female population. It has been widely observed that in nineteenth-century working-class families "every member of the family...[did] something to contribute to the family commonwealth" (Stott 1990:90), yet in this sample almost half of the women enumerated are claiming no employment. It is necessary to remember that this sample is biased, because the largest number of female Emigrant Bank account holders with occupations were domestics, most of whom lived with wealthier employers outside of the Sixth Ward. In addition, employments for women, especially women with children, were extremely limited, and fluctuated with supply and demand (Stott 1990:102). Furthermore, women with families often supplemented the family income by keeping boarders, washing clothes, and sewing shirts; all occupations that would be considered a part of the day-to-day tasks of running a household. Finally, the task of managing the family's budget often fell to the woman, as can be seen in this quote from Hasia Diner's *Erin's Daughters in America*:

There were nights when she sat anxious in the kitchen, waiting for her husband to return,... knowing that when he did come he would be thick of speech, bleary-eyed, staggering in his gait: yet never so drunk but that he has his money safe;... never so incapable but that he had sense enough to hand the greasy notes to her. And from then on they were hers; she kept them, spent them, saved them for the rent...[He] spent what custom ordained...[and] afterwards asked no money of her. She clothed him, fed him: when the time came he had the money by her for rent and to meet the calls of tax-gatherers. He never doubted that she was the best manager of the money he earned (Diner 1983:17-18).

Here, it would appear that the division between women who claimed no occupation and the women who worked is a semantic difference, rather than a real one; the number of Sixth Ward women who held or shared accounts reflects in some part their duties within the domestic economy.

A comparison of occupational groupings among Emigrant Bank account holders citywide and in the Sixth Ward is consistent with employment statistics from the 1855 New York State Census used by Groneman (Table 5) (1973:90-129).

Table 5. Occupational Grouping, City Versus Sixth Ward, 1855

Occupation	Male City	%	Male 6th Ward	%	Female City	%	Female 6th Ward	%
Skilled/Artisan	476	31.4	27	24.3	92	20.7	4	12.5
Semi-skilled	125	8.3	8	7.2	2	0.5	0	0.0
Unskilled labor	342	22.6	44	39.6	0	0.0	0	0.0
Business owner	169	11.2	11	9.9	25	5.6	6	18.8
Service/Retail industry	205	13.5	17	15.3	297	66.9	22	68.8
Professional/White collar	77	5.1	1	0.9	19	4.3	0	0.0
Religious	50	3.3	1	0.9	6	1.4	0	0.0
Military	13	0.9	1	0.9	0	0.0	0	0.0
Maritime	11	0.7	0	0.0	0	0.0	0	0.0
Other	46	3.0	1	0.9	3	0.7	0	0.0
TOTAL	1,514	100.0	111	99.9	444	100.1	32	100.1

*Note: Men and women who listed no occupation are not included here.

Of those men who held bank accounts, higher percentages of skilled workers, semi-skilled workers, and white-collar professionals lived outside the Sixth Ward; within the Sixth Ward, higher percentages of male account holders were unskilled laborers or in the service industry. However, percentages of business owners holding accounts at the bank were nearly the same citywide and in the Sixth Ward. What is most astonishing are the high numbers of unskilled laborers who were able to maintain savings in light of the economic situation in the city. The economic depression in New York during the years 1854 and 1855 had a devastating effect on the city's laborers: less than one-fifth of all building trade workers were employed (Groneman 1973:93). Despite this, in 1855 almost a quarter of male account holders citywide and 40 percent of male account holders in the Sixth Ward were laborers.

Although male occupants of the Sixth Ward were represented in almost every occupational category, this was not the case with the women who listed occupations. Almost all of the women from the Sixth Ward were either involved in service jobs or they listed no occupation, whereas outside of the Sixth Ward there were more women who worked in professional jobs or religious service. This reflects the difficulties for laboring females, especially the Irish, who lived in the poorer wards, and it also shows the division between married and unmarried working women. Stott (1990:105) uses the terms *primary* and *supplementary* workers to discuss working women. Primary workers are women whose livelihoods depend on their wage earnings, whereas supplementary workers work to supplement their families' incomes. Citywide, 223 of the 253 women in the service industry were domestics; only 10 of these lived in the Sixth Ward. These women were, for the most part, young, single women who lived in employers' homes. Earning their own wages, unencumbered by husbands and children, they represent the *primary* workers who were most likely to save money for themselves or to send home to relatives. As discussed above, the majority of women in the Sixth Ward were wives supplementing their families' incomes by doing any number of jobs such as keeping boarders, washing clothes, or sewing shirts. Their contributions to the family income are inestimable, because these tasks were considered part of their daily work. Their presence in the bank records reflects more their duties in managing the family budget than their individual earning power.

2.3.2.2 Irish Immigrants by County—1860

Percentages of immigrant account holders by nationality changed little in 1860 (Figure 20). There appears to be a slight increase in the number of Irish female account holders, but this may be due to the increasing numbers of Irish females who immigrated alone after the famine. There is also a decrease of two percent in the number of German account holders living in the Sixth Ward in 1860. A citywide sample might display a different statistic, but this also may be the result of much of the German population of the Sixth Ward moving uptown at this time to *Kleindeutschland*, which was located in the Eleventh Ward. By 1860, there appears to be a slight change in the numbers of Irish account holders residing in the Sixth Ward who immigrated from the four regions of Ireland (Figure 21). The increase in the number of account holders

from Connaught in 1860 (Table 6) appears to be an anomaly in the statistical analysis. Miller (1985:577) reports an overall decrease in the number of immigrants from all four regions of Ireland between 1856 and 1860, yet the number of immigrants from Connaught opening or maintaining bank accounts in 1860 increases over 10 percent. This could represent an increase in immigrants from this region to the Sixth Ward which is not seen in a larger survey of immigration, or it could simply mean that more people from this region were opening accounts in this year. The total number of counties represented in a survey of Sixth Ward Irish immigrants increases from 22 to 32.

Comparison: Account Holders, 1855-60

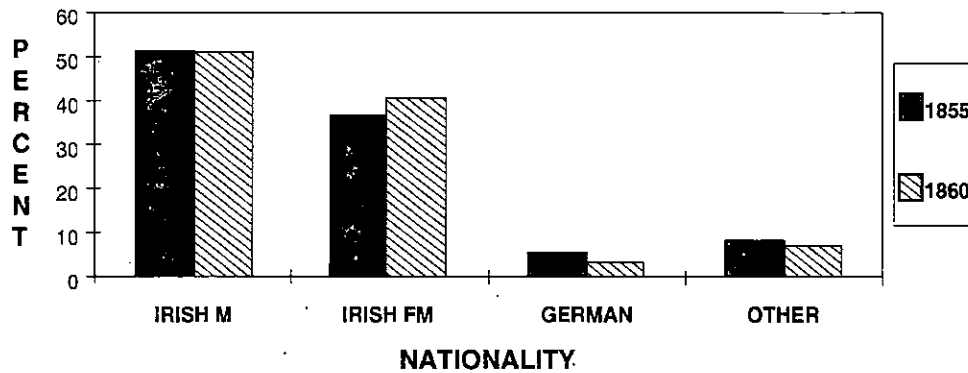


Figure 20. Comparison: Emigrant Bank account holders by nationality, 1855-1860.

Immigrants by Region, 1855-60

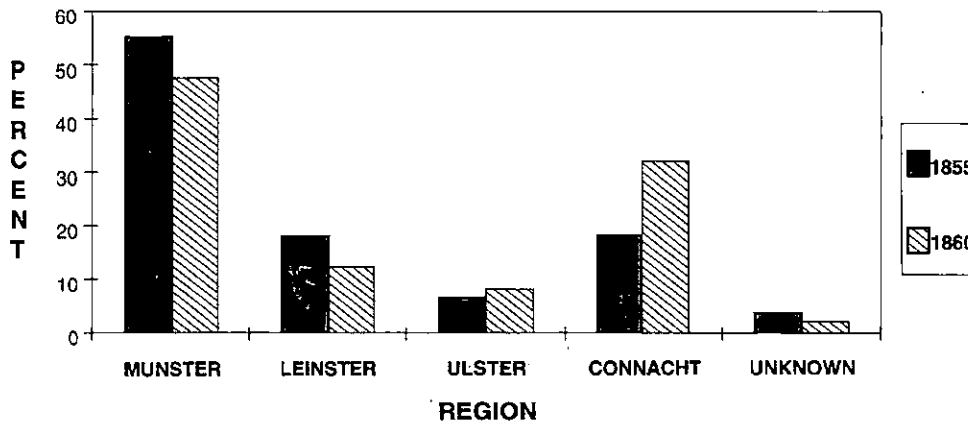


Figure 21. Immigrants by region, 1855-1860.

Table 6. Irish Immigrants by County, 1860

LEINSTER

COUNTY	MALES	FEMALES	TOTAL	%
Carlow	1	0	1	3
Kilkenny	4	1	5	16
Westmeath	0	1	1	3
Longford	3	2	5	16
Meath	4	1	5	16
Dublin	3	0	3	10
Kildare	5	0	5	16
Wexford	1	0	1	3
Queen's (Laois)	2	0	2	7
King's (Offaly)	1	0	1	3
Wicklow	0	1	1	3
Louth	1	0	1	3
TOTAL	25	6	31	99
PERCENTAGE	81	19	100	

MUNSTER

COUNTY	MALES	FEMALES	TOTAL	%
Cork	14	16	30	24
Kerry	32	34	66	52
Limerick	4	9	13	10
Clare	3	3	6	5
Waterford	0	2	2	2
Tipperary	4	5	9	7
TOTAL	57	69	126	100
PERCENTAGE	45	55	100	

CONNAUGHT

COUNTY	MALES	FEMALES	TOTAL	%
Roscommon	4	8	12	14
Leitrim	6	2	8	10
Galway	12	8	20	24
Sligo	22	10	32	38
Mayo	6	6	12	14
TOTAL	50	34	84	100
PERCENTAGE	60	40	100	

ULSTER

COUNTY	MALES	FEMALES	TOTAL	%
Fermanagh	2	0	2	10
Armagh	1	0	1	5
Cavan	2	4	6	30
Down	1	0	1	5
Monaghan	0	3	3	15
Tyrone	2	0	2	10
Donegal	3	0	3	15
Derry	1	0	1	5
Antrim	1	0	1	5
TOTAL	13	7	20	100
PERCENTAGE	65	35	100	

The average number of years that 1860 account holders had been living in New York (Table 7) increased from the one-to-five-year bracket to the six-to-ten-year bracket. Apparently, most men and women opening accounts at the Emigrant Bank in 1860 immigrated during or right after the famine. The majority of Sixth Ward account holders opening accounts in 1860 arrived at the same time as those opening accounts in 1855. In the decade between 1850 and 1860, there was a general increase in the number of people opening accounts at the bank. There may have been more public awareness of the benefits of savings, or, more likely, a larger percentage of immigrants could afford savings as time passed.

Table 7. Length of Time in New York, 1860

MALE

Years	Irish	Ger	Engl	Prus	Pol	Fren	Swis	Dan	Ita	Wel	Total	%
<1	9	1	1							1	12	8
1-5	21	1				1			1		24	15
6-10	57	3		1	1	1					63	40
11-20	46	3					1				50	31
20+	3		2					1			6	4
30+	3										3	2
TOTAL	139	8	3	1	1	2	1	1	1	1	158	100
PERCENT	88	5	2	.6	.6	1.3	.6	.6	.6	.6	99.9	

Note: Ten foreign men listed no date of arrival; two American men were not included.

FEMALE

Years	Irish	Scot	Germ	Total	%
<1	4			4	3
1-5	28			28	24
6-10	50		1	51	44
11-20	25		1	26	22
20+	5			5	4
30+	2			2	2
TOTAL	114	1	1	116	99
PERCENT	98	1	1	100	

Note: Three foreign women listed no date of arrival; three American women were not included.

Occupational distribution for the Sixth Ward in 1860 shows the same diversity found in the 1855 bank records (Table 8). However, a comparison between the occupational groupings in the Sixth Ward for 1855 and 1860 does display changes in the employment makeup of the ward, including a relative increase in the number of business owners (Table 9, Figure 22).

Table 8. Occupations of Emigrant Bank Account Holders, Sixth Ward, 1860

Occupation	Irish M	Irish Fm	Ger M	Am M	Am F	Other M	Other Fm	Total
Pedlar	6	1				1		8
Bartender	3							3
Laborer	42		1			1		44
Shoemaker	1		1					2
Capmaker						1		1
Painter	2							2
Cordage & bagging	1							1
Domestic		21						21
Boardinghouse		1						1
Washer		12						12
Paper dealer	1							1
Porter	9							9
Machinist	1							1

Table 8. Occupations of Emigrant Bank Account Holders, Sixth Ward, 1860 (cont.)

Occupation	Irish M	Irish Fm	Ger M	Am M	Am F	Other M	Other Fm	Total
Watchman	2							2
Speculator	2							2
Seamstress		9			1		1	11
Clerk	4			1		2		7
Coal dealer	1							1
Carpenter	4							4
Liquor dealer	5							5
Grocer	7		1					8
Glazier						2		2
Tailor	8							8
Fruiterer	2	7						9
Soapstone dealer		1						1
Physician	2							2
Cushion maker	1							1
Confections	1							1
Public porter	2							2
Gasfitter	1							1
Clothier	3							3
Tobacconist				1				1
Policeman	1							1
Junk dealer	4							4
Waiter	4							4
Rag dealer	1							1
Fur server (?)		1						1
Cooper	1							1
Furniture dealer	1							1
Rag picker		1						1
Optician						1		1
Brushmaker	2							2
Book sewer							1	1
Bookbinder	1							1
Undertaker	1							1
Picking hair		1						1
Junk store	2							2
Butcher	2							2
Bootmaker			1					1
Nailer	1							1
Gunsmith			1					1
Match seller	1							1
Sugar maker	1							1
Porterhouse keeper		1						1
Lithographer	1							1
Handbill distributor	1							1
Teacher	1							1
Manufacturer			1					1
Caulker	1							1
Seaman						1		1
Butter dealer	1							1
Carter	1							1
Hack driver	1							1
Milk dealer	1							1
Printer	1							1
Hoopskirt maker		1						1
Ship's steward			1					1
Tobacco stripper		1						1
Baker	1							1

Table 8. Occupations of Emigrant Bank Account Holders, Sixth Ward, 1860 (cont.)

Occupation	Irish M	Irish Fm	Ger M	Am M	Am F	Other M	Other Fm	Total
Carpet weaver	1							1
Barkeeper	1							1
Restaurant						1		1
TOTAL	146	58	7	2	1	10	2	226

Note: Sixty-six men and women (23% of the total population) listed no occupation.

Table 9. Occupational Grouping, 1860

Occupation	Irish M	Irish Fm	Ger M	Am M	Am F	Other M	Other Fm	Total	%
Business owner/Entrepreneur	26	3	2	1		1		33	14.6
Skilled labor/Artisan	23	10	3		1	3	2	42	18.6
Semi-skilled labor	6	1		1		2		10	4.4
Unskilled labor	64	3	1			2		70	31.0
Service industry	24	41	1					66	29.2
Professional	3					1		4	1.8
Other						1		1	0.4
TOTAL	146	58	7	2	1	10	2	226	100.0

Occupational Groups, 1855-60

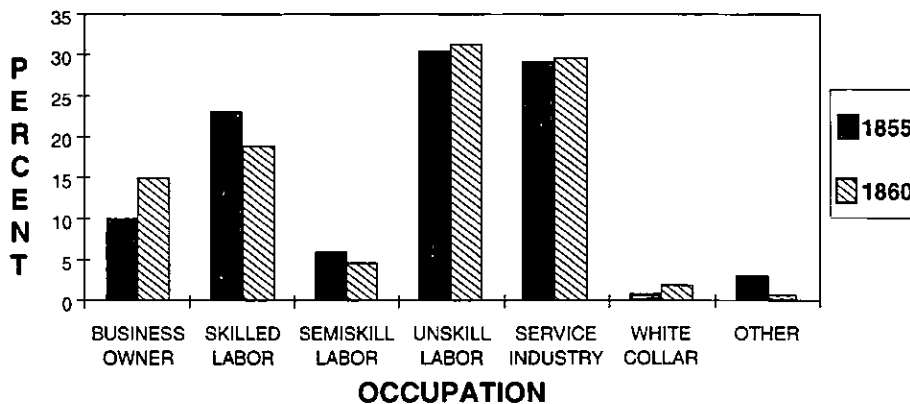


Figure 22. Occupational groups, 1855-1860.

2.3.2.3 Personal and Account Information

The Emigrant Bank records yielded additional information about the relationships between immigrant account holders. Accounts in the Sixth Ward were shared by married couples, brothers and sisters, brothers-in-law, fathers and sons, and widows and children. Information from the test and signature books, which contained the account holders' personal data, further reveals these relationships by noting the order of arrivals and where family members lived. For example, Daniel and Johanna Sullivan of County Kerry arrived together on the ship *Jacob A. Westervelt* from Liverpool in November of 1851. However, Mary and Owen Healy, husband and wife from County Leitrim, arrived eight months apart in 1852. It was common for Irish couples to arrive separately: in 75 percent of families living in the Sixth Ward in 1855, the father arrived first and sent for his family after working for a few years (Groneman 1973:56). The account records also reveal chain migration within family groups. For instance, Darby Shea and his wife, Mary, and their relations Patrick and Honora Shea, husband and wife, opened accounts consecutively on June 27, 1855. The test and signature books note that they are all from the same parish in Kerry and that Darby and Mary speak little English. Darby and Mary arrived together three years after Patrick and Honora, and they all occupy the same address at 39 Orange Street.

In addition to the Sheas above, Patrick Shea and his wife, Johanna, Patrick's brother, Peter, and his wife Mary, Johanna's sister, and Patrick and Peter's mother, Johanna Shea, all arrived together in April of 1852 on the *Prince Albert* from London. Patrick and the two Johannas lived at 36 Orange Street, and Peter and Mary lived at 501 Pearl Street. Between 1846 and 1855, Anglo-Irish landlords cleared their estates of some 50,000 tenants to make room for more profitable enterprises, such as cattle grazing. Most of the assisted emigrants received their passage, and a few got provisions and "landing money" (Miller 1985:296). The families of immigrants listed above are all from the parish of Tuosist in County Kerry and may represent assisted emigrants from an estate clearance in the area around 1851 (Marion Casey 1966, personal communication). Additionally, over 80 percent of all immigrants from County Kerry who lived in the Sixth Ward and banked at the Emigrant Bank between 1855 and 1860 emigrated from the approximately 10-square-mile area in southern Kerry around the parish of Tuosist and the nearby town of Kenmare, reinforcing this theory.

Some of the most exciting data that come from the Emigrant Bank records are the personal account records for those occupants living on Block 160. Eighty occupants of Block 160 have been found in the bank records. Account holders on Block 160 include Thomas Murphy, a porter from County Kildare; Thomas Murphy, a bartender from County Cork; and Timothy Lynch, a tinsmith from County Kerry, all living at 472 Pearl Street. Also included are Julia McCarthy, a housekeeper living at 476 Pearl Street; and Patrick Lysaigt, a liquor dealer, and Widow Margaret Barry (married name McColvin), a boardinghouse keeper, both occupants of 474 Pearl Street. Dennis O'Connor, a policeman turned coal dealer at 57 Cross Street; Margaret Bradshaw, a Dublin native and housekeeper at the Five Points Mission; and Michael McLoughlin, a liquor dealer from Sligo (and brother of Peter McLoughlin who owned Lot 6 between 1840 and 1858) and occupant of 494 Pearl Street are also among the Irish immigrants living on Block 160 who banked at Emigrant Bank.

Savings accounts of three account holders, Timothy Lynch, Thomas Murphy of Kildare, and Michael McLoughlin, were examined for this study. Timothy Lynch opened his account on April 6, 1855, with a deposit of \$300. Between April of 1855 and January of 1857, he made sporadic deposits, varying in amount from \$10 to \$90. In January of 1857, his account total was \$460.23. In March of 1857 he made a withdrawal of \$160, followed by a withdrawal of \$100 in April. In May and June of 1857, he deposited \$170, but again withdrew \$100 in June. By July 1, his bank account totaled \$276.23. However, on July 11, 1857, he deposited \$300; withdrew \$120 on July 31; and deposited \$250 on September 5. From September onward, he regularly withdrew and deposited sums of money (often \$100 or more) until November 28, 1859, when he appears to have closed his account with a balance of \$1,194.85.

These sums are large for a married man with children. A *New York Times* article in 1853 reported that a working man needed a minimum of \$600 a year to house, feed, and clothe his family (Ernst 1994:83); Lynch had, by 1858, over one full year's expenses in his bank account. Furthermore, Stott (1990:165) documents the savings of another workingman, shipwright Samuel Warshinge, between 1839 and 1842 who kept around \$30 a month in savings that was used to buy provisions in the hard months of winter. Lynch regularly deposited much more than this in his bank account. The question is: What is Lynch doing to increase his income so far above that of the average laborer? (For a discussion of nineteenth-century wages see Groneman 1973.) Further research suggested that Timothy Lynch may be related to James Lynch, an alderman at Tammany Hall, who owned the Old Brewery and sold it to Protestant mission ladies in 1855. Tammany Hall was a New York City political organization that ran much of the city government from the mid-to-late nineteenth century (see Section 2.5). In the 1850s and 1860s, prominent Tammany Hall leaders were well known for graft in all kinds of deals, especially those concerning construction bids and railroads. Lynch's connection to this important New York political and economic machine suggests that although Lynch may not have acquired his money legally, he had the means to afford a comfortable lifestyle.

Michael McLoughlin, a liquor dealer from Rockley, County Sligo, was another occupant of 472 Pearl Street who banked at Emigrant Bank. Michael was the brother of Peter McLoughlin, an entrepreneur, philanthropist, and well-known Irish community leader who owned the lot and tenement at 472 Pearl

Street at mid-century and sat on the executive committee of the Irish Emigrant Society. Michael lived at 472 Pearl Street until after his brother's death in 1854, when he moved a few lots down to 494 Pearl Street and opened a liquor store. He opened his savings account with \$2,000 in 1855 and added \$50 every six months (making only three withdrawals of \$50 each) until he closed his account in 1858 with \$2,150.

Thomas Murphy, an unmarried porter from Stapletown, County Kildare, opened his bank account in July of 1855 with \$25. He made four or five deposits, on average \$12.00, in the summer and winter months until he closed his account in 1859 with \$469.93. These three men came from different occupational backgrounds: Murphy was an unskilled laborer, Lynch was an artisan, and McLoughlin was a business owner. Although they lived within doors of each other, these men existed in different economic, and possibly social, spheres. The differences between them are an excellent example of the ways in which assumptions about economic and social status among immigrants or in immigrant neighborhoods may mask the diversity of the immigrant experience in New York.

Handwritten notes in the margins of test and signature books reveal personal details about account holders and insights into the dynamics of family relationships. The most important notations confer data on literacy among the mid-century Irish. In the 1855 test book, all personal information was taken down by a bank employee. By 1860, each account holder signed his or her name to the book as proof of identity, yet a number of these accounts have an X and the notation "HER MARK" or "HIS MARK" next to the name. There are two possible explanations for this. First, most rural Irish immigrants were uneducated previous to the creation of an Irish national school system in 1831 and would have spent their time working on their farms and plots. Although many of these people may have spoken English, writing skills were probably not important to the rural Irish. Second, notations in the margins of some accounts note that the person or persons in question spoke little or no English. One estimate claims that 28 percent of immigrants living in New York City in 1860 were Irish speakers (Nilsen 1996:254). Before the twentieth century, the Irish language had a traditional celtic orthography, which not only hindered the publication of Irish columns in newspapers before 1857 when they received Irish type from Europe (Nilsen 1996:261), but may also have affected the signatures and writing by Irish on public documents. Irish-speaking immigrants who were illiterate, spoke little English, or both, may have only been able to sign their names with an X, an indication of the difficulty some rural immigrants faced in creating a new life in urban America.

Some of the most poignant of the notes found in the margins of the test and signature books came from accounts held by married couples. For instance, a note in the margin of the account held by Michael Connolly, a laborer from Galway, and his wife, Hannah, read: "Give him no money in t[illegible], His Wife, 2/27/60." An account held by a Michael Flanagan and his wife Mary bore a note reading "Michael is drinking, his wife desires that he get no money, October 12, 1862." In addition to the difficulties the wife of a working-class laborer faced in trying to make ends meet in the household, some women faced the trials of maintaining savings and withholding them from a drug-, alcohol-, or gambling-addicted husband. Many sources address the issues of chronic alcoholism, domestic violence, and insanity within Irish households (see Diner 1983; Miller 1985; Stansell 1987), attributing them to poverty and immigrant alienation in urban America. Women in these troubled households were constantly struggling to make the most of a family's earnings in the atmosphere of lingering patriarchal dominance over household affairs. Diner (1983:56) quotes Benjamin O. Flowers's *Civilization's Inferno*:

Pat, who, having woken up from a drunken stupor, demanded "Give me some money!" But there was no whiskey and no money. He overturned the table, cursed and blasphemed until, with demoniacal rage, he drew a knife and caught his wife by the throat.

While the scenario in the households described above may not have been as dire or violent as the portrayal here, many women may have faced such adversity. A note in the margin of Honora Connolly's bank account read "Bank book torn to pieces by her husband April 25, 1866, new account opened April 27, affidavit filed." The fact that these women had to ask the bank to deny their husbands access to the household savings or to replace a destroyed account book provides a measure of insight into the dilemmas some nineteenth-century women faced.

In summary, the Emigrant Bank records have yielded extensive information about the occupants of the Sixth Ward and Block 160. Patterns of migration, relationships among account holders, occupational choices, and specific personal data of Block 160 occupants may enrich the understanding of immigrant life in New York in this period. These records also permit observations of the roles of women in private and public life. Continuing investigation into the test books and ledgers from the Emigrant Bank will help reshape ideas about the place of the immigrant in mid-nineteenth-century New York City.

2.3.3 Transfiguration Church

A statistical survey of all Sixth Ward marriages was undertaken for 1855. The marriage records indicate that most were first marriages. Eighty-one percent of males and 87 percent of females said they were single (not divorced or widowed) at the time of this marriage. However, 18 percent of males and 12 percent of females were getting remarried and listed themselves as widowed. One percent of each population listed no information regarding their status (Figure 23).

Figure 23 shows a correlation between gender and marriage status. Women were more likely than men to be single entering a marriage, whereas among those widowed, males were more likely to remarry. These statistics correlate with the preponderance of Irish women in the Sixth Ward, as compared to Irish men, in 1855 (Groneman 1973:71). Irish males were involved in heavy labor or manufacturing jobs and were more likely to be killed at their jobs (Diner 1983:55), lowering the number of marriageable males in the ward. It appears from the percentages that although there were fewer men available for women who had lost their husbands, widowed Irish men may have chosen to marry single women instead of widows.

The mean age of individuals being married was 27 years for males and 23 years for females; the youngest male and female in the 1855 marriage records were 18 and 16 respectively, whilst the oldest male and female were 60 and 41. Diner (1983:47) reports that in the later part of the nineteenth century the Irish typically married later, "when they were well established as grown up members of their community." Contrary to what scholars have argued previously, the earlier marriage rates among the Sixth Ward Irish in 1855 may have been a result of an economic strategy in a period when tremendous numbers of famine Irish had flooded the job and housing markets. A man and woman together might earn enough to survive, whereas alone, especially for a woman without a decent job in service, it would be difficult to earn a living. As an indication of the willingness to marry at a young age, as well as an indication of the toll that the famine, poor health care, and living and working conditions in America had on these immigrants, the youngest widow being remarried at Transfiguration Church was 23 years old and the youngest widower was 21 years old.

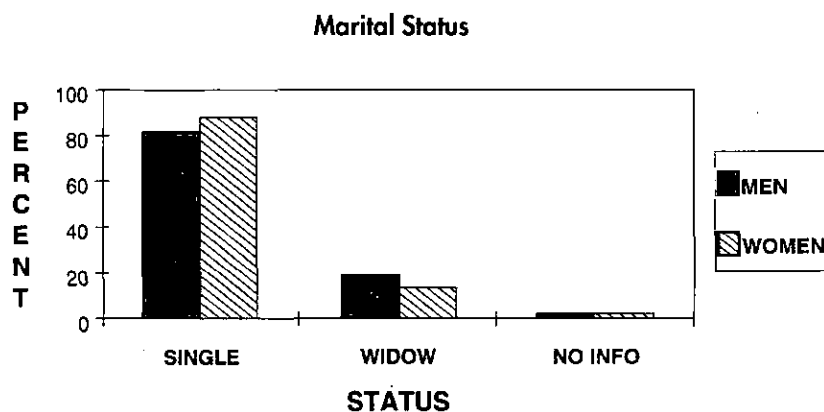


Figure 23. Marital status.

Many of the individuals in the records listed addresses that were either close to the church on Mott or Mulberry Streets or within the neighborhood on Pearl, Anthony, Pell, Orange, James, or Oliver Streets. However, there were individuals and couples living all over the Sixth Ward who came to Transfiguration Church to be married. Of those who listed their addresses outside the Sixth Ward, some came from out of state. One man even listed his address as Natchez, Louisiana. For the most part, though, at least one of the individuals lived in the vicinity of the church. This is consistent with the numbers of parishioners in attendance at mid-century. Dolan (1975:51) observed that according to the sacramental index, Transfiguration Church was the largest Catholic church in New York at mid-century, with an estimated 10,000 parishioners. If the parish was, in fact, this large, it would mean that a good proportion of the occupants from the Fourth and Sixth Wards chose to observe the sacraments, including marriage, at Transfiguration Church.

Six males and three females who were married in 1855 were listed as Transfiguration pewholders. This meant that they were parishioners and that they paid a fee for the pew in which they sat at mass. Pew rents were common in both Protestant and Catholic churches in America (Dolan 1975:51). Like collection, rents were a way for the church to maintain its facilities and pay the clergy. However, pew rents could be as much as \$150 a year, which would generally be out of the realm of what poorer parishioners could afford. It is likely that these more expensive seats at the front of the church also conferred social status to the people who sat in them, for it was from among these pewholders that the church trustees were elected. These men were the well-to-do from the parish, and they supported the parish in many ways, often lending monies in excess of \$20,000 to the church (Dolan 1975:52). A sample based on occupational distribution of parishioners in 1850 found that the majority were in skilled or semi-skilled trades, with unskilled laborers and business owners present in smaller percentages (Dolan 1975:52). The representation of both middling and wealthy Irish in the church congregation displays, much like the Emigrant Bank records do, economic and social distinctions within the Irish community at mid-century.

Like the Emigrant Bank records, the marriage records at Transfiguration Church record each couple's place of birth. Of the 190 couples in 1855, eighty-three percent were Irish, and every county in Ireland, with the exception of Wicklow, was represented in the register. Thirty-eight percent were from Connaught, 31 percent from Munster, 20 percent from Leinster, and 11 percent from Ulster. This distribution is noticeably different than the distribution of Emigrant Bank account holders for the Sixth Ward in the same year (Figure 24). While the majority of depositors in the bank records were natives of Munster, the marriage records display a majority of men and women from Connaught.

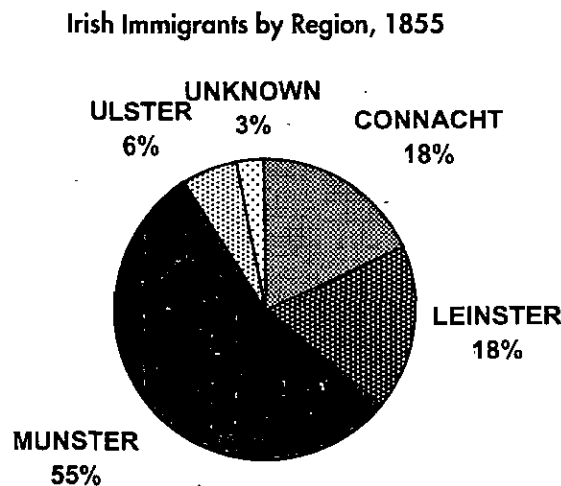


Figure 24. Irish immigrants by region, 1855. Data from Emigrant Bank records.

Furthermore, the counties in the marriage records with the highest rates of migration were Sligo, Cork, and Leitrim. In the Emigrant Bank records, the three counties with the highest representation were Kerry, Cork, and Limerick, which is consistent with emigration rates from Ireland in this time period (Miller 1985:578). Nearly one in five marriages occurring at the Transfiguration Church in 1855 involved a man or woman from Sligo, nearly all of whom were from a 20-mile strip of the rugged northwest coast. Perhaps they represent assisted immigrants like those from the estate clearance in Kerry mentioned earlier. Whatever the reason for the immigration, this group was marrying at a rate that was well above rates from other counties.

Also of some interest is the fact that 47 percent of marrying couples shared a common county of origin, and many couples were from the same town or parish. It is possible that some of these couples emigrated together. However, if this is not the case, there must be some scenario to account for the fact that many of these people grew up together and married in America. Thirty percent of the couples married at Transfiguration Church were living at the same address. These couples may represent immigrants who either did not have marriage papers or did not bring them with them when they emigrated. In the eighteenth century, the English established penal laws in Ireland that virtually banished the Catholic Church. Since priests were not as prevalent as they are in modern Ireland, especially in remote rural counties, some couples lived together "as man and wife who had never been married and many others in flagrant and notorious adultery" (Miller 1985:73).

A marriage certificate was a necessity for women with children who were applying for aid from charities, especially women's charities run by evangelicals. Because many of these charities had overwhelming case loads, using moral criteria, such as marriage, in the selection process helped them justify aiding some women and turning away others (Stansell 1987:70). It seems unlikely that members of the Catholic faith, even if they were not practicing, would support pre-marital relations or cohabitation of unmarried couples. A reaffirmation of vows in an American church may have added respectability to a couple who had not been properly married before. Two other possibilities are that these couples lived in the same building and not the same apartment or that the residences listed were to be the couples' new homes.

Between 1854 and 1860, thirty-four occupants of Block 160 were married at the Transfiguration Church. Of the 11 occupants of Block 160 married at the Transfiguration Church during the census years 1855 and 1860, only Martin O'Shaughnessy, a boarder at 478 Pearl Street, was found in the census. All of the other individuals married during these years are not in the census, and the omission may attest to the carelessness of the census taker or to the fact that many of these people were moving so often that they were not in one place long enough to be counted. This is an important issue in historical archeology. Reliance on the census as a primary source of information can be problematic in associating archeological deposits with households. The transient nature of the large immigrant population in nineteenth-century New York is documented in both historical sources like *Harper's Weekly* and secondary sources (Dolan 1975:51; Blackmar 1989:213–216). The number of Block 160 occupants in the Transfiguration Church and Emigrant Bank records who are not in the census during a census year testifies to the necessity for using other primary sources to supplement census data.

2.3.4 Conclusion

The records from the Emigrant Industrial Savings Bank and the Transfiguration Church provide a large volume of information not found in censuses or city directories about economic and social practices among immigrants, especially the Irish, in mid-nineteenth century New York. The statistical data that come from these sources display the variability in both spatial and social origins and economic strategy within the Irish community. However, the more subtle data from these records concerning personal relationships, literacy, and women's roles in daily life provide truly new information on the immigrant experience in America. The evidence that the Irish were frugal and maintained savings in a city where the economy was constantly fluctuating contradicts the opinions held by contemporary journalists and missionaries, as well as some modern historians and archeologists, that the majority of the New York Irish existed as part of a culture of poverty. To the contrary, some account holders, like Michael McLoughlin and Timothy Lynch, displayed an economic stability that would have allowed them considerable comfort and social mobility within the Irish community. By using these supplementary sources it is possible to better understand the diversity of the immigrant experience in America.

2.4 Bottle Embossments: The Trade and the Industry (Jesse Ponz)

2.4.1 Introduction

Consumer goods with commercial embossments reflect the expansion and contraction of trade networks and the growth of local industry. Analysis of bottle embossments has been applied to the study of trade in a variety of places including, for instance, Silcott in the state of Washington (Adams 1976:99–112); New York City (Schuyler 1980:48–59; Baugher-Perlin 1982:259–290); Washington, D.C. (Cheek et al. 1983:115–117; Cheek et al. 1991:57–68); and Cumberland, Maryland (Cheek et al. 1994:180–184).

Feature deposits, referred to as analytical strata (AS), are arranged chronologically in Tables 10 through 32. See Appendix A for the feature profiles which show the analytical strata used in this study. Dating is based on terminus post quem (TPQ) dates for analytical strata calculated using all artifact categories in combination with the preponderance of datable bottle types. All of the embossed bottles that were recovered from securely dated analytical strata are discussed in this section.

Products were designated local if the retailer (often the manufacturer, bottler, or importer) or glassmaker was located in Manhattan. For the later deposits, Brooklyn and Newark were included in the local category since these cities appear to have served as industrial suburbs of New York City. Imported products were manufactured or bottled outside New York City. For purposes of discussion, imported products are sometimes further subdivided into regional (including Philadelphia and upstate New York) and international. Several products, such as mineral water and schnapps, fall into an intermediate category, as the product itself may have originated at a distance but was bottled or distributed locally. These products were deemed local or imported depending on the address of the retailer. Embossments indicating glassmakers are included, although it may not be known whether bottles made outside New York City were imported for their own sake by local product manufacturers or whether they were incidental containers of imported products.

2.4.2 Data and Discussion

2.4.2.1 Early-Nineteenth-Century Deposits

Embossed bottles were recovered from fill deposits in two archeological features that dated to the turn of the nineteenth century. Feature D was located on Lot 6 and Feature AF was located on Lot 7. Both lots fronted on Pearl Street.

Table 10. Embossed Vessel from Feature D (AS V, TPQ 1807)

Vessel No.	Function	Source	Embossment	Notes
V1300	Food	Unknown	LONDON	1800–1900 ¹

¹ Jones (1983:81)

Table 11. Embossed Vessels from Feature AF (AS II, TPQ 1800)

Vessel No.	Function	Source	Embossment	Notes
V1533–V1538	Food	Unknown	LONDON	1800–1900 ¹
V1539	Food	Unknown	RHODES & KERNEYS	London-mustard type
V1560–V1562	Med	Unknown	ESSENCE OF PEPPERMINT // BY THE // KING'S PATENT	1790–1900+ ²

Note: Under embossment, double slashes (//) indicate a side change.

¹ Jones (1983:81)

² Fike (1987:116–17)

The embossed vessels from Features D and AF contained English products. By the early 1800s the vessels may have been imported or made by local food and drug makers (McKearin and Wilson 1978; Jones 1983; Fike 1987). London mustard, for instance, was manufactured in cities other than London in Europe and also in the United States.

Between 1793 and 1813, while Europe was at war, the United States dominated the carrying trade. Goods produced elsewhere were brought to American ports where they were transferred to American vessels for shipment to Europe. The lower section of Pearl Street near the seaport had become a regional center for wholesale dry goods (Homburger 1994a:62).

Commercial prosperity encouraged population growth (by 1820 New York City was the most populous city in the country) which, in turn, created local markets for consumer goods, such as drugs, beer, and mustard. Among seasonings, mustard was second only to pepper in world trade (Root 1980:278). McKearin and Wilson (1978:262) note the growing number of mustard manufacturers in urban centers at this time. London mustard appears to have become a generic by this time (Jones 1983:81), and ads for "London mustard squares" appeared in New York City newspapers (McKearin and Wilson 1978:262). English patent medicines, including Essence of Peppermint, Turlington's Balsam of Life, and opodeldoc, also were widely copied in this period (McKearin and Wilson 1978; Fike 1987:116–117; Armstrong and Armstrong 1991).

2.4.2.2 1830s Deposits

Embossed bottles were recovered from fill deposits dating to the 1830s and early 1840s in two archeological features on Lots 7 (Feature N) and 6 (Feature B).

Table 12. Embossed Vessels from Feature N (AS IV, TPQ 1840)

Vessel No.	Function	Source	Embossment	Notes
V1205	Food	I	SUPERFINE OLIVE OIL CLARIFIED/ JOHN DURAND/BORDEAUX	
V1206–V1210	Food	U	LONDON	1800–1900 ¹

Note: I=import, U=unknown. Under embossment, a single slash (/) indicates a line change.

¹ Jones (1983:81)

Table 13. Embossed Vessel from Feature B (AS IV, TPQ 1843)

Vessel No.	Function	Source	Embossment	Notes
V1029	Food	I	SUPERFINE OLIVE OIL CLARIFIED/ JOHN DURAND BORDEAUX	

Note: I=import. Under embossment, a single slash (/) indicates a line change.

Although the assemblage of embossed bottles dating to this period is small, it is known that by 1827 New York City was already a mercantile town with "the character of a general mart for the exchange of foreign and domestic production" (Dix 1827 quoted in Pred 1972:113). The flood of English merchandise into New York City following the War of 1812 favored American traders who became middlemen for buyers throughout the region. The real leap forward, however, came with the establishment of regularly scheduled packet-line service to Liverpool in 1818 and to London and Le Havre in 1822.

The opening of the Erie Canal in 1825 created an enormous trading complex connecting New York City via inland waterways with the Midwest farm belt and river port cities, such as Cincinnati. Subsequently, a major portion of the grain trade was exported through the port of New York (1830–1860), and local industries began to supply the midwestern communities. New York City had become the major link between the national agricultural economy and Europe, and the seaport had become the economic hub of the region.

Small-scale industries related to processing and packaging exports sprang up to meet the demands of the new western markets. Several vessels representing early local industries were recovered from later deposits. These include a Lynch & Clarke mineral water bottle and an M & G Miller spirits bottle from

Feature AM, AS II, and a J.J. Mapes snuff-type bottle from Feature J, AS V. Lynch & Clarke (1811–1833/46) are notable for having been the first known commercial bottlers of Saratoga spring water (1823) (McKearin and Wilson 1978:234), an upstate New York product. As distillers (1831–1836), Michael and George Miller would have been dependent on the grain trade. J.J. Mapes (1825–1834) was a chemist and sugar refiner, the latter of which was a major industry. Other important local industries, such as brewing and drug making, may have been represented in the assemblage (especially drugs), but they could not be identified because at the time of sale they came with paper labels, which have long since disappeared.

2.4.2.3 1840s Deposits

Embossed vessels were identified from deposits dating primarily to the 1840s in three features: B on Lot 6, N on Lot 7, and AG on Lot 43.

Table 14. Embossed Vessels from Feature B (AS V, TPQ 1830)

Vessel No.	Function	Source	Embossment	Notes
V1030	Food	I	SURFINE OLIVE OIL/W.E. NARTIGUE/ BORDEAUX/CLARIFIED	
V1033	Food	I	HUILÉ D'OLIVE/SURFINE/ CLARIFIÉE/ BORDEAUX	
V1078	Med	U	BY THE/KINGS ROYAL/PATENT/GRANTED TO// ROBT/TURLI/NGTON/FOR HIS/ INVENTED/BALSOM /OF/LIFE// JANy 26 1754//LONDON	1754–1900+ 1

Note: I=import, U=unknown. Under embossment, a single slash (/) indicates a line change, double slashes (//) indicate a side change.

¹ Fike (1987:27)

Table 15. Embossed Vessel from Feature N (AS III, TPQ 1850)

Vessel No.	Function	Source	Embossment	Notes
V1185	Food (or Wine)	L	D.M. HUBBARD/NEW YORK	1841–63 ¹

Note: L=local. Under embossment, a single slash (/) indicates a line change.

¹ Longworth 1841–1842; Trow 1862–1863

Table 16. Embossed Vessels from Feature AG (AS III, TPQ 1841)

Vessel No.	Function	Source	Embossment	Notes
V1794, V1796	Food	U	LONDON//W.bno 6	1800–19001
V1795	Food	U	Hull/. . . Co	London-mustard type
V1797, V1799–V1801	Food	U	London	
V1738	Med	I	BRISTOL'S//EXTRACT OF/ SARSAPARILLA// BUFFALO	
V1741–V1743	Med	I	HENRY'S//CALCINED//MAGNESIA// MANCHESTER	1772–1900+2
V1736	Med	I	ELIXIR DE GUILLE G	
V1748	Med	I	D/EXEISSERLIGEPRIWILEGRT: A LIONAD/ CHWKON ESSENTS	
V1744, V1745	Med	U	ESSENCE OF//PEPPERMINT//BY THE// KING'S PATENT	1790–1900+3
V1682	Wine	I	MUSCAT. FRONTIGNAN	
Remain	Wine	I	BRANNE MOUTON	
Remain	Wine	I	LEOVILLE MEDOC	
Remain	Wine	I	MOUTON	
Remain	Wine	I	CHATEAU	

Note: U=unknown, I=import. Under embossments, a single slash (/) indicates a line change, double slashes (//) indicate a side change. Reminders are fragments that could not be mended into vessels.

¹ Jones (1983:81)

² Fike (1987:141)

³ Fike (1987:116–17)

Features B (AS V) and AG (AS III) contained a high percentage of imported Bordeaux wine and olive oil vessels. In Feature AG (AS III), all medicines for which a source could be determined were imported, three from England and two from continental Europe. By the 1840s, New York City was at the height of its supremacy in the Atlantic trade with three packet-line vessels leaving New York each week for ports in England and France.

The only identified regional product from Feature AG (AS III), sarsaparilla from Buffalo, New York, is an interesting example of a product that would have come into New York City via the Erie Canal. This is unusual since most recorded commerce via the canal traced goods going out of New York rather than into the city.

The only identified local product was the basal and lower body portion of what looks like a green-glass cylindrical wine bottle, with a seal embossed "D.M. Hubbard" around a cluster of grapes (Feature N, AS III). David M. Hubbard was a produce broker at 80 Wall Street, possibly related to "Hubbard & Co. Grocers," 37 Peck Slip (home 335 Pearl Street). As wine-style vessels with large mouths were used to market preserved foods (Jones and Smith 1985:66, fig. 22), this vessel may have contained an early local food industry product.

2.4.2.4 1850s Deposits

Embossed vessels were recovered from deposits dating primarily to the 1850s in four features: B and J on Lot 6, AL on Lot 47, and H on Lot 45.

Table 17. Embossed Vessels from Feature B (AS III, TPQ 1840)

Vessel No.	Function	Source	Embossment	Notes
V1032	Food	I	SUPERFINE OLIVE OIL. CLARIFIED/ JOHN DURAND. BORDEAUX	
V1031	Food	I	HUILE-SURFINE / ***/*FX-GROUSSET*/ MARSEILLES	
V1034	Food	I	HUILE D'OLIVE/SURFINE/CLARIFIEE/ BORDEAUX	
V1004	Glass	I	NEW ENGLAND GLASS BOTTLE FACTORY	1827-45 ¹

Note: I=import. Under embossment, a single slash (/) indicates a line change.

¹ McKearin and Wilson (1978:104)

Table 18. Embossed Vessels from Features J (AS V, TPQ 1850) and Z (AS II, TPQ 1850)

Vessel No.	Function	Source	Embossment	Notes
V903	Water	L	CLARKE & WHITE/NEW YORK	1852-1865 ¹
V555	Food	I	LUCCA/OIL	
V560	Food	I	PRUNES D'ENTE/FAU & HOFFMAN/BORDEAUX	
V660	Med	L	DR S.S. FITCH // 707 B WAY N.Y.	1847-53 ²
V687	Med	L	RUSHTON & ASPINWALL // NEW - YORK	1831-1842 ³
V666	Med	L	HYATTS // INFALLIBLE // LIFE/BALSAM/N.Y.	1849-1900+ ⁴
V578	Med	I	DR. W. EVANS TEETHING SYRUP	1840 ⁵
V580	Med	U	MEXICAN/MUSTANG/LINIMENT	c.1825-1900+ ⁶
V688	Beer	L	J. SULLIVAN/WATER St/N. YORK	1832-3
V689	Bev	L	P. KNICKERBOCKER/1848/64 W. 18th St NY	1848
V574	Cos	I	THE ORIGINAL AND GENUINE // ROWLANDS/ MACASSAR OIL // NO 20 HATTAN/GARDEN/ LONDON 2	1793-1900+ ⁷
V748	Ink	U	M & P // NEW YORK	
V549	Glass	L	P. GROENING BROOKLYN	
V718	Unknown	L	J.J. MAPES/N[o] 61 FRONT ST/N-YORK	1825-1834 ³
V579	Unknown	U	HUNTS SOVEREIGN OINTMENT	

Note: L=local, I=import, U=unknown. Under embossment, a single slash (/) indicates a line change, double slashes (//) indicate a side change.

¹ McKearin and Wilson (1978:235)

² Fike (1987:162)

³ Longworth 1825-1826, 1831-1832, 1832-1833, 1833-1834, 1841-1842; Doggett 1850-1851

⁴ Fike (1987:25)

⁵ Fike (1987:226)

⁶ Fike (1987:135)

⁷ Fike (1987:195)

Table 19. Embossed Vessels from Feature AL (AS II, TPQ 1860)

Vessel No.	Function	Source	Embossment	Notes
V2144	Water	L	J. BOARDMAN & Co/NEW YORK//MINERAL WATERS/B/THIS BOTTLE IS NEVER SOLD	1846-58 ¹
V2143	Water	U	MINERAL WATERS	
V2140-V2142	Med	I	HENRY'S//CALCINED//MAGNESIA//MANCHESTER	1772-1900+ ²
V2133	Beer	I	N. A. RO. . . /PHILADELPHIA/PORTER. . . / 280 LEWISSON	
V2134	Beer	U	PORTER & ALE V2122 Liquor I COGNAC	
V2139	Cos	L	BARRY'S//TRICOPHEROUS//FOR THE SKIN/ AND HAIR//NEW YORK/DIRECTIONS/ IN THE PAMPHLET	1851?-1900+ ³
V2169	Bev	U	R C & T/NY	
V2170	Bev	U	BROW. . . NY	
V2171	Bev	U	W/Y	
V2154,V2155	Cos	I	LUBIN/PARFUMEUR/A PARIS	
V2107	Glass	I	H. RICKETTS & CO. GLASS WORKS BRISTOL 1	late 1830s-1853 ⁴
V2112	Glass	I	PATENT ²	1821- ⁵

Note: L=local, U=unknown, I=import. Under embossment, a single slash (/) indicates a line change, double slashes (//) indicate a side change.

¹ Doggett 1846-1847; Trow 1857-1858

² Fike (1987:141)

³ Fike (1987:122)

⁴ Jones (1986:99); McKearin and Wilson (1978:217)

⁵ Jones (1986:88)

Table 20. Embossed Vessels from Feature H (AS III, TPQ 1827)

Vessel No.	Function	Source	Embossment	Notes
V372	Water	L	J BOARDMAN//NEW YORK//MINERAL WATERS//* THIS BOTTLE/IS NEVER SOLD	1846-1858 ¹
V374	Water	L	WM EAGLE//NEW YORK//PREMIUM//SODA WATER	1845-1874 ¹
V373	Water	L	G. CASSIDY//NEW YORK//1861	1851-1874 ¹
V365	Beer	L	T & W/139 FRANKLYN STREET./N.Y.//XX/ PORTER & ALE	
V370	Cos	L	BACHELOR'S//LIQUID//HAIR DYE//NO. 2	c.1850?- ²
V369	Cos	I	THE ORIGINAL AND GENUINE//ROWLANDS/ MACASSAR OIL//NO 20 HATTAN/GARDEN/ LONDON	1793-1900+ ³

Note: L=local, I=import. Under embossment, a single slash (/) indicates a line change, double slashes (//) indicate a side change.

¹ Doggett 1844-1845, 1851-1852; Trow 1873-1874

² Fike (1987:122)

³ Fike (1987:195)

Table 21. Embossed Vessel from Feature AL (AS I, TPQ 1870)

Vessel No.	Function	Source	Embossment	Notes
V2201	Food	L	LEA & PERRINS/WORCESTERSHIRE	1835-1900+ ¹

Note: L=local. Under embossment, a single slash (/) indicates a line change.

¹ Current product label

The assemblage shows a decrease in the percentage of imported products. Those which are represented are specialty items such as perfume from Paris (Feature AL), olive oil from Lucca (Feature J) and Bordeaux (Feature B), cognac (Feature AL), long-standing brands of English medicine (Feature AL) and cosmetics (Features J and H), and Philadelphia porter (Feature AL).

Most notable in this period is the large number of locally made or bottled products, especially water (Features J, AL, and H) and medicine (Feature J), as well as beer (Features J and H), cosmetics (Features AL and H), and possibly an ink bottle (Feature J). The surge in demand that resulted from New York City's population growth due, in great part, to the immigration that began in the late 1840s is the probable cause of this boom in consumer goods.

Family and Neighborhood Life on Block 160

2.4.2.5 1860s Deposits

Embossed vessels were recovered from deposits dating primarily to the 1860s in Feature AN on Lot 34, from Feature AH on Lot 47, from two features, AM and O, on Lot 7, and from Feature J on Lot 6.

Table 22. Embossed Vessels from Feature AM (AS II, TPQ 1851)

Vessel No.	Function	Source	Embossment	Notes
V86	Water	L	LYNCH & CLARKE	1811-1833/45 ¹
V188	Med	U	LIQUID OPODELDOC	1760-1900+ ²
Remain	Wine	I	ST. JULIEN MEDOC	
V250	Liquor	L	M & G MILLER	1831-1836 ³

Note: L=local, U=unknown, I=import. Reminders were fragments that could not be mended into vessels.

¹ McKearin and Wilson (1978:234-35)

² Fike (1987:175)

³ Longworth 1831-1832, 1835-1836

Table 23. Embossed Vessels from Feature AN (AS III, TPQ 1860)

Vessel No.	Function	Source	Embossment	Notes
V303	Water	L	TWEDDLE'S/CELEBRATED SODA & MINERAL WATERS//CORTLAND STREET/38/NEW YORK	1844-1849 ¹
V302	Water	U	... PERIOR/SODA & MINERAL WATERS//N.Y.	
V294	Med	U	ESSENCE OF//PEPPERMINT//BY THE//KING'S PATENT	1790-1900+ ²
V293			... NDS'S//SARSAPARILLA//... - YORK	
V291	Food	I	SUPERFINE OLIVE OIL CLARIFIED/JOHN DURAND/BORDEAUX	

Note: L=local, U=unknown, I=import. Under embossment, a single slash (/) indicates a line change, double slashes (//) indicate a side change.

¹ Daggett 1844-1845, 1848-1849

² Fike (1987:116-117)

Table 24. Embossed Vessels from Feature AH (AS I, TPQ 1870)

Vessel No.	Function	Source	Embossment	Notes
V2362	Med	L	HALE'S HONEY OF HOREHOUND & TAR/C.N. CRITTENDON//NEW YORK	1865-1899 ¹
V2378	Med	I	DR. JAYNE'S ALTERNATIVE/84 CHEST. PHILA	1851-57 ²
V2420			Dr. TOWNSEND'S//SARSAPARILLA//ALBANY 1	1839/46-51 ³
V2386	Med	U	R.../ST. DOM.../BITTERS	
V2399	Cos	L	BATCHELOR'S/LIQUID/HAIR DYE/No 1	1850?- ⁴
V2406	Cos?	U	COCOA NUT OIL/C TOPPAN	
V2388, V2390	Glass	L	H. DOWNES & CO./STOPPER MADE BY ALBERTSON'S/JOHN MATTHEWS NEW YORK/PAT'D	1873-

Note: L=local, I=import, U=unknown. Under embossment, a single slash (/) indicates a line change, double slashes (//) indicate a side change.

¹ Fike (1987:165)

² Fike (1987:168)

³ Fike (1987:220)

⁴ Fike (1987:122)

Table 25. Embossed Vessels from Feature O (AS III, TPQ 1860)

Vessel No.	Function	Source	Embossment	Notes
V1387, V1388	Water	L	J. & A. DEARBORN & Co/NEW YORK// SODA WATER/D	1847/48-55? ¹
V1389	Water	L	W.E. BROCKWAY/NEW YORK	1853-70+ ¹
V1390	Water	L	HARROLD & JOHNSTON/NEW YORK//H.& J.	1860-62 ¹
V1392	Water	L	BOARDMAN 1846-581 V1371 Med L LAW & BOYD/N. YORK	1848-70+ ¹
V1374, V1378	Med	L	R.R.R/RADWAYS READY RELIEF/ONE DOLLAR/ NEW YORK/ENTd ACORd TO// ACT OF CONGRESS	1848-77 ²
V1380	Med	L	M.E.HALSEY & Co./DRUGGISTS/421 PEARL ST NY	1851-53 ¹
V1372	Med	L	CHRISTIE'S/MAGNETIC FLUID	1846-52 ¹
V1359	Med	I	F.BROWN'S/AROMATIC ESS OF/JAMAICA GINGER/ PHILa	
V1370	Med	U	LIQUID OPODELDOC	1760-1900+ ³
V1332	Beer	I	PHILADELPHIA/XX/PORTER & ALE	
V1333	Beer	I	PHILADELPHIA/XXX/PORTER & ALE/**	
V1334	Beer	I	PHILADELPHIA/XXX/PORTER & ALE	
V1376	Cos	L	LYON'S//KATHAIRON//FOR/THE/HAIR// NEW YORK	1842-56/57 ¹
V1354	Cos	I	LUBIN/PARFUMEUR/A PARIS	
V1417	Ink	L	T./DAVIDS//INDEL/IBLE//INK	1838-70+ ¹
V1418	Ink	I	J.E. PETERMAN'S/INK/PHILADa	

Note: L=local, I=import, U=unknown. Under embossment, a single slash (/) indicates a line change, double slashes (//) indicate a side change.

¹ Longworth 1838-1839, 1842-1843; Doggett 1846-1847, 1847-1848, 1848-1849; Doggett and Rode 1851-1852; Rode 1852-1853, 1853-1854, 1854-1855; Trow 1855-1856, 1856-1857, 1860-1861, 1861-1862, 1862-1863, 1869-1870

² Fike (1987:74)

³ Fike (1987:175)

Table 26. Embossed Vessel from Feature J (AS II, TPQ 1875)

Vessel No.	Function	Source	Embossment	Notes
V903	Water	L	CLARKE & WHITE/NEW YORK	1852-1866

Note: L=local. Under embossment, a single slash (/) indicates a line change.

By the 1860s, local products clearly outnumbered imports, of which there were only a few, including Bordeaux wine and oil (Feature AM) and Parisian perfume (Feature O). This pattern appears to mirror the shift in New York's economic base from commerce to local manufacturing. Regional products, especially from Philadelphia, increased and included porter/ale, medicine, and ink (Feature O). This increase is most likely related to the development of the railroads during the 1840s and 1850s, which made New York City's markets accessible to the mid-Atlantic states.

The data suggest that local bottled water and patent medicine industries were already flourishing, a decade earlier than previously thought (Armstrong and Armstrong 1991:159). Though the relative proportions of local products to imports had changed, the distribution networks which evolved before the Civil War persisted (Pusateri 1984:116).

2.4.2.6 1870s Deposits

A relatively large number of embossed vessels was found in a deposit at the top of Feature J and contemporaneous deposits in related features on Lot 6.

Table 27. Embossed Vessels from Features J (AS III, TPQ 1870), T, U, and Z

Vessel No.	Function	Source	Embossment	Notes
V695, V696, V698-V700	Water	L	SEELY & BRO/NEW YORK//S & B	1858-1866 ¹
V704	Water	L	KORNAHRENS & FITSCHEN/NEW YORK	1860-1863 ¹
V706	Water	L	TIETYEN & MENKEN/NEW YORK//T & M/1860	1860-1865 ¹
V552	Food	L	WELLS, MILLER, & PROVOST/NO 217 FRONT ST/ NEW YORK	1844-1853 ¹
V554	Food	L	LEA & PERRINS/WORSTERSHIRE SAUCE	1835-1900+ ²
V655	Med	L	DR S.S. FITCH//707 B WAY N.Y.	1847-1853 ³
V662	Med	L	R.R.R./RADWAY & CO/NEW YORK//ENTd ACORd 208 Centre Street TO//ACT OF CONGRESS	1848-77 ⁴
V663	Med	L	J.R. STAFFORD'S//OLIVE TAR	1848-1900+ ⁵
V665	Med	L	HYATTS//INFALLIBLE//LIFE BALSAM/N.Y.	1849-1900+ ⁶
V664	Med	L	Dr KIERSTED'S//JULEP//FOR DIARROEA	1816-1873 ¹
V859	Med	I	SANTAL MIDY CAPSULES//PARIS	1870s- ⁷
V580	Med	U	MEXICAN/MUSTANG/LINIMENT	c. 1825-1900+ ⁸
V707, V715	Beer	L	T & W/139 FRANKLYN STREET/N.Y.//XX/ PORTER & ALE	
V575	Beer	I	PHILADELPHIA/XXX/PORTER & ALE	
V756, V758, V759	Schnap	L	UDOLPHO WOLFE'S//AROMATIC/SCHNAPPS //SCHIEDAM	1836-1870 ¹
V701-V703	Bev	L	MORTON & BROs/NEWARK	
V757	Schnap	U	V. OLDNER'S//AROMATIC/SCHNAPPS// SCHIEDAM	
V705	Bev	I	J.B. & E.S. CRONK/TARRYTOWN & PORTCHESTER/N.Y.	
V690	Bev	U	BW & Co V572 Cos L BATCHELOR'S/MOLDAVIA /CREAM	1850?- ⁹
V567, V568	Cos	I	LUBIN/PARFUMEUR/A PARIS	
V753	Ink?	?	... INE GUYOT	
V852	Glass	I	DYOTTVILLE GLASS WORKS PHILA	1893-1900+ ¹⁰
V691	Unknown	I	P. KELLETT/NEWARK/N.J.	

Note: L=local, I=import, U=unknown. Under embossment, a single slash (/) indicates a line change, double slashes (//) indicate a side change.

¹ Longworth 1816-1817, 1836-1837; Doggett 1844-1845; Rode 1852-1853; Trow 1858-1859, 1860-1861, 1862-1863, 1864-1865, 1865-1866, 1869-1870, 1872-1873

² Current product label

³ Fike (1987:162)

⁴ Fike (1987:79)

⁵ Fike (1987:182)

⁶ Fike (1987:25)

⁷ Fike (1987:179)

⁸ Fike (1987:135)

⁹ Fike (1987:122)

¹⁰ McKearin and Wilson (1978:83, 88)

The deposits dating to the 1870s show an even greater emphasis on local manufacturers than the deposits dating to the preceding decade. All identifiable water, food, and cosmetics and most medicine and beer are local. Even the majority of schnapps bottles bear the name of a local distributor, reflecting increasing industrialization. Foreign products include French perfume and medicine and possibly ink. Identified regional products include Philadelphia porter/ale and an unknown beverage from Portchester, New York. The two vessels from Newark, New Jersey, reflect the growth of that city as an industrial suburb of New York City. Beginning earlier in the century, many industries left New York for sites across the Hudson where operation costs were lower, a trend that continues in the present.

2.4.2.7 Late-Nineteenth-Century Deposits

Embossed bottles were found in deposits dating to the late nineteenth century in Feature AK (Lot 47), Feature AM (Lot 7), Feature AG (Lot 43), and Features B and Z (Lot 6).

Table 28. Embossed Vessels from Feature AK (AS I, TPQ 1890)

Vessel No.	Function	Source	Embossment	Notes
V2039	Water?	L	WALSH & O'NEILL/145/WEST 35TH ST./NEW YORK	
V2031	Med	L	SHORT STOP FOR COUGHS/H. M. O'NEILL. N.Y.	1890-1900 ¹
V2030	Med	L	W. M. OLIFFEE/NO. 6 BOWERY/NEW YORK	
V2040	Med	I	CANTRELL & COCHRANE//DUBLIN/&/BELFAST/SEE THAT EACH CORK IS BRANDED	
V2032	Cos	U	DR. S.H.JE.../VEGETABLE/HAIR BALM	
V2041	Bev	U	THIS BOTTLE NOT TO BE SOLD/NEW YORK	

Note: L=local, I=import, U=unknown. Under embossment, a single slash (/) indicates a line change, double slashes (//) indicate a side change.

¹ Fike (1987:91)

Table 29. Embossed Vessel from Feature AM (AS I, TPQ 1850)

Vessel No.	Function	Source	Embossment	Notes
V188	Med	U	LIQUID OPODELDOC	1760-1900+ ¹

Note: U=unknown.

¹ Fike (1987:175)

Table 30. Embossed Vessels from Feature Z (AS I, TPQ 1840)

Vessel No.	Function	Source	Embossment	Notes
V857	Food	L	LEA & PERRINS/WORSTERSHIRE SAUCE	1835-1900+ ¹
V861	Med	U	MEXICAN/MUSTANG/LINIMENT	c. 1825-1900+ ²
V852	Glass	I	DYOTVILLE GLASS WORKS PHILA	1833-1900+ ³

Note: L=local, U=unknown, I=import. Under embossment, a single slash (/) indicates a line change, double slashes (//) indicate a side change.

¹ Current product label

² Fike (1987:135)

³ McKearin and Wilson (1978:83, 88)

Table 31. Embossed Vessels from Feature AG (AS I, TPQ 1892)

Vessel No.	Function	Source	Embossment	Notes
V1746	Water	U	NEWTON'S/SODA & MINERAL WATERS//PATENT	
V1737	Med	L	C. BRINCKERHOFF'S//HEALTH RESTORATIVE //NEW YORK//PRICE \$1.00 CORNELIUS BRINCKERHOFF, NY, NY	1840s-1890s? ¹

Note: U=unknown, L=local. Under embossment, a single slash (/) indicates a line change, double slashes (//) indicate a side change.

¹ Fike (1987:212)

Table 32. Embossed Vessel from Feature B (AS I, TPQ 1903)

Vessel No.	Function	Source	Embossment	Notes
V1010	Wine	I	DUBONNET	

Note: I=import.

In the late-nineteenth-century deposits, the ratio of local products to imports (3:1) approximates the levels of the preceding decade. This is in agreement with Cheek and others' (1994:183-184) observation that local retailers represent approximately 78 percent of the bottles on late-nineteenth/early-twentieth-century sites in East Coast commercial/industrial centers.

2.4.3 Conclusion

From the foregoing it appears that access to commercial products in nineteenth-century New York may have depended on the tide of commerce and level of industrialization. The data also suggest that the features with the highest percentages of imports date to the 1830s and 1840s, the period of favorable trade conditions for New York City. Furthermore, it seems that imports were mainly specialty items, that is, goods for which there was no competition between local and foreign producers because of historic connections between the product and its place of origin (e.g., Bordeaux wine and olive oil, Parisian perfume, Philadelphia porter, etc.). Local products, on the other hand, were mainly necessities, such as water and medicine. Thus, it seems that the residents of Block 160 responded to cost, consuming imported products when transport costs were lowest. Products that may have been used frequently were bought from local producers.

But can the presence/absence and quantity of commercial products belonging to a particular deposit be explained by reference to changes in the economic system? Can household deposits be tied to historic events? For individual deposits, the answer must be no, since there are no ways to test such hypothetical constructions. However, when deposits are grouped by decade and compared, changes in artifact distributions over time seem to fit well with the historical record. A subsidiary problem is related to the inadvertent omission of important events as part of the explanation. For example, problems in French wine production may account for the reduction or absence of these products in the Block 160 feature deposits.¹ Yet, observed patterns in the archeological record could just as well have resulted from a decreased role of commerce in the domestic economy. In other words, different events can produce similar patterns in the archeological record.

Another problem is related to the relevance of embossed vessels to economic explanations, since they comprise such a small percentage of the total assemblage. According to Fike (1987:4), "embossing was not a common practice until the mid-nineteenth century and even by the 1890s, less than 40 percent of all glass vessels were embossed." In other words, by dealing solely with embossed vessels to the exclusion of unembossed vessels, the majority of vessels which contained imported and local products has been omitted from the analysis. This problem is impossible to rectify since the source of unembossed vessels can rarely be identified and even the function is sometimes problematic. It is also true that embossed bottles may not have always been used for the products that the embossment indicated. Jones (1983) and McKearin and Wilson (1978) have noted that London mustard bottles were used for other products and other kinds of bottles were often reused (Busch 1987).

Although it is not possible to know the full range of bottled products that were being consumed at Five Points, it is significant that the pattern of consumption of products that came in embossed bottles reflected the economic patterns that were affecting the rest of the city. When trade supplied imported goods to the city, the people at Five Points used them; when the Erie Canal and the railroads brought new products into the city, they also appeared at Five Points; and when domestic manufacturing became a more important source of goods than trade, locally produced products were prevalent at Five Points. Whether the products were being used in the same proportions as in other neighborhoods is beyond the scope of this study, but they were being used. Based on these data, it is safe to conclude that Five Points residents were full participants in the city's economy.

¹ Despite the presence of other Bordeaux products, wine is absent from the Block 160 features. This may be related to the introduction into Europe of the *oidium* fungus in about 1851. Although overall wine production in France fell by only a quarter, the production of fine wine was nearly eliminated (Baker 1965:121). Imported wine may have been partly replaced by domestic vintages from concord grapes, which was apparently very successful within a few years after its introduction in 1852 (Heiser 1973:186). The absence of imported wine in quantity may be related to the rise in prices as French vineyards were damaged by the *phylloxera* aphid, introduced in 1863. The infestation was not controlled until the turn of the century (Baker 1965:121; Hobhouse 1991:62).

2.5 “Suckers, Soap-Locks, Irishmen, and Plug-Uglies”: Block 160, Municipal Politics, and Local Control (Reginald H. Pitts)

2.5.1 Introduction

The history of New York City politics during the nineteenth century has been much discussed and analyzed in books, articles, and dissertations. The names of such men as “Boss” Tweed, “Honest John” Kelly, “Boss” Croker, George Washington Plunkitt, “Big Tim” Sullivan, and Al Smith, “The Happy Warrior,” are well known to both the casual student of New York City government and the urban historian or political scientist, and the name “Tammany” has come to represent the essence of the big-city political machine.

These men would not have been able to accomplish much of what they did without the help, support, votes, and other talents of countless men and women who manned the polls, cast their votes (sometimes early and often), convinced others to vote the same way (usually with varying forms of persuasion), and profited in some degree from the successes of Tweed, Croker, Sullivan, Plunkitt, and Smith, as well as others of their ilk. These people rarely made the newspapers, but they were influential in their own world; they knew that political support would help themselves—and others—in making their lives more livable. Some of these people lived on Block 160, just minutes away from City Hall, the Halls of Justice (the “Tombs”), and other municipal offices.

This section will briefly discuss the role of local politics—including the power and influence of Tammany Hall—on the residents of Block 160 during the nineteenth century. It will sketch how the residents were able to access this power and then profit from it.²

2.5.2 Irish Americans and Early Political Activity on Block 160

During the early years of the Republic, political power in New York City was largely held by the descendants of those who had wielded power in colonial times. These were men of “high prestige occupations who were in the top percentiles of wealth holding”—merchants, bankers, lawyers, and gentlemen. The so-called “ordinary” man—skilled artisans, small tradesmen, licensed cart drivers, and laborers—“were conspicuous in antebellum city government in their absence from it” (Pessen 1978:23).

Property qualifications as a requirement to vote barred many of those too poor to possess either real property or personal property of value; others, like African Americans, and recent immigrants who were not yet naturalized, could not legally vote. However, many recent immigrants became citizens; some went into business, acquired personal property or realty to satisfy the property requirement, and voted in primary and general elections (Fox 1919).

Further uptown, the role of the ordinary man played little part in the governing activities of the elected official. However, below Fourteenth Street where ordinary men lived in such numbers that they could not be ignored—and could vote—the elected official dealt with these people and attempted to answer their questions and solve their problems. In return, he usually could depend upon their support at election times, and sometimes even at other times.

Among the Sixth Ward aldermen in the early years of the nineteenth century were potter Clarkson Crolius and brewers George Janeway, who served in 1803 and 1804, and William Coulthard, the owner and operator of Coulthard’s Brewery at 59-61 Cross Street (Lots 25-28 on Block 160), who was elected in 1813 (Common Council of the City of New York 8:211). Coulthard worked with many tavernkeepers and liquor dealers in his capacities as brewer and local politico; many of these people were recent emigrants from Ireland.

² “My emphasis on politics as a struggle for neighborhood control and patronage, and as an arena for ethnic rivalry, does not mean to suggest these were the only functions of working-class politics....It does seem, however, that the intense interest surrounding elections was due in large part to the ways politics was imbedded in the daily life of the neighborhood” (Stott 1990:235).

In his capacity as alderman and ward leader, Coulthard dealt with tavernkeeper Thomas Crofton, who ran an establishment located on Mott Street near Cross Street. On November 2, 1812, Crofton's Inn was established as the polling place for the Sixth Ward (Common Council of the City of New York 7:292); two months later, Thomas Crofton died; named as one of the executors of his estate was William Coulthard (Liber of Wills for New York County 50:484). Another ally of Coulthard's was Robert Macqueen, who operated an air furnace on Chatham Street near Cross. In 1816, Macqueen was elected assistant alderman, and the next year was elected alderman, a position that he would hold for the next five years (Valentine 1865).

One of the Sixth Ward polling inspectors who established Crofton's Inn as the polling place was Bernard Kennedy, a tavernkeeper. When Kennedy died in June 1820, William Coulthard was named as one of the executors of his estate (Liber of Wills for New York County 55:319). When William Coulthard wrote his own will two years later, the witnesses were Bernard's brothers John and Timothy Kennedy and Edmund McGavaghan, who had also witnessed the last will and testament of William's mother, Elizabeth, a year before (Liber of Wills for New York County 57:87, 57:328).

The leading political organization in New York City at this time was Tammany Hall, or more officially "The Society of St. Tammany" or the "Columbian Order," formed as a benevolent society in 1789 by a Nassau Street upholsterer named William Mooney. From that start, the society, meeting in its own "Tammany Hall," became an active political club that sponsored candidates for elective office. The officers held Indian titles, with the head or president (designated as the "grand sachem") being selected from thirteen "sachems" (or trustees) who made up the General Committee, the governing body (Myers 1971:4-6). The rank and file members of Tammany were sometimes referred to as "braves" (Allen 1993:5-6).

In its early years, the Tammany Society was largely composed of anti-aristocratic, white Anglo-Saxon men, who were well enough off to own some property and thereby vote (Allen 1993:25). These men were essentially middle-class tradesmen, artisans, and professionals (Mushkat 1981:76). However, the Irish "had no doubts about their right to equality. Their eagerness sharpened by centuries of oppression in their native land, they were determined to exercise all of their prerogatives" (Berger 1973:12).

In 1817, a group of Sixth Ward Irish Catholics met at Dooley's Long Room at the corner of Duane and Cross Streets (Harlow 1931:302) and determined that they were not being represented in the choosing of candidates for public office. They marched to Tammany Hall (then located at Chatham and Frankfort Streets), broke into a meeting of the General Committee, and demanded loudly that Tammany endorse their candidate, Irish patriot Thomas Addis Emmett, a respected New York lawyer. The General Committee—a gathering of ward leaders—demurred, contending that their own candidate would be more acceptable to them, and then implied that the "Irish were less than one hundred percent American patriots" (Allen 1993:27). Incensed, the Catholics started a brawl (Myers 1971:46).

2.5.3 *Tammany: Beginnings of Neighborhood Political Activity*

During the 1820s, the Irish presence began to loom even larger. New state constitutions ratified in 1822 and 1826 "increased democratization of the political process and the development of modern party organizations" (Mushkat 1981:76) by—among other things—lowering the property requirement for otherwise eligible white male citizens. Many artisans who had acquired some property—including some naturalized Irishmen—began to take notice that "they were living in a state of flux and were not sharing in the prospect of future advances" (Mushkat 1981:121).

Tammany had started to proclaim itself as the "true home of the working classes" (Stott 1990:235), but working-class voters felt otherwise, discovering that although "the Hall indeed coveted labor's support and pretended to be its champion, banking and corporate interests dominated the party's power structure and left a deep imprint on its programs" (Mushkat 1981:121-122). In the 1830s, these artisans formed a "Working-Man's Party," publishing its own paper, the *Workingman's Advocate*. The party, also known as the "Pewter Mug Democracy," challenged Tammany in a number of elections, but failed (*New York Workingman's Advocate*; Mushkat 1981:123-127).

From this beginning, however, arose the first Irish grass-roots, workingman's politician. Michael Walsh, more commonly known as Mike, arrived with his family from County Cork in the early 1820s (Figure 25). He started out driving a cart about Five Points, but turned a knack for writing into a journalism career, writing for a number of local papers, including Walt Whitman's *Aurora*. Walsh soon became interested in local Democratic politics, formed a group of local rowdies he called the "Spartans" (Wilentz 1984:219; Walsh 1843), and suddenly appeared in the streets of the Fourth and Sixth Wards as a political power that was to be reckoned with. Tammany agreed, and Walsh was admitted as a member—partially due to the fact that, although Irish-born, he was also a Protestant (Allen 1993:55).

Walsh commanded a large number of votes within the working class. He spoke their language, lived among them, and knew their lives firsthand. "Walsh's speeches were delivered in a bombastic, high-spirited style unlike any heard in the city," states Richard Stott. "Speaking in a working-class dialect... Walsh was by turns profane, sarcastically humorous, and vitriolic—'vulture,' 'grub-worm,' 'booby,' and 'cur' were among his favorite epithets" (Stott 1990:236). To voice his opinions and give voice to his Spartans, Walsh started two newspapers—the *Knickerbocker*, and, more successfully, the *Subterranean* ("the voice of subterranean democracy"). Mike Walsh "cultivated an image as a raffish, brawling proletarian dandy who used slang 'like any tramp who had graduated from the gutter,' and combined ragged clothes with diamond rings and a silver-knobbed cane" (Sante 1991:255), and with his Spartans, soon elbowed his way into the political arena (Myers 1971:130–131).

It was about this time that the wealthy Whigs who ran New York City began to take notice of the upstart Irish. During the 1840s, the public schools throughout the state of New York were under the control of local school boards—all except in New York City. There, the public schools were under the control of a group called the Public School Society. Originally a philanthropic organization designed to provide educational opportunities for those children not aided by the numerous private schools, by 1825 the society had secured a virtual monopoly over the public school fund distributed by the New York City Common Council and controlled its disposition to various schools throughout the city (Leonard 1965:19–20).

In 1841, William H. Seward, a Whig, was elected governor of the state of New York. In his inaugural address, Seward invited foreign-born citizens to petition for a share of public school funds to be used for parochial schools. Although genuinely concerned about the education of the children of these foreign-born citizens "whom he felt were deprived of the advantages of public education because of religious and ethnic prejudices, New York City Whigs considered his action merely an insidious attempt to court the immigrant vote" (Leonard 1965:18–19). Nevertheless, New York City Roman Catholics—as did a number of other religious denominations (Lannie 1968:36)—attempted to comply with Seward's request and formally applied to the Common Council for those public funds. The trustees of the Public School Society requested the council reject the application, which was done (Leonard 1965:19–20). This incensed the Irish Catholic community and brought in the formidable Archbishop John Hughes.

Hughes, a native of County Tyrone, realized that his parishioners equated "the public school issue" with the larger question of "equal rights, equal citizenship, and the repudiation of what they termed less than equal rights" (Leonard 1965:114; Berger 1973:13). Using the pages of the newspaper *Freeman's Journal and Catholic Register*, Hughes rallied his parishioners. He organized a "Central Executive Committee on Common Schools" to hold ward meetings to "maintain unity of purpose" and obtain signatures for a petition to be offered to the state legislature. This petition would request the right to take advantage of the public school funding for their parochial schools. Seven thousand signatures were on the petitions sent to Albany (Leonard 1965:98; Lannie 1968:31–33).

Archbishop Hughes then turned his attention to organizing the Irish-American vote around this issue. Hughes was a personal friend of Governor Seward and could easily convince a significant number of naturalized Irish-American Roman Catholics to go over to the Whigs, although the latter were primarily nativist and anti-Irish (Mushkat 1981:167; Anbinder 1992:82). Tammany Hall, although aware of the power of the Irish Catholic vote, beat down an attempt by Mike Walsh to slate candidates for public office who supported the Catholics' right to get the public school funds. Archbishop Hughes took immediate action.

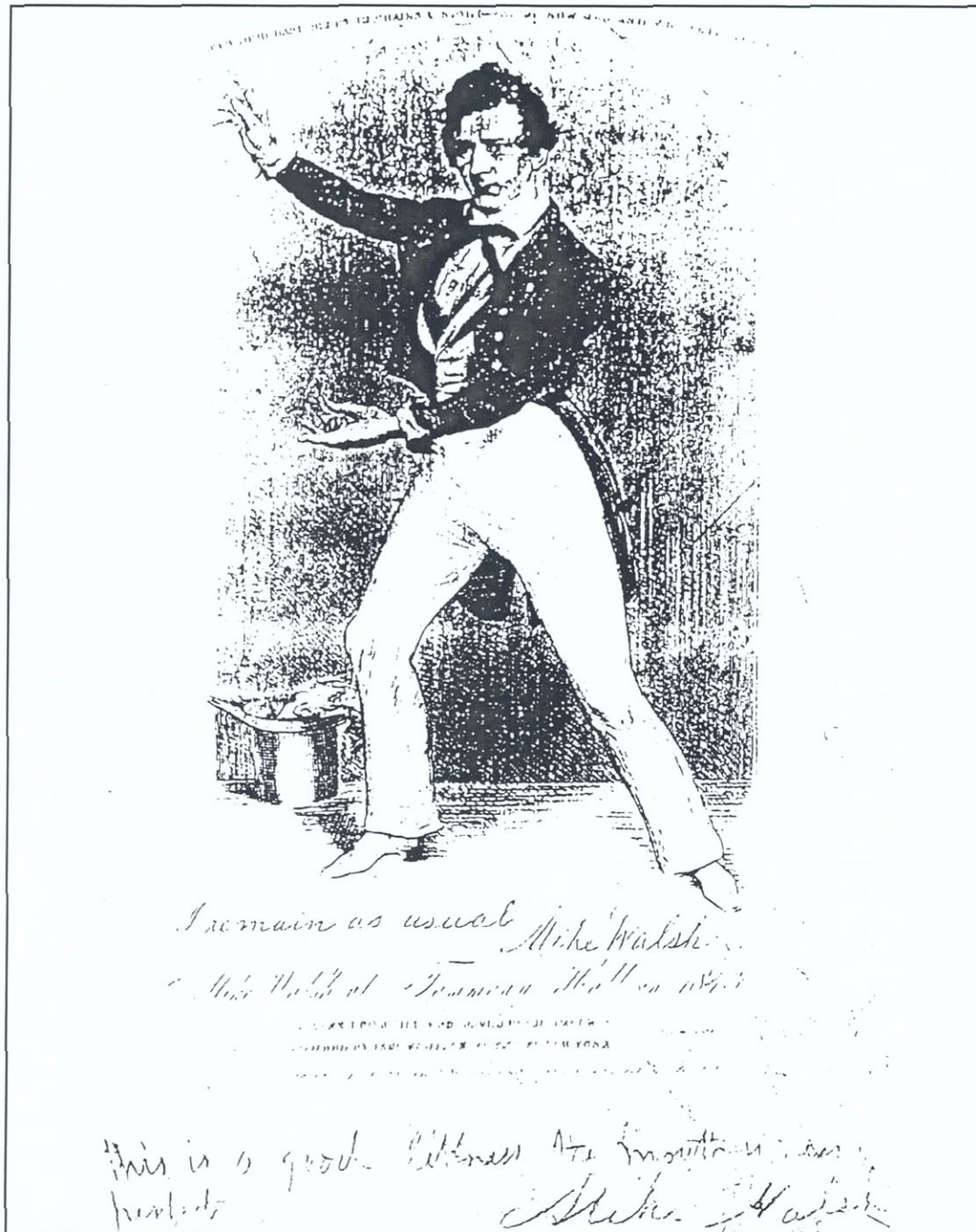


Figure 25. "The One and Only Mike Walsh" (Walsh 1843).

"The Hall owed Irish Catholics a moral debt for their support, and he [Hughes] meant to see that Tammany paid the price" (Mushkat 1981:201).

Presiding over a meeting at Carroll Hall in the Sixth Ward on October 29, 1841, Hughes contended that both the Whig and Democratic parties were pledged to oppose the claims of the Catholics to public school funding, and called for the organizing of a slate of candidates to oppose the Whigs and the Tammany Democrats. These candidates were to be answerable to the Catholics on the question of school funding (Leonard 1965:121–122). Mike Walsh was selected to run for Congress, and 13 candidates for the state assembly that Tammany had supported were endorsed by the "Carroll Hall Democracy." In the general election, 10 of the 13 candidates were elected to office, while the votes that Walsh took away from the Tammany candidate allowed the Whig candidate for Congress to win. In the final tally, Tammany barely squeaked by Carroll Hall in the amount of total votes cast (Mushkat 1981:203).

Tammany realized that the next time, the Catholic vote—if mustered to the degree that Archbishop Hughes had brought about—could result in a Tammany defeat and decided to take action. Before the election, a Tammany assemblyman, an Irish Protestant named John Louis O'Sullivan, had introduced a bill calling for the establishment of independent county school boards (Lannie 1968:150–153, 172). Tammany had supported the bill in a lackluster fashion; however, to show Archbishop Hughes and the Irish Catholic voters he commanded that Tammany was for their cause and would listen to their grievances, the society threw all its support behind this bill, and it was subsequently passed by a wide margin (Mushkat 1981:206).

2.5.4 Tammany Courts the Irish Catholic Vote

Having realized how powerful the naturalized Irish Catholic voter could be, Tammany Hall went about cultivating the Irish Catholic vote. Although actively recruiting men with Irish surnames for a while, like O'Sullivan and Walsh (both Protestants), Tammany sought out Irish Catholics. One fellow they found was the son of a schoolteacher from County Cork named Richard Barrett Connolly (Figure 26), who emigrated to the United States in 1826 and was working for a firm of Chatham Street auctioneers when universal (white male) suffrage was made available in the new state constitution. He came to Tammany's notice while attending Democratic ward meetings and made himself useful to the party until he was elected a member of the society in 1839 (Homerberger 1994b:145–150).

Another source of potential Tammany members was the Irish Emigrant Society—an organization designed to aid recent emigrants, insuring they had sufficient clothing, shelter, and food. The name of a likely political worker could be found by the members of the society and recruited into Tammany's ranks by members such as District Attorney John McKeon, the son of immigrants, who was also a Tammany brave (Ernst 1994:34–35).

Dick Connolly was only one of a number of Irishmen who became involved in local politics. Many of these participants, and others like him, started out bringing "the Irish working class to the voting stations on behalf of Tammany," to the disgust of the members of the Whig party, who groused that "we should get along well enough if it was not for the Irish" (Gilje 1987:244). Local political power as harnessed by Tammany was demonstrated in 1846, when Andrew H. Mickle was elected mayor of New York City. Mickle was a Sixth Ward native, born of immigrant parents in a hovel where pigs were kept in both the attic and the basement (Harlow 1931:302). Mickle had gone to work in a tobacco factory and showed enough acumen that he soon rose to a position of authority and eventually married the boss's daughter; he would die a millionaire (Myers 1971:139).

A large number of these politicians were men of status in the Five Points community—grocers, prizefighters, saloonkeepers, liquor dealers, and other small businessmen. The grocers were among the leading business professionals of their communities and these businessmen received a license to operate a grocery from the city of New York. This license, among other things, also authorized the licensee to sell liquor, along with drygoods. Some of these businessmen were educated men who were unable to follow the professions

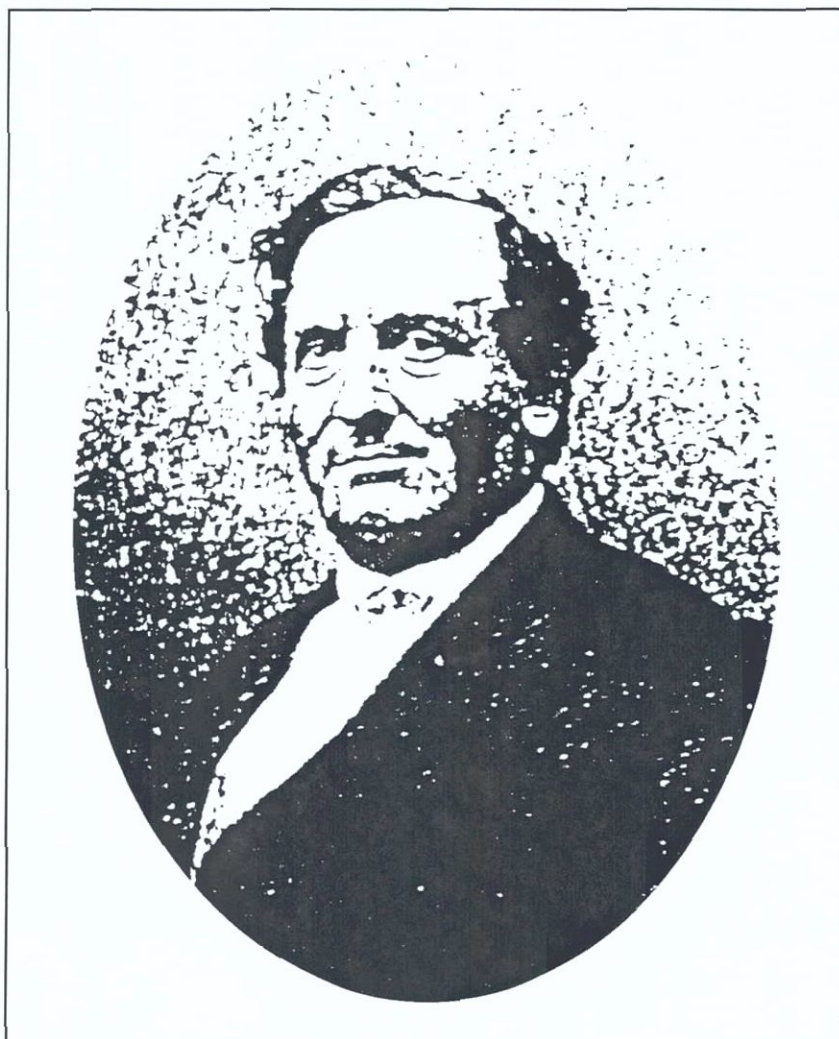


Figure 26. Richard B. Connolly (Valentine 1870).

or trades for which they were trained in Ireland. Others received licenses as a political favor, due to the number of votes they controlled or could control. Many grocers found that it was more profitable to sell more beer and liquor than bread and dry goods. "Soon 'grocery' became synonymous with 'liquor store'; these 'groggeries' became so numerous that those grocers who dealt primarily in dry goods had to say as much in their directory listings" (Stott 1990:210).

Soon the saloons and grogeries were the centers of political power in the Sixth Ward (Rorabaugh 1976:155). As Richard Stott notes, "politics was a major topic of conversation, and a saloonkeeper's praise of the local boss was significant. Indeed, ward captains often made their headquarters in saloons" (Stott 1990:237). And for the Five Points resident, the saloon was often the only place he could go,³ so the politicians had willing listeners, especially if they bought rounds for the house: "Everybody have a drink on me" (Butler and Driscoll 1933:75; Stott 1990:237).

The saloonkeepers and grocers made the most of it, and soon used that power for their own uses. A number of Sixth Ward aldermen and assistant aldermen during this period were liquor dealers: Felix O'Neil of 20 Orange Street (Lot 38), who served as an assistant alderman from 1839–1841 and as alderman from 1841–1842; Richard Barry, wine merchant of 488 Pearl Street (Lot 15), who served as assistant alderman from 1860–1861; Patrick Brennan, who among his many holdings ran the bar in the Old Brewery (Lots 25–28), served as assistant alderman from 1848–1849; and Patrick Gerraghty of 500 Pearl Street (Lot 21), who served as alderman in the late 1860s (Valentine 1870).

With this political power, elected officials could be found who were sympathetic to the wants and needs of the registered voters of the Sixth Ward. So when the police or the Protestant missionaries attempted to close down the saloons, gambling halls, and brothels, a note would be sent to the alderman, who would in turn send a note to the district attorney, stating that "the nuisance is abated" and all would go on as before (Gilfoyle 1992:79).

Others followed the lead of Mike Walsh and controlled the votes of a number of potential voters—the "soap-locks, butt-enders, and subterraneans" (Sante 1992)—largely through personal charisma and proficiency in fisticuffs, as "it was nearly impossible for a man to succeed in East Side politics in the mid-nineteenth century unless he was good with his fists" (Stott 1990:238). J. F. "Flurry" Kernan remembered that many Sixth Ward political meetings ended in a fight: "Knowing politicians of the ward never went well-dressed to a caucus meeting" (Kernan 1885:49–54).

One of these "ward-heelers" (Myers 1971:130) was a native New Yorker of Dutch ancestry named "Captain" Isaiah Rynders. Rynders left home to go down South, where he distinguished himself in New Orleans and Vicksburg as a gambler, knife fighter, and boxer before hurriedly leaving Vicksburg just ahead of a group of vigilantes (Harlow 1931:299–300; Sante 1991:255; Allen 1993:56). Rynders returned to New York City in 1835 and opened up the first of six groceries in and about Five Points soon after (Allen 1993:56). He soon became involved in the political arena, and, taking a leaf from Walsh's book, he organized the Empire Club, whose "membership was made up of a choice variety of picked worthies who could argue a mooted point to a finish with knuckles" (Myers 1971:136). Tammany soon made Rynders leader of the Sixth Ward (Harlow 1931:202).

Rynders was not as eloquent as Walsh, however. Some years later, when the New York state legislature followed the state of Maine in passing a law banning the sale and use of alcoholic beverages, city liquor dealers appeared at a Tammany meeting to listen to the Captain "rant as only he could at the mixing of politics and religion. Temperance, he insisted, was an individual decision, and in many cases the use of liquor was a religious necessity" (Hershkowitz 1978:53).

³ As Mike Walsh noted, "so long as it is looked upon as indecent, if not criminal for persons to run, sing, dance and skylark in the public streets and squares, so long will the greater mass of the poorer of people, who have scarcely room enough to turn around in, continue to seek excitement and amusement in public places" (quoted in Spann 1981:348).

On the other hand, Rynders had little interest in politics. Tammany used his Empire Club largely to foment riots (Bales 1962:37), either against political opponents (Harlow 1931:302) or people they did not like (Bales 1962:39). When escaped slave and Abolitionist speaker Frederick Douglass appeared in New York City to give a speech, he was greeted by Captain Rynders and his crew. Douglass was able to finish his speech only with difficulty (McFeely 1991).

Both Walsh and Rynders commanded the loyalty of many Irish Catholics. However, other groups in the Sixth Ward were being formed, one of which was headed by one Constantine "Con" Donoho, a grocer of 17 Orange Street. When Isaiah Rynders decided that he wished to be nominated for the state assembly in 1844, he was challenged by Con Donoho. The Empire Club confronted Donoho's group at Warren's Sixth Ward Hotel, formerly Dooley's Long Room, at Duane and Cross Streets, and were soundly beaten (Breen 1899:518-520).

As Rynders moved his base of operations to the Seventh Ward, Donoho became the Sixth Ward leader. Surrounded by what Harlow calls "his retainers," who, with their families, inhabited the same tenement and served as his bodyguards (Harlow 1931:302), Con Donoho lived on Orange Street until "an enemy hand reached him one evening at his own threshold, and the faithful follower who discovered him rang an alarm which rang through New York for years thereafter: 'Citizens of the Sixth Ward, turn out! Turn out! Con Donoho lays bleedin' on the pave ferninst his dure'" (Breen 1899:520; Harlow 1931:302).

Con Donoho recovered, but did not live much longer (*New York Herald*, September 29, 1847) although it was long enough to see the growing power of the Irish-American voter in the Sixth Ward. For example, when O'Sullivan's measure calling for independent county school boards was passed, each ward in New York City elected a school commissioner who supervised local schools. These commissioners comprised the New York County Commission for Common Schools (Mushkat 1981:205-206).

To help the commissioner, two trustees and two school inspectors were also appointed for one-year terms (Mushkat 1981:206). Dr. Hugh Sweeny of 63 Cross Street (Lot 29), a native of Dublin, had worked with Archbishop Hughes in organizing Roman Catholics against the Public School Society. He gave speeches, drew up petitions, and was prominent in the "Carroll Hall Democracy" (Lannie 1968:52, 91). When the Commission for the Common Schools of the Sixth Ward—the ward school board—was established in 1842, Dr. Sweeny was named commissioner, a post he held for nearly ten years. His successor was grocer and liquor dealer Richard Barry of 488 Pearl Street (Lot 16) (Valentine 1842-1860). In 1842, one of the school trustees was Con Donoho (Valentine 1842:73); seven years later the trustees were undertaker James Malone of 496 Pearl Street (Lot 18) and liveryman Thomas J. Barr of 470 Pearl Street (Lot 7); one of the inspectors was John Gerraghty of 500 Pearl Street (Lot 21) (Valentine 1849:77).

Therefore, the final say on the operation of public schools in the Sixth Ward came from an Irish American. The teachers in the schools were mostly Irish surnamed (Valentine 1842-1878); appointments were made through the commission, and, doubtless, some money may have had to change hands to insure that an application was successful. The state supervisor of education, William Leete Stone, was a nativist who encouraged daily Bible readings in the public schools, preferring the King James Version (Protestant) (Lannie 1968:221). It is more than likely that in the Sixth Ward, Stone's dictates did not bother Dr. Sweeny and the rest of the members of the commission, and the teachers read to children from the Douay (Roman Catholic) version (Mushkat 1981:206).

It also would not have bothered Dr. Sweeny—or most of his friends and political allies during that period, either—that while he was serving as the ward commissioner of the public schools he was also serving as the second vice president of the Roman Catholic Orphan Asylum Society at Old St. Patrick's Cathedral at Prince and Mott Streets (Valentine 1849)—no conflict of interest would have been found there.

2.5.5 The "Brains" of Tammany

Peter Barr Sweeny (Figure 27) was born on October 9, 1825, on Park Row, just south of the project area, into an influential local family. Although his father, James Sweeny, would eventually become a Jersey City saloonkeeper, Peter's uncle was Dr. Hugh Sweeny, the local Sixth Ward school commissioner and local political figure (Valentine 1849–1860). Peter's mother, Mary Barr Sweeny, was said to have owned and operated her own Park Row saloon—indeed, it was alleged that she would serve her customers while breast feeding her son (Werner 1932:114)—but her brothers were up-and-coming local political figures. State Assemblyman William V. Barr was well known as an orator (Bernstein 1990:90–91, 99, 242), and Sixth Ward Assistant Alderman Thomas J. Barr was just beginning a meteoric political career that would see him rise to the state senate and later to Congress (Callow 1966:41; Bernstein 1990:91). Barr, who owned and operated a livery stable at 470 Pearl Street (Lot 5), was, like his brother, a Tammany stalwart and would eventually become a sachem (Bernstein 1990:246).

Young Peter Sweeny attended St. Peter's parochial school on Barclay Street (Lynch 1927:236; Werner 1932:114) and later "the well-known Dr. Anthon's school [from where he] graduated with honors" (Hershkowitz 1978:146). Sweeny briefly attended Columbia College, read law with the eminent defense attorney James T. Brady, and was admitted to practice in 1849 (Werner 1932:114).⁴ Peter's brother, James M. Sweeny, started his career as a teacher at Common School No. 6 (later No. 9) on Elm Street in the Sixth Ward, as did a number of young maiden ladies with the same surname (Valentine 1848–1855).

Peter Sweeny, with his familial connections, was destined to become a member of Tammany, and he soon rose within its ranks, serving on the general committee in 1852 and as leader of the Twentieth Ward in 1855 (Callow 1966:41). His uncle, Tom Barr, took him under his wing; upon Barr's election to the state senate in 1854, Peter went with him to Albany. As the "Nephew to My Uncle," Sweeny became a lobbyist for stage-coach companies, opposing "the granting of street railway franchises that would interfere with their business" (Werner 1932:116). His lobbying roles also extended to railroads (he became one of the directors of the Erie Railroad and subsequently owned stock in railroads throughout the United States [Homberger 1994a:160]) and in gas companies (Allen 1993:87).

Sweeny was put up for public office, serving as public administrator in 1853 and district attorney in 1857. His debut as a prosecutor was a disaster. In open court, so goes the story, when attempting to give his opening statement to the jury, he hitched and stuttered and embarrassed himself to such a degree that he immediately resigned (Lynch 1927:150), going to "the genial climate" of the Caribbean for an extended vacation (Hershkowitz 1978:146).

Sweeny, whose "methods were secret and his manner reserved" (Werner 1932:115), soon found that he would find it hard to sell himself as a candidate for higher elective office. Tammany stalwart Richard B. Connolly tried to fashion Sweeny into a likable and appealing candidate, forcing him to smile when he made speeches. "Now, if you'll only do that when you go out among the lads," said Connolly, "you'll be a grand success. You can talk, but unless you smile, even when you're condemnin' your bitterest opponent, it will not have the effect it should have" (Lynch 1927:236).

Sweeny became more comfortable acting as a power behind the scenes. "I am not and never claimed to be a leader," he once said. "I am a sort of adviser. I try to harmonize the interest of the party and endeavor to serve good nominations and sound principles. But I do not aspire to the position of leader. I am simply a passenger in the ship with the privilege of going ashore if I do not like its management or its course" (Connable and Silberfarb 1967:151).

Sweeny soon joined forces within Tammany with up-and-comers like Richard B. Connolly, John T. Hoffman, and William M. Tweed (Figures 28 and 29), and during the 1850s, they noted with dismay the fragmentation of the city's Democratic party. For years, the party—reflecting the national convulsion over

⁴ It was alleged that, at one time, Sweeny himself ran his own Sixth Ward saloon and ran with a volunteer fire company—not an impossibility, but doubtful (Lynch 1927:150).

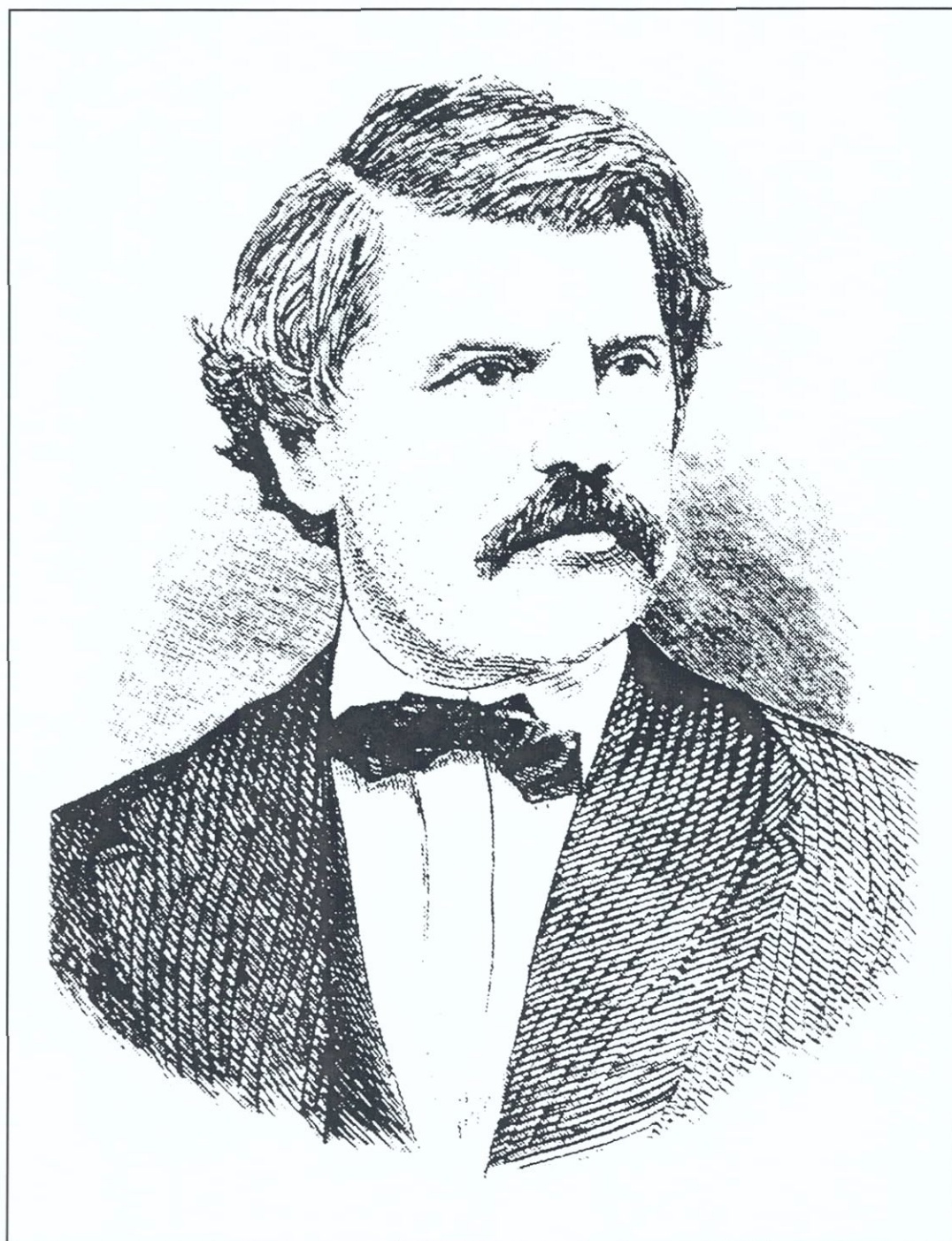


Figure 27. Peter B. Sweeny (Allen 1993).

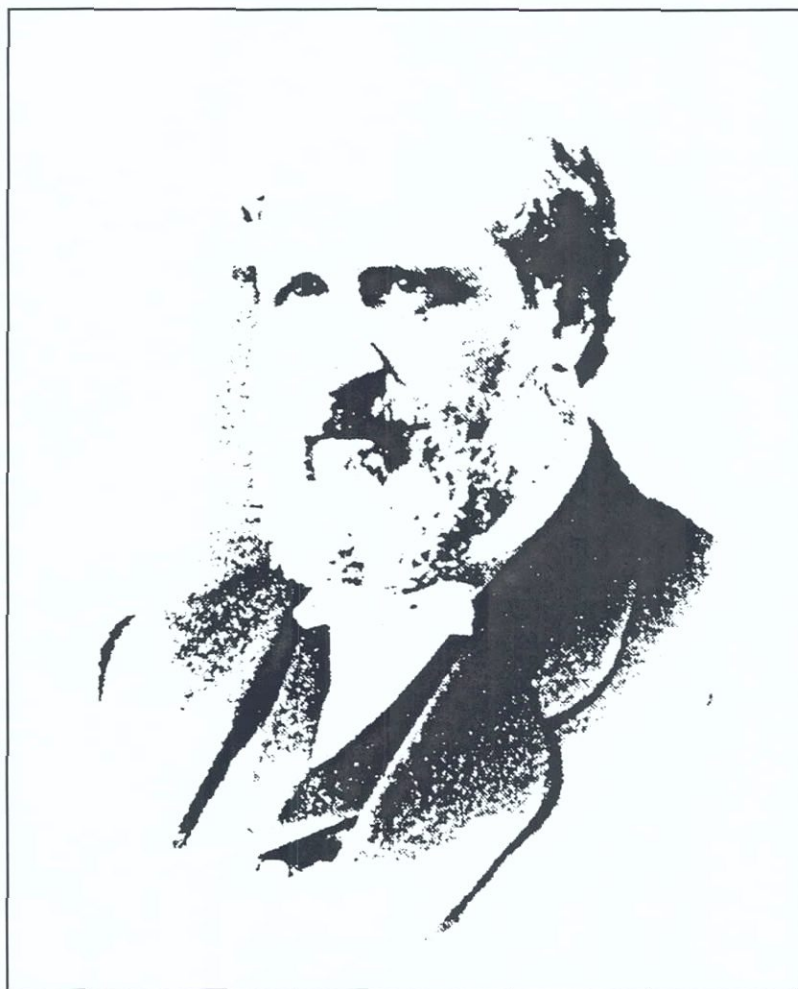


Figure 28. William M. Tweed (Hershkowitz 1978).

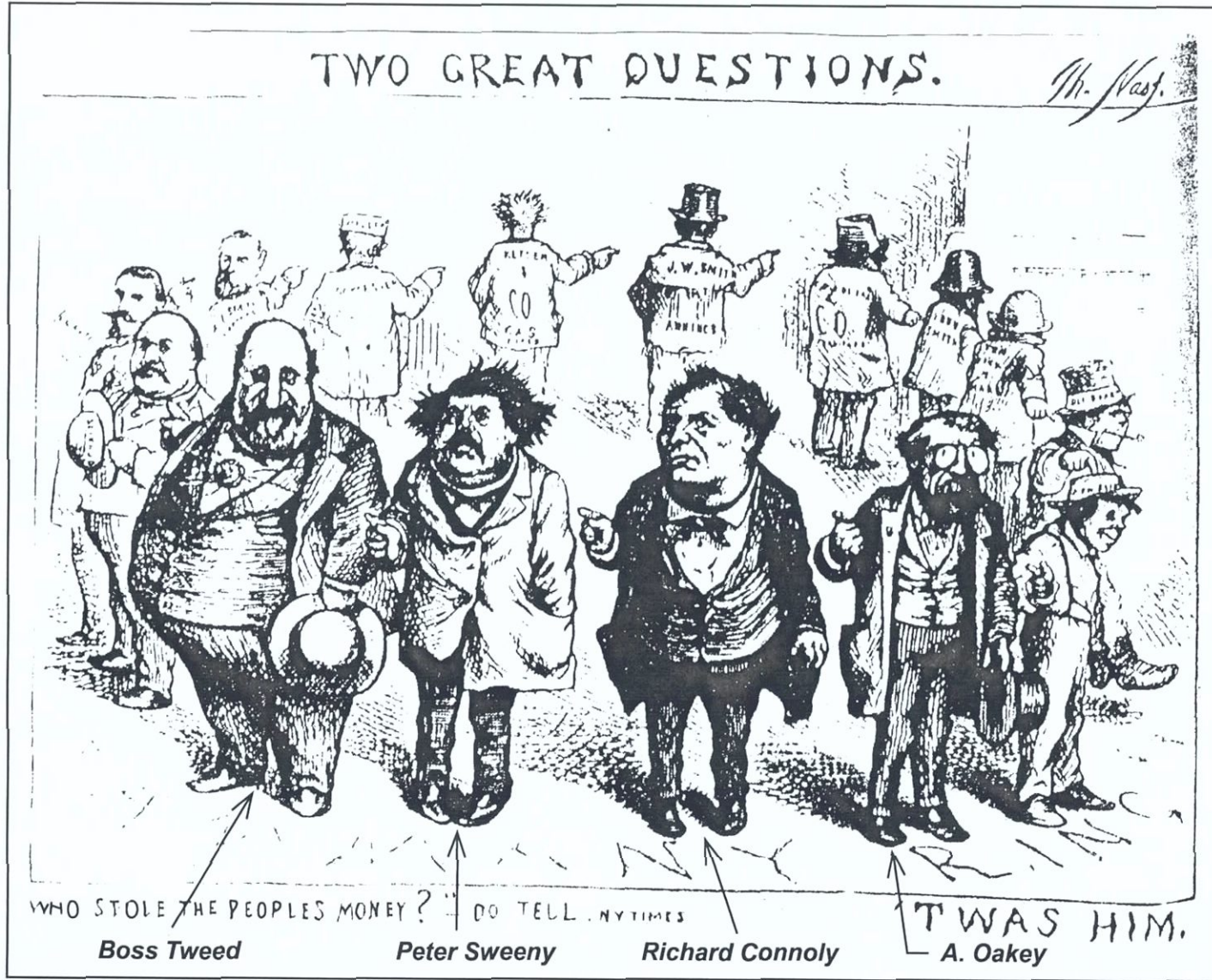


Figure 29. "Two Great Questions" (Harper's Weekly, August 14, 1871).

slavery—had been divided into two factions: “Barnburners” (radicals who did not wish to see slavery spread into free territories) and “Hunkers” (conservatives who didn’t care much about slavery, as there weren’t many slaves in the state of New York) (Allen 1993:59). The Whig party had taken advantage of this dissension to win a number of elections (Myers 1971:140–141). Other members of Tammany, like Mike Walsh, were further disrupting the smooth performance of the Democratic party by jumping from one faction to another and taking their adherents with them, thus causing more problems.

In 1850, when the Tammany braves briefly settled their grievances, they were able to nominate for mayor, and work for the subsequent election of, Fernando Wood, a Philadelphia Quaker turned grocer, cigar merchant, and politician (Myers 1971:146–149; Allen 1993:59–63). After Wood’s election, the old Barnburner-Hunker controversy was replaced by the “Softshell” (successors to the Barnburners) and “Hardshell” (successors to the Hunkers) controversy (Allen 1993:68). Wood didn’t help matters much by working independently of Tammany and “ingratiating himself with the masses,”—including naturalizing thousands of aliens, mostly Irish—who were thus indebted to vote for him (Myers 1971:188).

Slowly, Sweeny and Tweed started to lay the groundwork for the unification of the local Democratic party and, at the same time, Tammany. In 1856, Alderman John Kelly, backed by Tammany, defeated Mike Walsh’s bid for a second term in Congress by a mere eighteen votes (Myers 1971:251). When Walsh threatened a recount, implying (probably correctly) that a number of voters for Kelly had voted early and often, Kelly quietly reminded Walsh that it did not appear that he—Walsh—had ever become an American citizen—thus, making him ineligible to hold any elective office in the United States (Allen 1993:147). Walsh gave up and soon faded into drunken oblivion (*New York Times*, December 2, 1859).

In 1858, with Tweed’s help, Sweeny was able to oust Fernando Wood from Tammany. Although Wood formed a rival organization called the Mozart Hall Democracy in opposition to Tammany, it was not successful, and soon he was exiled to Congress, where he would spend the rest of his life. It was said of him that “no one ever saw him put his feet on the desk nor spit on the carpet” (*New York Herald* in Connable and Silberfarb 1967:137). The insurgents, like Sixth Ward politico James Lynch (“a popular Irishman” who ran against Tweed for sheriff of New York County in 1861—and won [Myers 1971:213]), were soon welcomed back into Tammany’s fold (Connable and Silberfarb 1967:103).

Sweeny and Tweed had unified the New York City Democratic party and Tammany Hall, which began to appear indistinguishable (Mushkat 1981:103). There were no more “Hards” and “Softs”—all Democrats would work together under the canopy of Tammany Hall. Tweed was seen as the “Boss”—tall, large, jovial—but Sweeny—quiet, reticent, secretive—was known as the “Brains.” It was agreed that Sweeny was Tweed’s right-hand man, despite the fact that they didn’t much like each other personally (Lynch 1927:150).

Through much behind-the-scenes lobbying, Sweeny was able to get Tweed placed on the Tammany General Committee. Sweeny also helped him oust the aging Isaiah Rynders from the leadership of the Seventh Ward (Collect Street would be renamed Rynders Street in his honor). However, the name was changed to Centre Street “once warm memory grew cold” (Sante 1991:257). An elderly ex-alderman and Irish Catholic named James Conner was named Grand Sachem (Allen 1993:92). This was a masterstroke on Sweeny’s part, for where the naturalized American—primarily Irish—vote could be courted by interested parties in the past, it immediately consolidated itself under Tammany’s control.

When Tammany leader John T. Hoffman was elected mayor in 1868, Sweeny and Tweed were able to place their friends and political allies in positions of power in Tammany and in the city government. Hoffman appointed Sweeny to the position of city chamberlain. This official’s job was to select banks for the deposit of city revenue. Although it had been common practice for the chamberlain to pocket large portions of the interest (up to \$200,000 per annum!), Sweeny stopped that practice, consenting to take an annual salary of \$10,000. “As a taxpayer,” he said, “I would not be satisfied that the custodian of the public money should reserve, however legally, to his own use, interest, or other advantage, from such moneys which might be applied to the reduction of taxes” (Hershkowitz 1978:122). The *New York Herald* commented that “if this

wonderful reform is to be the cue of the Tammany party of the future, we can have no objection to the success of Tammany nominees" (Connable and Silberfarb 1967:151). The *New York Times* agreed, saying that Sweeny, Hoffman, and District Attorney Abraham Oakey Hall "were busily engaged in bringing good government to New York!" (Callow 1966:256).

Two years later, Hoffman went to Albany as governor and Hall was elected mayor. Tweed and Sweeny were in a position to wield unlimited power—and they did. In 1870, Tweed was influential in convincing the state assembly to provide New York City with a new city charter. It was said that Tweed went to Albany with a million dollars, and spent every dime to insure the passage of this charter. Tweed admitted that he spent \$600,000 (Mandelbaum 1990:71).

Although the new charter (the "Tweed Charter"), on its face, was designed to simplify the operation of the municipal government and provide it with more control over its expenditures and other affairs, by doing so, "it virtually relieved the 'ring' of accountability to anybody" (Myers 1971:227). Without any checks on its power, the people behind the government could do as they wished. And they did.

With the control of the municipal treasury, Tammany and its friends ran wild. City contractors padded their bills⁵ to provide a "rake-off" for those politicians who were directly involved. Once the bills were submitted, designated agents of the "Tweed ring"—Tweed, Sweeny, Connolly, and Hall—would divide the excess money "on a prearranged formula" (Homberger 1994b:178) and deliver it to the members of the ring. Peter Sweeny's representative (his "broker") was his brother James M. Sweeny; all payments were made in James's name, and James delivered the money to Peter. If anything went wrong, it would be James, not Peter Sweeny, who would be in trouble with the law (Hershkowitz 1978:273).

With nearly 12,000 jobs on the city payroll, Tweed and Sweeny found "a rich source of funds, as officeholders were expected to express their gratitude by returning a percentage of their salaries to those who had appointed them" (Allen 1993:98). Many of those new city workers held down more than one city post at a time; a good many of them were no-shows. Sweeny, Tweed, and the others also provided for members of their families. For example, Peter's brother James, after teaching for several years in the local public school, received a position as deputy chamberlain. He was subsequently named clerk of the state supreme court, and later became a state senator, as did brother-in-law John J. Bradley. Bradley succeeded Peter Sweeny as city chamberlain and also served as New York County treasurer. Another brother-in-law, William A. Henry, was auditor of accounts in the treasurer's office, Bradley's brother George was the second auditor of city accounts in the treasurer's office, and uncle Tom Barr was police commissioner (Valentine 1868–1871; Allen 1993:99; Homberger 1994b: 177–178).

Before the Civil War, William Tweed had gone bankrupt when his chair-making business failed. By 1869, "he was reputed to be worth \$12,000,000"—an exaggeration. However, "he had investments in real estate and iron mines; he was interested in every street opening and widening scheme; he had a hand in all city, and in some state, contracts, and he held directorships in many railroad and gas companies and other corporations" (Myers 1971:224). Connolly, Sweeny, Hall, and others also—almost overnight—became millionaires. Even Sweeny's action in accepting a salary as city chamberlain was sullied when it was subsequently found that he was making more money from the office through bribery and undue influence than he would have pocketing the interest from the deposits of city revenue (Connable and Silberfarb 1967:151).

Tweed served "at one and the same time" as superintendent of public works, county supervisor, state senator, and supervisor of the New York County Courthouse, as well as the grand sachem of Tammany, and "charged the city handsomely for his services" (Mandelbaum 1990:72–75). On the other hand, Sweeny resigned as city chamberlain and contented himself as parks commissioner. However, that

⁵ "It surely can never be known if the bills were fair or not. That the bills were all carefully itemized and the work performed would suggest that they were honest. No one has ever specifically refuted them. A popular and universal view is, of course, that everyone working for the city at any time, or providing services to the city in some way, cheated through padded bills, services not performed, time taken off. It is as certain as George Washington never told a lie, Abraham Lincoln freed the slaves or all potatoes come from Idaho. But they all make good stories" (Hershkowitz 1978:114).

post—which also involved being in control of the Central Park Commission—was used for political manipulation (Rosenzweig and Blackmar 1994:269–272).

Jobs in Central Park or for the commission itself were provided for those worthy in Tammany's eyes (Pratt 1961:400). One recipient of this largesse was Irish-born laborer Thomas Wade, living at 55 Park Street (Lot 23), who was appointed as a park policeman about this time (Valentine 1872). The commission also "attempted serious changes in policy. They granted private amusement and refreshment concessions in Central Park. Several alterations were made in the basic plan of the park...[which] violated [the] unified conception of structure and landscape [designed by the landscape architect Frederick Law Olmstead]." Olmstead complained that the commission's "innovations...intruded upon his attempt to relieve dreary 'urban conditions' by providing open and natural vistas" (Mandelbaum 1990:73–74).

When Sweeny's commission took funding from Central Park "to speed improvement of small parks and squares further downtown," Olmstead continued to protest. To appease "those young men in knots of perhaps half a dozen in lounging attitudes," the aggrieved landscape architect remonstrated: the commission had destroyed his "vision of the city as a united community" and Central Park as a city community center that would bring together all races and creeds "in a socially, neighborly, unexertive recreation" (Mandelbaum 1990:74–75).

Sweeny, like Tweed, was aware that "those young men," and others like them, were the source of their power. Their ward leaders were handpicked by them and were personally answerable to them. These ward leaders had their subordinates—district captains and "sub-leaders." Their responsibility was to get out the voters when they were needed and insure that Tammany-sponsored candidates would be elected. Many of these ward leaders, again, were the liquor dealers and saloonkeepers, men of power and prestige in their communities. "This vast network was in effect Tweed's private army" (Allen 1993:93). To give something back to these people, Tammany made sure that the needy were taken care of: in the winter of 1870–1871, each alderman received \$1,000 to buy coal for the poor (Myers 1971:230). If coal, jobs, and open spaces amid the dingy tenements could help insure that the vote got out, so much the better.

However, Sweeny and Tweed's innovations greatly offended many. Former political allies who "felt that their political aspirations had not been sufficiently recognized," felt that they weren't getting their fair share of plunder, or who held personal grudges against Tweed and Sweeny tried different ways to oust the two. These malcontents included James "Jimmy the Famous" O'Brien, who had run afoul of Tammany and lost his position as sheriff of New York County (Myers 1971:225).

Other ethnic voting blocs were chafing under the power of Tammany and its command of the Irish-American vote. New York City African Americans, enfranchised by the passage of the Fifteenth Amendment, found that their vote was virtually meaningless. Many times, Tammany "repeaters" would have been at the polls before them and cast ballots under their names (Hershkowitz 1978:125–126; Sante 1991:265). German-American Democrats, who had worked within Tammany in years past, had been moved out of Tammany by the Irish in the 1860s and sought to participate more fully in the municipal process (Mandelbaum 1990:82).

However, the most important and subsequently most effective threat against Tweed, Sweeny, and their allies came from the "reformers": "for the most part of the upper and middle class—professional men, bankers, merchants, the 'better' politicians" (Callow 1966:257). These people had been, from the days of Fernando Wood, effectively shut out of the halls of power. The ruling class was now largely lower middle class and predominately—thanks to Tammany—Irish. "But the old middle- and upper-class elite...felt only bitterness toward this new and not always 'respectable elite.' Republican institutions under the Tweed Ring, the reformers declared, were safe only in the 'rightful' hands of the educated, the wealthy and the virtuous. Now power had shifted to those at the bottom of society, their morals decayed, their religion Romanist, their Alma Mater, the corner saloon" (Callow 1966:258–261).

As yet, most of these people could only fume in silence. Some newspapers spoke out, most notably the *New York Times*, published by George Jones and edited by Louis J. Jennings (Hershkowitz 1978:158; Allen 1993:120). However, as early as 1868, *Harper's Weekly* started writing editorials against Tweed and the New York municipal government; their work was immeasurably aided by the political cartoons of Thomas Nast, a young German immigrant who attended grammar school near Tweed's old home on Cherry Street (Figure 30; Bales 1962:109).

Nast, who would also give to the world the Tammany tiger, the Democratic donkey, and the Republican elephant, drew devastating caricatures of Tweed as a bloated ("a 'slim' Tweed would not be as inviting a target. Point one, for dieters"[Hershkowitz 1978:xviii]), licentious, corrupt, sordid, Falstaffian giant with New York City under his thumb, seconded by a black-a-vised, bristly-haired, evil-looking Sweeny, a horse-faced Hall with oversized pince-nez glasses, and a portly, balding Connolly with a simpering smile, aided by ape-like Irishmen (Mandelbaum 1990:132).

These pictures fixed the Tweed Ring in the mind of the readers of *Harper's Weekly*—and indeed, to posterity—as the epitome of municipal corruption. Tweed was aware of Nast's power. "If those picture papers would only leave me alone," he said, "I wouldn't care for all the rest. The people get used to seeing me in stripes, and by and by grow to think I ought to be in prison" (Myers 1971:239).

The Tweed Ring, for good or for ill, reigned supreme, "an awesome political machine, supported by the immigrant and the native poor, and sustained on election day by a horde of Tammany warriors, repeaters, and corrupt election officials who made a mockery out of the power of the ballot" (Callow 1966:253). These "warriors" were the grass-roots support behind Peter Sweeny, William Tweed, and Tammany Hall. Their political opponents knew that: one of Thomas Nast's cartoons in *Harper's Weekly* caricatured the famous Hiram Powers sculpture "The Greek Slave" (Figure 31). Instead of a nubile—and nude—young woman tied to a post awaiting punishment, Nast showed the stereotypical subhuman Irishman "Paddy"—a mainstay of many of his political cartoons of the period. Paddy, complete with short jacket, knee britches, garters, hob-nailed boots, and shillelagh, is standing in handcuffs in front of a hitching post, subserviently gazing over his shoulder at his "master," Peter B. Sweeny.

Sweeny stands with his arms folded, looking fiercely at his "slave." A cat o' nine tails (multi-thonged whip) is tucked under one arm. He is dressed in what appears to be his normal everyday wear (Nast portrayed him in other cartoons in this dress)—a white linen duster (long overcoat), haphazardly buttoned, with his plug hat on the back of his head (*Harper's Weekly*, September 26, 1870, as cited in Werner 1932:241).

The message was clear. To the readers of *Harper's Weekly* and the *New York Times*, Peter Barr Sweeny—and Tammany—sought to control not only New York City, but possibly the entire United States through the use of those elements that a civilized society should not harbor: the criminal, the violent, the foreign, the potentially dangerous (Figure 32). Sweeny—and through him, Tammany—by coddling and controlling these dangerous elements, were themselves dangerous; they must be stopped.

2.5.6 Tweed Loses His "Brains"

The beginning of the end of the Tweed Ring came with the accidental death of James Watson, who was, as New York County auditor, the chief of the Finance Department. Watson was killed in a sleighing accident in January of 1871. A former newspaperman named Matthew J. O'Rourke eventually became county auditor and discovered the "evidence of the enormous robberies" (Myers 1971:238). O'Rourke leaked the information to "Jimmy the Famous" O'Brien, the former sheriff. O'Brien encouraged O'Rourke to continue his work and brought in a political ally named William S. Copeland to help O'Rourke expose the incriminating evidence (Hershkowitz 1978:173).

By the summer of 1871, O'Brien took what O'Rourke and Copeland had given him and went to the editorial office of the *New York Times*. He gave the editor, Louis J. Jennings, the proof needed to support the newspaper's charges of corruption and municipal theft from the Tweed Ring (Allen 1993:122–123).

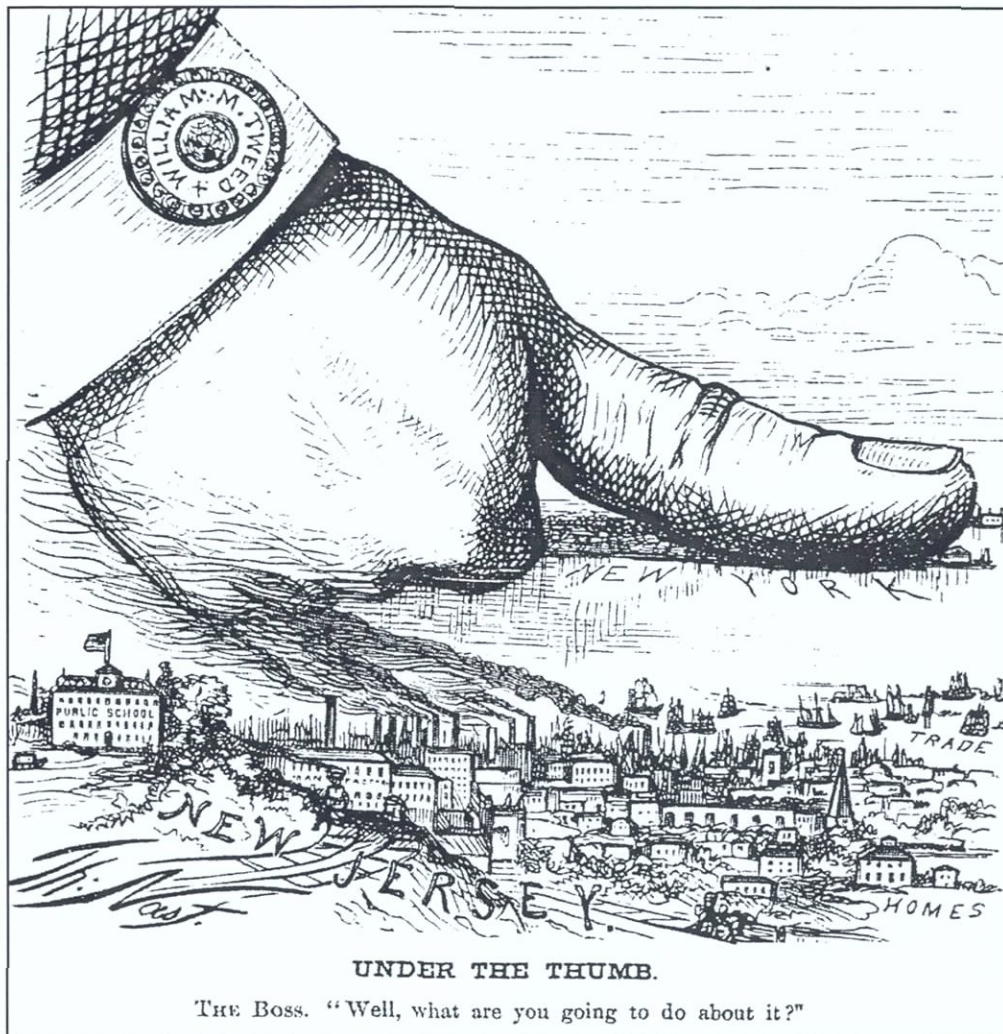


Figure 30. "Under the Thumb" (Harper's Weekly, June 10, 1871).



Figure 31. "The Greek Slave" (Harper's Weekly, September 26, 1870).



Figure 32. "The President of the United States and His Cabinet" (Harper's Weekly, September 30, 1871).

O'Brien's actions occurred about the same time as the infamous "Orange Day Massacre," when Protestant Irish, marching down Eighth Avenue celebrating the Battle of the Boyne, were set upon by Catholic Irish with stones, bricks, and bullets; over one hundred people, including women and children, were killed (Hershkowitz 1978:176). Tweed, Sweeny, and Hall were "accused of protecting the Catholic rioters" (Callow 1966:245), and their initial attempt to prevent the parade, which could be seen as an attempt to prevent bloodshed, was seen as evidence of "Irish Catholic Despotism" (Werner 1932:178).

Tammany's reputation was now at a low ebb. Tweed and Sweeny quickly attempted to buy off those people who were giving them the most trouble: Jennings and Jones of the *Times* refused to be bought off, as did Thomas Nast of *Harper's Weekly*. The city Board of Education, which supplied all city public schools with textbooks printed by Harper & Brothers, the publishers of *Harper's Weekly*, canceled the contract. The Harper family refused to ease the pressure on Tammany. Other politicians who were not directly involved with Tammany, like Samuel J. Tilden, head of the state Democratic Committee, began to voice their opinions as to "the sturdy, splendid crusade" of the reformers, and began to publicly disassociate themselves from the municipal government of New York City.

Tilden also began working behind the scenes to bring Tweed, Connolly, Hall, and Sweeny to trial, as "newspaper stories would not be enough" to stop them, and to defeat their supporters at the next elections to minimize the damage to the Democratic party. Therefore, a "Committee of Seventy"—made up of bankers, prosperous manufacturers and merchants, and descendants of those people who had represented the people of New York City earlier in that century (Callow 1966:256–258)—was "formed to examine allegations and pursue the guilty." Governor Hoffman—who owed his election as governor to Tweed—pledged "the complete legal resources of the state" to support the committee's work (Mandelbaum 1990:84).

Named as prosecutor was attorney Charles O'Connor, dean of the New York Bar Association. O'Connor was the son of the publisher and editor of the newspaper *Irish American* and the grandson of Irish Roman Catholic immigrants—the perfect person to represent the reformers, shielding them against charges of bigotry against the Irish (Myers 1971:238–239; Hershkowitz 1978:178–179, 181–184; Allen 1993:122–124).

When Tweed and Sweeny realized which way the wind was blowing, they tried to convince Richard Connolly, as city comptroller, to publicly admit that he was solely responsible for all the corruption, inflated bills, fluctuating property assessments, and other real—or supposed—instances of municipal fraud coming from the ring, thereby taking the heat. Connolly, who had no intention of being the scapegoat for the ring, went over to Samuel J. Tilden and the Committee of Seventy and offered to tell all (Allen 1993:130). Tilden had Connolly appoint as deputy comptroller Tilden's law partner, who went through the books and soon laid bare the extent of the ring's looting of the city treasury (Myers 1971:241). Tweed could see his power slipping. Although in the fall election of 1871 Tweed was re-elected to the state senate, his enemy "Jimmy the Famous" O'Brien also gained a seat. Other reformers, including Tilden, were elected to the state assembly, while nearly all of the Tammany-sponsored candidates were defeated (Hershkowitz 1978:200–201; Allen 1993:133).

The net was closing around the ring. Criminal indictments against the major figures in the ring were handed down. When Connolly resigned as comptroller, he was arrested on charges of conspiracy, fraud, and grand larceny and jailed on one million dollars bail. Tweed was arrested, but made bail. He was arrested again and again (Hershkowitz 1978:202). Although indictments were also issued against Peter and James Sweeny on these and related charges, both had left town. Thomas Nast commemorated Sweeny's departure with a tasteless cartoon that showed Sweeny, pistol in hand, reeling from a bullet through the head, and a headless Tweed ponderously walking toward two open doors—one leading to a jail cell, and the other leading "To the State Senate." The cartoon was entitled "Tweed Loses His 'Brains'" (Werner 1932:271).

The Sweeny brothers went to France. From their Paris apartment, they watched as Tweed, burdened by one trial after another, was eventually convicted and jailed. Despite an escape that carried him to Spain

(where he was arrested by Spanish authorities who thought, based on a Thomas Nast cartoon, that he was a kidnapper), Tweed died in prison (Hershkowitz 1978:338–340). Connolly, finally released on bail, also fled to Europe, never to return to New York City (Homburger 1994b:189). Mayor Hall went to trial, maintained that he had been too busy running the city to worry about what was in the papers Tweed and Connolly asked him to sign, and was cleared of all charges (Allen 1993:138).

Peter B. Sweeny never went to trial. After the death of his brother James, Peter cut a deal with O'Connor and the prosecution team: if he paid back some of the money he was accused of taking from the taxpayers, he would be allowed to return to New York, with all charges dropped. Over the strenuous objections of Boss Tweed, languishing in jail—he had hoped to testify against Sweeny—this deal was accepted; Peter then took \$400,000 from James's estate to pay the fine (Werner 1932:292). With his own immense fortune intact, he returned to New York City in June 1877 and lived "for many years in quiet retirement maintaining to the end that he was innocent," dying in Lake Mahopac, New York, on August 30, 1911, in his 86th year (Harlow 1938:18, 241; Hershkowitz 1978:314).

2.5.7 Reorganization of Tammany

"Honest John" Kelly (Figure 33), born on Hester Street in 1822 to immigrant parents, left school at eight upon the death of his father, a grocer, and started his working life as a grate-setter and soapstone cutter. Through the auspices of Tammany, the burly and taciturn Kelly served in a number of political offices—he was the man who defeated Mike Walsh's re-election bid for Congress—and became a wealthy man. After falling out with Tweed, Kelly went to Europe for an extended vacation. After Tweed's fall, Kelly took over as grand sagem of Tammany as well as head of the New York County Democratic Committee and cleaned house, getting rid of those former members who were too closely identified with Tweed and Sweeny, and encouraging younger and active members—like Richard Croker and George Washington Plunkitt—to take more active roles in political matters.

Kelly reorganized the New York County Democratic Party, establishing a hierarchy of its members. On the lowest level, election districts—composed of several blocks—were organized in each ward and controlled by a district captain. A number of election districts would compose an assembly district—from which one could be elected to the state assembly in Albany. These assembly districts were headed by a district leader. The leaders of the assembly districts would make up the County Executive Committee, headed by a chairman, a Tammany stalwart, answerable to "Boss" Kelly (Riordan 1969:5–6).

Kelly also decided that what was needed to make Tammany more effective was to centralize its control, making it less subject to the charisma of a Mike Walsh or a Boss Tweed or the intrigue of a "Brains" Sweeny (Allen 1993:152–153). Shrewdly, Kelly then invited into Tammany some of those reformers—including prosecutor Charles O'Connor and Samuel J. Tilden, who would be elected governor of New York with Tammany's help and then run for (and very nearly win) the office of president of the United States in 1876—who had been the most vocal opponents of the Tweed Ring, so that Tammany could announce to the public that it was "a reform body, with the boast that all of the thieves had been cast out" (Myers 1971:252–253).

Meanwhile, Kelly worked among the Tammany rank and file. Where the 33 district leaders that made up Tammany's general committee had the power to elect or depose a boss, Kelly formed an "executive committee" to which the general committee was answerable and packed it with his friends and political allies, essentially making his word law (Allen 1993:152). Kelly also controlled the giving of patronage by bringing it under his control. Municipal jobs were available for the asking—in 1888, when New York City consisted of Manhattan and some portions of the Bronx, 12,000 municipal jobs were available. Ten years later, when Greater New York was formed with the addition of Brooklyn, Queens, and Staten Island, the number of jobs had almost tripled (Riordan 1969:4). At one time, "certain jobs might be dispensed by an alderman, a state senator, or a city department head...henceforth all jobs (except for high-ranking ones) were handed out by the Tammany district leader—and the number of jobs each leader could dispense depended on the number of votes he had produced in the last election." A "Committee of Organization"—



Figure 33. "Honest John" Kelly (Allen 1993).

answerable to Kelly—was established to oversee this process and keep track of the jobs available to the district leader (Allen 1993:152–153).

To finance this activity, Kelly started requiring all candidates for office to pay “a sum of money proportionate to the office he sought....The money thus collected was held in a general fund until the day before the election, at which time it was doled out to the district leaders to pay for poll watchers, transporting infirm voters to the polls, and so on” (Allen 1993:153). This influx of funding was added to the money derived from the traditional methods of shaking down saloonkeepers, sporting-house madams, and local businessmen. Kelly was successful in his innovations; in the fall elections of 1873, Tammany reigned supreme, and “as long as the Boss was successful...[the members] were perfectly happy to do his bidding” (Allen 1993:152).

Kelly also realized that the bare-faced theft of taxpayers’ money by Tweed and Sweeny and Connolly would no longer be tolerated by the people of New York City. However, there was a way to make money as a politician above and beyond the salary designated for the elective position the politician may hold. “Honest graft,” distinguished from “dishonest graft—the shaking down of gamblers, saloonkeepers and whores” (Sante 1991:274) or outright theft from the city coffers à la Tweed Ring (Allen 1993:154)—could be utilized to make a tidy fortune.

For example, if someone discovered, well ahead of time, that certain public works improvements—municipal buildings, new parks, or playgrounds—would be located in a particular spot, this politician (probably stating that “I seen my opportunities and I took ‘em”) would “buy up all the land I can in the neighborhood. Then the board of this or that makes its plan public, and there is a rush to get my land....Isn’t it perfectly honest to charge a good price on my investment and foresight? Of course it is” (Riordan 1969:3–5). Fortunes were made.

2.5.8 Grass-roots Activities in the Neighborhoods

Tammany was busily training its future leaders, as well as making arrangements to help others who followed their dictates. At this time, a 12-year-old Washington Market butcher’s apprentice named George Washington Plunkitt went about on Election Day banging on doors, making sure that those who were supposed to vote did so. When needed, George, a native of the shanty town called Seneca Village, or “Nanny Goat Hill,” in the East 80s—now Central Park (Rosenzweig and Blackmar 1994:66)—would escort them to the polls (Riordan 1969:vii, xvii, xxiv, 19–20).

When George became eligible to vote, he canvassed the area, got the promises of friends and relatives to vote the way he wished, and went before the district leader to tell him that he could command a certain number of votes. As he remembered later, the leader smiled and said “Go ahead!” The young Plunkitt soon commanded 60 votes, and, to insure that those 60 voters would vote the way Tammany wished, Tammany soon helped the young man gain a seat in the state assembly. He would later become the leader of the 15th Assembly District on the West Side and hold one elective office or another for 40 years (Riordan 1969:21) (Figure 34).

Richard Wellstead Croker, who was a toddler when he left his native village of Clonakilty in County Cork, settled with his family in the Seneca Village shanty town in the late 1840s (Stoddard 1931:3–5). His father, a farrier and horse doctor in Clonakilty, upon arrival in New York registered with the local Tammany district leader and was soon able to get work as the assistant veterinarian to the horses of the Harlem Railroad. Soon the family moved to 3rd Avenue and East 28th Street (Connable and Silberfarb 1967:198–205).

The young Croker, who masked a keen intelligence and a sentimental bent with a penchant for fisticuffs, gang-banging, and other forms of mindless violence, started his working life as a machinist in the shops of the Harlem Railroad, working on locomotives. He first became involved in Tammany affairs as a gang leader who would, among other things, take a trainload of rowdies to other cities to interfere in their

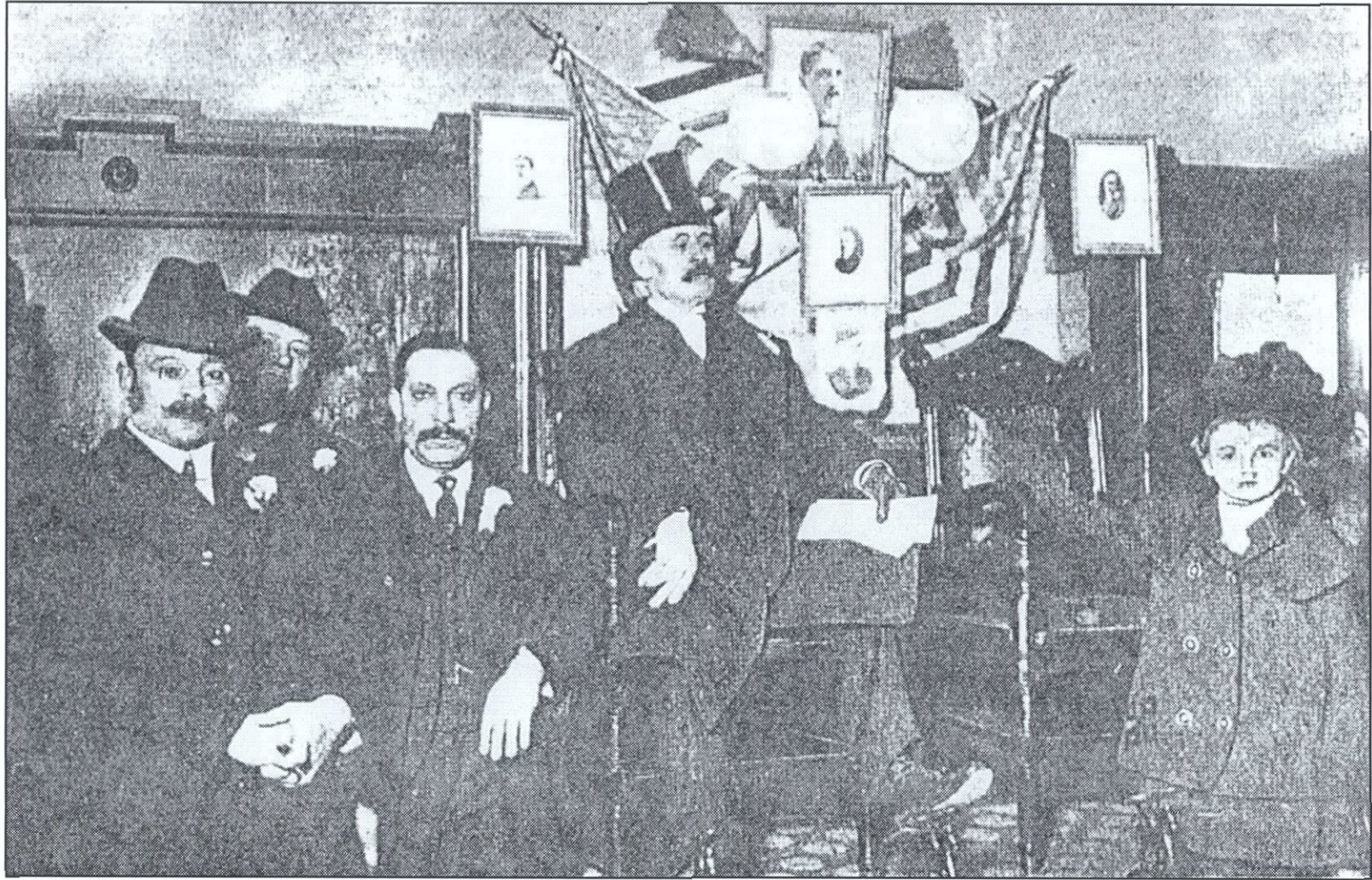


Figure 34. George Washington Plunkitt (center) at the shoeshine stand in the old criminal courts building (Riordan 1969).

municipal elections (Stoddard 1931:16–20) and, as a “repeater,” voted “early and often.” In one election, Croker once “succeeded in voting seventeen times for a Democratic candidate in Greenpoint,” Brooklyn (Allen 1993:172).

One cold day, Miss Frances B. Murray, a teacher in the Sixth Ward public school (Valentine 1848–1855), noticed that one of her charges had come to school nearly barefoot. After school was out, she took the child to the district leader of the Sixth Ward (later Sheriff), Matthew T. Brennan. Brennan immediately took the child to Baxter Street and bought him a pair of sturdy shoes, an act that the little boy—a recent emigrant from the village of Kenmare in County Kerry—never forgot.

When the grateful child grew into adolescence, he started his public career as a distributor of newspapers to newsboys; soon, while still in his teens, he opened up a saloon in the Sixth Ward. He voted at seventeen. Very soon, like Plunkitt, he organized his relatives and friends into a voting bloc that caught the eye of Tammany and rose in Tammany’s ranks, eventually becoming leader of the Fourth—or the Bowery—Assembly District. The young man was Timothy D. “Big Tim” Sullivan, who would later be known as the “King of the Bowery” (Harlow 1931:487).

These men—and many like them—were indebted to Tammany Hall. For those on the lower rungs of society, Tammany appeared as a beacon of hope. It was a source of jobs and public assistance, as well as a way out of poverty for the ambitious, but poor and unlettered, young man. As Richard Croker, who would eventually become “Boss” Croker, the omnipotent grand sachem of the 1880s, once stated: “Think of what New York is and what the people of New York are. Half, more than one half of our citizens are of foreign birth.... They do not speak our language, they do not know our laws, [but] they are the raw material with which we have to build up the state.... There is no denying the service which Tammany has rendered the Republic. There is no such organization for taking hold of the untrained, friendless man, and converting him into a citizen. Who else would do it if we did not? Tammany looks after them for the sake of their vote, makes citizens of them, in short; and although you may not like our motives or our methods, what other agency is there by which so long a row could have been hoed so quickly or so well?” (Stoddard 1931:120).

Croker was seconded by George Washington Plunkitt: “When the people elected Tammany, they knew just what they were doin’. We didn’t put up any false pretenses. We didn’t go in for humbug civil service and all that rot. We stood as we have always stood, for rewardin’ the man that won the victory” (Riordan 1969:12–13).

And this attitude was greatly appreciated by “the people.” Even in the earliest days of Tammany’s involvement with the residents of the Sixth Ward, the hand of charity—with strings attached—was extended to the poor and the destitute of the area. In the 1830s, Police Justice John M. Bloodgood “frequently went among the charitable citizens, collecting in a large basket, cakes, pies, meat, and other eatables” and would come down to the Five Points to distribute this largesse among the needy (Bales 1962:38; Myers 1971:118).

When milkman Patrick McCabe of 53 Cross (Park) Street (Lot 22) reached his 68th year (U.S. Bureau of the Census 1860) and either grew too old or enfeebled to sell milk from his wagon, Tammany found him a job as doorkeeper for the local firehouse. He opened the doors to let the fire wagons out when they left on a call; he closed the doors behind them when they returned. He may also have performed custodial duties like tidying up the engine room and cleaning up behind the horses. For that job, he received \$700 a year (Valentine 1860).

In 1850, 14-year-old Archibald J. Fullerton was living with his widowed mother Catherine, a seamstress, his maternal grandmother Bridget Boyne, and three little sisters under the age of 10 in a tenement room at 49 Cross (Park) Street (Lot 21) where they shared their living space with a family of four (U.S. Bureau of the Census 1850). There was evidently something about him that set him apart from the other kids on Block 160—he was one of the few adolescents in the census enumeration to be listed with a middle initial!

Archie apparently learned in the local public school to write a good hand, which eventually brought him to the attention of Tammany. By 1868, he was living on Cherry Street and was working in the city government as second assistant clerk to the common council. Fullerton rose through the ranks to first clerk of the common council, and with every promotion moved further and further uptown. He was living with his family on 4th Avenue near 55th Street upon his death in 1886 (Valentine 1870–1878; Trow 1872–1873:64).

Central Park policeman Thomas Wade of 55 Park Street (Lot 23), who had been a poor day laborer in 1870 (U.S. Bureau of the Census 1870), profited from the steady and constant salary due him as a city employee. By 1880, he was still at 55 Park Street, but his three sons were a policeman, a clerk in a brewery, and a college freshman. His 20-year-old daughter is not enumerated as having a job, so it may be assumed she did not work outside of the home, as nearly all of her neighbors did (U.S. Bureau of the Census 1880).

These “success” stories were the fuel that powered Tammany in the lower wards, and knowing from whence his power came made the leader responsible to his constituency. Up-and-coming young men like “Big Tim” Sullivan, “Battery Dan” Finn, “Big Bill” Devery, Paddy Divver, “Smiling Phil” Donahue, “Big Tom” Foley, or George Washington Plunkitt could eagerly seek the votes of their friends and neighbors, folks who “didn’t take any particular interest in politics” (Riordan 1969:14–15), and upon delivery of the vote, send down to them what perks or favors they had to offer.

Getting “a good government job” for the old milkman or the young army veteran who could write a fair hand was, for the local political leader, all to his benefit. The fact that people like McCabe and Fullerton were able to get these jobs and make a comfortable living would also give them—and their friends and relations—good reasons to support the political machine. “You can’t be patriotic on a salary that just keeps the wolf from the door,” Plunkitt observed. “When a man gets a good, fat salary, he finds himself humming ‘Hail Columbia’ all unconscious” (Riordan 1969:56).

Other activity that would bring the machine politician constantly before the eyes of his constituents in the neighborhood also was a potential vote garnerer. When a daughter of “the original Harris Cohen”—one of a number of brothers who were tailors and clothiers on Baxter Street (Lot 48)—was getting married, competing candidates for the Democratic nomination for assembly leader, Patrick J. (Paddy) Divver and Thomas F. (Big Tom) Foley, racked their brains to buy the perfect wedding present for the bride. The Cohens were well known all over the Lower East Side, and the appropriate wedding gift could bring in the “Jewish” vote. Foley stooped to subterfuge. He enlisted the aid of a local jeweler to find out what Divver was buying for Miss Cohen. When it was discovered that Divver had purchased a set of dishes and a set of silver knives, forks, and spoons, Foley did the same and added a silver tea service. Foley won the election (Riordan 1969:95–96).

As long as one voted the way he was expected to, favors requested from the local political leader could very well be granted. Again, George Washington Plunkitt: “What tells in holdin’ your grip on the district is to go right down among the poor families and help them in the different ways they need help.... The consequence is that the poor look up to George W. Plunkitt as a father, come to him in trouble—and don’t forget him on election day” (Riordan 1969:27–28).

Where some leaders, like Plunkitt, preferred the personal approach in meeting with his constituents, on Block 160 the center of political activity was, as it had been for so many years, the corner saloon. The establishment at 464 Pearl/110 Chatham Street (later 156 Park Row) (Lot 1/52) was a hive of political activity, its second floor being rented out as a meeting place for political organizations (Liber of Deeds for New York County 94:383 [Section 1], dated October 12, 1905, Sub-Lease of Premises at 156 Park Row—second floor—from Thomas Campbell to the Benjamin B. Odell, Jr. Republican Club of New York) as just one example. Its location—near City Hall, other municipal buildings, and the newspaper offices on Park Row—made it a well-known hangout for newspapermen, off-duty policemen, politicians from City Hall, and sporting figures.

The last owner and operator of a saloon at that site, Daniel J. "Diamond Dan" O'Rourke, who opened his establishment in 1909, was called the "Mayor of Park Row" (Harlow 1931:415, 541). The local "mayor" was described as a worthy who was positioned "to get the ear of the ward leader, district boss, and the precinct chief, [and] could get erring sons out of jail, [and] arrange for permits and variances to fly easily through the machine" (Sante 1991:117).

Therefore, if a resident of Block 160 wished a favor, all he (or she) had to do is bring it to the attention of the district leader—Big Tim Sullivan (and later Big Tom Foley or Paddy Divver). To do so, the supplicant would first go and plead his case before Diamond Dan O'Rourke, or one of his predecessors, at the corner saloon. If O'Rourke found the request worthy of the leader's time, it would be brought to Sullivan's attention; if something could be done, it would be done. As another ward leader once observed, "I think that there's got to be in every ward somebody that any bloke can come to—no matter what he's done—and get help. Help, you understand; none of your law and justice, but help" (Merton 1966:223).

There was, however, another side to this. As Oliver Allen points out, despite Croker's and Plunkitt's spirited defenses of Tammany, "for every \$100 that Tammany distributed for charitable reasons it received at least \$1,000 from some special interest to refrain from alleviating the underlying condition that caused the suffering....Plunkitt would be aiding the victims of a fire while Tammany would be doing nothing to improve housing conditions that had brought on such tragedies" (Allen 1993:156).

Plunkitt's "honest graft" and Sullivan's shakedowns of local merchants and people desiring favors cast a pall over the actual good that these representatives performed—Plunkitt was proud of his work in establishing the Museum of Natural History and opening the Harlem River Drive (Riordan 1969:7). The "Sullivan Law" prohibits the carrying of a concealed firearm, and Big Tim's Christmas parties for the down-and-outers in Chatham Square and on the Bowery (a free meal, new shoes, and clean socks were provided) were long remembered (Harlow 1931:491–497).

2.5.9 Conclusion

Tammany provided "the people of the slums" with more than "bread and...circuses" (Sante 1991:277). Tammany thrived in these neighborhoods because "the trials of poverty and crowded tenements made necessary values differing from those of abstracted legalisms and bred in a communal loyalty to one's neighbors" (Henderson 1976:35). For many years, Tammany provided "in a prevailing impersonal society...the important social functions of humanizing and personalizing all manner of assistance to those in need" (Merton 1966:222). The district leader, the ward leader, the precinct captain, the local "mayors," and their subordinates served their constituents in providing access to those city services that they may not have been able to get by walking uptown, hat in hand, and talking to a clerk in a city hall office.

Also, in acting as a social service agency in times of want, the local political leader was the man to whom everyone in the neighborhood went for help. From the time Police Justice Bloodgood trundled a wheelbarrow filled with food and pies through Five Points to when George Washington Plunkitt found temporary shelter for a suddenly homeless family, the residents of the district knew that when trouble brewed, the local politician was the person to turn to. As Gustavus Myers observed about Boss Tweed, "in the midst of a severe Winter...[as] these beneficiaries of his bounty...were gladdened by presents of coal and provisions, they did not stop to moralize, but blessed the man who could be so good to them....The expression, 'Well, if Tweed stole, he was at least good to the poor,' is still repeated, and furnished in its tacit exoneration, the prompting for like conduct on the part of his successors" (Myers 1971:230).

For those able and intelligent—but relatively uneducated—young men who may have been unable to get the educational opportunity to enter one of the professions, or if they were barred from utilizing "respectable channels" due to their ethnic or religious background, Tammany provided a way to prominence and power, supplying "avenues of social mobility for the otherwise disadvantaged" (Merton 1966:224–225).

As Oliver Allen observes, "When Tammany Hall finally perished, much that was bad went with it. But something was lost, too, and it will be missed" (Allen 1993:283).



3.0 THE CONSTRUCTION OF CLASS, RACE, AND ETHNICITY IN AN URBAN CONTEXT

3.1 Introduction (Rebecca Yamin)

There is no question that the project area housed members of New York City's emerging working class at mid-century, but the workers who lived at Five Points were more often classified by their race or ethnicity than by their class membership. A major focus of this research has been to discover how the residents of Block 160 classified themselves, how they used material possessions to identify themselves as members of specific ethnic groups or, indeed, of the working class. *If any one principle has guided this research, it is the belief that people's possessions mean something (Beaudry et al. 1991).* In the absence of words, things communicate their owners' values, tastes, and allegiances. But the meaning is necessarily context-dependent, and as much attention is paid here to building relevant historical contexts as to the things themselves.

Pitts's study of the penny press in Section 3.2 does two things. He briefly outlines the history of the press, differentiating between the mainstream papers, including the *New York Sun*, the *Herald*, the *Tribune*, and the *Transcript*, and the papers published by African Americans and other ethnic groups, including the *Truth-Teller*, the *Knickerbocker*, the *Subterranean*, the *Colored American*, *Freedom's Journal*, the *Irish American*, the *Irish Shield*, *La Verdad*, and *Der Staatszeitung*. He then examines the content of both groups of papers, contrasting how residents of Five Points were portrayed in the mainstream press with how they were portrayed in papers published by groups that lived in the neighborhoods they wrote about. The stereotyping of African Americans and Irish immigrants, in particular, was perpetuated and perhaps initiated by the mainstream press. Because the focus of these papers was on the sensational, reporters got much of their material from the police blotter and, according to Pitts, the cases described invariably involved Irish or African Americans. The ethnic press served a different purpose. It provided news and notices of interest to particular groups and attempted to counter how those groups were portrayed in the mainstream press. While the African-American papers lacked the economic resources to stay in business very long, during its two-year existence, *Freedom's Journal* circulated up and down the Atlantic seaboard carrying ads for merchants in Philadelphia and Boston as well as in New York. The Irish-American papers became identified with particular political factions, serving to unify the people who read them into blocs which could be exploited by politicians representing their interests.

As Reckner's analysis of clay smoking pipes (Section 3.3) shows, political allegiance and ethnicity appear to have been closely linked in the nineteenth century. Twenty percent of the clay smoking pipes recovered from a feature associated with German tailors on Baxter Street were decorated with patriotic motifs while only six percent of the nearly contemporaneous pipes recovered from a cesspool associated with an Irish tenement were similarly decorated. The process of trying to explain this patterning led Reckner to consider the different positions of German and Irish immigrants in the volatile politics of the day. New York's German tailors were among the most radical of the city's early unionists. Like the artisanal organizations that preceded them, unions used patriotic and explicitly American symbols, even though they were the same symbols used by the interests they contested. By co-opting national symbols, Reckner argues, they manipulated republican ideology and consolidated their own power. The Irish, on the other hand, may have avoided patriotic imagery because of its association with nativist rhetoric and ideology. The ideology of nativism was adamantly anti-Catholic and dependent on the creation of a foreign-born "other" who supposedly threatened the ideals of the republic. The Know-Nothing political party attacked Irish Catholics, reducing them to a racial stereotype that was visually portrayed as a dehumanized creature. This study points to the multi-vocality of patriotic imagery and the necessity of interpreting symbols within specific contexts. It also makes it clear that ethnicity played a key role in people's identities within the working class.

According to Dallal, Masonic symbols used as decorative motifs on tobacco pipes did not necessarily correlate with membership in Masonic lodges. Although she was able to locate a few Masons on Block 160, they were not residents of the lots where pipes decorated with Masonic symbols were found. She

suggests in Section 3.4 that the pipes may have been part of a kind of transubstantiation ritual from foreigner to citizen. Beginning after the Revolutionary War, Masonic symbols were apparently used on all sorts of utilitarian objects and were considered as American as cornbread. Whatever their meaning to the residents of Block 160 who owned them, the presence of pipes decorated with Masonic imagery is yet another indication of participation in cultural activities that reached beyond the Five Points neighborhood.

Milne and Crabtree's analysis of the faunal remains from the Five Points features (Section 3.5) poses two questions at the outset: whether differences in food choices can be seen as an expression of ethnicity and to what extent food choices may be a reflection of socioeconomic status. Although these factors are always confounded, the analysis of the 65,000 bones recovered from the 22 features excavated within Block 160 presented in Section 3.5 reveals patterns that definitely suggest variation based on ethnicity within the constraints of limited economic means. A feature associated with a household headed by a rabbi (Feature B), for instance, included little pork, only beef from the foreshank of the animal, and lead "plumbes" which were used to indicate that a chicken had been slaughtered according to kosher law. A feature associated with German occupants (Feature AN) was distinguished from all other features by including more mutton than beef, while deposits associated with mid-century Irish tenants were dominated by pork. By combining information from contemporary ethnic cookbooks with documentary information on residents and lot use, Milne and Crabtree are able to speculate on how a widowed artisan's wife adjusted to her reduced economic circumstances (Features AF and N); what was being cooked in the Irish tenements on hot summer nights; what Jews ate during shabat when they were not allowed to turn the stove on or off; and what was served in a saloon (Feature O), an eating house (Feature AM), and a brothel (Feature AG). The study includes a detailed discussion of major strata in ten features as well as appendices including tables listing remains from additional strata and the remaining features.

Raymer's study of macroplant remains (Section 3.6) focuses on changing patterns of plant use through time and ethnic and class differences in plant use. The decrease in naturally occurring wild plants and kitchen garden species over time reflects the intensification of the use of space on the block as the population expanded. There is also evidence for the tremendous variety of plant foods that were available in New York City's markets by the 1840s. Like other New Yorkers, Five Points residents took advantage of that variety, suggesting that economic circumstances did not limit food choices in terms of plants. The use of coffee is the only instance that appears to relate to ethnic preference. No coffee beans were found in the deposits associated with Irish tenement dwellers on the block, but they were found in the deposit attributed to a brothel on Orange Street and in the deposit associated with Widow Hoffman's household on Pearl Street. A large proportion of the plants (45 out of 65 taxa) identified had medicinal uses in the nineteenth century. Of particular interest is the possible use of wormseed as an intestinal worm remedy since other evidence (see Section 5.4 below) suggests that the tenement dwellers on Block 160 were able to control the incidence of worms.

The analysis of condiment containers and serving pieces presented in Section 3.7 relied on a small sample of artifacts, which in itself is new information. Apparently working-class households could not afford, or did not have a taste for, quantities of condiments. However, Bonasera did notice patterned differences between artifacts associated with German households and those associated with Irish ones. The Germans, including the Jewish Goldberg household as well as the Hoffmans next door, used London mustard and a variety of imported olive oils, while the Irish accompanied their meals with pepper sauce, Worcestershire Sauce, and pickles. The few condiment serving pieces recovered generally belonged to more well-to-do residents of Block 160 or to public establishments, such as the brothel on Lot 43 and the eating house on Lot 52. When contrasted with middle-class sites that have been investigated in New York, it is clear that the paucity of condiments and their associated serving pieces are one indication of the impoverished circumstances in which the people on Block 160 were living.

A teacup decorated with the image of Father Mathew administering the temperance oath to an adoring flock was one of the few artifacts recovered on Block 160 which could be specifically associated with an Irish theme. Father Mathew was a Catholic monk from Cork, Ireland, who spent two and a half years

advancing the cause of temperance in the United States. In Section 3.8, Kelly briefly discusses the significance of a Catholic joining a previously Protestant-controlled movement; Father Mathew's influence in Ireland and the United States; and how people interested in other causes—the abolition of slavery in particular—attempted to get him to endorse their causes. While we cannot know how the cup was used in the household at 472 Pearl Street that finally deposited it in the trash, the fact that it had no wear marks suggests it was a valued ornament. *The owners of the cup may or may not have abstained from alcohol, but surely they were proud of their countryman who Kelly's study shows was treated as a celebrity in New York.* Temperance was an issue that was used against the Irish as a method of control and possibly conversion, but it may also have been a serious concern within the Irish community.

As becomes evident from the studies in this chapter, the expression of ethnicity is not necessarily a matter of using the obvious: shamrocks, for instance, are almost entirely absent from the assemblage, a large proportion of which represents the possessions of newly arrived Irish immigrants. Ethnicity appears to be a process of differentiation that involves innovation as well as tradition, change as well as continuity. Working-class identity is even more illusive, although one scholar (*Gutman 1977*) has suggested that ethnic diversity is one of the things that distinguished the nineteenth-century American working class, preventing the alienation and dislocation that has often been assumed for workers who were forced to live and work in difficult circumstances.

3.2 “We Write to Enlighten and Inform our Readers”: Five Points in the Contemporary Press as Seen by Themselves and by Others (Reginald H. Pitts)

3.2.1. Introduction

The cheap matches and the cheap newspapers were sold in every street. Families before this had borrowed coals of fire and newspapers of their richer neighbors. With the reduced prices, each family had a pride in keeping its own match box and in taking its own daily newspaper (Isaac Clark Pray in the *New York City Sun* 1857).

A newspaper can send more souls to Heaven, and save more from Hell, than all the churches and chapels in New York—besides making money at the same time (James Gordon Bennett in the *New York Herald*, February 28, 1837).

Here’s a bit of life, Mr. & Mrs. Reader; it will interest you in this hot weather; the *Sun* shines for all (Charles A. Dana in the *New York City Sun*, July 27, 1868).

New York City has had a long and varied history of newspaper publishing—providing news either for the general public or for a selected few. At one time, newspapers printed items and stories of interest to the few—notices of ship arrivals and departures; notices of chattel and other property put up for sale; long and boring polemics and platitudes excerpted from novels or parliamentary debate; and items several weeks or months old concerning European occurrences.

After the close of the American Revolution, each political party commanded the papers to build up its particular party at the expense of the others. The price of a single issue—anywhere from six cents to almost a dollar—was prohibitive to the masses of the people. Furthermore, these papers were distributed to subscribers, people with fixed addresses and places of business (Schudson 1978:15–18). The workingman who slept in the parks or paid for a night’s lodging in various rented rooms was not the type of person who would receive such a newspaper.

About the beginning of the 1830s, “a convergence of technology and technique...led to a newspaper revolution in New York City that resulted in cheap newspapers designed for a mass audience” (Crouthamel 1989:19). This phenomenon was described as “the offspring of the industrial revolution made to suit the pocket books of ‘mechanicks, porters, and draymen’ [and would also have to] suit their interests and tastes” (Mott 1952:59–60). These papers were called “penny press” or “penny papers” because most, if not all of them, cost just one cent for one issue. New York’s first true penny paper¹ was Benjamin H. Day’s *Sun*, which first saw the light of day on September 2, 1833, from offices at 222 William Street (O’Brien 1918:230).

From the first, the *Sun* was a success. Day “had given the masses a paper they could afford, but he also knew how to give them the news they liked to read—local news, of an unvarnished kind” (Tebbel 1969:93). In discovering that it was more effective to appeal to the emotions than the intellects of the masses (Bleyer 1922:162), Ben Day opened the way for a type of affordable news gathering that would reach a larger number of readers.

James Gordon Bennett, an irascible and contentious Scotsman, followed Day with the publication of the *New York Herald*. Starting operations from a cellar at 20 Wall Street on September 18, 1835, Bennett’s *Herald*, like Day’s *Sun*, reflected the public they were trying to serve. “Bennett reported what was going on [in New York City] with a blunt, accurate style, far different from the wordy, mock elegant manner which had become standard except in partisan political attacks” (Tebbel 1969:94).

A less charitable view grudgingly acknowledged that the *Herald* “embodied four original ideas in journalism. The first, and most important, was the necessity of a thorough search for all the news. The second was that fixed principles are dangerous, and that it is more profitable to be on the winning

¹ The first true “penny paper” was printed in Philadelphia in 1830 and was called, appropriately, the *Cent*. It lasted only a short time (Smith 1911:18).

side....The third was the value of editorial audacity...[and] the fourth idea...was the value of audacity in the news; of unconventionality, vulgarity, and sensationalism" (Nevins 1968:157–158).

Early penny-press editors had an unerring sense of what would appeal to the shopkeepers, craftsmen and artisans, political hacks, laborers, parlormaid, and apple women who were their primary customers. These papers zeroed in on the human interest dimension of important news stories, both on the local and the national front. Furthermore, these papers gave insight into the lives of their readers by citing the existence of injustices and occasionally offering solutions. Indeed, "audacity" is the operative word. The people who read these penny papers were not apprehensive or timid; their world would not allow them to be. The writing had to be "direct, sensational, and witty" (Mott 1952:59); so the "penny papers expressed and built the culture of a democratic market society, a culture which had no place for social or intellectual deference" (Schudson 1978:19).

Besides innovative mechanical techniques that allowed more printed pages (Schudson 1978:31–33), the penny press stayed inexpensive by charging for advertising space. Local merchants were more than willing to pay for advertising in the penny press, as they knew that the readers were in the same neighborhood. In the pages of these papers one finds ads for groceries, mercantile establishments, private schools, taprooms, boardinghouses and hotels, livery stables, seamstresses, employment agencies, and "offerings for sale."

The area of Five Points—the intersection of Baxter (then Orange), Worth (then Anthony), and Park (then Cross) Streets in the old Sixth Ward of lower Manhattan in the early nineteenth century—was described by some as home and by others as a hellhole. One reason that residents of this area were viewed with suspicion and hatred by the rest of the city was that a very large percentage of these people were foreigners—recent immigrants from Europe, with the Irish predominating. Foreigners were looked upon with distrust, as their ways seemed peculiar to their neighbors. Many of the early penny papers—the *New York Sun*, the *Herald*, the *Tribune*, the *Transcript*, the *Standard*, and others geared for general distribution throughout the city—viewed the residents of Five Points with a mixture of pity, revulsion, and fear, emphasizing the sensational, the violent, and the bizarre.

These papers were read by the men who were prominent in the Five Points neighborhood and known to city residents outside of the area—politicians, liquor dealers, grocers, undertakers, doctors, lawyers, small merchants, and well-known local characters worthy of having their activities listed in the papers while alive, and their obituaries found there after their deaths. There were also papers that spoke directly to the residents of Five Points, Broadway, the Bowery, Chatham Square, City Hall Park, and the surrounding areas. Among them were the *Truth-Teller*, the *Knickerbocker*, the *Subterranean*, the *Colored American*, *Freedom's Journal*, the *Irish American*, the *Irish Shield*, *La Verdad*, and *Der Staatszeitung*.

Taking advantage of the new technology and marketing techniques that made the mainstream penny press available to the reading public, Africans, Jews, Irish, Germans, and others each published news that was of more immediate interest and relevance to members of its particular minority group. These publications treated the people and the area quite differently than the mainstream press. The reader of these papers also found that not all who lived in the Five Points area were destitute, devoid of all hope, or down-at-heel, but were just people like any others, with hopes, dreams, and desires. The advertisements reflected the needs and desires of a particular audience, thus providing insights into daily life.

This section describes how the people of Five Points and other slum areas were depicted in the popular press of the day, along with some insight into how this happened and also how the "depraved classes" resisted these stereotypical depictions of themselves in their own publications.

3.2.2 Depiction of Five Points and Neighboring Areas in the Popular Press

To the Curious:—The collection of filth and manure now lying in heaps, or which has been heaped in Wall, Pearl, Water and Front Streets, near the Coffee-House, and left there, will astonish those who are fond of the wonderful, and pay them for the trouble of a walk there (*New York*

Evening Post, June 13, 1821, cited in Allan Nevins, *The Evening Post: A Century of Journalism* 1968:67).

The streets of New York are so filthy that an Irishman could plant potatoes in the middle of them (*New York Citizen*, February 24, 1844).

Look any and every day in the week, at your morning paper, and see what a black record of crime has been committed in your public streets the day and the night before, what stabbings, what shootings, what knockings down, what assaults by slungshots and otherwise.... It is very commonly answered, that these acts are done by foreigners recently come here, and not by our citizens: granted, and what is the commentary? Why do not these foreigners commit these acts of violence in their own country? (James W. Gerard, in *London and New York: Their Crime and Police*. W.C. Bryant, NY).

SCENE AT THE FIVE POINTS—Yesterday, a man named John Freeman, a mate of a vessel, strolled down to this hell on earth, and was enticed into [the] cellar [of] no. 66 Orange [Baxter] Street. Here he treated the inmates liberally to what they chose to drink, and ultimately getting very drunk himself, he fell asleep, and was robbed of several dollars which he had about him. He was awakened by the attempt of three negro women to strip him of his clothes; he procured an officer and had them arrested. Their names are Sarah Graves, Isabella Lee, and Catherine Smith, and they are bound for trial (*New York Transcript*, July 18, 1834).

During the first years of the nineteenth century, most of the newspapers serving Manhattan—penny and “two-penny dailies,” “cheap” weeklies, and the commercial and mercantile newspapers—were printed and published in lower Manhattan, for “lacking...rapid transportation, it was necessary for newspapers to remain near City Hall and the criminal courts, on both of which contemporary journalism depended heavily for news” (Churchill 1958:19).

Being so close to the courts of justice, the mainstream penny press emphasized “crime news”—either as “a means of exposing the corruption, cruelty, and class bias of the criminal justice system” (Stevens 1991:20) or “amusing, entertaining, and shocking” the reader (Nevins 1968:162). Crack reporters like William H. Atree of the *Transcript*, George W. Wisner of the *Sun*, and James Gordon Bennett of the *Herald* pioneered the use of the police blotter. Every morning, these reporters would appear at the courtrooms of the police justices at the Jefferson Market Court or at the “Tombs” prison—officially the Halls of Justice located in the block bordered by Franklin, Leonard, Centre, and Elm (Lafayette) Streets (Sante 1991:244)—and get from the court clerk the names of those miscreants scheduled to appear before the judge. The reporters would then remain during the day, watching the accused appear before the bar of justice; while the defendants told their stories, the reporters would busily take them down for publication in the evening papers or next day in the morning papers (Crouthamel 1989:233).

As the sampling at the head of this section indicates, a significant amount of news referring to the residents of the Five Points neighborhood listed them under the heading of “crime news.” These stories, sometimes straightforwardly reported, but many times embellished with the ferocious humor of the time, would find their way into the pages of the newspapers. At the time, it bothered few people “that an innocent man, because he is poor and defenseless, may be caricatured, and consigned to the infamy of a day, and even to the loss of employment,...[for] the people must be amused” (Isaac C. Pray of the *New York City Sun*, as quoted in Stevens 1991:24–25).

The offenders brought before the court were invariably Irish or African American, and their stories—along with the appropriate dialect—provided entertainment for the reader. The stereotypical image of the Irishman—inconsequential, simple, boorish, brawling, larcenous, ignorant, drunken, dirty, promiscuous, rash yet somehow lighthearted, cheerful, and amiable (unless drunk)—and the stereotypical image of the Negro—shiftless, stupid, lackadaisical, savage and licentious, yet childlike, docile, and cowering in the presence of a white man—permeated “the ordinary, everyday verbal exchanges of antebellum Americans”

(Knobel 1986:15). These pervasive images were promoted through the popular culture of the day, as “stage Irishmen” and “traveling darkie minstrels” commonly appeared as “comic relief” in popular plays and books.

Therefore, by the time Ben Day and James Gordon Bennett started to peddle their papers, the stereotypical Irishman and Negro were fixtures in the popular press, where both drunken “Paddy” (and his slatternly consort “Bridget”) and stupid “Julius” (and his rambunctious consort “Dinah”) were contrasted to the Anglo-American (by the Anglo-Americans themselves)—as obviously inferior in mind, word, and deed, and, therefore, unfit to be considered as Americans.

Although the mainstream penny press did sometimes print sympathetic or non-judgmental reports of the *inhabitants*, many of them de-emphasized the tragedy or the hardship of the situations and treated it with a light touch. The editor of the *Transcript*, walking through City Hall Park at eleven o'clock one summer evening, “espied a man lying on the grass, just beside one of the gravel walks.” When he woke the man and asked him about his business, the sleeper, an Irishman in the country “three wakes” “rubbed his eyes, and replied, ‘Faith, sir, and ain’t it sleepin’ I am?’ When asked whether it would be better to find lodgings, the Irishman said that as he found that he could save a quarter (the price of a night’s lodging) by sleeping in the park, he was pleased to do it. In Ireland, he explained, ‘a man can’t slape, as he can here, in the public square, all night without bein locked up...for disturbin’ the pace. Long life, I say, to Ameriky and its free institutions!’” (*New York Transcript*, July 30, 1834).

Occasionally, some compassion was displayed by the mainstream press. The roving editor of the *Transcript* one day noticed that the old women who sold apples near St. Paul’s Church had been forcibly moved from their normal spots to peddle their fruit elsewhere. “They are turned abroad to seek new stands; they are driven from the shady places to broil and wither in the sun.” One woman, who was moved from Broadway to Vesey Street, when asked the reason for her removal, claimed that “the alderman has shifted me.” To the next question (“What for?”), she replied, “Just to show his power, I suppose. It couldn’t be for any good it did him, or anybody else; for here I was, turning an honest penny, and not molesting anybody, when all at once he comes to me and says I must ‘vacuate the premises. And what could a poor old woman do against an alderman?’” However, the *Transcript* failed to pursue the story (*New York Transcript*, July 30, 1834).

Such articles led James Gordon Bennett and the *Herald* to attack the *Transcript* as the “Five Points paper” or “as the publication read most by the denizens of the Sixth Ward” (*New York Herald*, June 21, 1835). If this was an attempt on Bennett’s part to wean readers from the *Transcript* by denigrating it as a publication good only for the degenerates of the Five Points—and thus beneath contempt—it may have been successful, as the *Transcript* lasted only a few years. However, the nature of some of these accounts leads one to ponder whether the *Transcript*, with its stories of applewomen, seamstresses, and Irish laborers, was showing slices of life or, in its own way, promoting stereotypical views of the foreign poor in a lower key than that of the *Sun* and the *Herald*.

Another mainstream penny paper that showed interest in the plight of the residents of Five Points was the *Aurora*, for a time edited by the poet Walt Whitman, fresh from farming and schoolteaching and editing and writing for both small newspapers on Long Island and the mighty Brooklyn *Eagle*. Whitman was appointed to the editorship of the *Aurora* in early 1842 (Kaplan 1980:78).

Where a number of the editors and publishers of the papers lived further uptown (Longworth 1825–1845), Walt Whitman boarded at roominghouses near his place of business: he “explored the Great Metropolis from ‘Mrs. Chipman’s [at] 12 Centre Street; Mrs. R.’s in Spring street, Mrs. Bonnard’s in John street; Mrs. Edgerton’s in Vesey; [and] at Brown’s in Duane street’” (Kaplan 1980:95–96). He walked the streets of Five Points and the surrounding neighborhoods, firing his imagination “on the plays he saw...in the theaters along Park Row, Chatham Square and the Bowery” (Kaplan 1980:78).

Whitman, therefore, knew the residents of Five Points firsthand and treated them in the *Aurora* as human beings with problems and in difficult circumstances, not subjects of humorous tales or prototypes of vice and decadence that, if not checked, could take over the city. For example, while walking through City Hall Park one afternoon, Whitman happened on a group of boys shooting marbles on a public sidewalk. A policeman marched up, swinging his billyclub, and chased the boys away. Whitman was dismayed and vented his indignation in print, decrying the fact that if these boys had been of a higher social class they would not have been treated in such a manner (*New York Aurora*, February 23, 1842).

Such articles were few. Five Points, within walking distance from the offices of various newspapers, provided the majority of the crime news to the exclusion of happenings at other areas further uptown, like the "Red House" at McGowan's Point (110th Street and 3rd Avenue) (Gilfoyle 1992:29-31). Five Points, however, was, in the words of *Tribune* reporter G. G. (Gaslight) Foster, "that great ulcer of wretchedness—the very rotting skeleton of civilization" (Foster 1990:126), whose residents were largely drunkards, libertines and felons living in the depths of poverty and crime. "Thievery, beggary and prostitution provided their vile existence," trumpeted the *New York Police Gazette*, the great-grandfather of today's tabloids, "and the drunkenness and the attractions of the lowest of grogeries their sole escape in what they deem pleasure" (Van Every 1972:282).

To take one example of the "crime-ridden streets," the *Transcript* reported the story of a 14-year-old girl enticed away from her parents' farm in Jamaica, Queens, by "a rascally clerk who lives in Pearl street and placed by him in a house of ill fame in the city." The girl's mother, "half distracted," came into the city and requested the aid of the police. One patrolman found the girl in "a notorious house on Leonard street." The piece concludes, "the child was restored to her mother who took her home in the hope of reclaiming her." To grab the reader's attention, the article bore the one-word heading: "SEDUCTION" (*New York Transcript*, July 10, 1834).

Some residents of Five Points and other slums read such accounts and deeply resented the characterizations found there. With the growth of anti-immigrant fervor against Irish and other foreigners, whether naturalized citizens or not, the latter fought back as hard as possible. Riots against those who were oppressing these people were not uncommon; others vented their spleen in the letters-to-the-editor section of the newspapers.

The *Champion of American Labor* was a short-lived nativist paper printed in the 1840s. Its strident articles and editorials pilloried immigrants and described how they were taking away the jobs that "honest workmen who were Americans by birth, not choice" needed. A naturalized citizen fought back in print: "You intend to shut out the foreigners or naturalized citizens of this country from any benefit that will arise from your plans to get better wages.... You use the word *American* very often and nothing at all is said about *naturalized citizens*; but if you think to succeed without the aid of foreigners you will find yourself mistaken; for we are strong and are getting stronger every day, and though we feel the effects of competition from those men who are sent here from the poor houses of Europe, yet if you don't help us to get better wages by shutting off such men, why you needn't expect our help" (*New York Champion of American Labor*, April 17, 1847).

For these residents, forced by mischance or poverty to live in leaky, drafty tenement rooms and work long hours for meager wages, newspapers addressing concerns affecting members of their particular ethnic group or their political leanings were available, so that a picture of how these people saw themselves was made available to them. Within the pages of such papers as the *Colored American*, *Subterranean*, *Truth-Teller*, *Irish American*, and *Freeman's Journal* can be discerned something of the private lives and perceptions of some residents of Five Points and other sections of the city. Their lives did not always involve assaults, larcenies, or petty thievery or revolve around drinking to excess or wallowing in their own filth.

3.2.3 How the Residents of the Area Viewed Themselves and Their Neighborhood

Timothy Donohue, who was committed to prison Thursday morning for drunkenness and abusing his wife, is not the same person who resides at no. 31 Vesey Street of that name. On the contrary, Mr. Donohue of Vesey street is a worthy citizen (*New York City Sun*, July 21, 1834).

Oppressed Americans! Who are they? Nonsense, brethren! You are COLORED AMERICANS. The Indians are RED AMERICANS and the white people are WHITE AMERICANS and you are as good as they are and they no better than you. God made all of you from the same blood (*New York Colored American*, March 15, 1838).

A PITHY ANSWER TO A SHORT ADVERTISEMENT.—A Shopkeeper, in Grand street, the other day, stuck upon his door the following laconic advertisement—“A Boy Wanted.” On going to his shop the next day, he beheld a smiling little urchin in a basket with the following pithy label—“HERE HE IS!” (*New York Transcript*, June 25, 1834).

Two thousand European immigrants might arrive in a single day and pour into the rookeries of Pitt, Ridge, and Attorney Streets, some of the dirtiest looking places in New York.... These newcomers are not paupers and criminals, but the Republic's most needed asset, the wealth of stout poor men who will work (*Walt Whitman in the New York Aurora*, cited in Kaplan 1980:78).

Soon after their arrival in New York City, immigrant groups began to publish newspapers printed to provide news and notices affecting members of their particular ethnic or religious group. These papers also served as a unifying force for immigrants: they provided a means by which they could keep in touch while dealing with the reality of New York City. Immigrants from France started *Le Courier Etats-Unis* in 1839; Gustav Adolf Neumann started publishing the German-language newspaper *Der Staatszeitung* on Chatham Street (later moving to Park Row opposite Chatham Square) on Christmas Eve 1834. Neumann's publication was followed by at least five other German-language papers serving the growing German-American population in Manhattan (Wittke 1957:44–45), primarily located in *Kleinedeutschland* (Little Germany) just north of Five Points and the Bowery at First Avenue and Houston Street.

Refugees from the Carlist wars in Spain and the civil wars in Latin-American countries published newspapers backing their group's beliefs. In 1848, Cora Montgomery, supported by Cuban refugees, published a weekly entitled *La Verdad* (The Truth), that called for the annexation of Cuba by the United States 50 years before it actually occurred. German Jews boasted the *Asmonean Journal*, and soon Italians, Welsh, and Scandinavians could read the news of New York, the United States, and their native land in their native languages (Ernst 1994).

Irish Americans and African Americans—as with other minority groups—strenuously disagreed with the mainstream press about how they were depicted. Their small newspapers supported the hopes and dreams of their readers, while encouraging them to stand fast and persevere. The *Truth-Teller*, published from 338½ Broadway beginning in 1831, was one of a number of newspapers published for Irish immigrants, providing information useful to either Protestants or Catholics. It printed dispatches from London and Dublin, giving the recent immigrant a chance to keep up with news from home. “A box for the convenience of correspondents, advertisers, etc., in the lower part of the city will be found at Mr. John Kearney's O'Connell House, no. 5 Chatham street. Communications left there will be promptly attended to” (*New York Truth-Teller*, March 12, 1831).

The *Truth-Teller*, like its successor, the *Irish-American*, and its competitor, the *Freeman's Journal and Catholic Register* (the official publication of the Archdiocese of New York—not to be confused with *Freedom's Journal*), appealed to the conservative, settled component of the Irish-American community in New York. These publications were in business for well over 40 years. Other Irish-toned publications, like Thomas F. Meagher's *Irish News* of 1856, were thought of as radical and liberal by their likely reading public and were shunned.

The *Truth-Teller*, which catered to recent Irish Catholic immigrants, had in one issue no fewer than five advertisements for coffin makers—including John L. Dillon’s establishment at 496 Pearl Street (*New York Truth-Teller*, November 12, 1831). This is a poignant fact, particularly since the mortality rate among the urban poor—especially among recent immigrants to the United States—was so high.

Nearly all New York Irish, be they either Protestant or Roman Catholic, were keenly interested in the plight of their homeland under British rule. The pages of most papers were concerned with the career of the leading advocate for Irish Home Rule, Daniel O’Connell (1772–1844) and his successors. Many pre-Famine Irish who had prospered in the New World were able to send money and support measures that would help their brethren back home. For instance, the January 6, 1844, issue of the *Truth-Teller* recounted a meeting held at Tammany Hall for “Repeal Wardens.” These “wardens” had been compelled to travel about and collect donations from fellow Irish Americans in their districts and report back with the amounts that they had collected. And they did, each proudly announcing their names and places of origin.

Among the wardens for the Sixth Ward was James Malone, successor to Dillon’s undertaking establishment at 496 Pearl Street. Malone, who stated that he was a native of the village of Drumbcashel in County Louth, donated two dollars; he had also collected a dollar from his wife Catherine, a native of County Westmeath, and a dollar apiece from each of his children from nine-year-old Cathy to baby Annie, all born in the Sixth Ward (U.S. Bureau of the Census 1850)—six dollars in all. Another warden was junk-shop owner (later policeman) Bernard McParlin, of 8 Orange (Baxter) Street, who was an Ulsterman from County Armagh. He added 50 cents to the three dollars that he had been able to collect from his friends and relations (*New York Truth-Teller*, January 6, 1844).

During the winter of 1826–1827, New York City African Americans were made aware of “ugly rumors... which most aggressively and viciously supported the notion that Negroes, criminal and dissolute as they tended to be, both male and female, constituted a grave menace to the peace and safety of white New Yorkers” (Jackson 1989:122). To counter these slanders, a group of African Americans met at the home of Boston Crummell and made plans to start the publication of a newspaper entitled *Freedom’s Journal*—the first newspaper published by and for African Americans. Named as editors were Samuel Eli Cornish, a Delaware-born sailor who became a Presbyterian minister, and John Browne Russwurm, a native of Port Antonio, Jamaica, and the bearer of bachelor’s and master’s degrees from Bowdoin College. The paper’s first issue came out February 6, 1827 (Bennett 1968:63). From the first, *Freedom’s Journal* saw itself as a national voice for African Americans; it was circulated up and down the Atlantic Seaboard, and carried ads not only for local New York merchants but also for merchants in Philadelphia and Boston (Dann 1971:10).

Freedom’s Journal was printed for two years; Samuel Cornish then “began from scratch a new paper” entitled *Rights of All* which lasted less than a year (Jackson 1989:1260). A number of other African-American newspapers made their appearance at various times, but also failed soon after their inception. This was due, in part, to the fact that “the press was always in dire financial straits” as its clientele were largely unable to financially support it (Jackson 1989:126). Also, many of the men who edited and published these papers were unable “to confine the use of their time and talents to the exclusive prosecution of any single endeavor,” as many of those who started these newspapers went on to other vocations. For example, John Russwurm left *Freedom’s Journal* to become one of the first African Americans to settle on the West African coast; there he operated a paper and soon became governor of his colony (Franklin 1967:182).

While it existed, the African-American press served as a rallying point for its readers. For example, the *Weekly Advocate*, a short-lived paper published for African Americans by Philip A. Bell, exhorted its readers to “BEWARE SLAVECATCHERS. We say to one and all of our friends, AWAKE!! Beware of these Slave-Catchers! And while you are freely allowed to differ among yourselves on other points, in this one be united!” (*New York Weekly Advocate*, January 14, 1837). Its successor, the *Colored American*, continued to counsel its readers: “Brethren, what will become of us if we do not learn to do better? We can never be a people until we maintain our own causes and support our own institutions. We must give liberally, and act more efficiently, or *never claim to be freeman, or expect to be elevated*” (*New York Colored American*, January 27, 1838).

These newspapers did what they could to bring injustices committed on their readers to the attention of those who could do something about them. In 1837, the city of New York passed a city ordinance denying licenses to African-American cart drivers and porters, stating that it was done so to protect them from being beaten and abused by their white counterparts. The *Colored American* swiftly condemned the city fathers: "This illegal proscription of colored men is not practiced in the dark. It is an open violation of law and of conscience....It is disgraceful to oppress in this manner, any of our citizens—Deny a man any privilege other than the privilege of honestly getting his bread. It is also disgraceful to indulge in such feelings of slavery and resort to, as an apology, the feeling of public sentiment. THE CARTMEN WILL NOT SUBMIT TO IT!!!" (*New York Colored American*, September 16, 1837).

Members of political factions early learned that one of the most powerful ways to get their points across was to print out their platforms in the local newspapers. Many of the mainstream penny papers—*Courier and Enquirer*, *Transcript*, *Express*, *Standard*, and the *Aurora*, to cite a few examples—supported a particular political party or faction. The readers would therefore know that if a politician had his speeches or writings published in a particular newspaper, the political party associated with the paper sanctioned his words.

However, when the local press wouldn't support them, political factions would start their own newspapers (Mott 1952:70). Michael Walsh, a Protestant from County Cork who started out driving a cart around Five Points, was, for a time, the best known politician in New York City. Affiliated with various factions within the Democratic party throughout his political career, Walsh, the leader of a group of brawlers called the Spartans, was always in demand due to the large bloc of votes he controlled. To make his views known, Mike Walsh, with the help of Walt Whitman and others, started the *Subterranean*, located first at 27 Ann Street, but later at Tryon Row at Chatham. Walsh's main focus—as it would remain for many years—was the plight of his "subterraneans" and their interests—including higher wages and participation in the bidding process concerning municipal allocation of building contracts (Sante 1991:255–256).

The tenor of his activity, dedication, and potential danger were spelled out in a notice to subscribers: "A few silly and prejudiced individuals have stopped the *Subterranean* because one or two actions did not meet their entire approbation. We wish people to distinctly understand that we consider ourselves under no obligation to any person living for buying this paper; on this contrary, we look upon it as a favor to let people buy it. And in regard to what we write, let it be fully understood that we write to enlighten and inform our readers, and not to receive instruction from them....In sum, any person who don't like this paper don't like us, and any person who don't like us can go to hell" (*New York Subterranean*, July 27, 1843).

Other factions welcomed the naturalized citizen. The *Adopted American*, edited by T. W. Clerke from 17 Ann Street, served as the organ for the Independent Republican party. This political party "for Naturalized Americans" had as its stated desire to cast out the backers of President Andrew Jackson and Vice President (formerly New York governor and subsequently president in his own right) Martin Van Buren, calling on those non-native subjects of the Republic "to help us in the present crisis" (*New York Adopted American*, April 4, 1834). It is not known if naturalized Americans, like the residents of the Sixth Ward, read this paper or appreciated Clerke's sentiments concerning Martin Van Buren; however, the paper does illustrate the potential voting power of the naturalized citizen.

To take another example, when the *Subterranean* was faced with official misdeeds performed by the municipal government of the city of New York, its pages became a call to action for its readers, especially if the offending official was of a different political persuasion from that of the editor, the publisher, and the readers of the paper. Mike Walsh and his coterie were not averse to taking action using a variety of methods, both legal and otherwise, which constantly got them into hot water (Sante 1991:255).

One typical article read as follows:

HUGH KELLY. On the corner of Chatham and Orange [Baxter] Streets, stands the man of the above name. He is blind, but though blind, is capable of seeing into the mechinations of political batterers. He is a disciple of ours, which is the highest compliment we can pay any

man. We have been informed that a number of unprincipled old “Hunker”² vagabonds have been passing counterfeit coin upon him; in addition to which, when he goes for his papers in the morning, advantages of every description are purposely taken of him. We’ll see to that (*New York Subterranean*, October 7, 1843).

This was no idle threat; with Walsh’s reputation as a rough-and-tumble streetfighter, one can safely presume that Hugh Kelly was subsequently unmolested while going about his lawful business.

All was not suffering and hardships in the pages of the “cheaps.” Dispatches from other areas recounting humorous stories or anecdotes about historical figures were to be found in nearly all publications, even the most strident. However, unlike the mainstream newspapers, generally these rarely demeaned or belittled the subject—unless, as Mike Walsh pointed out, they happened to be on the wrong side of the political fence. Even in some of the more partisan papers, some glimpses of private life shine through. For example, in the first issue of the *Subterranean*, five bachelors, using their names and addresses, placed an advertisement for wives. “We are looking forward to meet exceptional young ladies with the object of matrimony.” Walsh bemusedly commented that “Here is something new: trying to win a wife with out going through the business of courtship. This is a new thing.” The bachelors continued to run their “want ad” for the next three consecutive issues (*New York Subterranean*, July 15, 1843).

Incidents of babies in baskets left on doorsteps often occurred and were jocosely reported. The excerpt printed at the head of this section is only one of a number of incidents that was reported almost daily. Before the establishment of orphan asylums and, subsequently, the New York Foundling Hospital in 1869, these babies would become wards of the city and be kept in the almshouse on Blackwell’s Island, bottled by aged pensioners (Van Every 1972:199). Apparently, babies appeared in many foyers, including the doorways of many newspaper offices. “A Young *Subterranean*” was dropped off at the offices of the *Subterranean* early one morning (*New York Subterranean*, July 22, 1843); a little boy was found in a stable, leading the editors of the *Workingman’s Advocate* to wonder if he may be the new Messiah (*New York Workingman’s Advocate*, August 19, 1830). Although these accounts were humorously treated, the possibility exists that the mothers, upon hearing these accounts, would be comforted with the knowledge that their children were found, and were, at least for a time, safe.

3.2.4. Summary and Conclusion

The penny press served a variety of interests in nineteenth-century New York. Mainstream papers reinforced the prejudices of the elite while alternative papers gave voice to the less-advantaged members of the community. For African Americans and newly arrived immigrants, newspapers that reflected their culture and provided a guide to the wild and different milieu of New York in terms that they could understand brought them together. The readers of these papers became a unified force that could be used to provide social or political change, while showing that there was always another side to the derogatory stories and anecdotes found in the mainstream press.

² “Hunkers” were members of a faction in the Democratic party of that time. In New York State, they were against tax money being used for “internal improvements”—state-sponsored roadways and the Erie Canal, for example; on the national level, they were usually pro-South and amenable to the spread of slavery in the territories. Mike Walsh, at this time, was a “barnburner”—a radical Democrat who opposed everything Hunkers proposed. Later, Walsh would switch sides and become a “Hunker” (Sante 1991:256).

3.3 Negotiating Patriotism at Five Points: Clay Tobacco Pipes and Patriotic Imagery among Trade Unionists and Nativists in a Nineteenth-Century New York Neighborhood (Paul F. Reckner)

3.3.1 Naming the Slum

This is the place, these narrow ways, diverting to the right and left, and reeking everywhere of dirt and filth (Dickens 1985:98).

Five Points refers specifically to the intersection of Anthony (later Worth), Orange (later Baxter), and Cross (later Park) Streets. The square was a mecca of working-class street life, with saloons, oyster houses, and a bustling commercial district. Middle-class observers took their descriptions of the chaotic scene a step further, however. Writers Charles Dickens and George Foster, and later Stephen Crane, toured the neighborhood and composed lurid tales of prostitution, murder, and mayhem. The massive, even threatening, influx of foreign-born immigrants spurred on both the physical development of the neighborhood and this social construction of the slum as symbol. By 1850, the image of the mythic, *the infamous* Five Points was a common fixture in New York City's popular press. Reformers of many stripes heard the call and entered the fray, producing numerous tracts on the depravity of the area's denizens. In written and visual representations, Five Points and the neighborhood surrounding it became synonymous—a vaguely bounded realm of vice and poverty. The Old Brewery, a brewery converted into a tenement, symbolized the degradation (Figure 35).

3.3.2 Patriotic Negotiations

To understand this process of myth building, some of the most complex issues of nineteenth-century America are implicated: class conflict, xenophobia, and raging debates over the nature and character of American national identity. These arguments served as fodder for political action, and ideological dialogues were carried out through the use of rhetoric and highly charged symbols of the American Republic (e.g., Knobel 1986; Kertzer 1988; Zinn 1990; Bodnar 1992).

Material culture studies offer a natural entry into the realm of symbolic communication. However, the incredible range of texts associated with a symbol as prominent as the American flag makes this type of inquiry problematic and conditional by nature—an important caveat (e.g., Eco 1979; Barthes 1988; Tilley 1991). Bodnar summarizes the issue: "It is not surprising to see several interests connected in [these] symbols...if we can accept the argument that symbolic meaning...emerges from a communicative process (1992:19).

This study deals with American patriotic motifs on clay tobacco pipes recovered from Block 160 in New York City's Sixth Ward. Variations in the distribution of these pipes raise questions about how the overwhelmingly immigrant populations of Five Points were using, or perhaps being used by, these symbols. They speak of America, but which America? Whose vision of the nation? The land of opportunity or the country which prompted Irish merchant James Dixon to pen this warning to his countrymen: "if people can live comfortable [in Ireland] they ought to remain there" (Miller 1985:324)?

Why should the designs on clay pipes merit such attention? The relevance of patriotic motifs is evident, but additionally, the very image of the clay pipe came to symbolize the day laborer and workingman of the 1850s (Walker 1977:390; Cook 1989a, 1989b). Clays were passé for the middle-class gentleman smoker; a pipe of briar wood or meerschaum suited his taste and standing far better. The clay pipe was more the mode of the laborer and the mechanic—an ideal arena for negotiating symbols of working-class political ideology. Mike Walsh, renowned Bowery politician of the 1840s and 1850s, considered saloons the "homes and nurseries of Democracy" (Stott 1990:239), and pipes played their role in saloon culture (Figure 36).

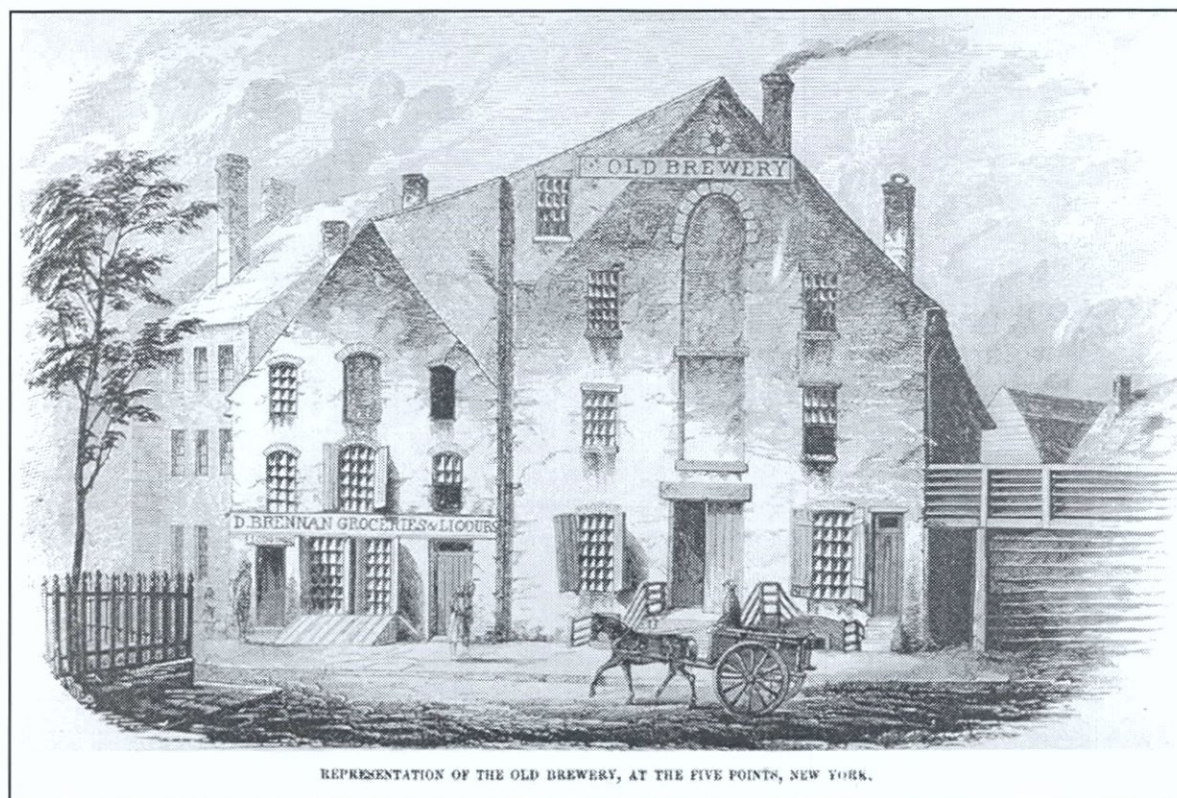


Figure 35. "The Old Brewery" (Ladies of the Mission 1854).



Figure 36. Barry's Saloon at No. 488 Pearl Street (Harper's Weekly, November 13, 1858).

3.3.3 Object and History

This study began with distinctions noted in the assemblage. For example, fragments of at least 153 distinct pipes were recovered from a brick cistern (Feature AN, AS III) at number 22 Orange (Baxter) Street, along with a range of other household objects. Twenty percent of the pipe fragments depict patriotic motifs. The most explicit, and most common, is the federal eagle (Figure 37), and several marked with *TD* and 13 stars (Figure 38) are also present.

The *terminus post quem* (TPQ) for the brick cistern is 1860, and the bulk of the material dates from the 1840s and later (Brighton 1995; Bonasera 1995; Nelson 1995). Throughout this period, a number of tenant families, generally of German birth, occupied the multi-family dwelling on the lot. Three households were listed at 22 Orange in the 1855 New York census: Samuel Stone, a German-born clothier; Lambert Blower, a Dutch tailor; and Samuel Lubra, a German tailor (Fitts 1995). Stone's secondhand clothing shop was also located on the premises (Milne 1995).

At 472 Pearl Street, a large cesspool (Feature J, AS III and V) yielded a distinctly different data set. The 276 pipes in the assemblage include a wide range of motifs, but barely six percent of these show any nationalistic theme in their design. Those present were generally of the TD-and-13-stars style. The assemblage is bracketed by a range of dates similar to the 22 Orange (Baxter) Street feature. During this period a large tenement stood at 472 Pearl Street, housing over 200 residents. Ninety-seven percent of these were recent Irish immigrants; the vast majority had resided in the U.S. for fewer than five years at the time of the 1855 census.³ Most of the working tenants were employed as day laborers. Several commercial ventures also operated out of 472 Pearl, including a liquor store and a tobacco shop.⁴

3.3.4 Working-Class Political Lives

Five Points residents were actively involved in both politics and the manipulation of political symbols. It is crucial to understand the range and sophistication of their ideologies and the distinct experiences of various ethnic groups within working-class political life. These experiences, in part, determined the symbolism deployed by particular social groups.

Contemporary accounts made conspicuous reference to the patriotic sentiments of the neighborhood's denizens. After touring Five Points, Charles Dickens wrote of "under-ground chambers...the walls bedecked with rough designs, of ships, and forts and flags, and *American eagles* out of number" (Dickens 1985:98–99, emphasis added). Stephan Crane, in *Maggie: A Girl of the Streets*, evokes a typical theater scene—the singing of the "Star-Spangled Banner" draws a profound response: "Instantly a great cheer swelled from the throats of the assemblage of masses. There was a heavy rumble of booted feet thumping the floor. Eyes gleamed with sudden fire" (1979:24). Crane's account sounds superficial and patronizing but perhaps reassured his middle-class readership that the lower classes espoused a uniformly uncritical concept of American patriotism.

Bowery theaters reflected an image of the American workingman in the person of Mose, the mythologized Bowery b'hoj, fireman, and grudging patriot. The re-enactment of the death of Bill (the Butcher) Poole was also popular with Bowery audiences. Poole, a renowned brawler and operative of the Native American Party, was shot during a rough-and-tumble by Tammany agent Lew Baker in 1855. On stage, the dying Bill wrapped himself in an American flag and croaked out the oft-repeated last words, "Good-bye, boys; I die a true American!" (Asbury 1928:100; Gorn 1987). Volunteer fire departments served as focal points for nineteenth-century working-class neighborhoods and were closely bound up with local political affairs (Stott 1990:239; Bodnar 1992:32). William (Boss) Tweed used his position on Americus Engine Company Number Six as a springboard to the halls of Tammany. The fire company's emblem, the tiger,

³ Typically Irish motifs represent a very small percentage of the 472 Pearl Street assemblage as well. Only one example was identified, decorated with a harp on the left face of the bowl and shamrocks on the right—oriented as if the observer was smoking the pipe.

⁴ Louis Fink, a Connecticut-born American, ran the tobacco shop at 472 Pearl Street from 1848 until ca. 1854, when August Heydenreich took over the business (Trow 1848–1849, 1850–1851, 1851–1852, 1853–1854).



Figure 37. Clay tobacco pipes bearing the federal eagle motif.

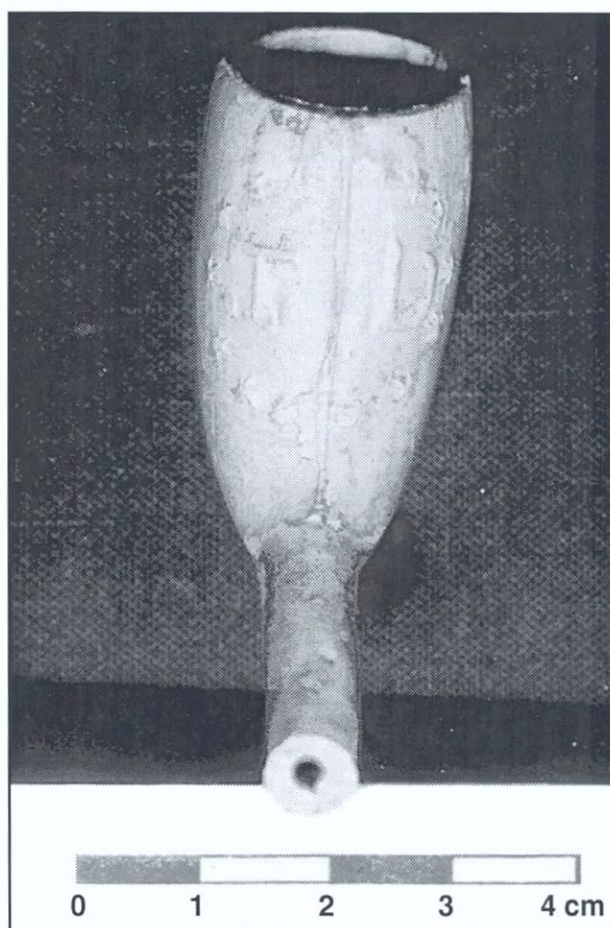


Figure 38. TD-and-13-stars-style pipe.

became synonymous with the influential Democratic machine, and Tammany's "wigwam" was a local institution until the late 1860s (Allen 1993:24). John Morrissey's political career resembled Tweed's: the street fighter and Tammanyite parleyed his American heavyweight boxing championship into two terms as a Democratic congressman in the 1860s (Figure 39; Stott 1990:238). Most German and Irish workers voted a Democratic ticket and Sixth Ward election returns show a strong favoring of Tammany candidates (Stott 1990:237; Allen 1993:92; Ernst 1994).

The pages of the penny press exposed workingmen to a wide range of political and economic critiques, from temperance and education to the writings of Marx and Engels. Titles such as the *New York Mechanic*, *Workingman's Advocate*, and *The National Workingman* spoke directly to craftsmen, and Mike Walsh's *Subterranean* covered any issue of concern for the working-class Bowery b'hoy (Wilentz 1984; Pitts 1995).

A brief examination of two political movements will focus on the ideologies bound up with the American patriotic symbols on Five Points pipes. The presence of German tailors and clothiers at 22 Orange Street calls for a brief survey of the rhetoric and symbolism of New York City tailors' unions. Following this, a discussion of nineteenth-century nativist movements and their use of the same nationalistic motifs will be related to the Irish residents of 472 Pearl Street.

3.3.5 New York Unionism

The rhetoric of early artisanal organizations praised the productive member of society—the mechanic, a general term for any skilled craftsman—as the backbone of a stable republican state. An eighteenth-century morality tale relates the story of an American artisan who buys an engraved watch. He later learns the design is the French Bourbon coat of arms, and hastens back to the shop in order to exchange it “for something more congenial to democratic feelings” (Wilentz 1984:62). In the trade processions of 1788 and 1825, patriotic banners billowed beside craft banners (Figure 40), and many of the emblems of the trades incorporated explicitly American symbols. Craftsmen would “swear eternal allegiance to the principles of Republicanism” in windy public speeches (Wilentz 1984:91).

With the intensification of industrial capitalist development in the second quarter of the century, many journeymen mechanics saw their interests shifting away from those of entrepreneurs and shop masters. Rationalized and sweated labor practices were disrupting the unity of the craft system, and young journeymen saw little chance of ever owning their own shops. Public demonstrations by journeymen in April 1829 laid the groundwork for the creation of the Working Men's movement. Though short-lived, this group's rhetoric directly linked earlier traditions of artisan republicanism to the new journeymen's unionism. George Henry Evans considered the Working Men “a Radical Revolution, which should secure to each man the fruits of his own labor” (Wilentz 1984:212). In the following years several other labor organizations appeared on New York's labor scene. The New York General Trades Union of 1833 aided in the orchestration of over 40 strikes. In those trades most severely affected by changes in the relations of production, shop masters and journeymen marched separately, and under separate banners, in craft parades. This shift exemplifies the presentation of multiple messages in the commemorative pageantry of this period (Bodnar 1992:19).

New York's tailors were some of the most well organized and radical of unionists. In a major turnout in 1836, twenty journeymen tailors who participated in the strike were arrested and found guilty of conspiracy in a trial which “recapitulated the social and ideological divisions within the trades” (Wilentz 1984:290). This decision legitimated the position of many shop masters and factory owners, who had defined for themselves a new concept of American republicanism wherein their role as accumulators of wealth was constitutionally sanctioned—the “patriot-entrepreneur.” Their rhetoric cast trade unions as undemocratic and “illegal combinations” which disrupted business and prevented shop owners from pursuing their natural right to profit (Wilentz 1984:228, 291). The June 1, 1836 issue of *Union* printed a response from mechanics to the guilty verdict:

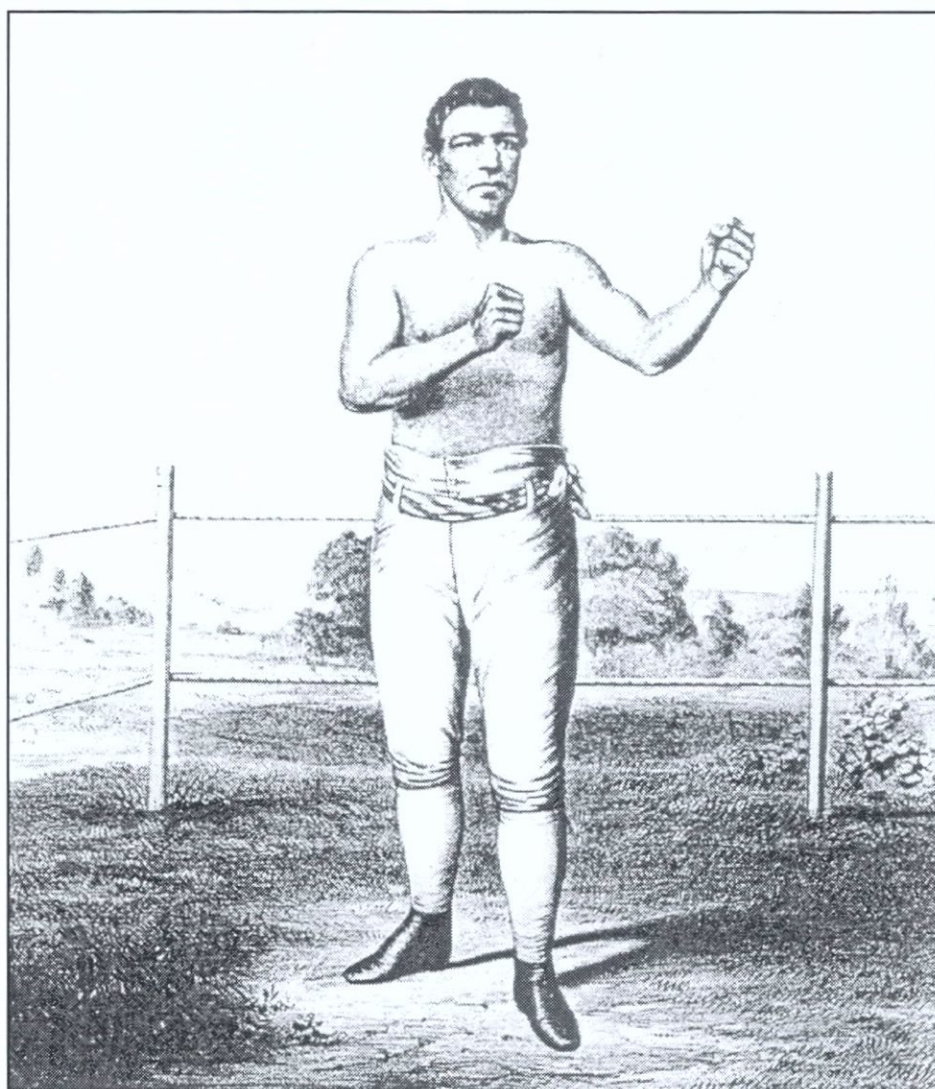


Figure 39. John Morrisey in a Currier & Ives lithograph, 1860 (Stott 1990:233).

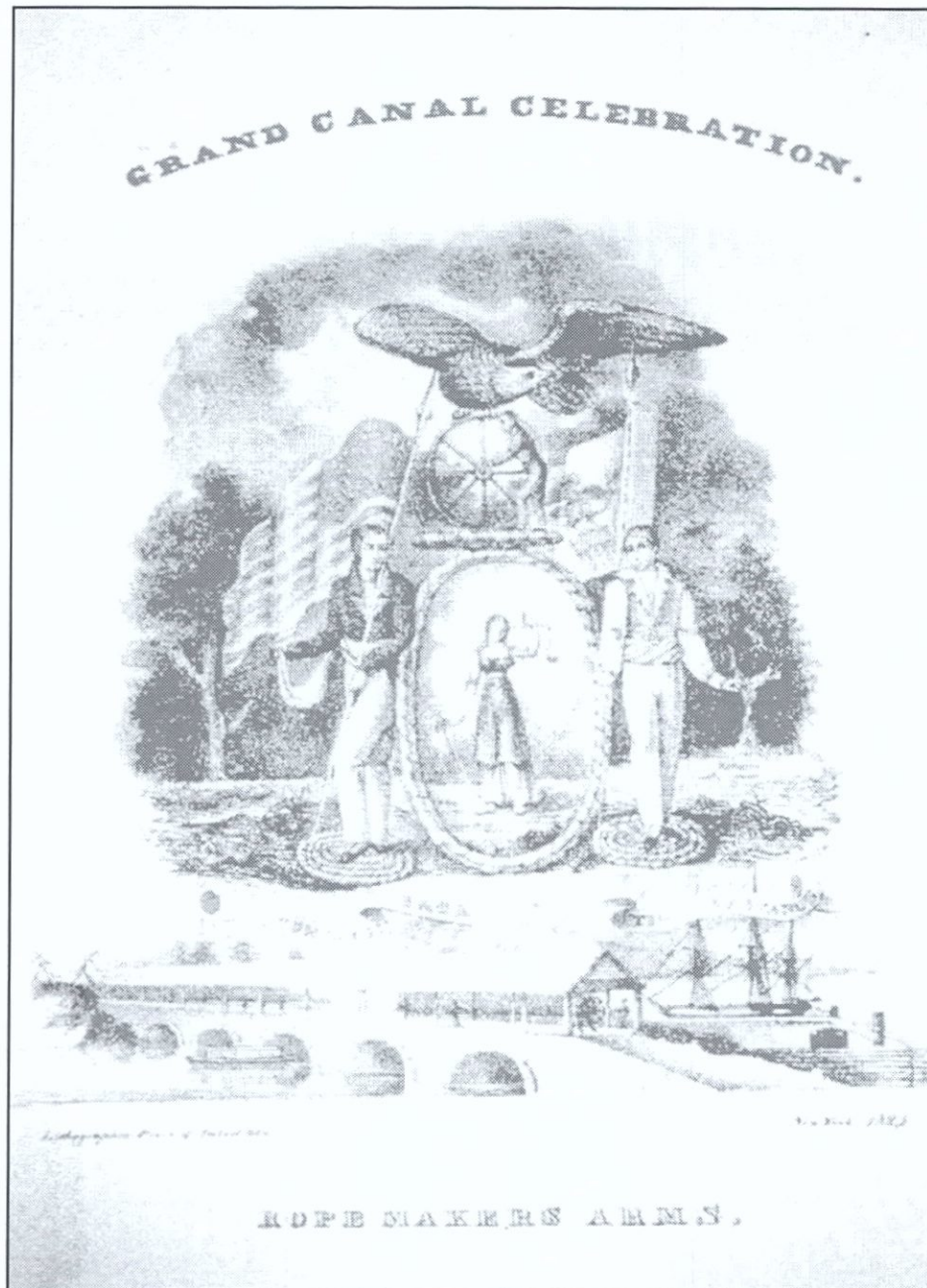


Figure 40. *Ropemakers' Arms* from the New York parade celebrating the opening of the Erie Canal (Colden 1825).

If an American judge will tell an American jury that the barriers which the poor have thrown up to protect [against] the avarice of the rich are unlawful, then are the mechanics justified the same as our own fore Fathers [*sic*] were in the days of the revolution, in ARMING FOR SELF DEFENSE!! (in Wilentz 1984:291).

Carpenters also turned out in the general strike of 1836, and members of the New York Union of Journeymen House Carpenters lived in and around the Sixth Ward, such as William A. Davis, who was rooming at number 499 Pearl Street, just across the street from Block 160 (New York Union of Journeymen House Carpenters 1834–1836).

In 1850 the carpenters and tailors struck again, and German unionists played a pivotal role. At least two tailors were killed in the ensuing demonstrations and clashes with the recently reorganized municipal police force. Wilentz (1984:380) characterizes the moment: “For the first time, urban American workers had been slain by the forces of order in a trade dispute.” The violence of the tailors’ strike was inconceivable and shocking to both the press and the middle class. Mainstream accounts of the conflict laid full blame on the strikers themselves.

Records from the New York Industrial Congress meeting of 1850 indicate that representatives from the Sixth Ward were in attendance. The delegates were “propertyless men, most of whom lived in the city’s poorer wards...a rough ethnic cross-section of the New York work force” (Wilentz 1984:364–366, 413).

The Knights of Labor carried on this tradition of activism through the 1860s and beyond. The Knight’s charter declared “an inevitable and irresistible conflict between the wage system of labor and republican system of government,” and their politics included a “sharp critique of social inequality” based on the labor theory of value (Fink 1983:4–9). “No contemporary organization celebrated the symbols of the Republic—the flag, the ballot box, the Fourth of July—with more enthusiasm than the Knights” (Fink 1983:24).

In his analysis of American patriotic motifs, Bodnar identifies an inherent tension in the multiple meanings of national symbols. This tension arises out of the struggle between cultural leaders who have a vested interest in reinforcing national identities and civic duty and the body of small social groups whose agendas are focused on localized issues. By co-opting national symbols and tying their agenda to larger issues, these groups strive to build constituencies and consolidate political power (Bodnar 1992:13–17). The rhetoric surrounding the 1836 tailors’ trial exemplifies this class-conscious negotiation of republican ideology and American patriotic motifs by later nineteenth-century trade unions.

There is no certainty in associating Samuel Lubra or Lambert Blower of 22 Orange (Baxter) Street with the radicalism of the New York tailors’ unions, and neither can we know the thoughts of Samuel Stone, as the owner of a clothing retail shop. However, it is reasonable to assert that their involvement in these issues (on either side) helped define the values which they associated with patriotic motifs, their relationship to the American Republic, and their choice of smoking pipes.

3.3.6 *Nativism and the New York Irish*

Returning to the working-class Irish of 472 Pearl Street and the paucity of patriotic pipes, it is important to consider several factors which may have influenced their choices. These include the impact of mainstream constructions of Irish-Catholic stereotypes, the socio-economic conditions of these recent immigrants, and the pervasive threat of political nativism.

The ideology of nativism has been difficult for historians to isolate, but two central themes of the movement were anti-Catholicism and the creation of a threatening, foreign-born “other” (Higham 1988:5–6). Knoebel argues that mainstream nineteenth-century American national identity revolved around Anglo-Saxon ethnicity, Protestantism, and republicanism (1986:25). Nativist philosophy conceived of native-born Americans as a race apart from those of the Old World, imbued with a uniquely democratic

nature by the very soil and institutions of their country of birth (Knobel 1986:129). A familiar suite of American patriotic iconography was attached to this rhetoric of identity.

Irish immigrants who arrived in the U.S. prior to the 1840s were not initially perceived as a major threat to the established social order, but concern among natives was growing. Early nativists expressed the concern that the superstitious, hierarchical, and aristocratic nature of the Catholic faith rendered believers incapable of participating in a democratic and republican government. A diatribe from the *New York Native American Democrat* (1835) warns its readers: "A crisis has arrived in the politics of our Country...it is a fact too true to be denied that foreigners hold the balance of power in our domestic councils."

The massive influx of predominantly Irish-Catholic famine immigrants in the mid-1840s evoked a more intense form of rhetoric from the nativist press—far more critical than that which was focused on the German community (Knobel 1986). Newspapers with names such as *The Republic* and the *American Republican* (an organ of the party of the same name) linked anti-Catholic language with more and more dehumanized visions of the Irish "race" (Figure 41). Written accounts highlighted their intemperance, poverty, and riotous nature. Further scandalizing middle-class sensibilities, one writer described New York Irishmen as "big-fisted, double jointed shoulder hitters who pride themselves on traveling through life 'on their muscle'" (Knobel 1986:28).⁵

Speculations over Papist conspiracies were common. The *New York American Republican* ran a story in 1843 under the headline "The Pope. His claim to spiritual and Political Omnipotence." The same paper also carried announcements for upcoming meetings of the American Republican Society, and the Sixth Ward boasted an aggressive local chapter (*New York American Republican* 1843). James Harper's platform in the 1844 New York Common Council race proclaimed: "Poverty, crime, immorality, and pauperism could never spring from any sickness of the American soul; the disease must have been imported by Catholics" (Wilentz 1984:319).

The threat of cheap foreign labor mobilized another brand of nativist journalism, targeted specifically to the native-born, anti-immigrant workingman. The *New York Mechanic* and *American Mechanic* in the 1840s and the *American Artisan* in the 1850s blamed immigrants themselves for falling wages and bleak employment opportunities.

From 1840 to 1860, a series of nativist political organizations posted candidates on American ballots. The Order of the Star Spangled Banner (O.S.S.B.), a secret nativist fraternity referred to as the Know-Nothings, claimed members among both Whigs and Democrats, and the New York chapter was powerful enough to put up a candidate in the 1854 mayoral race. In the mid-1850s, the O.S.S.B. had chapters in 31 states, and the Order of United Americans claimed adherents in 16. The immigration platform of the American party proclaimed that "no man educated under one system of government can ever become thoroughly inbred with the essence and spirit of another" (Knobel 1986:5). Sixth Ward election returns from this period show a small but tenacious nativist turnout for all of these parties (*New York American Republican*, Nov. 8, 1844; *Tribune Almanac and Political Register* 1856–1861). Election-day clashes between party-sponsored immigrant and native-born gangs were not uncommon (Asbury 1928; Brown 1976).

Nativist rhetoric explicitly linked Irish ethnic stereotypes and anti-Catholicism with appeals to "Our Native American Fellow Citizens" and "fellow citizens—FELLOW PROTESTANTS!" These pleas would inevitably be accompanied by symbols of the Republic as nativists strove to define an exclusionary American national identity (*New York Native American Democrat*; *New York American Republican*). The hesitancy of the Irish of 472 Pearl Street to use objects decorated with patriotic motifs is more comprehensible when we can see their neighbors raising the American flag against them. Further, despite their strong Tammany-Democrat affiliations, the exclusion of Irish Catholics from higher elected positions and the nature of the Tammany patronage system only "reinforced [Irish] ethnic identities and exclusiveness" prior to 1870 (Miller 1985:329, 525). Irish voting loyalties tended to hinge on local concerns and were not successfully articulated with national labor movements and broad social issues until after 1870, "when

⁵ The terms used to denote various ethnic groups may be understood as symbols in their own right (Knobel 1986; Cook 1992). Nativists constructed an archetypal or composite Irishman—Knobel (1986) calls him "Paddy"—who embodies the attributes which they found most disturbing and opposed to their own values. Likewise, mainstream conceptions of German ethnicity ranged from the "sensible, industrious Deutchlander" to the "scheming radical and revolutionary," depending on the orientation of the framer. Constructions of the immigrant encompass characterizations of "fellow tradesman," "threat to prosperity," and "cheap labor." These stereotypes further resemble symbolic or mythic constructions in that their meanings (the images they conjure) are deeply affected by the social and historical context in which they are used. This is exemplified in the changing tone of anti-Irish-Catholic rhetoric through the course of the nineteenth century (Knobel 1986).

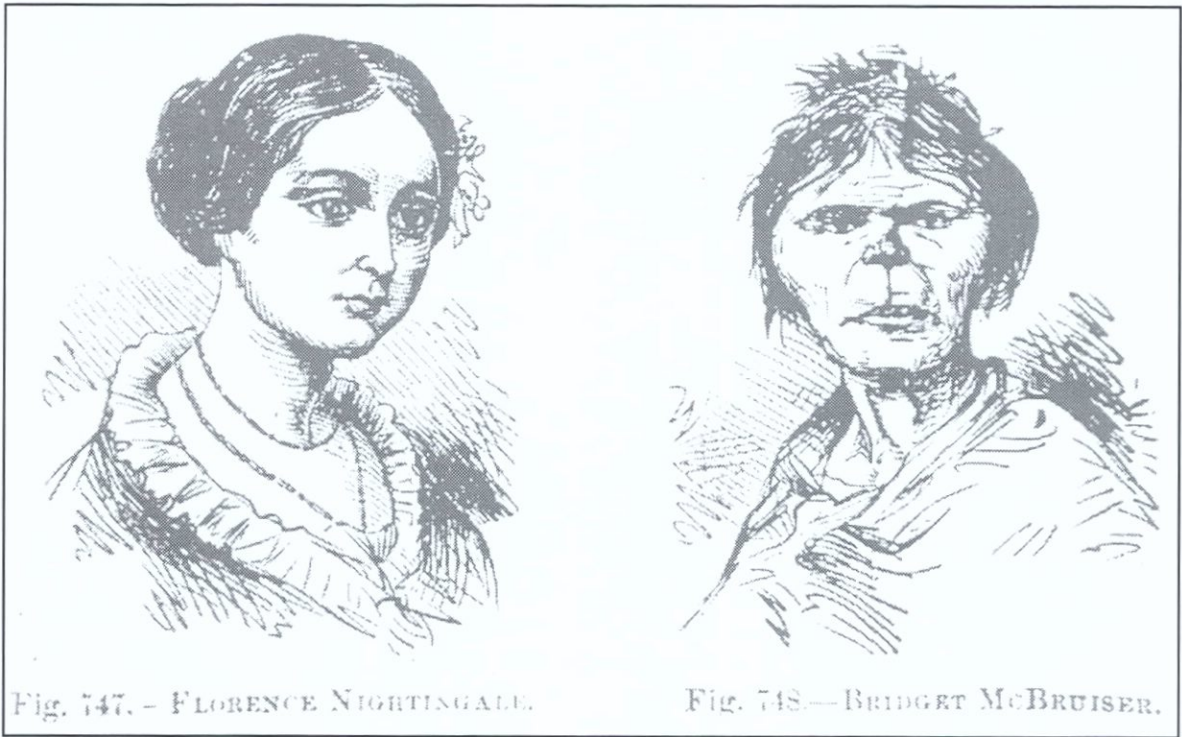


Figure 41. "Contrasted Faces" (reprinted in Knobel 1986).

Irish-American society was more matured" (Miller 1985:328). Unlike many Germans, who faced fewer barriers in establishing their "American-ness,"⁶ the recently immigrated Irish-Catholic population of the 1840s and 1850s had not yet coalesced and found a voice (or voices) in national politics (Knobel 1986). It would take almost a generation of struggle for them to enter this arena.

The pipe assemblage from 4 Baxter Street (Feature AK, AS I) offers a glimpse at this transformation on Block 160. The material dates to the late 1860s through the 1870s and includes 13 distinct examples. Twenty-three percent of the assemblage (3 pipes) display clearly Irish slogans. The inscription **DUBLIN No 1 PIPE** is emblazoned on the heavy clay bowl of one example. More explicitly, two pipes bear the mark **HOME RULE** with attendant harp and shamrock details. The Irish nationalist home rule movement, predominantly but not exclusively Catholic, gained American Irish supporters during the last quarter of the nineteenth century.

Four Baxter Street was occupied by several tradesmens' families from the mid-1850s onward. John Synott (Sinnott) was a shoemaker whose place of birth was listed as New York in the 1860 federal census. In the 1870 federal census, however, he was recorded as Irish-born. He resided on the lot with his wife and family, operating his shop as late as 1880 (Milne 1995). Miller states that in the post-1870 period "many, perhaps most, working-class Irish-Americans found primary expression of both ethnic and social identities not in bourgeois institutions but in militant labor unions and, to a lesser extent, in radical politics which linked Irish protest traditions to American urban-industrial conditions and grievances" (1985:524).

Synott's choice of pipes with Irish nationalist slogans stands in marked contrast to the purchasing patterns of Irish residents at 472 Pearl Street a mere 25 years earlier. These meaningful changes in expression of identity through material culture both reflected and instigated transformations in the Irish-American community and in its relationship to the broader American social landscape.

3.3.7 Symbol and Text

Social groups wield symbols—of ethnicity, of nationalism—to define and distinguish themselves and their ideology within the political realm. When these symbols enter the archeological record through discarded objects, they may be seen as fragments of the discourse of individuals carried on among themselves and the social groups around them. Many factors influence a group's choice of symbols, the meanings which they articulate with a particular symbol, and the success of their use in achieving political ends. By situating individuals within spheres of social interest—ethnic, socio-economic, political, historical—it is possible to frame their conceptions of an American eagle or an ethnic stereotype. The appropriation of such symbols has a compound effect: it not only remakes group identities, but the symbol itself is redefined and these groups add their own line to the complex text of the American flag or a national identity. This process has been pivotal in the conflict between labor and capital in the United States and in the negotiation of the position of immigrant communities within a new society.

This study relies on a contextual basis for interpretation based on a synthesis of archeological data and documented local social conditions. The multiple meanings associated with the American patriotic symbols found on Five Points pipes are inextricably bound up with the individuals, political climate, and time period in which they were used and defined. Having acknowledged this limitation, however, the study also further demonstrates the potential of a contextualized, interpretive approach in relating local issues to the broader cultural-historical landscape.

⁶ Many factors contributed to this differential rate of acceptance: the lower rate of German immigration, their generally better economic situation upon entry into the U.S., the possession of specialized craft skills, or the common perception of Germans as Protestant or Jewish rather than Catholic (Knobel 1986).

3.4 Five Points of Fellowship: Masonic Pipes from Block 160 (Diane Dallal)

3.4.1 Introduction

This study examines the relationship between the fraternal order of Freemasons and the residents of the Sixth Ward. Ten clay smoking pipes decorated with Masonic symbols were recovered during the archeological excavation of Block 160. The pipes were retrieved from strata ranging from the late eighteenth century through ca. 1870. The majority derived from deposits dating ca. 1840.

Masonic symbolism as a decorative style was widespread between ca. 1775 and 1826, permeating American culture almost as Christian symbolism permeated the art of the Middle Ages. Masonic emblems embellished every kind of utilitarian object; therefore, the presence of pipes with Masonic iconography did not *necessarily* signify the presence of a Freemason. Evidence from the contemporaneous Assay Site in lower Manhattan, however, strongly suggested a correlation between the presence of Masonic pipes and Masonic membership (Dallal 1995; Dallal and Reckner 1995). Based upon these data, as well as similar if less compelling evidence from the Barclay's Bank site, also in New York City, it is reasonable to suggest that some of the property owners, shopkeepers, and residents of Block 160 were Freemasons.

Mr. William D. Moore (1996 personal communication), director of the Chancellor Robert R. Livingston Masonic Library in New York City, stated that the meeting house used by many lodges was located in the Sixth Ward, where the Irish-Catholic population was centered. This may have been the Masonic (Gothic) Hall located on Broadway between Duane and Pearl Streets.

The files of Eastern Star Lodge No. 227, New York City, report that "during the panic of 1865 when there existed a great business depression, this Lodge opened a Mission House in the Five Points and sold to the poor coal, flour, wood and other necessities of life at cost price, thus to some degree alleviating the distress of the people; the Brethren of the Lodge giving their time and labor free for the cause"⁷ (Eastern Star Lodge, No. 227, n.d.).

That a relationship existed between the fraternal order of Freemasons and the occupants of Five Points is clear, although it may have been predicated only upon charity. Yet, it hardly matters if the Freemasons' association with Five Points was a charitable one. What is important here is that people smoked pipes with Masonic symbols and that these pipes were found in a slum described by contemporaries as inhabited by beings less than human. The possible existence of Freemasons on Block 160 brings into question the negative characterizations of the neighborhood by the media of the day. The intellectual, philosophical, and socioeconomic implications of Masonic membership defy media constructions of Five Pointers as not only poor and alien but also as immoral and inhuman (Dallal and Reckner 1995).

Given the socioeconomic profile of New York City's Freemasons in the nineteenth century (lawyers, farmers, and independent tradesmen during the first half, and middle- and upper-class craftsmen, merchants, and politicians during the second), Masonic membership does not correlate with the contemporary vision of "the utterly profligate refuse of humanity" (Ladies of the Mission 1854:viii) living at Five Points. The Freemasons of Block 160 may have been drawn from among the landowners or from the entrepreneurial class attracted by the same low rents that lured the working poor. They might have been drawn from among the skilled laborers of German or other extractions. The existence of German language lodges such as Trinity No. 12 and German Pilgrim No. 179 allows for the possibility that the Masonic pipes recovered from Block 160 were expressions of personal involvement in the Masonic Craft (Dallal and Reckner 1995).

Pipes exist in at least two contexts. The first is strictly utilitarian: the pipe is designed to hold tobacco which is then smoked. The second context is social and includes all the relevant variables that enable one to define it as a pipe and impart to it a complex social meaning that is interpretable by the user and the group to

⁷ Eastern Star Lodge No. 227 was organized on March 23, 1851, at 274 Grand Street. During the time they maintained their "Mission House" in Five Points, they held regular lodge meetings in the Gibson Building, at the corner of Broadway and 13th Street (Quick 1908-1913:192). A search for the location of the mission was unsuccessful.

which he or she belongs. Elements of style are purposely chosen to signify social relationships and group membership, and ethnic and class subcultures wield style as a tool to identify those who belong and those who do not (Wobst 1977; Cook 1989b; Hebdige 1993). Initiation rites, ritual performances, symbols such as the compass and square on pipes and other objects, ritual handshakes, and the particular mythology of the Mason as builder simultaneously define the lodge and enable the brother to participate in its continuing definition. The symbols (and rituals) of masonry also serve a social function by bridging social divisions of class and ethnicity.

More than 800 pipes were recovered from Block 160 (Reckner, 1996 personal communication). In addition to 10 Masonic pipes, approximately 10 were decorated with Irish motifs. Approximately 100 pipes, however, were embellished with American patriotic symbols, such as eagles, flags, and stars. The pipes from Block 160 decorated with American patriotic symbols nearly all came from deposits associated with German residents, while the Irish avoided such symbols (see Section 3.3). The scant number embellished with Irish motifs from the Five Points deposits relates to chronology rather than choice, however. The “Home Rule” slogan which derives from the Irish agitation for self-government, for example, dates ca. 1873–1922 (Sudbury 1980:35).

Like the pipes from Block 160, pipes from a privy associated with a tenement occupied by the Irish immigrant working poor at the Meadows Site in Philadelphia (ca. 1860–1870) were not decorated with the iconography stereotypically associated with the Irish—no harps or shamrocks, no “Derry” or “Dhudeens,” no slogans calling for home rule (Louis Berger & Associates 1991; Dallal 1994). Although pipes decorated with the flag of Ireland, shamrocks, and harps were manufactured after ca. 1846, when Scottish pipe manufacturers introduced pipes for the “Irish” market (Alexander 1986), they were apparently not available in the United States, despite the fact that Glasgow “was an important center for trading pipes abroad” (Walker 1977:342). It is also possible that they were simply not favored by the Irish in America until after 1870. Evidence from the East Side Neighborhood Site in Wilmington, Delaware (ca. 1870–1905), indicated that those of Irish extraction favored Irish political slogans, harps, and leprechauns on pipes when choice was available (Dallal 1994).

German immigrants who preferred patriotic pipes and Five Pointers who joined fraternal organizations such as the Freemasons hardly conform to contemporary accounts of these “dark figures” (Vidal 1976:94–95). It suggests, instead, that immigrants who joined the fraternal order, and those who smoked Masonic pipes, were participating in a ritual of sorts, a transubstantiation of foreigner to citizen, perhaps, incorporating the icons of liberty and the Enlightenment, as they carved out their new American identity.

3.4.2 Research Methods

Research for this section was conducted at the Chancellor Robert R. Livingston Masonic Library, which maintains an extensive collection of materials related to New York Freemasonry. Informants included William D. Moore, director of the Livingston Masonic Library; and Mark Parthemer, master of Holland Lodge No. 8, F. & A. M. An exhaustive search was undertaken to link the inhabitants of Block 160 with Masonic lodges in New York City. It was logical to assume that if Masons existed, they would be found predominantly among the property owners, shopkeepers, or the German population, only three percent of which were unskilled laborers (Fitts 1995:18).

A search was made for “ethnic” lodges, such as La Union Francaise No. 71, La Sincerite No. 373, La Fraternidad No. 387, German Pilgrim No. 179, and Germania No. 182, the names of which suggested a large ethnic membership. Lists of lodge officers were scanned for surnames that suggest ethnic identity. Hibernia Lodge No. 339 was thought to be a likely candidate for Irish brethren and, indeed, the 1825 membership roster indicated M’Quigg, Kerighan, Conner, and Casey, but other names such as Anderson and Hamilton were more problematic, since they suggested Scots or Anglo-Protestant affiliations. Even

more confusing was Independent Royal Arch Lodge No. 2 with its quintessentially British lodge name and large German membership in 1837 (Baldwin and Hemma 1837). Lodge names were often misleading.

Names such as Cohen and Levi suggest religious affiliation, and their presence on Masonic membership lists was thought to indicate the presence of a Jewish Freemason. First names such as Moses and Aaron coupled with a Jewish-, German-, or Sephardic-sounding family name were also thought to signify the presence of a person of the Jewish faith.

Except for a list of Revolutionary War officers who had been Masons, such as Benedict Arnold, Masonic membership rosters did not exist for the years prior to 1797 and after 1853. Individual lodge histories by Quick (1902–1907; 1908–1913) and others (Shove 1851; Hyneman 1857; Barker 1869; McGee 1870; Ross 1899; Wright 1938–1939; Hoffman 1957; Frankel 1959; Reid 1963), revealed only the names of charter members and officers. Other brethren were occasionally listed in the necrology section of a particular lodge's history.

Armed with the occupants and occupations of the inhabitants of Block 160 as gleaned from city directories, tax assessments, and census records by project team members (Milne, Fitts, and Pitts), a search of New York State Grand Lodge Registers (1797–1837 and 1837–1853) was undertaken.⁸ These registers, no more than a series of index cards alphabetically arranged by surname, contained the names of brethren, lodge affiliations, and dates related to initiation and acceptance into the lodge. Occasionally, occupations and/or places of birth were noted. If the name of a possible resident of Block 160 was identified in the Grand Lodge Register, it was then necessary to determine the lodge's location. The separate Lodge Location File, which contained the name and location of every lodge in New York State, was consulted to determine if the resident's lodge was located in Manhattan. Often, two or more individuals with identical names were recorded. Since personal and/or business addresses of lodge members were not listed in the files, it was important to eliminate individuals who might be members of lodges outside of Manhattan. For example, three John Wards were recorded in the First Grand Lodge Register (1797–1832). The lodges associated with the three Wards were King Solomon No. 120, Constellation No. 103, and Selected Friends No. 219. Further research indicated that the lodges were located in Pawling, New York, and Fulton and Onondaga Counties, respectively. It was therefore unlikely that any one of the John Wards in the Grand Lodge Register was the person documented in tax assessment records as the owner of 474 Pearl Street, and it was concluded that John Ward from Block 160 was not a Freemason.

Once an occupant was linked with a lodge (however tentatively), files and histories (if extant) of that lodge were examined for evidence of ethnicity, meeting places, language affiliation, charitable work, or any other data which might aid in the determination of whether or not the individual was truly associated with Block 160 and/or would add to the history of Five Points.

Evidence for African-American membership was even more problematic. Assuming that lodges of the time period were segregated, it was necessary to determine the presence or absence of "African" Lodges in New York City. Although there were a number of African-American households on Block 160 in the first two decades of the nineteenth century, very few remained after 1830, and only one household was listed in the 1855 New York State census. It is therefore unlikely that any African Americans on Block 160 belonged to the first African Lodge which was established in 1848.

The Grand Lodge Membership Registers at the Masonic Library did not provide membership data after 1853, and later records were inaccessible to individual researchers. Although it is possible, however, to formally request a library search for individuals to determine if they were Freemasons, the number of names derived from census and other records, and the length of time needed to perform this search, was believed to be prohibitive.

⁸ Although a systematic search for laborers, cartmen, and servants was not undertaken, approximately one-half of these individuals were sought in the Masonic Registers. None proved to be a Freemason.

3.4.3 A Brief History of Freemasonry

Freemasonry originated in England, was transplanted to America during the eighteenth century, and evolved into an influential fraternal order by the nineteenth century (Carnes 1989). It traces its origins to the guilds of working (operative) stonemasons who incorporated as "The Company of Masons" in the early fifteenth century. Gentlemen were accepted into the brotherhood as honorary members in the seventeenth century. According to Carnes, many of these gentlemen were amateur architects and philosophers with a keen interest in classical Greece and Rome as well as the scientific and mathematical principles of the Enlightenment.

On June 24, 1717, the day of the Feast of St. John the Baptist,⁹ four operative masonic lodges met in a London pub to organize the first Grand Lodge in England—a speculative fraternity of Freemasons. "Freemasonry was the earliest and most powerful appropriation of artisanal fraternalism" (Clawson 1989:112). Associated with the exciting liberal ideas of the Enlightenment, yet steeped in the ancient traditions of stoneworking and classical architecture, "Freemasonry gained wide acceptance in England, America and the Continent by the mid-eighteenth century" (Franco 1980:14).

Freemasonry provided a vehicle for the popularization and spread of new ideas which included the Enlightenment concepts of the power of reason over dogma, the equality of man, and the existence of natural laws. These radical ideas eventually formed the basis for American arguments favoring political separation from Great Britain....Masonic ties and patriotism were so closely entwined during the period after the Revolution, that they virtually merge in popular usage (Franco 1980:15–16).

By the close of the eighteenth century, many Freemasons held key positions in the new federal government. Public conceptions of masonry were closely tied to the cults of the Founding Fathers and the heroes of the Revolution. Many lodges claimed George Washington, Benjamin Franklin, and General Lafayette (who played major roles in framing the rhetoric and ideology of the young nation) as honorary lodge members (Dallal and Reckner 1995). Freemasonry's global membership, its lack of overt prejudice, and its desire to unite men of "good morals and enlightened understandings" inspired Governor DeWitt Clinton to proclaim that Freemasons were the "enlightened part of the human race" (Bullock 1996:152–153).

The first New York Lodge was St. John's Lodge No. 1, incorporated in 1757. Meetings took place in taverns and, despite the lofty rhetoric, early lodges were primarily eating and drinking clubs. A history of Albion Lodge No. 26 of New York City supports this view when it reveals that a "committee of one" was appointed by the lodge to ensure an abundant supply of refreshments: "the exhilarating fluid, cheese, cakes, pipes, tobacco and cigars on hand" (Quick 1902–1907:118).

American ministers preached that drunken Masonic revelries led to quasi-religious rites and debauchery inspired by drink and the devil. The relationship between conservative ministers and Freemasons smoldered for years, exploding in 1836 when William Morgan, a disaffected New York Mason, threatened to expose the secret rituals of Freemasonry. Morgan's disappearance and presumed murder resulted in a brief anti-Masonic movement which generated considerable venom and fear. Many lodges closed their doors, members withdrew, and many denied any association with the fraternal order. In New York, membership declined from 30,000 to 300 (Clawson 1989:117) and fewer than 50 out of 500 New York lodges remained active (Holland Lodge No. 8 1938:32).

Large-scale recovery began in earnest after 1840. Liquor was banned from lodge meetings and money once spent on alcohol and refreshments was expended instead on ritualistic paraphernalia. Great energy and income was devoted to sets, costumes, and props to accompany the allegorical dramas performed within the ritual structure. A period of sobriety and self-restraint prevailed except in the performance of these Masonic rituals (Dallal and Reckner 1995).

⁹ A significant day in Freemasonry. The day of the installation of a new master, his wardens, and overseers in all grand lodges. Many lodges elected new officers on Johannistday. Most Freemason membership statistics bear the date of Johannistday (Laschet 1994:38). Many smoking pipes with masonic motifs include a rose on the bowl. The Festival of Roses, known in some countries as Solstice, was celebrated in Europe on Johannistday, the Feast of St. John the Baptist.

3.4.4 Ethnic Lodges

Ethnic Masonic lodges in New York City date to the eighteenth century. In 1787 eight men born in the Netherlands or of Dutch extraction, all members of St. John's Lodge of Ancient York Masons in New York City, petitioned the Grand Lodge of the State of New York for permission to form a Dutch Lodge, arguing that they were "not well acquainted with the English language" (Holland Lodge No. 8 1938:9). [Therefore] "in order to more fully understand the duties and mysteries" of Freemasonry, they asked "to perform their labours in the low Dutch language" (Holland Lodge No. 8 1938:9). A warrant was granted September 20th, 1787, by the Grand Lodge of the State of New York, and the new lodge was named Holland Lodge. The Grand Lodge ordered Holland Lodge to keep its minutes in both English and Dutch (Holland Lodge No. 8 1938:9–10). For many years, Holland Lodge protested this decision. It is significant, therefore, that according to Mark Parthemer, present Master of Holland Lodge, no evidence exists to indicate that minutes were *ever* kept in the "low Dutch language" (December 10, 1996, personal communication). Meeting notices and minutes currently in the possession of Holland Lodge are all written in the English language (Mark Parthemer, December 10, 1996, personal communication). What then was the reason for the separation from St. John's Lodge No. 1?

According to Mr. Parthemer (December 10, 1996, personal communication), there was friction of "unknown origin" between the English and Dutch members of the lodge. This friction and the subsequent formation of Holland Lodge suggests an interesting tension between two kinds of action. One is the maintenance of one's ethnicity in a subordinate situation. For example, the English took New York in a "bloodless conquest" in 1676. The tension between the new British *masters* and New York's Dutch *burghers* forced those of Dutch ethnicity to place a premium on practices that enabled them to retain their cultural identity. These would include their trade practices, material culture, language, and customs. At the same time, there was a trans-national organization, the Freemasons, which was actively engaged in attempting to overcome ethnic and national differences and to supplant what they considered to be superstitious cultural practices with reason, knowledge, and rationality—the essential themes of the Enlightenment (Dallal and Reckner 1995).

In 1789, Courtlandt van Beuren, a grocer/merchant of Dutch ethnicity, was initiated into Holland Lodge No. 8. Courtlandt van Beuren, the son of Dr. Henry van Beuren and his second wife, Catherine Filkin van Voorhies, was born in the Dutch enclave of Flatbush in 1759. It is possible that he spoke Dutch at home and in the streets of Flatbush. Undoubtedly, he also used Dutch in business where "at the market and on the wharves, a knowledge of Dutch was indispensable" (Holland Lodge No. 8 1938:2). He joined a lodge, the very existence of which was predicated (in spirit, at least) upon a rejection of the English language. It is apparent, therefore, that more than one hundred years after the English conquest, there were still groups of New Yorkers who were acting out the tension between the cultures (Dallal and Reckner 1995).

The use of Masonic symbols as a decorative style reached its peak between 1790 and 1830—just about the time Courtlandt van Beuren lived and worked at 91 Front Street. Eleven clay smoking pipes decorated with symbols associated with Freemasonry were recovered from Feature 18, the wooden box-privy (1801–1830) located at the rear of what was once his residence and workplace, at the Assay Site¹⁰ in lower Manhattan (Dallal 1995). All of the pipes had been smoked, indicating that the deposit was domestic rather than commercial in content. The fact that Van Beuren was a Freemason suggested that he might have deliberately selected pipes with Masonic symbols to smoke, but it was also possible that he smoked them because they were fashionable.

The ethnicity of New York City masonry became increasingly diverse as the nineteenth century progressed and American Freemasonry varied in its policy toward immigrants (Clawson 1989:130). There was greater openness in the earlier part of the nineteenth century and a strong streak of nativism in lodges

¹⁰ The Assay Site, also known as the Financial Square Project, was located on New York City's Block 35, situated between Gouverneur's Lane, Old Slip, South, and Front Streets. Historical research and fieldwork was conducted in 1984 by Greenhouse Consultants, Inc., with Diana Wall and Roselle Henn, principal investigators. Louis Berger & Associates prepared the research design and undertook the artifact analysis and report preparation. The collection is owned by the South Street Seaport Museum.

during the latter years. America's ethnic diversity, its racism, and its "bouts of nativism" resulted in "more complex patterns" of exclusionary policies (Clawson 1989:130). While it is true that Masonic lodges were created and used to support and maintain ethnic ties, it is also true that some lodges were nests of nativist sentiment. Despite the fact that candidates were cautioned to "forget all differences of social position, financial possessions, mental abilities, and religious opinions" (Frankel 1959:324), lodge members too often banded together based on their similarities, rather than differences. The charter members of Henry Clay Lodge No. 277 in 1852, for example, were all engaged in the ship-building trades. Of its 95 members in 1854, all but five were ship-builders or seamen (Quick 1908–1913:193–195).

Other lodges, however, better represented the Masonic ideal. The membership list of Montgomery Lodge No. 68 in 1857, for example, contained the following brethren: Jacob Cohen, banjo maker; Edward Gallagher, tailor; Joseph Hilton, coroner; William Hutchins, clothier; Isaac Jacobs, merchant; Henry Lyon, merchant; Mosely Lyon, jeweler; Joseph Solomon, gold and silver refiner; Hugh Ward, merchant; and John Whitemore, clerk of the city prison. "An examination of the old returns shows that the 'Sons of Erin' formed a large part of its membership—at times as high as two-thirds of its members were born on the Emerald Isle" (Reid 1963:65). Evidence suggests, however, that neither General Richard Montgomery (the lodge's namesake) nor the "Irish" members were Catholics (William D. Moore, December 10, 1996, personal communication). Although "sons of Erin" made up two-thirds of the lodge, it is likely that they identified themselves as British-American Protestants. Between 1850 and 1870, Irish Protestants sharply distinguished themselves from Irish-Catholic society, striving to assimilate in different ways, for example, identifying themselves as Protestant, British Americans (Miller 1985:494).

The non-sectarian nature of Masonry is apparent from the early admission of Jews in London in 1721. Jews were also members of the earliest lodges in New York (Coen 1954–1955:158–160); between 1820 and 1880, a sizable number had joined Masonic lodges in the United States. Fraternal brotherhoods such as these "provided a natural meeting ground" where Jewish and Gentile merchants might come together (Diner 1992:160), proving the integrative nature of Freemasonry, which "espoused universalism, brotherhood, tolerance, and morality" (Diner 1992:160).

Research suggests that many members of German ethnic lodges in New York City were Jews, despite the fact that many lodges were restricted. In 1840, Trinity No. 12 and German Union No. 54 (the oldest German Lodge in New York City) worked in the German language. When Pythagoras Lodge No. 86 was formed in 1841, all candidates for membership had to be "conversant with the German language" (Hoffman 1968:33). The petition to apply for membership cost five dollars. Other costs included \$20 for the 1st degree, \$15 for the 2nd degree, and \$10 for the third (see the discussion of Masonic degrees in Section 3.4.7).

There were numerous Germanic lodges and meeting places in New York ca. 1850. For example, Pythagoras Lodge No. 1 met at Pythagoras Hall, 197/199 Walker Street. Trinity No. 12, German Union No. 54, German Pilgrim No. 179, Knickerbocker No. 182, and Zschokke No. 202 met at Warren Hall (corner of Oliver and Henry Streets). Other German lodges included Harmony Lodge No. 199, Hermann Lodge No. 268, Germania Lodge No. 182, and Franklin Lodge No. 2 (Hoffman 1968). By 1856, Pythagoras Lodge No. 1 had 86 members, Pilgrim had 179, Aschokke 232, and Schiller 304 members (Frankel 1947–1949).

Although New York was home to other ethnic lodges during the nineteenth century (Syrian, French, and Spanish), only African-American lodges were based on race.

3.4.5 African-American Lodges

On March 6, 1775, a 40-year-old, self-educated, former slave named Prince Hall and 14 other free black men were made Freemasons by a British soldier in an English military lodge attached to a British regiment stationed in Boston (Stevens 1899:72; Davis 1936:412). The British Army evacuated Boston in 1776, but (according to Masonic rules of the time period) left a permit allowing their black brethren to meet as a lodge after British departure. Under this license, "the first lodge of colored men in America" was formed (Davis 1936:412).

Prince Hall subsequently applied to the Massachusetts Grand Lodge in 1783 for a warrant to form a lodge, but was refused. He then applied to the Grand Lodge of England which issued a warrant on September 29, 1784, constituting African Lodge No. 454 of Free and Accepted Masons (Upton 1900:54). African Lodge continued as a working lodge of the Grand Lodge of England until at least 1797, when it became a Mother Lodge by establishing lodges in Philadelphia and Providence.

After Hall's death in 1807, delegates met to form African Grand Lodge,¹¹ which became the source of all Masonic authority among African-American Freemasons. In 1848 and 1849, African-American Grand Lodges were formed in New York, New Jersey,¹² Maryland, Washington, D.C., and Delaware. "In 1896 there were Sovereign Grand Lodges of Free and Accepted Negro Masons in 32 States, and one each in the District of Columbia, the Province of Ontario, and in Liberia" (Hamill and Gilbert 1992:43).

In 1875 an attempt by the all-white Grand Lodge of Ohio to recognize the African-American Grand Lodge in that state was vetoed. "Racial exclusion was a hallmark of mainstream American fraternal orders" (Clawson 1989:131). Although the Prince Hall Lodge of Massachusetts maintained fraternal relations with white Grand Lodges in foreign countries where they were "received and accorded all the rights of a brother in Masonic Lodges" (Stevens 1899:74), African-American lodges were not recognized by the larger white bodies of Masonry in the United States. "Negroes or Mulattos" were simply not accepted (Matheny 1942-1944:129). In fact, African-American men were not invited to join white Masonic lodges until the 1970s (William D. Moore, December 13, 1996, personal communication).

3.4.6 Irish Lodges

The first papal bull condemning Freemasonry was issued on April 28, 1738, by Pope Clement XII (Cerza 1967:243). The faithful were directed to "oppose Freemasonry" and those who violated the bull were threatened with excommunication (Cerza 1967:243). Few Catholics belonged to Masonic-type fraternal organizations, "which were repeatedly proscribed by papal edicts during the eighteenth and nineteenth centuries. Parish priests were instructed to urge lodge members to quit their orders; Catholics who persisted were to be excommunicated" (Carnes 1989:4).

Because Catholics were prohibited from joining Masonic lodges "on pain of mortal sin," this affected the incorporation of large numbers of Catholic immigrants into Masonic orders (Clawson 1989:130). However, Catholics *did* join fraternal orders, as is evidenced by the "Church's perennial concern over the issue" (Clawson 1989:130). In later years, the number of Catholics was probably even smaller in response to increased nativism on the one hand and the "creation of viable Catholic alternatives on the other," such as the Catholic Knights of America, the Knights of Columbus, and the Knights of Father Mathew (Clawson 1989:130).

Curiously, the meeting house used by many of New York's fraternal orders for most of the nineteenth century was located in the Sixth Ward, where the Irish-Catholic population was centered (William D. Moore, 1995, personal communication). With the exception of Montgomery Lodge 68, however, research failed to show that exclusively Irish lodges existed. Most Irish immigrants on Block 160 were day laborers and low-income wage earners and could not easily afford membership dues, the cost of ritualistic paraphernalia, and initiation fees. A mid-nineteenth-century information bulletin for prospective members of Pythagoras Lodge No. 1, for example, cautioned that "some expenses" would be necessary and applicants were advised to take this under consideration before applying for membership (reproduced in Frankel 1959:323). Expenses involved in lodge membership could be considerable. Carnes (1993:37) asserts that during the "Gilded Age" of the late nineteenth century, American men spent more money on initiation rites and costume dramas in fraternal mens' organizations than the United States spent on defense.

¹¹ The name was subsequently changed to Prince Hall Grand Lodge of Massachusetts in 1808 (Upton 1900:55).

¹² As late as 1946, Alpha Lodge No. 116 of New Jersey was the only recognized African-American lodge in the United States (Davis 1936).

3.4.7 Masonic Imagery

According to the tenets of Freemasonry, an operative mason was a working stonemason who cut and prepared stone for building cathedrals, castles, and King Solomon's Temple (Hamill and Gilbert 1992:248). A speculative mason is literally a non-operative mason, the term "speculative" meaning to meditate upon a theme or subject. Whereas the operative mason is involved in the practicalities of his trade, the speculative mason uses the *idea* of building and the tools involved, to remind him of the principles he has sworn to uphold. For example, the working tools of the operative mason (the square, level, plumb) are symbolically used to remind the mason of the principles and tenets of masonry (Hamill and Gilbert 1992: 249).

"A Mason's first step is to become an Entered Apprentice" (Hamill and Gilbert 1992:48) and the second step is known as Fellowcraft. Most masons, however, remain at the third step or degree,¹³ and if they wish to advance in the "Masonic hierarchy," they enter "either the Scottish or York rites" (Hamill and Gilbert 1992:48). A 32nd degree is the highest a Mason can attain, although a 33rd degree can be awarded by the Supreme Council. Each degree teaches a moral. The candidate learns the moral lesson the degree imparts and participates in a ritual dramatization of that moral. "All the rich symbolism of Freemasonry that is visible in the decoration and furnishing of the Masonic lodge and displayed in the course of the ceremonies, serves to remind the Freemason of the Ideals of the Craft" (Hamill and Gilbert 1992:57).

In the latter half of the nineteenth century, specialized companies catered specifically to the needs of Freemasons, providing all of the props prescribed by the dramas, as well as lodge room trappings (William D. Moore, 1995, personal communication). These companies advertised in Masonic journals such as the *Illustrator*. Mail-order catalogues advertised these Masonic goods which were shipped all over the United States. This emphasis also extended to objects used outside the lodge room in the social sphere of the fraternity and included transfer-printed Liverpool pitchers, Masonic drinking flasks, firing glasses, and tobacco pipes (Dallal and Reckner 1995). Minutes from New York's Holland Lodge No. 8 (1939:58) make note of the donation of "china bowls" and "china mugs" decorated with the lodge's seal.

The Freemason is encouraged to live by the principles of "Brotherly Love, Relief (i.e., Charity or Philanthropy), and Truth; to practice the four cardinal virtues of Temperance, Fortitude, Prudence and Justice; and to have as his distinguishing characteristics the qualities of Virtue, Honour, and Mercy" (Hamill and Gilbert 1992:57). He is exhorted to maintain his faith in God and to study science and the liberal arts. He is also encouraged to maintain his honor at all times and to be stoic in the face of death, "placing his faith in the certainty of immortality" (Hamill and Gilbert 1992:57). The ideals are presented in symbolic form in the decoration of the lodge, in tracing boards, and in the working tools of the operative mason which are symbolically used in rituals.

Symbols are central to the structure and teachings of the fraternal order. Masons have drawn their lexicon of icons from the Bible, classical Greece and Rome, Egyptian iconography, and from ordinary objects which were redefined and transformed to "further [their] educational aims." The symbolic dictionary of Masonry underwent a process of standardization in the late eighteenth and early nineteenth centuries and was further formalized by Jeremy Cross who published his "Masonic Chart" in 1819 (Dallal and Reckner 1995). Masonic scholars acknowledge the multivocalic (Turner 1979) nature of symbols, and the symbols of Freemasonry have more than one meaning. Truth is hidden behind allegories and symbols and is not revealed until each veil is removed and "the essential" stands exposed (Carnes 1989:63). The process of transformation which occurs during initiation rites is central to the fraternal order.

The symbolic ritual dramas that are at the heart of the initiation ceremonies lead the initiate to look within himself and reflect upon the inner meaning of what he is undergoing. That this is a rite of passage is certain, for the initiate prepares himself psychologically and spiritually before undertaking a symbolic journey that is gradually revealed to him. The journey often involves symbolic trials and dangers as a test of his courage, integrity, and commitment (Hamill and Gilbert 1992:221).

¹³ The choice of symbolic terminology, i.e., "to undergo the third degree," and its associated Masonic ritual is deliberate (Mark Parthemer, December 1996, personal communication).

Some of the ritual takes place in darkness “culminating in a dramatic restoration of light” which symbolizes the change in his inner state from moral ignorance to enlightenment (Hamill and Gilbert 1992:222). The initiate is clothed in new robes or regalia to symbolize this change of state.

After the War of Independence, Masonic symbols were wedded to every type of utilitarian object, including smoking pipes and glass pocket flasks. According to McKearin and Wilson (1978:408), Masonic designs were “as American as cornbread.” The popularity of Masonic symbolism reached its height between 1790 and 1830, with the years 1820 and 1830 being the peak. However, Masonic flask production and the association of Masonic symbols with other patriotic motifs ended abruptly after 1830, a fact that Franco (1980:18–19) cites as “strong evidence that the decorative arts of this period were... important and accurate expressions of the social and political feelings of the nation.” In the wake of anti-Masonic sentiment, the widely accepted linkage of Masonry and symbols of American patriotism broke down and never fully recovered (Dallal and Reckner 1995). Although there was a resurgence during the Victorian Age, their “meaning had been fundamentally altered.” Small, personal objects such as cufflinks bearing Masonic designs, however, continued to function as a means of proclaiming a “personal involvement with Masonry on an individual level” (Franco 1980:21).

The most common Masonic symbols found on smoking pipes are described below. In all instances, meanings ascribed to these symbols are superficial and are primarily abstracted (but sometimes quoted) from Paton (1873), Cirlot (1971), Hamill and Gilbert (1992), and Laschet (1994).

3.4.8 Masonic Symbols

The All-Seeing Eye	The omniscience of God (Paton 1873:70).
Beehive	The lesson of unity, cooperation, and duty towards the young (Paton 1873:180–1). The beehive reminds us that the world is one community, “the members of which are mutually dependent, and united by commerce” (Paton 1873:182). The beehive also reminds the Mason that the acquisition of knowledge is an important work (Paton 1873:184).
Castles	Operative masons were stonemasons who cut and prepared stone for building castles and cathedrals. Castles denote protection and are included in the seal of the Grand Lodge of England from which the Grand Lodge of New York derives its own seal.
Chisel	The chisel was used by operative stonemasons to give form to building stones (Paton 1873:92). When “combined with the mallet [it represents] the polishing effect of education and discipline.” It is also one of the “working tools of the Mark Master degree.”
Compass	Reason (Paton 1873:210). The compass “circumscribe(s) desires and keeps passions in bounds.”
Dove	The symbol of the messenger in English masonry. It appears in the “Ark and Dove” degree in the United States.
G	Stands for God; also geometry which is the origin of mathematics and architecture; i.e., operative masons were builders and used geometric principles.
Gauge	Represents the proper division of a Freemason’s time for different purposes (Paton 1873:88). It is also one of the “working tools appropriated to the degree of the Entered Apprentice” (Paton 1873:90). The gauge reminds us of the imperfections of our nature.
Gavel or Mallet	The gavel was used by operative masons to break off the corners of rough stones (Paton 1873:91) and in speculative masonry it “symbolizes divesting the heart of vice.”

Jacob's Ladder	The symbol of encouragement. A traditional seven-rung ladder described in the higher degrees (Laschet 1994:40). The principal rungs of the ladder are faith, hope, and charity (Paton 1873:112,113).
Level	Reminds us of the original natural level on which all men stand (Paton 1873:96). A level was used by operative masons to lay surfaces perfectly horizontal. The level is used symbolically by speculative masons to encourage humility and to remind one "not to despise those of low estate" (Paton 1873:96). The level is also the senior warden's jewel.
Moon	The moon is useful, although it shines only by reflected light; the same is true of the pious and good (Paton 1873:227). The moon reminds us of the importance of tides, especially its influence on the atmosphere and weather (Paton 1873:228-229). It also symbolizes night and woman.
Two Pillars	The two pillars located at the entrance of Solomon's Temple (Paton 1873:121) represent the image of the absolute and essential principles of building (Cirlot 1971). Pillars remind us of the strength and beauty combined in the works of God (Cirlot 1971:122). King Solomon's Temple represents the lodge. The tools that built this temple are used allegorically "to portray a system of morality." The symbols are used "to illustrate the means by which a Mason may become more perfect" (Hamill and Gilbert 1992:151).
Pelican	The 18th degree is dedicated to the "Knight of the Rosie Crosse." Symbols of this degree are the cross, the rose, and the pelican (Laschet 1994:200-201).
Plumb	Represents the laws of morality and signifies the uprightness of character expected of the disciples of Freemasonry (Paton 1873:98). The plumb is the junior warden's jewel.
Rectangle	The number four manifested ritually. Symbolizes the temple, the house of God on earth.
Rose	The symbol of the Festival of Roses or the Feast of St. John the Baptist (Johannisday). Ordinary lodges celebrate this day with a special ceremonial ritual (Laschet 1994:38). Love of life and nature's awakening is symbolized by the rose. The Freemason decorates his workplace with three roses as a symbol of his attitude to life in believing in light, love, and life (Laschet 1994:39).
Shield	The shield itself represents faith (Seals in the Building 1925:93). The Masonic Mark Jewel is in the shape of a shield. Jewels are badges of rank and office. Each rank has "its own symbol, worn as a jewel of office. These include the master's square, the senior warden's level, the junior warden's plumb, the crossed keys of the treasurer, the crossed pens of the secretary," etc.
Square	A Freemason's conduct will be tried by moral law (Paton 1873:94). Although the square is a working tool of operative masons, it is a symbol of virtue for speculative masons. The master's jewel is the square.
Star	The five-pointed star is symbolic of the five points ¹⁴ of fellowship: (1) "a master mason should not draw his hand from a sinking brother" (Paton 1873:356); (2) "the foot should never halt in the pursuit of duty" (Paton 1873:361); (3) pray for the distressed; the value and power of prayer (Paton 1873:364); (4) "a faithful breast conceals the faults and secrets of a Brother" (Paton 1873:368); and (5) "approaching evil is frequently averted by a friendly admonition" (Paton 1873:373). Six stars represent the double triangle known as Solomon's Seal, (the Star of David), and seven stars are the number needed for a perfect lodge.

¹⁴ Mark Parthemer, master of Holland Lodge No. 8, wonders if the phrase, "five points of fellowship" might not have derived from or had some connection or ritual association with the neighborhood of Five Points. According to Parthemer, the choice of symbolic terminology and its associated Masonic ritual is deliberate (Parthemer, December 1996, personal communication).

Sun	The sun symbolizes personal enlightenment, “the greatness of the material universe,” and God (Paton 1873:225). The sun also represents day as well as man. The 28th degree is dedicated to the Knight of the Sun (Laschet 1994:202).
Triangle	The Divinity is shown in the form of a triangle; it represents God’s qualities.
Trowel	Represents charity inculcated in the Mosaic Law; i.e., the parable of the Good Samaritan (Paton 1873:101, 103). It is the “symbolic tool that spreads the cement that unites Masons in brotherly love.” The trowel was used as the badge of the grand master of Ireland beginning ca. 1725.
Twenty-Four-Inch Gauge	Represents the 24 hours of the day divided into three parts: God, work, and rest.
Square and Compass (together)	Reason and faith. When combined with the sun, it is the senior deacon’s jewel. When combined with the moon, it is the junior deacon’s jewel.

3.4.9 *Masons and Masonic Pipes from Block 160*

Ten pipes with Masonic symbols were recovered from eight features on Block 160—Feature J (472 Pearl Street), Feature AF (474 Pearl Street), Feature AG (10 and 12 Baxter Street), Feature AK (4 Baxter Street), Feature AI (4 Baxter Street), Feature AB (468 Pearl Street), and the area outside of Feature W (also 468 Pearl Street). The pipes are described in the following text, along with data regarding Freemasons who might have been associated with these features. Other Freemasons associated with Block 160 were found during research and these persons are also included in the text, despite the fact that no Masonic pipes were recovered on properties associated with these individuals.

3.4.9.1 472 Pearl St. (Lot 6)

In 1855, 472 Pearl Street was an overcrowded tenement with more than 100 occupants who were predominantly (97%) Irish. The remaining three percent were German. Most of the occupants were day laborers residing in the United States less than five years. A liquor store and a tobacco shop were also situated on the property at the time. None of the known occupants was a Freemason.

Of the 276 individual pipes recovered from Feature J, six percent exhibited nationalistic themes primarily expressed by 13-star patriotic models made in the United States between ca. 1845–1875. One pipe with Masonic motifs, however, was recovered from Analytical Stratum III (TPQ 1870) (Figures 42 and 43). It is possible that a Mason lived here ca. 1870, but the Grand Lodge registers do not extend beyond 1853. Pipe no. 534 consisted of a partially fluted bowl with a small heel (see Volume VI:112). Motifs included a floral garland without Masonic significance and a compass and square on the right side of the bowl. The stag in relief facing the smoker has no relationship to Masonry but is common on late-eighteenth- and early-nineteenth-century Masonic pipes from Rainford, England. Pipes with stags’ heads and Masonic motifs have also been recovered from late-eighteenth- and early-nineteenth-century deposits at the Assay and Barclay’s Bank sites in lower Manhattan (Dallal 1995).

3.4.9.2 474 Pearl St. (Lot 7)

According to 1802 tax assessment records, Dr. Morton was associated with 474 Pearl Street at this time. Several Freemasons with the surname Morton were recorded in the first Grand Lodge Register (1797–1832), but the register listed no occupations for these Mortons. Therefore, it is not known if the Dr. Morton from 474 Pearl Street was a Mason.



Figure 42. Masonic pipe with compass and square (top) recovered from Feature J (AS III, TPQ 1870) and bowl depicting mason's jewel and other motifs (bottom) recovered from Feature AK (AS IV, TPQ 1800).

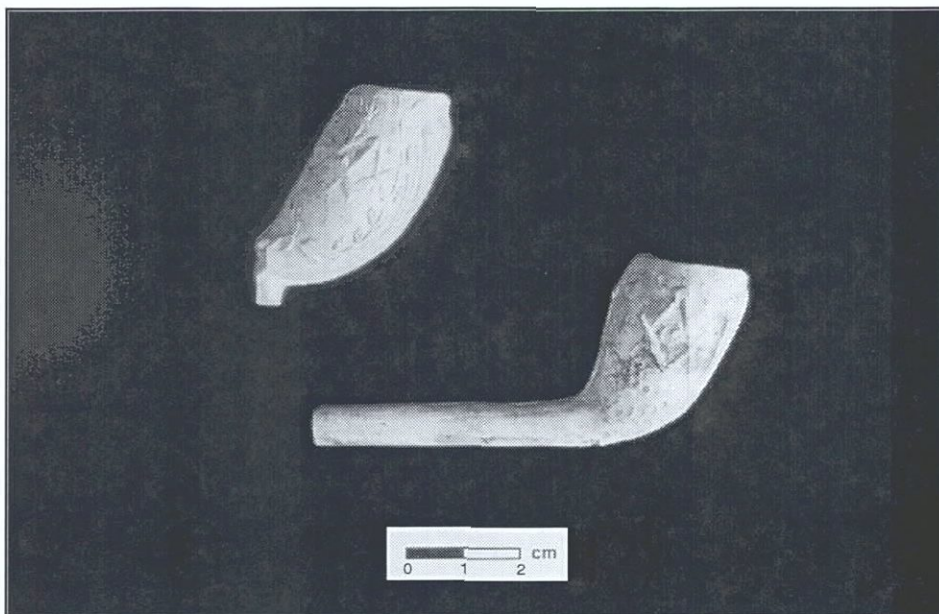


Figure 43. Obverse of pipes shown in Figure 42.

One small bowl fragment (cat. no. 940) with Masonic motifs was recovered from AS II (TPQ ca. 1800) of Feature AF. The nearly illegible Masonic symbols included a compass and square and a ladder or 24-inch gauge. The date range of the pipe assemblage was consistent with the occupation of baker Tobias Hoffman as well as Dr. Morton, who was presumably Hoffman's tenant. Other occupants included Isaac Cross (1812 until at least 1815), who rented the rear of the lot. During this time he operated a cabinet shop and may have boarded several men (see Volume III). The property eventually passed to J. M. T. Labatut. Neither Hoffman, Labatut, nor Cross was a Freemason.

3.4.9.3 476 Pearl St. (Lot 8)

No Masonic pipes were recovered at this address. However, one individual, George Harrison, who was in the milk business, lived and worked at 476 Pearl Street ca. 1850 with his wife and servant. Research indicated that a George L. Harrison, merchant, became a member of Holland Lodge No. 8 on June 16, 1856. It is not known if the Harrison of Holland Lodge is the same individual as the one who lived and worked at 476 Pearl Street.

3.4.9.4 2 Orange/Baxter Street and 114 & 116 Chatham Street

Although no Masonic pipes were recovered from 2 Orange/Baxter Street or 116 Chatham Street, the name of an occupant, Vultee, surfaced in the second Grand Lodge Register (1832–1853). Charles W. Vultee, age 35 and a grocer born in New York, was initiated into the Lodge of Strict Observance No. 94 of New York City in February 1846. According to the 1834 city directory, Charles Vultee, owner of a grocery at 116 Chatham Street, resided with his family at 2 Orange Street. Between 1840 and 1841 a C. W. Vultee, grocer, owner of a grocery located at 18 Orange Street, lived at 116 Chatham Street. Two males and six females including five children and a free black woman, probably a servant, lived in the house at the time. Unless the recorded age at his lodge initiation is incorrect, this could not have been the Charles Vultee recorded in 1834. (He could not have been the head of a large family at the age of 12.) It is more likely that Charles W. succeeded his father Charles Vultee in the grocery business and that he joined a Masonic lodge in 1846. Charles W. Vultee died two years later (Second Grand Lodge Register 1832–1853).

It is noteworthy that a relative, (his twin or a cousin?), Frederick L. Vultee, a deputy sheriff and also age 35 and born in New York, was initiated into the same lodge in the same month and year as Charles W. Vultee. "F.L. Vulti" (sic) later become master of the lodge in 1851 (Quick 1902–1907:157). The Lodge of Strict Observance, warranted in 1843, held its meetings at the Howard House (later the City Hotel) located at 492 Broadway in 1846 (Quick 1902–1907:181). One aspect of the lodge's mission was to raise money for the erection of a Masonic temple in New York City and to provide an asylum for the aged and orphans of New York State brethren (Quick 1902–1907:153).

The 1855 census also recorded George W. Voultee, an unmarried male, age 37, born in New York City and a seller or maker of surgical instruments at 114 Chatham Street. George W. was not a Freemason. His widowed mother Gertrude, aged 67 (and in New York for 49 years), lived at the same address. She was born in Germany and sold "ready made linen" at 114 Chatham Street between 1827–1887 according to census and tax assessment records. It is likely that George W., Charles W., and Frederick L. Vultee were the sons of Gertrude and Charles Vultee.

3.4.9.5 4 Orange/Baxter Street (Lot 47)

The Grand Lodge Registers did not reveal any New York City Freemasons among the occupants at this address. The assemblage of pipes from Feature AI associated with 4 Orange/Baxter Street, however, consisted of 153 fragments, including the rim of a fragmentary clay pipe bowl decorated with Masonic symbols (AS II, cat. no. 710, [TPQ 1850]). Motifs included a castle, compass, chisel, and horizontal lines representing the rays of the sun or the rays which illuminate the all-seeing eye.

Another pipe embellished with Masonic symbols (pipe no. 720) was recovered from the primary fill of Feature AK (AS IV [TPQ 1800]) (see Volume VI:221). It consisted of a heelless, partially fluted bowl with a fragmentary stem. The left side of the bowl was decorated with a shield-like design representing a mason's jewel and an unidentifiable motif within. A garland (not Masonically significant), sun, moon, compass, and square with the letter G adorned the right side of the bowl, and a stag's head faced the smoker. The stag's head occurs frequently on pipes dating prior to the 1826 anti-Masonic period. Its popularity may reflect its traditional use in English heraldry, or an association with fraternities and benevolent societies. The Ancient Order of Foresters, a sickness-benefit and funeral society formed in 1834, adopted the stag's head as a prominent element in its emblem. The higher incidence of stags' heads on earlier pipes may reflect the dominance of the English pipe market in the late eighteenth and early nineteenth centuries. When Masonic pipes reappeared on the American market, Scottish, French, Dutch, and German pipe manufactories expanded their share of the trade, especially after 1850.

The pipe from AS IV was probably made in England. It is similar, if not identical, to pipes found in the privy (1810–1830) of Courtlandt van Beuren at the Assay Site in lower Manhattan (Figure 44).

3.4.9.6 8 Orange/Baxter Street

Pipes with Masonic motifs were not recovered at 8 Orange/Baxter Street. However, census records, tax assessments, and city directories ca. 1840–1845 indicated that William Deverna, who worked as a manager at 470 Pearl Street, lived there with his family. The 1840 census revealed that six males and eight females occupied the house and that nine of its occupants were children. Prior to 1853, an individual named William Deverna was initiated into Mount Moriah Lodge No. 27, New York City. Unfortunately, no other information about Deverna was revealed in the Masonic records; therefore, it is not clear if the Deverna of Mt. Moriah Lodge was the same as the occupant of 8 Orange Street.

Mt. Moriah Lodge 27 was organized in 1806 and met at St. John's Hall on Frankfort Street (Quick 1902–1907:122). A history published by the lodge (Mt. Moriah Lodge 27, 1934:6) proudly noted that during the anti-Masonic period, 1826–ca. 1840, and during the Morgan Excitement (see Section 3.4.3), out of 500 lodges in the state of New York, 420 surrendered their warrants; 20 lodges in New York City, two in Brooklyn, and one in Hudson remained. Mt. Moriah was among the lodges which kept its charter.

Two other Freemasons with names identical to two of the occupants of 8 Orange/Baxter Street, were listed in the New York State Grand Lodge Membership Registers. William Lyon, a grocer/marshal, occupied 8 Orange Street between ca. 1808–1810. The federal census for the Sixth Ward placed the second individual, William Lyons, a 37-year-old liquor dealer born in Ireland (b.1813), at 478 Pearl Street in 1850. (Lyons owned property worth \$50,000—a substantial sum in those days.)

The Grand Lodge Registers listed William W. Lyon and William Lyons as Freemasons. Lyon, who was the almshouse commissioner, was initiated into Montgomery Lodge No. 68 on September 10, 1849. As discussed above, this lodge had many Irish brethren. It is not known if the William Lyon of 8 Orange Street in 1808–1810 went on to become commissioner of the city's almshouse or if he was the Brother William W. Lyon of Montgomery Lodge.

The second individual, William Lyons, was initiated into Silencia Lodge No. 360 on December 26, 1823. According to a history published by the lodge¹⁵ (Barker 1869), members met at St. John's Hall on Frankfort between Chatham and William Streets, a popular place for Masonic meetings. The lodge members attended the Masonic reception for "Brother Marquis De Lafayette" which took place at Washington Hall,¹⁶ corner of Broadway and Reade Street. (A. T. Stewart's store later occupied the site) (Barker 1869:14). William Lyons was elected to the standing committee of the lodge in 1824 (Barker 1869:15) and was elected steward (in charge of refreshments) in 1825, 1826, and 1828 (Barker 1869:25, 28). Lyons either left the lodge

¹⁵ The lodge originated in 1823 (Barker 1869:10) and its number 360 was changed to 198 in 1850.

¹⁶ Washington Hall was one of the prominent public buildings of the time used for lectures, balls, and public entertainments (Barker 1869:14).



Figure 44. Masonic pipe (ca. 1810) depicting a stag facing the smoker. From Courtlandt Van Buren's privy at the Assay Site. At least two of the pipes from Block 160 included portions of this English motif. Photographed by Rob Tucher.

or died in 1831; a notation next to his name for that year says "S. off R., Feb. 21, 1831," i.e., stricken off record (Barker 1869:153).

Unless the date of birth recorded in the 1850 census is incorrect, however, William Lyons could not have been the same Lyons as the individual who became a member of Silentia Lodge in 1823: he would only have been 10 years old at the time.

3.4.9.7 10-12 Orange/Baxter Street (Lot 43)

Aaron Levi, who was a tailor, a clothier, and/or dealt in secondhand clothes, lived and worked at this address between 1850 and 1864. Levi was born in Prussia and was 43 years old in 1850. According to census records, his wife, Isabella, was five years older and had been born in Germany. (Their children were not listed in the 1850 census.) In 1860, the same Aaron Levy (sic), now a 50-year-old clothier with a wife Isabella (here recorded as five years younger than her husband), was reported to have two children, Caroline, 14, born in New York, and Sarah, 9, born in South Carolina.

It is interesting that an Aaron Levy and a Mr. Levi were recorded in the Second Grand Lodge Masonic Register (1832–1853). Aaron Levy, a 38-year-old pawnbroker born in Prussia, was initiated into Naval Lodge 69 on October 21, 1844. Naval Lodge originated in Brooklyn in 1826 and was located "near the Navy Yard" which gave it its name (Quick 1902–1907:180). After relocating to New York City in 1838, the lodge participated in public ceremonials such as the funeral of Andrew Jackson in 1845 (Quick 1902–1907:180). At the time of Aaron Levy's initiation, the lodge met at Warren Hall, corner of Oliver and Henry Streets (Quick 1902–1907:181). It is not certain if the Aaron Levy of Naval Lodge is the same as that of the Levy at 10-12 Baxter Street.

The second entry in the Grand Lodge Register, Mr. Levi (first name unknown), was a merchant, born in New York, who joined Adelphi Lodge No. 23 of New York City on November 20, 1853. Adelphi Lodge had a "large German and foreign membership" during the anti-Masonic period (Quick 1902–1907:159). Because he was born in New York, it is unlikely that Mr. Levi is the Aaron Levy of Baxter Street.

Four of the 62 mended pipes recovered from the stone-lined privy designated Feature AG were decorated with Masonic motifs. The first, a heeled pipe (pipe no. 653) recovered from AS I (TPQ 1892), was covered with Masonic symbols: the sun and moon, compass and square, castles, Jacob's ladder, 24-inch gauge, a chisel, mallet and prybar, a shield or mason's jewel, and stars (see Volume VI:186) (Figure 45, top right). It is interesting that among the pipes in this stratum was one made by Thomas Smith, a New York City pipemaker (1843–1884). There was also a fragment of a hand-painted German porcelain pipe.

The second Masonic pipe (pipe no. 689) was recovered from Analytical Stratum III (TPQ 1841) and consisted of a partially fluted bowl fragment decorated with a compass and square and castles (Figure 45, bottom) (also see Volume VI:200). The third example (pipe no. 700), also from AS III (TPQ 1841), consisted of a complete bowl with a heel marked with the initials W/S (see Volume VI:205). The pipe was exquisitely decorated with seven stars and a moon, a level, a mallet, a prybar and chisel, a sun, three castles, a compass and square, Jacob's ladder, a 24-inch gauge, and the all-seeing eye (Figure 45, top left). This pipe may have been manufactured by William Swinyard of Surrey (working 1815–1858) (Higgins 1981).

The fourth pipe (pipe no. 809) was recovered from an unassociated wall collapse and consisted of a small elaborately decorated bowl fragment decorated with a compass and square, a crossed trowel and gavel, the sun, the 24-inch gauge, and Frater(nity) (see Volume VI:207).

3.4.9.8 468 Pearl Street (Lot 3/4)

No Freemasons were found to be associated with 468 Pearl Street prior to 1853, although two Masonic pipes were recovered at this address. One located outside Feature W (cat. no. 459) may date to the eighteenth century. Although fragmentary, the bowl is adorned with brackets (common to Masonic

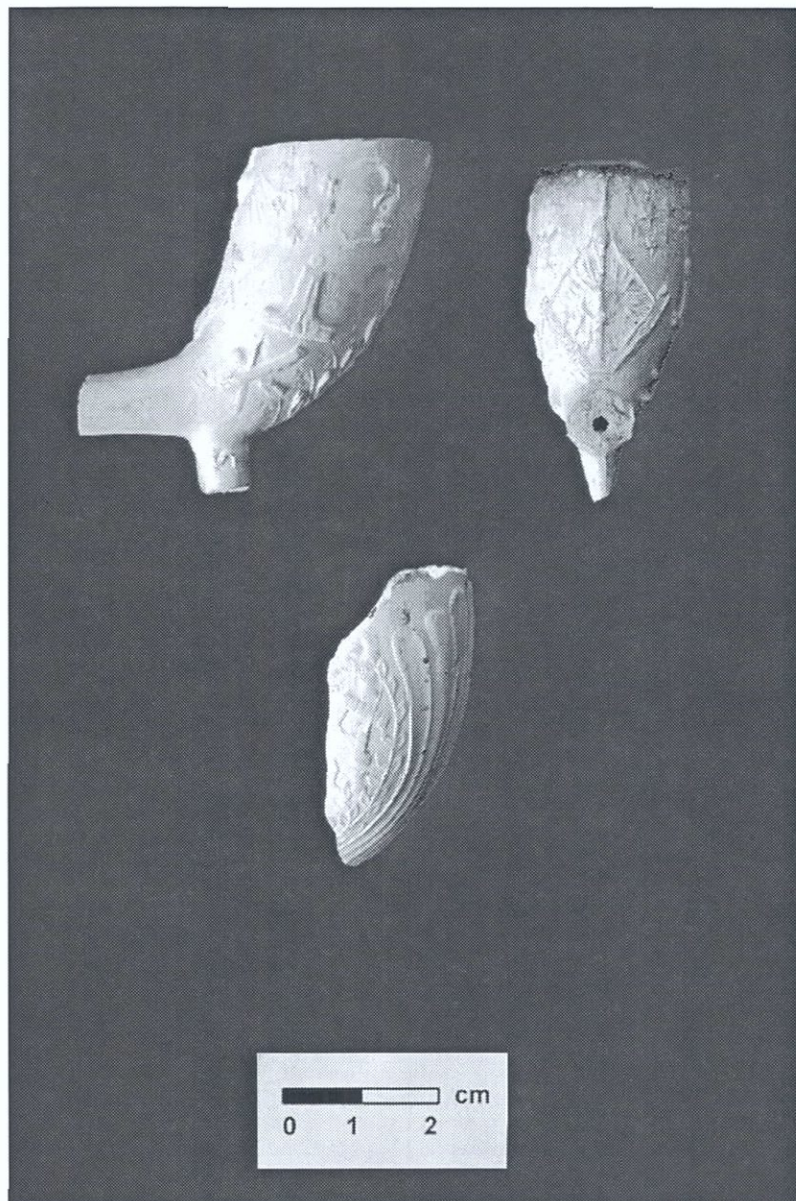


Figure 45. Masonic pipe (top right) from Feature AG (AS I, TPQ 1892) and partially fluted pipe (bottom) from Feature AG (AS III, TPQ 1841) decorated with compass, square, and castles. Masonic pipe (top left) from Feature AG (AS III, TPQ 1841) consisting of a complete bowl with a heel marked with the initials W/S. The bowl is decorated with seven stars and a moon, a level, mallet, prybar, chisel, sun casters, compass and square, Jacob's ladder, a 24-inch gauge, and the all-seeing eye. Possibly made by William Swinyard of Surrey, ca. 1818.

pipes) and part of what is probably a shield (mason's jewel). It was also decorated with a compass and square. The pipe is similar to a Nottingham pipe illustrated in Hammond (1982:55, Figure 16, No. 84) which he dated to 1790–1820.

The other Masonic pipe from 468 Pearl Street was recovered from Feature AB (pipe no. 773). The pipe came from the uppermost stratum of the disturbed feature (TPQ 1841), although most of the ceramics date much earlier. This example consisted only of the fragment of a bowl decorated with the nearly illegible outline of what was probably a shield or mason's jewel.

3.4.9.9 466 Pearl St.

No Masonic pipes were recovered at this address. One of the inhabitants, Charles Peck, coach trimmer, however, may have been a member of New York Lodge 368. Charles A. Peck was initiated on May 22, 1827, and suspended for non-payment of dues in 1831 (New York Lodge 368[1831]). It is not known if this was the Peck of 466 Pearl Street. Addresses of New York City lodge members are not recorded in the Masonic registers.

3.4.10 Conclusions

It has been hypothesized that pipes can be read as text in which ideas about the self and the surrounding world are expressed (Cook 1989b; Dallal 1994). These common, everyday objects of choice were found in great quantities in the privies of the occupants of Block 160. Ten of these pipes were decorated with Masonic symbols.

In 1855, a staggering 95 percent of the total inhabitants of Block 160 were new immigrants (Fitts 1995). Low per capita income assured that not many could afford the costs of membership in the fraternal order of Freemasons. If Masonic membership constituted an expenditure of cash that was beyond the means of most Five Pointers, longings for higher status might have been expressed by the adoption of symbols perceived to be associated with those of the fraternal order. Occupants who could afford it joined fraternal orders, such as the Freemasons, which bridged divisions of class, status, and ethnicity. But Masonry and its panoply of symbols also had a greater social function. It acted as an integrative mechanism which helped to pull together all of these disparate groups into a cohesive nation.

Cortlandt van Beuren, Freemason and smoker, who selected pipes based upon his Masonic identity, was used as a model of the link between Masonic pipes and Masons. Although the decorated pipes illustrated how simple objects could transmit symbolically encoded information about group identity, these symbols, initially created to signify a relationship between those who used them, were situated on objects that were also commodities to be sold.

However improbable it may seem for Freemasons to have lived in Five Points, "artifacts...have been used with some success to pull the rug out from under some cherished notions of past happenings" (Brown 1993:143). Research showed that seven early-to-mid-nineteenth-century occupants of Block 160 might have been Freemasons. For the most part, these gentlemen fell within the category of independent tradesmen—a group from which Freemasons were drawn during the first half of the nineteenth century (Clawson 1989). Although this study found no relationship between these particular Masons and the presence of Masonic pipes in the privies on the Courthouse Block Site, the very existence of Freemasons on Block 160 suggested that, at the very least, the community of Five Points was more complex than historical accounts depicted.

Research by Fitts, Pitts, and Milne (reported in Volume III) revealed that some relatively prosperous property owners, merchants, bakers, lumberyard owners, and slave-holders, who fit the pattern of the typical Freemason of the late eighteenth and early nineteenth century, were present at Five Points. These were the men expected to be the Freemasons on Block 160, but they were not. Two Masonic pipes were recovered at 468 Pearl Street, where wealthy merchant Rene Nau lived with his family and slaves ca. 1800, as did tallow chandler James Cowan, 1808–1814, and dry goods merchants Abraham, Benjamin, and Joseph

Birdsall (listed in city directories as commercial occupants of 468 Pearl Street), but none of these occupants proved to be Freemasons. Even though it is likely that coach trimmer Charles Peck of 466 Pearl Street, grocer Charles W. Vultee of 2 Orange (Baxter) Street, milk dealer George Harrison of 476 Pearl, Almshouse Commissioner William Lyon, and manager William Deverna of 8 Orange (Baxter) Street were Freemasons, no Masonic pipes were recovered from these premises.

The opposite occurred at 4 Orange (Baxter) Street, where two Masonic pipes were recovered but no Masons identified. A Masonic pipe (ca. 1855) was also found at 472 Pearl Street but none of the occupants (predominantly poor Irish immigrant day laborers) was a Freemason. Although four of the ten Masonic pipes from Block 160 were recovered at 10-12 Baxter Street, and three of these were retrieved from strata dating ca. 1840 when Aaron Levy was an occupant, it was impossible to attribute them to his household. He may not, after all, have been a Freemason; he may not have smoked a pipe. It is possible that the pipes belonged to others in the building, to visitors, or to the brothel on the premises.

The single example of a Masonic pipe (TPQ 1800–20) at an address where a Mason may have resided occurred at 474 Pearl Street. It was impossible to determine if one of the Mortons in the *Grand Lodge Register* was the Dr. Morton of Pearl Street. Tobias Hoffman, Isaac Cross, and J. Labatut, also of this address, were believed to be likely candidates for the fraternal order, but their names were not found among lists of Freemasons.

Research has shown that “the fraternal movement was characterized by a striking degree of cultural pluralism, . . . most orders had not only accepted immigrants as members but allowed local lodges to operate in languages other than English” (Clawson 1989:131). Although ethnic lodges were divisive by definition (in seeking to maintain cultural identities), they still adhered to the over-arching principles of Freemasonry, and so served an integrative function. The purpose of these ethnic lodges was twofold: while preserving native language and culture, they also eased the transition into American society at large. The cornerstones of Freemasonry, which are truth, equality, and liberty, are not only the themes of the Enlightenment, they are also the very cornerstones of the American Bill of Rights and the Constitution. “Too often Freemasonry is portrayed as . . . an activity carried out in private by an elite group bonded together by motives of self interest” (Hamill and Gilbert 1992:203). Nothing could be further from the truth, however. The fraternal order reminds the Freemason that he is “above all a citizen of the world whose duty (as the Craft ceremonies continually reaffirm) is not to the self, but to his family, his country, and his fellow-men” (Hamill and Gilbert 1992:203).

3.5 Revealing Meals: Ethnicity, Economic Status, and Diet at Five Points, 1800–1860

(Claudia Milne and Pamela Crabtree)

3.5.1 *Methods and Materials*

This section represents an attempt to use approximately 65,000 animal bone fragments to reconstruct the diet of the nineteenth-century inhabitants of Five Points. The analysis is based on the faunal remains recovered from a series of archaeological features that range in date from the end of the eighteenth century to the third quarter of the nineteenth century. The animal bones have been identified and interpreted using standard zooarcheological methods (described below). Two of the major questions addressed in this chapter are whether differences in food choices can be seen as expressions of ethnicity in what was a diverse, multi-ethnic immigrant neighborhood and the extent to which food choices may be a reflection of socio-economic status (see, for example, Crabtree 1990).

Several archeological and historical problems arise in attempting to use faunal remains to examine diet, status, and ethnicity. The first and most obvious problem is the extent to which specific excavated features may be associated with particular families or groups of families. Features AF and N, which date to the first third of the century, can reasonably be associated with two stages of the Hoffman household. The density of occupation on Block 160 increased throughout the nineteenth century, and many of the later tenants lived more transient lifestyles than the earlier occupants. By mid-century it becomes more difficult to associate specific deposits with particular families. For example, Feature O was a stone-lined privy located in the backyard of a saloon. The floors above the saloon were occupied by Irish immigrant tenants. Are the fauna recovered from Feature O the refuse from meals prepared in the saloon and served to its customers, or are they remains of meals prepared by the Irish tenants living upstairs? It is likely the bones recovered from Feature O represent meals associated with both the saloon and the upstairs tenants.

A second and equally vexing problem relates to the nature of the faunal record itself. Animal bones are, at best, an indirect reflection of past diet and subsistence practices. At the most basic level, animal bones reflect bone-in meat cuts only. Fillets, flank steaks, and other boneless meat cuts will be archeologically invisible. Animal bones most often enter the archeological record after an animal has been slaughtered, butchered, and eaten. Many animals, such as chickens, may be more valuable for their eggs and other secondary products than they are for their meat. Non-food animals are clearly present in almost all the Five Points features. These include companion animals such as cats and dogs, as well as commensals such as mice and rats. We need to distinguish between food and non-food species and to determine how these non-food animals became incorporated in the archeological deposits. Finally, we need to address the taphonomic questions that face all faunal analysts. In simple terms, we need to ask what happened to the animal bones from the time they were discarded as household waste until they were finally recovered by the excavators. For example, will the smallest fish bones pass through archeological screens? What effects did commensal rodents and carnivores (specifically, cats and dogs) have on bone preservation? These challenging methodological questions need to be addressed before we can use faunal and historical data to reconstruct diet, economic status, and ethnic identity.

3.5.2 *Coding and Identification*

The Five Points fauna were analyzed using conventional zooarcheological techniques (Grayson 1981; Klein and Cruz-Urbe 1984). All the fauna were identified using the comparative collections from the New York University Anthropology Department, the Hunter College Anthropology Department (CUNY), and the American Museum of Natural History. The identifications and other basic faunal data were recorded using the ANIMALS program, version 4.0 (Campana and Crabtree 1987). ANIMALS is a specialized database manager designed for archeological faunal analysis and written for the PC in the C programming language. The following basic faunal data can be recorded using the ANIMALS program: archeological context, species (or higher order classification), anatomical part, handedness, portion of the bone, degree of fragmentation, state of epiphyseal fusion, and condition (e.g., burned, rodent gnawed). The following

additional information can also be recorded using the program: aging based on dental eruption and wear (following Grant 1982), butchery traces, bone measurements (following von den Driesch 1976), and comments.

The basic zooarcheological data consist of the identifications of the individual bones. Unfortunately, the vast majority of animal bones in most well-collected faunal assemblages cannot be identified to species. Taphonomic factors such as butchery, rodent and carnivore gnawing, weathering, and trampling can serve to obliterate the distinctive morphological points that can be used to distinguish between closely related species. Following the recommendations of Coy et al. (1982:41–42), a series of higher order taxonomic categories has been used to identify those bones which could not be identified to species. The category sheep/goat (coded S/G) was used for all caprine remains that could not be identified to species using the criteria set forth in Boessneck et al. (1964). The category small artiodactyl (coded SAR) was used for fragmentary remains that could have been either sheep/goat or pig. It was most often used for heavily fragmented pieces of ribs and vertebrae. Similarly, the large ungulate category (coded OXO) was used for bone fragments that could have come from either cattle or horses. The vast majority of these bone fragments probably came from cattle, since only one or two horse bones were identified in the entire Five Points faunal assemblage. Only the skulls, jaws, and teeth of the commensal rodents were identified to genus or species. Post cranial bones of small commensal rodents were simply identified as rodent (coded ROD). For the domestic birds, the categories chicken-sized (FWZ) and goose-sized (GSZ) were used to categorize the fragmented and non-diagnostic pieces. Most of the heavily fragmented bone splinters were simply recorded as unidentified mammal (UNM), unidentified bird (UNB), and unidentified fish (UNF). A small number of very tiny bone splinters were categorized as unidentified (UNX).

3.5.2.1 MNI and NISP

Once the basic identifications and computer recording of the Five Points bones were completed, analysis began with simple estimates of taxonomic abundance. Two methods, the MNI and the NISP, have been used by zooarcheologists to calculate the relative importance of the various animal species at archeological sites. The NISP (number of identified specimens per taxon) method bases species ratios on fragment counts, while the MNI (minimum number of individuals) method is based on an estimate of the number of individual animals needed to account for all the bones in a particular feature or context. Both methods are subject to serious criticisms. The NISP method fails to account for problems of independence, that is, that a number of different bones may have come from the same individual animal. The MNI, on the other hand, responds unpredictably to aggregation, combining archeological contexts to form meaningful analytical units. The problem is exacerbated when historic faunal assemblages are studied, since small fauna such as fish and poultry were often sold as individual animals, while larger animals such as cattle were sold as individual meat cuts. Because both methods of quantification are subject to bias, we have based our estimates of taxonomic abundance on both the MNI and the NISP. Klein and Cruz-Uribe (1984:37) have noted that “the NISP can be very useful when it is presented together with the MNI.” Species ratios based on both MNIs and NISPs are presented for the most important archeological deposits.

3.5.2.2 Retail Meat Cuts

Species ratios are a small but important part of the analysis of a faunal collection. In historical contexts, retail meat cuts are frequently the most meaningful unit of analysis (see Schulz and Gust 1983; Lyman 1984). Body parts are assumed to represent cuts of meat. To eliminate the problem of interdependence (Lyman 1984:59–66), each bone was assigned to a specific cut of meat. This assignment was based upon the National Meat Board’s detailed instructions on the fabrication and butchering of animal carcasses (Ashbrook 1955; Romans and Ziegler 1977). To determine the minimum number of retail meat cuts (MNMC) that must be present to account for each assemblage, the number of bones attributable to each cut was added and then divided by the standard number of bones found in each cut (Table 33). These cuts were then roughly ordered according to price per pound with the most choice and expensive loin cuts at the top and the least expensive hock and foot cuts at the bottom (see Henn 1985; Henry 1987a).

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This is an imperfect sample of bone-in cuts only. Cuts without bones, including rolled roasts, bacon, and some stew meats, do not appear in the archeological record. A number of the smaller rib and vertebral fragments were not identifiable to species and were coded as SAR. The cuts of meat associated with these bones (including the upper pork loin, rib cuts and chops, and rack of mutton) are underrepresented in the retail cuts charts.

Previous studies have focused primarily on beef; however, analysis of the Five Points fauna has shown that beef, pork, and lamb/mutton all played a role in the diet of urban nineteenth-century New Yorkers. Therefore, all three meats were incorporated into the same chart (Table 33). The chart is used to better view the meat assemblages in terms of expenditure. The charts are not intended to indicate either the status or class of the consumer as the construction of social identity is far too complex to be based solely on the cuts of meat consumed.

Table 33. Retail Bone-in Cuts

Retail Meat Cut	Bones Included in Cut	Standard Number
Short Loin Beef	L-verts (5)	5
Mutton Loin	L-verts (5); ilium (1); sacrum (1)	7
Beef Sirloin	Ilium (1); acet (1); scarum (1); prx femur (1)	4
Rack of Mutton	T-verts (8); prx/mid ribs (24); (splitcut/ 2)	16
Beef Ribs	T-verts (lower 7); ribs (lower 7)	14
Beef Round	Midshaft femur	1
Pork Loin	L-verts (5); ilium (1); sacrum (1)	7
Pork Ham/Leg	Prox/med femur (1); ischium (1); acetab (1); pubis (1)	4
Beef Rump	Ischium (1); caudal verts (5)	6
Beef Hindshank	Dis. femur (1) astrg/cal (2); tib/fibula (2) tarsal (4)	9
Mutton Chuck	T-verts (4); scapula (1); prx/mid humerus (1)	6
Pork Ribs/Upr. Loin	T-verts (12); prx/mid ribs (12); scapula blade (1)	25
Leg of Mutton-Butt	Ischium (1); acet/pub (2); prx/mid femur (1)	4
Leg of Mutton-Shank	Dis. femur (1); prx/mid tibia (1)	2
Pork-Boston Butt	C-verts (7); dis. scap (1); prx/mid humerus (1)	9
Beef Chuck	Scapula (1); upper T-verts (5)	6
Beef Arm	Prx/mid humerus (1)	1
Beef Cross Ribs	Midshaft ribs (13)	13
Pork-Picnic Ham	Dis. humerus (1); radius/ulna (2)	3
Pork-Shank Ham	Dis. femur (1); prx/mid tibia/fibula (2)	3
Beef Frontshank	Dis. humerus (1); radius/ulna (2); carpals (6)	9
Beef Brisket	CC; sternum; dis. ribs (13)	13
Mutton Plate	CC; sternum; dis. ribs (13)	13
Pork Spare Ribs	CC; sternum; dis. ribs (12)	12
Beef Neck	C-verts (7)	7
Mutton Neck	C-verts (7)	7
Mutton Hindshank	Dis. tibia (1); MT (1); cal/ast (2); tarsals (5)	9
Mutton Foreshank	Dis. humerus (1); rad/uln (2); prx/mid MT/MC (2); carpals (6)	11
Pork Foreshank/Hock	Carpals (5); prx MC (2)	7
Pork Hindshank/Hock	Dis. tib/fib (2); tarsal, cal/astrag (7); prx MT (2)	11
Pigs' Feet	Phalanges (12); lateral MP (2); mid/dis MP (2)	16
Beef Feet	MT/MC (1); phalanges (6)	7
Mutton Head		30
Mutton Feet	Dis. MT or MC (1); phalanges (6)	7
Pork Head		30

3.5.2.3 Fish Remains

A considerable portion of each faunal assemblage recovered at the Five Points site was identified as fish bone. Fish was consistently one of the least expensive foods available per pound in the urban northeastern United States (Singer 1987). The fish bone is well preserved and frequently completely intact. Based on the NISP, the amounts of fish in each deposit varied from six percent (Feature AF) to 55 percent (Feature H) of the identified bones. Fish was obviously an important food item to many of the Five Points residents; therefore, the analysis of the fish remains is included in detail in the following report. In most instances the spines and scales of unidentified fish are excluded from the tabulations and calculations contained in this section so as not to inflate the numbers of unidentified fish in these deposits. Morphological similarities in the bones of both the flounder and bass species made identification to the species level difficult for a number of bones, especially the vertebrae. Additionally, the diversity of flounder and bass species present in local waters hindered identification, and a number of bones in each deposit were identified only to the larger bass (SERR) or flat fish (PLEU) families.

All of the Five Points features also contained some quantity of shellfish, oysters, clams, mussels, whelks, and limpets. The deposition and presence of the shellfish within several features appears to be functional, to serve as odor control or to improve drainage, rather than as the by-product of meals. Discussion of shellfish, therefore, has been limited in this section and mostly relegated to the appendix (Appendix C).

3.5.3 Introduction and Historical Background

In addition to personal preferences, a number of factors influence food choices. These include the physical availability and cost of food items and the socio-economic status and ethnicity of the consumer. Although some fish species and wild game had disappeared from Manhattan's markets by the late eighteenth century, by most accounts almost any type of food imaginable was physically available in the nineteenth-century city (DeVoe 1970; Dickens 1985; Rothschild and Balkwill 1993).¹⁷

The earliest Block 160 households associated with specific archeological deposits were those of moderately well-off artisans who set up residences and businesses along Magazine (later Pearl) Street at the end of the eighteenth century. Little is known about the ethnic background of these residents. They were businessmen and property owners, who both lived and worked on their Magazine Street properties. Five Points was also home to a large number of free black households and a number of native-born workers who chose to remain near the city's business and commercial districts. By 1855, however, the majority (75%) of the district's residents were foreign born (Groneman 1973). Large-scale immigration from European cities began in earnest in the 1820s and Five Points became a teeming neighborhood of workers and their families. These workers settled into subdivided rental housing the earlier residents and property owners left behind. Most of the new arrivals were rural Irish fleeing the first of many famines. They were soon joined by Polish and German Jews, Italian laborers, and some of the earliest Chinese migrants to America. In most cases, the wealth of historical data available, including censuses, tax assessments, and marriage and banns records, permitted the identification of households which could be associated with specific archeological deposits. For some features, however, the dense and transient nature of residents in this neighborhood did not allow for specific household associations, but the propensity for ethnic groups to cluster at the same address allowed the analysts to assign deposits to specific ethnic groups. Several features could not be assigned to either a specific household or ethnic group, but are discussed as part of the larger working-class neighborhood.

Ethnic identity is maintained through behavior and is not necessarily expressed with large numbers of distinctive markers, be they food items or material objects. Everyday items act as symbols of community, solidarity, and difference, even when utilized in the most mundane manner (Cook 1992:1). Faunal remains recovered from archeological sites have the potential to be one of the most viable, continuous

¹⁷ Almost any contemporary or traveler's account of New York City includes a description of foods and/or eating establishments. See, for instance, Foster 1990; reprints of both *Harper's Weekly* and *Frank Leslie's Illustrated Newspaper*; also municipal health records and laws regulating the butchery and sale of animals as well as the taking of fish.

expressions of ethnicity (Kalcik 1984:38). Foodways are particularly resistant to change, but individual food items in and of themselves are not necessarily accurate indicators of either ethnicity or economic status. A regular pattern of consumption, the combination and preparation of items, and the cycle of meals is more revealing (Goode et al. 1987; Cheek and Friedlander 1989:36). This pattern should be visible in the retail meat cuts chosen and the species that are preferred (Branstner and Martin 1987:308).

The ethnic backgrounds of many of the immigrant residents of Five Points undoubtedly played a role in their selections and methods of food preparation; however, social status and ethnicity are not independent variables (Reitz 1987:47). By the middle of the nineteenth century, the majority of Five Points residents were classified as the laboring poor (Groneman 1973). Many of the neighborhood's tenement dwellers took in boarders or shared small apartments to make ends meet. In examining the faunal assemblage from the Five Points site an attempt was made to distinguish signatures of ethnicity from those that might be attributable to economic differences. In addition to historical documents specific to the market system in New York City, traditional and ethnic cookbooks were consulted to better understand the historic foodways of these immigrant groups. The use of multiple lines of evidence, the faunal assemblage in tandem with the historical record, may help disentangle the complicated array of factors that influence food choices.

The fauna from Five Points were examined feature by feature; the features are presented here in chronological order. The archeological deposits ranged in time from late-eighteenth-century features (AF) to those that date to the third quarter of the nineteenth century (AN, H, J, O, and AM). Only those strata that were considered primary deposits and could be associated with specific occupants or groups of occupants are discussed. These analytical strata, labeled AS with a roman numeral, are shown on the profiles included in Appendix A. Data from additional strata and smaller features are described in Appendix C.

3.5.4 The Diet of the Early Residents, 1800–1830

3.5.4.1 Lot 7, Feature AF (AS II), Hoffman Family, ca. 1800

At the end of the eighteenth century, the Hoffmans, including Tobias, his wife Margaret, and their children, established their home at 474 Pearl Street (Lot 7), next door to the Hoffman bakery oven. Their house took up just half the lot, measuring 60 feet deep on a lot 112 feet deep (New York City Tax Assessments [NYCTA] 1858). They may have rented out this back-yard space to industrial tenants. By 1808, Lewis Storms had established a livery stable in the rear of 474 Pearl Street and a few years later Isaac Cross moved his cabinetry shop and undertaking business to the same address (NYCTA 1808–1842; Elliot 1812; Longworth 1808, 1818, 1824). The Hoffmans may have closed their wood-lined privy (Feature AF) in anticipation of turning their rear yard into rental property. The lower deposit (AS II) contained the vast majority of faunal remains, a total of 1,559 bone fragments (Table 34). The other stratum produced just a small number of bone fragments, discussion of which is not warranted here.

Several factors will be considered in examining the animal bones recovered from this portion of Lot 7. First, the Hoffmans were financially better off than many of the Five Points residents that followed them. They were property owners who maintained a residence next door to their business. Analysis of other classes of artifacts in Features AF and N (another privy on the Hoffman property) suggests the Hoffmans had the means to purchase expensive imported china and glassware. Is this apparent prosperity also reflected in the faunal assemblage?

The second factor is time. The Hoffman assemblage is one of the earliest recovered from Block 160. The cuts of meat the Hoffmans and their tenants consumed may reflect an earlier form of the butchery industry in New York City. As it was uncommon to have neighborhood butcher shops prior to the 1820s and it was actually illegal to sell meat from individually owned stores until 1843, whoever shopped for the Hoffman household must have frequented a stall at one of the city-run markets. The early dates associated with this feature may also reflect different cooking technology and kitchen arrangements than the later features. The Hoffman kitchen may have fed several adult men, apprentices or employees of

Tobias's bakery. At least two single men are known to have rented space from the family prior to 1800, and in the first decade of the nineteenth century (after Feature AF was filled) at least two families shared residential space with the Hoffmans.

One of the most interesting aspects of the deposit associated with the Hoffmans is the damage visible on the bones from rodent gnawing. Four percent of all the animal bones recovered from this feature showed some evidence of rodent gnawing, considerably more than any other feature examined, regardless of time period. It was expected that as the occupation of Block 160 grew increasingly more dense, evidence of rodents and other commensal species would also increase. Instead, it appears that the deposit associated with the Hoffmans contained both the largest number of rodents (10% of mammal NISP) as well as the greatest amount of rodent damage to the bones (Table 35). This does not mean that the Hoffmans kept a dirty lot; rather, it is probably related to the bakery next door. Rats find damp, slightly fermented flour especially appealing. The large number of rodents present in the deposit may also reflect the length of time the feature was open before it was filled.

Table 34. Faunal Assemblage from Feature AF (AS II)

	NISP*	% NISP
Mammal	1,111	71.3
Bird	351	22.5
Fish	97	6.2
TOTAL	1,559	100.0

*Number of identified specimens per taxon

Table 35. Mammal Remains from Feature AF (AS II)

	NISP	% NISP
Cattle; <i>Bos taurus</i>	181	16.3
Sheep; <i>Ovis aries</i>	10	0.9
Sheep/Goat; <i>Ovis/ Capra</i>	113	10.2
Pig; <i>Sus scrofa</i>	92	8.3
Dog; <i>Canis familiaris</i>	2	0.2
Cat; <i>Felis catus</i>	10	0.9
Mouse; <i>Mus musculus</i>	1	0.1
Rat; <i>Rattus</i> species	7	0.6
Small Artiodactyl	73	6.6
Large Ungulate	3	0.3
Commensal Rodent	102	9.2
Unidentified Mammal	517	46.5
TOTAL	1,111	100.1

Meat from Feature AF (AS II)

The Hoffmans were meat eaters. Most of the identified mammal bones (80%) belonged to one of the large domestic mammals: cattle, sheep, or pigs (Table 36). The MNI for all three animals was identical (Table 37), but it appears this meat was purchased as retail cuts rather than whole animals.

A minimum number of 57 separate meat cuts (MNMC) are necessary to account for this assemblage. The percentage of the MNMC calculated for each type of meat roughly agrees with the NISP calculated for the large domestic mammals (Tables 37 and 38). The remains of cattle are 46 percent of the NISP and beef accounts for 48 percent of all the meat cuts. Regardless of the method of quantification, mutton makes up about a third of the large-mammal assemblage. Pork is about a quarter of the NISP and MNMC and a third of the MNI.

Table 36. Identified Mammal Bones from Feature AF (AS II)

	NISP	% NISP
Large Food Mammals	472	79.5
Small Non-Food Mammals	12	2.0
Commensal Rodents	110	18.5
TOTAL	594	100.0

Table 37. Species Ratios for Large Domestic Mammals from Feature AF (AS II)

	NISP	% NISP	MNI*	% MNI
Cattle	181	45.7	2	33.3
Sheep/Goat	123	31.1	2	33.3
Pig	92	23.2	2	33.3
TOTAL	396	100.0	6	99.9

*Minimum number of individuals

Table 38. Species Ratios Based on the Minimum Number of Meat Cuts (MNMIC) from Feature AF (AS II)

	MNMIC	% MNMIC
Beef	27.5	48.4
Lamb/Mutton	16.8	29.6
Pork	12.5	22.0
TOTAL	56.8	100.0

When the bones were assigned to specific meat cuts, it appears the Hoffmans favored large joint roasts from the scapula, humerus, pelvis, and upper femur. These choice meats account for half the beef cuts in the deposit. The chuck and cross roasts alone account for a quarter of all the beef in the deposit. At least four large pot roasts were prepared (distal portion of the scapula), and the large number of fragments from the mid-shaft of the upper ribs represents other pot or rib roasts. These rib roasts may have also been cut down along the length of the rib into rib steaks.

When the percentage of each retail meat cut is calculated, beef round and beef arm exceeded other cuts. These cuts are present as rounds sawn from the midshaft or diaphysis of the humerus and femur. Ideally, these cuts should be at least 3.8 centimeters (1.5 inches) thick to be considered roasts rather than steaks (Romans and Ziegler 1977:460). Most of the Feature AF specimens were identified as roasts, based on the thickness of the butchered bone. Additionally, four sawn long-bone fragments were longer than six centimeters. These bones represent large roasts or purchases of soup bones after steaks and roasts had been removed.

Four lower shank bones represent veal cuts, but most of the beef consumed by the Hoffman household came from large, mature cows. Most of the pork in the deposit was slaughtered at under a year, before the proximal end of the second phalanx had fused (Silver 1969, Table G). The Hoffmans, like many Americans, preferred mutton to lamb, and the bones recovered from Feature AF were from mature sheep.

Pork and mutton appear to have been less important to the Hoffman household than beef. They did, however, favor meat from the lower shank of the pig. The picnic ham accounts for about one-third of all the pork consumed by the Hoffmans (4 cuts from a total of 12.5 MNMIC). Other shank hams and hocks made up another third of the assemblage (3.8 cuts of a total of 12.5 MNMIC). The evidence suggests that the Hoffman household neither consumed the more expensive pork products (the loin, ribs, and leg ham) nor the least expensive (pigs' feet) in any quantity.

Limited amounts of mutton were consumed. The legs were favored portions, including the femur and the lower shanks. These three cuts account for just 16 percent of all the meat represented by the faunal assemblage, but more than 70 percent of all the mutton and lamb cuts that were consumed. Although leg chops may be cut from this section, the common cuts are small variations of leg roasts and shank roasts which may be braised and cooked in liquid. The household also ate lamb chops on occasion.

Poultry from Feature AF (AS II)

The residents of 474 Pearl Street ate a good deal of poultry. Twenty-three percent of the NISP for the entire deposit was identified as bird. Domestic fowl, turkey, duck, goose, and pigeon were all consumed. Mrs. Hoffman may have kept chickens in her backyard, not necessarily for their potential as dinner, but for their eggs. Two mature chickens were recovered (including an entire individual in cat no. 991). However, the total number of fowl depicted is deceptively high (Table 39). At least three of the individuals are small chicks and were probably not eaten. A small amount of pigeon, two individuals, was also identified, possibly as the end result of dinner. The Hoffman household was distinctive in their consumption of duck, preferring goose and duck to chicken and turkey.

In addition to the birds believed to be the remains of dinner, the Hoffmans may have kept small birds, possibly sparrows or finches, as pets. Three extremely small, "perching" birds (family Passeriformes) were identified (coded as "small unknown bird"). All were mature (adult) specimens. Glass bird feeders have been recovered from archeological sites in both Brooklyn and Manhattan, including Five Points,¹⁸ and although none was recovered with the Hoffman refuse, it seems likely that these small birds were kept as pets.

Table 39. Bird Remains from Feature AF (AS II)

	NISP	% NISP	MNI	% MNI
Chicken; <i>Gallus gallus</i>	49	14.0	5	25.0
Turkey; <i>Meleagris gallopavo</i>	1	0.3	1	5.0
Duck; <i>Anas</i> species	40	11.4	7	35.0
Goose; <i>Anser</i> species	18	5.1	2	10.0
Pigeon; Family Columbidae	23	6.6	2	10.0
Small Bird; Passeriformes	9	2.6	3	15.0
Fowl-Sized Bird	9	2.6	—	—
Goose-Sized Bird	12	3.4	—	—
Unidentified Bird	190	54.1	—	—
TOTAL	351	100.1	20	100.0

¹⁸ Small birds were also recovered from Features B and AG. Three glass bird feeders were also recovered from Feature AG and a fourth came from Feature AL.

Fish from Feature AF (AS II)

Although all classes of New Yorkers ate fish and shellfish, the remains of fish make up a limited portion of the assemblage recovered from the Hoffmans' privy. Fish bones are just six percent of the total NISP. The late-eighteenth-century household favored bass, black sea bass in particular (Table 40). There was one unidentified bass species as well as three black sea basses. The other species of interest was salmon. Due to its scarcity, salmon was the most expensive fish available in the urban northeast at the time (Singer 1987). Salmon may have been purchased as steaks, as only one caudal vertebrae is present. There is no cod or haddock in this early assemblage.

Table 40. Fish Remains from Feature AF (AS II)

	NISP	%NISP	MNI	%MNI
Salmon/Trout; <i>Salmo species</i>	1	1.0	1	9.1
Basses; Family <i>Serranidae</i>	11	11.3	1	9.1
Blk. Sea Bass; <i>Centropristis striata</i>	43	44.3	3	27.3
Blackfish; <i>Tautoga onitis</i>	3	3.1	1	9.1
Bluefish; <i>Pomatomus saltatrix</i>	1	1.0	1	9.1
Shad; <i>Alosa sapidissima</i>	8	8.2	1	9.1
True Herring; <i>Clupea harengus</i>	7	7.2	2	18.2
Flounders; Family <i>Pleuronectidae</i>	1	1.0	1	9.1
Unidentified Fish	22	22.7	—	—
TOTAL	97	99.8	11	100.1

3.5.4.2 Lot 7, Feature N (AS IV) Widow Hoffman and Her Tenants, ca. 1830

After the death of Tobias Hoffman in 1812, a number of laborers and their families boarded with his widow. There were at least two long-term tenants. Lewis Storms rented space for both his livery stable and home at 474 Pearl Street. In 1810, his household included his wife, five children, and a free black man. Isaac Cross's cabinetry business also leased space in the back lot (U.S. Bureau of the Census 1810). It is possible that Widow Hoffman and her tenants, including the industrial and commercial tenants, all contributed to the filling of Feature N, a wood-lined privy. Nine deposits were excavated and divided into six analytical strata. The vast majority of bones was recovered from AS IV (N=2,000). This report will be based primarily on these faunal remains, which are described in detail below. The other analytical strata produced only small faunal samples.

Feature N (AS IV) produced a sizable and well preserved faunal assemblage (Table 41), including a total of 1,055 mammal bones: the remains of cattle, sheep, sheep/goat, pig, cat, mouse, rat, small artiodactyl, large ungulate, commensal rodent, and unidentified mammals (Table 42). The large number of mammal bones identified as either cat or rat is striking (Table 42). Cat bones make up 15 percent of the identified mammal remains, while rat and mouse bones make up an additional 24 percent (Table 43). The high number of rat and mouse bones (140 bones representing a minimum of 10 individuals) undoubtedly reflects the presence of the bakery next door, which was still in operation at the time these bones were deposited. The sacks of flour that must have been stored there would have been an ideal home for rodents. The large number of cat bones (90 fragments, MNI=6) may represent the Hoffman family's attempt to reduce the rat and mouse population.

Table 41. Faunal Assemblage from Feature N (AS IV)

	NISP	% NISP
Mammal	1,055	52.8
Bird	716	35.8
Fish	151	7.6
Unidentified Bone	78	3.9
TOTAL	2,000	100.1

Table 42. Mammal Remains from Feature N (AS IV)

	NISP	% NISP
Cattle; <i>Bos taurus</i>	63	6.0
Sheep; <i>Ovis aries</i>	9	0.9
Sheep/Goat; <i>Ovis/Capra</i>	29	2.7
Pig; <i>Sus scrofa</i>	192	18.2
Cat; <i>Felis catus</i>	90	.5
Mouse; <i>Mus musculus</i>	2	0.2
Rat; <i>Rattus species</i>	28	2.7
Small Artiodactyl	51	4.8
Large Ungulate	14	1.3
Commensal Rodent	110	10.4
Unidentified Mammal	467	44.3
TOTAL	1,055	100.0

Table 43. Identified Mammal Bones from Feature N (AS IV)

	NISP	% NISP
Large Food Mammals	358	60.9
Small Non-Food Mammals	90	15.3
Commensal Rodents	140	23.8
TOTAL	588	100.0

Meat from Feature N (AS IV)

Beef, pork, and mutton continued to be a part of the Hoffmans' diet in the 1830s. The role of pork in the diet, however, had increased substantially since the early 1800s. The vast majority of the large mammal bones are those of pigs. Cattle and sheep/goat bones are present in much smaller numbers (Tables 44A–C). The faunal assemblage included a minimum of eight pigs, three sheep, and two cattle. Included among the pig bones, however, are 73 very immature pig bones.¹⁹ The presence of these pigs in the N faunal assemblage may indicate that pigs were being reared on or around the lot. These very immature animals are likely to be either perinatal mortalities or excess piglets that could not be successfully reared in urban conditions. Historical sources suggest that pigs were being raised on urban lots in New York City throughout the nineteenth century (Common Council of the City of New York 1788–1821, 1:417, 547, 11:731, 751; Board of Health 1811, 1868). Pigs are omnivorous, consuming a wide range of plant and animal foods, including human excrement. Keeping a small number of pigs on an urban lot would have been a relatively simple way to supplement the Hoffman diet, especially if the family's financial condition deteriorated after Tobias's death in 1812.

Since the very immature pigs would have contributed almost nothing to the Hoffmans' diet, species ratios based on NISP were recalculated to exclude the very immature pigs (Table 44B). The revised species ratios indicate that about half the large food mammal bones were pigs, while beef bones made up about 29 percent

¹⁹ The term very immature (coded VIM) is used to describe the remains of neonatal pigs, no more than a few weeks old, that would have produced little, if any, meat.

of the assemblage, and sheep bones made up 17 percent. These data suggest that pork and pork products made up a larger portion of the Hoffman diet in the 1830s than it had at the turn of the century (as represented by Feature AF, AS II). If the Hoffmans had begun to raise pigs on their lot, then it is reasonable to expect that the proportion of pork in the diet would rise accordingly.

While some of the pork consumed by the Hoffmans is likely to have been raised at home, the Hoffmans would have purchased their beef and mutton at stalls in one of the city-run markets. Species ratios were therefore also calculated on the basis of the minimum number of meat cuts represented (Table 44C). In all, 23 retail cuts were identified. These calculations indicate that while nearly 50 percent of the meat cuts were pork products, the proportion of beef rises to almost 40 percent. Mutton and lamb make up only a little more than 10 percent of the meat cuts present.

Table 44A. Species Ratios for Large Domestic Mammals from Feature N (AS IV)

	NISP ^a	% NISP ^a	MNI	% MNI ^a
Cattle	63	21.5	2	15.4
Sheep/Goat	38	13.0	3	23.1
Pig	192	65.5	8	1.5
TOTAL	293	100.0	13	100.0

Table 44B. Species Ratios Based on NISP (Excluding Very Immature Pigs) from Feature N (AS IV)

	NISP ^b	% NISP ^b
Cattle	63	28.6
Sheep/Goat	38	17.3
Pig	119	54.1
TOTAL	220	100.0

Table 44C. Species Ratios Based on the Minimum Number of Meat Cuts (MNMC) from Feature N (AS IV)

	MNMC ^c	% MNMC ^c
Beef	8.9	39.2
Lamb/Mutton	2.9	12.8
Pork	10.9	48.0
TOTAL	22.7	100.0

When the actual cuts of beef, pork, and mutton consumed by the Hoffmans are examined in detail, it is clear that the pattern of meat consumption has changed from the early nineteenth century. The following diagram compares the retail meat cuts from both Hoffman households, Feature AF ca. 1800 and N ca. 1830 (Figure 46).²⁰ The Hoffmans most often consumed moderately priced cuts of meat, including beef arm and pork-shank hams, followed by more expensive cuts of meat, especially beef chuck and round, and pork ham/leg. The beef arm and rounds are represented by large roasts, as they were in the earlier AF deposit. The preferred cuts of pork are all derived from the upper and mid-hind limb. Both households consumed beef steaks (as represented by rounds cut from the femur), but other expensive cuts are absent from this later assemblage.

Another difference is the peak (Figure 46) in the Feature N assemblages at one of the less expensive pork products, the leg ham, cut from the shank. The Widow Hoffman did not make use of the pigs' feet or hocks, but the number of pig head bones in the assemblage increased. This may reflect the increased consumption of less costly meats such as headcheeses or the butchery of complete animals. The most commonly eaten cut of mutton was the relatively inexpensive mutton foreshank; more expensive cuts of mutton were eaten only occasionally. All the sheep in the deposit were mature animals. There is no evidence for the consumption of lamb from Feature N.

²⁰ The very immature pigs have been excluded from these calculations.

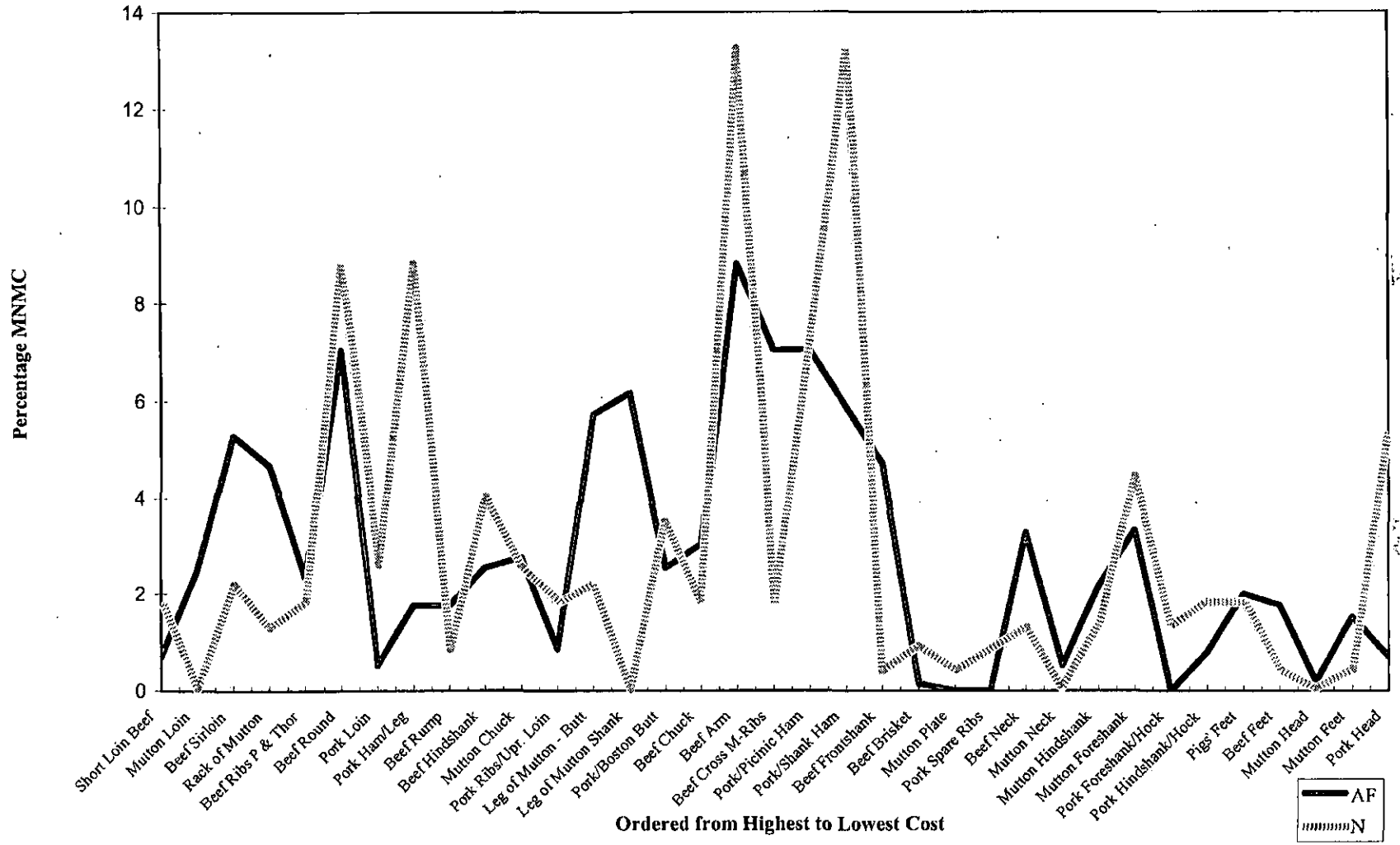


Figure 46. Retail meat cuts from Features AF (AS II) and N (AS IV).

Overall, the comparison of mammal remains recovered from Features AF and N shows the Hoffmans continued to prefer moderately priced and expensive cuts of beef and pork. The increasing importance of pork in the diet, especially the increased use of inexpensive cuts, suggests that the Widow Hoffman's economic well-being may have deteriorated by the 1830s. Raising pigs on the lot may have been one way of compensating for the family's diminished economic status.

Poultry from Feature N (AS IV)

The most striking aspect of the Feature N faunal assemblage is the large number of bird bones recovered (Table 45). Bird bones make up 36 percent of the Feature N faunal assemblage, a figure that is considerably higher than the proportion of bird bones in any other assemblage from Five Points. Moreover, the relative importance of birds in the Feature N assemblage is substantially higher than the proportion of birds (23%) in the earlier AF assemblage which was also associated with the Hoffman family.

AS IV yielded a total of 716 bird bones (Table 45), the vast majority of which were chicken bones (NISP=205) and chicken-sized fragments (NISP=320). Although all parts of the chicken are represented in the N assemblage, the most common elements are tarsometarses. Small numbers of domestic duck and goose bones were also recovered from Feature N. These bones represent a minimum of ten chickens, four ducks, and two geese. The ducks and geese are represented almost entirely by head and foot (tarsometarses) bones. Three intact bones and numerous "rings" were identified as the tracheal bullae from male ducks. These are the ossified voice boxes of older ducks. One bone was identified as pigeon and another four bones (including an intact skull) as a small perching bird, such as a sparrow.

Table 45. Poultry Remains from Feature N (AS IV)

	NISP	% NISP
Chicken; <i>Gallus gallus</i>	205	28.6
Duck; <i>Anas species</i>	21	2.9
Goose; <i>Anser species</i>	8	1.1
Pigeon; Family <i>Columbidae</i>	1	0.1
Small Bird; <i>Passeriformes</i>	4	0.6
Fowl-Sized Bird	320	44.7
Goose-Sized Bird	8	1.1
Unknown Bird	149	20.8
TOTAL	716	99.9

The abundance of foot bones is not easily explained (Figure 47). Heads and feet are usually removed before poultry is roasted or stewed. Perhaps Mrs. Hoffman was raising chickens and ducks to supplement her income. If so, the heads and feet may have been removed before the birds were sold. The Feature N assemblage included nine immature chicken bone fragments. These chicks would have provided little in the way of meat. One way to explain their presence is to suggest that Widow Hoffman continued to raise chickens on the lot. The faunal evidence from Feature AF indicates that the Hoffmans were also raising chickens in the early 1800s. The chickens were probably kept primarily for their eggs. Roosters as well as hens are present in the faunal assemblage, and many birds appear to have been elderly when they were killed. The data indicating that the Hoffman family continued to raise poultry, when combined with the evidence for raising pigs, suggest that the Hoffmans were producing a progressively larger portion of their diet on their own lot.

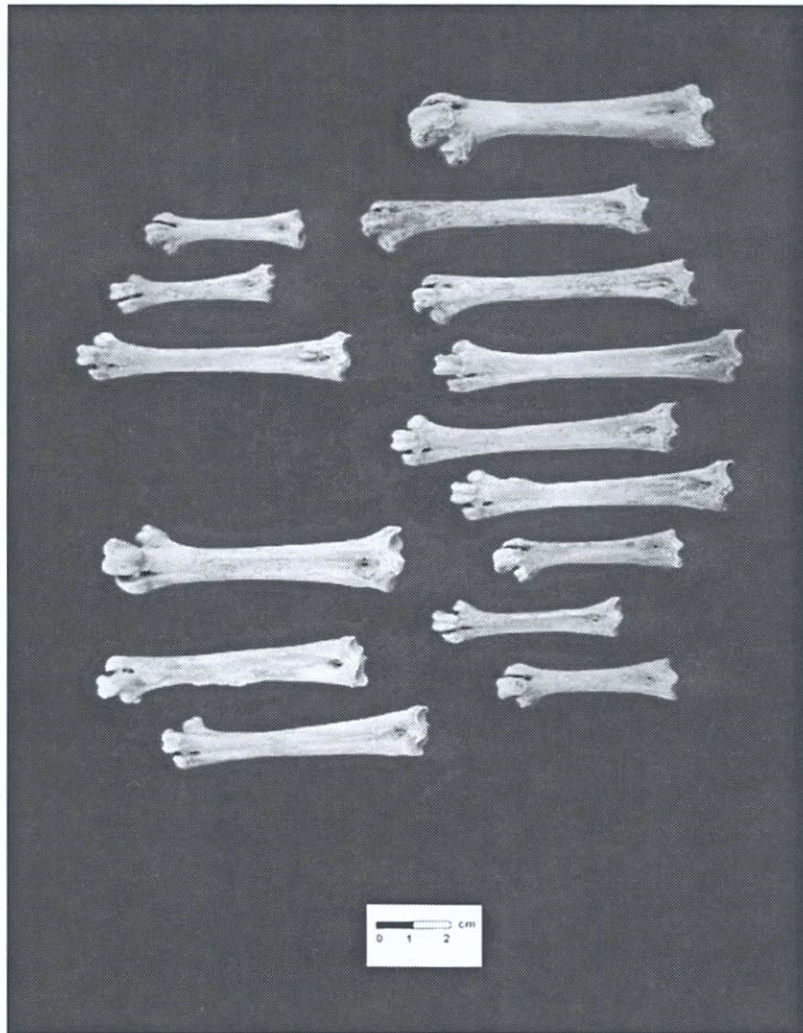


Figure 47. Bird feet from Feature N (AS IV).

Fish from Feature N (AS IV)

Based on the food remains recovered from Features AF and N, the Hoffmans' overall meat consumption declined while the amount of poultry they consumed increased. The amount of fish remains fairly constant. There were nine species of fish identified in this deposit. These are roughly ordered in the following table (Table 46) from highest to lowest cost per pound (based on Singer 1987). In the 1830s, the Hoffman household no longer consumed the most expensive fish available. There was no salmon or trout recovered from this deposit and the proportion of bass present had also diminished. This may be partially the result of the decline of bass species, including the black sea bass, in local waters (Rothschild and Balkwill 1993:72). The local porgy may have been a suitable substitute and certainly a less expensive one. All species of fish are represented by at least one individual, but the 96 bones (64% of the NISP) identified as porgies represent at least six individual fish. This is the earliest feature from which codfish were recovered.

Table 46. Fish Remains from Feature N (AS IV)

	NISP	% NISP	MNI	% MNI
Basses; Family Serranidae	3	2.0	1	6.7
Blk. Sea Bass; <i>Centropristis striata</i>	5	3.3	1	6.7
Atlantic Mackerel; <i>Scomber scombus</i>	2	1.3	1	6.7
Blackfish; <i>Tautoga onitis</i>	1	0.7	1	6.7
Shad; <i>Alosa sapidissima</i>	1	0.7	1	.7
True Herring; <i>Clupea harengus</i>	5	3.3	1	6.7
Porgies; Family Sparidae	96	63.6	6	40.0
Atlantic Cod; <i>Gadus morhua</i>	4	2.6	1	6.7
Flounders; Family Pleuronectidae	1	0.7	1	6.7
Small Unknown Fish	2	1.3	1	6.7
Unidentified Fish	31	20.5	0	0.0
TOTAL	151	100.0	15	100.3

3.5.4.3 Lot 6, Feature D (AS V), Other Members of the Artisan Class, ca. 1800–1810

Feature D was a wood-lined privy on the back lot of 472 Pearl Street (Lot 6). A total of 1,306 bone fragments was recovered from six strata. The dates from the analysis of the other artifact classes suggest this privy was abandoned and filled around 1810. It is possible this deposit represents the transition between merchant William Wilson's household (1790–1808) and that of cabinetmaker Isaac Cross and his family (1808–1837). The privy may have been filled before Cross moved in, or Cross himself may have made the improvement to the back yard when he purchased the lot around 1809.

Eight hundred twenty bones identifiable as to species were recovered from AS V, associated with the occupation of Isaac Cross. The bones of mammals made up just 27 percent of the NISP in Feature D (Table 47). Most of these were identified as large domestic mammals (Table 48), but the fragment counts (Table 49) clearly overestimate the role of pork in the diet. Of the 105 bones identified as pig, 82 (or 78%) are from a single, young pig. This young pig was nearly complete and does not appear to have been butchered. It is likely the pig was disposed of as an entire carcass. The presence of the complete young pig here²¹ again raises the possibility that pigs were being kept in the Five Points district into the early nineteenth century. This was not uncommon in the early city, even among the more well-off residents (Board of Health 1812, 1866; Common Council of the City of New York 1821, 11:731, 751). Just two cat bones and a single bone identified as rodent were present in the deposit.

²¹ Very young pigs were also recovered from Features N and AG. The Feature AG piglets were found to be younger than those recovered from Feature D.

Table 47. Faunal Assemblage from Feature D (AS V)

	NISP	% NISP
Mammal	221	27.0
Bird	117	14.3
Fish (excluding spines/scales)	482	58.8
TOTAL	820	100.1

Table 48. Identified Mammal Bones from Feature D (AS V)

	NISP	% NISP
Large Food Mammals	166	98.2
Small Non-Food Mammals	2	1.2
Commensal Rodents	1	0.6
TOTAL	169	100.0

Table 49. Mammal Remains from Feature D (AS V)

	NISP	% NISP
Cattle; <i>Bos taurus</i>	36	16.3
Sheep/Goat; <i>Ovis/Capra</i>	12	5.4
Pig; <i>Sus scrofa</i>	105	47.5
Cat; <i>Felis catus</i>	2	.9
Small Artiodactyl	8	3.6
Large Ungulate	5	2.3
Commensal Rodent	1	.5
Unidentified Mammal	52	23.5
TOTAL	221	100.0

The majority of the meat consumed was beef. If the neonatal pig is eliminated from the calculations (Table 50), bones identified as cattle comprise about half (51%) of the large food mammals. Pig bones make up another third (32%), while the bones of sheep account for 17 percent of the large domestic mammals.

The retail meat purchased came from the choice axial and upper limb elements. It appears as if the beef and lamb present in the deposit were purchased as retail cuts rather than larger butchers' cuts in which a half or quarter animal might be purchased. The majority of the beef cuts were those from the lumbar vertebrae and the proximal or dorsal ribs. These are the loin cuts, some of the most costly (Schulz and Gust 1983; Henry 1987a). Other costly cuts included the blade cuts from the ischium, ilium, and scapula. There is almost a complete absence of the less expensive, lower-status cuts of meat in this deposit. No hock, foot, or cranial elements from either cattle or sheep were recovered.

Table 50. Species Ratios for Large Domestic Mammals (Excluding the Immature Pig)²² from Feature D (AS V)

	NISP	% NISP	MNI	% MNI
Cattle	36	50.7	2	40.0
Sheep/Goat	12	16.9	1	20.0
Pig	23	32.4	2	40.0
TOTAL	71	100.0	5	100.0

Poultry from Feature D (AS V)

The remains of birds account for 14 percent of the total faunal assemblage recovered. Most of the bird bones were chicken or bird identified in the fowl-sized range (Table 51). All body parts are present and this assemblage appears to represent at least four individual chickens as well as one turkey.

²² Excluding the 82 bones of the young pig from the following calculations.

Table 51. Bird Remains from Feature D (AS V)

	NISP	% NISP	MNI	% MNI
Chicken; <i>Gallus gallus</i>	82	70.1	4	80.0
Turkey; <i>Meleagris gallopavo</i>	1	0.9	1	20.0
Fowl-Sized Bird	10	8.5	—	—
Unknown Bird	24	20.5	—	—
TOTAL	117	100.0	5	100.0

Fish Remains from Feature D (AS V)

The bones of fish make up 59 percent of the total NISP for Feature D. It is likely that most of the fish in this deposit entered the archeological record whole, fairly typical patterning in nineteenth-century urban food assemblages (Henry 1987a). However, there are almost no vertebral elements present and this raises questions about both the functional nature of the deposit as well as the recovery strategy utilized during excavation.

Three species of fish were present, members of the herring and bass families (Table 52). The most plentiful were the common herring and nine individuals were recovered. The remains of the herrings consist entirely of cranial elements along with just six ultimate vertebrae from the tail end of the fish. The lack of herring vertebrae from the mid-spine may be related to recovery techniques. Herring vertebrae are extremely small and fragile and may not have been recovered even if present in the deposit. An alternate explanation might be that the privy served as the disposal place for these fish as they were processed. The heads and tails may have been removed and thrown away while the majority of the elements traveled with the meat and were disposed of elsewhere.

Eleven cranial bones were identified as black sea bass while another 40 were identified as belonging to the larger bass family (*Serranidae*). The distribution of the bass is similar to that of the herring: of a total of 51 bones, there was just one vertebra identified.

Table 52. Fish Remains from Feature D (AS V)

	NISP	% NISP	MNI	% MNI
Basses; Family <i>Serranidae</i>	40	8.3	—	—
Blk. Sea Bass; <i>Centropristis striata</i>	11	2.3	1	10.0
Herrings; Family <i>Clupidae</i>	417	86.5	9	90.0
Unidentified Fish	14	2.9	—	—
TOTAL	482	100.0	10	100.0

3.5.4.4 Summary: Early-Nineteenth-Century Artisan Households, Features AF, N, and D

The faunal assemblage from Feature D and the two assemblages attributed to the Hoffman households are different from those attributed to the later immigrant residents of Block 160. The three early-nineteenth-century features were associated with property owners, their families, and their employees/tenants. The structure of these households, as represented in census years and the proximity of their home and work spaces, mark them as some of the last members of the artisan class to inhabit the Five Points neighborhood (Blackmar 1989).

On Pearl Street, in addition to Hoffman's bakery, cabinetmaker Isaac Cross rented commercial space from the Hoffmans and continued to do so after Tobias's death. Both Hoffman and Cross fed multiple adults, including apprentices who boarded in their homes (U.S. Bureau of the Census 1810, 1820). Additionally, Hoffman rented residential as well as stable space at 474 Pearl Street to Lewis Storms for his livery and horses.

Cattle were most important in both these early assemblages (Features AF and D), although in Feature D there were also a large number of fish bones. Beef was the meat of choice, accounting for 46 to 51 percent of all the large mammal bones in each deposit. In Feature D the most expensive loin steaks and roasts appear to have been favored, while in Feature AF much of the beef consumed was cut from large shoulder and arm roasts, a frugal choice if feeding boarders or workers. A number of moderately priced hams were present in both assemblages, but neither the most expensive pork products (loin cuts) nor the least expensive (feet/hocks) were present. Served cold or as sandwich meat, these hams may have been an economical way to feed six or seven working men. Mutton made up another third of the identified large mammal remains in both assemblages.

Comparatively, the most bird remains were recovered from these three early deposits. Bird bones made up between 14 and 36 percent of the total NISP for each deposit. The amount of bird in these assemblages is comparable to that in later archeological contexts associated with a middle-class household at Sullivan Street (Salwen and Yamin 1990) and artisan households at Greenwich Mews (Geismar 1989). No other features at Five Points contain such large amounts of bird bones.

Feature N is somewhat different from the two (AF and D) that have been classified as *artisan features*. The faunal assemblage recovered from Feature N represents the diet in a widow's household. From the archeological record it appears that Widow Hoffman's household did not eat as well as it had when her husband was alive. By the 1830s, pork has become more important in the diet, and the presence of several immature pigs in the assemblage raises the possibility that the widow kept pigs in her backyard. This evidence, along with the distribution of bird bones and the presence of young chickens, suggests that Widow Hoffman may have been raising chickens, ducks, and pigs to supplement either her diet or her income. Although the faunal assemblage associated with the widow's household appears somewhat poorer than that recovered from Feature AF, there are also some similarities: the large percentage of poultry, the presence of duck and goose in addition to chicken and turkey, and the small perching birds that were recovered from both features.

3.5.5 A Brothel and A Synagogue—Five Points in the Early 1840s

During the 1820s and 1830s, the Five Points neighborhood began to undergo a demographic shift. The early-nineteenth-century artisans and property owners were replaced by working-class tenants who were primarily recent immigrants. Two deposits dating to the early 1840s (Features B and AG) reflect the disparate nature and complexity of the neighborhood.

3.5.5.1 Lot 43, Feature AG (AS III), A Brothel, ca. 1830s–1843

Feature AG was a circular privy located on Lot 43. A total of 13,722 animal bones and one human tooth were recovered from two strata, AS I and AS III. The earliest levels of fill within the privy (AS III) are associated with a cellar brothel run by John Donohue (State ex. rel. Blackall et al. v. Donohue 1843), along with a small number of respectable families. All tenants, respectable and otherwise, rented space from the French-Creole property owner J. M. J. Labatut who ran a mahogany yard at the same address (U.S. Bureau of the Census 1830, 1840; NYCTA 1815–1866). The early fill levels in the privy appear to represent an abrupt cleaning episode, probably coinciding with the closure of the brothel in 1843.

A large and diverse faunal assemblage was recovered from AS III. At the time these fauna were deposited, the associated premises appear to have been occupied by a group of prostitutes. Historical and journalistic sources document the presence of numbers of prostitutes in Five Points in the middle of the nineteenth century (e.g., State ex. rel. Blackall et al. v. Donohue 1843; Foster 1990; Five Points House of Industry 1860:226). The animal bones recovered from Feature AG (AS III) may shed light on the living and working conditions of women engaged in the world's oldest profession.

The assemblage associated with the brothel (AS III) produced 10,144 bone fragments (Table 53) plus one human molar. Excluding the 2,764 small fragments that could not be assigned to class, approximately two-thirds of the bones are the remains of mammals, over one-quarter (28%) are the remains of fish, and only six percent are the remains of birds.

Table 53. Faunal Assemblage from Feature AG (AS III)

	NISP	% NISP
Mammal	4,875	48.1
Bird	455	4.5
Fish	2,050	20.2
Unidentified	2,764	27.2
TOTAL	10,144	100.0

Meat From Feature AG (AS III)

The AS III faunal sample yielded a diverse array of mammal remains including large domestic food mammals (cattle, sheep, and pig), small domestic pets (cat and dog), small food mammals (rabbit and squirrel), and commensal rodents. The assemblage also produced a substantial number of fragmented mammal remains that undoubtedly represent splintered fragments of cattle, sheep, and pig bones (Table 54).

Table 54. Mammal Remains from Feature AG (AS III)

	NISP	% NISP
Cattle; <i>Bos taurus</i>	347	7.1
Sheep; <i>Ovis aries</i>	39	0.8
Sheep/Goat; <i>Ovis/Capra</i>	495	10.2
Pig; <i>Sus scrofa</i>	904	18.5
Dog; <i>Canis familiaris</i>	12	0.2
Cat; <i>Felis catus</i>	253	5.2
Rabbit; <i>Lepus species</i>	9	0.2
Squirrel; <i>Sciurus species</i>	4	0.1
Rat; <i>Rattus species</i>	27	0.6
Small Artiodactyl	536	11.0
Large Ungulate	85	1.7
Commensal Rodent	212	4.3
Unidentified Mammal	1,952	40.0
TOTAL	4,875	99.9

The majority of the identified mammal bones are those of the large domestic food mammals. Small domestic pets and commensal rodents together make up less than 20 percent of the identified mammal remains (Table 55). The non-food mammals include a minimum of ten cats, one dog, and nine rodents (rats). Feature AG (AS III) is one of the few features that yielded both squirrel and rabbit bones.²³ All wild mammals are exceptionally rare in the Five Points deposits and in urban nineteenth-century faunal assemblages generally (Rothchild and Balkwill 1993:72). They are far more common in rural assemblages (e.g., Reitz 1987; Bowen 1992). Since the prostitutes are unlikely to have cooked for themselves, they may have hired a cook, perhaps someone with a rural background, who was familiar with the use of small mammal meats.

²³ Squirrel constitutes 0.2 percent of the mammal NISP for the lower deposit (AS V) in Feature B as well.

Table 55. Identified Mammal Bones from Feature AG (AS III)

	NISP	% NISP
Large Food Mammals	2,406	82.3
Small Non-Food Mammals (Pets)	265	9.1
Small Food Mammals	13	0.4
Commensal Rodents	239	8.2
TOTAL	2,923	100.0

Regardless of the method of quantification used (Tables 56A–C), the assemblage was dominated by pork and pork products. Conventional methods of quantification, however, may overestimate the role of pigs and pork products in the diet. The AS III assemblage included a large number of bones (N=233) from very immature (neonatal or perinatal mortalities) pigs which would have provided almost nothing in the way of meat (Figure 48). The deciduous lower premolars of these pigs had not yet fully erupted, indicating that the pigs were less than seven weeks old at time of death (Silver 1969:298, Table G). A “*shote*” (or shoat), a pig killed between two and three months of age, could be quartered and boiled in liquor or wine with ginger, nutmeg, and mace. Young pigs might also be spit roasted (Hess 1981:72, 77; Hooker 1981:44–45). However, since there is no zooarcheological evidence these animals were eaten (the bones are nearly all complete and show no butchery marks), they may represent neonatal mortalities or animals that were chosen for slaughter shortly after birth. One explanation for the presence of these animals is that pigs were being raised on the lot. It is difficult to imagine a group of ladies of the evening spending their days tending swine. However, if the prostitutes had hired a cook or housekeeper, he or she may well have tended a small number of pigs as part of the household duties. If the species ratios are recalculated to exclude the very immature pigs (Table 56B), swine still make up 43 percent of the large domestic mammal remains, followed by sheep (34%) and cattle (22%).

A large portion of the cow in this assemblage is immature, veal rather than beef. A total of eight cattle half-mandibles (MNI=4) was recovered from AS III. All have a lower first molar that is not fully erupted. This tooth erupts at approximately five to six months of age (Silver 1969:296). The epiphyseal data are similar, and only 15 percent of the early fusing elements²⁴ were fused.

To provide a more accurate estimate of the relative importance of beef, pork, and mutton in the prostitutes’ diet, the minimum numbers of meat cuts were calculated and ranked from highest to lowest cost (Figure 49). The species ratios based on the numbers of meat cuts are generally similar to those based on fragment counts (NISP), except that the meat-cut calculations increase the importance of beef in the diet at the expense of mutton. A minimum number of 180 meat cuts must be present to account for the meat represented in the deposit. The most numerous meat cuts were moderately priced and inexpensive cuts of pork, including picnic hams and pork foreshank/hocks. Other preferred cuts include beef arm, mutton neck, and pigs’ feet, all moderately priced to inexpensive meats.

²⁴ Early fusing elements: proximal radius, distal humerus, proximal first phalanx, and proximal second phalanx.

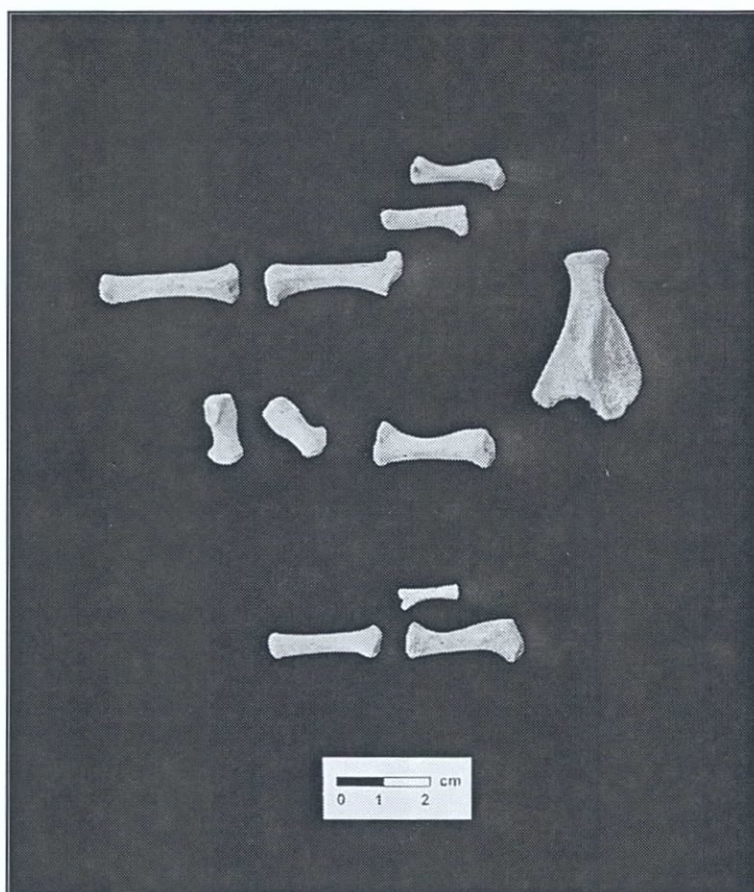


Figure 48. Evidence of keeping livestock, piglets from Feature AG (AS III).

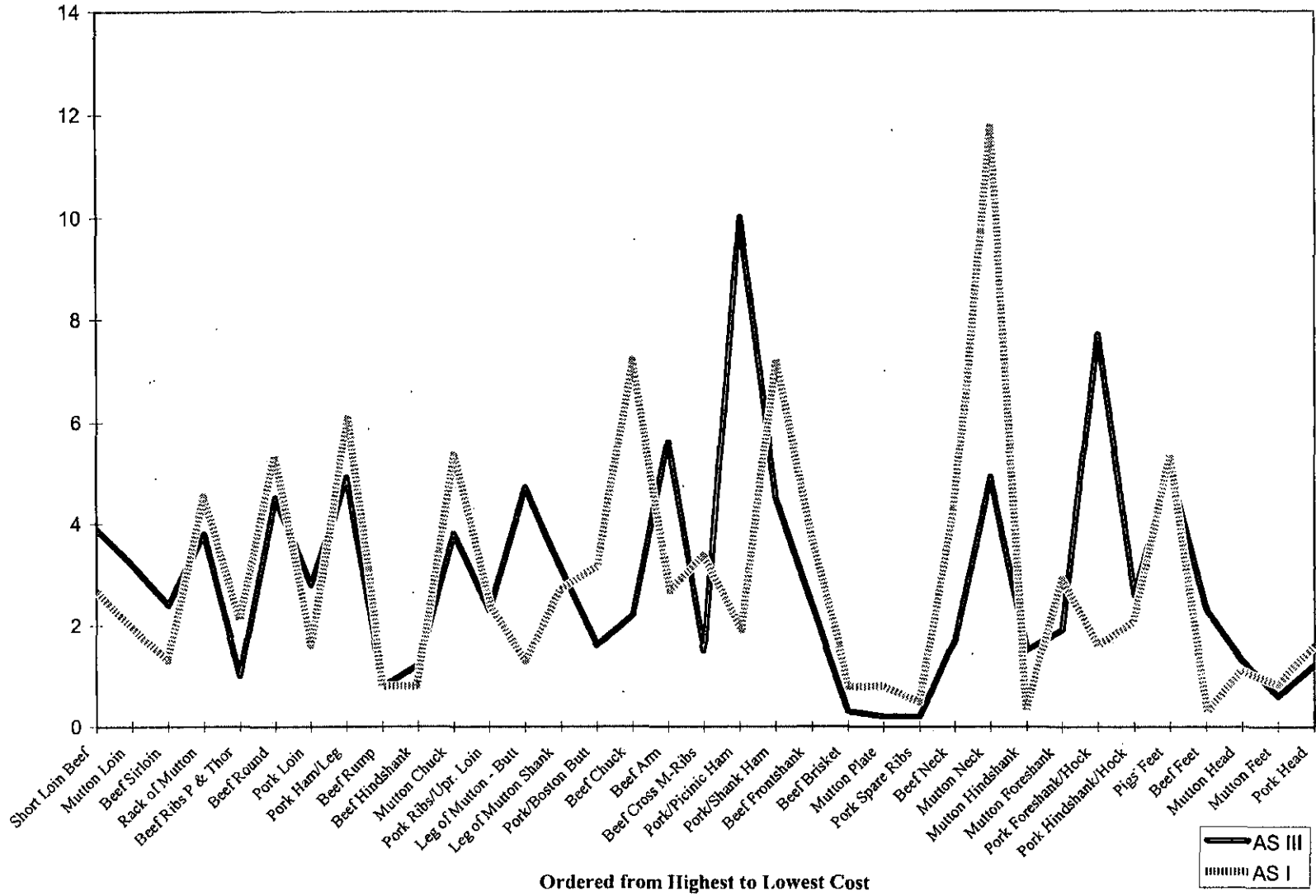


Figure 49. Retail meat cuts from Feature AC (AS III and AS I).

Table 56A. Species Ratios for Large Domestic Mammals from Feature AG (AS III)

	NISP	% NISP	MNI	% MNI
Cattle	347	19.4	10	20.0
Sheep/Goat	534	29.9	12	24.0
Pig	904	50.6	28	56.0
TOTAL	1,785	99.9	50	100.0

Table 56B. Species Ratios for Large Domestic Mammals (Excluding Very Immature Pigs) from Feature AG (AS III)

	NISP	% NISP
Cattle	347	22.4
Sheep/Goat	534	34.4
Pig	671	43.2
TOTAL	1,552	100.0

Table 56C. Species Ratios for Large Domestic Mammals Based on the Minimum Number of Meat Cuts (MNMCI) from Feature AG (AS III)

	MNMCI	% MNMCI
Beef	53.2	29.5
Lamb/Mutton	51.4	28.5
Pork	75.7	42.0
TOTAL	180.3	100.0

The pattern of meat consumption is generally similar to the Irish diet as seen in the later Features J and O. For example, the faunal assemblage from the lower level of Feature J, which dates to the 1850s and is associated with Irish immigrants, is dominated by the remains of picnic hams, pigs' feet, and beef arms. Importantly, however, the prostitutes' assemblage includes a higher proportion of the most expensive meat cuts, including cuts of veal, beef short loin, mutton loin, and rack of mutton. The diversity observed in the cuts of meat is also visible in the bird, fish, and shellfish assemblages. Were these higher-quality meats and exotic fish and game served to customers as part of the entertainment offered in better-class brothels (Gilfoyle 1992:167-177), or were the prostitutes simply able to afford more expensive meats than their immigrant neighbors?

Poultry from Feature AG (AS III)

Poultry appears to have played a relatively minor role in the diet (4.5% of the deposit NISP); however, they made use of a diverse range of domestic birds. Chicken (11 individuals), duck (5 individuals), goose (1 individual), turkey (3 individuals), and pigeon (1 individual) were all recovered from the AS III assemblage (Table 57). A small quantity of egg shell was also recovered from AS III.

Table 57. Bird Remains from Feature AG (AS III)

	NISP	% NISP
Chicken; <i>Gallus gallus</i>	131	28.8
Turkey; <i>Meleagris gallopavo</i>	9	2.0
Duck; <i>Anas species</i>	44	9.7
Goose; <i>Anser species</i>	4	0.9
Pigeon; Family <i>Columbidae</i>	5	1.1
Fowl-Sized Bird	215	47.3
Goose-Sized Bird	3	.7
Unknown Bird	44	9.7
TOTAL	455	100.2

Fish from Feature AG (AS III)

A little over 20 percent of the total number of bones recovered from Feature AG (AS III) was the remains of fish. The assemblage is notable for its diversity with 21 species present including four kinds of flounder and four bass species (Table 58). This number also includes two very small, unidentified fish, with distinctive vertebrae.

The residents associated with this stratum ate salmon, the most expensive fish available. They also consumed a number of different types of bass, including stripers, black sea bass, and perch. All of the bass specimens present in this deposit are small fish (under 22 cm), possibly taken from the rivers surrounding the city. The same is true of the flounder and bluefish; all are small fish likely caught in local waters. The most common fish was the silver porgy or scup. A minimum number of 21 porgies were present, accounting for 20.5 percent of the fish bone. Like the other small fish taken from the city's rivers, the porgies may have been fished specifically for the kitchen of the brothel or purchased from the central market or from vendors selling their wares in the streets.

Three species were likely imported preserved: salmon, halibut, and codfish. Whereas the basses and porgies are present as whole animals and the small flounders are present as complete fillets (there are few cranial bones present), the salmon and halibut were purchased in parts or as steaks. The codfish, while purchased whole, is of a size²⁵ that suggests the presence of stockfish and fishing on a commercial scale (Amorosi et al. 1994; Perdikaris 1996). Chronologically, this is the first analytical stratum in which codfish make up any sizable portion of the fish assemblage. There are at least five Atlantic codfish present. The codfish, along with at least three haddock, represent considerably more meat and protein than the greater number of porgies. The porgies on average do not get any larger than 15 centimeters while commercially fished cod average between 60 and 90 centimeters in length.

There were 52 pounds of shell recovered from the entirety of Feature AG. Thirty-six pounds were present in AS III. The more common shellfish, oyster and hard-shell clams, were present in equal quantities (681 fragments identified as oyster and 702 as hard-shell clam), but there were also 261 shells identified as steamers or soft-shell clams, an exotic food relative to the other Five Points deposits. There were at least three lobsters in the deposit (although only the tips of their claws survived). There were also scallop and mussel shells in this deposit, along with the ordinary round of slipper shells, limpets, and whelks. At least three large whelk shells (and nine additional fragments) were recovered from AS I, III, and IV of the feature. One unusual find was a large, polished cowrie shell (Figure 50). Certainly not a food item, this shell, along with some of the others, may have been a keepsake, curio, or a memento.

²⁵ Four premaxillary bones provided measurements with a mean of 0.69 cm; three dentarys provided mean measurements of 0.41 cm; and a single vomer measured 1.27 cm.

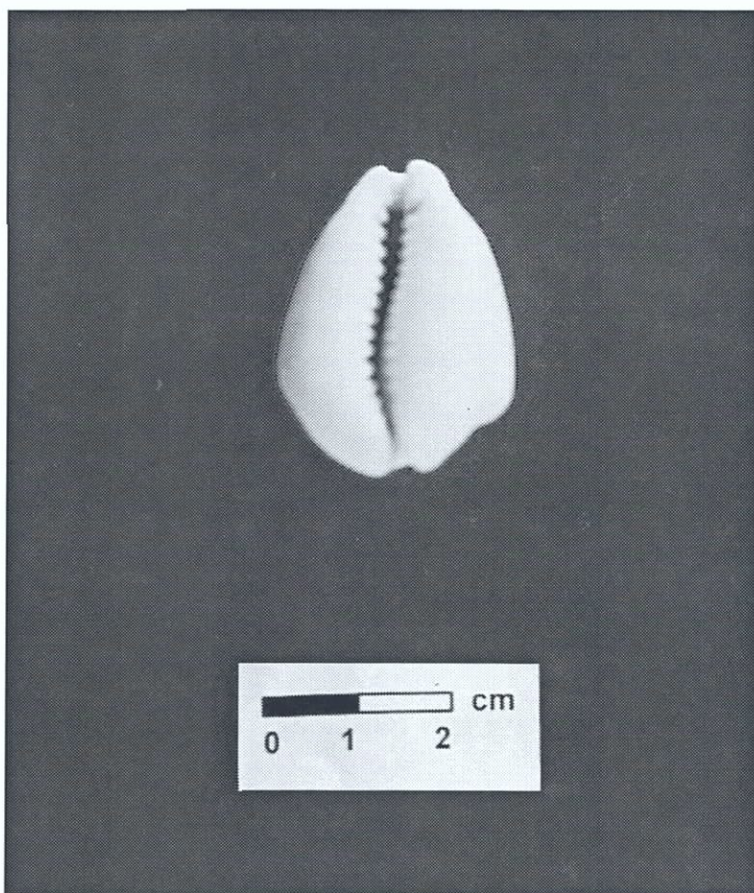


Figure 50. Polished cowrie shell, Feature AG.

Table 58. Fish Remains from Feature AG (AS III)

	NISP ¹	% NISP ²	MNI ³	% MNI ⁴
Salmon/Trout; <i>Salmo species</i>	7	0.3	1	1.4
Basses; Family <i>Serranidae</i>	107	5.2	1	1.4
Blk. Sea Bass; <i>Centropristis striata</i>	7	0.3	1	1.4
Striped Bass; <i>Morone saxatilis</i>	29	1.4	1	1.4
White Perch; <i>Morone americanus</i>	27	1.3	2	2.9
Atlantic Mackerel; <i>Scomber scombus</i>	150	7.3	5	7.1
Halibut; <i>Hippoglossus hippoglossus</i>	3	0.1	1	1.4
Blackfish; <i>Tautoga onitis</i>	30	1.5	1	1.4
Bluefish; <i>Pomatomus saltatrix</i>	91	4.4	2	2.9
Herrings; Family <i>Clupidae</i>	79	3.9	—	—
Shad; <i>Alosa sapidissima</i>	104	5.1	8	11.4
True Herring; <i>Clupea harengus</i>	88	4.3	6	8.6
Porgies; Family <i>Sparidae</i>	421	20.5	21	30.0
Codfish; Family <i>Gadidae</i>	25	1.2	—	—
Atlantic Cod; <i>Gadus morhua</i>	211	10.3	5	7.1
Haddock; <i>Melanogrammus aeglefinus</i>	502.4	34.3	—	—
Whiting; <i>Merluccius merluccius</i>	5	0.2	1	1.4
Flounders; Family <i>Pleuronectidae</i>	281	13.7	5	7.1
Plaice; <i>Pleuronectus platessa</i>	11	0.5	2	2.9
Flounder; <i>Pseudopleuronectes americanus</i>	1	0.0	1	1.4
Grey Gurnard; <i>Eutrigla gurnardus</i>	21	1.0	1	1.4
Other—Small Unknown Fish	78	3.8	2	2.9
Unidentified Fish	224	10.9	—	—
TOTAL	2,050	99.6	70	99.8

3.5.5.2 Lot 43, Feature AG (AS I)

Feature AG yielded an exceptionally rich and well-preserved faunal assemblage which allows us to trace changes in diet during this critical period in the early nineteenth century. Overlying AS III was a fill stratum labeled AS I. This stratum has not been associated with a specific household or series of households; however, there are some similarities in species of fish consumed and parts of animals present in both AS III and AS I. A portion of the lower deposit (AS III) was disturbed from its original context, and it is possible that a portion of the AS I fill may be associated with the underlying stratum (AS III).

AS I produced a total of 3,578 animal bones and fragments (Table 59). Remains of cattle, sheep, sheep/goat, pig, dog, cat, rat, small artiodactyl, large ungulate, commensal rodent, and unidentified mammal bone were identified. Companion animals make up 14 percent of the identified mammal NISP, and commensal rodents make up another 10 percent (Table 60). The non-food animals include a minimum of one dog, five cats, and rodents. Domestic food identified mammals (including small artiodactyl and large ungulate remains) make up just over three-quarters of the identified mammal remains (Table 61).

Table 59. Faunal Assemblage from Feature AG (AS I)

	NISP	% NISP
Mammal	1,845	51.6
Bird	343	9.6
Fish (excluding spines/scales)	874	24.4
Unidentified	516	14.4
TOTAL	3,578	100.0

Table 60. Identified Mammal Bones from Feature AG (AS I)

	NISP	% NISP
Large Food Mammals	645	76.0
Small Non-Food Mammals	118	13.9
Commensal Rodents	86	10.1
TOTAL	849	100.0

Table 61. Mammal Remains from Feature AG (AS I)

	NISP	% NISP
Cattle; <i>Bos taurus</i>	115	6.2
Sheep; <i>Ovis aries</i>	5	0.3
Sheep/Goat; <i>Ovis/Capra</i>	129	7.0
Pig; <i>Sus scrofa</i>	166	9.0
Dog; <i>Canis familiaris</i>	3	0.2
Cat; <i>Felis catus</i>	115	6.2
Rat; <i>Rattus species</i>	6	0.3
Small Artiodactyl	180	9.8
Large Ungulate	50	2.7
Commensal Rodent	80	4.3
Unidentified Mammal	996	54.0
TOTAL	1,845	100.0

Meat from Feature AG (AS I)

The large food mammal remains include bones of cattle, sheep, and pigs. Species ratios based on fragment counts (Table 62A) indicate that pigs are predominant (40%), followed by sheep (32%), and then cattle (28%). However, the assemblage includes 26 very immature pig bones from newborn animals killed during the first few days or weeks of life. There is no evidence to indicate that these pigs were eaten, and they would have produced little meat. These bones may, however, indicate that pigs were being raised on the lot. When the very immature pigs (which show no signs of butchery or breakage) are excluded from the calculations (Table 62B), the percentage of pig (36%) still predominates followed closely by sheep (34.4%) and by cattle (29.6%).

The distribution of body parts was examined to determine the minimum number of meat cuts represented by the large food mammals. The immature pigs were excluded from these calculations. Species ratios based on the minimum number of meat cuts indicate that nearly equal amounts of beef (35%), pork (33%), and mutton/lamb (33%) were consumed (Table 62C).

The 39 meat cuts present in this assemblage reflect a diverse diet. A variety of expensive, moderately priced, and inexpensive cuts of beef, pork, and mutton were purchased and consumed. Stew meat from mutton necks was the most common retail meat cut purchased, but pork ham/legs, mutton chuck, beef chuck, shank hams, and pigs' feet are also well represented in the faunal collection. The butchery marks suggest that the residents consumed a variety of steaks, chops, and roasts. Aging data indicate that mutton, lamb, beef, and veal were all part of the residents' diet. The retail meat cuts for both AS I and AS III were plotted on the same graph (Figure 49).

Table 62A. Species Ratios for Large Domestic Mammals from Feature AG (AS I)

	NISP	% NISP
Cattle	115	27.7
Sheep/Goat	134	32.3
Pig	166	40.0
TOTAL	415	100.0

Table 62B. Species Ratios for Large Domestic Mammals (Excluding Very Immature Pigs) from Feature AG (AS I)

	NISP	% NISP	MNI	% MNI
Cattle	115	29.6	4	28.6
Sheep/Goat	134	34.4	4	28.6
Pig	140	36.0	6	42.9
TOTAL	389	100.0	14	100.1

Table 62C. Species Ratios Based on the Minimum Number of Meat Cuts (MNMCI) from Feature AG (AS I)

	MNMCI	% MNMCI
Beef	13.4	34.8
Lamb/Mutton	12.5	32.5
Pork	12.6	32.7
TOTAL	38.5	100.0

Bird Remains from Feature AG (AS I)

Bird bones make up 10 percent of the faunal assemblage. A total of 343 bird bones was recovered from Feature AG (AS I). Remains of domestic chickens (5 individuals), goose (1 individual), duck (1 individual), turkey (1 individual), and pigeon (1 individual) were identified (Table 63). Eggshell fragments were recovered from AS I.

Table 63. Bird Remains from Feature AG (AS I)

	NISP	% NISP
Chicken; <i>Gallus gallus</i>	83	24.2
Turkey; <i>Meleagris gallopavo</i>	1	0.3
Duck; <i>Anas</i> species	5	1.5
Goose; <i>Anser</i> species	4	1.2
Pigeon; Family <i>Columbidae</i>	4	1.2
Fowl-Sized Bird	141	41.1
Goose-Sized Bird	17	5.0
Unknown Bird	88	25.7
TOTAL	343	100.2

Fish Remains from Feature AG (AS I)

A total of 874 fish bones was recovered from AS I, 24 percent of the total faunal assemblage. This (AS I) and the other significant stratum (AS III) from feature AG are notable for the diversity of fish species present (Table 64). Nineteen different species of fish were present in this portion of the assemblage. This variety may represent ecological change as certain local species, such as the black sea bass, became more scarce and other species took their place in the diet (Rothschild and Balkwill 1993). The diversity of fish present, including the more expensive fishes and imported, commercial fish (salmon, cod, and halibut) may also reflect the greater financial means of the Lot 43 residents.

When combined, bass species, including striped bass, black sea bass, perch, and at least one unidentified member of the bass family, make up 11 percent of the NISP for the fish assemblage. The most frequently consumed fish were the small, local porgies which make up 26 percent of the NISP. Again, this is the earliest feature to produce any quantity of codfish (13% of the NISP).

Table 64. Fish Remains from Feature AG (AS I)

	NISP	% NISP	MNI	% MNI
Salmon/Trout; <i>Salmo</i> species	8	0.9	2	5.3
Basses; Family <i>Serranidae</i>	64	7.3	2	5.3
Blk. Sea Bass; <i>Centropristis striata</i>	14	1.6	2	5.3
Striped Bass; <i>Morone saxatilis</i>	6	0.7	1	2.6
White Perch; <i>Morone americanus</i>	9	1.0	2	5.3
Atlantic Mackerel; <i>Scomberscombus</i>	41	4.7	2	5.3
Blackfish; <i>Tautoga onitis</i>	46	5.3	3	7.9
Bluefish; <i>Pomatomus saltatrix</i>	24	2.7	2	5.3
Herrings; Family <i>Clupidae</i>	34	3.9	—	—
Shad; <i>Alosa sapidissima</i>	27	3.1	1	2.6
True Herring; <i>Clupea harengus</i> 61	7.0	2	5.3	
Porgies; Family <i>Sparidae</i>	226	25.9	8	21.1
Codfish; Family <i>Gadidae</i>	33	3.8	—	—
Atlantic Cod; <i>Gadus morhua</i>	82	9.4	2	5.3
Haddock; <i>Melanogrammus aeglefinus</i>	14	1.6	1	2.6
Whiting; <i>Merluccius merluccius</i>	5	0.6	1	2.6
Flounders; Family <i>Pleuronectidae</i>	44	5.0	4	10.5
Plaice; <i>Pleuronectes platessa</i>	2	0.2	1	2.6
Grey Grunard; <i>Eutrigla gurnardus</i>	18	2.1	1	2.6
Other—Small Unknown Fish	22	2.5	1	2.6
Unidentified Fish	94	10.8	—	—
TOTAL	874	100.1	38	100.1

3.5.5.3 Lot 6, Feature B (AS V), Isaac Cross's Household and Cabinetry Shop, ca. 1810–1837

Feature B was a stone-lined privy, 8 feet in diameter and 4 to 4.5 feet in depth. Five deposits were distinguished within Feature B from which a total of 6,651 bone fragments was recovered. There are two deposits in Feature B worthy of discussion: a lower deposit (AS V) and the deposit (AS IV) associated with the household of tailor and rabbi Harris Goldberg (U.S. Bureau of the Census 1840; Grinstein 1945). The lower deposit (AS V) was capped by a layer of oyster and clam shells. It appears as if the shells were used to seal off the privy or to provide better drainage. Most of the bones of the commensal rodents were recovered from the same level of the privy as most of the shellfish. A total of 16 rodents was identified and it is likely the shaft was open for a period of time at this level.

It is unclear whether the privy was still in use when Goldberg moved onto the property ca. 1839 or if previous tenant and/or owner Isaac Cross (1810–1837) had closed it. Cross was one of the last members of the artisan class to own and occupy this Block 160 property. He lived at 472 Pearl Street with his wife, children, and five or six adult apprentices/tenants. He rented workspace for his cabinetry shop from his next-door neighbor, Widow Hoffman. Wooden engineers' or tailors' rulers were recovered from both AS V and the overlying stratum, AS IV. A small metal chisel or plane was also present. Although the separation of the two analytical strata is not entirely clear, it is probable that the lower fill was deposited when Cross left the property in the 1830s.

Altogether 2,567 bone fragments were recovered from the lower deposit of Feature B (AS V). Of those, 1,213 were identified as mammals (47%), another 1,285 (50%) were identified as fish, and 69 (3%) were bird (Table 65). Of these, 393 bones were identified as large domestic mammals (Table 66), while another 137 were either cat or dog, mostly dog. A large number of dog bones were recovered from AS V (N=127). Smaller numbers of dog bones (N=101) came from the overlying deposit (AS IV). Although the division between AS IV and AS V is unclear, the presence of ham bones in the lower deposit is one item that distinguishes AS V from the Goldberg deposit (AS IV).

Table 65. Faunal Assemblage from Feature B (AS V)

	NISP	% NISP
Mammal	1,213	47.3
Bird	69	2.7
Fish	1,285	50.1
TOTAL	2,567	100.1

This deposit (AS V) contained the largest percentage of commensal rodents recovered on the Five Points site (Table 66). Most of these animals were recovered from the same levels as the shell deposits. Twenty-seven percent of the bones identified as mammals were those of rodents (Table 67). By comparison, in the two features spatially associated with the bakery, AF and N, commensal rodents made up 19 percent (Table 36) and 24 percent (Table 43) of the mammal assemblage.

Table 66. Mammal Remains from Feature B (AS V)

	NISP	% NISP
Cattle; <i>Bos taurus</i>	157	12.9
Sheep; <i>Ovis aries</i>	11	0.9
Sheep/Goat; <i>Ovis/Capra</i>	117	9.6
Pig; <i>Sus scrofa</i>	108	8.9
Dog; <i>Canis familiaris</i>	127	10.5
Cat; <i>Felis catus</i>	10	0.8
Rat; <i>Rattus</i> species	26	2.1
Squirrel; <i>Sciurus</i> species	2	0.2
Small Artiodactyl	93	7.7
Large Ungulate	35	2.9
Commensal Rodent	214	17.6
Unidentified Mammal	313	25.8
TOTAL	1,213	99.9

Table 67. Identified Mammal Bones from Feature B (AS V)

	NISP	% NISP
Large Food Mammals	521	57.9
Small Non-Food Mammals	137	15.2
Commensal Rodents	242	26.9
TOTAL	900	100.0

Based on the NISP, the remains of cattle make up 40 percent of the large domestic mammal bones recovered. Pork products make up 28 percent and mutton another 33 percent (Table 68A). These percentages are slightly different when the minimum number of retail meat cuts (MNMC) present in the deposit is calculated (Table 68B).

The minimum number of meat cuts necessary to account for the deposit is 54, with emphasis on beefsteaks and hams from the hind shank of the pig. Beef accounts for 40 percent or 22 of the meat cuts present in the deposit. Almost a quarter (23%) of these cuts were in the form of steaks, cut from either the humerus or femur of the cow. Examination of the MNMC shows pork to be almost equal in importance to beef. More than a third of the retail meat cuts came from pig. Almost 70 percent of the pork cuts identified in this deposit were from the hind shank of the pig—either ham roasts or ham steaks.

All cuts of mutton were consumed with no obvious preference for a single product. Fifty-four bones from the ribs and thoracic vertebrae of the sheep were attributed to rack of mutton, accounting for 26 percent of all the mutton cuts, but these also may have been cooked as mutton stews or rib steaks. Cranial elements identified as both sheep/goat and pig were recovered from AS IV of Feature B including four large sections of four separate sheep mandibles and a complete sheep skull. This may be indicative of the pre-1843 system of slaughtering and butchery. Sheep were readily available quartered or halved, with just the feet and horns removed (DeVoe 1970).

Table 68A. Species Ratios for Large Domestic Mammals from Feature B (AS V)

	NISP	% NISP	MNI	% MNI
Cattle	157	39.9	3	27.3
Sheep/Goat	128	32.6	2	18.2
Pig	108	27.5	6	54.5
TOTAL	393	100.0	11	100.0

Table 68B. Species Ratios for Large Domestic Mammals Based on the Minimum Number of Meat Cuts (MNMC) from Feature B (AS V)

	MNMC	% MNMC
Beef	21.6	39.9
Lamb/Mutton	12.9	23.8
Pork	19.7	36.3
TOTAL	54.2	100.0

Bird and Fish Remains from Feature B (AS V)

Bird bones make up just three percent of the AS V assemblage (see Table 65); fish, however, make up a large proportion of this assemblage. Based on the NISP, the remains of fish account for half of all the bones recovered from AS V (see Table 65). Locally available fish, especially the porgy (NISP=916), were consumed. Both shad (NISP=65) and herring (NISP=7) were eaten along with three different species of bass (sea bass, NISP=33; striped bass, NISP=20; and an unidentified bass species NISP=3). Ultimately, however, the meat-based meals were more important in terms of protein and energy. Most of the fish recovered were small, locally caught fish. There was a minimum number of 33 individual fish, 16 of which were small porgies. Just 15–30 centimeters in length (Jordan and Everman 1969), these porgies account for only a small number of meals. Codfish make up less than one percent of the NISP for the fish assemblage.

Table 69. Bird Remains from Feature B (AS V)

	NISP	% NISP
Chicken; <i>Gallus gallus</i>	15	21.7
Turkey; <i>Meleagris gallopavo</i>	2	2.9
Duck; <i>Anas</i> species	2	2.9
Fowl-Sized Bird	27	39.1
Unknown Bird	23	33.3
TOTAL	69	99.9

Table 70. Fish Remains from Feature B (AS V)

	NISP	% NISP	MNI	% MNI
Basses; Family <i>Serranidae</i>	3	0.2	1	2.9
Blk. Sea Bass; <i>Centropristis striata</i>	33	2.6	1	2.9
Striped Bass; <i>Morone saxatilis</i>	20	1.6	2	5.7
Atlantic Mackerel; <i>Scomberscombus</i>	26	2.0	2	5.7
Blackfish; <i>Tautoga onitis</i>	9	0.7	1	2.9
Bluefish; <i>Pomatomus saltatrix</i>	25	1.9	1	2.9
Herrings; Family <i>Clupidae</i>	1	0.1	—	—
Shad; <i>Alosa sapidissima</i>	65	5.1	7	20.0
True Herring; <i>Clupea harengus</i>	6	0.5	1	2.9
Porgies; Family <i>Sparidae</i>	916	71.3	16	45.7
Codfish; Family <i>Gadidae</i>	11	0.9	—	—
Atlantic Cod; <i>Gadus morhua</i>	1	0.1	1	2.9
Flounders; Family <i>Pleuronectidae</i>	4	0.3	2	5.7
Unidentified Fish	165	12.8	—	—
TOTAL	1,285	100.1	35	100.2

3.5.5.4 Lot 6, Feature B (AS IV), Harris Goldberg's Home and the *Shaarey Zadek* Synagogue, ca. 1840

When Isaac Cross left Pearl Street, his property was rented to Harris Goldberg. Goldberg, a tailor by trade, stayed just a few years before moving around the corner, first to Orange Street and then to Mott Street. At this time (ca. 1840s and 1850s) Goldberg served the community of Polish Jews in New York City as both a scribe and a rabbi (Grinstein 1945). There were seven adults in his household in 1840, including five men who may have been his rabbinical students or apprentice tailors (U.S. Bureau of the Census 1840). The documentary record shows Goldberg was an orthodox Jew who ran a storefront synagogue, *Shaarey Zadek*, that "followed a strict interpretation of Jewish law" (Grinstein 1945:311, 341, 472). The small amount of pork in the deposit, the absence of hindquarter cuts, and the presence of lead plumbes indicating the consumption of kosher poultry led to the conclusion that at least a portion of the deposit was the result of kosher meals.

In most of the deposits excavated from the site—indeed, in most of the excavations attributed to mid-nineteenth-century households in New York City—the bones of large domestic mammals make up more than 60 percent of all identified bones (e.g., Geismar 1989, 1992; Salwen and Yamin 1990). In the deposit associated with the Goldbergs' household, mammals account for just 49 percent of the 1,794 bones recovered from Feature B (AS IV), while the remains of fish make up another 46 percent of the total NISP for the deposit (Table 71). The remains of cats, dogs, and rodents make up 17 percent of the mammal NISP (Table 72). The remains of large domestic mammals dominate the mammal remains (Table 73).

Table 71. Faunal Assemblage from Feature B (AS IV)

	NISP	% NISP [†]
Mammal	873	48.7
Bird	96	5.4
Fish (excluding spines/scales)	825	46.0
TOTAL	1,794	100.1

Table 72. Mammal Remains from Feature B (AS IV)

	NISP	% NISP
Cattle; <i>Bos taurus</i>	199	22.8
Sheep; <i>Ovis aries</i>	7	0.8
Sheep/Goat; <i>Ovis/Capra</i>	54	6.2
Pig; <i>Sus scrofa</i>	43	4.9
Dog; <i>Canis familiaris</i>	101	11.6
Cat; <i>Felis catus</i>	7	0.8
Rat; <i>Rattus</i> species	10	1.1
Mouse; <i>Mus musculus</i>	1	0.1
Commensal Rodent	29	3.3
Unidentified Mammal	422	48.3
TOTAL	873	99.9

Table 73. Identified Mammal Bones from Feature B (AS IV)

	NISP	% NISP [†]
Large Food Mammals	303	67.2
Small Non-Food Mammals	108	23.9
Commensal Rodents	40	8.9
TOTAL	451	100.0

Meat from Feature B (AS IV)

The Goldberg household consumed mostly beef, eating little mutton and almost no pork (Tables 74A–B). Sixty-six percent of the large domestic mammal bones were identified as from mature cows. Whoever shopped for the household purchased the same cuts of meat over and over again. The beef in the deposit is mainly from the foreshank. Further examination of the bones from the Goldberg deposit revealed few cuts of meat from the loin or hindshank of the cow. There was one fragment from the ilium and four fragments from the lumbar vertebrae that could be attributed to the loin of beef. There were a limited number of mutton bones present and just two lower vertebrae represented a loin cut. The hindquarters of an animal are not considered kosher unless all the veins are removed. This is an extremely slow and impractical process and therefore kosher meat is generally restricted to the foreshank of the animal (Gastwirt 1974:28–30).

A minimum number of 27 retail meat cuts were identified. Thirty-eight percent of all the beef cuts in the deposit came from the lower foreshank. The majority of meat cuts were large roasts cut from the midshaft of the radius. This is considered the best soup bone; however, it is not clear from the archeological record whether large roasts or just the soup bones were purchased (Figure 51). Another inexpensive cut prevalent in the Goldberg diet is the brisket. With few bones, this cut is difficult to detect in the archeological record. Additionally, with the small artiodactyls there are problems identifying costal cartilage and distal ribs to species. Although present in small quantities in other Five Points deposits, beef brisket accounts for six percent of the total number of identifiable meat cuts recovered from AS IV (Figure 52).

Table 74A. Species Ratios for Large Domestic Mammals from Feature B (AS IV)

	NISP	% NISP	MNI	% MNI
Cattle	199	65.7	4	66.7
Sheep/Goat	61	20.1	1	16.7
Pig	43	14.2	1	16.7
TOTAL	303	100.0	6	100.1

Table 74B. Species Ratios for Large Domestic Mammals Based on the Minimum Number of Meat Cuts (MNMC) from Feature B (AS IV)

	MNMC	% MNMC
Beef	21.1	78.4
Lamb/Mutton	3.4	12.6
Pork	2.4	8.9
TOTAL	26.9	99.9

Sabbath law prohibited all work, including cooking, from sundown Friday until sunset Saturday. Soups and stews, one-pot dishes requiring little attention, could be placed on a burner Friday evening and left to cook slowly until the Saturday evening meal. For the same reason, pickled or creamed fish and chicken are frequent fixtures in Saturday meals. These dishes may be prepared in advance and served cold. For many Five Points residents, however, chickens may have been a luxury, valued for their eggs²⁶ and eaten only when no longer viable for egg production.

Poultry was an important component of Jewish holiday meals, and investigations of price gouging in the kosher poultry industry prior to Jewish holidays confirm this (Gastwirt 1974:44–45). Based on the size of the lead seals recovered from the lower portion of Feature B, these were most likely poultry “plumbes.” The seals were attached to the legs of birds to indicate they had been slaughtered according to kosher law. The demand for kosher poultry by Jewish housewives was so great that live-poultry slaughterhouses were located in nearly every Jewish residential center in New York City (Hedden 1929:68). However, there are few bird bones (5% of the total NISP for AS IV) in the Goldberg deposit (Table 71). Seven bones were identified as the remains of a single pigeon and another five bones were identified as mourning dove, a smaller member of the pigeon family (Table 75). A small intact skull identified as a small parrot (Figure 53) was also present in the assemblage.

Table 75. Bird Remains from Feature B (AS IV)

	NISP	% NISP
Chicken; <i>Gallus gallus</i>	11	11.5
Turkey; <i>Meleagris gallopavo</i>	3	3.1
Pigeon; Family <i>Columbidae</i>	7	7.3
Mourning Dove; <i>Zenaidura macroura</i>	5	5.2
Parrot	1	1.0
Fowl-Sized Bird	12	12.5
Unknown Bird	57	59.4
TOTAL	96	100.0

²⁶ Both eggshell fragments and a ceramic eggcup were recovered from the Goldbergs' deposit.



Figure 51. Beef soup bones recovered from the Goldberg deposit, Feature B (AS IV).

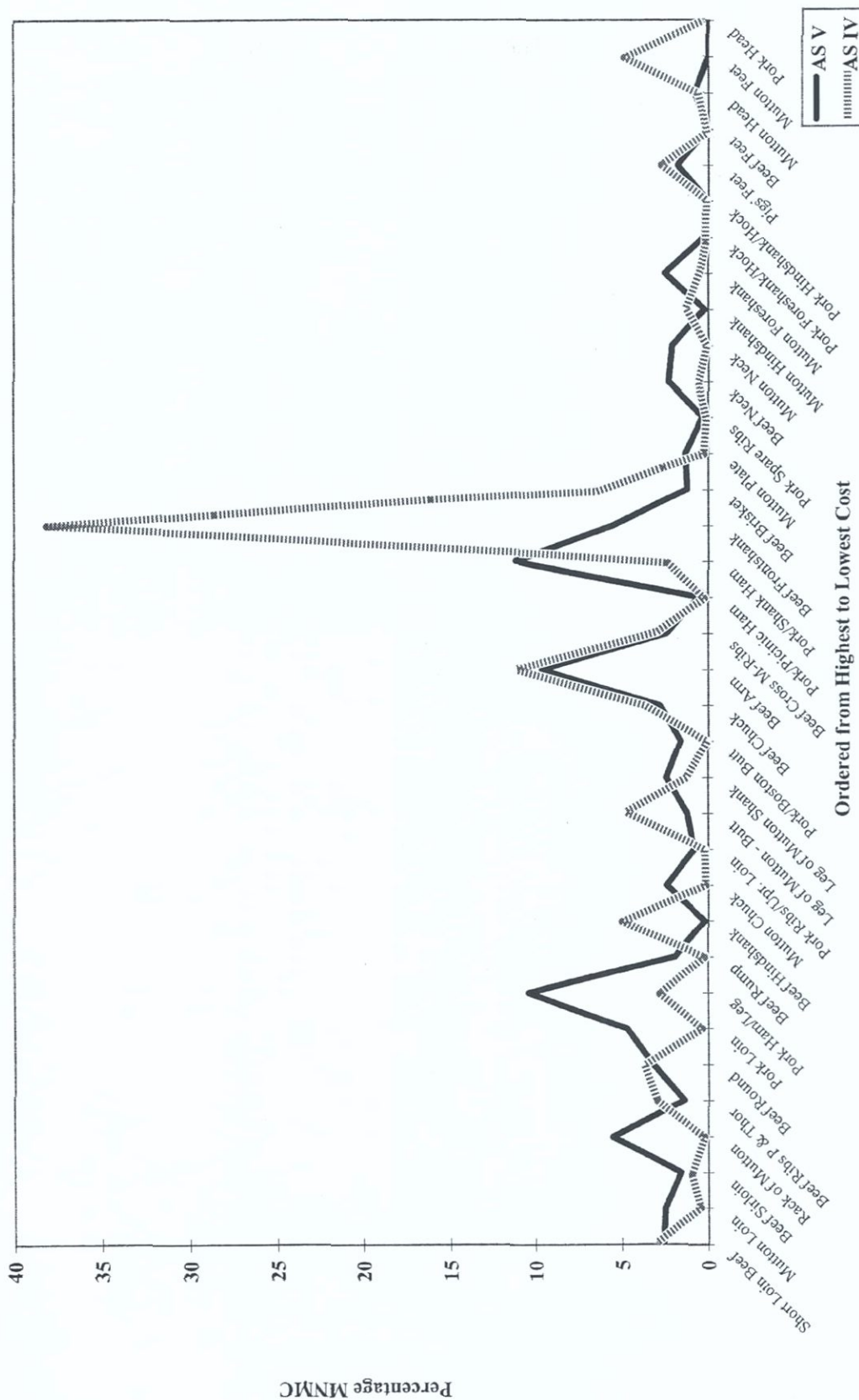


Figure 52. Retail meat cuts from Feature B (AS V and AS IV).

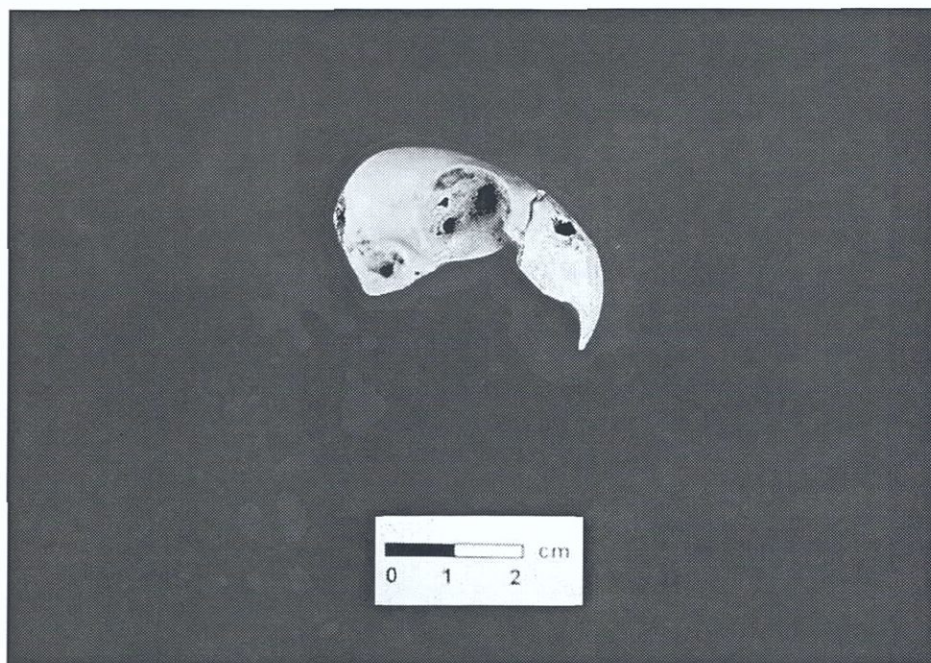


Figure 53. Intact parrot skull recovered from Feature B (AS IV).

Fish From Feature B (AS IV)

The nature of the meat industry in nineteenth-century New York affected the follower of Jewish dietary laws. Animals were generally slaughtered in the morning to be delivered to shops and sold in the afternoons. City laws prevented these shops from operating on Sundays, although the Jewish butchers were also closed on Saturday in observance of their own Sabbath. This was prior to the era of widespread refrigeration; therefore, Jews, like most New Yorkers, preferred freshly slaughtered meat. Additionally, meat slaughtered on the Jewish Sabbath was not considered kosher as there was no rabbinical supervision available on this day. Some butchers would try to sell Friday's meat after sundown on Saturday or again on Monday. This meat would have to be rinsed again so that it would remain kosher, but much of this "old" meat had to be sold at a loss since most New Yorkers preferred freshly killed animals (Williams 1924; Gastwirt 1974:35–40; Henn 1985).

Perhaps because of the limitations in availability of kosher meats, fish are important in Jewish diet. Fish are considered *pauve* and may be eaten with either meat or dairy foods. Fish in cream sauce and gefilte fish are components of the Sabbath meal, and three separate species of fish—whitefish, herring, and smelt—are cited as essential to the diet (Levy 1988:17–19; Fischer and Robbins 1990:6–8). The Goldberg household consumed one of the least expensive, most readily available fish in New York waters in the 1840s, the common scup or porgy (Table 76). Small, mild, white-fleshed fish, the porgies comprised 58 percent of the total number of identifiable fish bones in AS IV. Shad, a member of the herring family locally plentiful during the spring and available salted or smoked at other times of year, made up another seven percent of the fish bones recovered from Feature B (AS IV).

Table 76. Fish Remains from Feature B (AS IV)

	NISP	% NISP	MNI	% MNI
Basses; Family <i>Serranidae</i>	10	1.2	1	3.8
Blk. Sea Bass; <i>Centropristis striata</i>	6	0.7	1	3.8
Striped Bass; <i>Morone saxatilis</i>	23	2.8	1	3.8
White Perch; <i>Morone americanus</i>	2	0.2	1	3.8
Atlantic Mackerel; <i>Scomber scombus</i>	15	1.8	1	3.8
Blackfish; <i>Tautoga onitis</i>	3	0.4	1	3.8
Bluefish; <i>Pomatomus saltatrix</i>	5	0.6	1	3.8
Shad; <i>Alosa sapidissima</i>	56	6.8	2	7.7
Porgies; Family <i>Sparidae</i>	480	58.2	13	50.0
Atlantic Cod; <i>Gadus morhua</i>	7	0.8	1	3.8
Haddock; <i>Melanogrammus aeglefinus</i>	7	0.8	1	3.8
Flounders; Family <i>Pleuronectidae</i>	2	0.2	1	3.8
Other—Small Unknown Fish	3	0.4	1	3.8
Unidentified Fish	206	25.0	—	—
TOTAL	825	99.9	26	99.5

The consumption of local fish in great quantities, combined with the lack of poultry in the deposit, may be the result of an economical decision. Goldberg rented his house, sharing it with eight other adults, all of whom probably contributed to the rent. It is likely all were fed from the same kitchen and the large number of fish bones and preference for beef foreshank, perhaps in the form of soup or stews, may represent economizing on the part of the cook, while still maintaining what appears to have been a kosher kitchen.

3.5.5.5 Summary—Five Points in the 1840s, Features AG and B

A number of exotic species were present, unique to these two features. These include the mourning dove and parrot remains from Feature B, as well as the large quantities of soft-shell clams recovered from Feature AG. Pigeon was also recovered from both features. The presence of these species may be related to the time in which these features were deposited, as these species are not seen in the Five Points deposits that date to the second half of the nineteenth century. Features B and AG contain deposits with date ranges in the 1830s and 1840s, but represent different lifestyles and household arrangements. Isaac Cross, with his cabinetry shop and his foreign-born employees and tenants, lived as the last of the artisan class, his home and shop sharing adjoining lots. From the Cross kitchen came an array of meat and fish. Mostly ham from the leg and shank of the pig was served. This was a meat that suited all three meals and could be served cold with little effort.

Many derogatory statements were made about New York City's Five Points, even before Cross and Labatut left the neighborhood and Widow Hoffman died. Much attention was paid to the "low, ramshackle" buildings and their inhabitants. "The lower stories are usually occupied as drinking and dancing rooms....As soon as evening sets in, the inmates of the house, dressed in the most shocking immodesty, gather....They are obscene nightbirds who flit and howl and hoot by night, and whose crimes and abominations make them shun the light of day" (Foster 1990:123). Could this be an accurate depiction of life in Five Points around the corner from Isaac Cross and Harris Goldberg? The archeological assemblage suggests the prostitutes of Orange Street lived or at least worked in somewhat opulent surroundings: they drank hot chocolate from porcelain cups, they ate or served veal and other expensive meat cuts, along with oysters and soft-shell clams on fancy china. The diversity of fish species, the large number and the variety of meat cuts, including the most expensive, and the residents' presumed access to small game all suggest an exotic and distinctive diet. The variety may also be the result of a public versus private dichotomy with the most exotic foods served to the clientele, while in the off hours the less expensive hams and more ordinary food items were eaten by the residents of the house.

At the same time, around the corner, Harris Goldberg was sharing his living quarters with either his students or apprentices. With the head of the household dependent on tailoring and transcription for income, the foods associated with this household are rather spare. It appears the Goldberg household subsisted on beef stews and soups as well as a small variety of white-fleshed local fish. With little pork and no cuts from the hindquarters of the sheep and cow, it also appears that Goldberg maintained a kosher home at a time when many Jewish migrants to America were growing lax in their observance of religious law.

3.5.6 An Immigrant Neighborhood, Five Points 1850–1870

In light of the Goldbergs' apparent adherence to the laws of kashrut, did the other presumably Jewish immigrants from Germany and Poland also keep kosher homes? There were many pressures to abandon traditional lifeways in the new country, both social and economic. The decline of Jewish lifeways in the early nineteenth century worried many of New York City's Jewish residents. Laxity in the maintenance of kosher kitchens and the observance of the Sabbath was attributed in part to the upheaval of migration, exposure to new customs, and the general atmosphere of freedom in America. By the end of the 1830s attendance at Sabbath services had dropped dramatically. Employment on Saturdays was necessary to the economic survival of many workers, and many Jews kept their shops open on Saturday, choosing business interests over the observance of the Sabbath (Grinstein 1945:337–344). By 1850 a number of Polish and German immigrants had settled on Block 160. Along the eastern portion of Orange Street they established both homes and businesses.

From the historical record including censuses, tax records, and contemporary observations of the neighborhood, it is apparent that many Five Points residents were at the lower end of the economic spectrum. In reorganized artisan households, Orange Street tailors rented residential space to their employees and relatives. Were these extended households economizing, and can this be seen in the faunal

record left behind? The large proportions of fish and the presence of the less expensive meat cuts in all of these deposits, regardless of the ethnic background of the residents, suggest that these assemblages reflect economical choices in the urban marketplace.

3.5.6.1 Lot 37, 22 Orange (Baxter) Street, Feature AN (AS III), A German Tailor, His Family, and Their German and Dutch Tenants, ca. 1854–1860

Immigrant tailor Samuel Stone lived around the corner (Lot 37, 22 Orange Street) from the house Goldberg had rented ten years earlier (Lot 6, 472 Pearl Street). Stone emigrated from Germany via England around 1844. Unlike Goldberg, it is not known whether Stone was an active or practicing Jew. Both men lived on rented properties, but while Goldberg sewed for someone else and devoted time to religious life, Stone owned his own secondhand clothing shop and seems to have focused his energies on building a clothing business (Rode 1854; Valentine 1855). Each man shared his home with multiple adults although the structures at both addresses were single-family houses that had been built decades before and divided to accommodate larger numbers of tenants (U.S. Bureau of the Census 1840, 1860; New York State Census 1855).²⁷

Within Feature AN, AS III was the deposit associated with the Stones' occupation (1854–1860), and 8,623 bone fragments were recovered from this stratum alone (Table 77). Sixty-two percent of these bones were identified as mammals, 9 percent as birds, and 29 percent as the remains of fish. The majority (96%) of the identified mammal bones were those of the three large, domestic mammals. Although there was also a bakery on this lot, the number of commensal rodents in the assemblage made up only 3 percent of the identified mammal bones (Table 78). The relatively small number of rodents in the deposit may be the result of rapid filling of the cistern.

Table 77. Faunal Assemblage from Feature AN (AS III)

	NISP	% NISP
Mammal	5,301	61.5
Bird	788	9.1
Fish	2,534	29.4
TOTAL	8,623	100.0

Table 78. Identified Mammal Bones from Feature AN (AS III)

	NISP	% NISP
Large Food Mammals	1,394	96.4
Small Non-Food Mammals	10	0.7
Commensal Rodents	42	2.9
TOTAL	1,446	100.0

Seventy-three percent of the mammal bones (3,855 fragments from a total of 5,301) were classified as unidentified (Table 79). This is a considerably higher percentage than was present in other Five Points assemblages. Twenty-nine percent of the bird and mammal bones were burnt to the point of becoming calcine. Both the bone and pipe assemblages from this stratum had the appearance of being weathered and were greatly fragmented. Most of the calcine bone was recovered from cat. no. 927. It is likely that much of this deposit represents a secondary dumping of food remains, perhaps after burning in either a stove or the yard.

²⁷ Goldberg's household included seven adults in 1840, while Stone's had six adults and seven children in 1855.

Table 79. Mammal Remains from Feature AN (AS III)

	NISP	% NISP
Cattle; <i>Bos taurus</i>	151	2.8
Sheep; <i>Ovis aries</i>	65	1.2
Sheep/Goat; <i>Ovis/Capra</i>	298	5.6
Pig; <i>Sus scrofa</i>	217	4.1
Dog; <i>Canis familiaris</i>	1	0.0
Cat; <i>Felis catus</i>	9	0.2
Rat; <i>Rattus species</i>	6	0.1
Small Artiodactyl	450	8.5
Large Artiodactyl	11	0.2
Large Ungulate	202	3.8
Commensal Rodent	36	0.7
Unidentified Mammal	3,855	72.7
TOTAL	5,301	99.9

Meat from Feature AN (AS III)

Sixty-two percent of the bones in the deposit were identified as mammal (Table 77). Of these, 96 percent were the bones of one of the large domestic mammals (Table 78). Meat was an important part of the diet and although they consumed meat from all three animals, the Stone household preferred mutton. Species ratios based on both the NISP and MNI were calculated for the large domestic mammals (Table 80A). Fifty percent of the NISP was mutton with a minimum number of at least five sheep represented in the deposit.

Fifty-three percent of the retail meat cuts consumed by the Stones and their employees/tenants were from mature sheep (Table 80B). There is no lamb in this deposit, and more than half the specimens in the deposit were 2.5 years of age or older. A quarter of the meat cuts present came from the sheep's hindshank. There were at least seven large leg roasts, along with another eight shank roasts (from which large sections of the medipodial bones were recovered). Pigs' feet, popular with many Five Points tenants, were virtually absent from the deposit associated with the Stones. This was the only deposit in which a real preference for mutton was shown (Figure 54). Additionally, whereas the other Five Points households ate beef and hamsteaks, the Stones cooked mutton steaks and roasts from the leg instead. There are few clear roasting or char marks on any of these bones and much of the mutton present in Feature AN (AS III) may have been braised in liquid or stewed on the stove top.

Table 80A. Species Ratios for Large Domestic Mammals from Feature AN (AS III)

	NISP	% NISP	MNI	% MNI
Cattle	151	20.7	1	11.1
Sheep/Goat	363	49.7	5	55.6
Pig	217	29.7	3	33.3
TOTAL	731	100.1	9	100.0

Table 80B. Species Ratios for Large Domestic Mammals Based on the Minimum Number of Meat Cuts (MNMC) from Feature AN (AS III)

	MNMC	% MNMC
Beef	26.2	24.5
Mutton	53.1	49.6
Pork	27.8	26.0
TOTAL	107.1	100.1

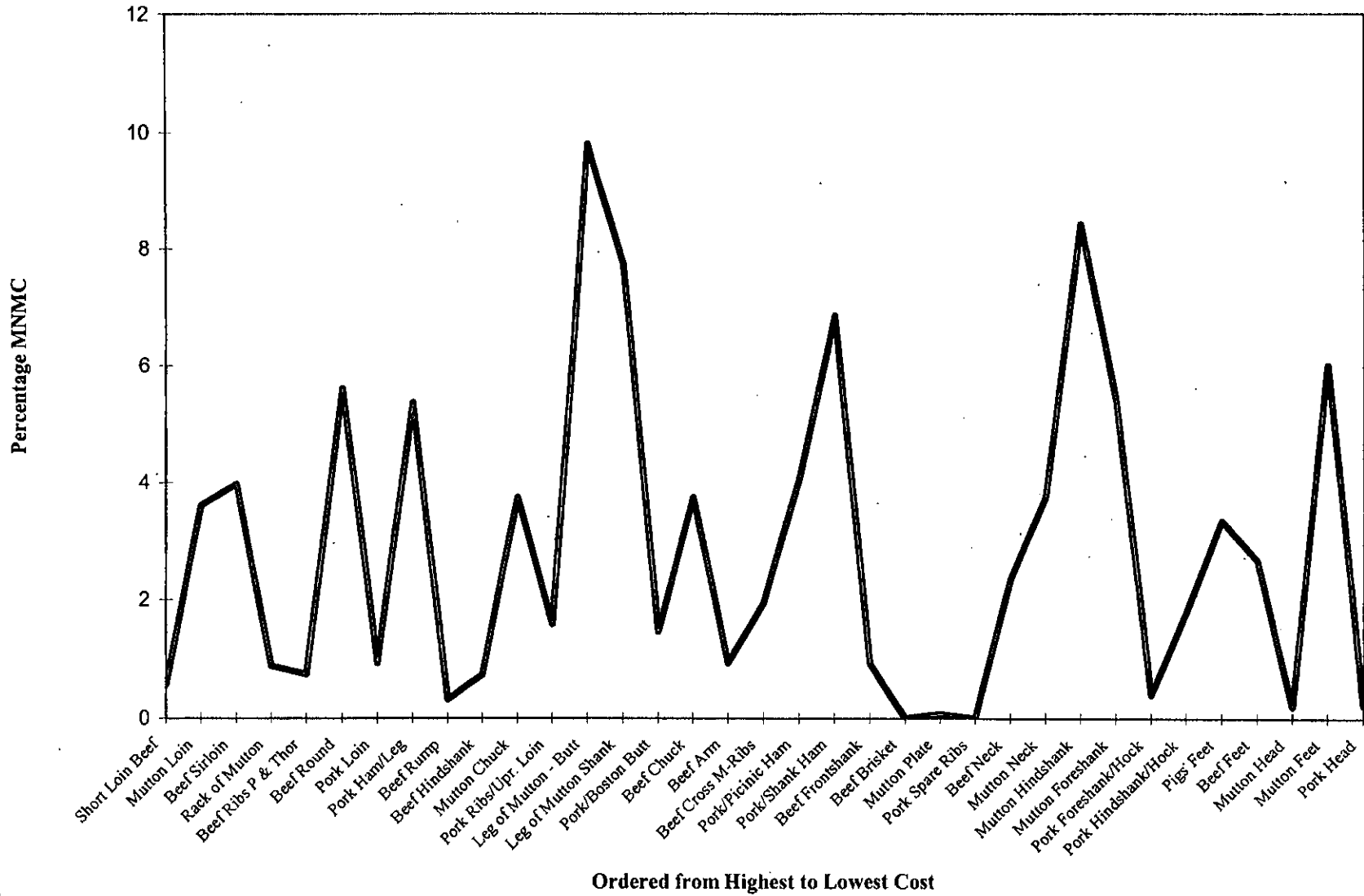


Figure 54. Retail meat cuts from Feature AN (AS III).

Poultry From Feature AN (AS III)

Poultry remains made up about nine percent of the NISP for AS III. A total of 788 bone fragments identified as bird was recovered (Table 77). All four domestic birds, chicken, turkey, duck, and goose, were consumed, but the household appears to have preferred chicken and turkey (Table 81). At least four chickens and another four turkeys were eaten. Goose and duck were represented by one individual each. Slightly more than half the bird bones present in AS III could not be identified as to species. Another 21 percent were identified simply as fowl-sized bird.

Table 81. Bird Remains from Feature AN (AS III)

	NISP	% NISP
Chicken; <i>Callus gallus</i>	87	11.0
Turkey; <i>Meleagris gallopavo</i>	83	10.5
Duck; <i>Anas species</i>	14	1.8
Goose; <i>Anser species</i>	8	1.0
Fowl-Sized Bird	165	20.9
Goose-Sized Bird	11	1.4
Unknown Bird	420	53.3
TOTAL	788	99.9

Fish Remains from Feature AN (AS III)

Like their neighbors, the Stones ate a good deal of fish. Almost 30 percent of the total number of bones were identified as fish.²⁸ What is interesting is the amount of cod that appears in the Stone deposit. For the most part these were large commercially fished animals often imported into New York (60-90 cm in length [Perdikaris 1996]). There were a minimum number of 14 codfish (including haddock, pollack, and ling) and just 10 porgies present in the assemblage. Codfish make up 35 percent of the fish recovered from this deposit (Table 82), while porgies account for 15 percent of the NISP. In terms of the amount of meat provided, codfish represent considerably more meat and protein than a comparable number of porgy or flounder bones as they are significantly larger fish. One codfish cleithrum and one precaudal vertebra were sawn through and at least one of these fish was purchased without its head, probably salted. Codfish was one of the least expensive foods available in New York at mid-century, and the consumption of fish may be related to economic choices on the part of the Stones. Bass species make up less than 2 percent of the fish assemblage, and the least expensive fish, the flounder, is just 2 percent of this assemblage.

²⁸ As with the other features, the scales and spines have been eliminated from these calculations so as not to inflate the actual number of fish present.

Table 82. Fish Remains from Feature AN (AS III)

	NISP	% NISP	MNI	% MNI
Basses; Family <i>Serranidae</i>	22	0.9	1	2.4
Blk. Sea Bass; <i>Centropristis striata</i>	3	0.1	1	2.4
Striped Bass; <i>Morone saxatilis</i>	14	0.6	2	4.8
White Perch; <i>Morone americanus</i>	3	0.1	1	2.4
Atlantic Mackerel; <i>Scomber scombus</i>	109	4.3	3	7.1
Halibut; <i>Hippoglossus hippoglossus</i>	33	1.3	2	4.8
Blackfish; <i>Tautoga onitis</i>	7	0.3	1	2.4
Bluefish; <i>Pomatomus saltatrix</i>	21	0.8	1	2.4
Shad; <i>Alosa sapidissima</i>	20	0.8	1	2.4
True Herring; <i>Clupea harengus</i>	2	0.1	1	2.4
Porgies; Family <i>Sparidae</i>	376	14.8	10	23.8
Codfish; Family <i>Gadidae</i>	403	15.9	—	—
Atlantic Cod; <i>Gadus morhua</i>	385	15.2	11	26.2
Haddock; <i>Melanogrammus aeglefinus</i>	25	1.0	1	2.4
Pollack; <i>Pollachius virens</i>	66	2.6	1	2.4
Ling; <i>Molva molva</i>	2	0.1	1	2.4
Flounders; Family <i>Pleuronectidae</i>	25	1.0	2	4.8
Winter Flounder; <i>Pseudopleuronectes americanus</i>	27	1.1	1	2.4
Plaice; <i>Pleuronectes platessa</i>	64	2.5	1	2.4
Unidentified Fish	927	36.6	—	—
TOTAL	2,534	100.1	42	100.3

3.5.6.2 Lot 45, Feature H (AS III), Polish and Italian Tenants, ca. 1860s

A few doors east of Stone's shop was a large tenement at 8 Baxter Street that housed another secondhand clothing shop run by Polish immigrants, Polish shoemakers, and several Italian families, including one headed by Joseph Costa, an organ-grinder. Next door, at 10 through 14 Baxter Street, was a series of brick tenements that housed several hundred Irish, Polish, German, and Italian immigrants. Any number of people from these buildings may have contributed to the filling of Feature H, a stone-lined privy on the back lot of 8 Baxter Street.

Oyster and clam shells were scattered throughout the feature. Sixty-one percent of all the shell fragments in the lower deposit came from cat. no. 348. As with Features B and AF, the shellfish at the bottom of Feature H served a functional purpose. A layer of shell was deposited to either facilitate drainage, neutralize odors, and/or to seal off the original privy deposits with lime. Clam shells greatly outnumber oyster shells. Two small pieces of coral were recovered from cat. no. 322 within AS III.

The uppermost deposit in Feature H was likely disposed of in the 1890s. This deposit was entirely commercial in nature and loaded with pins, needles, textile fragments, and identical glass buttons. The lower half of Feature H (AS III) contained domestic refuse including 3,538 bone fragments. The majority of the bones were recovered from cat. no. 322. Four bones belonging to a single, small, male, New World Cebus monkey were also recovered from cat. no. 322 (Figure 55). This associates at least a portion of this deposit with the Italian tenants who were employed as organ-grinders through the 1860s and 1870s (U.S. Bureau of the Census 1860, 1870).

A total of 3,538 bone fragments came from the lower deposit (AS III) associated with multiple households dating to the 1860s. Just 38 percent were identified as the remains of mammals. Another six percent were identified as the remains of birds while the majority of the bones, 55 percent, were identified as fish (Table 83).

The identified mammal bones were grouped into higher order taxa: large food mammals, pets, and rodents (Table 84). Large domestic mammals accounted for most (65%) of the mammal bones in this deposit. A minimum of two cats, a single rabbit, and one small monkey were also present. Commensal rodents (rats) were another 13 percent of the identified mammal bones. Eight bones (less than one percent of the feature NISP) from the carapace of an unidentified turtle or tortoise were also recovered. Whether this animal was a part of the diet or a pet or an example of urban fauna is not known. A small quantity of eggshell was also recovered from this stratum.



Figure 55. Mandible, scapula, humerus, and femur of a New World Cebus monkey, Feature H (AS III).

Compared with the other analytical strata already discussed, mammals make up a smaller proportion of the faunal assemblage associated with the residents of 8 Baxter Street. For most of the other features (Feature D is the one exception) the remains of mammals account for 45 to 70 percent of the faunal assemblages.

Table 83. Faunal Assemblage from Feature H (AS III)

	NISP	% NISP
Mammal	1,354	38.3
Bird	221	6.2
Fish (excluding spines/scales)	1,955	55.3
Reptile	8	0.2
TOTAL	3,538	100.0

Table 84. Identified Mammal Bones from Feature H (AS III)

	NISP	% NISP
Large Food Mammals	406	65.3
Small Non-Food Mammals	136	21.9
Commensal Rodents	80	12.9
TOTAL	622	100.1

Meat from Feature H (AS III)

Just 38 percent of the total deposit was identified as the remains of mammals. The bones from the large domestic mammals, cattle, sheep, and pigs, when combined, make up 65 percent of the identified mammal bone. Five percent of this was identified as cattle and another five percent of the bones were classified as large ungulate. Sheep made up about six percent of the assemblage and pigs almost nine percent. An additional six percent of the bones were identified simply as small artiodactyl (Table 85).

Table 85. Mammal Remains from Feature H (AS III)

	NISP	% NISP
Cattle; <i>Bos taurus</i>	71	5.2
Sheep; <i>Ovis aries</i>	10	0.7
Sheep/Goat; <i>Ovis/Capra</i>	69	5.1
Pig; <i>Sus scrofa</i>	116	8.6
Cat; <i>Felis catus</i>	130	9.6
Rabbit; <i>Lepus</i> species	2	0.1
Rat; <i>Rattus</i> species	3	0.2
Monkey; <i>Cebus</i> species	4	0.3
Small Artiodactyl	77	5.7
Large Ungulate	63	4.7
Commensal Rodent	77	5.7
Unidentified Mammal	732	54.1
TOTAL	1,354	100.0

The residents of 8 Baxter Street ate beef, pork, and mutton in nearly equal quantities, although pork was the meat of choice. At least two pigs and two sheep are necessary to account for the meat in the deposit. Fragments of pig bones account for 44 percent of the NISP for the large domestic mammals (Table 86A). However, when the minimum number of meat cuts was calculated, pork makes up less than a third of the 35 meat cuts identified in the deposit (Table 86B). This difference might be explained by the greater number of bones found in the pig or differences in the butchering of these animal carcasses.

Table 86A. Species Ratios for Large Domestic Mammals from Feature H (AS III)

	NISP	% NISP	MNI	% MNI
Cattle	71	26.7	1	20.0
Sheep/Goat	79	29.7	2	40.0
Pig	116	43.6	2	40.0
TOTAL	266	100.0	5	100.0

Table 86B. Species Ratios for Large Domestic Mammals Based on the Minimum Number of Meat Cuts (MNMN) from Feature H (AS III)

	MNMN	% MNMN
Beef	13.1	37.3
Lamb/Mutton	11.2	31.9
Pork	10.8	30.8
TOTAL	35.1	100.0

Certain retail meat cuts may be underestimated in these calculations. Difficulty in differentiating sheep and pig ribs and vertebrae from one another diminishes the number of stew cuts and rib steaks that were counted; however, this is consistent for all the features analyzed in this manner. Few of the most expensive cuts, the loins of beef and mutton, were consumed, but a wide range of other retail cuts were eaten. The buildings that are likely associated with this assemblage housed large numbers of both Polish and Italian immigrants, with some Irish, in a number of different housing situations. The assemblage from Feature H (AS III) appears to reflect different households cooking in separate kitchens, but the overall pattern of meals consumed may shed some light on working-class diet at mid-century.

Similar to other Five Points assemblages, a preference is shown for both ham steaks and beefsteaks. The meat-cuts chart (Figure 56) peaks at beef round (cut from the cow's femur), pork leg (cut from the pig's femur), and beef arm (cut from the midshaft of the humerus). These three cuts, which account for a quarter of all the meat cuts, are moderately priced, but not necessarily the least expensive or the most cost efficient. Most of these cuts appear to have been consumed as steaks rather than roasts. These steak and chop cuts may have been the most efficient in terms of preparation time and energy as they could be quickly pan-fried on the stove top.

Leg of mutton and mutton shoulder or chuck were also consumed in some quantity. The chart (Figure 56) also shows a similar peak at mutton foreshank, an inexpensive lower leg, mutton roast (including the distal humerus, radius, ulna, metacarpals, and carpals), and smaller peaks at both ham hocks and pigs' feet. There is no evidence of the raising of livestock on these lots, and all of the meat present in AS III appears to have been purchased as retail cuts.

Poultry from Feature H (AS III)

The remains of birds make up just six percent of the entire faunal assemblage from Feature H (AS III). At times chickens were a luxury item and might not be eaten unless past their egg-laying prime. There is eggshell within the deposit so the tenants did consume eggs, although there is no evidence they raised their own chickens. There were at least three chickens, a turkey, a duck, and a single bone identified as goose. Another 42 percent of the bird assemblage, mostly phalanges and vertebrae, was not identified to species, but coded simply as fowl-sized bird (Table 87).

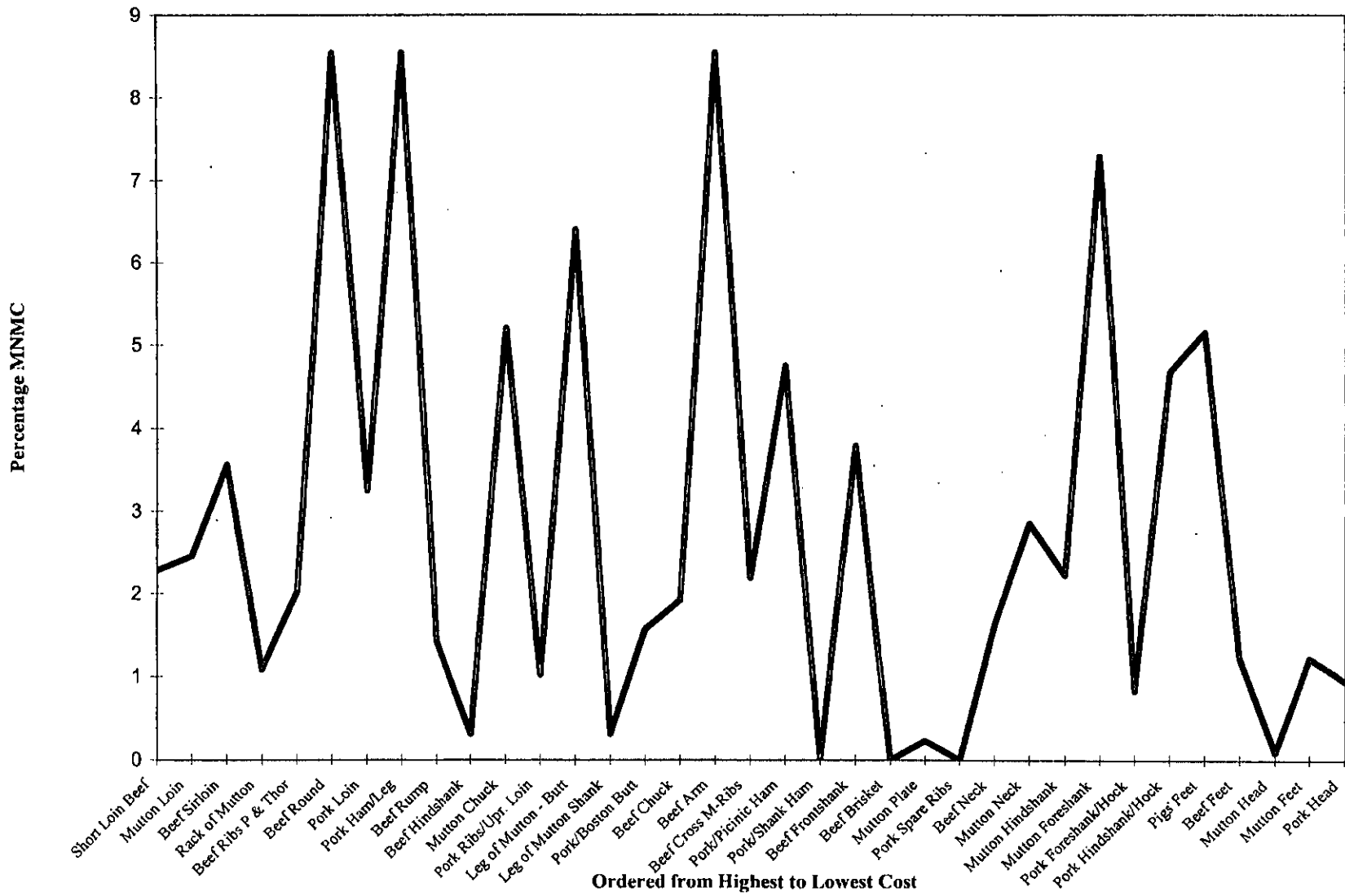


Figure 56. Retail meat cuts from Feature F (AS III).

Table 87. Bird Remains from Feature H (AS III)

	NISP	% NISP
Chicken; <i>Gallus gallus</i>	32	14.5
Turkey; <i>Meleagris gallopavo</i>	8	3.6
Duck; <i>Anas</i> species	2	0.9
Goose; <i>Anser</i> species	1	0.5
Fowl-Sized Bird	92	41.6
Unknown Bird	86	38.9
TOTAL	221	100.0

Fish Remains from Feature H (AS III)

The remains of fish made up 55 percent of the total NISP for Feature H (AS III). There was a total of 1,955 bones (excluding spines and scales) from 20 different species of fish identified from AS III (Table 88). Obviously, seafood played an important role in the diet of the residents of 8 Baxter Street in the 1860s. Twenty percent of the fish from Feature H (AS III) were identified as one of the cod family: the Atlantic Cod, pollack, haddock, or ling. Unidentified codfish, most of which are probably Atlantic Cod, comprise 15 percent of the NISP for the fish remains. Again, these cods were commercially fished and were probably imported from New England. Singer (1987) has documented the potential of skeletal ratio analysis as a way to relate fish consumption to economic status. In Feature H there were whole codfish present, although the ratio of 3.5 cranial elements to every one vertebral element present may indicate at least some cod heads were purchased. This purchase, less expensive than cod steaks or whole fish, would be suitable for making stocks and stews, and, in many cases, the larger cod heads would provide some quantity of meat as well.

Small, locally fished porgies constitute another 10 percent of the NISP and 14 percent of the minimum number of fish present in the deposit. Four flounder species were present, accounting for five percent of the NISP and nine percent of the MNI. The cods, flounders, and porgies were the least expensive fish available.

Table 88. Fish Remains from Feature H (AS III)

	NISP	% NISP	MNI	% MNI
Salmon/Trout; <i>Salmo</i> species	1	0.1	1	2.3
Basses; Family <i>Serranidae</i>	27	1.4	1	2.3
Blk. Sea Bass; <i>Centropristis striata</i>	16	0.8	2	4.7
Striped Bass; <i>Morone saxatilis</i>	25	1.3	3	7.0
Atlantic Mackerel; <i>Scomber scombus</i>	16	0.8	1	2.3
Halibut; <i>Hippoglossus hippoglossus</i>	10	0.5	1	2.3
Blackfish; <i>Tautoga onitis</i>	53	2.7	2	4.7
Bluefish; <i>Pomatomus saltatrix</i>	15	0.8	1	2.3
Shad; <i>Alosa sapidissima</i>	43	2.2	2	4.7
Herring; <i>Clupea harengus</i>	78	4.0	3	7.0
Porgies; Family <i>Sparidae</i>	204	10.4	6	14.0
Codfish; Family <i>Gadidae</i>	287	14.7	—	—
Atlantic Cod; <i>Gadus morhua</i>	289	14.8	9	20.9
Haddock; <i>Melanogrammus aeglefinus</i>	64	3.3	2	4.7
Pollack; <i>Pollachius virens</i>	36	1.8	2	4.7
Ling; <i>Molva molva</i>	2	0.1	1	2.3
Flounders; Family <i>Pleuronectidae</i>	85	4.3	4	9.3
Winter Flounder; <i>Pseudopleuronectes americanus</i>	3	0.2	—	—
Plaice; <i>Pleuronectes platessa</i>	11	0.6	—	—
Other— Small Unknown Fish	5	0.3	1	2.3
Gray Gurnard; <i>Eutrigla gurnardus</i>	7	0.4	1	2.3
Unidentified Fish	678	34.7	—	—
TOTAL	1,955	100.2	43	100.1

3.5.6.3 Lot 6, Feature J (AS V and AS III), Irish Tenants from the Late 1840s through the 1860s

All together 18,900 bone fragments, along with one human tooth with a large cavity and four eggshell fragments, were recovered from two contexts (AS III and V) in a large stone-lined cesspool that had served the residents of a five-story tenement at 472 Pearl Street. This building was occupied almost entirely by Irish immigrants throughout the 1850s and 1860s, the time to which the deposits date. As the occupation of Block 160 grew more dense, it is difficult to associate specific households with the archeological deposits. Although census data indicate an almost exclusive Irish occupation of 472 Pearl Street, Hodges (1996) and Tchen (1996) have noted the involvement of Irish women with both Chinese and African-American men. These relationships were frowned upon and contributed to the reputation of the neighborhood as “the only spot, thank God, in these United States where the Abolition idea is reduced to practice [and] whites, negroes, and mongrels readily intermarry” (*New York Evening Day Book* 1858 as cited by Tchen 1996:130). Many of the Irish households enumerated in the censuses of 1850, 1855, and 1860 were headed by women. This does not necessarily mean men were not there, but perhaps through either evasion or technicalities, these men were not counted. The deposits from the cesspool are discussed as if they were associated solely with Irish famine refugees, but it should be understood that many residents likely remained invisible in the written record and that many factors may influence dietary choices.

There is a substantial amount of oyster and clam shell scattered throughout each deposit. In the upper deposit, the shell is concentrated in the lower section of the deposit (cat. no. 787). Six items were of particular interest: four completely intact, large, unidentified whelk-type shells and one similar shell fragment were recovered from both analytical strata.²⁹ Two small coral fragments were also recovered from the upper deposit of Feature J (in cat. no. 490 and cat. no. 787). While the coral is a keepsake, memento, or decorative element, the large shells may represent food items or collectibles or both. Vendors sold all types of shellfish from stalls and carts in the streets, and a visitor to the neighborhood, William Bobo (1852:119), wrote of a “large and beautiful” shell shop located on Chatham Street in Five Points. It was the only one in the city and carried “a sample of all the shell animals in the known world.”

From the lower deposit (AS V), a total of 9,590 bone fragments was recovered. Most (72%) were the remains of mammals (Table 89). Bird remains accounted for about five percent of the NISP for AS V, while the remains of fish make up 21 percent of the total NISP. The identified mammal remains were divided into higher order taxa (Table 90). The large food mammals, cattle, sheep, and pigs, make up 90 percent of the identified bones. Cat, rat, and dog bones make up the remaining 10 percent of the identified mammals, a minimum of 6 cats, 1 dog, and 10 rodents.

Another 9,310 bone fragments were recovered from a second context (AS III), dating slightly later in time (ca. 1870). The remains of mammals make up 86 percent of the total NISP for this deposit (Table 89). Meat played a large role in the diet of the Irish tenants. It appears that even less fish and less bird was being consumed by the Irish households associated with the later deposit (AS III). Bird makes up just four percent of the total NISP for AS III and fish another 10 percent. When just the identified mammal remains were considered (NISP=2,600), the large food mammals account for 86 percent of the bones (Table 90). Three rabbit bones were considered as a small food mammal.

Ten percent of the identified NISP for AS V were either small pets or commensal rodents (Table 90). Fourteen percent of the upper deposit (AS III) identified mammal bones were those of either cats or rats (Table 90). The non-food mammals present include a minimum of 4 cats, 2 dogs, and 11 rats. These are slightly larger amounts than those present in the lower deposit.

²⁹ These whelks came from catalog numbers 738, 758, 795, 490, and 787.

Table 89. Faunal Assemblage from Feature J (AS V and AS III)

	AS V NISP	AS V % NISP	AS III NISP	ASIII % NISP
Mammal	6,947	72.4	7,998	85.9
Bird	509	5.3	367	3.9
Fish	2,015	21.0	941	10.1
Reptile	119	1.2	4	0.0
TOTAL	9,590	99.9	9,310	99.9

Table 90. Identified Mammal Bones from Feature J (AS V and AS III)

	AS V NISP	AS V % NISP	AS III NISP	ASIII % NISP
Large Food Mammals	2,771	90.3	2,229	85.7
Small Food Mammals	0	0.0	3	0.1
Small Non- Food Mammals	154	5.0	220	8.5
Commensal Rodents	143	4.7	148	5.7
TOTAL	3,068	100.0	2,600	100.0

In the lower deposit (AS V), 868 bones were classified as either small artiodactyl (NISP=566) or large ungulate (NISP=302). Another 3,879 bone fragments could not be identified beyond classification as mammal (Table 91). A total of 915 (13%) of the mammal bones in the deposit had been burnt, most to the point of becoming calcine. Another six had been gnawed or chewed on by either rats or cats. In the upper deposit, 888 bone fragments were classified as either small artiodactyl or large ungulate. Another 5,398 bone fragments were unidentifiable (Table 91).

Table 91. Mammal Remains from Feature J (AS V and AS III)

	AS V NISP	AS V % NISP	AS III NISP	ASIII % NISP
Cattle; <i>Bos taurus</i>	394	5.7	192	2.4
Sheep; <i>Ovis aries</i>	37	0.5	20	0.3
Sheep/Goat; <i>Ovis/Capra</i>	474	6.8	208	2.6
Pig; <i>Sus scrofa</i>	998	14.4	921	11.5
Dog; <i>Canis familiaris</i>	29	0.4	92	1.2
Cat; <i>Felis catus</i>	125	1.8	128	1.6
Rat; <i>Rattus species</i>	57	0.8	30	0.4
Rabbit; <i>Lepus species</i>	0	0.0	3	0.0
Small Artiodactyl	566	8.1	526	6.6
Large Ungulate	302	4.3	362	4.5
Commensal Rodent	86	1.2	118	1.5
Unidentified Mammal	3,879	55.8	5,398	67.5
TOTAL	6,947	99.8	7,998	100.1

These deposits are most like typical workingman's fare. All methods of quantification (Tables 91 and 92A and B) indicate that pigs were the most common food animals consumed by the Irish tenants of Pearl Street as represented by the faunal assemblages from Feature J. The pig was well known in Ireland and among all rural poor. The Irish who migrated to New York in the 1840s and 1850s ate pork in all forms—large hams, steaks, hocks, and feet. In both deposits pork products accounted for 52–69 percent of all meat bones recovered (Tables 92A–B). These are extremely large deposits from which a minimum number of 352 meat cuts were identified, 232 from the lower deposit (AS V) and another 120 from the upper deposit (AS III) (Table 92C).

Table 92A. Species Ratios for Large Domestic Mammals from Feature J (AS V)

	NISP	% NISP	MNI	% MNI
Cattle	394	20.7	15	26.8
Sheep/Goat	511	26.9	19	33.9
Pig	998	52.4	22	39.3
TOTAL	1,903	100.0	56	100.0

Table 92B. Species Ratios for Large Domestic Mammals from Feature J (AS III)

	NISP	% NISP	MNI	% MNI
Cattle	192	14.3	8	25.0
Sheep/Goat	228	17.0	12	37.5
Pig	921	68.7	12	37.5
TOTAL	1,341	100.0	32	100.0

Table 92C. Species Ratios for Large Domestic Mammals Based on the Minimum Number of Meat Cuts (MNMC) from Feature J (AS III AND AS V)

	MNMC	% MNMC	MNMC	% MNMC
Beef	64.8	28.0	33.6	28.0
Lamb/Mutton	62.9	27.1	23.7	19.7
Pork	104.0	44.9	62.8	52.3
TOTAL	231.7	100.0	120.1	100.0

Meat from the picnic (humerus, radius, and ulna) and shank (distal femur, tibia, and fibula) hams, the peaks in the middle of the chart (Figure 57), account for a fifth to a quarter of all the meat cuts in each of the two deposits. Roughly half of these appear to have been purchased as large roasts, while the remainder were steaks cut into rounds of less than three cm thick. The bones which have been attributed to the larger roasts, especially those from the foreshank of the cow, may have been purchased as soup bones, but this is impossible to determine from the archeological sample.

The staple of the workingman, the beefsteak, makes up between 11 and 13 percent of the meat cuts in the Irish assemblage. Steaks cut from the arm and leg of the cow make up seven percent of the Feature AN assemblage³⁰ and 17 percent of the retail meat cuts in the Feature H assemblages. The diet of the Irish tenants was dominated by the remains of moderately priced and low-cost cuts of pork, including picnic hams, shank hams, and pigs' feet. All of the pork appears to have been purchased from markets or butchers. There is no evidence to suggest that the Irish were keeping pigs on the lot, and no pigs classified as very immature were recovered from either of the Feature J faunal assemblages. Beef and mutton were less frequently eaten, but leg of mutton (from the shank end) and beef arm (in the form of beef steaks) were the other commonly consumed cuts of meat.

The feature associated with the Irish tenants was divided into two deposits. There were no real differences observed in either the species or body parts consumed. Compared to their Baxter Street neighbors, the Irish consumed some of the more expensive cuts of meat available, but they also utilized some of the least expensive. Neither of the Polish-German households made much use of the lower limb hock and foot cuts of any animals, but the Irish ate ham hocks and pigs' feet with some regularity (Figure 58). There is relatively little meat on these bones, but they may be used to flavor other dishes, and crubíns (crubeens), pigs' feet simmered for hours in white wine and spices, are one of "the most traditional of all Irish specialties" (Fitz Gibbon 1968:83; Connery 1992:44). Additionally, the foot and hock cuts of the pig, along with bacon, were the least expensive meats available and often used as flavoring.

³⁰ The preference of the German-American residents associated with Feature AN was for mutton steaks and roasts.

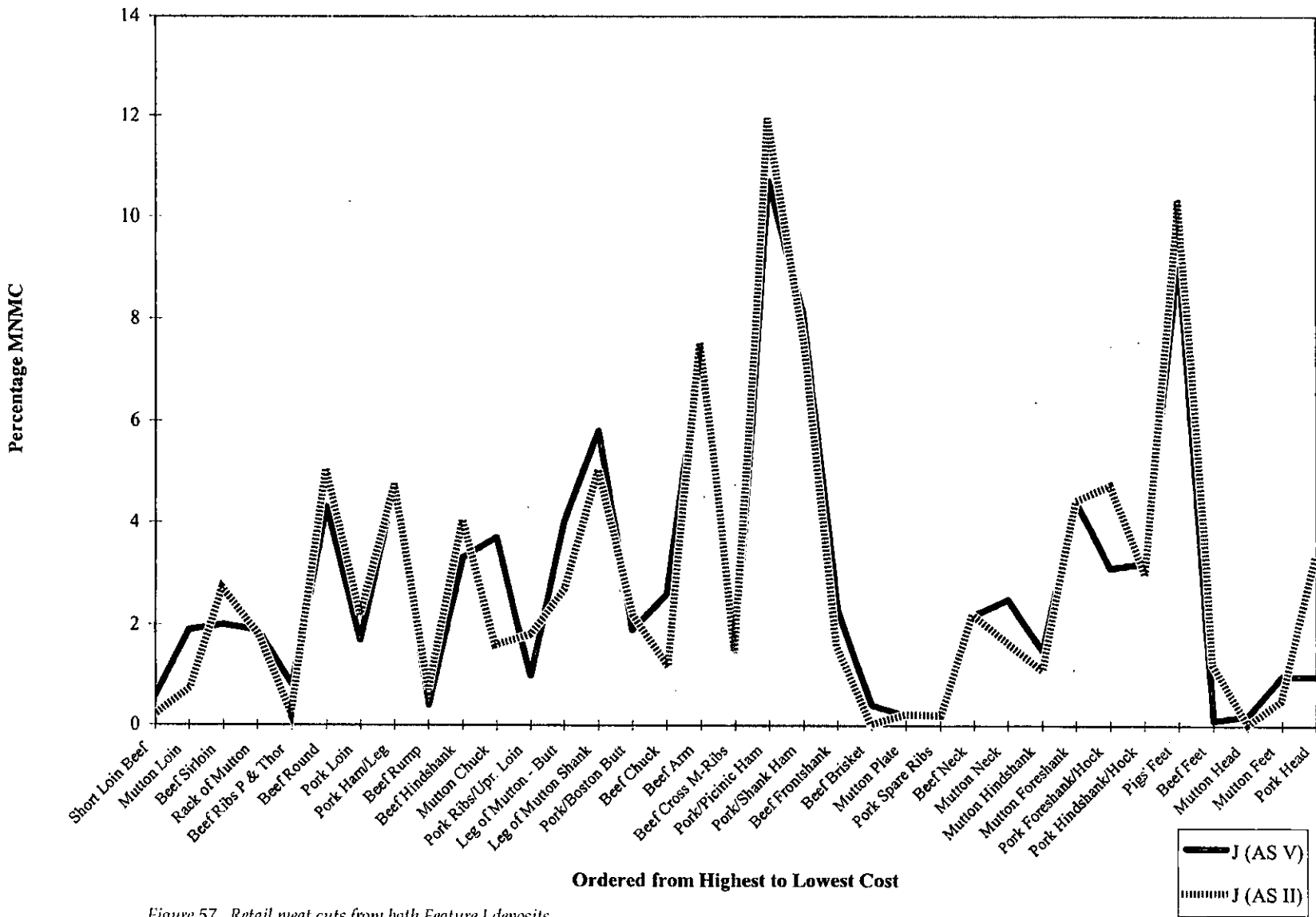


Figure 57. Retail meat cuts from both Feature J deposits.

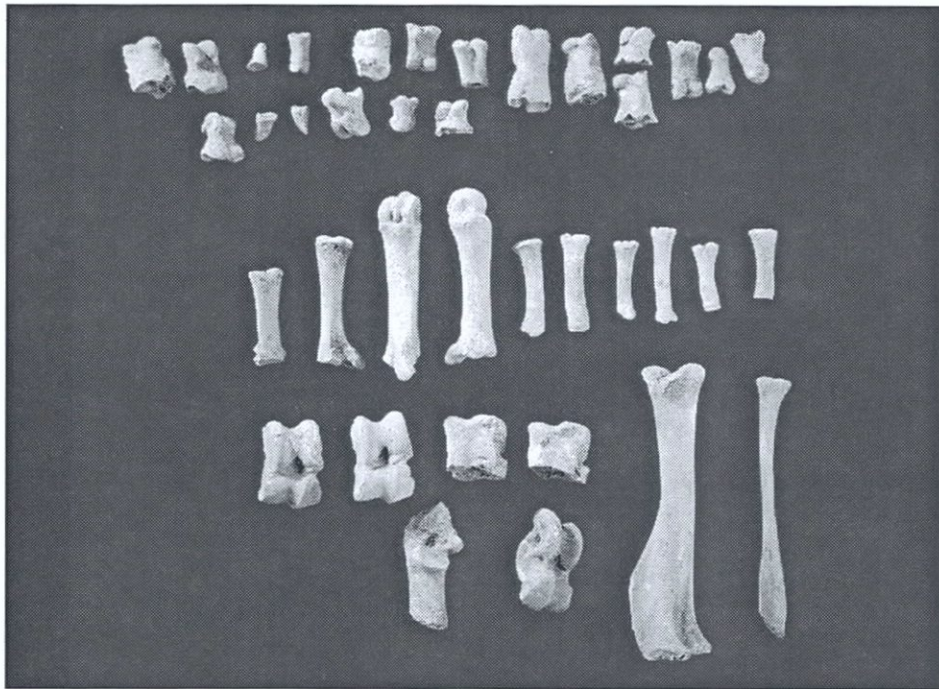


Figure 58. Pigs' feet, Feature J.

Poultry from Feature J (AS V)

Like their Baxter Street neighbors, as represented by Features AN and H, the Irish ate little poultry. In the lower deposit (AS V) just five percent of the total NISP was identified as the remains of birds (Table 89). There were 10 chickens, 5 turkeys, 2 ducks, and 1 goose. Another 103 bones were identified as fowl-sized birds and 180 bones were unidentifiable (Table 93). Three bones were identified as pigeon, perhaps the remains of a meal. There were no immature chickens in the assemblage and there is no evidence the Irish tenants were keeping chickens on the lot.

In the upper deposit (AS III), the 367 bones identified as the remains of birds are just 4 percent of the total NISP for the feature. Ninety bones were classified as fowl-sized and another 182 bone fragments were unidentifiable. Chicken was the most common form of poultry (NISP=62), and there were at least 4 individuals represented in the deposit. There were also 2 turkeys, 1 goose, and 1 duck.

Table 93. Bird Remains from Feature J (AS V and AS III)

	AS V NISP	AS V % NISP	AS III NISP	ASIII % NISP
Chicken; <i>Gallus gallus</i>	149	29.3	62	16.9
Turkey; <i>Meleagris gallopavo</i>	32	6.3	13	3.5
Duck; <i>Anas</i> species	18	3.5	7	1.9
Goose; <i>Anser</i> species	9	1.8	9	2.5
Pigeon; Family Columbidae	3	0.6	0	0.0
Fowl-Sized Bird	103	20.2	90	24.5
Goose Sized Bird	15	2.9	4	1.1
Unknown Bird	180	35.4	182	49.6
TOTAL	509	100.0	367	100.0

Fish Remains from Feature J (AS V and III)

A total of 2,015 fish bones (excluding spines and scales)³¹ was recovered from the lower deposit (AS V). Another 941 fish bones were recovered from the upper deposit (Table 94). Fish remains accounted for 10 percent of the bones recovered from the upper portion of the feature (AS III) and 21 percent of the bones recovered from the lower deposit (AS V). The Irish seem to have eaten less fish than any other group of New Yorkers represented archeologically, based on the NISP. Between 33 and 51 percent of the fish in the Irish deposits were porgies. Maurice Callaghan, a fishmonger, was one of the few long-term residents at this Pearl Street address. He may have been responsible for the presence of the small, locally caught fish, supplying his neighbors at a discount. The preference for porgies at a time when cod was widely available may be the result of a readily available, inexpensive, local supply.

The fish were roughly ordered according to mid-nineteenth century prices per pound. However, there is little difference in cost between a striped bass at \$0.16 per pound and shad at \$0.12 per pound. Only salmon and trout at \$0.47–\$0.60 per pound were far outside the general range of fish prices, making them comparable to the least expensive cuts of pork (neck at \$0.49 per pound) and beef (hindshank at \$0.59 per pound [Henn 1985; Singer 1987:88–89; Henry 1987a:371]). These are general pricing schemes for the nineteenth century, Henn's and Singer's for the urban northeast, and Henry's for the urban west coast. Prices could fluctuate based on local events, seasonal availability, or difficulty in storage and transport; however, the cost of these food items *relative* to one another remains much the same (Schulz and Gust 1983; Rothschild and Balkwill 1993).

³¹ There were 391 scales and 336 vertebral spines recovered from AS V. There were 365 scales and 29 spines recovered from the upper deposit, AS III.

Table 94. Fish Remains from Feature J (AS V and AS III)

	AS V NISP ^a	AS V % NISP ^a	AS III NISP ^b	AS III % NISP ^b
Salmon/Trout; <i>Salmo</i> species	5	0.2	1	0.1
Basses; Family <i>Serranidae</i>	38	1.9	20	2.1
Blk. Sea Bass; <i>Centropristis striata</i>	8	0.4	3	0.3
Striped Bass; <i>Morone saxatilis</i>	25	1.2	4	0.4
White Perch; <i>Morone americanus</i>	2	0.1	1	0.1
Atlantic Mackerel; <i>Scomber scombus</i>	108	5.4	9	1.0
Halibut; <i>Hippoglossus hippoglossus</i>	7	0.3	0	0.0
Blackfish; <i>Tautoga onitis</i>	43	2.1	27	2.9
Bluefish; <i>Pomatomus saltatrix</i>	6	0.3	23	2.4
Herrings; Family <i>Clupidae</i>	28	1.4	7	0.7
Shad; <i>Alosa sapidissima</i>	82	4.1	12	1.3
Herring; <i>Clupea harengus</i>	42	2.1	1	0.1
Porgies; Family <i>Sparidae</i>	665	33.0	482	51.2
Codfish; Family <i>Gadidae</i>	172	8.5	91	9.7
Atlantic Cod; <i>Gadus morhua</i>	190	9.4	62	6.6
Haddock; <i>Melanogrammus aeglefinus</i>	40	2.0	34	3.6
Pollack; <i>Pollachius virens</i>	15	0.7	13	1.4
Flounders; Family <i>Pleuronectidae</i>	58	2.9	53	5.6
Winter Flounder; <i>Pseudopleuronectes americanus</i>	41	2.0	4	0.4
Plaice; <i>Pleuronectes platessa</i>	9	0.4	1	0.1
Other—Small Unknown Fish	22	1.1	1	0.1
Unidentified Fish	409	20.3	92	9.8
TOTAL	2,015	99.8	941	99.9

3.5.6.4 Summary: Immigrant Diet, Features AN, H, and J

Meat was a staple of the workingman's diet (Stott 1990:176). This certainly seems true when the deposits associated with the Pearl Street Irish were examined. The remains of meat-based meals account for the majority of the bones in each of the two deposits, and pork is the dominant meat. Pork was consistently the least expensive meat available in the urban northeast. The cost might have been considerably lower if the pork was purchased from neighbors who raised their own pigs.³² Pork is present in the deposit associated with the Irish in moderate-to-inexpensive cuts from the leg hams and lower shanks or hocks. These may have been the most economical choice for households that preferred meat to poultry or fish. The remaining ham bones could be stretched into soups or stews, and the meat cut from the bone could be served cold the next day as sandwiches. Ham and bacon might be quickly pan-fried along with eggs and potatoes, a time-saving and energy-efficient "Irish-fry" (Connery 1992:34). There is little poultry in these deposits, a pattern that holds true for many archeological assemblages attributed to the urban working class (Branstner and Martin 1987; Cheek and Friedlander 1989; Geismar 1989).

The economizing of the Irish did not extend to the consumption of fish, consistently the least expensive food available in New York City. The relatively small number of porgies present in the two Irish deposits may be the remnants of a few fish-loving households, or refuse from Maurice Callaghan, a fishmonger. It is possible that the fish present may be the remains of Friday-night meals, when Roman Catholics were forbidden to eat meat.

³² 1853 Ferris atlas still has smokehouses on a number of the back lots in the Sixth Ward.

Some of the German and Polish residents of Baxter Street pursued a strategy similar to that of the Irish. The households associated with Feature AN also yielded a faunal assemblage that consisted mostly of the remains of meat-based meals. Again there was little poultry present, and fish made up 29 percent of the overall assemblage NISP. Although they also purchased moderate-to-inexpensive cuts of meat, the preference of the German residents was for a different species. A quarter of the meat cuts present in this deposit were from the hindshank of mature sheep, in the form of mutton roasts and leg of mutton. Where the Irish ate pigs' hocks and feet, the German tenants associated with Feature AN ate mutton hocks and feet. Almost 30 percent of the deposit associated with the German tailors and their families was fish; the deposit associated with the earlier of the two Irish deposits (AS V) yielded 21 percent, but considerably more than the deposit associated with the later Irish deposit (AS III), which yielded 10 percent. The majority of fish in the German deposit was codfish, inexpensive and readily available.

The German and Italian tenants associated with Feature H appear to have been even less well off than their Baxter and Pearl Street neighbors. There were more households and tenants associated with the Feature H deposit (six households with a total of 26 people in 1860) and anywhere from one to three families associated with the Feature AN deposit, but by 1860 there was just a single family of Germans and their German servant (U.S. Bureau of the Census 1860). The tenants associated with Feature H consumed all three in relatively equal quantities with a slight emphasis on pork. There was little poultry recovered from the deposit, but this was the feature from which the greatest amount of fish bone (55% of the NISP) was recovered. This may indeed be associated with the Italian residents of the lot with dietary emphasis on fish, pasta, and legumes, but since the deposit has also been associated with some German and Irish tenants, this distinction is not entirely clear. Overall, however, the bones are the remains of the meals of working men and women. Unlike either the Irish or German deposits, there does not appear to be a favored species or a preferred meat cut. This may reflect the diverse, dense, and somewhat transitory occupation of this lot.

3.5.7 A Saloon, an Eating House, and Irish Tenants, ca. 1860s

3.5.7.1 Lot 7, Feature O (AS III), Irish Tenants and a Saloon, ca. 1860s

Feature O was a stone-lined privy associated with a tavern and a group of Irish tenants who lived above it. The bulk of the faunal remains from Feature O are derived from AS III and date to the 1860s. These faunal remains are therefore contemporary with the upper levels of Feature J, which also date to the 1860s and are associated with a group of Irish tenants. A total of 3,847 bone fragments was recovered from AS III (Table 95).

The vast majority of the bones are the remains of mammals (Table 95). The bones in Feature O are generally less well preserved than those from other features, such as AG and N. This is reflected in the high proportion of unidentified mammal remains and in the large number of small fragments that could not be reliably identified to class (N=735). When the unidentified mammals are excluded from consideration, the Feature O assemblage is clearly dominated by the remains of large domestic food animals (Table 96). Large mammal remains (including small artiodactyl and large ungulate bones) make up 93 percent of the identifiable mammal bones; commensal rodents and small domestic pets together make up only 7 percent of the identifiable mammal assemblage. The non-food mammals include a minimum of 1 dog, 1 cat, and 8 commensal rodents. The mammals represented include cattle, sheep and sheep/goat, pig, dog, cat, commensal rodents, small artiodactyl, large ungulate, and unidentified mammal bone fragments (Table 97). The majority of the bird remains are those of domestic fowl; however, a single distinctive, tarsometatarsus was identified as that of a barn owl.

Table 95. Faunal Assemblage from Feature O (AS III)

	NISP	% NISP
Mammal	3,400	88.4
Bird	84	2.2
Fish (excluding spines/scales)	363	9.4
TOTAL	3,847	100.0

Table 96. Identified Mammal Bones from Feature O (AS III)

	NISP	% NISP
Large Food Mammals	1,118	93.0
Small Non-Food Mammals	7	0.6
Commensal Rodents	77	6.4
TOTAL	1,202	100.0

Table 97. Mammal Remains from Feature O (AS III)

	NISP	% NISP
Cattle; <i>Bos taurus</i>	87	2.6
Sheep; <i>Ovis aries</i>	21	0.6
Sheep/Goat; <i>Ovis/Capra</i>	115	3.4
Pig; <i>Sus scrofa</i>	476	14.0
Dog; <i>Canis familiaris</i>	2	0.1
Cat; <i>Felis catus</i>	5	0.1
Rat; <i>Rattus</i> species	5	0.1
Small Artiodactyl	308	9.1
Large Ungulate	111	3.3
Commensal Rodent	72	2.1
Unidentified Mammal	2,198	64.6
TOTAL	3,400	100.0

Meat from Feature O (AS III)

Pig bones are by far the most common of the large domestic mammal remains, accounting for 68 percent of the identified specimens (Table 98A). Sheep/goat (20%) and cattle (12%) bones are far less numerous. The feature assemblage yielded a minimum of 10 pigs, 6 cattle, and 6 sheep. As noted above, MNI calculations are poor measures of taxonomic abundance for historic faunal assemblages since meat was purchased from butchers and meat markets as retail cuts or joints of meat rather than as whole animals or sides of carcasses (see, for example, Lyman 1984). The species ratios based on the minimum numbers of meat cuts are generally similar to those based on fragment counts (NISP). Pork comprises 62 percent of the retail meat cuts, followed by mutton (19%) and beef (18%) (Table 98B).

Table 98A. Species Ratios for Large Domestic Mammals from Feature O (AS III)

	NISP	% NISP	MNI	% MNI
Cattle	87	12.4	6	27.3
Sheep/Goat	136	19.5	6	27.3
Pig	476	68.1	10	45.5
TOTAL	699	100.0	22	100.1

Table 98B. Species Ratios for Large Domestic Mammals Based on the Minimum Number of Meat Cuts (MNMNC) from Feature O (AS III)

	MNMNC	% MNMNC
Beef	14.9	18.4
Lamb/Mutton	15.7	19.4
Pork	50.2	62.1
TOTAL	80.8	99.9

The relative importance of the various cuts of beef, pork, and mutton, arranged from the most to the least expensive, is shown in Figure 59, plotted against the other two Irish deposits from Feature J. Pork and ham clearly play a dominant role in the diet. In particular, three moderately priced cuts of pork/ham (Boston butt, shank hams, and picnic hams) make up over 30 percent of all the meat cuts consumed. If these bones represent the refuse from the saloon, these cuts of ham may well have been used for sandwiches and other light meals. On the other hand, these bones may be the refuse of the Irish tenants. Cured hams would be an obvious meat choice in the absence of refrigeration. Slices of ham could be quickly pan-fried, and the meat could also be used for cold sandwiches and lunches. Feature O also produced a large number of pigs' feet, and pickled pigs' feet may also have served as "pub grub." The pork appears to have come from pigs that were between one and two years old when they were slaughtered. Most of the epiphyses that fuse by one year (e.g., the proximal second phalanx) are fused, while those that fuse by two years (e.g., the proximal first phalanx) are mostly unfused.

Mutton is second to pork in terms of the number of joints of meat represented. The most popular cut was the relatively inexpensive mutton foreshank, but pricier cuts, such as mutton loin, are also represented in the Feature O assemblage. Most of the meat appears to be mutton rather than lamb; much of the meat comes from animals that were more than three years old when they were slaughtered for food. These animals may have been raised initially for their wool.

Beef played a relatively minor role in the Feature O assemblage, especially when compared to its dominant role in the early-nineteenth-century features. The most popular cuts of beef appear to be rounds, including beefsteaks. The steaks would have been relatively quick and easy to cook, especially in cramped, hot kitchens. They therefore might be an obvious choice for the Irish tenants in the summertime.

Poultry Remains from Feature O (AS III)

The importance of meat in the Feature O assemblage is highlighted by the paucity of bird remains from the feature. Only 84 bird bones and fragments were recovered from Feature O, AS III. The remains include the bones of chickens, geese, and a single barn owl. Although a minimum of five chickens and one goose were present, poultry clearly played a minimal role in the diet (Table 99).

Table 99. Bird Remains from Feature O (AS III)

	NISP	% NISP
Chicken; <i>Gallus gallus</i>	16	19.0
Goose; <i>Anser</i> species	1	1.2
Barn Owl; <i>Tyto alba</i>	1	1.2
Fowl-Sized Bird	23	27.4
Goose-Sized Bird	10	11.9
Unknown Bird	33	39.3
TOTAL	84	100.0

Percentage MNMC

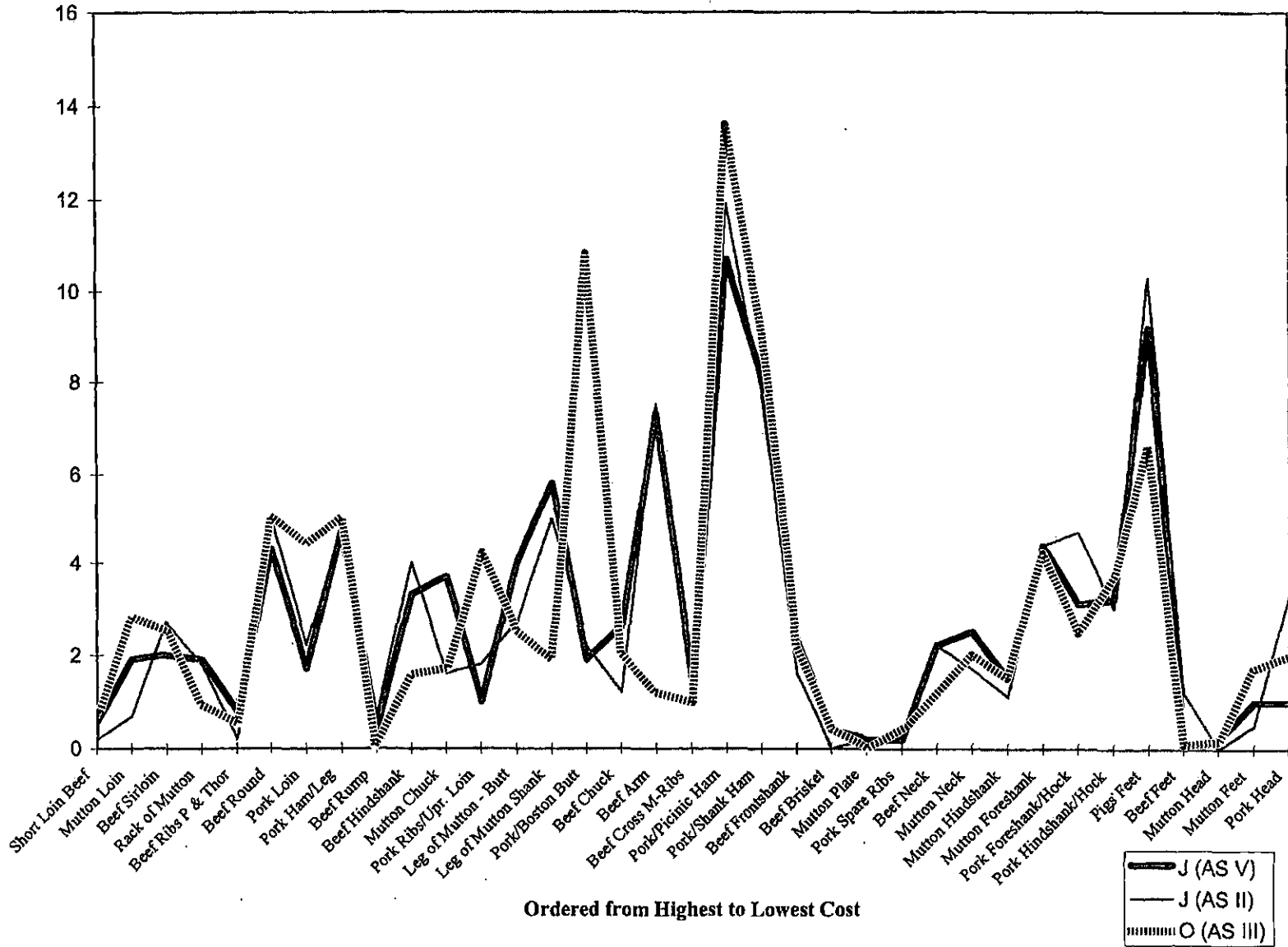


Figure 59. Retail meat cuts from Irish deposits from Features J and O.

Fish Remains from Feature O (AS III)

Taphonomic processes may in part explain the fish assemblage which appears to consist mostly of the head and mouthpieces of codfish. These (the dentary and premaxilla) are the heaviest and densest bones in the cod and may have been some of the only bones to survive. Then again, purchasing heads and carcasses may have been an economic choice and/or the result of dietary preferences. The heads of the fish may have been used to make stock or soup. In any case, the dentary and premaxilla bones provide a number of viable measurements, and all of these codfish appear to be within the range of commercially fished stockfish (Amorosi et al. 1994; Perdikaris 1996).

A total of 363 fish bones, representing 13 species, was recovered from Feature O (AS III). Fish identified as codfish make up 55 percent of the NISP for the assemblage. The small, silver porgies make up another 13 percent of the assemblage (Table 100). A cowrie shell was also recovered from Feature O (Figure 60).

Table 100. Fish Remains from Feature O (AS III)

	NISP	% NISP	MNI	% MNI
Blk. Sea Bass; <i>Centropristis striata</i>	10	2.8	1	4.2
Striped Bass; <i>Morone saxatilis</i>	1	0.3	2	8.3
White Perch; <i>Morone americanus</i>	1	0.3	1	4.2
Halibut; <i>Hippoglossus hippoglossus</i>	1	0.3	1	4.2
Blackfish; <i>Tautoga onitis</i>	15	4.1	1	4.2
Bluefish; <i>Pomatomus saltatrix</i>	4	1.1	1	4.2
Herring; <i>Clupea harengus</i>	1	0.3	1	4.2
Porgies; Family Sparidae	47	12.9	4	16.7
Codfish; Family Gadidae	93	25.6	—	—
Atlantic Cod; <i>Gadus morhua</i>	105	28.9	7	29.2
Haddock; <i>Melanogrammus aeglefinus</i>	22	6.1	2	8.3
Whiting; <i>Merluccius merluccius</i>	11	3.0	1	4.2
Flounders; Family Pleuronectidae	3	0.8	2	8.3
Unidentified Fish	49	13.5	—	—
TOTAL	363	100.0	24	100.2

3.5.7.2 Lot 52, Feature AM (AS II), An Eating House or Oyster Saloon, ca. 1850s

Feature AM, at the time of excavation, was a rectangular, sandstone pit that has been interpreted as the remains of an icehouse. The fill within this sandstone feature was a single, discrete deposit. A large portion of this collection was not identifiable and was simply categorized as unknown mammal. This is primarily the result of the bones being burnt to the point of calcination. Of the entire Feature AM faunal assemblage, 17 percent of the bones were burnt or calcine (compared to 20% for Feature AN, 1% for Features H and B). This may indicate that a portion of the deposit was secondary, discarded in the icehouse after being burned in the backyard, hearth, or stove.

For more than 40 years, a portion of the property served alternately as an oyster house, a saloon, or a restaurant. Patrick Conlan's oyster saloon is first listed in the 1840 city directory and continued to be listed through 1854 (Longworth 1841; Rode 1854). Franz Caspare appeared in the 1840 city directory with a refectory or eating house at 110 Chatham (Longworth 1840, 1845). William Sparks opened another branch of his liquor business here around 1856 (Doggett 1857). John Rohr ran a saloon and oyster house at this same address for a few years in the early 1860s (U.S. Bureau of the Census 1860). Two of the three residential tenants in 1850 were waiters (immigrants from Ireland), and the third a 15-year-old clerk from Connecticut. Four residential tenants are listed at 110 Chatham in 1855, an Irish brother and sister, and the Irish Malone brothers, both framemakers (U.S. Census 1850; New York State Census 1855).

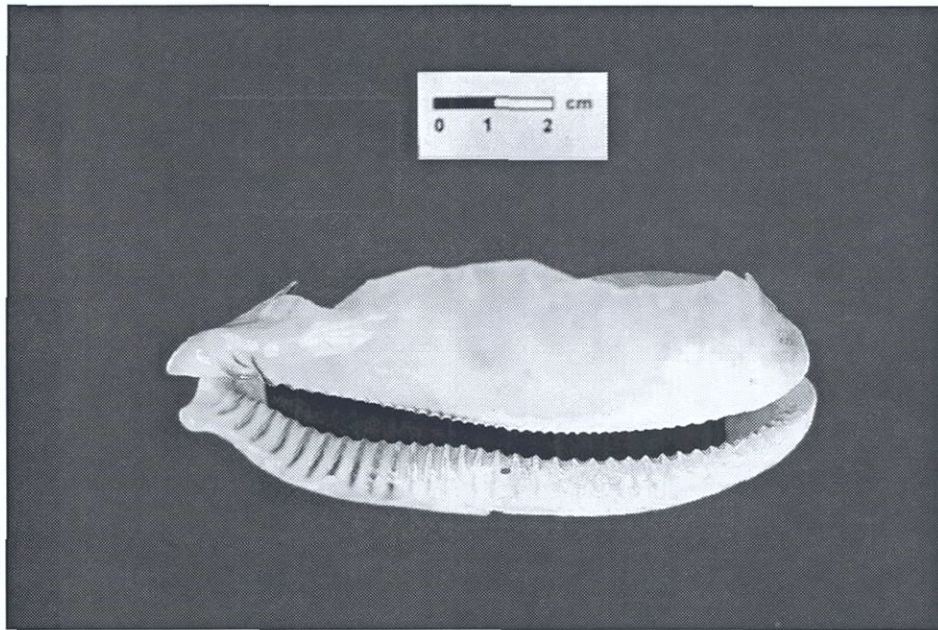


Figure 60. Cowrie shell, Feature O.

Table 101. Faunal Assemblage from Feature AM (AS II)

	NISP	% NISP
Mammal	3,629	85.3
Bird	180	4.2
Fish	444	10.4
TOTAL	4,253	99.9

In examining the composition of the faunal assemblage from Feature AM, the fact that this address, 110 Chatham Street, served as a restaurant or eating house or oyster saloon for the better part of 30 years was considered. Upon preliminary analysis, the assemblage from Feature AM looks very similar to that of Feature J (both AS III and V). Like Feature AM (Table 101), the assemblages from Feature J were also composed of between 72 and 86 percent mammals (Table 89).

The bones of large domestic mammals make up 72 percent of the identified mammal bones from the Feature AM deposit. Cats make up another 17 percent of the identified mammal remains and commensal rodents another 11 percent (Table 102).

Table 102. Identified Mammal Bones from Feature AM (AS II)

	NISP	% NISP
Large Food Mammals	856	72.1
Small Non-Food Mammals	200	16.8
Commensal Rodents	131	11.0
TOTAL	1,187	99.9

Table 103. Mammal Remains from Feature AM (AS II)

	NISP	% NISP
Cattle; <i>Bos taurus</i>	140	3.9
Sheep; <i>Ovis aries</i>	30	0.8
Sheep/Goat; <i>Ovis/Capra</i>	42	1.2
Pig; <i>Sus scrofa</i>	193	5.3
Cat; <i>Felis catus</i>	200	5.5
Rat; <i>Rattus</i> species	78	2.1
Mouse; <i>Mus musculus</i>	10	0.3
Small Artiodactyl	311	8.6
Large Ungulate	140	3.9
Commensal Rodent	43	1.2
Unidentified Mammal	2,442	67.3
TOTAL	3,629	100.1

Meat from Feature AM (AS II)

Pork appears to be the most important meat and it accounts for almost 50 percent of the meat in the Feature AM deposit (Table 104A) and between 52 and 69 percent of the Feature J deposits (Tables 92A and 92B). Fusion data were recorded for a large number of bones attributed to these three species. For the pigs, six of seven radii were not fused at the proximal end, indicating these pigs were slaughtered at under one year. None of the first phalanxes was fused at the proximal end either, agreeing with the estimate of less than one year. With respect to the bones of the sheep, mutton was the less expensive and preferred meat. Four of the five tibiae identified were fused at the proximal end, a fusion that occurs between the third and fourth year of life. Three of four proximal femora were also fused; again this fusion occurs after the third year of life. Less gross fusion data were available for the cattle, mostly present as retail cuts of meat (e.g., steaks and chops), but most were too large and too old to be considered veal.

The Construction of Class, Race, and Ethnicity in an Urban Context

The next level of analysis is the examination of the cuts of meat present in this deposit (Table 104B). Beef and pork dominate the assemblage; however, the MNMC show them to be relatively equal in quantity, unlike the NISP calculations which emphasize the role of pork. The preferred pork cuts were hams from the humerus and femur as well as the less expensive shank hams, while a variety of beef steaks from the loin and arm were enjoyed. The peaks in the retail meat chart (Figure 61) occur with cuts of meat that are considered beefsteaks and ham steaks. The femur and humerus of the cow would be sawn into rounds or "eye" steaks. The same would be done with the picnic ham or femur of the pig. The largest peak or greatest number of individual cuts came from the foreshank of the pig—the radius and ulna combination. These, too, were sawn into round steaks. A smaller peak occurs at leg-of-mutton. Of the seven cuts, six are fragments of the femurs, the seventh is the complete bone. An entire leg was purchased and prepared. There are no roasting marks on the joints, so this may have been stewed or simmered on the stove top. A smaller peak, the first in the chart, indicates the loins of beef consumed. Included in this number are the steaks named for the porter houses at which they were served. Most of these cuts could be quickly prepared in a skillet on the stovetop or under a broiler—there are few roast cuts and even fewer stew meats. Feet and necks, the least expensive cuts, barely peak on the chart.

Table 104A. Species Ratios for Large Domestic Mammals from Feature AM (AS II)

	NISP	% NISP	MNI	% MNI
Cattle	140	34.6	3	20.0
Sheep/Goat	72	17.8	5	33.3
Pig	193	47.7	7	46.7
TOTAL	405	100.1	15	100.0

Table 104B. Species Ratios for Large Domestic Mammals Based on the Minimum Number of Meat Cuts (MNMC) from Feature AM (AS II)

	MNMC	% MNMC
Beef	28.1	42.4
Lamb/Mutton	11.1	16.8
Pork	27.0	40.8
TOTAL	66.2	100.0

Poultry from Feature AM

The remains of birds make up 4 percent of the total NISP of Feature AM (AS II). The identified remains are mostly chicken (Table 105).

Table 105. Bird Remains from Feature AM (AS II)

	AS II NISP	AS II % NISP
Chicken; <i>Gallus gallus</i>	50	27.8
Turkey; <i>Meleagris gallopavo</i>	11	6.1
Duck; <i>Anas</i> species	1	0.6
Unknown Bird	118	65.6
TOTAL	180	100.1

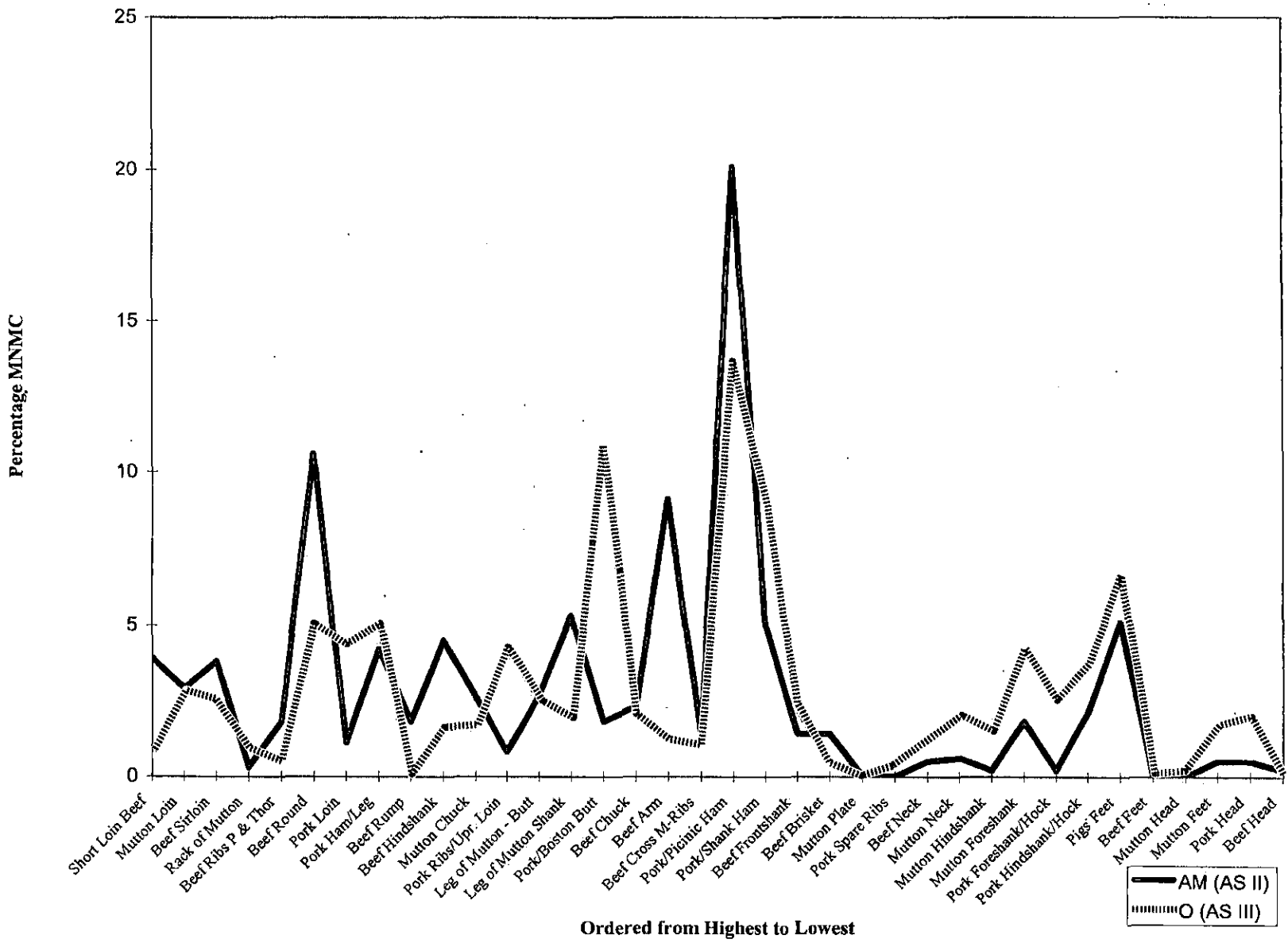


Figure 61. Retail meat cuts from Features AM (AS II) and O (AS III).

Fish from Feature AM (AS II)

There were 16 species of fish recovered from Feature AM (Table 106). This is the only feature at Five Points that contains any quantity of shad (13% of the NISP), and, unlike other contemporary features, contains little codfish or porgy. This may relate to the season in which the feature was filled, as shad would have been most plentiful in local rivers in the late winter; however, by mid-century, both shad and codfish were available salted all year round.

Table 106. Fish Remains from Feature AM (AS II)

	NISP	% NISP	MNI	% MNI
Salmon; Family <i>Salmonidae</i>	1	0.2	1	4.2
Basses; Family <i>Serranidae</i>	21	4.7	1	4.2
Blk. Sea Bass; <i>Centropristis striata</i>	29	6.5	2	8.3
Striped Bass; <i>Morone saxatilis</i>	1	0.2	1	4.2
White Perch; <i>Morone americanus</i>	3	0.7	1	4.2
Mackerel; <i>Scomber scombrus</i>	27	6.1	1	4.2
Blackfish; <i>Tautoga onitis</i>	18	4.1	2	8.3
The Herrings; Family <i>Clupeidae</i> ²	0.5	1	4.2	
Herring; <i>Clupea harengus</i>	5	1.1	1	4.2
Shad; <i>Alosa sapidissima</i>	58	13.1	2	8.3
Porgies; Family <i>Sparidae</i>	31	7.0	3	12.5
Codfish; Family <i>Gadidae</i>	12	2.7	—	—
Atlantic Cod; <i>Gadus morhua</i>	32	7.2	2	8.3
Haddock; <i>Melanogrammus aeglefinus</i>	1	0.2	1	4.2
Pollack; <i>Pollachius virens</i>	1	0.2	1	4.2
Flounders; Family <i>Pleuronectidae</i>	3	0.7	1	4.2
Small Unidentified Fish	82	18.5	3	12.5
Unidentified Fish	117	26.4	—	—
TOTAL	444	100.1	24	100.2

Perhaps these foods were served in an eating house such as Foster (1990) described. Public dining halls came in many forms. The fanciest were expensive and aristocratic. Others served upwards of thirty thousand merchants and businessmen a day. "The fare is generally bad enough.... It is really wonderful how men of refined tastes and pampered habits... find it in their hearts—or stomachs either—to gorge such disgusting masses of stringy meat and tepid vegetables." There is a more diversified set of customers in the lower-class eating houses. "It is not impossible to see, here, Professor Bush dining cheek-by-jowl with a hod-man off duty, nor to find a black leg from Park Row seated opposite."

3.5.8 Conclusions

The interpretation of faunal remains, historical records, and pertinent literature, including ethnic cookbooks, reveals the different dietary strategies pursued in Five Points. For example, pork was one of the most familiar foods available to the Irish in America, but it was also the least expensive. The amounts of fish consumed may be the result of decisions based on economic need, although consumption of fish may also be related to religious beliefs and practices. For many residents of Five Points, economic status closely correlates with ethnic background, and by using multiple lines of evidence the archeologist may begin to understand some of the factors that influenced dietary choice.

Several patterns emerged when the assemblages from Five Points were examined. One of the consistencies in these deposits is the consumption of steaks: ham steaks, beefsteaks, and mutton steaks cut in rounds from the limbs of these mammals. These cuts are quick and easy to prepare, if slightly more expensive. Steaks and chops are cost efficient in the time and energy needed to prepare them. Additionally, in the summer months, a quick stove-top meal was more desirable than roasting or boiling a larger cut of meat. With the exception of the brothel assemblage, most of these deposits lacked any quantity of the most expensive cuts of meat. In the larger deposits (attributed to multiple households [Features J and H]), a wide variety of meats and meat cuts were present, but most were moderate- to lower-priced purchases.

With the exception of Feature AN (associated with German tailors) and Feature B (AS IV), which was associated with the Goldberg household, pork was the favored meat of the residents of Five Points. It was familiar to those who had emigrated from rural Europe; it was inexpensive and readily available. It could be satisfactorily salted or smoked and served cold. The three deposits associated with the Irish (Features J and O) and the two associated with saloons/oyster houses (Features O and AM) yielded more pork bones than the others.

Surveys of working-class diet indicate that fresh meat was eaten at two and sometimes three meals a day (Stott 1990). Although most of the Five Points deposits have a relatively large mammal component (based on the NISP) they also contain relatively large amounts of fish bone, especially when compared with deposits attributed to the middle class in New York City (Milne and Crabtree 1996). Again, this pattern has been observed in other deposits attributed to the laboring class: poultry has a much smaller role than fish (where available) in the diet, and pork is the preferred meat (Branstner and Martin 1987; Henry 1987b). Only in the earlier features, including Widow Hoffman's, did poultry make up more than 10 percent of the deposit NISP. The small amount of poultry has been noted on other sites associated with the laboring class. These include a late-nineteenth-century site in Detroit (Branstner and Martin 1987) and the Boott Mills site in Massachusetts (Landon 1989). Comparison of the NISPs for all three classes, mammal, fish, and bird, from archeological sites in New York City and Brooklyn (e.g., Salwen and Yamin 1990; Geismar 1989, 1992), most of which have been attributed to the artisan or middle classes, show a different pattern, with the remains of birds constituting about a quarter to a third of each assemblage and fish having a smaller role in the diet.

Small amounts of game, including pigeon, mourning dove, rabbit, and squirrel, were present in a number of deposits, but were more prevalent in the assemblages associated with the pre-1850 occupations. Additionally, the earlier deposits are notable for the diversity of local fish present. By contrast, the later deposits (particularly Features AN, H, and O) are dominated by the remains of codfish. Some of the differences seen in these assemblages may be attributed to temporal or ecological changes affecting the availability of certain fish and game species.

With many of the known households and household groups at Five Points there is the difficulty of separating economic status from ethnic traditions. This was a neighborhood in which many migrants to the city (most of them new arrivals from Europe) chose to settle. Some of the poorest members of the working class inhabited the Five Points neighborhood. It is impossible to make the distinction between the Friday-night fish dinner of an Irish or Italian Roman Catholic household and an economical choice in feeding the family. Although there were no truly overwhelming signatures of poverty in the faunal assemblages (the assemblage associated with the Goldberg household is rather spare) and a variety of meat cuts from all three large domestic animals were consumed by most of the Five Points residents, many choices may be viewed as financially practical. Those who shopped and cooked for these workers' households economized in many ways. Meat bones and leftovers were stretched into soups and stocks; some individuals raised their own small livestock, pigs whose meat could be salted and smoked while chickens were valued most for their eggs. Fish, by far the least expensive food available in New York City at this time, was frequently consumed.

3.6 Macroplant Remains from the Five Points Neighborhood, New York City: A Study of Nineteenth-Century Urban Subsistence Patterns (Leslie E. Raymer with contributions by Richard Fuss and Cynthia Rhodes)

3.6.1 Introduction

This archeobotanical analysis focuses upon macroplant remains collected by flotation and directly during excavation of 18 of the cultural features associated with the nineteenth-century occupation of the Five Points neighborhood on the Courthouse Block (Block 160) in New York City. These features range in age from the early to the mid-nineteenth century. During a series of archeological investigations that was conducted within the federal courthouse site, Block 160, between 1991 and 1992, flotation samples were collected from 12 wood- or stone-lined shaft privies (Features AI, AL, O, AD, AF, AK, B, C, D, E, N, AG), 2 cisterns (Features AN, Z), 1 stone-lined icehouse (Feature AM), 1 school sink (Feature A), and a stone-lined cesspool (Feature J). Additionally, a single sample was collected from an oyster-shell layer identified as Feature W, probably the remains of a lime kiln.

Macroplant remains from 19 nineteenth-century components from the 18 features are discussed in this report. Two additional features (Feature H, a privy, and Feature U, a sump associated with the cesspool) also produced macroplant remains, although no flotation samples were taken from those features. Two grape seeds were recovered from Feature H and three peach pits came from Feature U. Additionally, macroplant remains associated with post-occupational fill dating after 1873 from the Feature B privy (AS III) are not presented in the data analysis.

All of the macroplant remains came from similar depositional environments. With the exception of Feature W, all of the macroplant samples were collected from deep, lined features that were sealed shortly after abandonment and subsequently deeply buried by later building episodes. Macroplant remains from each feature are directly comparable due to the similar depositional environment of all of the archeological deposits from which the archeobotanical assemblage derived.

This analysis focuses upon changing patterns of plant use through time and ethnic and class differences in plant use. Of particular interest is a comparison of floral assemblages associated with relatively well-to-do artisans who initially settled Block 160 around 1800 with those associated with immigrant-tenants who replaced the artisans in the second quarter of the nineteenth century. Examination of macroplant remains from features associated with artisan and immigrant-tenant occupations allowed an assessment of changing dietary patterns and uses of outdoor space. It also indicated how increasing population affected the local environment as the nineteenth century progressed. The following key research questions were addressed:

- (1) Did various occupants of the project area utilize plants differently from one another; if so, what forces caused differential plant use (i.e., availability, ethnic preferences, differential access due to differing income levels)?
- (2) How do patterns of plant use change over time?
- (3) Are there differences in diet and other plant use between immigrant tenement dwellers and the relatively more affluent artisans and small-shop owners who initially lived in the neighborhood?
- (4) 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?
- (5) Were plant foods purchased at local markets or produced at home (grown in gardens, canned at home, etc.)?
- (6) Were herbal medicinal remedies used by the Five Points residents?
- (7) What were the effects of increasing population density on plant availability?
- (8) Did different ethnic groups occupying the project area utilize plants differently from one another; if so, are these differences archeologically visible?

3.6.2 Occupational History

The project area was initially occupied from 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 (U.S. Bureau of the Census 1810).

Around 1820, occupation of the project area began to shift from relatively well-off artisans who owned their homes and operated their own businesses to immigrant laborers who rented apartments near their places of employment. As more and more recent immigrants settled 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. By the mid-1840s, these houses were being replaced by multi-story tenements that were densely packed with renters, their families, and boarders who sublet space from the apartment dwellers.

Large-scale immigration from Europe began with industrialization and urbanization in the 1820s and continued until the dawn of the twentieth century. Between the 1820s and 1890s, Block 160 was inhabited by successive waves of European immigrants, including Polish and German Jews, Irish Catholics fleeing the famine caused by the potato blight, Italians, and some of the earliest Chinese immigrants in the United States. Between 1820 and 1860, the population of New York increased from 123,000 to 814,000. During this time, the population of Block 160 increased from 175 individuals in 1810 to 1,334 people in 1855.

The huge influx of people in the second quarter of the nineteenth century profoundly affected the local environment of Block 160. The primary result of this population growth was an intensification of the use of space and a concomitant degradation of living conditions for the inhabitants. The almost eightfold increase in population between 1800 and 1860 caused most of the open spaces in the original owner-occupants' yards to be built upon, paved, or otherwise enclosed. The loss of open space limited the occupants' dietary choices, since they no longer had the option of 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.

The first occupants were moderately well-off artisans who purchased property along Pearl Street at the end of the eighteenth century and established their homes and businesses within Block 160. Six privies, Features AF, C, N, E, D, and B (AS V), are associated with three owner-occupant households that were located at 472 and 474-476 Pearl Street in the first third of the nineteenth century. The 472 Pearl Street property was initially purchased by Hendrick Lott, a carpenter. One of the first occupants was a merchant, William Wilson, and his family. Features C, D, and E, wood-lined privies, were used by the Wilson household between 1800 and 1810. The Feature C privy may also have been used by the Lotts. Issac Cross, a cabinetmaker, purchased the 472 Pearl Street residence around 1812 and moved there with his family and apprentices. The lower deposit of Feature B (AS V), a privy, is associated with the Cross Family. The Crosses also apparently used Feature E. A brick-lined cistern, Feature Z, was also constructed by the Cross family during their occupancy.

The 474-476 Pearl Street lots were purchased by a German baker, Tobias Hoffman, between 1793 and 1802. Tobias and his wife, Margaret, built their home and bakery on these two lots. Tobias died in 1812, but his widow occupied the residence until her death in 1836. Widow Hoffman continued to operate the bakery at 476 Pearl Street and also supplemented her income by taking in boarders. Feature AF, a wood-lined privy, is associated with the initial Hoffman occupancy of 474 Pearl Street. Feature N, another wood-lined privy, was constructed about the time of Tobias's death and was in use until ca. 1830.

Two other privies, Features AD and AK, are associated with the initial artisan occupation of Block 160. Feature AD, located on Lot 5, was in use around 1800. Feature AK is a stone-lined privy that is associated with the households of John Baitsel, a baker, and Paul Durango, a merchant tailor. This feature was open and in use in the 1820s.

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. Macroplant remains from two privies, Features B and AG, which date to the 1830s and early 1840s, reflect the complexity of the neighborhood. 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. The upper deposit of Feature B (AS IV), a stone-lined privy, is associated with the household of Harris Goldberg, a German-Jewish tailor and rabbi who rented the 472 Pearl Street residence from Issac Cross in the late 1830s and early 1840s. The Goldberg household, which consisted of five adult men and two women in 1830, kept a kosher home, which was fairly common among Jews in early New York.

Feature AN, a brick-lined cistern, was also utilized by a German-Jewish immigrant and his family. This feature, located at 22 Orange/Baxter Street, was open and in use between 1854 and 1860. Samuel Stone, a tailor who owned his own secondhand clothing shop, rented the property in the 1850s. Unlike the Goldberg family, the Stones do not appear to have maintained a kosher household.

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. A stone-lined cesspool, Feature J, and an overflow sump, Feature U, are associated with an integrated septic system servicing a multifamily Irish tenement that was constructed at 472 Pearl Street about 1848 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 the five-story brick tenement at 472 Pearl Street. Feature U served as an overflow sump for the cesspool. A second tenement was added to the back lot of the 472 Pearl Street property in the 1860s. Feature A, a school sink (multiseat privy with running water to wash waste into the sump), was constructed in the 1860s by the new owner, William Clinton. The school sink drained into the old Feature Z cistern, which Clinton converted into a cesspool.

Feature AM, a stone-lined icehouse, served as a storage facility for Conlon's Eating House, a working-class restaurant and saloon that was located at the corner of Chatham and Pearl Streets from ca. 1840 to 1857. Feature O, a stone-lined privy, served an immigrant working-class tavern (Lysaigh's) and tenement that was located at 474 Pearl Street in the 1860s. Two privies, Features AI and AL, were used by immigrant laborers who occupied apartments located in a multifamily dwelling located at 4 Orange/Baxter Streets in the 1850s and 1860s.

3.6.3 Analysis Procedures

Macroplant remains collected by flotation and directly during excavation from 18 early- to late-nineteenth-century features are presented in this report. The flotation samples were processed by William Sandy in a Shell Mound Archeobotanical Project flotation device. The volume of each flotation sample was approximately three liters. No recovery controls were added to the samples.

In the laboratory, each flotation light fraction was weighed and 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. Ten heavy fractions were sorted to verify the flotation separation, which seems to have been adequate.

The analytical procedure of species ubiquity was employed to study the macroplant 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. Species ubiquity was calculated for the macroplant assemblage as a whole (Figure 62) and for all artisan-class and tenement-dweller features (Figure 63). Macroplant remains associated with the brothel (Feature AG) and the two Jewish features (Features B and AN) are considered separately from the other feature contexts.

Seeds and other plant parts were identified with standard reference texts (Martin and Barkley 1970; USDA 1974; Montgomery 1977) and a modern reference collection. The floral remains identified during this analysis and the potential uses of these plants are presented in Table 107. The plant remains recovered by flotation and excavation screening are tabulated in Tables 108 and 109A–C. The ubiquity and overall abundance of the macroplant remains associated with each occupation (i.e., artisan and tenement) are presented in Table 110. Macroplant remains are broken out by stratum for Features B (Table 111) and J (Table 112). Since the macroplant assemblages found in each stratum of Feature J were more similar than different, all macroplant remains from this large cesspool were lumped by overall feature for this discussion. The three occupational strata delineated within the Feature B privy are presented separately in this report, since each stratum clearly derives from different cultural (Feature B, AS IV and V) or post-occupational (AS I to III) zones.

With the exception of the Feature B privy, which contained distinct strata associated with two occupants' use of this facility, all plant remains from each privy are summarized by individual feature. The lower deposit of Feature B (AS V), associated with Isaac Cross, an artisan-class cabinetmaker, is considered separately from the upper deposit (AS IV), which is associated with the household of Harris Goldberg, a German-Jewish tailor and rabbi.

3.6.4 Analysis and Interpretation

3.6.4.1 Overall Recovery

The recovery of macroplant remains from the Five Points privies was excellent: 212,453 charred and uncharred seeds and other reproductive structures (nutshell, coconut husk, maize cob fragments) were found in the flotation and excavation samples (Tables 109 and 110). The macroplant assemblage is diverse as well as abundant. Sixty-five categories of specifically identified seeds were cataloged during this analysis, including 37 economically important food plants (4 exotics, 4 condiments, 10 vegetables, 16 fruits, 2 nuts, 1 ornamental—bottle gourd), 17 possible economically important plants (3 possible ornamental—boneset, starthistle, sycamore, 12 edible herbaceous plants, 2 possible medicinal herbs), and 11 varieties of probable yard weeds (Table 107). Twenty-six charred and uncharred seeds could not be specifically identified and were identified to family (Composite, Nightshade, and Rose Families) or more general categories of carbonized berry, carbonized grain, or uncharred stem.

All of the identified seeds, both charred and uncharred, are analyzed in this study. The carbonized seeds are considered to be unquestionably associated with the archeological deposits. However, the origin of the uncharred seeds is more problematic. Uncharred seeds are frequently excluded from macroplant analyses because they are interpreted as modern intrusions into archeological deposits (Minnis 1981; Lopinot and Brussell 1982; Miller 1989). 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 Block 160 was occupied in the recent past, the likelihood of recovering uncharred seeds from the archeological deposits is greatly increased. Extensive studies of macroplant assemblages from 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 (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; Raymer et al. 1997). With this in mind, the origins and antiquity of each plant taxon are carefully assessed.

Over 99 percent of the seed assemblage from Five Points contexts is uncharred. Huge quantities of uncharred seeds were found in 18 features, which consist of a buried pre-occupational surface, 12 wood- or stone-lined shaft privies, 2 cisterns, 1 stone-lined icehouse, 1 school sink, and 1 stone-lined cesspool. All of the features were sealed shortly after abandonment and subsequently deeply buried by later building episodes. 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 chances of the post-depositional intrusion of modern seeds into the archeological deposit.

Privies provide excellent microenvironments for the long-term preservation of uncharred seeds. Most of the privies were brick or wood lined, which would have reduced the chances of post-depositional disturbance by rodents and tree roots. The depth of these shaft features, coupled with the thick layer of overlying fill, 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 post-depositional bioturbation, have shown that the majority of modern seeds are found in the upper 50 cm of a given soil column. Most of the Block 160 privies were covered by far more than 50 cm of fill. The evidence suggests that the entire uncharred seed assemblage, particularly those seeds associated with the privies, dates to the time of the site's occupation and use. All of the feature material originated from sealed, undisturbed contexts that were deeply buried beneath the modern land surface.

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, mulberry, serviceberry, strawberry, cucurbit, eggplant, squash/pumpkin, and tomato seeds were ingested and later expelled by the site inhabitants. Indeed, blackberry/raspberry, blueberry, elderberry, fig, mulberry, and strawberry seeds are virtually ubiquitous in nineteenth-century privies (O'Steen and Raymer 1995).

Finally, many of the uncharred plant taxa derive from plants with durable seeds that often survive for many years (blackberry/raspberry, brazil nut, coconut husk, cherry, elderberry, plum, peach, strawberry, watermelon, bottle gourd, pokeweed, smartweed, jimsonweed) in buried contexts. Six taxa, including pokeweed, blackberry/raspberry, cherry, plum, elderberry, and jimsonweed, are virtually ubiquitous in historic macroplant assemblages. Other uncharred taxa, including the condiments, vegetables, ornamentals, and many herbaceous plants, have more fragile seeds that are less likely to be preserved for long periods in open settings. However, given the exceptional preservational environment of the Five Points features and the overwhelming abundance of definite archeological seeds (see Table 110), all of the macroplant remains are interpreted as archeological seeds that were either directly deposited within the features in fecal waste or secondarily deposited as kitchen waste and perhaps as windborn natural seed rain.

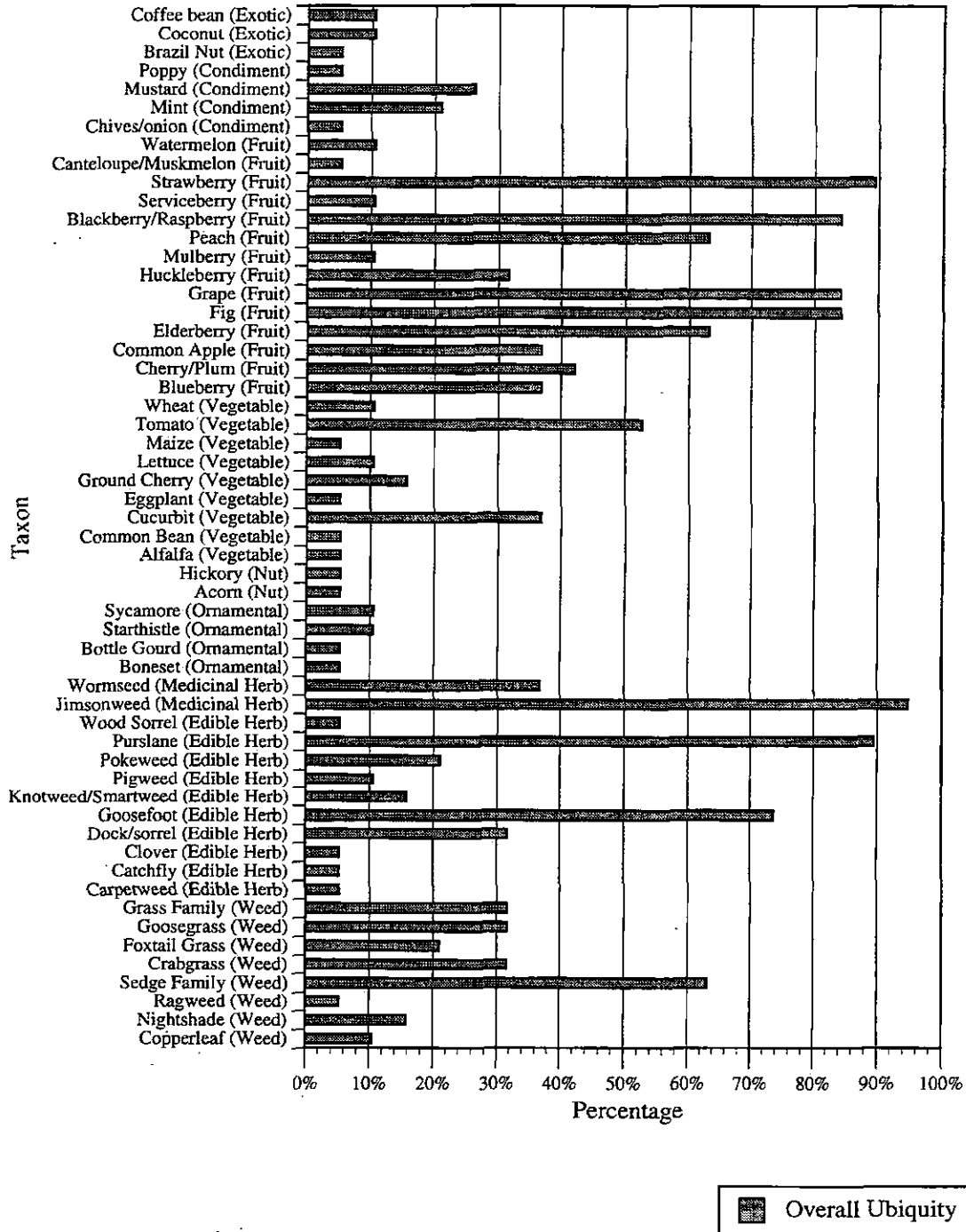


Figure 62. Overall ubiquity of macroplant remains.

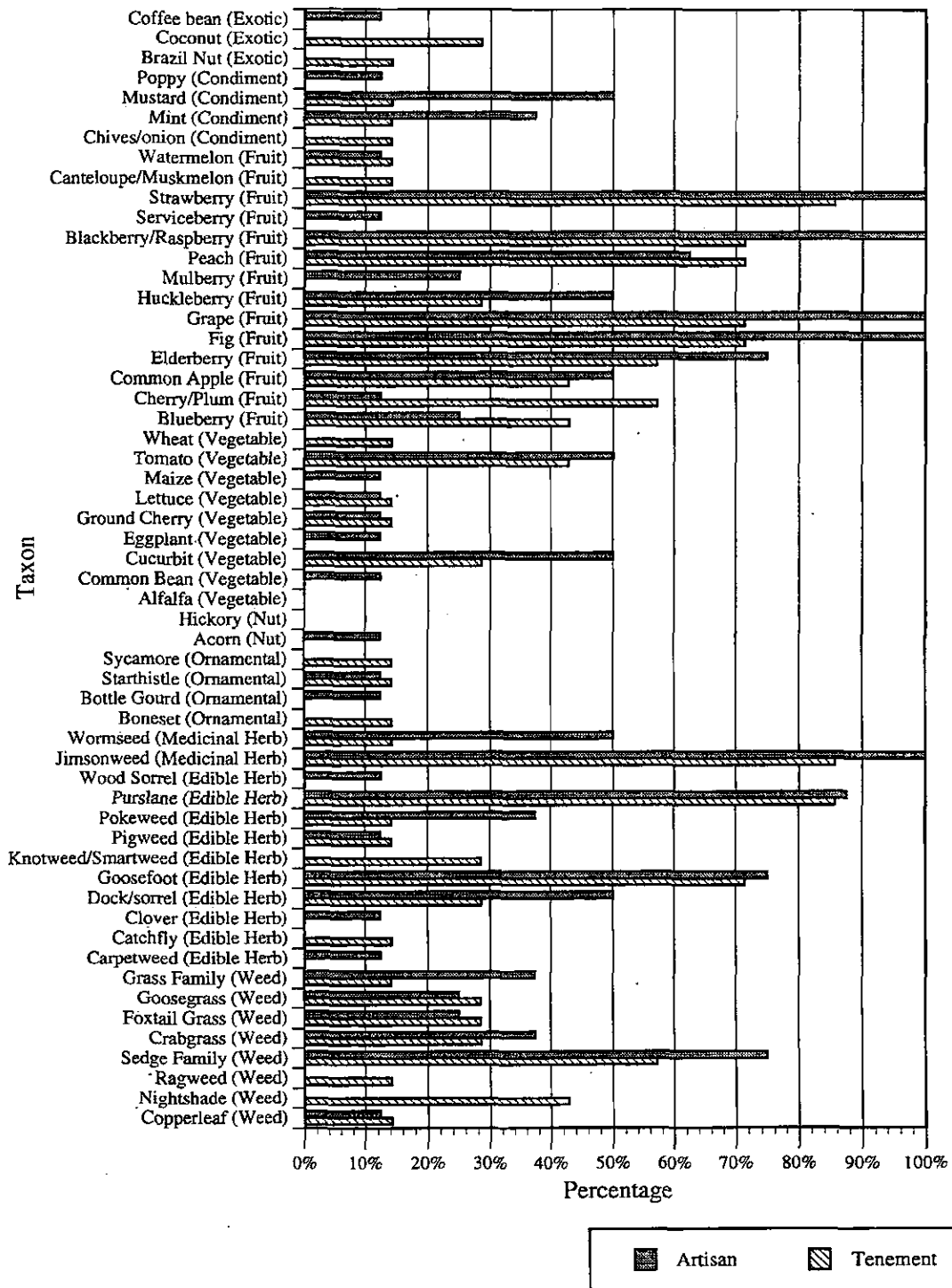


Figure 63. Ubiquity of macroplant remains from tenement and artisan contexts.

Table 107. Common Names, Latin Nomenclature, and Economic Uses of Five Points Macroplant Assemblage.

Classification	Common Name	Scientific Name	Family	Vegetable Type	Major Use	Edible	Edible Part	Medicinal	Ornamental	Poison	Weed	Major Use	Habitat	Season of Availability
Exotic	Brazil Nut	<i>Bertholletia excelsa</i>	Lecythidaceae	Tree	Nut	X	Nutmeat					Exotic	Imported Cultigen	
Exotic	Coconut	<i>Cocos nucifera</i>	Palmaceae	Tree	Vegetable	X	Nut					Exotic	Imported Cultigen	
Exotic	Coffee Bean	<i>Coffea arabica</i>	Rubiaceae	Shrub	Beverage	X	Bean	X				Exotic	Imported Cultigen	
Exotic	Peanut shell	<i>Arachis hypogaea</i>	Fabaceae	Domesticated	Vegetable	X	Seed	X				Exotic	Imported Cultigen	July-October
Condiment	Chives/Onion	<i>Allium sp.</i>	Liliaceae	Perennial herb	Condiment	X	Bulb	X				Condiment	Woods and wooded slopes	July-August
Condiment	Mint	<i>Mentha sp.</i>	Labiatae	Perennial herb	Condiment	X	Leaves	X	X			Condiment	Moist pastures, field margins	July-September
Condiment	Mustard	<i>Brassica sp.</i>	Cruciferae	Annual/perennial herb	Condiment	X	Greens, Seeds	X			X	Condiment	Cultigen; disturbed habitats	April-July
Condiment	Poppy	<i>Papaver sp.</i>	Papaveraceae	Annual/perennial herb	Ornamental	X	Seeds	X	X			Condiment	Cultigen; rare escape	May-June
Fruit	Blackberry/ Raspberry	<i>Rubus sp.</i>	Rosaceae	Shrub	Fruit	X	Fruit	X			X	Fruit	Cultigen, fence rows, thickets	June-July
Fruit	Blueberry	<i>Vaccinium sp.</i>	Ericaceae	Shrub	Fruit	X	Fruit	X	X			Fruit	Woods, clearings	June-September
Fruit	Cantaloupe/ Muskmelon	<i>Cucumis sp.</i>	Cucurbitaceae	Domesticated	Fruit	X	Fruit	X				Fruit	Cultigen	June-frost
Fruit	Cherry	<i>Prunus sp.</i>	Rosaceae	Small tree	Fruit	X	Fruit	X	X			Fruit	Cultigen; frequently escaped	June-August
Fruit	Cherry/Plum	<i>Prunus sp.</i>	Rosaceae	Small tree	Fruit	X	Fruit	X	X			Fruit	Cultigen	
Fruit	Common Apple	<i>Malus pumila</i>	Rosaceae	Small tree	Fruit	X	Fruit	X	X			Fruit	Cultigen, old orchards	July-October
Fruit	Elderberry	<i>Sambucus canadensis</i>	Caprifoliaceae	Shrub	Fruit	X	Fruit	X	X			Fruit	Moist soil, meadows	July-August
Fruit	Fig	<i>Ficus sp.</i>	Moraceae	Shrub	Fruit	X	Fruit	X				Fruit	Cultigen	July-October
Fruit	Grape	<i>Vitis sp.</i>	Vitaceae	Vine	Fruit	X	Fruit	X				Fruit	Cultigen; low woods, streams	August-October
Fruit	Huckleberry	<i>Gaylussacia sp.</i>	Ericaceae	Shrub	Fruit	X	Fruit	X				Fruit	Woods, clearings	July-September
Fruit	Mulberry	<i>Morus rubra</i>	Moraceae	Small tree	Fruit	X	Fruit	X	X			Fruit	Alluvial woods, clearings	May-June
Fruit	Peach	<i>Prunus persica</i>	Rosaceae	Small tree	Fruit	X	Fruit	X				Fruit	Cultigen; frequently escaped	June-July
Fruit	Plum	<i>Prunus sp.</i>	Rosaceae	Small tree	Fruit	X	Fruit	X	X			Fruit	Cultigen; woodland borders	July-August
Fruit	Serviceberry	<i>Amelanchier sp.</i>	Rosaceae	Shrub, Small tree	Fruit	X	Fruit	X	X			Fruit	Moist woods, all soil types	March-June
Fruit	Strawberry	<i>Fragaria sp.</i>	Rosaceae	Herb	Fruit	X	Fruit	X				Fruit	Cultigen, old fields	April-June
Fruit	Watermelon	<i>Citrullus vulgaris</i>	Cucurbitaceae	Domesticated	Fruit	X	Fruit	X				Fruit	Cultigen	June-frost
Vegetable	Alfalfa	<i>Medicago sativa</i>	Fabaceae	Domesticated	Vegetable	X	Bean					Vegetable	Cultigen; widely escaped	June-August
Vegetable	Common Bean	<i>Phaseolus vulgaris</i>	Fabaceae	Domesticated	Vegetable	X	Bean					Vegetable	Cultigen	Summer-Fall
Vegetable	Cucurbit	<i>Cucurbitaceae</i>	Cucurbitaceae	Domesticated	Vegetable	X	Fruit					Vegetable	Cultigen	Summer-Fall
Vegetable	Eggplant	<i>Solanum melongena esculentum</i>	Solanaceae	Cultigen	Vegetable	X	Fruit					Vegetable	Cultigen	Summer-Fall
Vegetable	Ground Cherry	<i>Physalis sp.</i>	Solanaceae	Domesticated	Vegetable	X	Fruit	X			X	Vegetable	Fields and open woodlands	May-September
Vegetable	Lettuce	<i>Lactuca sativa</i>	Compositae	Domesticated	Vegetable	X	Greens	X				Vegetable	Cultigen	Summer-Fall
Vegetable	Squash/ Pumpkin Seed	<i>Cucurbita sp.</i>	Cucurbitaceae	Domesticated	Vegetable	X	Fruit	X				Vegetable	Cultigen	June-frost
Vegetable	Tomato	<i>Lycopersicon esculentum</i>	Solanaceae	Domesticated	Vegetable	X	Fruit					Vegetable	Cultigen, volunteers on sewage sludge	June-frost
Vegetable	Wheat	<i>Triticum aestivum</i>	Gramineae	Domesticated	Vegetable	X	Grain					Vegetable	Cultigen	May-June
Vegetable	Maize	<i>Zea mays</i>	Gramineae	Domesticated	Vegetable	X	Seeds	X				Vegetable	Cultigen	June-October
Nut	Acorn Shell	<i>Quercus sp.</i>	Fagaceae	Tree	Nut	X	Nutmeat	X	X			Nut	Rich woods	September-Nov.
Nut	Hickory Shell	<i>Carya sp.</i>	Juglandaceae	Tree	Nut	X	Nutmeat	X	X			Nut	Uplands, bottomlands	October
Edible Herb	Carpetweed	<i>Mollugo verticillata</i>	Aizoaceae	Annual herb	Edible Herb	X	Greens	X			X	Edible Herb	Waste places, introduced	May-frost
Edible Herb	Catchfly	<i>Silene sp.</i>	Caryophyllaceae	Annual herb	Edible Herb	X	Leaves, shoots	X			X	Edible Herb	Waste places	May-September
Edible Herb	Clover	<i>Trifolium sp.</i>	Fabaceae	Perennial herb	Edible Herb	X	Leaf, flower, seed	X				Edible Herb	Waste places	April-August

Edible Herb	Dock	<i>Rumex sp.</i>	Polygonaceae	Annual/perennial herb	Edible Herb	X	Greens	X			X	Edible Herb	Fields, waste places	Late summer-autumn
Edible Herb	Goosefoot	<i>Chenopodium sp.</i>	Chenopodiaceae	Annual herb	Edible Herb	X	Greens, seeds	X			X	Edible Herb	Disturbed soil, waste places	June-frost
Edible Herb	Knotweed	<i>Polygonum sp.</i>	Polygonaceae	Annual/perennial herb	Edible Herb	X	Greens, seeds	X	X		X	Edible Herb	Fields, waste places	June-frost
Edible Herb	Pennsylvania Smartweed	<i>Polygonum pennsylvanicum</i>	Polygonaceae	Annual herb	Edible Herb	X	Greens, seeds	X			X	Edible Herb	Fields, waste places	July-frost
Edible Herb	Pigweed	<i>Amaranthus sp.</i>	Amaranthaceae	Annual herb	Edible Herb	X	Greens, Seeds	X	X		X	Edible Herb	Fields, pastures, waste places	June-frost
Edible Herb	Pokeweed	<i>Phytolacca americana</i>	Phytolaccaceae	Perennial herb	Edible Herb	X	Greens	X		X	X	Edible Herb	Fields, waste places	May-frost
Edible Herb	Purslane	<i>Portulaca oleracea</i>	Portulacaceae	Annual herb	Edible Herb	X	Greens, Seeds	X			X	Edible Herb	Waste places, introduced	May-October
Edible Herb	Wild Buckwheat	<i>Polygonum convolvulus</i>	Polygonaceae	Annual herb	Edible Herb	X	Greens					Edible Herb	Fields, waste places	May-September
Edible Herb	Wood Sorrel	<i>Oxalis stricta</i>	Oxalidaceae	Perennial herb	Edible Herb	X	Greens	X	X		X	Edible Herb	Fields, waste places	May-October
Medicinal	Jimsonweed	<i>Datura stramonium</i>	Solanaceae	Annual herb	Weed			X	X	X	X	Weed	Waste places, introduced	July-October
Medicinal	Wormseed	<i>Chenopodium ambrosioides</i>	Chenopodiaceae	Annual herb		X	Seeds, leaves	X			X	Medicinal	Waste places, fields	Summer-fall
Ornamental	Boneset	<i>Eupatorium sp.</i>	Compositae	Annual/perennial herb				X	X			Ornamental	Meadows, woods, marshes	July-October
Ornamental	Bottle Gourd Seed	<i>Lagenaria sp.</i>	Cucurbitaceae	Domesticated	Container							Container	Cultigen; rare escape	August-frost
Ornamental	Starthistle	<i>Centaurea sp.</i>	Compositae	Annual/perennial herb	Ornamental			X	X		X	Ornamental	Fields and waste places	April to June
Ornamental	Sycamore	<i>Platanus occidentalis</i>	Platanaceae	Tree	Ornamental				X			Ornamental	Low woods	October
Weed	Bulrush	<i>Scirpus sp.</i>	Cyperaceae	Annual/perennial herb	Weed						X	Weed	Ditches, marshes	July-September
Weed	Copperleaf	<i>Acalypha virginica</i>	Euphorbiaceae	Annual herb	Weed						X	Weed	Waste places	June-frost
Weed	Flatsedge	<i>Cyperus sp.</i>	Cyperaceae	Annual/perennial herb	Weed						X	Weed	Waste places, ditches	July-October
Weed	Nightshade	<i>Solanum sp.</i>	Solanaceae	Weed				X			X	Weed	Waste places, fields, roadsides	June-October
Weed	Ragweed	<i>Ambrosia sp.</i>	Compositae	Annual/perennial herb	Weed			X			X	Weed	Fields, waste places	July-frost
Weed	Sedge	<i>Carex sp.</i>	Cyperaceae	Perennial herb								Weed	Waste places, dry woods	May-June
Weed	Sedge Family	Cyperaceae	Cyperaceae	Perennial herb	Weed						X	Weed	Waste places	Summer-Fall
Weed-Grass	Crabgrass	<i>Digitaria sp.</i>	Gramineae	Grass	Grass						X	Weed-Grass	Waste places; fields; lawns	July-October
Weed-Grass	Foxtail Grass	<i>Setaria sp.</i>	Gramineae	Grass	Grass						X	Weed-Grass	Waste places, fields	June-October
Weed-Grass	Goosegrass	<i>Elysiue indica</i>	Gramineae	Grass	Grass						X	Weed-Grass	Waste places	June-October
Weed-Grass	Grass Family	Gramineae	Gramineae	Grass	Grass							Weed-Grass		
Unknown-Other	Carbonized Berry											Unknown-Other		
Unknown-Other	Carbonized Grain			Domesticated	Vegetable	X	Grain					Unknown-Other		
Unknown-Other	Composite Family	Compositae	Compositae		Other							Unknown-Other		
Unknown-Other	Nightshade Family	Solanaceae	Solanaceae		Weed							Unknown-Other		
Unknown-Other	Rose Family		Rosaceae									Unknown-Other		
Unknown-Other	Uncharred Stem											Unknown-Other		

Table 108. Macroplant Remains from Postoccupation Fill and Unfloated Feature Contexts

Major Use	Common Name	Vegetative Type	Edible	Edible Part	Medicinal	Feature B Stone-lined Privy 472 Pearl Post-1873 Post-occupation Fill AS III	Feature H Stone-lined Privy 14 Baxter Street 1860s-1880s Germans and Italians AS IV	Feature U Stone-lined Sump 472 Pearl Street 1850s Irish Tenement AS V	Toxo Totals
Condiment	Chives/onion	Perennial herb	X	Bulb	X				0
Condiment	Mint	Perennial herb	X	Leaves	X				0
Condiment	Mustard	Annual/perennial herb	X	Greens, seeds	X				0
Condiment	Poppy	Annual/perennial herb	X	Seeds	X				0
Edible Herb	Carpetweed	Annual herb	X	Greens	X				0
Edible Herb	Catchfly	Annual herb	X	Leaves, shoots	X				0
Edible Herb	Clover	Perennial herb	X	Leaf, flower, seed	X				0
Edible Herb	Dock/sorrel	Annual/perennial herb	X	Greens	X				0
Edible Herb	Goosefoot	Annual herb	X	Greens, seeds	X	5			5
Edible Herb	Knotweed	Annual/perennial herb	X	Greens, seeds	X				0
Edible Herb	Pigweed	Annual herb	X	Greens, seeds	X				0
Edible Herb	Pokeweed	Perennial herb	X	Greens	X				0
Edible Herb	Purslane	Annual herb	X	Greens, seeds	X	31			31
Edible Herb	Smartweed	Annual herb	X	Greens, seeds	X				0
Edible Herb	Wild Buckwheat	Annual herb	X	Greens					0
Edible Herb	Wood Sorrel	Perennial herb	X	Greens	X				0
Exotic	Brazil Nut	Tree	X	Nutmeat					0
Exotic	Coconut	Tree	X	Nut					0
Exotic	Coffee bean	Shrub	X	Bean	X				0
Exotic	Peanut shell	Domesticated	X	Seed	X				0
Fruit	Blueberry	Shrub	X	Fruit	X	1			1
Fruit	Cherry	Small tree	X	Fruit	X				0
Fruit	Cherry/Plum	Small tree	X	Fruit	X				0
Fruit	Common Apple	Small tree	X	Fruit	X				0
Fruit	Elderberry	Shrub	X	Fruit	X	2			2
Fruit	Fig	Shrub	X	Fruit	X	337			337
Fruit	Grape	Vine	X	Fruit	X	43	2		45
Fruit	Huckleberry	Shrub	X	Fruit	X				0
Fruit	Mulberry	Small tree	X	Fruit	X				0
Fruit	Peach	Small tree	X	Fruit	X	3		3	6
Fruit	Plum	Small tree	X	Fruit	X				0
Fruit	Blackberry/Raspberry	Shrub	X	Fruit	X	970			970
Fruit	Serviceberry	Shrub, Small tree	X	Fruit	X				0
Fruit	Strawberry	Herb	X	Fruit	X	160			160
Fruit	Cantaloupe/Muskmelon	Domesticated	X	Fruit	X				0
Fruit	Watermelon	Domesticated	X	Fruit	X				0
Medicinal	Jimsonweed	Annual herb			X	10			10
Medicinal	Wormseed	Annual herb	X	Seeds, leaves	X				0

Nut	Acorn Shell	Tree	X	Nutmeal	X				0
Nut	Hickory Shell	Tree	X	Nutmeal	X				0
Ornamental	Boneset	Annual/perennial herb			X				0
Ornamental	Bottle Gourd seed	Domesticated							0
Ornamental	Starthistle	Annual/perennial herb			X				0
Ornamental	Sycamore	Tree							0
Other	Carbonized Berry								0
Other	Carbonized Grain	Domesticated	X	Grain					0
Other	Composite Family								0
Other	Nightshade Family								0
Other	Rose Family								0
Other	Uncharred Stem								0
Vegetable	Alfalfa	Domesticated	X	Bean					0
Vegetable	Common Bean	Domesticated	X	Bean					0
Vegetable	Cucurbit	Domesticated	X	Fruit					0
Vegetable	Eggplant	Cultigen	X	Fruit					0
Vegetable	Ground Cherry	Domesticated	X	Fruit	X				0
Vegetable	Lettuce	Domesticated	X	Greens	X				0
Vegetable	Maize	Domesticated	X	Seeds	X				0
Vegetable	Squash/Pumpkin seed	Domesticated	X	Fruit	X				0
Vegetable	Tomato	Domesticated	X	Fruit		27			27
Vegetable	Wheat	Domesticated	X	Grain					0
Weed	Bulrush	Annual/perennial herb							0
Weed	Copperleaf	Annual herb							0
Weed	Flatsedge	Annual/perennial herb				2			2
Weed	Nightshade	Annual/perennial herb			X				0
Weed	Ragweed	Annual/perennial herb			X				0
Weed	Sedge	Perennial herb							0
Weed	Sedge Family	Perennial herb				2			2
Weed-Grass	Crabgrass	Grass							0
Weed-Grass	Foxtail Grass	Grass							0
Weed-Grass	Goosegrass	Grass							0
Weed-Grass	Grass Family	Grass							0
	Total					1593	2	3	1598

Table 109A. Macroplant Remains Found in Tenement Contexts.

Major Use	Common Name	Scientific Name	Family	Vegetative Type	Edible	Edible Part	Medicinal	Feature A School Sink 472 Pearl St 1886 Irish/Italian Tenement AS I	Feature AI Stone-lined Privy 4 Orange/Boxer 1850s Irish/Italian Multiple Families Tenement AS III	Feature AL Cobble-lined Privy 4 Orange/Boxer 1850s Irish Multiple Families. Tenement AS II	Feature AM Stone-lined Icehouse 10 Chatham/464 Pear 1850s Irish-Canadian Restaurant/Saloon Commercial Stratum II	Feature J Stone-lined Cesspool 472 Pearl St 1840s-1860s Irish 30+ Households Tenement AS II-V	Feature O Stone-lined Privy 474 Pearl St 1860s Irish-Lysaigh's Tavern & Tenement Commercial/Tenement AS III	Feature Z Brick-lined Cistern 472 Pearl St 1860s Irish/Italian Tenements AS II
Condiment	Chives/onion	<i>Allium sp.</i>	Liliaceae	Perennial herb	X	Bulb	X				2			
Condiment	Mint	<i>Mentha sp.</i>	Labiatae	Perennial herb	X	Leaves	X					1		
Condiment	Mustard	<i>Brassica sp.</i>	Cruciferae	Annual/perennial herb	X	Greens, seeds	X				2			
Condiment	Poppy	<i>Papaver sp.</i>	Papaveraceae	Annual/perennial herb	X	Seeds	X							
Edible Herb	Carpetweed	<i>Mollugo verticillata</i>	Aizoaceae	Annual herb	X	Greens	X							
Edible Herb	Catchfly	<i>Silene sp.</i>	Caryophyllaceae	Annual herb	X	Leaves, shoots	X					1		
Edible Herb	Clover	<i>Trifolium sp.</i>	Fabaceae	Perennial herb	X	Leaf, flower, seed	X							
Edible Herb	Dock/sorrel	<i>Rumex sp.</i>	Polygonaceae	Annual/perennial herb	X	Greens	X	6				1		
Edible Herb	Goosefoot	<i>Chenopodium sp.</i>	Chenopodiaceae	Annual herb	X	Greens, seeds	X	3			18	8	20	6
Edible Herb	Knotweed	<i>Polygonum sp.</i>	Polygonaceae	Annual/perennial herb	X	Greens, seeds	X	28						
Edible Herb	Pigweed	<i>Amaranthus sp.</i>	Amaranthaceae	Annual herb	X	Greens, seeds	X					4		
Edible Herb	Pokeweed	<i>Phytolacca americana</i>	Phytolaccaceae	Perennial herb	X	Greens	X					5		
Edible Herb	Purslane	<i>Portulaca oleracea</i>	Portulacaceae	Annual herb	X	Greens, seeds	X	5	14		19	108	16	4
Edible Herb	Smartweed	<i>Polygonum pennsylvanicum</i>	Polygonaceae	Annual herb	X	Greens, seeds	X	2				3		
Edible Herb	Wild Buckwheat	<i>Polygonum convolvulus</i>	Polygonaceae	Annual herb	X	Greens	X	4						
Edible Herb	Wood Sorrel	<i>Oxalis stricta</i>	Oxalidaceae	Perennial herb	X	Greens	X							
Exotic	Brazil Nut	<i>Bertholletia excelsa</i>	Lecythidaceae	Tree	X	Nutmeat						2		
Exotic	Cocunut	<i>Cocos nucifera</i>	Palmaceae	Tree	X	Nut						7		2
Exotic	Coffee bean	<i>Coffea arabica</i>	Rubiaceae	Shrub	X	Bean	X							
Exotic	Peanut shell	<i>Arachis hypogaea</i>	Fabaceae	Domesticated	X	Seed	X					17		10
Fruit	Blueberry	<i>Vaccinium sp.</i>	Ericaceae	Shrub	X	Fruit	X				75	79	4	
Fruit	Cherry	<i>Prunus sp.</i>	Rosaceae	Small tree	X	Fruit	X				8	87		1
Fruit	Cherry/Plum	<i>Prunus sp.</i>	Rosaceae	Small tree	X	Fruit	X			1		2		
Fruit	Common Apple	<i>Malus pumila</i>	Rosaceae	Small tree	X	Fruit	X				2	2		1
Fruit	Elderberry	<i>Sambucus canadensis</i>	Caprifoliaceae	Shrub	X	Fruit	X				26	15	12	1
Fruit	Fig	<i>Ficus sp.</i>	Moraceae	Shrub	X	Fruit	X		1	41	10507	2879	1592	
Fruit	Grape	<i>Vitis sp.</i>	Vitaceae	Vine	X	Fruit	X		1	241	1363	455	4	
Fruit	Huckleberry	<i>Gaylussacia sp.</i>	Ericaceae	Shrub	X	Fruit	X				2	14		
Fruit	Mulberry	<i>Morus rubra</i>	Moraceae	Small tree	X	Fruit	X							
Fruit	Peach	<i>Prunus persica</i>	Rosaceae	Small tree	X	Fruit	X	2		53	1	524		2
Fruit	Plum	<i>Prunus sp.</i>	Rosaceae	Small tree	X	Fruit	X				2	34		5
Fruit	Blackberry/ Raspberry	<i>Rubus sp.</i>	Rosaceae	Shrub	X	Fruit	X		12	205	3724	2269	1460	
Fruit	Serviceberry	<i>Amelanchier sp.</i>	Rosaceae	Shrub, small tree	X	Fruit	X							
Fruit	Strawberry	<i>Frageria sp.</i>	Rosaceae	Herb	X	Fruit	X	3	3		198	2585	104	3
Fruit	Cantaloupe/ Muskmelon	<i>Cucumis sp.</i>	Cucurbitaceae	Domesticated	X	Fruit	X					1		

Fruit	Watermelon	<i>Citrullus vulgaris</i>	Cucurbitaceae	Domesticated	X	Fruit	X					6		
Medicinal	Jimsonweed	<i>Datura stramonium</i>	Solanaceae	Annual herb			X	2	4		8	15	8	1
Medicinal	Wormseed	<i>Chenopodium ambrosoides</i>	Chenopodiaceae	Annual herb	X	Seeds, leaves	X							
Nut	Acorn Shell	<i>Quercus sp.</i>	Fagaceae	Tree	X	Nutmeat	X							
Nut	Hickory Shell	<i>Carya sp.</i>	Juglandaceae	Tree	X	Nutmeat	X							
Ornamental	Boneset	<i>Eupatorium sp.</i>	Compositae	Annual/perennial herb			X				3			
Ornamental	Bottle Gourd seed	<i>Lagenaria sp.</i>	Cucurbitaceae	Domesticated										
Ornamental	Starthistle	<i>Centaurea sp.</i>	Compositae	Annual/perennial herb			X					1		
Ornamental	Sycamore	<i>Platanus occidentalis</i>	Platanaceae	Tree								2		
Other	Carbonized Berry													
Other	Carbonized Grain			Domesticated	X	Grain						1		
Other	Composite Family	Compositae	Compositae					1				1		
Other	Nightshade Family	Solanaceae	Solanaceae						4					
Other	Rose Family		Rosaceae											
Other	Uncharred Stem										2			
Vegetable	Alfalfa	<i>Medicago sativa</i>	Fabaceae	Domesticated	X	Bean								
Vegetable	Common Bean	<i>Phaseolus vulgaris</i>	Fabaceae	Domesticated	X	Bean								
Vegetable	Cucurbit		Cucurbitaceae	Domesticated	X	Fruit						1		
Vegetable	Eggplant	<i>Solanum melongena esculentum</i>	Solanaceae	Cultigen	X	Fruit								
Vegetable	Ground Cherry	<i>Physalis sp.</i>	Solanaceae	Domesticated	X	Fruit	X			2				
Vegetable	Lettuce	<i>Lactuca sativa</i>	Compositae	Domesticated	X	Greens	X							
Vegetable	Maize	<i>Zea mays</i>	Gramineae	Domesticated	X	Seeds	X							
Vegetable	Squash/ Pumpkin seed	<i>Cucurbita sp.</i>	Cucurbitaceae	Domesticated	X	Fruit	X							
Vegetable	Tomato	<i>Lycopersicon esculentum</i>	Solanaceae	Domesticated	X	Fruit					224	861	500	
Vegetable	Wheat	<i>Triticum aestivum</i>	Gramineae	Domesticated	X	Grain						4		
Weed	Bulrush	<i>Scirpus sp.</i>	Cyperaceae	Annual/perennial herb				15	1					
Weed	Copperleaf	<i>Acalypha virginica</i>	Euphorbiaceae	Annual herb							2			
Weed	Flatsedge	<i>Cyperus sp.</i>	Cyperaceae	Annual/perennial herb				7				4		
Weed	Nightshade	<i>Solanum sp.</i>	Solanaceae	Annual/perennial herb			X				2	1		1
Weed	Ragweed	<i>Ambrosia sp.</i>	Compositae	Annual/perennial herb			X					1		
Weed	Sedge	<i>Carex sp.</i>	Cyperaceae	Perennial herb										
Weed	Sedge Family	Cyperaceae	Cyperaceae	Perennial herb				1				3		1
Weed-Grass	Crabgrass	<i>Digitaria sp.</i>	Gramineae	Grass							15	25		
Weed-Grass	Foxtail Grass	<i>Setaria sp.</i>	Gramineae	Grass							1	2		
Weed-Grass	Goosegrass	<i>Elymus indica</i>	Gramineae	Grass							2	5		
Weed-Grass	Grass Family	Gramineae	Gramineae	Grass								2		
	Total							79	38	545	16209	10040	3720	38

Fruit	Watermelon	<i>Citrullus vulgaris</i>	Cucurbitaceae	Domesticated	X	Fruit	X				1				
Medicinal	Jimsonweed	<i>Datura stramonium</i>	Solanaceae	Annual herb			X	31	39	1	29	29	48	15	21
Medicinal	Wormseed	<i>Chenopodium ambrosioides</i>	Chenopodiaceae	Annual herb	X	Seeds, leaves	X		15		14			5	4
Nut	Acorn Shell	<i>Quercus sp.</i>	Fagaceae	Tree	X	Nutmeat	X								1
Nut	Hickory Shell	<i>Carpin sp.</i>	Juglandaceae	Tree	X	Nutmeat	X								
Ornamental	Boneset	<i>Eupatorium sp.</i>	Compositae	Annual/perennial herb			X								
Ornamental	Bottle Gourd seed	<i>Lagenaria sp.</i>	Cucurbitaceae	Domesticated						1					
Ornamental	Starthistle	<i>Centaurea sp.</i>	Compositae	Annual/perennial herb			X						1		
Ornamental	Sycamore	<i>Platanus occidentalis</i>	Platanaceae	Tree											
Other	Carbonized Berry														
Other	Carbonized Grain			Domesticated	X	Grain									
Other	Composite Family	Compositae	Compositae												
Other	Nightshade Family	Solanaceae	Solanaceae							2				2	
Other	Rose Family		Rosaceae												
Other	Uncharred Stem														
Vegetable	Alfalfa	<i>Medicago sativa</i>	Fabaceae	Domesticated	X	Bean									
Vegetable	Common Bean	<i>Phaseolus vulgaris</i>	Fabaceae	Domesticated	X	Bean				1					
Vegetable	Cucurbit	Cucurbitaceae	Cucurbitaceae	Domesticated	X	Fruit					2		2		
Vegetable	Eggplant	<i>Solanum melongena esculentum</i>	Solanaceae	Cultigen	X	Fruit					1				
Vegetable	Ground Cherry	<i>Physalis sp.</i>	Solanaceae	Domesticated	X	Fruit	X	1							
Vegetable	Lettuce	<i>Lactuca sativa</i>	Compositae	Domesticated	X	Greens	X				1				
Vegetable	Maize	<i>Zea mays</i>	Gramineae	Domesticated	X	Seeds	X								2
Vegetable	Squash/ Pumpkin seed	<i>Cucurbita sp.</i>	Cucurbitaceae	Domesticated	X	Fruit	X			7	6	2			
Vegetable	Tomato	<i>Lycopersicon esculentum</i>	Solanaceae	Domesticated	X	Fruit					128		1	5	60
Vegetable	Wheat	<i>Triticum aestivum</i>	Gramineae	Domesticated	X	Grain									
Weed	Bulrush	<i>Scirpus sp.</i>	Cyperaceae	Annual/perennial herb				9					15		
Weed	Copperleaf	<i>Acalypha virginica</i>	Euphorbiaceae	Annual herb									3		
Weed	Flatsedge	<i>Cyperus sp.</i>	Cyperaceae	Annual/perennial herb				8	1				177		1
Weed	Nightshade	<i>Solanum sp.</i>	Solanaceae	Annual/perennial herb			X								
Weed	Ragweed	<i>Ambrosia sp.</i>	Compositae	Annual/perennial herb			X								
Weed	Sedge	<i>Carex sp.</i>	Cyperaceae	Perennial herb									1		
Weed	Sedge Family	Cyperaceae	Cyperaceae	Perennial herb				2			1	1	49		
Weed-Grass	Crabgrass	<i>Digitaria sp.</i>	Gramineae	Grass				1					1		9
Weed-Grass	Foxtail Grass	<i>Setaria sp.</i>	Gramineae	Grass							3		2		
Weed-Grass	Goosegrass	<i>Eleusine indica</i>	Gramineae	Grass							1		2		
Weed-Grass	Grass Family	Gramineae	Gramineae	Grass						10			1		
	Total							10470	5907	2588	15362	6879	1064	13493	52671

Notes: *Feature AK — 1 peach pit from Stratum I and 1 peach pit from Stratum III; ** Feature C — 1 peach pit from stratum III

Table 109C. Macroplant Remains Found in Jewish and Brothel Contexts.

Major Use	Common Name	Vegetative Type	Edible	Edible Part	Medicinal	Feature AG Stone-lined Privy 10/12 Orange (Baxter) 1830s-1843 Merchant/Brothel Labatut/Donohue Owner Occupant/Brothel AS III	Feature AN Brick-lined Cistern 22 Orange/Baxter 1855-1860 German Tailors Stone Family Renter AS III	Feature B Stone-lined Privy 472 Pearl 1808-1837 Scribe Goldberg Renter AS IV	Feature W Oyster Shell Deposit 470 Pearl Street 1870s
Condiment	Chives/onion	Perennial herb	X	Bulb	X				
Condiment	Mint	Perennial herb	X	Leaves	X				
Condiment	Mustard	Annual/perennial herb	X	Greens, seeds	X				
Condiment	Poppy	Annual/perennial herb	X	Seeds	X				
Edible Herb	Carpetweed	Annual herb	X	Greens	X				
Edible Herb	Catchfly	Annual herb	X	Leaves, shoots	X				
Edible Herb	Clover	Perennial herb	X	Leaf, flower, seeds	X				
Edible Herb	Dock/sorrel	Annual/perennial herb	X	Greens	X				
Edible Herb	Goosefoot	Annual herb	X	Greens, seeds	X	12	9	17	
Edible Herb	Knotweed	Annual/perennial herb	X	Greens, seeds	X				
Edible Herb	Pigweed	Annual herb	X	Greens, seeds	X				
Edible Herb	Pokeweed	Perennial herb	X	Greens	X				
Edible Herb	Purslane	Annual herb	X	Greens, seeds	X	32	6	36	22
Edible Herb	Smartweed	Annual herb	X	Greens, seeds	X				
Edible Herb	Wild Buckwheat	Annual herb	X	Greens				1	
Edible Herb	Wood Sorrel	Perennial herb	X	Greens	X				
Exotic	Brazil Nut	Tree	X	Nutmeat					
Exotic	Coconut	Tree	X	Nut					
Exotic	Coffee bean	Shrub	X	Bean	X	46			
Exotic	Peanut shell	Domestic	X	Seed	X		2		
Fruit	Blueberry	Shrub	X	Fruit	X		2	1	
Fruit	Cherry	Small tree	X	Fruit	X	2	1	1	
Fruit	Cherry/Plum	Small tree	X	Fruit	X	1			
Fruit	Common Apple	Small tree	X	Fruit	X				
Fruit	Elderberry	Shrub	X	Fruit	X	18		22	
Fruit	Fig	Shrub	X	Fruit	X	3668	829	1970	
Fruit	Grape	Vine	X	Fruit	X	50	12	170	
Fruit	Huckleberry	Shrub	X	Fruit	X				
Fruit	Mulberry	Small tree	X	Fruit	X				
Fruit	Peach	Small tree	X	Fruit	X	18	13		
Fruit	Plum	Small tree	X	Fruit	X	1	1		
Fruit	Blackberry/Raspberry	Shrub	X	Fruit	X	47307	100	9884	
Fruit	Serviceberry	Shrub, small tree	X	Fruit	X	8			
Fruit	Strawberry	Herb	X	Fruit	X	8032	36	598	
Fruit	Cantaloupe/Muskmelon	Domestic	X	Fruit	X				
Fruit	Watermelon	Domestic	X	Fruit	X				
Medicinal	Jimsonweed	Annual herb			X	4	34	14	1
Medicinal	Wormseed	Annual herb	X	Seeds, leaves	X	21	2		

Nut	Acom Shell	Tree	X	Nutmeat	X				
Nut	Hickory Shell	Tree	X	Nutmeat	X	1			
Ornamental	Boneset	Annual/perennial herb			X				
Ornamental	Bottle Gourd seed	Domestic							
Ornamental	Starthistle	Annual/perennial herb			X				
Ornamental	Sycamore	Tree					1		
Other	Carbonized Berry						1		
Other	Carbonized Grain	Domestic	X	Grain					
Other	Composite Family								
Other	Nightshade Family					8		3	
Other	Rose Family						1		
Other	Uncharred Stem								
Vegetable	Alfalfa	Domestic	X	Bean			1		
Vegetable	Common Bean	Domestic	X	Bean					
Vegetable	Cucurbit	Domestic	X	Fruit					
Vegetable	Eggplant	Cultigen	X	Fruit					
Vegetable	Ground Cherry	Domestic	X	Fruit	X			3	
Vegetable	Lettuce	Domestic	X	Greens	X				
Vegetable	Maize	Domestic	X	Seeds	X				
Vegetable	Squash/Pumpkin seed	Domestic	X	Fruit	X	18			
Vegetable	Tomato	Domestic	X	Fruit		158	29	93	
Vegetable	Wheat	Domestic	X	Grain			3		
Weed	Bulrush	Annual/perennial herb							
Weed	Copperleaf	Annual herb							
Weed	Flatsedge	Annual/perennial herb					2	4	
Weed	Nightshade	Annual/perennial herb			X				
Weed	Ragweed	Annual/perennial herb			X				
Weed	Sedge	Perennial herb							
Weed	Sedge Family	Perennial herb					1		
Weed-Grass	Crabgrass	Grass						11	
Weed-Grass	Foxtail Grass	Grass							
Weed-Grass	Goosegrass	Grass					3	1	
Weed-Grass	Grass Family	Grass					1	3	
	Total					59405	1090	12832	23

Table 110. Ubiquity and Abundance of Macroplant Remains from Tenement and Artisan Contexts.

Major Use	Common Name	Scientific Name	Vegetative Type	Edible	Edible Part	Medi- cinal	Total Seeds All Tenement Privies	Ubiquity of Tenement Privies 7 features	Total Seeds All Artisan Class Privies	Ubiquity of Artisan Class Privies 8 features	Brothel Feature AG Labat Owner Occupant/ Brothel AS III	Jewish Feature AN Stone Renter AS III	Jewish Feature B Goldberg Renter AS IV	Feature W Oyster Shell 1870s	Overall Total	Overall Ubiquity 19 features
Condiment	Chives/onion	<i>Allium sp.</i>	Perennial herb	X	Bulb	X	2	14.29%	0	0.00%					2	5.26%
Condiment	Mint	<i>Mentha sp.</i>	Perennial herb	X	Leaves	X	1	14.29%	5	37.50%					6	21.05%
Condiment	Mustard	<i>Brassica sp.</i>	Annual/perennial herb	X	Greens, seeds	X	2	14.29%	30	50.00%					32	26.32%
Condiment	Poppy	<i>Papaver sp.</i>	Annual/perennial herb	X	Seeds	X	0	0.00%	2	12.50%					2	5.26%
Edible Herb	Carpetweed	<i>Mollugo verticillata</i>	Annual herb	X	Greens	X	0	0.00%	1	12.50%					1	5.26%
Edible Herb	Catchfly	<i>Silene sp.</i>	Annual herb	X	Leaves, shoots	X	1	14.29%	0	0.00%					1	5.26%
Edible Herb	Clover	<i>Trifolium sp.</i>	Perennial herb	X	Leaf, flower, seeds	X	0	0.00%	9	12.50%					9	5.26%
Edible Herb	Dock/sorrel	<i>Rumex sp.</i>	Annual/perennial herb	X	Greens	X	7	28.57%	131	50.00%					138	31.58%
Edible Herb	Goosefoot	<i>Chenopodium sp.</i>	Annual herb	X	Greens, seeds	X	55	71.43%	327	75.00%	P	P	P		420	73.68%
Edible Herb	Knotweed	<i>Polygonum sp.</i>	Annual/perennial herb	X	Greens, seeds	X	28	14.29%	0	0.00%					28	5.26%
Edible Herb	Pigweed	<i>Amaranthus sp.</i>	Annual herb	X	Greens, seeds	X	4	14.29%	4	12.50%					8	10.53%
Edible Herb	Pokeweed	<i>Phytolacca americana</i>	Perennial herb	X	Greens	X	5	14.29%	21	37.50%					26	21.05%
Edible Herb	Purslane	<i>Portulaca oleracea</i>	Annual herb	X	Greens, seeds	X	166	85.71%	879	87.50%	P	P	P	P	1141	89.47%
Edible Herb	Smartweed	<i>Polygonum pensylvanicum</i>	Annual herb	X	Greens, seeds	X	5	28.57%	0	0.00%					5	10.53%
Edible Herb	Wild Buckwheat	<i>Polygonum convolvulus</i>	Annual herb	X	Greens		4	14.29%	0	0.00%					5	10.53%
Edible Herb	Wood Sorrel	<i>Oxalis stricta</i>	Perennial herb	X	Greens	X	0	0.00%	2	12.50%					2	5.26%
Exotic	Brazil Nut	<i>Bertholletia excelsa</i>	Tree	X	Nutmeat		2	14.29%	0	0.00%					2	5.26%
Exotic	Coconut	<i>Cocos nucifera</i>	Tree	X	Nut		9	28.57%	0	0.00%					9	10.53%
Exotic	Coffee bean	<i>Coffea arabica</i>	Shrub	X	Bean	X	0	0.00%	1	12.50%	P				47	10.53%
Exotic	Peanut shell	<i>Arachis hypogaea</i>	Domesticated	X	Seed	X	27	28.57%	0	0.00%		P			29	15.79%
Fruit	Blueberry	<i>Vaccinium sp.</i>	Shrub	X	Fruit	X	158	42.86%	77	25.00%		P	P		238	36.84%
Fruit	Cherry	<i>Prunus sp.</i>	Small tree	X	Fruit	X	96	42.86%	1	12.50%	P	P	P		101	36.84%
Fruit	Cherry/Plum	<i>Prunus sp.</i>	Small tree	X	Fruit	X	3	28.57%	3	12.50%	P				7	21.05%
Fruit	Common Apple	<i>Malus pumila</i>	Small tree	X	Fruit	X	5	42.86%	6	50.00%					11	36.84%
Fruit	Elderberry	<i>Sambucus canadensis</i>	Shrub	X	Fruit	X	54	57.14%	2770	75.00%	P		P		2864	63.16%
Fruit	Fig	<i>Ficus sp.</i>	Shrub	X	Fruit	X	15020	71.43%	11323	100.00%	P	P	P		32810	84.21%
Fruit	Grape	<i>Vitis sp.</i>	Vine	X	Fruit	X	2064	71.43%	1172	100.00%	P	P	P		3468	84.21%
Fruit	Huckleberry	<i>Gaylussacia sp.</i>	Shrub	X	Fruit	X	16	28.57%	20	50.00%					36	31.58%
Fruit	Mulberry	<i>Morus rubra</i>	Small tree	X	Fruit	X	0	0.00%	10	25.00%					10	10.53%
Fruit	Peach	<i>Prunus persica</i>	Small tree	X	Fruit	X	582	71.43%	20	62.50%	P	P			633	63.16%
Fruit	Plum	<i>Prunus sp.</i>	Small tree	X	Fruit	X	41	42.86%	3	12.50%	P	P			46	31.58%
Fruit	Blackberry/ Raspberry	<i>Rubus sp.</i>	Shrub	X	Fruit	X	7670	71.43%	86271	100.00%	P	P	P		151232	84.21%
Fruit	Serviceberry	<i>Amelanchier sp.</i>	Shrub, small tree	X	Fruit	X	0	0.00%	21	12.50%	P				29	10.53%
Fruit	Strawberry	<i>Fragaria sp.</i>	Herb	X	Fruit	X	2896	85.71%	4548	100.00%	P	P	P		16110	89.47%
Fruit	Cantaloupe/ Muskmelon	<i>Cucumis sp.</i>	Domesticated	X	Fruit	X	1	14.29%	0	0.00%					1	5.26%
Fruit	Watermelon	<i>Citrullus vulgaris</i>	Domesticated	X	Fruit	X	6	14.29%	1	12.50%					7	10.53%

Medicinal	Jimsonweed	<i>Datura stramonium</i>	Annual herb			X	38	85.71%	213	100.00%	P	P	P	P	304	94.74%
Medicinal	Wormseed	<i>Chenopodium ambrosioides</i>	Annual herb	X	Seeds, leaves	X	1	14.29%	38	50.00%	P	P			62	36.84%
Nut	Acorn Shell	<i>Quercus sp.</i>	Tree	X	Nutmeat	X	0	0.00%	1	12.50%					1	5.26%
Nut	Hickory Shell	<i>Carya sp.</i>	Tree	X	Nutmeat	X	0	0.00%	0	0.00%	P				1	5.26%
Ornamental	Boneset	<i>Eupatorium sp.</i>	Annual/perennial herb			X	3	14.29%	0	0.00%					3	5.26%
Ornamental	Bottle Gourd seed	<i>Lagenaria sp.</i>	Domesticate				0	0.00%	1	12.50%					1	5.26%
Ornamental	Starthistle	<i>Centaurea sp.</i>	Annual/perennial herb			X	1	14.29%	1	12.50%					2	10.53%
Ornamental	Sycamore	<i>Platanus occidentalis</i>	Tree				2	14.29%	0	0.00%		P			3	10.53%
Other	Carbonized Berry						0	0.00%	0	0.00%		P			1	5.26%
Other	Carbonized Grain		Domesticate	X	Grain		1	14.29%	0	0.00%					1	5.26%
Other	Composite Family	<i>Compositae</i>					2	28.57%	0	0.00%					2	10.53%
Other	Nightshade Family	<i>Solanaceae</i>					4	14.29%	4	25.00%	P		P		19	26.32%
Other	Rose Family						0	0.00%	0	0.00%		P			1	5.26%
Other	Uncharred Stem						2	14.29%	0	0.00%					2	5.26%
Vegetable	Alfalfa	<i>Medicago sativa</i>	Domesticate	X	Bean		0	0.00%	0	0.00%		P			1	5.26%
Vegetable	Common Bean	<i>Phaseolus vulgaris</i>	Domesticate	X	Bean		0	0.00%	1	12.50%					1	5.26%
Vegetable	Cucurbit	<i>Cucurbitaceae</i>	Domesticate	X	Fruit		1	14.29%	4	25.00%					5	15.79%
Vegetable	Eggplant	<i>Solanum melongena esculentum</i>	Cultigen	X	Fruit		0	0.00%	1	12.50%					1	5.26%
Vegetable	Ground Cherry	<i>Physalis sp.</i>	Domesticate	X	Fruit	X	2	14.29%	1	12.50%			P		6	15.79%
Vegetable	Lettuce	<i>Lactuca sativa</i>	Domesticate	X	Greens	X	1	14.29%	1	12.50%					2	10.53%
Vegetable	Maize	<i>Zea mays</i>	Domesticate	X	Seeds	X	0	0.00%	2	12.50%					2	5.26%
Vegetable	Squash/ Pumpkin seed	<i>Cucurbita sp.</i>	Domesticate	X	Fruit	X	1	14.29%	15	37.50%	P				34	26.32%
Vegetable	Tomato	<i>Lycopersicon esculentum</i>	Domesticate	X	Fruit		1585	42.86%	194	50.00%	P	P	P		2059	52.63%
Vegetable	Wheat	<i>Triticum aestivum</i>	Domesticate	X	Grain		4	14.29%	0	0.00%		P			7	10.53%
Weed	Bulrush	<i>Scirpus sp.</i>	Annual/perennial herb				16	28.57%	24	25.00%					40	21.05%
Weed	Copperleaf	<i>Acalypha virginica</i>	Annual herb				2	14.29%	3	12.50%					5	10.53%
Weed	Flatsedge	<i>Cyperus sp.</i>	Annual/perennial herb				11	28.57%	187	50.00%		P	P		204	42.11%
Weed	Nightshade	<i>Solanum sp.</i>	Annual/perennial herb			X	4	42.86%	0	0.00%					4	15.79%
Weed	Ragweed	<i>Ambrosia sp.</i>	Annual/perennial herb			X	1	14.29%	0	0.00%					1	5.26%
Weed	Sedge	<i>Carex sp.</i>	Perennial herb				0	0.00%	1	12.50%					1	5.26%
Weed	Sedge Family	<i>Cyperaceae</i>	Perennial herb				5	42.86%	53	50.00%		P			59	42.11%
Weed-Grass	Crabgrass	<i>Digitaria sp.</i>	Grass				40	28.57%	11	37.50%			P		62	31.58%
Weed-Grass	Foxtail Grass	<i>Setaria sp.</i>	Grass				3	28.57%	5	25.00%					8	21.05%
Weed-Grass	Gonosegrass	<i>Eleusine indica</i>	Grass				7	28.57%	3	25.00%		P	P		14	31.58%
Weed-Grass	Grass Family	<i>Gramineae</i>	Grass				2	14.29%	12	37.50%		P	P		18	31.58%
	Total						30669	100.00%	108434	100.00%					212453	100.00%

Table 111. Macroplant Assemblage, Feature B.

Major Use	Common Name	Vegetative Type	Edible	Edible Part	Medicinal	Artisan Feature B Stone-lined Privy 472 Pearl 1808-1837 Cabinetmaker Cross Owner Occupant AS V	Other Feature B Stone-lined Privy 472 Pearl 1808-1837 Scribe Goldberg Renter AS IV	Feature B Stone-lined Privy 472 Pearl Post 1873 Postoccupation Fill AS I-III	Feature B Stone-lined Privy 472 Pearl Total AS I-V
Condiment	Chives/onion	Perennial herb	X	Bulb	X				
Condiment	Mint	Perennial herb	X	Leaves	X				1
Condiment	Mustard	Annual/perennial herb	X	Greens, seeds	X	6			6
Condiment	Poppy	Annual/perennial herb	X	Seeds	X	2			2
Edible Herb	Carpetweed	Annual herb	X	Greens	X	1			1
Edible Herb	Catchfly	Annual herb	X	Leaves, shoots	X				
Edible Herb	Clover	Perennial herb	X	Leaf, flower, seeds	X				
Edible Herb	Dock/sorrel	Annual/perennial herb	X	Greens	X	1			1
Edible Herb	Goosefoot	Annual herb	X	Greens, seeds	X	63	17	5	85
Edible Herb	Knotweed	Annual/perennial herb	X	Greens, seeds	X				
Edible Herb	Pigweed	Annual herb	X	Greens, seeds	X				
Edible Herb	Pokeweed	Perennial herb	X	Greens	X	2			2
Edible Herb	Purslane	Annual herb	X	Greens, seeds	X	129	36	31	196
Edible Herb	Smartweed	Annual herb	X	Greens, seeds	X				
Edible Herb	Wild Buckwheat	Annual herb	X	Greens			1		1
Edible Herb	Wood Sorrel	Perennial herb	X	Greens	X				
Exotic	Brazil Nut	Tree	X	Nutmeat					
Exotic	Coconut	Tree	X	Nut					
Exotic	Coffee bean	Shrub	X	Bean	X				
Exotic	Peanut shell	Domesticated	X	Seed	X				
Fruit	Blueberry	Shrub	X	Fruit	X	64	1	1	66
Fruit	Cherry	Small tree	X	Fruit	X	1	1		2
Fruit	Cherry/Plum	Small tree	X	Fruit	X	3			3
Fruit	Common Apple	Small tree	X	Fruit	X	1			1
Fruit	Elderberry	Shrub	X	Fruit	X	73	22	2	97
Fruit	Fig	Shrub	X	Fruit	X	3223	1970	337	5530
Fruit	Grape	Vine	X	Fruit	X	210	170	43	423
Fruit	Huckleberry	Shrub	X	Fruit	X	15			15
Fruit	Mulberry	Small tree	X	Fruit	X	7			7
Fruit	Peach	Small tree	X	Fruit	X	1		3	4
Fruit	Plum	Small tree	X	Fruit	X	3			3
Fruit	Blackberry/Raspberry	Shrub	X	Fruit	X	10958	9884	970	21812
Fruit	Serviceberry	Shrub, small tree	X	Fruit	X	21			21
Fruit	Strawberry	Herb	X	Fruit	X	386	598	160	1144
Fruit	Cantaloupe/Muskmelon	Domesticated	X	Fruit	X				
Fruit	Watermelon	Domesticated	X	Fruit	X	1			1
Medicinal	Jimsonweed	Annual herb			X	29	14	10	53

Medicinal	Wormseed	Annual herb	X	Seeds, leaves	X	14			14
Nut	Acorn Shell	Tree	X	Nutmeat	X				
Nut	Hickory Shell	Tree	X	Nutmeat	X				
Ornamental	Boneset	Annual/perennial herb			X				
Ornamental	Bottle Gourd seed	Domesticated				1			1
Ornamental	Starthistle	Annual/perennial herb			X				
Ornamental	Sycamore	Tree							
Other	Carbonized Berry								
Other	Carbonized Grain	Domesticated	X	Grain					
Other	Composite Family								
Other	Nightshade Family					2	3		5
Other	Rose Family								
Other	Uncharred Stem								
Vegetable	Alfalfa	Domesticated	X	Bean					
Vegetable	Common Bean	Domesticated	X	Bean					
Vegetable	Cucurbit	Domesticated	X	Fruit		2			2
Vegetable	Eggplant	Cultigen	X	Fruit		1			1
Vegetable	Ground Cherry	Domesticated	X	Fruit	X		3		3
Vegetable	Lettuce	Domesticated	X	Greens	X	1			1
Vegetable	Maize	Domesticated	X	Seeds	X				
Vegetable	Squash/Pumpkin seed	Domesticated	X	Fruit	X	6			6
Vegetable	Tomato	Domesticated	X	Fruit		128	93	27	248
Vegetable	Wheat	Domesticated	X	Grain					
Weed	Bulrush	Annual/perennial herb							
Weed	Copperleaf	Annual herb							
Weed	Flatsedge	Annual/perennial herb					4	2	6
Weed	Nightshade	Annual/perennial herb			X				
Weed	Ragweed	Annual/perennial herb			X				
Weed	Sedge	Perennial herb							
Weed	Sedge Family	Perennial herb				1		2	3
Weed-Grass	Crabgrass	Grass					11		11
Weed-Grass	Foxtail Grass	Grass				3			3
Weed-Grass	Goosegrass	Grass				1	1		2
Weed-Grass	Grass Family	Grass				1	3		4
	Total					15362	12832	1593	29787

Table 112. Macroplant Assemblage, Feature J.

Major Use	Common Name	Vegetative Type	Edible	Medicinal	Tenement Feature J Stone-lined Cesspool 472 Pearl St 1840s-1860s Irish 30+ Households Tenement AS III	Tenement Feature J Stone-lined Cesspool 472 Pearl St 1840s-1860s Irish 30+ Households Tenement AS IV-Fill	Tenement Feature J Stone-lined Cesspool 472 Pearl St 1840s-1860s Irish 30+ Households Tenement AS V	Tenement Feature J Stone-lined Cesspool 472 Pearl St 1840s-1860s Irish 30+ Households Tenement AS III-V
Condiment	Chives/onion	Perennial herb	X	X				
Condiment	Mint	Perennial herb	X	X			1	1
Condiment	Mustard	Annual/perennial herb	X	X				
Condiment	Poppy	Annual/perennial herb	X	X				
Edible Herb	Carpetweed	Annual herb	X	X				
Edible Herb	Catchfly	Annual herb	X	X			1	1
Edible Herb	Clover	Perennial herb	X	X				
Edible Herb	Dock/sorrel	Annual/perennial herb	X	X			1	1
Edible Herb	Goosefoot	Annual herb	X	X	3	1	4	8
Edible Herb	Knotweed	Annual/perennial herb	X	X				
Edible Herb	Pigweed	Annual herb	X	X			4	4
Edible Herb	Pokeweed	Perennial herb	X	X		5		5
Edible Herb	Purslane	Annual herb	X	X	93	4	11	108
Edible Herb	Smartweed	Annual herb	X	X		1	2	3
Edible Herb	Wild Buckwheat	Annual herb	X					
Edible Herb	Wood Sorrel	Perennial herb	X	X				
Exotic	Brazil Nut	Tree	X			1	1	2
Exotic	Coconut	Tree	X		2	1	4	7
Exotic	Coffee bean	Shrub	X	X				
Exotic	Peanut shell	Domesticated	X	X			17	17
Fruit	Blueberry	Shrub	X	X	5	1	73	79
Fruit	Cherry	Small tree	X	X	13	1	73	87
Fruit	Cherry/Plum	Small tree	X	X			2	2
Fruit	Common Apple	Small tree	X	X			2	2
Fruit	Elderberry	Shrub	X	X	8		7	15
Fruit	Fig	Shrub	X	X	2102	36	741	2879
Fruit	Grape	Vine	X	X	225	26	204	455
Fruit	Huckleberry	Shrub	X	X			14	14
Fruit	Mulberry	Small tree	X	X				
Fruit	Peach	Small tree	X	X	173	12	339	524
Fruit	Plum	Small tree	X	X	10		24	34
Fruit	Blackberry/Raspberry	Shrub	X	X	1800	51	418	2269
Fruit	Serviceberry	Shrub, small tree	X	X				
Fruit	Strawberry	Herb	X	X	1339	134	1112	2585
Fruit	Cantaloupe/Muskmelon	Domesticated	X	X			1	1
Fruit	Watermelon	Domesticated	X	X			6	6
Medicinal	Jimsonweed	Annual herb		X	13	1	1	15

Medicinal	Wormseed	Annual herb	X	X			1	1
Nut	Acom Shell	Tree	X	X				
Nut	Hickory Shell	Tree	X	X				
Ornamental	Boneset	Annual/perennial herb		X				
Ornamental	Bottle Gourd seed	Domesticate						
Ornamental	Starthistle	Annual/perennial herb		X	1			1
Ornamental	Sycamore	Tree			2			2
Other	Carbonized Berry							
Other	Carbonized Grain	Domesticate	X		1			1
Other	Composite Family						1	1
Other	Nightshade Family							
Other	Rose Family							
Other	Uncharred Stem							
Vegetable	Alfalfa	Domesticate	X					
Vegetable	Common Bean	Domesticate	X					
Vegetable	Cucurbit	Domesticate	X			1		1
Vegetable	Eggplant	Cultigen	X					
Vegetable	Ground Cherry	Domesticate	X	X				
Vegetable	Lettuce	Domesticate	X	X	1			1
Vegetable	Maize	Domesticate	X	X				
Vegetable	Squash/Pumpkin seed	Domesticate	X	X				
Vegetable	Tomato	Domesticate	X		741	32	88	861
Vegetable	Wheat	Domesticate	X		4			4
Weed	Bulrush	Annual/perennial herb						
Weed	Copperleaf	Annual herb						
Weed	Flatsedge	Annual/perennial herb			3	1		4
Weed	Nightshade	Annual/perennial herb		X	1			1
Weed	Ragweed	Annual/perennial herb		X			1	1
Weed	Sedge	Perennial herb						
Weed	Sedge Family	Perennial herb			1	2		3
Weed-Grass	Crabgrass	Grass			5		20	25
Weed-Grass	Foxtail Grass	Grass			1		1	2
Weed-Grass	Goosegrass	Grass			1	3	1	5
Weed-Grass	Grass Family	Grass					2	2
	Total				6548	314	3178	10040

3.6.4.2 Assemblage Composition

This section presents a discussion of the nutshell fragments, fruit pits, and seeds recovered from the Five Points privies and other shaft features. The specifically identified seed taxa are divided into 10 broad categories based on their presumed economic importance. These are exotics, condiments, fruits, vegetables, nut-bearing shade trees, edible herbaceous plants, possible medicinal herbs, possible ornamentals, herbaceous weeds, and grasses. The first five categories represent economically important plants. Evidence will be presented that the possible ornamentals and edible herbaceous plants likely represent utilized plant remains as well. The herbaceous weeds and grasses probably represent naturally deposited yard weeds. The numbers, distribution, uses, and natural environments of each plant taxon are discussed in this section. Particular attention will be paid to the potential medicinal uses of the macroplant assemblage, as it is likely that herbal folk remedies were popular among the relatively poor Five Points residents.

Exotics

The first plant category consists of four plant resources that were acquired through a long-distance trading network. These are coffee bean (*Coffea arabica*), coconut (*Cocos nucifera*), Brazil nut (*Bertholicea excelsa*), and peanut (*Arachis hypogaea*) (Table 107). All four of these plants would have been purchased at local markets. Coffee, coconuts, and Brazil nuts were imported into the Northeast from the tropics, probably via commercial ships offloading their cargo in New York's harbor. Brazil nut trees, which cannot be cultivated in the United States, are large trees that are native to Guiana, Venezuela, and Brazil (Britton and Brown 1970; Hedrick 1972; Root 1980). Coconut trees will grow anywhere in the tropics where the correct temperature range and rainfall are found (Root 1980). Coffee plants are evergreen shrubs and small trees that are native to tropical Africa and Asia. The fruits of all three of these tropical plants became important commercial imports in the nineteenth century (Hedrick 1972; Root 1980).

Peanuts, which are native to South America, 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). Like the tropical imports, peanuts were probably delivered to New York markets on commercial ships.

Forty-seven carbonized coffee beans were found in two privies: Feature N, which was used by Widow Hoffman and her tenants at 474-476 Pearl Street; and Feature AG, which was associated with the brothel at 10-12 Orange/Baxter Street in the 1830s. The exclusive recovery of coffee beans from the Hoffman residence, a relatively high status owner-occupant, and the brothel, which was frequented by a relatively high-class clientele, and the absence of this taxon from immigrant-tenant contexts, suggests either that coffee was not popular among the recent Irish immigrants to the Five Points neighborhood or that it was too expensive for the immigrants to purchase.

The abundance of tea sets associated with Irish immigrant contexts, combined with the exclusive recovery of three other, presumably expensive, exotics (Brazil nut, coconut, peanut) from immigrant-tenant privies and cesspools, suggests that the absence of coffee from immigrant contexts was probably due to an ethnic preference for tea as a hot beverage among the Irish inhabitants of Block 160. Perhaps coffee drinking was an elegant ritual more suited to the drawing room than the tenement. The earlier artisans, particularly the men, apparently regarded this beverage as a leisure-time drink, as the majority of the coffee beans and all of the coffee sets were found in the brothel privy.

Forty fragments of peanut hull, Brazil nut hull, and coconut shell were found in a cesspool (Feature J) and converted cistern (Feature Z) associated with the five-story tenement located at 472 Pearl Street in the 1840s and 1850s. The recovery of these presumably expensive, imported plant foods from working-class contexts shows that recent immigrants had access to and desired exotic, high-status foodstuffs. The exclusive association of these imports with mid- to late-nineteenth-century contexts indicates that these

imported foods were more common in the second half of the nineteenth century in New York. The recovery of imported exotics from immigrant contexts also indicates the wide array of foodstuffs available in New York markets in the second half of the nineteenth century. Moreover, the presence of these imported exotics in tenement privies confirms Yamin's (1996) observation that recent immigrants settling in Five Points quickly began purchasing consumer goods (including exotic foods) that were considered fashionable and a mark of cultivation by the society at large.

Two of these exotics, coffee and peanuts, were used in the nineteenth century as medicines. 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). 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 Five Points privies, including mustard, mint, poppy, and chives/onion. These seeds probably represent cooking accidents that were dumped into the privies. Forty mint, mustard, and poppy seeds were found in six privies associated with the initial artisan occupation of the Five Points neighborhood (Table 109B). No condiments were associated with the Goldberg family occupation of 472 Pearl Street or the brothel at 10-12 Orange Street. A single mint seed was found in the Irish tenant cesspool (Feature J), and 2 chives/onion and 2 mustard seeds came from the icehouse associated with the working-class restaurant located at the corner of Chatham and Pearl Streets (Table 109A).

The recovery of these condiments documents probable seasonings and vegetables that were consumed by the nineteenth-century Five Points inhabitants. The single mint seed associated with the Irish tenement cesspool, which serviced over 100 individuals from approximately 30 households, indicates that although the working-class poor had access to condiments, they were rarely used in domestic meal preparation. The recovery of chives/onion and mustard from the restaurant icehouse probably documents spices added to meals served in the restaurant. The recovery of mustard from 50 percent and mint from 38 percent of the artisan features indicates that spices were more commonly used by the early nineteenth-century artisans occupying Block 160. The relative ubiquity of these herbaceous plants suggests that the owner-occupants (artisans) may have planted herb gardens on their lots. All four condiments were widely used in the nineteenth century as medicinal remedies. The presence of these taxa in the macroplant assemblage indicates that the artisans and immigrant laborers who occupied Block 160 could have used these plants as herbal remedies.

Chives/Onion

According to Britton and Brown (1970), over 300 species of *Allium* are found in the northern hemisphere. Cultivated varieties of *Allium* include onion, garlic, leek, and chives. The young leaves of this genus are prepared as greens and used as seasonings in salads and soups. The bulbs are used as a condiment and boiled and eaten as a vegetable (Bailey 1949; Britton and Brown 1970; Cox 1985).

According to Crellin and Philpott (1989), garlic and, to a lesser extent, onion have a long history of use as medicinal herbs. These plants were most commonly used as a home remedy for upper respiratory ailments. Both garlic and onion were used in poultices applied externally to treat patients with consumption and chest conditions. Garlic and onion poultices were commonly referred to in nineteenth-century medical texts (Crellin and Philpott 1989). Garlic and onion decoctions were also used in folk remedies as an antiseptic, to expel intestinal worms, as a topical treatment for snakebites, as treatments for kidney and bladder problems, and in the treatment of rheumatism (Coon 1963; Krochmal and Krochmal 1973).

Mint

About 30 species of mint (*Mentha* sp.) are found in the northern hemisphere. Twelve species, most of which were introduced from Europe and Asia, are listed in Britton and Brown's (1970) compendium of flora native to the northern United States. Mints prefer moist conditions and are commonly found in fields and pastures. Bailey (1949) discusses nine varieties of domesticated mint that are cultivated for their aromatic oil and used sparingly as garden ornamentals. Peppermint (*M. piperita*) and spearmint (*M. spicata*) are the most commonly used species in the United States and Europe. Both peppermint and spearmint have been grown commercially for their oil in the United States for over 100 years (Cox 1985). Both plants were grown in American kitchen gardens in the early nineteenth century. Spearmint was probably introduced much earlier in the mid-Atlantic states, since it was recorded as a naturalized plant in Virginia as early as 1739 (Hedrick 1972). Mint leaves are used for teas, as a seasoning for meat, and as flavoring for jellies and sauces (Angier 1974; Hall 1976).

Mints, particularly peppermint and spearmint, were among the most popular medicinal herbs in the eighteenth and nineteenth centuries. Both species were popular home remedies and were commonly discussed in nineteenth-century medical literature (Crellin and Philpott 1989). Peppermint and, to a lesser extent, spearmint were used in the United States as folk remedies for headaches, heartburn, digestive ailments, and insomnia (Coon 1963; Angier 1978; Crellin and Philpott 1989). Peppermint has been officially listed for 140 years in the United States Pharmacopoeia (Coon 1963).

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 brussels 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, like the mints, 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 (Krochmal and Krochmal 1973; Angier 1978).

Poppy

Poppies (*Papaver* sp.) are one of the best-known garden flowers in the United States. About 45 species, most of which are Old World natives, are found in the Northern Hemisphere (Bailey 1949). Poppies are commonly cultivated in Europe and Asia for their capsules, which are utilized in the production of opium and opium-based drugs, such as morphine. Some species are cultivated in the United States and Europe for their edible flowers and leaves (Britton and Brown 1970; Root 1980). Whole poppy seeds are commonly added to breads and cakes as a flavoring (Root 1980). Poppies were common constituents of late-eighteenth- and nineteenth-century ornamental gardens in the United States and were also cultivated in home gardens as culinary and medicinal herbs (Leighton 1987; Favretti and Favretti 1990).

Opium (white) poppy (*Papaver somniferum*) was one of the most commonly used drugs in the nineteenth century (Phelps Brown 1993). In the form of laudanum, opium was regularly prescribed for pain relief and as a sedative. Opium and its derivatives were used as a hypnotic, sedative, topical astringent, expectorant (cough medicine), and antispasmodic. It was also used in the treatment of diarrhea and dysentery and in the treatment of intestinal worms (Grieve 1931; Phelps Brown 1993).

Fruits

Sixteen varieties of economically important fruits, seven of which are from the rose family, were retrieved by flotation and during excavation. These are blueberry, cherry, cherry/plum, common apple, elderberry, fig, grape, huckleberry, mulberry, peach, plum, blackberry/raspberry, serviceberry, strawberry, watermelon, and muskmelon/cantaloupe. All of these fruits were once cultivated, but are widely distributed in the wild as well. 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 nineteenth century 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 used as lawn trees by the site inhabitants.

Ninety-eight percent of the macroplant assemblage identified during this analysis was derived from the above-mentioned taxa. Six taxa, including blackberry/raspberry, fig, grape, strawberry, elderberry, and peach, were virtually ubiquitous in all features associated with each of the three occupancies of the project area. Blueberries, cherries, plums, cherry/plums, apples, and huckleberries were less common, but were still associated with both well-to-do artisan- and working-class contexts. Mulberry and serviceberry were restricted to two artisan privies (Features B and E) and the brothel privy (Feature AG). Watermelon seeds were found in the immigrant-tenant cesspool (Feature J) and one of the Cross family privies (Feature B). A single muskmelon/cantaloupe seed came from Feature AK, a privy associated with an early-nineteenth-century artisan-class commercial establishment. The recovery of these sixteen economically important fruit-producing species indicates that both owner-occupants (artisans) and immigrant-tenants in the Five Points neighborhood relied on seasonal fresh fruits and preservation of these fruits through home canning and/or winemaking for a portion of their diet.

An examination of the distribution of fruit seeds and pits from features associated with artisan and immigrant-tenant occupations allowed an assessment of the influence of several factors on the consumption and use of fruits by the Five Points residents. Factors that appear to have influenced the selection and consumption of fruits include degree of wealth, market availability, and availability in the local environment (i.e., presence of naturally occurring fruit trees and shrubs, fruit-producing garden ornamentals, and fruits in kitchen gardens). Ethnic preferences do not seem to have influenced the consumption of fruits, since the same fruit taxa were eaten by all of the Five Points residents, regardless of ethnicity. The main factors structuring the consumption of fruits appear to have been the degree of purchasing power of individual consumers and local availability of a particular fruit species, either in the markets or growing in the project area. The distribution of fruit seeds and pits in the sampled features indicates that the use of various fruit species changed over time; that a wide variety of fruits was consumed by both immigrant-tenants and relatively well-to-do artisans; and that artisans consumed a great deal more fruit than the tenement-dwelling immigrants.

Aside from its abundance and variety, the most striking feature of the fruit assemblage from Five Points is the variable density and distribution of several fruit species in early-nineteenth-century artisan contexts and mid-nineteenth-century tenement contexts. Eight fruit taxa, including elderberry, huckleberry, mulberry, blackberry/raspberry, strawberry, serviceberry, grape, and fig, are either more abundant and/or more nearly ubiquitous in artisan-class features than in immigrant-tenant features (Table 113).

Five fruit taxa (plum/cherry, blueberry, peach, cantaloupe/watermelon) that one would expect to be more abundant in artisan contexts are actually more abundant and ubiquitous in immigrant-tenant features. The low representation of these fruits in early-nineteenth-century artisan contexts and their relative abundance in mid- to late-nineteenth-century contexts associated with the working poor indicates that these fruits were easier to obtain in the second half of the nineteenth century in New York and confirms the wide array of foodstuffs available in New York markets in the second half of the nineteenth century.

Table 113. Overall Abundance and Ubiquity of Fruit Taxa Associated with Tenement and Artisan Features

Taxon	Tenement Count	Tenement Ubiquity	Artisan Count	Artisan Ubiquity
Plum/Cherry	140	57%	7	12%
Blueberry	158	43%	77	25%
Peach	582	71%	20	63%
Cantaloupe/Watermelon	7	14%	1	13%
Elderberry	54	57%	2,770	75%
Fig	15,020	71%	11,323	100%
Grape	2,064	71%	1,172	100%
Huckleberry	16	29%	20	50%
Mulberry	0	0%	10	25%
Serviceberry	0	0%	21	13%
Blackberry/Raspberry	7,670	71%	86,271	100%
Strawberry	2,896	86%	4,548	100%
Apple	5	43%	6	50%
TOTAL	28,612		106,246	

The striking abundance of seven other fruit taxa in artisan contexts, all of which are easily propagated in small spaces such as urban yards and small kitchen gardens, indicates that the early-nineteenth-century residents of Five Points may have been raising some of their plant foods on open spaces on their lots and/or gathering naturally occurring fruits from vacant land in the area. For example, the strawberries found in artisan contexts were probably not acquired from city markets, since these fruits were not common in urban markets until the 1840s due to their perishability. Before the mid-nineteenth century, strawberries were only available to those who were fortunate enough to have space for kitchen gardens. Strawberries became readily available in New York City markets after the opening of the Erie Railroad in 1847, when masses of the perishable fruit were shipped quickly and cheaply to the city (Root 1980).

Conversely, the relative lack of these seven taxa in mid- to late-nineteenth-century tenement contexts, combined with the greater representation of plum/cherry, blueberry, peach, and cantaloupe/watermelon, provides indirect evidence of the loss of open spaces within Block 160 for kitchen gardens and fruit-bearing ornamentals as a result of population increase in the Five Points in the 1830s and 1840s. This pattern of decreasing availability of naturally occurring wild fruits, kitchen garden species (strawberries), and economically useful trees and shrubs (elderberry, blackberry/raspberry, grape, huckleberry, mulberry, serviceberry) corresponds to the massive increase in New York's population that began in the 1820s with the influx of immigrant laborers from Europe. The loss of open spaces limited the later tenement dwellers' access to many fruits, since they no longer had the option of gathering naturally occurring fruits or planting fruits in gardens or as ornamental fruit trees and shrubs on their lots.

The recovery of these presumably expensive fruits from working-class contexts shows that recent immigrants had access to and consumed high-status foodstuffs. The recovery of such a wide variety of fruit species from tenement privies confirms Yamin's (1996) observation that recent immigrants settling in Five Points quickly began purchasing the same consumer goods as the wealthier and higher-status members of New York society.

The greater density of fruit remains associated with artisan contexts indicates that affluent artisans (mostly property owners) had greater access to and consumed more fruits than poor immigrants. Whereas fruits were probably an everyday table food in early-nineteenth-century artisan households, they probably represented an occasionally consumed special treat in later immigrant laborer households. A detailed examination of the fruit assemblages associated with the Irish tenement cesspool (Feature J) used at 472 Pearl Street between the 1840s and the 1860s and the early-nineteenth-century artisan-class Cross family privy (Feature B, Stratum V) located at this same address illustrates the similarities and differences in the distribution of fruits in tenement and artisan features.

At first glance, the fruit assemblage found in Feature J, a cesspool associated with a mid-nineteenth-century septic system servicing an Irish tenement located at 472 Pearl Street, suggests that poor immigrants had the same access to fruits as the more affluent artisans who occupied the project area in the first quarter of the nineteenth century. The recovery of 14 of the 16 identified fruits from the Irish immigrant tenement cesspool (Feature J) was somewhat surprising, since a previous study (O'Steen and Raymer 1995) comparing macroplant assemblages from middle- to upper-income households to those from poor working-class residences found a much lower diversity of fruit taxa associated with working-class contexts. The only other privy from the Five Points neighborhood that exhibited such a great diversity of fruit taxa was the lower portion of Feature B, which was related to the household of cabinetmaker Isaac Cross. Cross lived at 472 Pearl Street in the early nineteenth century. Feature B contained 14,607 fruit seeds from all fourteen fruits. Feature J yielded 8,951 fruit pits and seeds.

Although the species diversity of fruits associated with the Irish immigrant tenement is almost as great as that of the well-to-do Cross family, there is a significant difference between these two occupations. When one considers that the cesspool serviced over 30 households comprised of more than 100 individuals, as opposed to the Cross privy that was used by a single family and five or six adult tenants, the disparity in the density of fruit seeds and pits found in the two features becomes more significant. It is apparent that fruits were more common in the Cross family's diet than they were in the diet of the mid-nineteenth-century Irish tenants who used Feature J. The greater density of fruit remains associated with artisan contexts indicates that affluent artisan property owners had greater access to and consumed more fruits than poor immigrants. This confirms the earlier finding of O'Steen and Raymer (1995).

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; Raymer 1993, 1995; Raymer and O'Steen 1993, 1994; Cummings and Puseman 1994; O'Steen et al. 1995a, 1995b; O'Steen and Raymer 1995). 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 (Gillespie 1959; Angier 1974; Hall 1976; Peterson 1977). Root (1980) reports that wild blueberries were 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 (Krochmal and Krochmal 1973; Crellin and Philpott 1989). Griffith (1847) states that the fruit, leaves, and root bark were useful in the treatment of mouth sores and diarrhea and other bowel complaints. Rafinesque (1828–1830) discusses this taxon as a diarrhea cure. The berries were once rendered into a syrup-like beverage that was consumed for chronic dysentery, and the leaves and root bark were made into a tea that was administered as a treatment for sore throats and diarrhea (Krochmal and Krochmal 1973; Angier 1978). The blueberry seeds found in the Five Points samples, particularly the tenement occupancies, likely originated from commercial fruit stalls.

Huckleberry

Approximately 40 species of huckleberry (*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 berry-like drupes containing 10 hard, seed-like 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 were not apparently favored as ornamentals in nineteenth-century gardens; no mention of *Gaylussacia* sp. is made in either Favretti and Favretti's (1990) or Leighton's (1987) listing of popular nineteenth-century 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, since Hedrick (1972) noted that fruits of the species *Gaylussacia frondosa* were more valued in late-nineteenth-century commercial markets than other varieties. Huckleberry was not apparently utilized as a medicinal remedy in the nineteenth century, as this taxon was not recorded in the historic literature reviewed for this report as a medicinal herb (Grieve 1931; Justice 1939; Massey 1942; Coon 1963; Krochmal et al. 1969; Krochmal and Krochmal 1973; Angier 1978; Cox 1985; Crellin and Philpott 1989; Foster and Duke 1990; Phelps Brown 1993).

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; Raymer and O'Steen 1993, 1994; Raymer 1993, 1995; Cummings and Puseman 1994; O'Steen et al. 1995a, 1995b; O'Steen and Raymer 1995). Blackberries/raspberries, which are distributed throughout the eastern United States, commonly form thickets along fence rows and roadsides, within old fields, and in other disturbed habitats. The succulent berries are available for harvest from the late spring through midsummer (Bailey 1949; Radford et al. 1968). Blackberry/raspberry 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; Peterson 1977; Medve and Medve 1990).

Fruits of the genus *Rubus* 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 dried blackberry/raspberry root bark were used to control diarrhea, as a blood purifier, and as a spring tonic. Dried blackberry roots were sold commercially in the nineteenth century. Decoctions of the roots were gargled for 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 (Coon 1963; Krochmal and Krochmal 1973; Angier 1978; Crellin and Philpott 1989). *Rubus* sp. berries were either collected from plants growing on the lots or purchased from local fruit stands.

Cherry

Cherry trees, which grow to a height of forty 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 (Leighton 1987; Favretti and Favretti 1990). 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 (*P. serotina*). Domesticated European cherries, which included the common cooking cherry (*P. cerasus*) and sweet cherry (*P. 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 (Gillespie 1959; Angier 1974; 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 (Krochmal and Krochmal 1973; Crellin and Philpott 1989). The berries were used as a treatment for diarrhea (Krochmal and Krochmal 1973; Angier 1978). 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 Five Points lots, it is more likely that 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; Radford et al. 1968; Britton and Brown 1970).

Like the cherry, these small fruit trees were popular lawn and garden trees in the nineteenth century (Leighton 1987; Favretti and Favretti 1990). 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 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 Euro-American 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 preserves, desserts, and beverages. Plums were made into jams and jellies, mixed with sweeter fruits in pies, and added to fruit compotes. Plums were used to make sweet wine and have been used to flavor liquor (Gillespie 1959; Angier 1974; 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 only recommended as a laxative, in the form of prunes. The plum pits found in the Five Points assemblage likely represent domesticated varieties that were purchased at market.

Common 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 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; Radford et al. 1968; Britton and Brown 1970). Apples were commonly planted in the nineteenth century as lawn and garden ornamentals and as a source of seasonal fresh fruit (Leighton 1987; Favretti and Favretti 1990). 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 (Gillespie 1959; Angier 1974; 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) states 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). The apple seeds found at Five Points were either purchased at market or originated from ornamental trees grown on the lots. Minimally, the seeds found in tenement contexts probably were bought, since the crowded conditions of the lots during the second half of the nineteenth century afforded little space for ornamental trees to be planted.

Elderberry

Like blackberry/raspberry and blueberry, elderberry seeds are found in most nineteenth-century archeobotanical assemblages in the East (Cummings 1993; Raymer 1993, 1995; Raymer and O’Steen 1993, 1994; Cummings and Puseman 1994; O’Steen et al. 1995a, 1995b; O’Steen and Raymer 1995). 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, flowers in the spring and fruits in October. Elderberry trees are found throughout North America and Europe in moist woods, roadside ditches, thickets, stream banks, and marsh edges (Coon 1963; Radford et al. 1968; Angier 1974).

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 (Leighton 1987; Favretti and Favretti 1990). 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 for sunburn, to relieve itching, and to remove freckles (Coon 1963). Elderberry has been used in folk remedies as a cure-all 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, battered and fried as fritters, and made into tea and sweet-smelling wine (Fernald and Kinsey 1958; Gillespie 1959; Hall 1976; Peterson 1977; Medve and Medve 1990). Green blossoms were pickled and served in place of capers (Hedrick 1972; Bryan and Castle 1974). Unlike the fruit trees represented in the macroplant assemblage, which were almost certainly purchased at markets, the 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 New York City markets.

Fig

Like blackberries/raspberries, fig seeds were found in the majority of the sampled contexts. Fig seeds are almost ubiquitous in nineteenth-century contexts. They are particularly prevalent in privies (Cummings 1993; Raymer 1993, 1995; Raymer and O'Steen 1993, 1994; Cummings and Puseman 1994; O'Steen et al. 1995a, 1995b; O'Steen and Raymer 1995). The genus *Ficus* includes trees, shrubs, and climbing vines and consists of more than 2,000 species in tropical and subtropical countries. One species of fig, *F. 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 there are numerous references to the fig in the Bible. Figs were also a favorite fruit of the Greeks and Romans. Figs 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 employment of figs in cases of "habitual constipation" and mentioned their use in poultices. The figs found in the Five Points neighborhood were apparently enjoyed by both the relatively affluent artisan class and the immigrant-tenants.

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, *V. labrusca*, and the muscadine, *V. 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 (Ward 1941; Radford et al. 1968; Hedrick 1972; Hall 1976; Root 1980).

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 (Hedrick 1972; Hall 1976; 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.

Mulberry

The mulberry is a small deciduous tree that was popular as a medicine, for its edible fruit, and as an ornamental (Bailey 1949; Fernald and Kinsey 1958; Krochmal and Krochmal 1973; Crellin and Philpott 1989; Medve and Medve 1990). Its fruits ripen from June to July and its favored habitat is rich soil horizons in alluvial woods (Radford et al. 1968; Britton and Brown 1970). 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 (*M. 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 (*M. 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. Mulberries were popular lawn trees in the nineteenth century (Bailey 1949; Radford et al. 1968; Angier 1974; USDA 1974; Leighton 1987; Crellin and Philpott 1989; Medve and Medve 1990).

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 hard to gather, fragile (easily bruised), and hard to keep or store (Root 1980; Medve and Medve 1990). 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. There were repeated attempts to establish silk industries in the United States in the early nineteenth century, all of which failed. Native red mulberries were apparently deliberately planted by American Indian groups, as 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 (Fernald and Kinsey 1958; Gillespie 1959; Angier 1974; Hall 1976; Peterson 1977; Medve and Medve 1990). Mulberries

are often hard 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) discusses the medicinal properties of the fruit 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 (Coon 1963; Krochmal and Krochmal 1973; Angier 1978). The native American species, red mulberry, was apparently 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. The mulberries found at Five Points were probably purchased from fruit stalls.

Peach

The peach was first brought to the New World by the Spanish, 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 (Krochmal et al. 1969; Crellin and Philpott 1989). The flowers were described in the *Colonial Period* as a treatment for fever and pains. The fruits, leaves, kernels, and flowers were used as home remedies for stomach ailments, liver problems, and as a laxative in the nineteenth century (Crellin and Philpott 1989). Peaches were not apparently highly regarded by nineteenth-century American physicians, as this fruit was not even mentioned in such influential nineteenth-century medicinal texts as Griffith (1847) or Johnson (1884). The peach pits found in the Five Points deposits almost certainly derived from fruits purchased from local vendors.

Serviceberry

Serviceberries (*Amelanchier* sp.), which are also known as Juneberries, are comprised of about 25 species of shrubs and small trees that seldom grow more than 30 feet high. Serviceberries were primarily valued in the nineteenth century for their succulent fruits; however, they also had a minor reputation as a medicinal remedy and were sometimes grown as ornamentals. Leighton (1987) lists one species (*A. ovalis*) that was grown in nineteenth-century gardens as an ornamental. Bailey (1949) states that serviceberries are sometimes planted as ornamentals because of their impressive white flowers and so that their edible berries can be easily harvested. Serviceberry fruits ripen in the Northeast from April to July. This genus tends to form thickets in wooded areas and occupies a wide range of habitats, including both wet, swampy areas and dry, rocky areas (Radford et al. 1968; Britton and Brown 1970). Britton and Brown (1970) list six varieties as native to the northern United States and Canada.

This native of North America has been used for centuries by Native Americans, primarily as a major component of pemmican (Angier 1974). Serviceberry fruits are eaten fresh, made into wine, made into pies, added to pancakes and muffins, and prepared as a fruit. Serviceberries are commonly preserved for later use as jellies and jams and by drying. Because of their tart flavor, the fruits make excellent pies, breads, preserves, and wines (Fernald and Kinsey 1958; Gillespie 1959; Angier 1974; Hall 1976; Medve and Medve 1990). Serviceberries are often difficult to procure in the wild because the fruits are a major seasonal wildlife food. The berries are particularly sought by songbirds (Angier 1974; Medve and Medve 1990).

According to Crellin and Philpott (1989), the serviceberry was never very popular as an herbal remedy in America. The main interest in this small tree was for its edible fruit. A few medical references, such as Millsbaugh (1884), discuss herbal remedies made from serviceberry bark. Crellin and Philpott (1989) note that the bark was used in the same manner as peach, apple, and wild cherry bark, as a preventative for coughs and colds. The exclusive recovery of serviceberry seeds from the brothel privy (Feature AG) and the Cross family privy (Feature B) indicate the relatively high-status households using these features had access to a greater variety of fruits than poorer tenement dwellers who occupied the project area later in the nineteenth century.

Strawberry

Strawberry fruits, which grow wild in old fields and along woodland borders, ripen from March to June (Radford et al. 1968; Angier 1974; Medve and Medve 1990). 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, since 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 blackberries/raspberries, 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 were once used as a cosmetic (Coon 1963; Krochmal and Krochmal 1973; Angier 1978; Crellin and Philpott 1989). 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). The recovery of strawberry seeds is suggestive of either the cultivation of these plants in kitchen gardens or the purchase of strawberries from fruit stands.

Cantaloupe/Muskmelon

A single cantaloupe/muskmelon seed, *Cucumis* sp., was found in the mid-nineteenth-century tenement cesspool located at 472 Pearl Street. This seed probably originated from fruits purchased from a local fruit stand. 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 (*C. sativus*) and cantaloupe/muskmelon (*C. melo*). All melons fall within the same species, *C. melo*. Three principal groups of melons are recognized by taxonomists: muskmelons, *C. 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 in 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). The cantaloupe/muskmelon found in Feature J, which dates between the 1840s and 1860s, shows that *Cucumis* sp. fruits were available in New York markets in the mid-nineteenth century.

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 (Grieve 1931; Crellin and Philpott 1989; Phelps Brown 1993).

Watermelon

Watermelon seeds, *Citrullus vulgaris*, were found in the mid-nineteenth century tenement cesspool located at 472 Pearl Street (Feature J) and in the early-nineteenth-century Cross family privy (Feature B). These seeds probably originated from fruits purchased from local fruit stands. The recovery of watermelon seeds from early-nineteenth-century contexts shows that watermelons were available in New York throughout the nineteenth century. The watermelon seeds found in the tenement privy demonstrate that poor New Yorkers had access to and desired fresh fruit in the mid-nineteenth century. 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). Watermelons, which are not native to North America, were 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 (Grieve 1931; Crellin and Philpott 1989). 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

Eleven plant taxa, which include 3 domesticated grains (maize, wheat, and an unidentifiable cultivated grain), 2 domesticated beans (alfalfa, common bean), 2 cucurbits (squash/pumpkin and unidentifiable cucurbit), eggplant, ground cherry, lettuce, and tomato, are classified as domestically grown vegetables. The majority of these plants are domesticates that were probably readily available to the Five Points residents, as either garden crops that were grown by the residents or through market purchases. The recovery of these plant taxa provides archeological evidence of probable dietary staples of both the resident owners and tenants of the Five Points neighborhood.

Ninety-six percent of the vegetable seeds derived from a single taxon, tomato (*Lycopersicon esculentum*). Tomato seeds were recovered from 52 percent of the features (Figure 63). The distribution of tomato seeds in the sampled features indicates a distinct trend of increasing abundance with the passage of time (Table 110). Whereas only 194 tomato seeds were found in artisan contexts that date to the first quarter of the nineteenth century, 1,585 came from mid- to late-nineteenth-century tenement features. This is to be expected, since tomatoes were not commonly consumed in the United States until the mid-nineteenth century. The 8:1 ratio of tomato seeds in mid- to late-nineteenth-century tenement contexts versus early-nineteenth-century artisan contexts indicates the increasing popularity of this vegetable as the nineteenth century progressed.

Tomatoes were first widely consumed in the United States in the mid-nineteenth century. This member of the nightshade family is 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, where the fruits were used in sauces, 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" 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 nineteenth-century privies, which attests to the popularity of this vegetable (O’Steen and Raymer 1995).

The seeds of cucurbits (squash/pumpkin, *Cucurbita* sp.; and unidentifiable cucurbit) were found in 38 percent of the sampled features, including both artisan-class (Features AK, B-Cross, C, D) and immigrant-tenement (Features AM, J) occupations. Cucurbits were far more abundant and ubiquitous in artisan contexts, which suggests that this vegetable was more commonly consumed by the more well-to-do early residents of Block 160. Whereas cucurbits were present in 50 percent of the artisan features, this taxon was only associated with 28 percent of the immigrant-tenant occupations. The 1:10 ratio of cucurbit seeds in mid- to late-nineteenth-century tenement contexts versus early nineteenth-century artisan contexts indicates how much more common this taxon was in the diet of the artisan class. Eighteen squash/pumpkin seeds also came from the brothel privy (Feature AG).

The abundance of cucurbit remains associated with the early-nineteenth-century artisans relative to the mid-nineteenth-century immigrants is likely an artifact of the artisans’ greater purchasing power. However, this vegetable may have been less common in the immigrants’ diets because of differing ethnic food preferences between the Anglo-American artisans who first settled the Five Points and the Irish who immigrated en masse to the United States in the 1840s. Alternatively, cucurbits may have been less common later in the nineteenth century because of the loss of open spaces for kitchen gardens within Block 160 as population densities increased and the area became more built up.

The distribution of the other vegetables was more limited (Figure 63; Table 110). Two specifically identified grains, maize (*Zea mays*) and wheat (*Triticum aestivum*), were found in three features (Features J, AN, N). An unidentified carbonized grain was found in Feature J. The grains, all of which were carbonized, were almost certainly purchased at market. Two legume seeds were found in two privies, Features AK (common bean, *Phaseolus vulgaris*) and AN (alfalfa, *Medicago sativa*). Lettuce (*Lactuca sativa*) seeds were recovered from one artisan context (Feature B-Cross) and one Irish immigrant context (Feature J).

Two members of the nightshade family, eggplant (*Solanum melongea* var. *esculentum*) and ground cherry (*Physalis* sp.), were found in four features. A single eggplant seed was found in one of the Cross family privies (Feature B) located at 472 Pearl Street. Six ground cherry seeds came from a tenement privy, Feature AI, an artisan privy, Feature AD, and the Goldberg deposit in Feature B (Stratum IV). The ground cherry seeds, unlike the other vegetables, may not represent food remains. Ground cherries were sold in nineteenth-century markets; however, this plant is a widely distributed weed as well. Ground cherry, 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 also 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).

The low incidence of these seven domesticates is probably an artifact of poor preservation in the macroplant assemblage, rather than reflective of a relative lack of dietary importance for these taxa or differences in the diets of the inhabitants of the various residences. Documentary evidence indicates that most of these plants were dietary staples throughout the nineteenth century in the United States.

Four vegetables, including squash/pumpkin, lettuce, maize, and ground cherry, are recorded in the botanical and historic literature reviewed for this project as nineteenth-century medicinal home remedies (Crellin and Philpott 1989). Unlike many of the fruits found in the Five Points features, none of these domesticates was very popular in the nineteenth century for medicinal use. The majority of these plants are domesticates that were probably readily available to the Five Points residents, as either garden crops that were grown by the residents or through market purchases.

Lettuce juice was promoted to some extent in the 1800s as a sedative and anodyne. Crellin and Philpott (1990) also report that the juice was used as a skin salve and heart stimulant. Angier (1978) reports that ground cherry root tea was used as a cure for stomach problems and that the fruits were used as a scurvy preventative. Corn silk was used by African Americans and Native Americans as a folk remedy for kidney diseases. This remedy was popularized in the 1880s when pharmaceutical companies, such as Parke-Davis, marketed corn silk as a diuretic and cure for kidney ailments (Crellin and Philpott 1989).

Nut-Bearing Shade Trees

Two varieties of economically important domestically grown nut taxa were retrieved by flotation and during excavation. These are hickory nuts and acorns. Hickories and oaks were commonly grown around nineteenth-century habitations as shade trees and for their nuts (Radford et al. 1968). A single fragment of acorn shell was found in the Hoffman privy (Feature N) and a piece of hickory shell came from the brothel privy (Feature AG).

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, 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).

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 (Radford et al. 1968; Britton and Brown 1970). 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 can be ground for flour, which makes excellent muffins and pancakes. Acorns can be roasted and used as a coffee substitute. Acorns from white oaks are more palatable than 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 (Gillespie 1959; Angier 1974; Peterson 1977). Oaks were deliberately planted around dwellings in the nineteenth century as shade trees and for their acorns (Leighton 1987; Favretti and Favretti 1990).

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 (Krochmal and Krochmal 1973; Crellin and Philpott 1989). Acorns were only used medicinally 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 (*Q. velutina*) were considered the most valuable species for medical uses in nineteenth-century America (Crellin and Philpott 1989). The recovery of acorn shell from Feature N may indicate the presence of an oak at 474 Pearl Street, ca. 1830.

Hickory

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. 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 (*C. ovata*) syrup is considered a delicacy. Pecans (*C. illinoensis*) are widely cultivated in orchards in the southern and southwestern states.

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. There is evidence 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 Native American groups as a diuretic, a laxative, a treatment for skin ailments, a tonic, and for gynecological problems (Moerman 1986). The recovery of a single fragment of hickory shell from the brothel privy probably originated from nuts served to the fairly well-to-do brothel patrons or by the prostitutes dwelling at 10-12 Baxter in the first half of the nineteenth century.

Naturally Occurring Edible Herbaceous Plants

Twelve plants, including carpetweed, dock, goosefoot, pigweed, three smartweeds, pokeweed, purslane, catchfly, clover, and wood sorrel, are recorded as edible herbs. Three smartweeds (*Polygonum* sp.), including Pennsylvania smartweed, wild buckwheat, and an unidentified smartweed, are represented in the Five Points macroplant assemblage.

These 12 plants may document the use of naturally occurring plants in the site area as dietary supplements. On the other hand, these taxa may represent naturally occurring yard weeds. With this in mind, the documentary evidence on the historic utilization of these taxa and their condition and distribution within the archeological deposits were carefully assessed. The evidence suggested that all of these plants were deposited in the privies in the nineteenth century and that many of these edible herbaceous weeds represented food remains.

All 12 herbs have a long history of use as edible wild plant foods, both by Native Americans and immigrants of European and African descent. The leaves of all 12 have been consumed as potherbs, and the seeds of several can be ground for flour (Fernald and Kinsey 1958; Gillespie 1959; Hall 1976; Peterson 1977; Cox 1985; Medve and Medve 1990). All of these plants have been used historically as gathered dietary supplements. Some varieties of goosefoot were cultivated in the nineteenth century as a medicinal herb, and pigweed was used as a bedding plant (Leighton 1987). Additionally, all of these plants are recorded as medicinal herbs (Millsbaugh 1884; Krochmal et al. 1969; Krochmal and Krochmal 1973).

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 macro-remains represent economically utilized plant remains that were either directly deposited into the privies in feces or dumped with trash. The condition of the seeds is suggestive of relative age, since most of the seeds appear old, some are mineralized, and many have fecal material adhering to them. Further, the privies from which the edible weed seeds were recovered were also densely packed with domesticated food remains, including fruits, vegetables, and spices. Relatively few non-economic weeds were found within the privies. These plants may represent naturally deposited seed rain. In the opinion of the author, the condition and overall abundance of these edible naturally occurring weeds is more suggestive of food remains.

Two plants, purslane and goosefoot (*Chenopodium album*, *C. sp.*), are virtually ubiquitous in the analyzed features. Purslane seeds were identified in 89 percent of the sampled features. Purslane was found in 86 percent of the tenement features, 88 percent of the artisan features, both Jewish immigrant privies, and

the brothel privy (Figures 62 and 63). These seeds probably originated from weeds growing in the project locality in the nineteenth century. Purslane is commonly found in nineteenth-century archeological deposits in the eastern United States (O'Steen and Raymer 1995).

Goosefoot (*Chenopodium album*) seeds were found in 74 percent of the sampled features. Goosefoot, also known as lambsquarters, was recovered from 71 percent of the immigrant tenement features and 75 percent of the artisan features. *Chenopodium album* seeds were also found in both Jewish features and the brothel privy. Although the ubiquity of lambsquarters and purslane was similar in both early-nineteenth-century artisan contexts and mid-nineteenth-century immigrant contexts, the incidence of these taxa associated with tenement contexts is strikingly lower (Table 111). The ratio of goosefoot (1:6) and purslane (1:5) seeds found in tenement versus artisan contexts illustrates the higher density of herbaceous weed seeds found in early-nineteenth-century features. With the exception of the smartweeds, which were almost exclusively associated with two tenement privies (Features A, J), and catchfly, which was restricted to a single tenement context (Feature J), this same pattern is evident for the entire assemblage of edible herbaceous plants.

Thirteen hundred seventy-four edible herb seeds were found in artisan contexts that date to the first quarter of the nineteenth century; however, only 275 came from mid- to late-nineteenth-century tenement features. The 1:5 ratio of edible herb seeds in mid- to late-nineteenth-century tenement contexts relative to early nineteenth-century artisan contexts indicates a decreasing occurrence of wild plants in the project area as the nineteenth century progressed. The ubiquity of these plants, again with the exception of the smartweeds and catchfly, ranges from slightly greater to significantly greater within the artisan features.

Dock seeds were found in 32 percent of the sampled features, including 50 percent of the artisan-class (Features AD, AF, B-Cross, D) and 29 percent of the tenement (Features A, J) occupations. Unlike purslane and lambsquarters, which had similar ubiquity distributions, both the ubiquity and abundance of dock seeds is greater in artisan-class features. This taxon probably occurred naturally in the Five Points neighborhood in the nineteenth century. Dock greens may also have been purchased at local markets. These seeds quite possibly are artifacts of the consumption of this plant for food.

The distribution of other edible herbs is more limited. Edible herbs with limited distributions include catchfly, clover, knotweed/smartweed, pigweed, pokeweed, and wood sorrel. Pokeweed seeds were found in four privies at Five Points, including three (40% ubiquity) that were associated with the early nineteenth-century artisan-class occupation of the project area (Features B-Cross, E, N) and one (14% ubiquity) associated with the mid- to late-nineteenth-century tenement occupation (Feature J). These seeds, which almost certainly date to the time the site was occupied, likely originated from weeds growing in the locality. They may represent the remnants of economic plants that were utilized by the inhabitants for food and/or medicine.

The distribution of smartweeds, *Polygonum* sp., was restricted to a small number of immigrant-tenant features. Smartweed, *P. pennsylvanicum*, was only found in two features dating to the tenement occupation of the Five Points. These features include the Feature A school sink, which dates to the last quarter of the nineteenth century and is associated with an Italian occupation, and the mid-nineteenth-century Irish tenement cesspool at 472 Pearl (Feature J). Wild buckwheat seeds, *P. convolvulus*, were found in Feature A and in the Goldberg deposit in Feature B. The almost exclusive recovery of these seeds from Feature A, where 89 percent (34 of 38 seeds) of the *Polygonum* sp. seeds were found, suggests either that this weed did not grow in the project area in the first part of the nineteenth century, which seems unlikely, or that the smartweeds were utilized for some purpose by the Italians living at 472 Pearl Street at the end of the nineteenth century.

A single carpetweed seed was found in the early-nineteenth-century Cross privy (Feature B). This seed, recovered from the privy fill, almost certainly dates to the time of the site's occupation, and probably originated from a naturally occurring weed growing on the Cross property in the early nineteenth

century. The poor recovery of this taxon was somewhat surprising, since carpetweed is commonly highly ubiquitous within nineteenth-century archeological assemblages. It is likely that the lack of recovery is an artifact of the flotation techniques utilized when the Five Points samples were processed in 1991, rather than a result of the lack of this taxon growing in the site vicinity. It is possible that the mesh size of the light fraction trap was not fine enough to capture these tiny weed seeds.

Like carpetweed, catchfly, *Silene* sp., is represented by a single seed that was found in the fill of the tenement cesspool, Feature J. This seed, because of its context, probably dates to the mid-nineteenth-century occupation of Five Points. Nine clover seeds were found in the fill of the Hoffman family privy at 474 Pearl Street. Like the previously discussed carpetweed and catchfly, these clover seeds almost certainly date to the early nineteenth century when this privy was open and in use. Clover likely grew naturally on the Hoffman property.

Pigweed seeds were found in a single artisan-class privy (Feature AD) that dated to ca. 1800. These seeds probably originated from yard weeds growing on the property at this time. Two wood sorrel seeds were found in a single artisan-class privy, Feature D, which dates to the first quarter of the nineteenth century and was used by the Wilson family. These seeds probably document yard weeds that were growing naturally at 472 Pearl Street in the early 1800s.

The distribution of edible herbs in the sampled features indicates a distinct trend of decreasing abundance with the passage of time (Table 110). This pattern is repeated in the distribution of other taxa (edible and inedible herbaceous weeds, grasses, condiments, some fruit species) that would have been growing wild in open spaces on the lots (weeds and grasses); plants that are easily propagated in restricted spaces, such as small vegetable and herb gardens (vegetables except for cereal grains, strawberries, grapes, cucurbits, all four condiments, and perhaps wormseed and jimsonweed); and plants that are deliberately planted as ornamental and economically useful yard trees and shrubs (elderberry, huckleberry, mulberry, serviceberry, blackberry / raspberry, cherry, plum, apple, peach, and perhaps fig trees).

This pattern of decreasing naturally occurring wild plants, kitchen garden species, and economically useful trees and shrubs corresponds to the massive increase in population growth that occurred with the influx of immigrants that began in the 1820s. The lower density and ubiquity of seeds found in mid-nineteenth-century features illustrates how increasing population density restricted the amount of open space in the project area. The almost eightfold increase in population between 1800 and 1860 within Block 160 caused most of the open spaces in the artisans' yards to be built upon, paved, or otherwise enclosed. The loss of open spaces limited the later tenement 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 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.

Carpetweed

Carpetweed, *Mollugo verticillata*, is an annual herbaceous weed that was introduced to the United States from the American tropics. This noxious weed, which is commonly found in sandy soils in old fields, gardens, and yards, is now virtually ubiquitous throughout North America (Britton and Brown 1970; Cox 1985). Carpetweed greens may be cooked and eaten as a potherb or added to salads as a fresh green (Cox 1985). This plant has become popular in recent decades as a nutritional supplement (Crellin and Philpott 1989).

Carpetweed was never very popular as a domestic medicine in the United States. It was apparently completely ignored by professional medical practitioners in the nineteenth century (Crellin and Philpott 1989). According to Cox (1985), carpetweed has a minor reputation as a treatment for diarrhea and mouth and throat sores. Crellin and Philpott (1989) also attribute diuretic properties to this plant. No definite research has proved or disproved this plant's purported use as a diuretic and cholesterol-lowering agent (Crellin and Philpott 1989).

Catchfly

Like carpetweed, catchfly, *Silene* sp., is represented by a single seed found in the fill of the tenement cesspool, Feature J. This genus, which is represented by 16 native American and naturalized European species in the northern United States and Canada, consists of both annual and perennial herbaceous plants that are found in both moist and dry conditions within woods, fields, and waste places throughout the Northeast. Cox (1985) and Gillespie (1959) list one species of catchfly, *S. cucubalis*, as an edible potherb whose young shoots can be parboiled, creamed, or eaten alone as a pea-like green vegetable. Cox (1985) discusses a second species of *Silene*, fire pink (*S. virginica*), as a medicinal herb whose root has been used in the treatment of intestinal worms. This plant was not apparently highly regarded as a medicinal remedy, as no mention of its use as a medicinal herb was found in other medicinal plant books reviewed for this project (Millspaugh 1884; Grieve 1931; Justice 1939; Massey 1942; Coon 1963; Krochmal et al. 1969; Krochmal and Krochmal 1973; Angier 1978; Crellin and Philpott 1989; Foster and Duke 1990; Duke 1992; Phelps Brown 1993).

Clover

Clover, *Trifolium* sp., is a biennial or perennial herbaceous legume which 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 (Peterson 1977; Cox 1985). European red clover, *T. 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 (Hedrick 1972; Angier 1974). 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 (Peterson 1977; Cox 1985). 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 (Radford et al. 1968; Britton and Brown 1970; Cox 1985; Medve and Medve 1990). 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 (Gillespie 1959; Angier 1974; Hall 1976; Cox 1985). Dock has been cultivated and gathered from the wild for centuries in Europe (Hedrick 1972). Yellow dock, *R. crispus*, is a perennial

herbaceous weed that was introduced from Europe. Yellow dock fruits are available for harvest from May through July (Radford et al. 1968; Cox 1985; Medve and Medve 1990).

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 also as 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).

Euro-American settlers consumed dock tea as a laxative, tonic, blood purifier, and appetite stimulant (Angier 1978). Dock was used to make poultices and to treat ringworm (Millspaugh 1884; Krochmal et al. 1969; Krochmal and Krochmal 1973). Medical interest in dock diminished rapidly in the twentieth century (Crellin and Philpott 1989). This taxon probably occurred naturally in the Five Points neighborhood in the nineteenth century. Dock greens may also have been purchased at local markets. These seeds quite possibly are artifacts of the consumption of this plant for food. Dock seeds were found in six features, including both artisan-class and tenement occupations.

Goosefoot

Two species of *Chenopodium*, goosefoot (*C. album*) and wormseed (*C. ambrosoides*), were recognized in the macroplant assemblage. Goosefoot was commonly consumed as a potherb in the past. Wormseed, on the other hand, is not edible. Wormseed oil was widely used in nineteenth-century America as an herbal remedy for intestinal worm infestations. The distribution of goosefoot, an edible herbaceous weed, is discussed in this section. Wormseed will be discussed separately under the rubric of potential medicinal herbs.

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 (Radford et al. 1968; Britton and Brown 1970). A single plant can produce up to 100,000 seeds. Goosefoot seeds were found in 74 percent of the sampled features. Goosefoot probably grew in waste areas in the Five Points locality during the nineteenth century.

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 (Fernald and Kinsey 1958; Gillespie 1959; Hedrick 1972; Hall 1976; Peterson 1977; Cox 1985; Medve and Medve 1990). Goosefoot greens and seeds have been used historically as a gathered dietary supplement. Euro-American 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 (Leighton 1987; Favretti and Favretti 1990; Coffey 1993). Lambsquarters (*C. album*) was not recorded in the literature reviewed for this report as a medicinal herb (Millspaugh 1884; Grieve 1931; Justice 1939; Massey 1942; Coon 1963; Krochmal et al. 1969; Krochmal and Krochmal 1973; Angier 1978; Cox 1985; Crellin and Philpott 1989; Foster and Duke 1990; Duke 1992; Phelps Brown 1993).

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 (Radford et al. 1968; Britton and Brown 1970; Medve and Medve 1990). 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 (Gillespie

1959; Angier 1974; Hall 1976; Cox 1985). 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. hypochondriacus*, *A. tricolor*) were grown as garden ornamentals from the late eighteenth through the nineteenth centuries (Leighton 1987; Favretti and Favretti 1990).

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 once used to quell internal bleeding, dysentery, and diarrhea (Coon 1963; Krochmal and Krochmal 1973; Angier 1978; Coffey 1993). Pigweed was believed to reduce excessive menstrual flows and internal hemorrhaging. It was also administered as a treatment for stomach ulcers (Krochmal and Krochmal 1973; Angier 1978).

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 (Radford et al. 1968; Cox 1985).

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 (Gillespie 1959; Hall 1976; Cox 1985). The young leaves are canned and stored for future use 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; Hall 1976; Cox 1985).

Pokeweed was widely used as a folk remedy during the eighteenth and nineteenth centuries in the United States (Justice 1939; Massey 1942; Krochmal and Krochmal 1973; Cox 1985; Crellin and Philpott 1989). 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 as a laxative (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).

Purslane

Purslane seeds were virtually ubiquitous within the Five Points privies. These weedy annuals were identified in 89 percent of the sampled features. Purslane, *Portulaca oleracea*, is an annual herbaceous weed that was introduced to the United States from southern Europe. This plant, which fruits from May to October, is a widely distributed weed that grows in lawns, cultivated fields, along roadsides, and within virtually every disturbed habitat throughout the United States (Radford et al. 1968; Cox 1985). Purslane seeds are virtually ubiquitous in historical archeological contexts in the eastern United States.

Like goosefoot and pigweed, both the greens and seeds of purslane are edible. The young shoots and leaves, which can be gathered throughout the summer and regenerate rapidly after picking, are added to raw

salads, cooked as a green vegetable, and added to soups and stews as a thickener. The stems can be preserved by pickling. The seeds can be ground for flour, which is mixed with wheat flour in order to add flavor to baked goods (Gillespie 1959; Hall 1976; Cox 1985). In the past, purslane was cultivated in Yemen and Brazil; consumed as a potherb in Burma; added to soups and pickled in Italy and France; and consumed as a salad green in England (Hedrick 1972). Indeed, the French have developed an upright variety that is cultivated as a potherb (Bailey 1949).

Purslane has a minor reputation as a medicinal herb in the United States, particularly in the seventeenth and eighteenth centuries. Favretti and Favretti (1990) list this plant as a culinary and medicinal herb that was grown in American gardens from 1600 until 1776. It is not mentioned as an American garden plant in the nineteenth century (Leighton 1987; Favretti and Favretti 1990). Purslane was used in the sixteenth century to relieve indigestion and as an appetite stimulant. Astringent properties were also attributed to it, making it a useful remedy for hemorrhoids, heavy menstruation, and bloody fluxes. The Puritans reputedly consumed purslane in the seventeenth century as a scurvy preventative (Crellin and Philpott 1989).

The evidence suggests that purslane was not highly valued by nineteenth-century Euro-Americans, either as a potherb or an herbal medicine. According to Hedrick (1972) and Crellin and Philpott (1989), this herb was more popular in Europe than it was in America. Cobbett, in his *American Gardener* (1846), disdained purslane as a noxious weed that was eaten as a famine food by Frenchmen and pigs when nothing else was available. Crellin and Philpott (1989) found little evidence that purslane was a popular medicine in nineteenth-century America; however, it was accepted as a treatment for diarrhea and as a preventative for scurvy. The Parke-Davis pharmaceutical firm sold a liquid form in the 1890s which the company touted as a diuretic and refrigerant (Crellin and Philpott 1989).

Smartweeds

The smartweeds, *Polygonum* sp., which are available for harvest in the summer, are common herbaceous weeds of disturbed habitats throughout the United States and Canada (Radford et al. 1968; Britton and Brown 1970). Britton and Brown, in their *Illustrated Flora of the Northern United States and Canada* (1970), discuss 14 species of *Polygonum*. Two smartweeds (*P. pensylvanicum*, *P. convovulus*) were specifically identified in the Five Points plant assemblage. Pennsylvania smartweed, *P. pensylvanicum*, is a native American annual herb that is common throughout the eastern United States in alluvial settings and disturbed areas (Radford et al. 1968; Britton and Brown 1970). Wild buckwheat, *P. convovulus*, is an annual climbing vine that has a substantial rhizome. This smartweed, which was imported to the Americas from Europe, is widespread in disturbed habitats in the Northeast (Britton and Brown 1970; Cox 1985).

The seeds and greens of these herbaceous plants have long been utilized as a gathered dietary supplement 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 (Gillespie 1959; Angier 1974). Gillespie (1959) states that some varieties of smartweed were also used as a pepper substitute.

The smartweeds, particularly *Polygonum hydropiper* and *P. 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.

Wood Sorrel

Wood sorrel, *Oxalis stricta*, is a small perennial herbaceous plant that fruits from April to October and grows in variable habitats including moist areas, open woodlands, fields, and waste places (Radford et al. 1968; Britton and Brown 1970). Wood sorrel was introduced from Europe as a weed and has become widely naturalized in the United States (Britton and Brown 1970).

Wood sorrel has long been used in the Old World as a potherb, garden ornamental, and medicinal remedy (Bailey 1949; Hedrick 1972; Crellin and Philpott 1989). Fresh wood sorrel greens are gathered from the wild and added to salads and eaten as a fresh snack food (Gillespie 1959; Hedrick 1972; Peterson 1977). Bailey (1949) describes 13 cultivated varieties of *Oxalis*. He states that plants of the *Oxalis* genus are grown for their ornamental flowers and edible roots (Bailey 1949). Hedrick (1972) states that *O. acetosella* was cultivated in Europe as a garden vegetable. Crellin and Philpott (1989) indicate that although wood sorrel was used as a medicinal herb in Europe, it never became very popular in nineteenth-century America. Nineteenth-century medical references report that although this taxon is useful in treating scurvy, it was not commonly used by medical professionals (Crellin and Philpott 1989).

Possible Medicinal Herbs

Two possible medicinal herbs, jimsonweed and wormseed, were retrieved from multiple Block 160 features. Although neither of these widely distributed herbaceous weeds is recorded as edible, both were relatively important medicinal herbs in the nineteenth century. Jimsonweed is the most abundant and widely distributed herbaceous weed found in the Five Points assemblage. This plant was found in every feature but Feature AL, a mid-nineteenth-century tenement privy. Although this plant may represent an ornamental or medicinal herb that was deliberately planted by the Five Points residents, it is just as likely that it represents a non-economic weed that grew in the yards. Jimsonweed is virtually ubiquitous in nineteenth-century archeological deposits in the eastern United States (O'Steen and Raymer 1995).

Jimsonweed

Jimsonweed, *Datura stramonium*, is a widely naturalized endemic weed that was imported from Europe and grows abundantly on garbage heaps (Millspaugh 1884). Jimsonweed, which is poisonous, was planted in nineteenth-century gardens as an ornamental flower and is recorded as a narcotic medicinal herb (Leighton 1987; Crellin and Philpott 1989). Although this plant may represent an ornamental or medicinal herb that was deliberately planted by the inhabitants, it is just as likely that it represents a non-economic weed that grew in the yards.

Jimsonweed is recorded as a medicinal herb. Although poisonous, it was used as an antispasmodic, topical treatment for skin conditions, antiasthmatic, and sedative (Krochmal et al. 1969; Krochmal and Krochmal 1973; Crellin and Philpott 1989). 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 (Krochmal and Krochmal 1973; Crellin and Philpott 1989). 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.

Wormseed

Wormseed, *Chenopodium ambrosoides*, was identified in seven features (AF, AG, AN, B-Cross, E, J, N), among them four artisan-class (50% ubiquity) and one tenement (14% ubiquity) privies. Wormseed was also identified in the brothel privy (Feature AG) and a mid-nineteenth-century Jewish context (Feature AN). Wormseed probably grew in waste areas in the Five Points locality during the nineteenth century. This taxon is not edible; however, two species of *Chenopodium* (*C. ambrosoides*, *C. botrys*), both of which are known

as wormseed or Jerusalem oak, were highly regarded in the eighteenth and nineteenth centuries as medicinal herbs, particularly as a worm preventative.

Chenopodium ambrosoides was imported from South America, while *C. botrys* was brought to the Americas from Europe (Coon 1963; Hedrick 1972; Krochmal and Krochmal 1973; Crellin and Philpott 1989; Coffey 1993). Oil derived from the seeds of these plants was made into a tonic that was used to treat intestinal worms in humans as well as animals (Krochmal and Krochmal 1973). Cotton Mather avowed in 1724 that wormseed was an excellent worm killer. He also recommended this taxon as a cure for stomach pains and a poor appetite (Coffey 1993). Other eighteenth-century medicinal references indicated *Chenopodium* sp. for the treatment of coughs, asthma, as an antispasmodic, and for headaches (Crellin and Philpott 1989).

By the nineteenth century, wormseed's reputation as a treatment for intestinal worms, particularly roundworms, was firmly established. In the early 1800s, African Americans commonly used this plant for this purpose. F. P. Porcher, in an 1847 reference, reported that wormseed was routinely administered as a worm treatment on southern plantations (Crellin and Philpott 1989). Wormseed was cultivated in the United States until the twentieth century for the production of chenopodium oil, which was commercially marketed as a worm remedy (Crellin and Philpott 1989; Coffey 1993). In addition to its reported efficacy against roundworms, wormseed was also widely used in the South in the early twentieth century as a treatment for hookworms (Crellin and Philpott 1989).

Possible Ornamentals

Four possible ornamentals, including a tree (sycamore), two herbaceous plants (boneset, starthistle), and a cucurbit (the bottle gourd), were retrieved from four privies. Two taxa, sycamore (*Platanus occidentalis*) and boneset (*Eupatorium* sp.), were exclusively associated with tenement occupations. Bottle gourd (*Lagenaria* sp.) was found in a single artisan context, and two starthistle (*Centaurea* sp.) seeds came from both artisan and tenement contexts. Starthistle seeds were retrieved from one of the Wilson family privies, (Feature D) and the Irish tenement cesspool (Feature J) located at 472 Pearl Street. Two sycamore seeds were found in the tenement cesspool and three boneset seeds were found in the icehouse that serviced Conlon's saloon at 110 Chatham/464 Pearl. A single bottle gourd seed was found in Feature B, AS V, which was used by the Cross family.

The sycamore seeds likely document an ornamental shade tree growing in the vicinity of 472 Pearl Street in the mid- to late nineteenth century. The bottle gourd seed may have originated from ornamental or garden plantings of bottle gourds on the Cross family property in the first quarter of the nineteenth century. Both boneset and starthistle were common ornamental flowers in the nineteenth century; however, these plants are also common weeds of disturbed habitats. These seeds minimally document herbaceous weeds growing on the lots and may be residues of ornamental plantings.

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. Bottle gourds were not used for medicine and are edible, but not particularly palatable (Hedrick 1972). Sycamores were widely planted as shade trees in nineteenth-century gardens and yards (Leighton 1987; Favretti and Favretti 1990).

Twenty-one species of boneset, *Eupatorium* sp., are found in the northern United States and Canada. This taxon, which is inedible, favors both moist and dry conditions and is a relatively common weed of waste places in the East (Britton and Brown 1970). Several species of *Eupatorium* were planted as ornamentals in late-eighteenth- and nineteenth-century gardens (Leighton 1987; Favretti and Favretti 1990). One species, *E. perfoliatum*, was cultivated as a medicinal herb in home gardens during this same period (Favretti and Favretti 1990). This plant was once one of the most popular herbal remedies in domestic American medicine (Johnson 1884).

Boneset, a common ornamental in the nineteenth-century garden, was commonly prescribed by doctors throughout the nineteenth century and was listed in the United States Pharmacopoeia from 1820 until

1916. This virtual cure-all was touted as a quinine substitute, cough medicine, tonic, laxative, emetic, stimulant, febrifuge (worm medication), and topical astringent (Krochmal and Krochmal 1973; Crellin and Philpott 1989; Phelps Brown 1993). Phelps Brown (1993) recommended *Eupatorium perfoliatum* as an emetic, for the reduction of fevers, and as a treatment for dyspepsia in 1875. Another species, *E. purpureum*, was prescribed as a diuretic, stimulant, astringent, and tonic (Phelps Brown 1993). Boneset was popular among enslaved African Americans in the mid-nineteenth century as a treatment for intestinal worms (Crellin and Philpott 1989).

Ten species of starthistle (*Centaurea* sp.), eight of which are naturalized European varieties, grow wild in waste places in the northern United States and Canada. Starthistle was a popular constituent of flower beds in the late eighteenth century and throughout the nineteenth century (Favretti and Favretti 1990). This taxon is not edible; however, it sustains a minor reputation as a medicinal herb. Starthistle was once used on a limited basis as an ingredient in salves and as a diuretic (Crellin and Philpott 1989). Grieve (1931) records several species of *Centaurea* as having medicinal value. One species, *C. colchitropa*, is discussed as a treatment for stones, "fistula, and gravel" (Grieve 1931:802). Another species, *C. scabiosa*, is recommended as a diuretic, diaphoretic (produces perspiration), tonic, and topical astringent. Finally, *C. cyanus* is touted as a tonic, stimulant, remedy for scorpion bites, and treatment for wounds and mouth ulcers.

Non-Economic Weeds and Grasses

Three hundred fourteen seeds from seven probable non-economic herbaceous weeds (copperleaf, ragweed, bulrush, flatsedge, sedge, sedge family, nightshade) and 102 seeds from at least four grass family taxa (crabgrass, foxtail grass, goosegrass, grass family) were found in the Five Points features. Two of the herbaceous plants (sedge, copperleaf) and two of the specifically identified grasses (crabgrass, goosegrass) are weedy species with no recorded economic value. Although five of these taxa (bulrush, flatsedge, nightshade, ragweed, foxtail grass) have documented uses as edible, ornamental, and/or medicinal plants, the low numbers and distribution of these plants are more suggestive of naturally growing yardweeds.

All of the herbaceous weeds and grasses are adventive weeds that favor disturbed habitats and grow abundantly around human habitations and in agricultural fields (Kay and Lees 1913; Radford et al. 1968; Cox 1985). 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 in Block 160, their occurrence in the privy deposits can be used as indicators of how the inhabitants used outdoor spaces in the project area. Specifically, the distribution and abundance of these non-economic weeds, coupled with that of other naturally occurring plants, garden crops, and ornamentals, provides indirect evidence of the profound effect of increasing population density as the nineteenth century progressed.

In the case of the non-economic weeds and grasses, there is a distinct trend of decreasing abundance and ubiquity with the passage of time. Whereas 268 herbaceous weed seeds were found in artisan contexts that date to the first quarter of the nineteenth century, only 39 came from mid- to late-nineteenth-century tenement features. Thirty-one grass grains were found in tenement contexts, and 52 came from artisan features. The 1:5 ratio of weed and grass seeds in mid- to late-nineteenth-century tenement contexts versus early-nineteenth-century artisan contexts illustrates how population growth restricted the amount of open space in the project area.

Sedges (*Scripus* sp., *Cyperus* sp., *Carex* sp.) were found in 42 percent of the tenement features (A, AI, J) and 75 percent of the artisan contexts (Features AD, AF, B, C, D, N). Although they have been tentatively interpreted as weeds due to their common occurrence as noxious weeds in yards and fields, two taxa, bulrush (*Scripus* sp.) and flatsedge (*Cyperus* sp.), may represent food remains. Nightshade was restricted to two tenement privies, Features AM and J. Ragweed was only found in the Irish tenement cesspool (Feature J), while five copperleaf seeds came from a tenement context, Feature AM, and an artisan privy, Feature D. Grass family seeds were recovered from 29 percent (N=2) of the tenement features (Features

AM, J), 50 percent (N=4) of the artisan features (Features AD, B, D, N), and both German-Jewish features (Features AN, B).

Copperleaf

Copperleaf is an endemic weed of waste places, cultivated fields, and yards (Muenscher 1955). 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 (Millspaugh 1884; Grieve 1931; Justice 1939; Massey 1942; Coon 1963; Krochmal et al. 1969; Krochmal and Krochmal 1973; Angier 1978; Cox 1985; Leighton 1987; Crellin and Philpott 1989; Favretti and Favretti 1990; Foster and Duke 1990; Duke 1992; Phelps Brown 1993).

Nightshade

Nightshade is a poisonous weed that is a common invader of disturbed areas (Radford et al. 1968; Britton and Brown 1970). 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 1989). 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 (Krochmal and Krochmal 1973; Cox 1985; Crellin and Philpott 1989). 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).

Sedge Family

Three sedge family taxa were recovered from the Five Points. These include bulrush (*Scirpus* sp.), flatsedge (*Cyperus* sp.), and sedge (*Carex* sp.). All three of these taxa are regarded as noxious weeds in the United States. None of these weedy species is recorded as medicinal herbs, and only two sedge family species—great bulrush (*Scirpus validus* or *S. acutus*) and chufa (*Cyperus esculentus*)—are recorded as edible (Millspaugh 1884; Grieve 1931; Justice 1939; Massey 1942; Coon 1963; Krochmal et al. 1969; Krochmal and Krochmal 1973; Angier 1978; Cox 1985; Crellin and Philpott 1989; Foster and Duke 1990; Duke 1992; Phelps Brown 1993). Hence, it is likely that these seeds represent naturally occurring weeds rather than remnants of economic plants.

Thirty-one genera of bulrush are recorded by Britton and Brown (1970) as growing in the Northeast. These annual and perennial herbaceous plants frequent wet habitats such as ditches and marshes. Flatsedge (*Cyperus* sp.), a large genus made up of several dozen species, is a common weed throughout the United States. Britton and Brown (1970) list more than 242 sedges (*Carex* sp.) in their *Illustrated Flora of the Northern United States and Canada*. All three sedge family genera fruit throughout the summer and early fall and grow in disturbed habitats and ditches. Most members of the sedge family are regarded as endemic weeds with no economic value.

Two sedge family taxa, bulrush (*Scirpus validus* or *S. acutus*) and chufa (*Cyperus esculentus*), are recorded as food plants. The tubers of chufa (*C. esculentus*), which are cultivated in many parts of the world and have a long history of use as food, can be eaten raw, boiled as a vegetable, or dried and ground into flour. The dried tubers have also been ground and used as a coffee substitute (Hall 1976; Peterson 1977). Great bulrush (*S. validus* or *S. acutus*), which grows in marshy locations throughout the United States, produces edible pollen, shoots, seeds, and rootstocks. The rootstock, which was highly regarded by Native Americans as a source of starch and sugar, can be ground for flour or used as a potato substitute. The seeds and pollen can be used for flour, and the shoots can be cooked as a potherb (Hall 1976; Peterson 1977; Medve and Medve 1990). Bulrush roots can also be chewed to help alleviate thirst (Saunders 1934).

Grasses

At least four grass taxa were recognized, including crabgrass, foxtail grass, goosegrass, and an unknown grass. Goosegrass is a native of Asia that is widely naturalized in the United States. It is an endemic weed of yards, fields, and waste places. Crabgrass is a common annual weed of sandy soils that is frequently found in lawns, gardens, and old fields. Both crabgrass and goosegrass are common constituents of urban nineteenth-century archeobotanical assemblages. Foxtail grass is commonly regarded as a weed; this taxon frequents field edges, roadsides, and other waste places. These grass taxa likely represent yardweeds that grew naturally on the lots.

3.6.4.3 Medicinal Plant Use at Five Points

Forty-five of the plant taxa identified during the macroplant analysis were used in the nineteenth century by both professional medical practitioners and laymen as herbal remedies. It then follows that any or all of these plants may have been used at one time or another as medicinal remedies by the nineteenth-century inhabitants of the Five Points neighborhood. Given the problems with endemic disease that the Five Points residents suffered and the low economic status of many of the immigrants living in the project area, it is likely that herbal remedies were popular among the residents throughout the nineteenth century. The recovery of these plants may document the use of herbal folk remedies by both the artisan- and working-class occupants of the project area.

The possible medicinal use of the macroplant remains found in the Five Points features was assessed through an examination of botanical and historical references regarding the medicinal use of the recovered plant taxa. The literature review found that 45 of the plant species were used at one time or another in the nineteenth century for ailments ranging from intestinal worms to cancer. While the use of many of the plants was rather limited, others such as mint (*Mentha* sp.), mustard (*Brassica* sp.), cherry bark (*Prunus serotina*), raspberry/blackberry (*Rubus* sp.), elderberry (*Sambucus canadensis*), dock (*Rumex* sp.), pokeweed (*Phytolacca americana*), and wormseed (*Chenopodium ambrosioides*) were commonly used in the nineteenth century as home remedies and prescribed by medical professionals (Millspaugh 1884; Grieve 1931; Justice 1939; Massey 1942; Coon 1963; Krochmal et al. 1969; Krochmal and Krochmal 1973; Angier 1978; Cox 1985; Crellin and Philpott 1989; Foster and Duke 1990; Duke 1992; Phelps Brown 1993).

The review of references on domestic herbal medicines provided interesting insights into the types of ailments from which nineteenth-century Americans commonly suffered. They appeared to have suffered from frequent intestinal ailments such as diarrhea and dysentery. Almost every plant species presented in this report was hailed as a potential cure for digestive ailments. There was also an overarching interest expressed in treatments for upper respiratory illnesses, which appear to have been common. Finally, intestinal worms must have been endemic in urban populations, as many plants are extolled as preventatives and treatments for worms. Archeological examinations of fecal samples from nineteenth-century privies, including the study presented in this report (Section 5.4), commonly find an abundance of intestinal parasites.

Some of these plants, particularly the naturally occurring herbaceous weeds, may have been collected by the inhabitants and prepared as home remedies. Other plants may have been purchased at markets and

used as home preparations or acquired from doctors and herbalists. Many of these plants were commercially marketed in the late nineteenth century by drug companies, such as Parke-Davis. Wormseed, *Chenopodium ambrosoides*, a popular nineteenth-century febrifuge, provides an example of an herbal remedy that was widely marketed in the latter half of the 1800s. This intestinal worm remedy was cultivated in the United States until the twentieth century for the production of chenopodium oil (Crellin and Philpott 1989; Coffey 1993).

While the recovery of these 45 plants from the Five Points features does not provide conclusive proof of their medicinal use by the inhabitants, it does provide evidence for the types of plants that were available for utilization as home remedies by the occupants of this neighborhood in the late eighteenth and nineteenth centuries. The potential medicinal plants consisted of 28 probable cultivated and/or domesticated plants and 17 naturally occurring annual or perennial herbaceous plants.

3.6.5 Discussion

The macroplant assemblage from the Five Points neighborhood is abundant and diverse. This analysis concluded that most of the uncharred seeds dated to the time of the site's occupation and use. Thirty-seven definite economically important food plants, 3 possible ornamentals, and 12 possibly utilized edible herbaceous weeds were identified. Additionally, 45 of the 65 identified plant taxa could have provided the Five Points residents with locally procured herbal remedies, since all of these taxa were utilized in nineteenth-century America as medicines.

This analysis examined changing patterns of plant use by the Five Points residents during the nineteenth century. Differing patterns of plant use observed between the relatively wealthy artisans who initially settled the project area and immigrant laborers who later replaced them were of particular interest. An examination of macroplant remains from features associated with artisan and immigrant-tenant occupations allowed an assessment of several aspects of life in the Five Points that changed as the nineteenth century progressed, including dietary patterns, the use of space, and the gradual degradation of the local environment over time.

The evidence indicates that plant use changed during the nineteenth century in response to four factors: (1) availability in the local environment; (2) availability in markets; (3) degree of use due to ethnic preferences; and (4) differential access due to degree of wealth. Ten broad classes of plant remains were described in this report, including imported exotics, condiments, fruits, vegetables, nuts, edible herbaceous plants, possible ornamentals, possible medicinal herbs, herbaceous weeds, and grasses.

This study demonstrates a pattern of decreasing availability of both naturally occurring and cultivated plants in the Block 160 local environment with the passage of time. Evidence of environmental degradation due to increasing population and the loss of open spaces in which to gather wild plants and cultivate kitchen gardens is provided by a pattern of decreasing naturally occurring wild plants, kitchen garden species, and economically useful trees and shrubs (blackberry/raspberry, elderberry, fig, grape, huckleberry, mulberry, serviceberry) during the nineteenth century. This decrease corresponds to the massive increase in population that occurred with the influx of immigrants beginning in the 1820s. These trends illustrate how increasing population density restricted the amount of open space in the project area.

The almost eightfold increase in population between 1800 and 1860 within Block 160 caused most of the open spaces in the artisans' yards to be built upon, paved, or otherwise enclosed. The loss of open spaces limited the later tenement 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), planting gardens, or planting economically useful trees and shrubs on their lots. By the mid-nineteenth century, the procurement of plant resources was probably restricted to market purchases.

The Block 160 archeobotanical remains indicate the rich variety of plant resources available by the 1840s in New York City markets. The almost exclusive recovery of three imported plants, brazil nuts, coconuts, and peanuts, from immigrant contexts indicates the wide array of foodstuffs available in New York markets in the second half of the nineteenth century. Additionally, the greater density of five fruit taxa, plum/cherry, blueberry, peach, cantaloupe/watermelon, in tenement contexts relative to artisan features indicates that these fruits were easier to obtain by the mid-nineteenth century. The association of these fruits with immigrant-tenant households lacking open spaces in which to cultivate their own food provides indirect evidence of increasing market availability. The presence of these imported exotics and fruits in tenement privies lends support to Yamin's (1996) observation that recent immigrants settling Five Points began purchasing consumer goods that were considered fashionable and a mark of cultivation in nineteenth-century America.

With one exception, the influence of ethnic preference on the consumption and use of plants at Five Points is not visible in the Block 160 macroplant assemblage. The main exception to this pattern is coffee. The exclusive association of coffee beans with the brothel privy and artisan contexts, coupled with the large number of teacups recovered from tenement contexts, suggests that recent immigrants avoided coffee either out of an ethnic preference for tea and/or the expense of purchasing coffee.

After taking into account changing patterns of plant availability in the local environment and markets as the nineteenth century progressed, the primary factor structuring the consumption and use of economically important fruits and vegetables in the Five Points neighborhood appears to have been the degree of purchasing power of individual consumers. Similarities in the plant species found in both artisan and immigrant-tenant contexts is striking and suggests that the same plant foods were consumed by rich and poor alike, regardless of ethnicity, in the nineteenth-century Five Points community.

The recovery of presumably expensive exotics, fruits, and vegetables from working-class contexts shows that recent immigrants had access to and consumed high-status foodstuffs. However, the greater density of these remains associated with artisan contexts indicates that affluent artisans (mostly property owners) had greater access to and consumed more fruits and vegetables than poor immigrants. Whereas these plants may have been an everyday table food in early-nineteenth-century artisan households, they probably represented an occasionally consumed special treat in later immigrant laborer households.

3.7 Condiments and Related Serving Pieces (Michael C. Bonasera)

3.7.1 Introduction

Glass condiment containers and the serving pieces for presenting and dispensing condiments can provide insights to diet (Jones 1983), ethnicity (Brown and Mussell 1992), and economic status (Kasson 1990). The archeological evidence from Block 160 indicates that Five Points residents used a limited number of condiment types and serving pieces (Table 114). However, the vessels that were recovered reveal a distinctive pattern that appears to reflect two distinct traditions. Drawing on faunal remains and documentary evidence in addition to the condiment and serving vessel data, this chapter discusses these two traditions.

Feature J contained the largest number of glass vessels of any feature at Five Points. Situated on Lot 6 (472 Pearl Street), the vessels had been discarded by predominantly Irish-American tenement dwellers in the mid-nineteenth century. Of 390 vessels from the two major artifact-bearing deposits (AS III, TPQ 1870; AS V, TPQ 1850), most of the condiment bottles contained sauce or pickled food and reflect the importance of meat in these newly arrived immigrants' diet. In contrast, assemblages from households associated with German immigrants (Features B, AF, and N) are distinguished by mustard and olive oil containers.

3.7.2 The Irish

Features J and Z on Lot 6 (472 Pearl Street) and Feature O on Lot 7 (474 Pearl Street) were associated with tenements occupied by newly arrived Irish immigrants. The Irish became a conspicuous presence on Pearl Street in the late 1840s, the period of the worst potato famines in Ireland. They remained on Pearl Street until the late nineteenth century, when the tenements filled up with Italian immigrants.

3.7.2.1 Lot 6, Feature J

Twelve food preparation vessels were recovered from Feature J, half from the upper deposit (AS III) and half from the lower deposit (AS V). Food preparation vessels comprise three percent of each deposit. Four spire-shaped bottles with Gothic decoration contained pepper sauce (McKearin and Wilson 1978:Plate VIII). Two short, waisted bottles with scrolled panels and wide mouths contained pickled foods, possibly capers or relish. Wells, Miller and Provost sold pickles, preserves, and "patent preserved meats" from 217 Front Street in New York. One of their embossed bottles was recovered (Figure 64, left). The company conducted business at a Front Street address from 1844 until 1853 (Doggett 1844–1851; Doggett and Rode 1851–1852; Rode 1853–1854) The bottle on the right in Figure 64 is the one large, embossed Lea & Perrins Worcestershire sauce bottle that was recovered from Feature J.

Table 114. Condiment Vessels and Serving Pieces at Five Points

Feature	Mustard	Oil	Flacon Food	Pickled Food	Sauce	Horse- radish	Fruit in Alcohol	Salt	Castor/ Cruet	Cruet	Bowl	Sugar/ Jam	Unident. Serving	Total
JZ		2		3	7	1	1	2	1	2	1			20
B	3	6												9
D	1													1
C			1											1
N	5	2												7
O				3				1					1	5
AF	7	1	1					2	1					12
AN		1						1						2
AG	8	1	9					1	4			1		24
H				1										1
AI		1												1
AH/AT		1						1						2
AK								1						1
AL	1	3		2				1						7
AM			2		1			1	5	1				10
Total	25	18	13	9	8	1	1	11	11	3	1	1	1	103

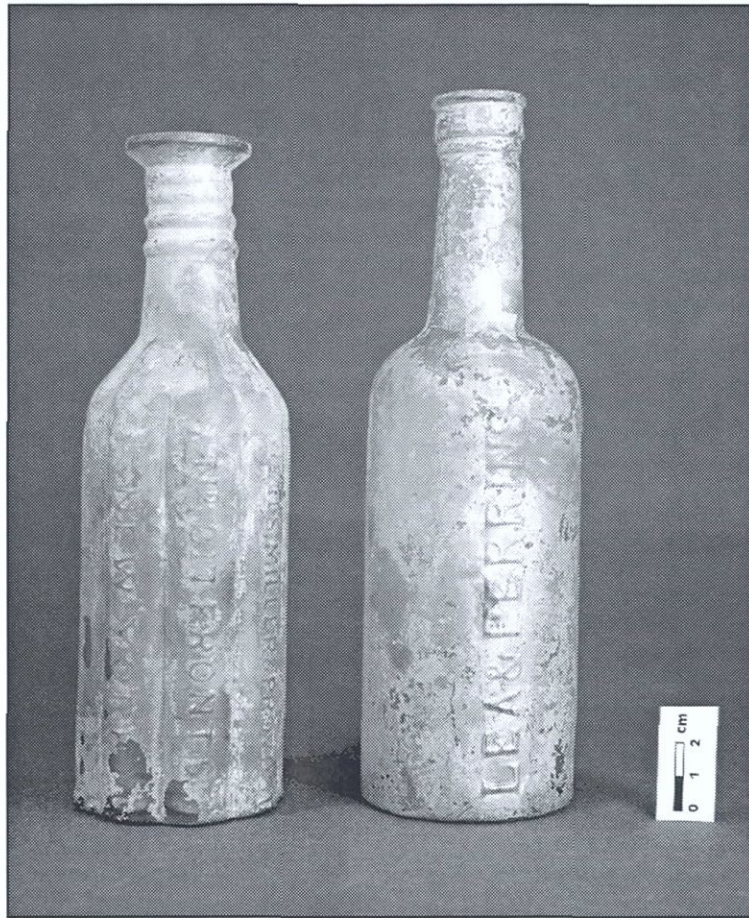


Figure 64. Wells, Miller and Provost pickle bottle (left) and Lea & Perrins Worcestershire sauce bottle (right), Feature J.

A single olive oil bottle from Lucca, Italy, indicates that at least one Irish tenant at 472 Pearl Street used olive oil, but there was only one other olive oil bottle in the assemblage. At least one large-mouthed vessel may have contained brandied plums. A distinctive rectangular aqua bottle with chamfered corners held horseradish (Figure 65). The absence of any mustard containers in an assemblage created by over one hundred people over several years is notable.

Only six serving pieces were recovered from Feature J. A castor and a cruet with elaborate cut decoration, likely of Anglo-Irish manufacture, were found in the lower deposit (1% of the glass in the deposit). Two saltcellars and a cruet were also recovered in the upper deposit (2% of the deposit). The number of serving pieces recovered in this and all other Five Points features is low.

3.7.2.2 Lot 6, Features Z, U, T, and A

Feature Z yielded 65 vessels, two of which were condiment containers. Features Z and J were component parts of a sewage system that virtually filled the yard behind the tenement at 472 Pearl Street. Feature Z contained two condiment bottles for foods similar to those represented in J—a smaller embossed Lea & Perrins bottle and a ribbed sauce or pickled food bottle. There were no serving pieces in the feature, and no vessels of any type in Feature U, an additional drywell or sump component of the sewage system. Features T and A, the remaining components of the system, yielded no pertinent vessels. In fact, only a few vessels of any kind were recovered from Feature T. Condiments or serving pieces were not represented among the few vessels which cross mended between Features J and T. One vessel composed of cross-mending fragments in both Features J and Z seems to have been a bowl for sauce or other condiments.

3.7.2.3 Lot 7, Feature O

Feature O on Lot 7 contained the only evidence of home canning in any of the feature assemblages. An aqua jar lid and milk-glass jar lid liner (mason type) were recovered from the overburden of Feature O, which has a mean glass date (MGD) of 1888 and a *terminus post quem* (TPQ) of 1903. The overburden also contained a bowl with an unidentified pressed pattern that may have contained relish or some other condiment, a clear salt dish, a square salt or pepper shaker with a pressed Duncan Block pattern (Jenks and Luna 1990:187), and a clear, unidentified serving piece. The salt or pepper shaker was apparently manufactured between 1903 and 1925. These four serving pieces from the overburden constitute 18 percent of the deposit. The feature fill itself yielded a canary-yellow fragmented salt dish, probably bearing a lacy pressed decoration, and another unidentified serving piece (2% of 110 vessels). Of the three condiment bottles, one is another Gothic-decorated pepper sauce bottle (Figure 66), manufactured between 1850 and 1870. There are lattice-decorated fragments from another aqua bottle (it probably had a wide neck, indicating pickled food) and an aqua vessel with sunken panels and Gothic decoration similar to one illustrated in McKearin and Wilson (1978: Figure 12, Plate 74). The vessel depicted in the volume had part of an original label stating “Tamarinds....” The three condiment vessels constitute three percent of the Feature O assemblage.

Several individuals may have contributed to Feature O. A building with over 50 tenants, mostly Irish Americans, stood on the lot, and there were also commercial establishments including Lysaigh’s Saloon and Ward’s Undertaking/Cabinets (see Volume III for detailed information on lot residents).

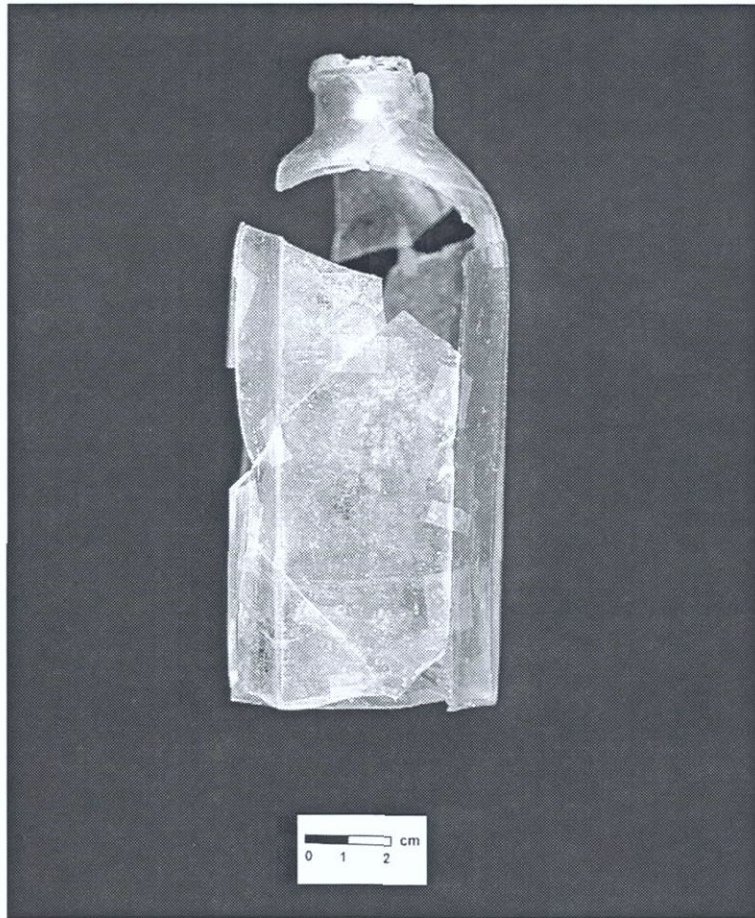


Figure 65. Horseradish bottle, Feature J.

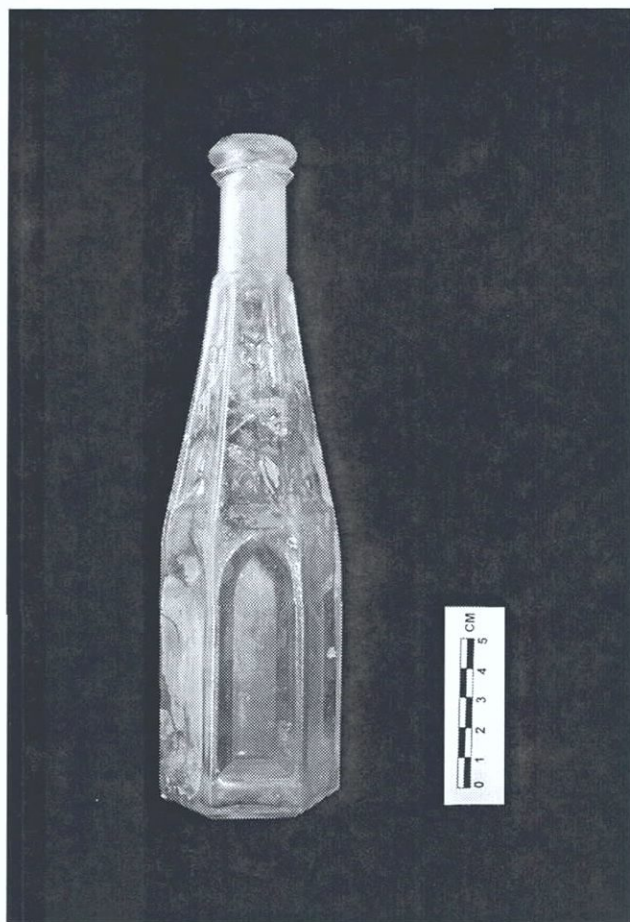


Figure 66. Gothic-decorated pepper sauce bottle, Feature J.

3.7.3 The Germans

Features B, N, and AF were associated with families of German background. Although the features were filled at different times, certain similarities in consumption patterns were noted that suggest a relationship to a German heritage.

3.7.3.1 Lot 6, Feature B

The Feature B assemblage recovered from a privy situated on Lot 6 included a deposit (AS IV) containing 64 vessels that appear to have been discarded by the Goldberg family, Jewish immigrants from eastern Germany. Harris Goldberg was a tailor who was also employed in his temple as a sexton or caretaker in the 1840s. The deposit associated with the Goldberg's household included more fish bone (50% of the bones recovered from the deposit) than faunal bone (42% of the bones), suggesting that fish played a major role in the family's diet.

The glass condiment assemblage from Feature B includes remains of six olive oil bottles. The seals from five of them are shown on Figure 67. These thin-bodied wine-style vessels bear shoulder-height seals. All were imported from France, from either the Marseilles or the Bordeaux region. Vegetable oil is an essential ingredient in kosher cooking, as butter could not be used because of prohibitions on mixing meat and dairy products. In the *Jewish Cookery Book*, originally published in 1871, Esther Levy recommends frying fish in sweet olive oil which has been brought to a boil, advising that "the same oil, with a little fresh added will do again" (1988:18). The beefsteaks and chops present in the Goldberg deposit were probably also cooked with olive oil. Levy even recommends basting the larger roasts with as much as a pint of olive oil.

At least three bottles contained the popular London mustard. Although it could be used as a plaster or poultice, the mustard primarily served as a condiment. The Goldbergs may have prepared the powdered mustard to serve with sausages or wursts, which themselves do not appear in the archeological record. They may also have combined it with horseradish, powdered sugar, and vinegar to serve as a sauce for beef or as a dressing for salads and vegetables. Two medium-sized food-storage vessels were also recovered that may have held brandied or preserved fruits. These were eaten as dessert or stewed with beef brisket in a Dutch oven to produce a candied or glazed beef dish. The nine condiment containers comprise 14 percent of the assemblage.

No serving pieces were recovered in the deposit attributed to the Goldberg household. However, one footed saltcellar was recovered from the Feature B overburden. In the first Jewish cookbook published in America, the recommended table setting includes "individual saltcellars for each person, ...cruets should be placed in the centre of the table" (Levy 1988:11). This table setting is said to apply to an affluent household (Diner 1992:81).

3.7.3.2 Lot 7, Feature AF

Several features on Lot 7 also yielded interesting condiment assemblages. The feature containing the oldest glass on the lot, Feature AF, yielded three serving pieces and nine condiment containers. This assemblage has an MGD of 1793 and a TPQ of 1800. The material may have been deposited at the time of Tobias Hoffman's death in 1812. A number of Stiegel or Stiegel-like tableware and serving pieces were identified. One of the saltcellars was produced in Manheim, Pennsylvania, as well (Figure 68); however, an abraded ring encircling the pontil scar of some vessels indicates European manufacture (Olive Jones, 1997, personal communication). This footed, clear saltcellar has a thin cobalt rim on a pattern-molded ogee bowl. The thick foot has seven irregular lobes, a variation from a Stiegel saltcellar of this type (Hunter 1950).



Figure 67. Olive oil bottle seals, Feature B (AS IV).

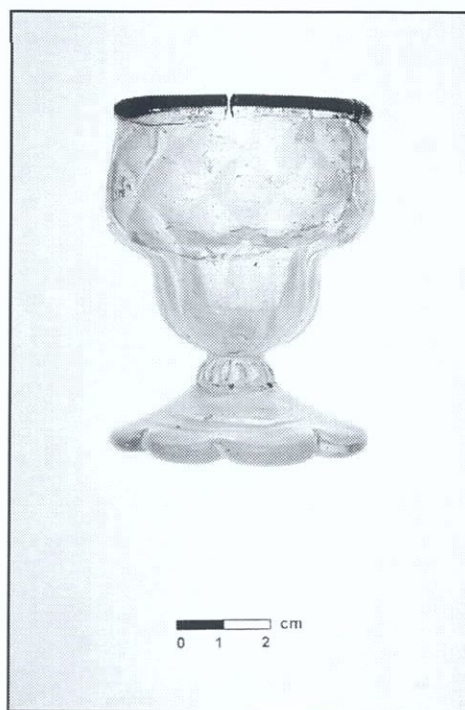


Figure 68. Saltcellar manufactured in Manheim, Pennsylvania, Feature AF (AS II).

A second saltcellar is cobalt blue—low and wide with a protruding midsection and a constricted base and top (Figure 69). There is also a small, thick castor or cruet with a cut concave diamond motif. According to one glass expert, open saltcellars were necessary prior to the use of refined salt. It was necessary to grind salt, which would not pour easily (Husfloen 1992:15).

A square-bodied flacon with a thin cylindrical neck (vessel 1531) may be the oldest condiment vessel recovered at Five Points. It was apparently manufactured between 1750 and 1780. This French or Italian vessel probably contained olive oil (Jones 1993:33). The base of an unidentified flacon and six London mustard bottles and one unembossed London mustard-style vessel were also excavated. The nine condiment bottles constitute seven percent of the Feature AF assemblage.

3.7.3.3 Lot 7, Feature N

All Feature N condiment vessels were recovered in the lower deposit (AS IV), dated to the 1830s. No serving pieces were identified. This deposit seems to have been created, at least in part, by the German-American Hoffman family, residing on the lot since 1789. One of the two wine-style olive oil bottles displays the seal of "JOHN DURAND. BORDEAUX SUPERFINE OLIVE OIL. CLARIFIED," the same brand as two of the Feature B bottles. Five London mustard bottles were also recovered from Feature N. These tall, square-bodied bottles have either flat or concave chamfered corners and relatively wide mouths with a capacity of slightly less than two ounces (Jones 1983:71). All identified London mustard containers are vertically embossed "LONDON" on one side. The London mustard vessels recovered at Five Points are clear or light green.

Features AF and N contained seven and five mustard containers, respectively, substantially more than all but one other feature within the project area. Like the Goldbergs, the Hoffman family also may have prepared sausages, knockwursts, and other dishes that were seasoned with mustard.

3.7.4 Public Consumption—A Brothel and an Eating House

Assemblages associated with public places are generally different (and conspicuously larger) than assemblages associated with individual households. Two such assemblages excavated from features on Block 160 produced distinctive patterning.

3.7.4.1 Lot 43, Feature AG, A Brothel

Feature AG, Lot 43, contained 350 vessels and an unusual condiment assemblage. Seven of the nine amber and aqua flacons (Figure 70) have wide necks indicating contents of fruit in alcohol, olives, or some other large preserved food. Eight mustard bottles were recovered (Figure 71); one of these is unembossed; the others are the familiar London brand. One London mustard bottle has the additional embossment "W. B No 6" on the opposing side. One wine-style olive oil bottle was identified. The Feature AG condiment assemblage comprises six percent of all vessels from the analytical stratum (AS III) associated with the brothel. The serving piece assemblage consists of a sugar bowl or jam pot (represented by a lid), four castors or cruets, and one saltcellar (2% of the assemblage of AS III). This clear vessel has a diamond-shaped foot and boat bowl, decorated with cut scallops and diamonds (Figure 72). Condiments and serving pieces were not represented in the overlying deposits.

The primary fill deposit (AS III) of Feature AG yielded an assemblage from a brothel that was closed in 1843 with the arrest of its manager, John Donohue. This establishment was located in a basement at 12 Orange Street. The character of the glass assemblage supports the documentary evidence and the ceramic and faunal assemblages, indicating some distinct differences from other Five Points features associated with single households, tenements, eating houses, and saloons, although the latter type of assemblage is the most similar. Indeed, the lower Feature AG deposit may be composed of vessels representing a drinking establishment, as brothels often operated within this context.

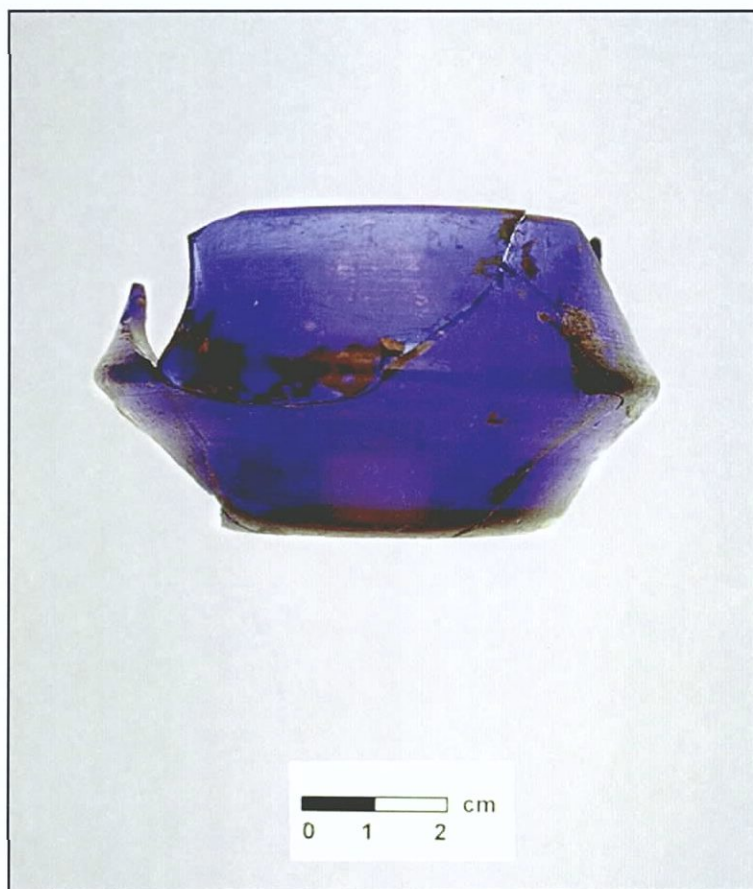


Figure 69. Cobalt-blue saltcellar, Feature AF (AS II).



Figure 70. Flacons, Feature AG (AS III).

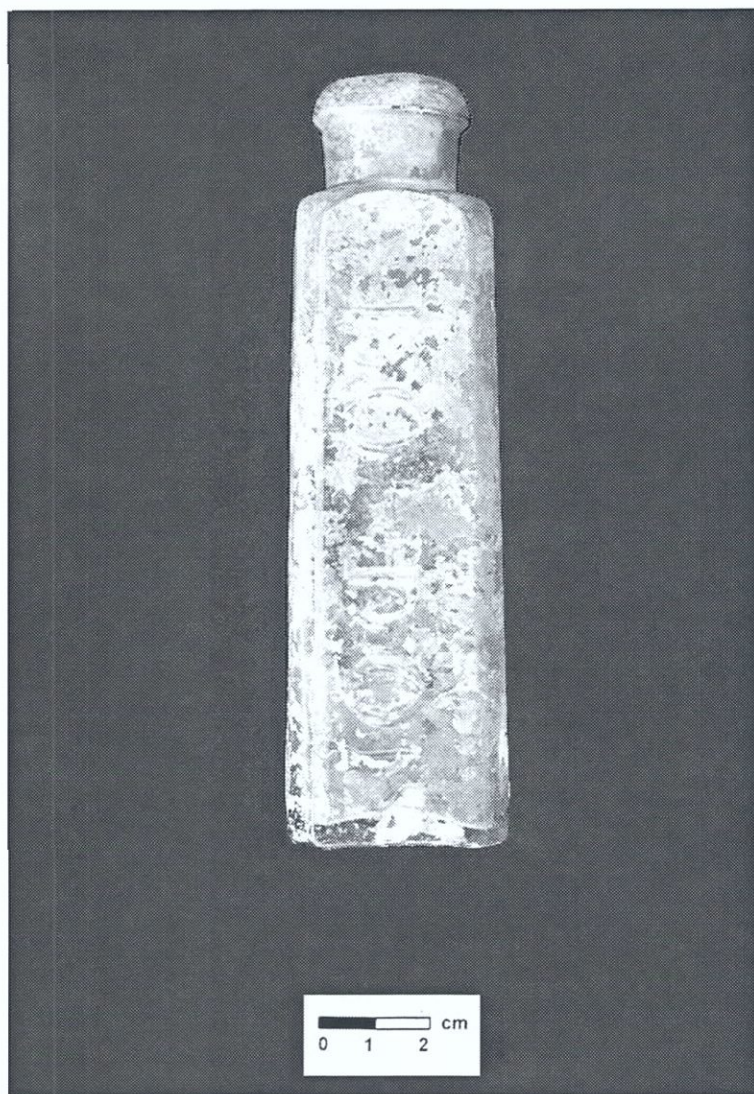


Figure 71. Mustard bottle, Feature AG (AS III).

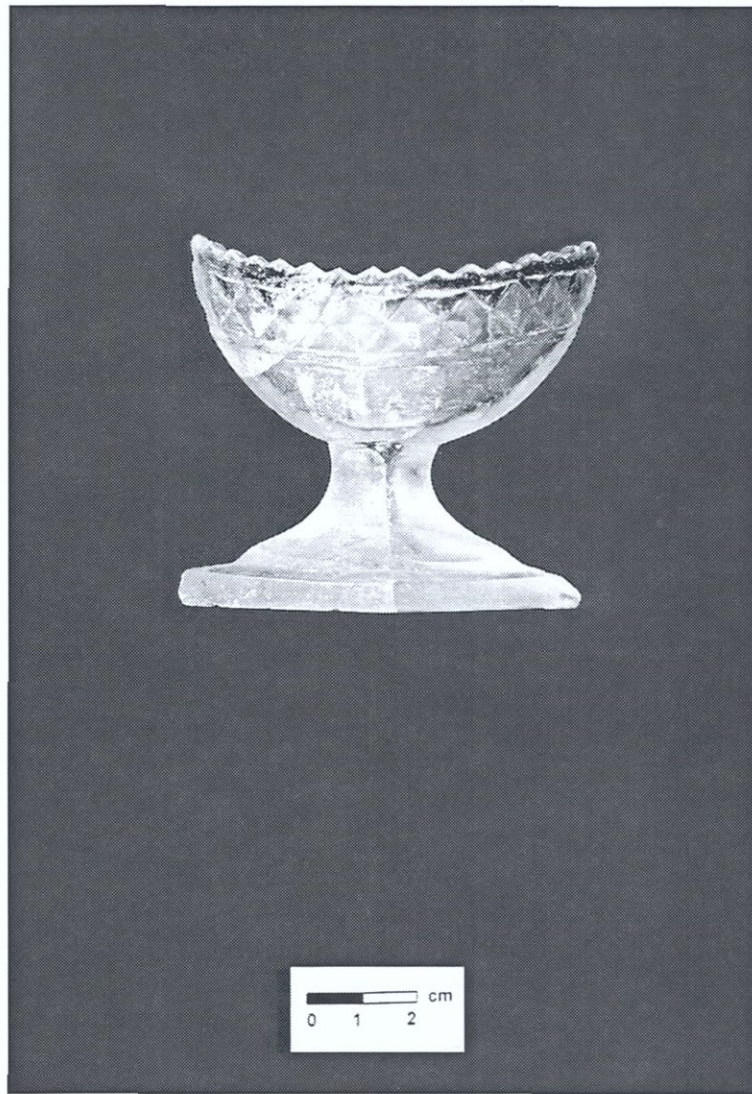


Figure 72. Saltcellar, Feature AG (AS III).

At least 103 wine bottles were recovered from Feature AG (AS III). The cost of wine was four times that of whiskey in the mid-nineteenth century. It was favored as an elegant social beverage, associated with the dining rituals of the French and English aristocracy (Williams 1985:134). In addition to the condiments and serving pieces noted above, matching decorated punch cups, bird feeders, seahorse scent bottles and other decorated perfume containers, and special lighting components were identified.

The imported products that came in the flacons recovered from Feature AG were more costly than domestic pickles or sauces, and they represent an unusual expenditure in comparison to the other Five Points feature assemblages. This food purchase appears to reflect the greater economic freedom of the prostitutes or at least of the madam who provided "adequate supplies of wine, fuel, and other staples" for the comfort of the women of the house and their customers (Hill 1993:224).

3.7.4.2 Lot 52, Feature AM, An Eating House

Feature AM, Lot 52, yielded a relatively larger group of serving pieces that include a footed saltcellar, a cruet, and five vessels that are either castors or cruets. These condiment-related serving pieces comprised three percent of the assemblage. Vessel 137 may also have been used to serve pickled food or other condiments as its size (7 3/8 inches by 7 3/8 inches exterior; 3 1/2 inches by 3 3/4 inches interior base) is too small for such food as meat or bread. This square, shallow bowl with the hairpin-pattern, lacy-pressed decoration was manufactured in New England around 1830–1845 (Spillman 1981:74, Figure 177). With its complex stiped patterns, lacy-pressed glass was an attempt to achieve the brilliancy of cut or engraved patterns (Barlow and Kaiser 1993). A sauce bottle and two flacons (1% of the assemblage) contained condiments. One of the flacons has a medium-width conical neck indicating olives or capers. This assemblage has been attributed, at least partially, to the adjacent establishment—Conlon's Eating House, operating from about 1840 to 1860. The volume of condiments consumed in an oyster house or eating establishment must have been far greater than the three vessels and the serving pieces described. Larger servings may have been available in containers of different materials, since a small sauce bottle would be rapidly depleted in a room full of hungry diners. Some refuse from the oyster house also could have been discarded elsewhere.

3.7.5 Summary and Conclusions

The glass condiment bottles and related serving pieces excavated from 22 shaft features at the Five Points site represent food consumption and dining practices spanning a century, and depict choices fueled by ethnic and religious preferences and tempered by economic considerations. The assemblage, generally discarded by working-class immigrants, includes some older material from artisan households. It differs from assemblages at middle-class sites of nineteenth-century New York, as discussed below.

Ethnicity is a strong determining factor of condiment preference. For instance, three features that appear to be associated with German-American households, Features B, AF, and N, contained more mustard containers than features representing non-German households. Feature AG, primarily a brothel assemblage, also contained a significant number of mustard vessels. This may reflect the increased spending capabilities of the establishment or indicate the ethnic affiliation of the prostitutes, the clients, or the madam. However, condiment use and dietary preference are based on several interacting factors, not only ethnicity. The other German-American household, represented in the Feature AN assemblage, did not contain mustard bottles; this feature was notable for an impoverished assemblage, but it was only partially (50%) excavated and therefore may be a skewed sample. The Stone household may have differed from the other Jewish tailor's (Goldberg's) assemblage due to economic factors, use of generic containers for condiment storage, dislike of mustard, or some other reason.

The glass condiment assemblage created by the predominately Irish tenants at 472 Pearl is remarkable for its dissimilarity to the German and Jewish assemblages and the apparent preponderance of sauces and other pickled foods to enhance the taste of, or garnish, meats. In this respect, it may be inferred that

these immigrants had conformed more readily to the diet of the American working class than the Germans. According to Richard Stott's study of workers in antebellum New York, "meat was eaten by workers twice, sometimes three times, a day. Afternoon dinner (the main meal of the day) and supper almost always included beef or pork" (1990:176–177). Equally notable is the absence of mustard containers in the Feature J assemblage, which is also true of the Feature O assemblage. This assemblage was probably associated with the 51 Irish immigrant tenement residents who lived above the Lysaigh Saloon and with the saloon. The condiment assemblage is comprised solely of pickled food and pepper sauce bottles. Once again, there are no mustard containers. This may indicate a reluctance to experiment with unfamiliar foods that were dietary components of other cultural groups in New York. Ethnic patterning of condiment (and food) choices is deeply embedded in concepts of group affiliation and separation from other groups.

The influence of religion within a cultural context is clearly illustrated in the Feature B assemblage. The prohibitions inherent in kashrut would be responsible for some condiment choices, most clearly illustrated with the intensity of olive oil consumption and the faunal remains (which conformed to kosher practices). Harris Goldberg and his household of six other adults discarded more olive oil bottles than the more than one hundred residents of the tenement at 472 Pearl Street. A very small amount of pig and no hindquarters of animals were identified in this deposit. Goldberg's role as a temple caretaker and leader at *Shaarey Zedek*, an orthodox congregation, has been documented (Grinstein 1945).

London mustard, however, is not kosher, and unless it was used by the boarders in a separate kitchen, a dietary law was broken. According to Diner, "fewer American Jews steadfastly clung to elaborate dietary prohibitions than did their kin in Europe; a vast range of contemporary documents bear witness to kashrut's erosion in America. American kashrut existed along a continuum, and individual women, as managers of their kitchens, picked and chose from the complex set of requirements and restrictions" (1992:127–128).

It is unclear whether the number of mustard bottles is related to an ethnic preference or an indication of greater economic power. In this respect, economic standing may supersede or mingle with other primary factors, such as ethnic influences, in condiment choices and diet in general. The shallow bowl with the lacy hairpin pattern from Feature AM also seems to represent increased spending within a business context (Conlon's Eating House) that would be unusual in a residential deposit on Block 160.

While condiment preference and the intensity with which condiments were used appears to be influenced by a number of factors, serving-piece use seems to be primarily dependent on economic status. No patterns relating to ethnicity were noted; in fact, the number of serving pieces from the Five Points features is so low that few conclusions can be drawn. Most of the larger feature assemblages contained one salt; only two, Features AF and JZU, contained two. The only other multiple serving pieces were recovered in Features AG (four castors or cruets), JZU (three castors or cruets), and AM. Five of these liquid condiment dispensers were recovered in the assemblage associated with the eating house. The most serving pieces, therefore, are associated with a late-eighteenth- and early-nineteenth-century artisan household of some means, a brothel, and an eating house. The latter two establishments served a clientele that was presumably larger than a household. The Feature JZU complex was situated on Lot 6 adjacent to the tenement housing over 100 individuals.

Victorian middle- and upper-class tables were often set with a great variety of matching serving pieces (Williams 1985). This appears to be fundamentally related to purchasing power, but there are examples of Five Points assemblages that contained other types of serving pieces that were costly. For instance, two decanters with elaborately cut decoration were recovered in Feature B. Serving pieces recovered in Five Points features usually predated the deposit or feature MGD by a number of years, suggesting long-term use. In specific instances, in a deposit that can be attributed to a household with some certainty, the age of the object suggests that it was purchased secondhand.

According to Williams, “meals along the entire spectrum of means in nineteenth-century America were linked by a common concern with ritual, formality, and schedule” (1985:5). While some aspects of dining, such as formality and schedule, are difficult to illuminate, cultural material from Five Points does exhibit differences in comparison to condiment bottles from middle-class metropolitan sites.

At Greenwich Mews, a mid-nineteenth-century site in Greenwich Village, most of the food bottles were identified as condiment bottles. Privy 1 contained 10 food (condiment) bottles—8.5 percent of the glass assemblage. Privy 2 yielded six vessels in an upper deposit and 11 vessels in the lower deposit. These bottles comprised 11.3 percent and 16.4 percent of the glass assemblages recovered in these features. Identified vessels in this group include two E.R. Durkee sauce bottles, a pickle bottle from a London establishment, and a wide-mouthed amber flacon, identified as an olive jar from France (Geismar 1989). Although the exact amounts of condiment vessels cannot be determined from the site report, a significantly greater number of condiments were recovered from the Greenwich Mews features than any Five Points feature.

This pattern is repeated at the Bishop Mugavero site, another middle-class site in Brooklyn. Five privies at the site yielded assemblages consisting of 7 to 12 percent food vessels, described as all condiment bottles. These assemblages contain a large number of French condiments, especially olive oil and bottles that appear to be French olive oil. Other condiments from these features include horseradish bottles, English pickle bottles, and barrel mustard jars (Geismar 1992). This form of mustard container was not recovered at Five Points, possibly due to a temporal difference.

Another middle-class Brooklyn site, Atlantic Terminal, seems to support this trend with features containing from 3 to 13 percent food preparation vessels (Fitts and Yamin 1996). Most of these are square pickled food bottles with Gothic decoration or wine-style olive oil bottles.

With the exception of the Feature O overburden, which contained twentieth-century material, three Five Points deposits have large condiment assemblages. One is proportionately similar to the largest condiment assemblages at the middle-class sites noted above. The deposit attributed to the Goldberg household in Feature B yielded 14 percent of these containers. The Feature AF assemblage contained condiments comprising 7 percent of the assemblage, and 6 percent of the Feature AG brothel deposit consisted of condiments. The frequency of condiment use exhibited in these deposits may be attributed to religious or ethnic considerations, economic status, or class. The Feature AF assemblage reflects a degree of prosperity enjoyed by the baker, Tobias Hoffman, and his family. The properties owned by this family, their bake shop, and the costly tablewares and serving pieces recovered indicate that (at least while Tobias lived) this household was relatively well-to-do. The greatest quantity of condiments was recovered in the Feature AG deposit associated with the brothel, although the extensive assemblage related to drinking tends to obscure their significance.

In conclusion, condiment use at Five Points is generally represented by relatively small numbers of vessels that make up smaller portions of their respective assemblages than condiment vessels at nineteenth-century middle-class sites. A pattern of more intensive mustard use was noted in features associated with German-American households. This seasoning was absent in deposits attributed to Irish Americans, who appeared to prefer meat sauces and related pickled foods. Increased use of condiments can be correlated with greater economic power, although other factors, such as religious dietary practices, may also be influential. Ethnicity does not appear to be a significant factor regarding serving-piece use.

3.8 Father Theobald Mathew (Tamara Kelly)

3.8.1 Introduction

A transfer-printed ceramic teacup with the image of Father Theobald Mathew administering the Total Abstinence Pledge to an audience of devout and awe-struck listeners was recovered from a feature associated with the Irish tenement at 472 Pearl Street (Lot 6, see Figure 3). The inside of the cup pictures a beehive with a shovel, rake, and hoe around it and the inscription "Temperance and Industry...Industry Pays Debts" (Figure 16). The cup was manufactured in Staffordshire, England, by William Adams and Sons between 1820 and 1840. Because there are no wear patterns or stir marks on its interior, the cup was probably used as an ornament in one of the tenement households.

Father Mathew, an Irish priest of the Capuchin order, became one of the foremost advocates and supporters of the temperance movement. Like many other nineteenth-century reformers, he believed that hard work and temperance (abstinence from alcohol) contributed to leading a spiritual, morally upright, and decent life. Although Five Points or the Sixth Ward was described as having a grog shop or saloon "for every six people in 1864" (Dolan 1975:32), the presence of this cup at the site suggests that some of the inhabitants, at least, were not as ribald as written accounts of the neighborhood led readers to believe. Those Irish immigrants in New York who had taken the pledge in Ireland may well have maintained their commitment to temperance in their new homes. In any case, at least one Irish family living in the neighborhood adhered to Father Mathew's admonition that working hard and staying sober would enable them to lead respectable lives.

3.8.2 The Temperance Movement

Although there is no definite date for the beginning of the temperance movement, "general attacks on drunkenness began to be focused into an organized temperance movement in the 1820s" (Riley 1991:260). There were a number of divisions within the movement, producing at least two schools of thought. Some advocates supported complete abstinence from alcohol, while others believed that alcohol should be used in moderation. The latter believed that it was permissible to drink beer, but all hard liquor should be avoided.

As director of the city workhouse in Cork, "the chief scene of his labors, Father Mathew saw the ill effects of drunkenness on some of its inhabitants" (Maguire 1864:98). John Francis Maguire, Father Mathew's biographer and friend, described the Cork workhouse as a place "in which the poor waifs and strays of society, the wretched and the broken-down, the victims of their own folly, or of the calamities, accidents, and vicissitudes of life, found a miserable home" (Maguire 1864:98). The workhouse was a haven for drunkards, the orphans of drunkards, and the sick. According to Maguire, Father Mathew observed people in the town's mental asylums, hospitals, and jails who were slaves of passion or second-hand victims to the "destructive vice," alcohol (Maguire 1864:99).

The economic hardships endured by much of Ireland's population may have had a great deal to do with the excessive use of alcohol. Ireland's population grew from about 5 million in 1800 to 8.5 million in 1845 (Gray 1995:26). Because the economy contracted after 1815, poverty was widespread, and those individuals who rented plots to grow potato crops were charged heavily to maintain them (Gray 1995:26). As a result, many farmers were forced into pauperism. In 1838, the predominantly British-run Irish government introduced a poor law patterned after the English workhouse system. Under this law Ireland was divided into 130 poor-law sections with each housing a workhouse (Gray 1995:29). "Boards of Guardians" (Gray 1995:29) were elected to oversee these facilities, and Father Mathew served on one of these boards. The poor law was supposed to deter pauperism. Catholic clerics supported the poor law because they felt that it would loosen the "poor's attachment to the land" (Gray 1995:27). It was the elderly, the sick, and those forced into destitution when potato supplies ran out before the harvest who were sent to the workhouse (Gray 1995:29). But with the onset of the potato blight in 1845, the workhouses could not hold all of the poor and sick people in Ireland (Gray 1995:29). The workhouses were full of disease and filth and they

were hated by the poor. Almost everyone in Ireland depended on the potato; when the potato crops failed, the rural poor were at an even greater risk than those living in the cities.

Conditions at the workhouse disturbed Father Mathew greatly, but he did not associate himself with the temperance movement in its developmental stages. It was not until William Martin, a Quaker who was also on the board of directors at the workhouse, convinced Father Mathew of the connection between “strong drink” (Maguire 1864:99) and poverty that he lent his support to the fledgling movement.

There had been earlier attempts to rid Cork of intemperance “and bring the working classes to believe in the virtue of sobriety” (Maguire 1864:99). In addition to the Quaker William Martin, men like Nicholas Dunscombe, a Protestant clergyman, and Richard Dowden, a Unitarian, worked with great zeal and enthusiasm to win converts to abstinence (Maguire 1864:99). Their labors, however, did not persuade a substantial number of people to modify their drinking habits. During the nineteenth century many temperance societies were run by clergymen or “wealthy evangelical laymen” (Walters 1978:131) who were looked upon as fanatics. Their platform of total abstinence seemed absurd and ridiculous to a population for whom drinking was an important part of the culture.

The majority of the Irish were Catholic, and they did not support the other temperance leaders because they believed that they were trying to win converts to Protestantism. They also resisted Protestant leaders because of their connection to Britain and Ireland’s long-standing conflict with the British. Ireland was colonized by largely Protestant Britain in the twelfth century. Irish-Catholic landowners had their land taken away and given to English, Scottish, and Welsh settlers (Gray 1995:14), and various laws were introduced to make the Irish convert to Protestantism. Although most of the Irish remained Catholic, the rigorous laws that were imposed upon them inspired a deep-seated mistrust and dislike of the English and what they stood for. The presence of the Anglo-Irish (those individuals living in Ireland who were the descendants of the settlers that once occupied Ireland) and the Protestant Ascendancy (the elite Anglo-Irish) were a constant reminder to the Catholic Irish of their inferior status in their homeland (Gray 1995:14).

Father Mathew’s commitment to the temperance movement provided the Catholic leadership that had previously been lacking. It also involved some personal sacrifice because if Father Mathew joined the movement he would have to totally denounce alcohol. At one time he believed that moderation, which he practiced along with many of his friends for religious and social reasons, was tolerable. For many, alcohol was a staple drink during the nineteenth century because there were not many available “safe” non-alcoholic thirst quenchers” (Riley 1991:260). Drinking water was scarce and often contaminated, and although “tea, coffee, and chocolate were getting cheaper” (Riley 1991:260), they were still more expensive than alcohol. A vast majority of people believed that alcohol supplied individuals with extra energy to complete physical tasks (Riley 1991:260).

Father Mathew also recognized that urging the people of Ireland to stop drinking alcohol would mean that many distilleries would be put out of business. Since friends and family members owned breweries and distilleries, he was concerned that they would lose their lucrative livelihood which had even allowed them to contribute to charities. Nevertheless, after alerting Martin that he wanted to start a temperance society in Cork, he summoned other temperance supporters to his home on April 10, 1838. It was here, at the age of 47, that he, along with these men, took the following pledge: “I promise to abstain from all intoxicating drinks, except used medicinally, and by order of a medical man, and to discountenance the cause and practice of intemperance” (Mathew 1890:35) (Figure 73).

In some quarters, Father Mathew’s commitment to the temperance movement was met with surprise and even pity (Maguire 1864:107, 108). Anti-temperance sentiment was strong among the rich, but the poor thronged to his meetings because they trusted him. After telling them that God would help them to keep the pledge, which was a difficult one, they gave him their word. Many of the men who joined the society were ashamed that they had let alcohol control their lives. Those who drank to excess were surprised that after they took the pledge they felt better physically. Father Mathew became known as a healer of the sick



Figure 73. The total abstinence pledge card (Tice 1992).

because many of the members who had maladies related to drinking began to feel and look better. The society grew, and Father Mathew administered the pledge to hundreds of thousands of people within the first year (Maguire 1864:113).

Father Mathew's movement soon spread throughout Ireland, and he developed "temperance reading rooms in every town," and "in connection with them he arranged courses of industrial and literary education" (Mathew 1890:44). He also developed a debating society within his temperance institute. To him, the movement went beyond the fight against alcohol to include a battle against ignorance, intolerance, and vice (Mathew 1890:44). Understandably, his fame spread beyond the boundaries of Ireland to Scotland, England, and America (U.S. Catholic Historical Society 1911:111).

3.8.3 Father Mathew's Visit to the United States

Several American bishops wanted Father Mathew to spread his temperance message throughout the United States. John Hughes, the Irish-born bishop of New York in 1842, was instrumental in getting Father Mathew to come to the United States (Diner 1996:103). Hughes sought to foster an "Irish American culture" which "blended Catholic piety, love of the American homeland, and American patriotism" (Diner 1996:103). When the Great Potato Famine forced many Irish immigrants to the United States, New York became one of the principal receiving areas. There were a number of Irish people in New York before the famine, but during and after it, the Irish population increased manifold. Bishop Hughes saw to it that "schools, hospitals, orphanages, banks, and benevolent associations" were established for them (Diner 1996:103).

In spite of health problems (related to paralysis), Father Mathew sailed for America in the summer of 1849 (Maguire 1864:461). During the voyage he heard confession, administered the pledge, gave advice, and at times reached into his pocket to give money to those who didn't have any (Maguire 1864:461). Arriving in New York harbor he was welcomed with much fanfare (Maguire 1864:462). Mayor Woodhull delivered an address, there was a parade, and a crowd including Irish and non-Irish admirers as well as public officials and dignitaries came to the dock.

In New York, Father Mathew was treated like a dignitary. The mayor invited him to use City Hall for receiving guests in the morning, but often the rooms were so full that separate days had to be set aside to see men and women. Once again, he was administering the pledge to throngs of people from various religious and ethnic groups. Father Mathew's visit to the United States helped reinforce the work of other temperance societies within the United States. He was invited to Philadelphia, New Orleans, Arkansas, Mississippi, Alabama, Washington, D.C., Massachusetts, and a number of other states, but throughout his stay in the United States, New York served as his headquarters.

3.8.4 Father Mathew and the Abolitionists

Years before his trip to the United States, Father Mathew signed an edict which stated that the Irish in Ireland would support the abolitionists in the states by doing all that they could to oppose slavery. The edict, which was drafted by African-American Charles Lenox Remond and Irish abolitionists James Haughton, Richard Allen, and Richard Davis Webb, was entitled "An Address from the People of Ireland to their Countrymen and Countrywomen in America" (Ignatiev 1995:11). Fifteen thousand Irish people signed this document along with many Catholic clergymen (Ignatiev 1995:9). Father Mathew was one of the clergymen who signed the address, which read as follows:

Dear Friends: You are at a great distance from your native land! A wide expanse of water separates you from the beloved country of your birth....

The object of this address is to call attention to the subject of SLAVERY IN AMERICA—that foul blot upon the noble institution and the fair name of your adopted country.... Slavery is the most tremendous invasion of the natural, inalienable rights of man, and some of the noblest

gifts of God, "life, liberty, and the pursuit of happiness"....All who are not for it must be against it. NONE CAN BE NEUTRAL....

America is cursed by slavery! WE CALL UPON YOU TO UNITE WITH THE ABOLITIONISTS, and never to cease your efforts until perfect liberty be granted to every one of her inhabitants, the black man as well as the white man....

JOIN WITH THE ABOLITIONIST EVERYWHERE. They are the only consistent advocates of liberty. Tell every man that you do not understand liberty for the white man, and slavery for the black man; that you are for the LIBERTY FOR ALL, of every color, creed, and country....

Irishmen and Irishwomen! Treat the colored people as your equals, as brethren. By your memories of Ireland, continue to love liberty—hate slavery—CLING BY THE ABOLITIONISTS—and in America you will do honor to the name of Ireland (Ignatiev 1995:10, 11).

The abolitionists expected the Irish to identify with the abolitionist cause because of their own experiences under British rule. The authenticity of the address, however, was disputed by many, including Bishop Hughes, and it became a source of controversy among the Irish in the United States. Some Irish Americans believed that the address was a total fabrication (Ignatiev 1995:13). The address was believed to be a British ploy to dissolve the United States and many Irish Americans took offense at a foreign source (Ireland) interfering with American institutions (Ignatiev 1995:13).

Discriminated against in employment, housing, the political arena, and other areas when they first came to the United States, the Irish were considered a racial minority. Along with many African Americans, they fought to secure work for themselves, sometimes fighting one another for jobs (Hodges 1996:108). When the Irish finally did earn the title "white"—white signifying power and prestige—they did all that they could to maintain their status in American society (Ignatiev 1995:2, 3). Although some of the Irish in America were not pro-slavery, they feared that blatantly condemning it would jeopardize their own position within the American framework.

In spite of his initial support of the abolitionists' edict, Father Mathew ran into difficulties over the issue during his travels in the United States. In Massachusetts, the abolitionist William Lloyd Garrison sent Father Mathew an "invitation to a function at Worcester to commemorate the abolition of slavery in the West Indies" (Kerrigan 1992:106). He declined, stating that his primary reason for coming to America was to spread his temperance message. When Garrison stated that Father Mathew could do both, he restated his primary reason for coming to America and said that he did not know if the Bible said anything against slavery. Garrison warned him that when he traveled to the South he would meet Catholic priests and laymen who were slaveowners and slaveholders. But Father Mathew did not let Garrison's warning stand in his way. Garrison, who was also the editor of an abolitionist newspaper, the *Liberator*, published a "detailed account of their conversation" (Kerrigan 1992:106), blatantly criticizing Father Mathew's views.

Some Northerners, and the majority of Southerners, condemned Garrison for what he did. But other abolitionists, like Frederick Douglass, who had taken the pledge from Father Mathew in 1845 when he visited Ireland, were also displeased with him (Kerrigan 1992:110). Douglass and many other abolitionists began to view Father Mathew as a hypocrite, and some of them even suggested that Father Mathew supported slaveholders. They felt that because he did not speak out against slavery he would send the message to the Irish in Ireland that slavery was acceptable and that there was nothing morally wrong with it (Kerrigan 1992:112).

Southern politicians also found fault with Father Mathew's positions. The governor of Georgia, who was also the president of the temperance society, asked Father Mathew if he really did agree with the abolitionist ideas he had previously supported. Not satisfied with his answer, he withdrew an invitation to visit Georgia. However, after telling the governor that "he had no intention of interfering with

American institutions" (Kerrigan 1992:113), his reply was well received. In 1849, Father Mathew was invited to take a seat inside the United States House of Representatives. When it was suggested that he take a seat inside the Senate, there was some opposition by senators from the North and South primarily because of the controversy surrounding his feelings about slavery. In the end he was allowed to attend some of the meetings because of his great dedication to temperance, and he was even invited to dinner by President Taylor, a slaveholder (Kerrigan 1992:113). Eventually he fell into good graces with the rest of the Southern states, but the majority of Northern abolitionists continued to criticize him, and what they regarded as Father Mathew's betrayal would never be forgotten. Although the slavery debate was a distressing distraction during Father Mathew's travels, he continued the temperance campaign, administering the temperance pledge not only to Irish Catholics, but also to Protestants.

Father Mathew returned to Ireland in 1851. During his two and a half years in the United States, and in spite of his failing health, he had managed to visit 25 states and administer the pledge in "over 300 of the principal towns and cities" (U.S. Catholic Historical Society 1911:112), adding more than 500,000 people to his temperance roll. He died in Cork on December 8, 1856, and "over 50,000 people took part in the funeral procession" (U.S. Catholic Historical Society 1911:113). In 1864, a monument was erected in his honor in Cork. The Capuchins in Ireland were not able to keep the movement going with the same zeal, but on October 11, 1905, bishops in Ireland "commissioned the Capuchins to preach anew the Temperance Crusade throughout the country" (U.S. Catholic Historical Society 1911:114). Since then the Capuchins have continued to spread the temperance message wherever they go.

3.8.5 Summary and Conclusions

The major events in Father Mathew's life, summarized here, provide a basis for appreciating the symbolic significance of the cup decorated with his image. Father Mathew's personal charisma appears to have contributed significantly to the success of the temperance movement in Ireland and in the United States. Even for people not committed to temperance, his image probably inspired pride in an Irish identity. Father Mathew represented temperance, but he also represented respectability (Figure 74). He was, after all, so widely respected that there was a major welcoming ceremony held in his honor when he arrived in New York.

Father Mathew's ability to alter drinking habits was recognized worldwide, and his leadership capabilities were sought on behalf of other causes. That he would not support emancipation in the United States in a public way did not mean that he did not oppose slavery. He devoted himself single-mindedly to the cause of temperance at the expense of his reputation and also of his personal health. His work, along with the work of many other nineteenth-century temperance reformers, was instrumental in bringing about legislation to outlaw alcohol consumption in the United States during the twentieth century. For the owners of the cup that found its way into the trash at 472 Pearl Street, Father Mathew's fame was probably as important as his message.

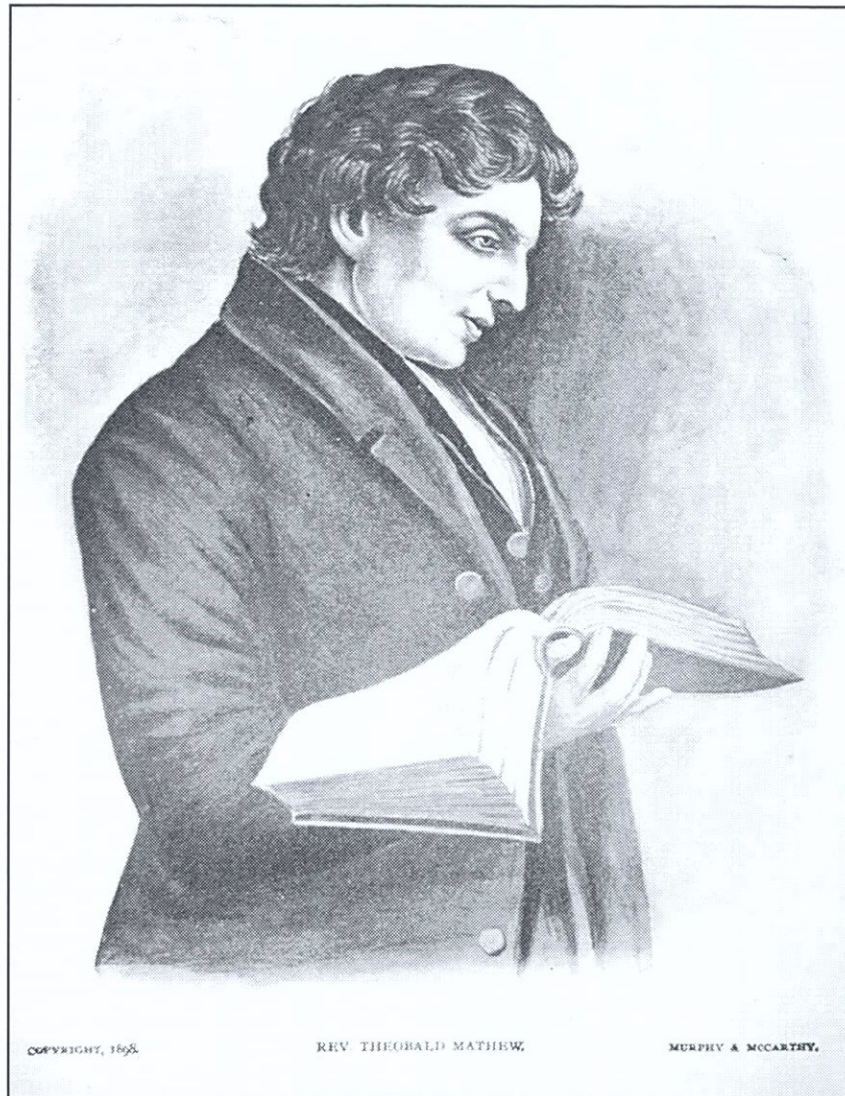


Figure 74. Engraving of Father Theobald Mathew. Courtesy of Cheryl LaRoche.

4.0 WORK AND INDUSTRY IN A DEVELOPING CAPITALIST ECONOMY

4.1 Introduction (Rebecca Yamin)

In 1855, a year when about half of New York's population had been born abroad, over three quarters of the workers in the largest trades were immigrants, nearly half of them Irish (Wilentz 1984:118). Much of the manufacturing workforce was made of up women (Wilentz 1984:119), although many of their activities went unrecorded. Women with children often had to piece together an income by taking in boarders and doing laundry and piecework at home for the garment industry (Stansell 1987:74). Less respectable activities, in the judgment of the reformers of the period, were street selling and keeping a shop or bawdy house, all of which were done in Five Points. A few features investigated on Block 160 related primarily to commercial activities. Feature AG, for instance, could be associated with the brothel that was closed in 1843, and the upper fill of Feature H apparently represented the contents of a tailoring or secondhand clothing store. Many of the occupants of Block 160 were involved in the needle trades, and evidence discussed in the first two sections below includes both commercial and non-commercial activities. A characteristic of the labor-intensive "sweating" strategy, pursued in New York in place of the factory system, was a large pool of available workers who could be hired or fired depending on fluctuating needs (Stott 1990:23). Many of the residents on Block 160 were part of that pool, and the cottage industries described in the third section may be one way people coped with periods of unemployment. Prostitution was another activity that women turned to in times of need, and prostitution at Five Points is discussed in the final section.

LaRoche and McGowan's study of textiles (Section 4.2) shows how conservation can contribute to making a category of data available for study that is seldomly considered. Textiles are particularly pertinent to understanding the work lives of the people who lived on Block 160 because so many of them worked in the garment industry, either as seamstresses, pieceworkers, tailors, or secondhand clothiers. The most numerous category of textiles found consisted of small fragments of wool, possibly the remnants of rag-picking activities (wool was sold for recycling as shoddy), the cutting down of used clothing to fit new owners, and rug manufacture. Using state-of-the-art techniques, LaRoche and McGowan have been able to identify more than 50 weave structures in the mostly wool twills recovered. This unusual sample of materials from clothing that was probably worn by the working-class residents of the neighborhood provides previously unavailable information on working-class dress. It can also be used to understand aspects of the ready-made clothing industry, which by mid-century was one of New York's most important industries. The section includes a short history of technological change in the industry and a discussion of the exploitation of labor. African Americans and women working in the garment industry were particularly discriminated against and played off against each other to keep wages low for both groups.

In Section 4.3, Griggs looks at competition and strategies within the needle trades through what she calls the lens of ethnicity. Sewing-related assemblages recovered on Baxter Street are markedly different from those associated with the Irish tenement at 472 Pearl Street. With one exception, the Baxter Street assemblages can be associated with the Eastern European Jewish men who were tailors and ran secondhand clothing shops along Baxter Street between Chatham and Park Streets. Commercial in nature, the assemblages include matching sets of buttons, thousands of straight pins (both loose and in paper packets), thimbles, hooks and eyes, and rolls of unused twill tape. The few delicate items—a thimble with the inscription "Forget Me Not" and a tambouring hook—may have belonged to women who worked on delicate tasks as part of the family unit in the business. The assemblage associated with the brothel on Baxter Street appears to be a lady's sewing box including tools for whitework and embroidery, leisure activities used to pass the daytime hours. Sewing items and cloth fragments recovered from the cesspool behind the Irish tenement suggest activities that may have augmented the meager incomes of the women living there, mostly widows, who identified themselves as seamstresses. Having access to cloth scraps in the shops where they worked, they apparently collected them for sale or reuse as rugs. Along with the contrasts in actual sewing-related activities, Griggs compares consumption patterns and suggests how ethnicity influenced both work-related and non-work-related choices.

McGowan's section (4.4) on "hidden" (cottage) industries at Five Points grew out of his curiosity about certain small finds that seemed to relate to activities not identified in the directories or associated with any of the residents' names in the census records. Although outwork for the garment industry was clearly being done in the tenements on Block 160, the small finds suggest that other cottage industries were also practiced. Worked animal bone, for instance, found in many (9) of the features, suggests that bone buttons, bone handles, toothbrushes, and sewing items were being manufactured. A variety of jewelry-making materials, including glass caning and faux gems, were also recovered. Old talents, not salable in the competitive marketplace, may well have been used to augment incomes and apply skills that immigrants brought with them. The pit full of oyster shells, originally interpreted as restaurant debris, appears on closer examination to have related to lime manufacture. Refractory brick with coal slag affixed to it, found beneath the oyster shells, probably belonged to the beehive oven that was used to burn the shells before they were ground into powder. The backyard ovens were illegal, but easy to rebuild when they were shut down. The identification of these industries arose out of the artifacts rather than the documents and added an important dimension to our understanding of the economic struggle for survival on Block 160.

The artifacts recovered from the privy associated with a brothel at 12 Baxter Street were by far the most elegant and costly assemblage found in any of the Five Points features. In Section 4.5, Yamin explores the meaning of the assemblage questioning other scholars' contention that New York City brothels employed prostitutes who belonged to the same class as their clientele. She argues that working-class prostitutes understood middle-class values and their symbolic expression well enough to manipulate them in their own interest even if they did not share them. Prostitution is viewed in this study as a profession practiced by ambitious and independent women who were unwilling to put up with the various other kinds of exploitive jobs available to them.

Many, if not most, of the male residents of Block 160 worked as day laborers, leaving little to show for their efforts except the medicine bottles that held soothing liniments for their aches and pains (see Section 5.3). Both women and men who worked in the needle trades, however, did work at home, and the remains of their activities have provided insights into their industry and ingenuity. The presence of the brothel on a street (Baxter) that was otherwise dominated by Eastern European Jews in the tailoring and secondhand clothing business at first seemed peculiar, but further investigation revealed that brothels and clothiers were the most lucrative businesses in mid-century New York (Gilfoyle 1992:125–126). They also may have shared a clientele.

4.2 "Material Culture": Conservation and Analysis of Textiles Recovered from Five Points

(Cheryl J. LaRoche and Gary S. McGowan)

4.2.1 Introduction

The recovery of hundreds of textile fragments from Block 160 in Manhattan offers an opportunity to investigate the first nineteenth-century site in New York City to yield an abundance of textiles. Textiles rarely survive the archeological context in quantities that are statistically or analytically significant. Thus, the work of the Irish and other immigrants living at Five Points, many making their living in the needle trades, would have been considerably less visible without the information that has been derived from the recovered textiles. This information was made accessible largely through the conservation process (see Volume V for an in-depth discussion of conservation).

Hundreds of wool cloth fragments were recovered from three archeological features, H, J, and AK, on Block 160 with additional fragments recovered from several (5) others. The fragments were washed and conserved, revealing weave structure and other diagnostic elements. In the past, archeological textiles as a material class have presented a number of technical and analytical problems for archeologists. Their relative rarity has often resulted in poor treatment and analytical strategies. Consequently, analysis of cloth and fibers has rarely provided data that could contribute substantively to the overall understanding of archeological sites. Improper recovery techniques and post-excavation loss of data, coupled with the already fragile nature of textiles and a hostile archeological environment, combine to leave a skewed record.

Analytical strategies were developed on the Five Points project to avoid these pitfalls. Soil conditions, one of the primary determinants of rates of survival, were measured and analyzed. Comparative analytical techniques were applied to textiles from New York City sites which are roughly contemporaneous to Block 160, dating to the mid-nineteenth century. Textiles and woven materials from the Assay site (Louis Berger & Associates 1990) and from Atlantic Terminal (Fitts and Yamin 1996) were reviewed. The Sullivan Street site (Salwen and Yamin 1990) may also have had textile fragments, although none was mentioned in the final report. We have concentrated on textiles from the Assay site because it produced the only accessible collection.

For the majority of sites, if textiles are found, they are rarely curated into the body of the collection and are perceived as requiring expensive or complicated care. Since glass, ceramics, and metals are more durable within the archeological context, sophisticated methods of analysis exist for these classes of artifacts. Often, archeologists are uncertain how to categorize textiles; do they belong with household goods or with commercial ones? Generally, textiles are not viewed as imbuing any significant analytical data and are therefore largely ignored. Textiles do, however, have analytical significance: garments and clothing parts as opposed to cut pieces and rags; twills as opposed to silks, satins, and velvets; outerwear versus underwear; men's wear versus women's wear; hand stitched versus machine sewn; and stylistic changes have analytic potential. As with other artifacts, textile manufacturing technology, decorative patterns, weave structures, fiber content, dyes, and colors reflect the temporal range associated with the site. Where only fragments survive, the original garment type may still be inferred: woollens for outerwear, silks for fancy dresses and vests, cottons for shirts, denims for work pants, etc.

In discussing "theoretical and methodological difficulties with the research domains in use by historical archaeologists, particularly in terms of urban sites," the final report from the Assay site (Louis Berger & Associates 1990:I-6) states, "the major problem is...few if any historical archaeological investigations have been able to 'build the bridge' between the artifacts recovered from sites and the broad, sweeping historical events and processes that characterized America in the eighteenth and nineteenth centuries." The report further states, "a primary reason for the failure to make this connection may be that researchers generally do not understand the 'historical context' of the artifacts they are using to examine these processes and are therefore unable to correctly interpret the results of their artifact analyses....Certain classes of artifacts are not the correct 'tools' to be used in attempting to describe and explain these social and

economic processes" (Louis Berger & Associates 1990:I-6). If this opinion applies to artifacts in general, then textiles could be overlooked as having such sweeping potential and would certainly be disqualified as a "correct tool."

Yet, the analysis of the textile fragments excavated from Block 160 has provided just such a bridge. In addition to conservation and analytical techniques, various other avenues of investigation were pursued to understand as much as possible about the historical context of the surviving textiles. The Industrial Revolution began with the mechanization of the textile trade (Wilson 1979). Topics of investigation for this chapter include the study of a wide range of nineteenth-century woolen textiles, textile technology, and the beginnings of the garment industry in New York City. The range of variation and large number of textiles reflect the commercial nature of portions of Block 160. These textiles speak to four different industries: the weaving industry, which produced the textiles; the garment industry, which transformed the textiles into clothing; the secondhand clothing industry; and the wool-recycling industry. The changing nature of domesticity in the nineteenth century is also reflected in the textile collection as women's work and the workplace became redefined.

4.2.2 *Textiles from Block 160*

The Block 160 textile assemblage is characterized by a number of unique factors. With the exception of a few large pieces of uncut cloth, there are hundreds of small wool twill fragments ranging from a few centimeters in length to as much as 25 centimeters. The vast majority are less than 10 centimeters long and can be characterized as rags. The warp and weft edges of most of the fragments are frayed and unraveled, showing no evidence of cut edges. The few cut pieces recovered appear to belong to collars, lapels, or other portions of upper garments (Figure 75). In most instances, they were not found in association with other cut pieces of the same fabric, which indicates that they were either part of a garment or intended to be part of a larger item of clothing. These cut-edged pieces may have been removed, cut down, and reused from a larger garment. No randomly shaped, cut-edged wasted scraps, which would be associated with overall garment cutting or manufacture, were recovered. Hundreds of folded strips of welting of uniform weave structure and color were also recovered from Feature J.

The nature of the assemblage associated with Feature J, which contained nearly one thousand fragments, is largely earth-toned or neutral-colored wool rags which may have lost much of their color due to the degradation of dyes. Browns and tans are the predominant colors, although one dark green and several maroon pieces were recovered. None of the fabric scraps contained dyed patterned designs. Color retention is greatly affected by the dye process and by soil conditions, and it is difficult to determine the intensity of the original colors without further chemical testing.

Although the weave structure of the assemblage is largely wool twill, there is great range and variation within the twill weave. Twill is a float weave associated historically with woolens (Wilson 1979:66). Twills, a durable weave structure because the strands are interlaced (i.e., two strands or elements over or under two other strands), are ideal for suiting, trousers, outerwear, and work clothing. Twills are described in the 1897 Sears catalog (Sears Roebuck & Company 1968) as closely woven and guaranteed to give excellent wear. Jean, originally a twill fabric with cotton warp and wool weft (Wilson 1979:264), evolved into the cotton twill denim fabric of blue jeans, which is still noted for wear qualities. One green cotton twill denim fabric fragment was recovered from among the 96 textile pieces in the secondary fill in Feature AK. This fragment is from a relatively recent stratum and dates to the last decades of the nineteenth century.

4.2.3 *The Effect of Archeological Conditions on Textiles*

Archeological conditions contributed to the high recovery rate for Block 160 textiles. Textile preservation is generally poor on Northeastern urban sites because of high rainfall rates and soil conditions. The microenvironment within the soil, particularly the pH levels, inhibits or accelerates decomposition within archeological contexts (Sibley and Jakes 1984). The bulk of the textiles recovered from Block 160

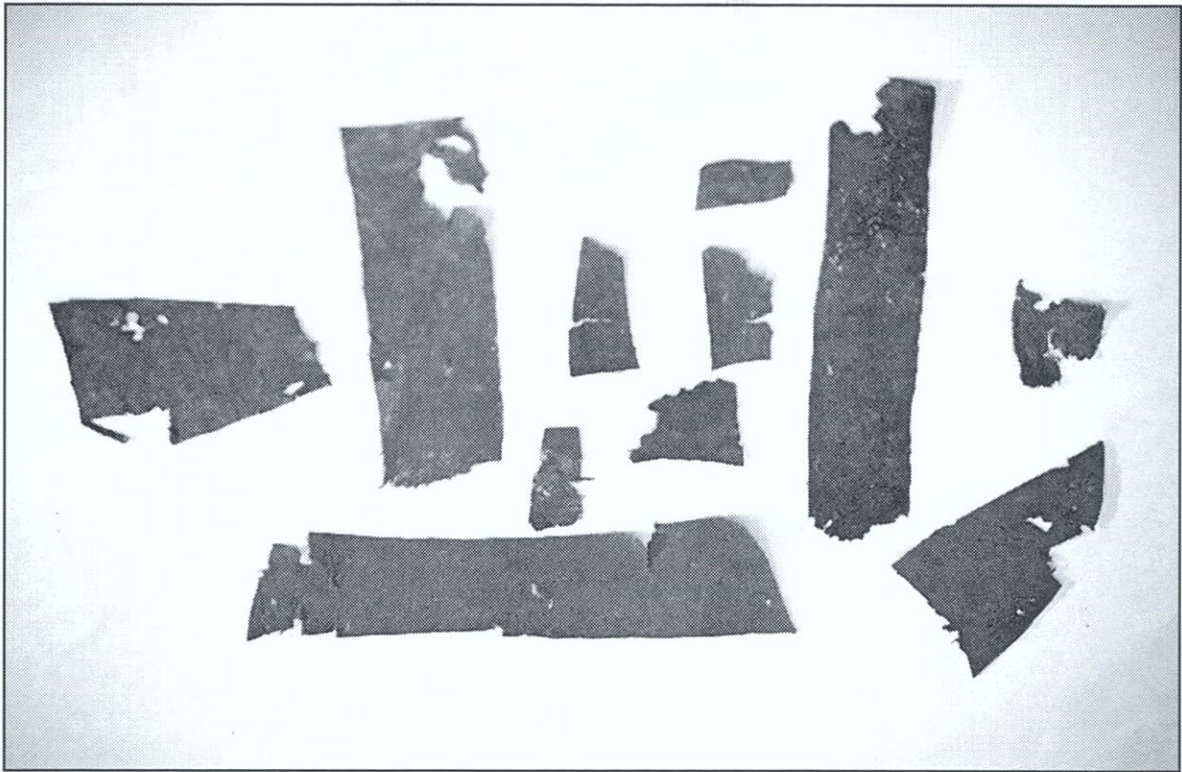


Figure 75. Cut-edged textile fabrics from collars, lapels, or other upper-garment parts, Features J and H.

was from Feature H, a stone-lined privy; from Feature J, a cesspool; and from secondary fill in Feature AK, a sandstone-lined privy.

The fragile, non-durable nature of cloth makes it particularly vulnerable to microbial and chemical action. Furthermore, the survival rate of cloth varies between cellulosic fibers, such as cotton; bast fibers, such as linen or hemp; and protein fibers, such as wool or silk. The overall acidic privy environment would have been mitigated by the introduction of lime. Alkali attacks wool, and the alkaline environment produced by the liming process should have been detrimental to the wool fibers. The textiles are embrittled and generally dehydrated but probably survived because the pH was generally low. Wool survives best at pH levels of 4.5, while cottons and linens generally survive in a soil environment with a more neutral pH.

Fabrics composed of dissimilar fiber combinations will therefore exhibit confusing or misleading patterns of degradation. For example, the archeological environment will not be sympathetic to textiles commonly referred to as linsey-woolsey or "Negro cloth," a linen-warp and wool-weft combination (Wilson 1979:264), or to silk and wool combinations. Because different soil conditions affect survival rates for various fibers, what appears to be an open weave textile in fact may have been a fabric of combined fibers to which the archeological environment has been sympathetic to the surviving elements. The Five Points assemblage includes a number of textile fragments with this distinctive pattern of degradation (Figures 76 and 77). This disparity between the rates of fiber degradation can confound interpretation. Data pertaining to effects of soil chemistry on preferential patterns of fiber degradation is of particular interest to conservators. Obviously, the relatively infrequent discovery of textile fibers, when compared with other artifactual evidence, increases the significance of the recovery of any textile remains (Sibley and Jakes 1984).

4.2.4 Conservation Techniques

The conservation cleaning techniques used for the Five Points materials to remove encrusted soil included baths of deionized water combined with chelators such as EDTA (ethylene diamine tetraacetic acid). Removal of embedded soil in the textiles allowed analysis of manufacturing detail of the surviving wool fragments. In most instances, the severity of soil encrustation completely obscured visual identification. As the chelation process began to loosen the soil and mineral deposits from the textiles, both the volume and the complexity of the textile fragments emerged.

The deteriorated condition of many of the fragments impeded identification of weave structure and, occasionally, of the fiber content. Through microscopic analysis of the textile fibers and weave patterns, we were able to determine that there are more than 50 different weave structures represented, many of which are represented by a single fragment. Analysis of weave structure can yield information pertaining to manufacturing techniques and country of origin. Textile experts have informed us that the steep twill fragments within the collection, for example, are most likely English imports. Textile curators, conservators, and historians from the Cooper-Hewitt Museum, the Fashion Institute of Technology, and St. John the Divine's Textile Conservation Laboratory as well as private conservators who have examined the collection have been surprised by the technological sophistication represented by the range and complexity of the weaves.

4.2.5 The Rise of the New York Textile Trade

From the mid-seventeenth to the mid-eighteenth century, the Industrial Revolution was fueled by the textile industry.¹ Textile manufacturing requires space, large machinery, and power, which New York City lacked. The absence of waterpower prevented New York from becoming a contender in the textile industry, leaving dominance in this area to Philadelphia and Lowell, Massachusetts. By 1830, however, some of New York's many clothing establishments were employing from 300 to 500 operatives, mainly women (Ernst 1994:17), who were conspicuous in the needle trades (Ernst 1994:68). The emerging garment industry was the largest employer of skilled New Yorkers before the Civil War (Scherzer 1992:253).

¹ Even the invention of the computer can be seen as an outgrowth of the Jacquard loom technology.

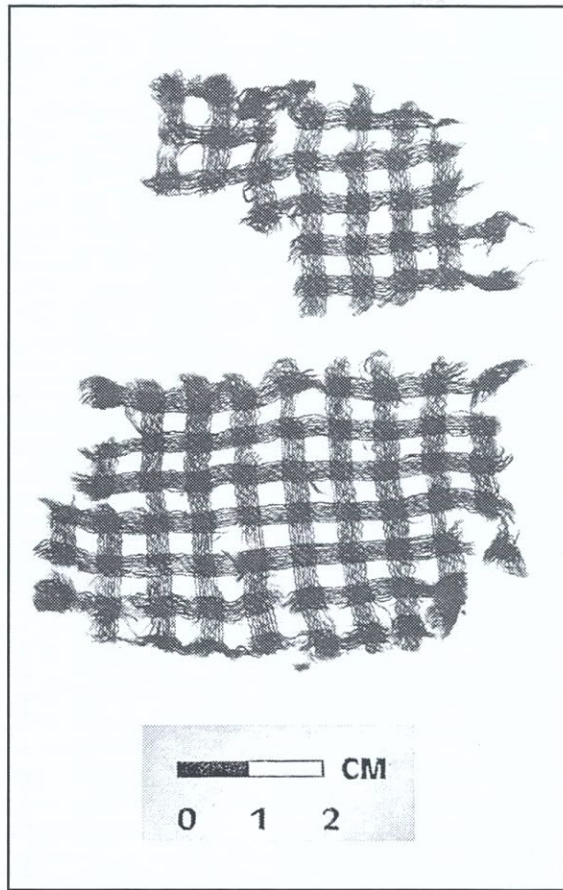


Figure 76. Patterns of preferential degradation and mixed-fiber materials.

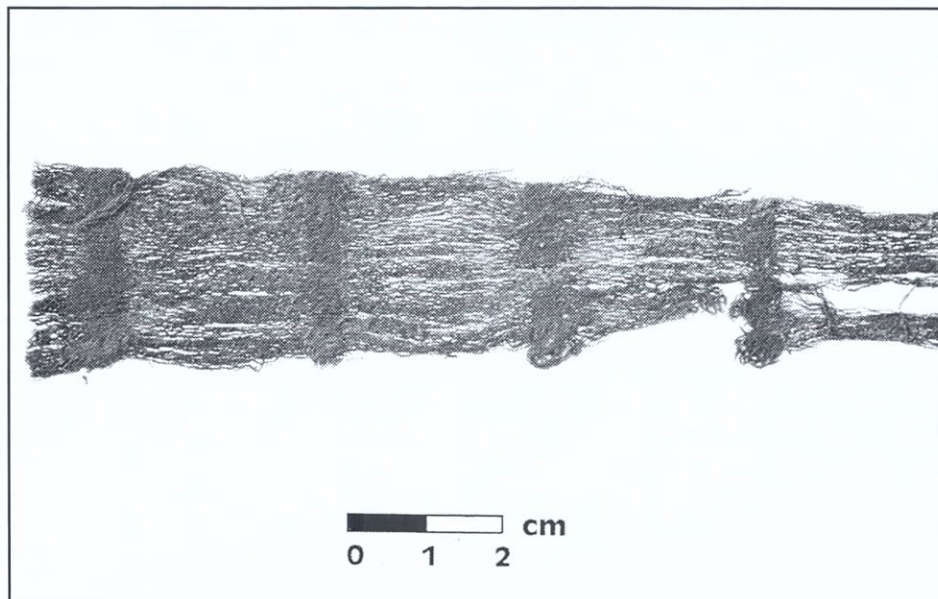


Figure 77. Patterns of preferential degradation and mixed-fiber materials.

The Port of New York can be seen as the epicenter of commercial trade throughout the nineteenth century in the United States. The textile trade flourished by offering bolts of imported wool, silks, linens, cotton, and other textiles, as well as rugs, accessories, and dyes. The port was one of the factors that sustained New York at the forefront of the garment trade, which had a particularly great influence on the character and future of New York (Spann 1981:405).

The wool industry, which was 20 years behind the cotton trade, matured around the time of the Civil War (Wilson 1979:257). In 1860, New York City imported \$34 million of the \$37.9 million worth of woolen goods imported into the United States. Boston, by contrast, imported \$1.1 million and Philadelphia \$1.2 million (Albion 1939:401). Woolens maintained a slight lead in value, though not in volume, over cotton goods throughout most of the period (Albion 1941:59).

New York also remained at the “apex of the cotton triangle” until the outbreak of the Civil War (Foner 1968:6). Every phase of the cotton trade was dominated by either the New York market or by New Yorkers. Shipping vessels, which carried Southern cotton either directly to England or back to New York or New England, were often owned by New Yorkers. New York companies insured the cotton cargoes and New York banks and firms often advanced funds necessary for planting the new crop.

New York enjoyed a particularly favored position as the American market center for Britain’s chief export, drygoods, especially silk, woolen, and other fabrics. So dominant was the city as a place where Americans bought their cloth and their clothing that even New England textile mills chose it over Boston as the chief place to market their domestic production (Spann 1981:6). Many Southern women did not consider themselves fashionable unless their clothes came from New York (Foner 1968:6). According to Foner (1968:12), Southern manufactured goods had to be sent to New York to be sold to Southern merchants.

4.2.6 Garment Manufacture

Traditionally, family garments had been hand sewn by women laboring at home (Stein 1977:3) or by dressmakers doing piecework, also from their homes (Ernst 1994:68). In antebellum America, prosperous urban businessmen, professionals, and factory masters could afford to have their clothing custom tailored outside the family unit (Scranton 1994:243). Although the impact of Elias Howe’s 1846 invention of the sewing machine was not immediate, it contributed to a transformation from custom-made clothing to ready-to-wear garments and changed the types of garments made by women. The sewing machine enabled women to make trousers, waistcoats, and cloaks (items previously made only by men) (Ernst 1994:18). Mass production of ready-to-wear garments converted the sewing industry from a home-based operation to a commercial one.

As the garment industry changed, a number of factors combined to keep New York at the forefront. To eighteenth-century New Yorkers, social status was measured not only by job level but also by what one wore (Spann 1981:96) and owned (Scherzer 1992:80). Frequent trips to Europe enabled merchants to keep their stock constantly in vogue without having to stock articles that might go out of style before they were sold (Albion 1939:66). New York clothiers also learned to make quality reproductions of London and Paris fashions at half the cost of imported clothing (Spann 1981:96), and by 1845 clothing shops were beginning to benefit from a revolution in the price of fashionable clothing. Advances in textile technology also kept the market churning as rapid changes in dress fabric patterns made it difficult to remake old dresses into fashionable new ones (Wilson 1979:259).

By the early 1850s, New York had established itself as the major supplier of the nation’s clothes (Spann 1981:405). Ready-made garments first appeared as “slop clothing” for seamen and as cheap yet dignified clothes for the middle class (Ernst 1994:18). Immigrants often spent extravagant sums on consumer items such as fancy clothing (Scherzer 1992:80), but they also created a demand for less expensive garments (Ernst 1994:18). Newly arrived immigrants helped to create their own jobs in the needle trades by their demand for cheap dresses, cloaks, and bonnets.

Although clothing for enslaved plantation workers was usually homemade, as plantations in the South intensified production, the enslaved population was also in need of clothing, which heightened demand. The first great, steady markets for ready-to-wear clothes sprang up in Boston, New York, Philadelphia, and Baltimore, to supply clothes for the enslaved populations of the South (Fenster 1994:41). Later, the Civil War created an immediate need for uniforms and for standardization in clothing manufacture.

During the mid-nineteenth century, labor became further compartmentalized; piecework led to the replacement of seamstresses with stitchers, and tailors with cutters. While this segmentation of labor further transformed the industry by allowing more stitchers and pieceworkers to work at home, the sweatshop also emerged as a result of the invention of the sewing machine and mass production associated with the new ready-to-wear market.

4.2.7 Ethnicity and the Labor Force

Unlike other areas of the Northeast, growth of New York City's garment industry was not based on mechanization, but on an unending supply of cheap labor (Wilentz 1984). It was a competitive and chaotic industry with a dispersed labor force always on the edge of hunger (Stein 1977:xv). As African Americans had done before them, Irish, Germans, Jews, and Italians entered the garment industry in the hopes of using it as a stepping stone out of poverty (Laurentz 1980). Unlike their European counterparts, however, African Americans were unable to move up within the garment industry or to move out of it to more lucrative work, social prestige, and political power (Smith 1868:63–64; Ernst 1994:17). Black workers were driven out of artisan trades by prejudice and squeezed out of service trades and common labor by competition (Hodges 1986; Ignatiev 1995:115). Often, it was the immigrants from Europe who were able to capitalize on the oppression of blacks (Laurentz 1980). On Block 160, immigrants displaced African Americans from about the 1830s onward. Before that time, the neighborhood had a substantial black population (U.S. Bureau of the Census 1810, 1820, 1830).

By 1855, seventy-one percent of Block 160's population was Irish (New York State Census 1855). Twelve of the 14 lots along Orange Street between Chatham and Cross Streets housed clothiers, tailors, seamstresses, secondhand clothing shops, or retail stores during the 1850s, at the height of the Irish migration to the United States (Trow 1854). Tailors and secondhand clothing shops were present through the 1870s. Ninety-four of the city's 118 secondhand dealers were located on the Lower East Side of Manhattan, and the Sixth Ward (which encompasses the project area) and the Fourth Ward (adjacent to it) boasted the largest concentration of shops where Irish and Jewish sellers shared the Chatham Square trade (Scherzer 1992:257, fn. 82).

Many of New York's early clothing manufacturers were German Jews who had been peddlers or retail merchants for several generations in Germany. Jews had been the principal dealers in both new and secondhand attire (Stolberg 1944:4), a trade which they continued to pursue in America. During the second half of the nineteenth century, workers in these secondhand shops would have served the clothing and tailoring needs of their poorer clientele by cutting down used clothing to fit new owners. Since many still had to be thrifty, clothing was made over several times (Wilson 1979:255).

By 1855, two-thirds of the New York dressmakers; seamstresses; milliners; shirt and collar makers; embroiderers; and lace fringe, tassel, and artificial-flower makers were foreign born. Sixty-nine percent of these immigrants were Irish and 14 percent were German, although only 5 percent of the Irish and 2 percent of the Germans (including German Jews) were dressmakers (Ernst 1994:68). At least 22 percent of the gainfully employed immigrants from Poland, mostly Jews, were tailors (Ernst 1994:77).

The steady trickle of Irish immigrants that began to arrive in New York City as early as 1820 provided a cheap and plentiful labor source for the rapidly expanding ready-to-wear industry. This new source of labor was at the expense of African Americans and women who were exploited and discriminated against within the garment industry. During the 1840s and 1850s, German and Irish immigrants took over the jobs of porters, dockhands, waiters, barbers, and cooks as a job ceiling was imposed on both black

men and women. African Americans were in major conflict with the Irish since they competed for some of the same jobs. Laurentz (1980) speculates that the Irish used the racist climate to push blacks out of jobs they already held. "Employers would utilize the animosity of these groups towards one another to keep wages low for each" (Laurentz 1980:88).

4.2.8 Rags in the Nineteenth Century

Reuse of cotton, wool, and other textiles, paper, bone, and bottles was a common practice in New York throughout the nineteenth century (Corey 1995). Ragpickers were closely associated with the Five Points section of lower Manhattan, and "Rag Picker's Court,"² although outside the project area, was only a few blocks away at Mulberry Bend.

Fewer than five pieces of cotton were recovered from Block 160. Cotton was sought for manufacture of rag paper and for quilting and other piecework and would not have been considered refuse. The pattern of cotton reuse coupled with the dissimilar survival rates for archeological textiles may be reflected in the preponderance of wool fragments in the features. As the advertisements shown in Figures 78 and 79 indicate, both cotton and linen rags were sought for paper. Several newspaper ads offer the highest cash prices for any quantity of cotton, linen, or wool rags (Figure 80) (Mann 1799:3, 1817:3-4, 1821:4).

Although wool rags also would have been a valued commodity, not all wool rags were suitable for reuse. Usable rags were chopped into shoddy, which was defined as the shredded wool of old cloth reduced to this condition to be remanufactured. The picked rags were placed in the feed apron of a rag or shoddy picking machine, ground up, and blown down and out the trunk. By 1900, Posselt (1900:134) observed that the trade had assumed such proportions that large quantities of woolen rags were imported annually to be made up again into cloth. The cloth produced by this method was so substandard that the word "shoddy" has become synonymous with inferior quality.

4.2.8.1 Rags and Health and Hygiene

Rags and rag flock (wool refuse or cloth torn to pieces) were also the subject of annual health reports (e.g., Board of Health 1867-1869). These reports made distinctions between new tailor's cuttings, bedding, clothing, and carpeting as the source of rags. Sanitation concerns centered on the dirty nature of the material, particularly as the demand for rags began to rise. Reports observed that secondhand clothes were commonly not cast away or sold to the rag merchant unless thoroughly worn out and that garments at this stage contained a great amount of filth. Old trousers, often badly stained with urine and feces, were often the target of complaint as they may have passed, unwashed, into the tearing machines. Rags were used for bedding and were suspected in the dissemination of infectious disease (*Report on Rag Flock* 1910). In addition to filling beds, rags were also used for stuffing upholstery and old carpet strips were reduced to flock.

Health and hygiene concerns surrounded both the rags and the immigrant population, which was characterized as "huddled together in miserable apartments in filth and rags" (Rosner 1995:72). The English *Report on Rag Flock* (1910) mentioned immense numbers of flea-infested rags which were usually disregarded by sorters. Bed bugs and lice were also a concern. The report further stated that various infections clung to rags. It was, therefore, not possible to deny the danger of infection by specific diseases potentially attached to the use of unwashed flock. Accordingly, rags were implicated in the dissemination of both influenza and smallpox.

By the turn of the century, several countries, including the United States, regulated the importation and trade of rags. Rags exported from Great Britain to the United States were to be disinfected in accordance with quarantine regulations that required 24 hours of fumigation with sulphur in a closed chamber (*Report on Rag Flock* 1910).

² "Rag Picker's Court" was off Mulberry Street near Chatham Square. Rags picked off the city's streets and garbage dumps were hung to be cleaned by the sun and rain before being sold.

Linen & Cotton Rags.

FINDING, by an advertisement in one of the Newark Papers, that some of the Gentlemen in Springfield, who call themselves Paper-Makers, have offered 30¢ per hundred, for clean linen and cotton rags; the Subscriber, therefore, takes this method to inform the public, that he will, at all times, give as much as is given by any person in the State.

CHARLES MARR.
Hanover, Sept, 4, 1799. (48. t. f.)

Figure 78. Newspaper advertisement for cotton and linen rags used in papermaking (Mann 1817).

Rags! Rags!

WANTED at the Factory of the Subscribers in Bloomfield, Essex county, any quantity of Rags, deliverable either at the Factory or at the Store of Mr. Jonathan Cory, in Newark. Where the highest price will be paid for them, in Cash.

Pitt & Baldwin.
Bloomfield, Feb, 6. 1821. 73¢

Figure 79. Newspaper advertisement for rags used in papermaking (Mann 1817).

Wool Wanted.

THE subscribers to the Palladium are hereby respectively informed, that good common, or any grade of merino wool, will be very acceptably received at the New-York current prices, in payment of their accounts, by

J. MANN.
Morristown, May 1, 1817.

Figure 80. Newspaper advertisement for wool (Mann 1817).

4.2.8.2 Domestic Use of Rags

Although rags and ragpicking were generally associated with commercial reuse and sale, wool rags were also valued for the domestic production of hooked, woven, braided, or punched rugs.³ A substantial number of long wool strips were recovered from the feature (J) associated with the Irish tenement at 472 Pearl Street. While no obvious function can be assigned to the strips, they may have been used in rugmaking which, like shirtmaking, was another craft that could have been practiced at home (Figure 81). Homemade rugs and floor cloths had been produced in the eighteenth century, but new types were made in the nineteenth century. Braided rugs were popular and required long strips of cloth. Woven rugs were also made with long strips of wool. Punched rugs, which required small scraps of wool similar to the fragments in the Block 160 assemblage, became so popular that artisans sold pre-printed canvas designs.

Before the rugmaking machine was invented, Oriental rugs and carpets were considered too precious to be placed on the floor (Grier 1988:86, 147). Floor coverings were the domain of the rich and continued to be associated with gentility. As machine-made rugs became widely available, the fine crewel and turkey-work rugs were taken off the table and placed on the floor, and rugs and carpeting became a requisite component of respectable furnishing (Grier 1988). Rag rugs, needlepoint coverings, and woven rugs served as floor coverings for the working class. According to historian Richard Stott (1990:173), one of the things that amazed newly arrived immigrants was the presence of rugs in workingmen's apartments. To not have a rug was to be poor indeed. By the late nineteenth century, rugs had become "a symbolic representation, an icon, of the high American standard of living" (Stott 1990:173).

4.2.9 Analytical Discussion

The process of remaking garments may at least partially explain the quantity and variety of cut-edged cloth pieces recovered from the site. Several of the pieces appear to come from collar or lapel sections which may have been cut down from larger garments (Figure 82). The pieces of folded welting found were probably used to edge garments to protect them from wear: welting can be readily changed when soiled or damaged. These types of fragments are probably remnants of the small-scale, repetitive sewing done by seamstresses and secondhand shops.

Of the three features with substantial textile deposits, the upper deposit in Feature H is the most indicative of the tailoring industry and of a commercial sewing enterprise associated with the needle trades. In addition to large pieces of uncut damask, rolls of bias tape, packs of pins, and a variety of buttons and men's tailoring thimbles (which have no caps) were recovered. The tailoring profession is closely associated with German and Polish Jews during this time, and the 1855 census reflects both Polish and German clothiers and tailors living on the block.

The nature of the textiles in the upper deposit in Feature H suggests abandonment. The quantity of pins, intact rolls of bias tape, and, particularly, the uncut cloth were all serviceable items that had not been recycled or reused. Textile experts (see Section 4.2.4) have suggested that the excavated cloth may be mourning fabric and therefore closely associated with the specific usage of bereavement and not viewed as generally reusable. Although initially difficult to identify, chemical testing revealed that this fabric is a glazed wool which was made to look like silk.

In contrast to the commercial deposit in Feature H, many of the cloth pieces recovered from Feature J, from the lower deposit in Feature H, and from other features (AM, AN, T, Z, B) are one of a kind and are not representative of mass cuttings of bolts of cloth which would have been associated with tailors or dressmakers. These unique fragments reflect both hand-stitched elements and machine stitching. Although the sewing machine was invented in 1846, it is not likely that it enjoyed widespread use in New York City before 1850.

³ Cotton, silk, velvet, and satin pieces have always been used for quilting and other pieced items, but wool was not a traditional pieced material.



Figure 81. Jacob Riis photograph of a woman making a rag rug. From *How the Other Half Lives* (1971).

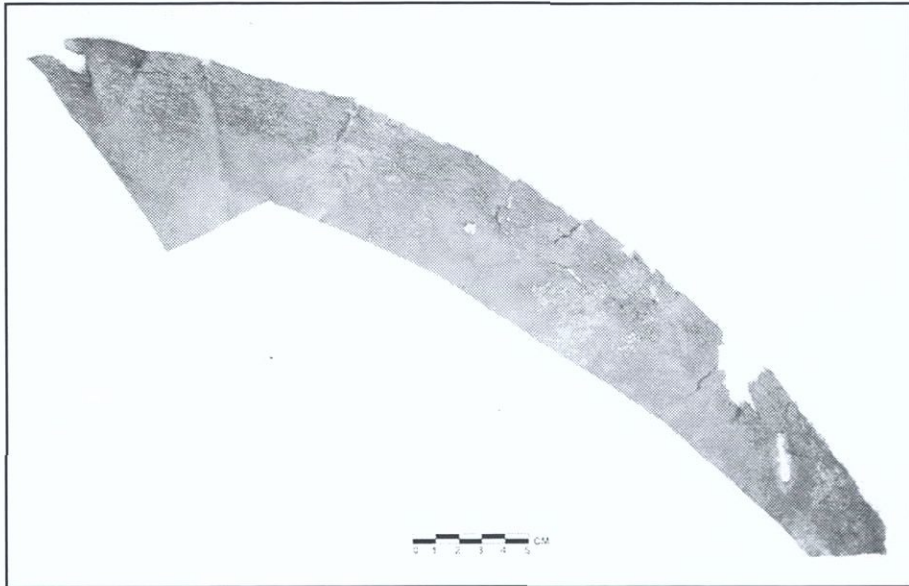


Figure 82. Possible lapel or collar piece recovered from Feature J.

Since the rags recovered from Block 160 were from privy contexts, the possibility of rags being used for sanitary or hygienic purposes was considered. Toilet paper did not come into popular use until ca. 1900, although paper for wiping was first produced in England in 1880 (Spinrad 1994:22). Rags were a forerunner of toilet paper, but the cut edges and small sizes of the fabric remnants recovered on Block 160, coupled with the lack of feces imbedded in the fabric, make such a use unlikely in this situation.

When collections from individual sites are viewed holistically and compared with other sites, patterns emerge that are indiscernible when sites are viewed in isolation. The Assay, Greenwich Mews, and Atlantic Terminal site reports are the only reports on nineteenth-century sites in New York City that mention woven materials. There is also some possibility that textiles were recovered from the Sullivan Street site. Unfortunately, excluding textiles from the report altogether or placing them in a miscellaneous category severely hampers comparative analysis.

The Assay textiles were recovered from a feature (S) associated with a middle-class, single-family, domestic household. The assemblage derived from the owner of waterfront businesses. The area burned in 1830, sealing the site below the burn level. The Assay assemblage does not represent refuse, and the types and variety of textiles are markedly different from the Five Points assemblage, which was excavated primarily from privies. The most prominent distinction between the Assay collection and the Five Points collection is the lack of woolens, rags, and fragments. Silks, beautiful resist-dyed cottons, and fancy cloth recovered at Assay suggest textiles associated with the genteel middle class rather than the working class. Whole garment pieces, a hand-stitched sleeve and a vest portion, ribbons and accessories, as opposed to rags and scraps, are represented in the Assay collection. Aside from intact garment pieces, the Assay textiles consist of several examples of the same fabric that would be remaindered in the making of a complete garment, while many of those associated with the tenements at Five Points are singular representations of many different textiles.

4.2.10 Conclusion

The low recovery rate for archeological textiles from most sites generally does not support any analysis beyond function, construction, and fiber identification. This section has explored several topics associated with the preservation and conservation of archeological fibers, textile production, manufacture, and use to illustrate the wealth of analytical data associated with fabric and garments. While not appropriate for this project, more detailed analysis might focus on details pertaining to weave structure, manufacturing techniques, mechanization, hand versus machine work, color and dyes, and import versus domestic distinctions, topics of great interest to textile and clothing experts, conservators, and historians.

Working-class textiles and garments are not often available for study or investigation. Generally, when garments and textiles are curated they are expensive, high-style examples. The Ellis Island Collection, although not archeological, is one notable exception. The Five Points materials add invaluable information on working-class clothing, particularly with regard to the variety of wool twills that were being used.

Within the Five Points assemblage, there are pant- and trouser-weight fabrics along with fragments of outerwear weight and shoddy. A few of the textile fragments have evidence of hand stitching and machine work and others have cut edges reflecting the work of tailors or seamstresses. The textiles reflect the commercial nature of portions of Block 160. Tailors, clothiers, seamstresses, and secondhand clothing shops all generate scraps of fabrics. There are also groups of textile fragments cut into long strips suggesting domestic rug manufacture.

Ragpicking was prevalent in the surrounding area and more than likely accounted for the presence of some of the rags. The large number of rags in Feature J, the cesspool behind the Irish tenement at 472 Pearl Street, suggests that rags were curated by tenement residents. These scraps of material were most likely collected from the surrounding clothiers, secondhand shops, tailors, seamstresses, and dressmakers who occupied the site. The assortment of fabrics may have been collected for personal use, but they may also have been collected with the ultimate intention of reuse or recycling in the booming rag industry. The textiles

may well represent the dregs of the dregs, however. The rag collection recovered from Block 160 could have been unwanted by the rag merchants and picked over by the quilters, the rugmakers, and the crafts people.

The history of New York's textile trade is entwined with ethnicity (the Irish, the Germans, the Jews), labor relations and exploitation, and economic and social mobility. Innovations in the textile industry are reflected in the technical sophistication of the weave structures. The quantity and variety of textiles from Block 160 are evidence of the mechanization and industrialization that was the hallmark of the nineteenth century. Because the needle trades also contributed to the character of the block and the neighborhood as well as to the nature of commerce in nineteenth century New York, the textiles furnish a perspective which historically has not been available through archeology.

4.3 Competition and Economic Strategy in the Needle Trades in a Nineteenth-Century Working-Class Neighborhood (Heather J. Griggs)

4.3.1 Introduction

The way to study people is not from the top down or the bottom up, but from the inside out, from the place where people are articulate to the place where they are not, from the place where they are in control of their destinies to the place where they are not (Glassie 1982:86).

Theoretical paradigms and scholarly classifications often mask the subtle complexities of human behavior. Although recent writings (Hodder 1986; Howson 1990; Beaudry et al. 1991) have focused on the need to view material culture in a dynamic social and historical environment, many archeologists still focus on specific artifact classes as indicators of gender, class, or ethnicity alone. Sewing-related artifacts (Figure 83) from Five Points afford an opportunity to observe the disparate manner in which men and women of different ethnic and social backgrounds used the same materials. Gender bias and intense competition for employment gave men a distinct advantage over women in the ready-made and secondhand clothing markets of nineteenth-century New York. However, the advantages that male needleworkers had over female needleworkers must be considered in a cultural context. Economic strategies are not created in a vacuum; rather, occupational patterns and survival strategies are constructed by groups with cultural attitudes toward marriage, family, and work all within the context of the changing circumstances of daily life.

4.3.2 Historical Background

Clothing was the largest industry in New York City by 1855, employing 35 percent of all manufacturing employees (Stott 1990:37). Foreign-born tailors, dressmakers, hatters, furriers, and clothiers made up nearly 13 percent of the immigrant population of the city at this time (Ernst 1994:67). Ninety percent of New York tailors were Irish or German in 1855 (Ernst 1994:77) with Polish and Russian Jews also working in the needle trades. This trend had roots in the homelands of these immigrants. Jews brought needlework experience with them from the shtetls of Europe (Kessner 1977:61). A nineteenth-century authority on the New York clothing trades claimed that the needle trades were the only trades in which Jews were able to *employ* labor and that did not interfere with their "peculiar" religious customs (Kessner 1977:62). Irish immigrants also brought experience in tailoring with them to their new homes. In Ireland, tailoring had been an urban trade that employed one of the island's largest groups, estimated to number between 15,000 and 30,000 in 1831 (Devlin 1996:171).

Competition among workers in the clothing industry arose from the creation of the "sweating" system. "In practice, sweating consists of the farming out by competing manufacturers of the material for garments, which in turn is distributed among competing men and women to be made up" (Commons 1977:45). This system, and its twin, the factory system, were apparently created in response to the increasing demands of country farmers and southern slave owners for cheap clothing that had traditionally been made at higher cost by farmers' wives (Stott 1990:38). The growing masses of urban dwellers, most of whom had no time to produce their own clothing, also boosted this market. As manufacturing giants like D. Devlin & Company and the Brooks Brothers took over the ready-made market, many smaller entrepreneurs and master tailors were forced to give up their own businesses and work as journeymen and retailers for those who could produce large quantities at cheap prices (Wilentz 1984:121).

Clothing manufacturers often set up massive workshops, or inside shops like the one shown in Figure 84, where men and women (only women are shown in the illustration) would complete the numerous stages of garment production according to their abilities. Some manufacturers had both an in- and an outwork system. In these companies' workshops, skilled cutters would cut the cloth into garment pieces which would then be given out on retainer to other men and women to be sewn into garments in homes and small workshops. Because of the compartmentalized nature of this type of production, certain skills became highly specialized (Stott 1990:40), increasing the competition among laborers.

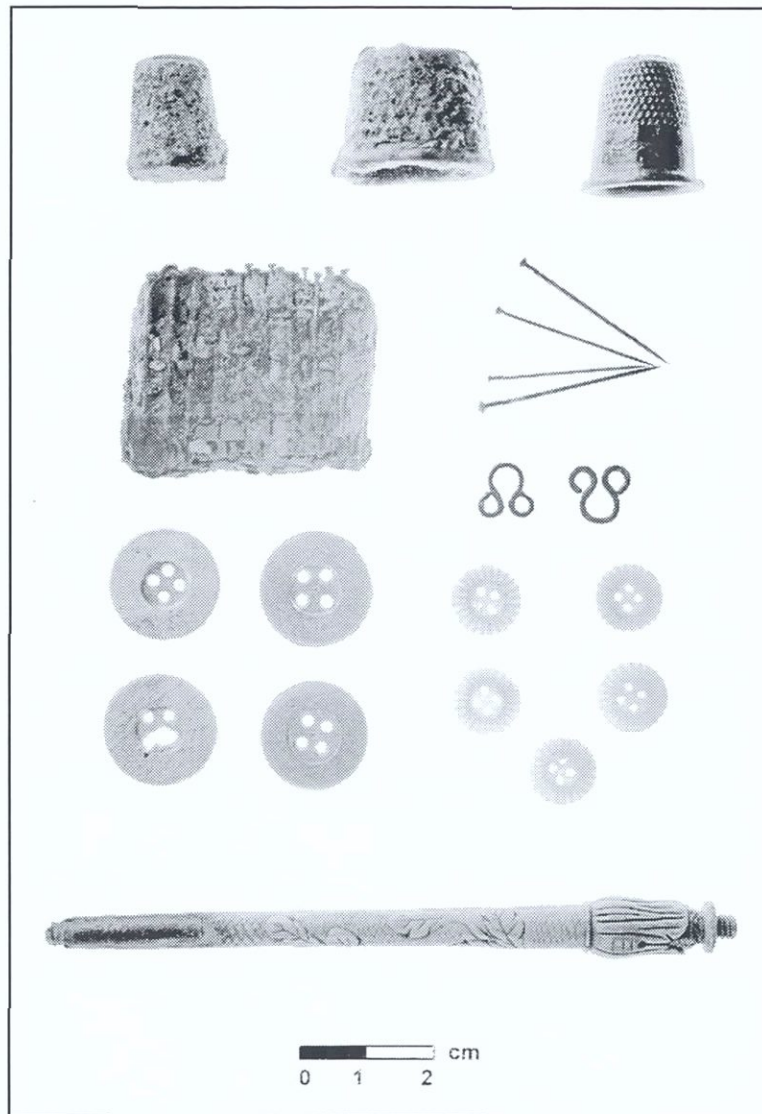


Figure 83. Sewing-related materials from commercial and domestic deposits in Feature H display both functional and decorative qualities. Upper row, thimbles; second row, paper of pins, straight pins, and eyes; buttons and tambour hook at the bottom.



Figure 84. The sewing room at A.T. Stewart's Department Store where several hundred women were employed in sewing by hand the clothes sold at Stewart's (Grafton 1977:212).

Most historians who discuss the sweating-system trades at any length point out the wretched conditions that often plagued needleworkers. In his 1833 pamphlet *An Appeal to the Wealthy of the Land*, Mathew Carey, a long-time advocate of the sweat worker, asked the question: "And while there is such an over-proportion of labor in the market, must not competition reduce prices, as it has done, to the lowest grade, even below the minimums necessary to support existence?" (Carey 1977:6). The five clothing manufacturers in the Sixth Ward paid their male workers an average of \$8 per week, which did not add up to the minimum yearly living wage of \$600 suggested by a *Times* article in 1853 (Groneman 1973:91). Furthermore, because of competition among contractors, and the common practice of manufacturers issuing credit to retailers, cash was often in short supply, lowering wages for outworkers (Wilentz 1984:123). The hardships of the needle trades worker may be summarized as follows:

At any given moment in the 1830s and 1840s, the underbidding in the contracting network could depress outwork and garret-shop piece rates so low that stitchers had to work 16 hours a day to maintain the meanest of living standards: in 1850, some of the largest southern-trade clothing firms in the Second Ward paid their *male* workers, on the average, well below subsistence wages....During slack seasons or a bad turn in trade, the clothing workers struggled harder to make ends meet, with a combination of odd jobs, charity relief, and the starchiest kinds of cheap food (Wilentz 1984:123–124).

If competition among groups of skilled male workers was keen, it was felt most sharply by the female sweaters who were paid far lower wages than men for work which was more menial and time consuming. Testimonies of these women speak unequivocally of health-related difficulties that arose from working in unventilated and cramped quarters (Dreiser 1977:43; Sikes 1977:13; Wright 1977:16). In addition, abysmal wages accompanied the trials faced by these needlewomen. An 1853 *New York Tribune* investigation of shirt sewers found that they usually received between three and eight cents per shirt. "Since finishing three shirts was a hard day's work, the *Tribune* estimated that a woman needleworker, taking into consideration the time expended to obtain and return the goods and other journeys to secure her pay, could conceivably receive fifty cents for an entire week's labor" (Groneman 1973:141). The same column reported that even with full-time employment, which was uncommon, a seamstress could at best earn \$91 a year (Stansell 1987:111).

Women were also more susceptible to the unfair practices of employers, who sometimes tried to cheat them out of earned wages. Apparently, "it was not uncommon for employers, especially small proprietors and subcontractors, to postpone paying a woman when she returned her work, to require alterations before they paid her, to refuse to pay her at all, or to hold back the deposit that they required for taking out work" (Stansell 1987:112). In 1878, the *Fifteenth Annual Report of the Working Women's Protection Union* recorded a case in which Raisebread & Son on Broadway tried to defraud Esther Merriman, a scarf maker, of \$2.10, saying her work was not well done. In presenting their case to the court, Raisebread & Son displayed a poorly made scarf to the judge, only to be shown by the defense that it was the very scarf *they* had given Ms. Merriman as a sample from which to work. In the end, they paid her the \$2.10 "for charity sake" (Working Women's Protection Union 1977:15).

Women also suffered in the competition for work in the sweated trades because of commonly held gender stereotypes. Stansell quotes several journeyman tailors, whom she describes as "irate, exasperated and derisive," as having said that for women to sew vests and pantaloons was a "preposterous and truly ridiculous idea." Indeed, she continues, "The journeymen reified a customary eighteenth-century division of labor—tailors sewed vests, women didn't—into a law of gender: Women *could not* sew vests properly, by virtue of reason and nature" (Stansell 1987:132). These variables, as well as a host of other obstacles, both domestic and public, left women at a distinct disadvantage when competing with their male counterparts.

4.3.3 *The Documentary Record—Block 160*

Between the 1850s and the 1880s, Baxter Street became well known for the “flapping coattails and pantaloons legs of the old clothes stores which lined the street” (Groneman 1973:38) (Figure 85). In 1855, clothiers and tailors occupied store fronts on 11 of the 13 lots on Baxter Street between Park and Chatham Streets, a trend that continued through the last quarter of the nineteenth century (Rode 1853–1855; Trow 1860–1890). The owners of the Baxter Street clothing businesses were almost exclusively Eastern-European Jews during this period. Additionally, some tenants in the tenements on Baxter Street also worked in the tailoring trades; most likely for the clothiers along the block or, perhaps, in the large sewing houses located nearby in the Second Ward. The small workshops and store fronts on Baxter Street were probably run with the help of the whole family, perhaps aided by boarders or apprentices, to maximize profit and minimize cost.

Businesses occupying store fronts on Pearl and Park Streets, on the other hand, were more diverse. It was in the cramped tenement quarters above these stores that the needleworkers of Pearl and Park Streets lived and, most likely, plied their trade. In 1855, the gender distribution of needleworkers on Baxter Street was the inverse of the distribution on Pearl Street, as shown in Table 115.

Table 115. Needleworkers Living or Working on Block 160 in 1855

Street	Men	Women	Total
Pearl Street	11	33	44
Baxter Street	23	1	24
Park Street	7	11	18
Chatham Street	0	1	1
TOTAL	41	46	87

This distribution is due to several variables, including the differences in ethnic makeup and space management between the two blocks. Buildings on Baxter Street were, for the most part, smaller, and they were occupied by German and Eastern European family units running the clothing stores on the block. These households were headed by men whose wives did not list an occupation. The buildings on Pearl and Park Streets, on the other hand, were larger, more populous tenement buildings, occupied mostly by the Irish.

The sample of Block 160 occupants working in the needle trades may be biased due to cultural and historical attitudes toward gender roles. Women were underrepresented in the documentary record because their wage work was often considered a facet of their domestic duties (Groneman 1973:149). “The exact numbers of working nineteenth-century American-Jewish women are obscured by their involvement in family stores and shops” (Diner 1992:82). In fact, Jewish wives and daughters did play an active role in the labor force, but they did so in “peculiarly female and Jewish ways, primarily in family business” (Diner 1992:81). Additionally, most of the Irish women living on Block 160 enumerated as working in the sewing trades were widows, widows’ daughters, or boarders. These women lived in the tenements along Pearl and Park Streets. Like the Jewish wives, married Irish women who were taking in work to help the family’s income are not listed as having occupations, another example of how gender roles and cultural perceptions affect the documentary record. Although Irish tailors outnumber other immigrant males working in the needle trades on this block, they are dispersed, giving the illusion that they were fewer in number. In contrast, almost all of the German and Eastern-European tailors were concentrated on Baxter Street, giving the appearance that most of the male needleworkers worked on Baxter Street, while the needlewomen worked on Park and Pearl Streets.

The overall trend of commercial and residential occupation related to the sewing trades on Block 160 conforms to recent historical work on this issue (Groneman 1973; Stansell 1987; Stott 1990; Ernst 1994). When the numbers of male and female needleworkers living on the block from 1855 to 1880 are compared



Figure 85. "Unredeemed goods for sale." After the Civil War the "Ol' Clo'es" shops on Baxter Street also became known for fencing stolen goods. From *How the Other Half Lives*, by Jacob Riis (1971:94).

(New York State Census 1855; U.S. Bureau of the Census 1870, 1880), a general decline becomes evident. The declining numbers of male and female needleworkers on Block 160 coincide with both immigrants moving in and out of the neighborhood and the changing technological and industrial climate of clothing manufacture. The population of needleworkers is highest at mid-century, when Irish tailors and seamstresses and Eastern-European clothiers were all struggling together in the competition for outwork. Machine-made clothing was not yet available, and thousands of hands were needed to keep up with the booming ready-made clothing trade. However, into the 1860s the growing affordability and efficiency of the sewing machine was putting the single outworker out of business and fueling the creation of contract sweatshops (Fenster 1994:52) and large sewing factories created by manufacturing giants like the Brooks Brothers. On Block 160, only the Eastern-European clothiers remain in numbers.

By 1880, the block had changed considerably. Many of the Irish present at mid-century were replaced by growing numbers of Italians and Chinese. The invention of the sewing machine and the continuing trend toward industrialized clothing manufacture had changed and diversified the needle trades by this time. Most of the young Irish-American, Eastern-European, and Italian women who worked in the needle trades on Block 160 in 1880 probably worked in their homes or in small sweatshops making hoop skirts, parasols, shirt collars, vests, neckties, corsets, and artificial flowers. Only the Jewish clothiers of Baxter Street remained in numbers, tailoring and adjusting secondhand clothing as they had been doing since mid-century.

4.3.4 Archeological Evidence

4.3.4.1 Feature J—Lot 6, 472 Pearl Street

Feature complex JZU, located in the courtyard of 472 Pearl Street, contained refuse from a large tenement house occupied almost exclusively by Irish at mid-century. Between 1850 and 1880, 13 occupants of 472 Pearl Street, all women, are identified in the census records as working in the needle trades. Nearly 1,000 textile fragments were found in Feature J. The majority of these fragments were found in the primary deposit (AS V), but nearly one-third were also found above the flagstone floor in AS III. They represent a wide range of mid-nineteenth century woolens, most of which are trouser-weight twills and plain weaves of the sort used to make outer garments like trousers, skirts, coats, and cloaks. More than 30 different weave structures were identified among these woolens, including balanced, warp-faced and weft-faced plain weaves; warp-faced and weft-faced twills; herringbone twills; fancy twills; satin weaves; knits; steep twills; and compound weaves. Additionally, Feature J contained examples of shoddy cloth: “a villainous compound, the refuse stuff and sweepings of the shop, pounded, rolled, glued, and smoothed to the external form and gloss of cloth, but no more like the genuine article than the shadow is to the substance” (Haythornthwaite 1990:103). Shoddy cloth, manufactured in quantity at mid-century, provided an affordable alternative for the poor and working-class occupants of the inner city who could not afford to spend more on clothing. Feature J also yielded a few small fragments of finely woven silk, some felt, and some plush strips. Unfortunately, no cottons or plant-fiber-based materials were recovered from Feature J, most likely an indication that the environment inside the feature was acidic (see Volume V, Section 3.1.6, for a discussion of the influence of environmental conditions on the preservation of textiles).

Of the textiles found in Feature J, approximately 25 had cut or selvage edges indicating sewing. Additionally, a small number bore signs of either hand or machine stitching along the edges. A 14-inch lapel fragment with a buttonhole and bunches of wool twill strips found in Feature Z also appeared to be the refuse from commercial activity at 472 Pearl Street. The strips are representative of welting used to bind and strengthen seams on garments. Feature J also contained a small collection of sewing artifacts. There were 30 copper-alloy pins; 11 hooks and eyes; the glass handle of a darning egg used for mending clothing; a bone handle for an embroidery hook; and 545 bone, ceramic, rubber, and metal buttons, including bunches of matching ceramic sew-through buttons.

4.3.4.2 Feature AG—Lot 43, 10-12 Baxter Street

Feature AG, a shallow stone-lined privy located at the back of Lot 43, yielded a variety of sewing-related materials in fill associated with the closure of a brothel at 12 Orange Street (Figure 86). The bulk of the sewing materials from Feature AG was located in the fill associated with AS III. Among the sewing artifacts in this deposit was a small thimble with a smooth cap, possibly of European manufacture, and a small open-capped (open top) tailor's thimble. A small, carved-bone stiletto was also found. This is a sharply pointed tool slightly larger than a toothpick with a round blade tapering to a sharp point. In the nineteenth century, needlewomen used stilettoes primarily for whitework, in which white thread is used on white cloth to embroider around small holes in floral designs. They were also used to make eyelet holes in dressmaking and for embroidery of various kinds (Rogers 1983:207). A folding ruler constructed of wood with a copper-alloy hinge and inch calibrations along the wood was also found in this deposit. The striated wear-pattern on a bone comb from which the tines had been removed and the broken edge polished to smoothness suggests its use as a silk winder. Silk and embroidery thread came in skeins rather than on spools and needed to be wound on something to keep the thread clean and untangled (Rogers 1983:162). This deposit also included a high-quality bone handle, a bobbin top, a handful of beads, and bunches of pins, hooks, and eyes. The sewing implements display a collection reminiscent of a lady's needlebox: thimble, stiletto, ruler, silk winder, embroidery hook, and bobbin. It is likely that this collection constitutes the contents of a sewing box used to mend petticoats and stockings and embroider handkerchiefs and sleeves during the hours before gentlemen came calling.

4.3.4.3 Feature H—Lot 45, 8 Baxter Street

Feature H, a stone-lined privy or drywell possibly associated with Lot 45, contained a commercial sewing deposit associated with clothiers and tailors who operated on this lot at 8 Baxter Street from 1853 through 1880 (Rode 1853–1855; Trow 1855–1880). Thousands of straight pins, both loose and in paper packets, thimbles, copper-alloy hooks and eyes, matching sets of jet-glass and copper-alloy buttons, scraps of twill tape, trimming, thread, seam bindings, and a large piece of turned twill damask, dyed black, were recovered from AS II at the top of the feature (Figure 87).

The approximately 50 jet-black-glass and copper-alloy buttons found in the feature are reminiscent of the classic Victorian mourning buttons that became fashionable after the death of Queen Victoria's husband in 1861 (Fink and Ditzler 1993:34). The buttons recovered, in three different sizes, are the kind of outer-garment buttons worn on coats, vests, and dresses. Twenty-six rolls and over one hundred fragments of twill tape, used to strengthen hems and cuffs, were salvaged from Feature H. Additionally, bunches of heavy cotton thread and rolls of trim were used to sew the turned twill damask unearthed into dresses and suits. The hundreds of straight pins and hooks served various purposes around a tailoring and alteration business. These items were relatively cheap to buy: 720 pins for thirty cents and 288 hooks and eyes for twelve cents in the 1897 *Sears, Roebuck & Company 1897 Catalog* (Sears, Roebuck & Company 1968:322). Thimbles, both open-capped or tailor's thimbles and the dome-capped copper-alloy thimbles that women used, protected the thumbs and fingers of tailors and seamstresses during long hours of sewing.

This upper fill also yielded a dome-capped copper-alloy thimble embossed "Forget [Me] Not." Plain brass thimbles were relatively inexpensive and would have been bought by the gross for a tailoring business. However, this embossed thimble offers an example of the use of a personal item in a commercial setting. In the same way that ceramic mugs were sometimes used as presentation pieces for friends or loved ones (Ketchum 1983:153), thimbles were considered an appropriate gift from a young man to a young woman because they were not too personal (Zahlkin 1988:3). These thimbles most commonly bore such inscriptions as "A Present," "Love," "Forget Me Not," and "From A Friend." Perhaps the forget-me-not thimble belonged to one of the young women who worked in the tailoring business at 8 Baxter Street, and it got lost or thrown out when the shop changed ownership.

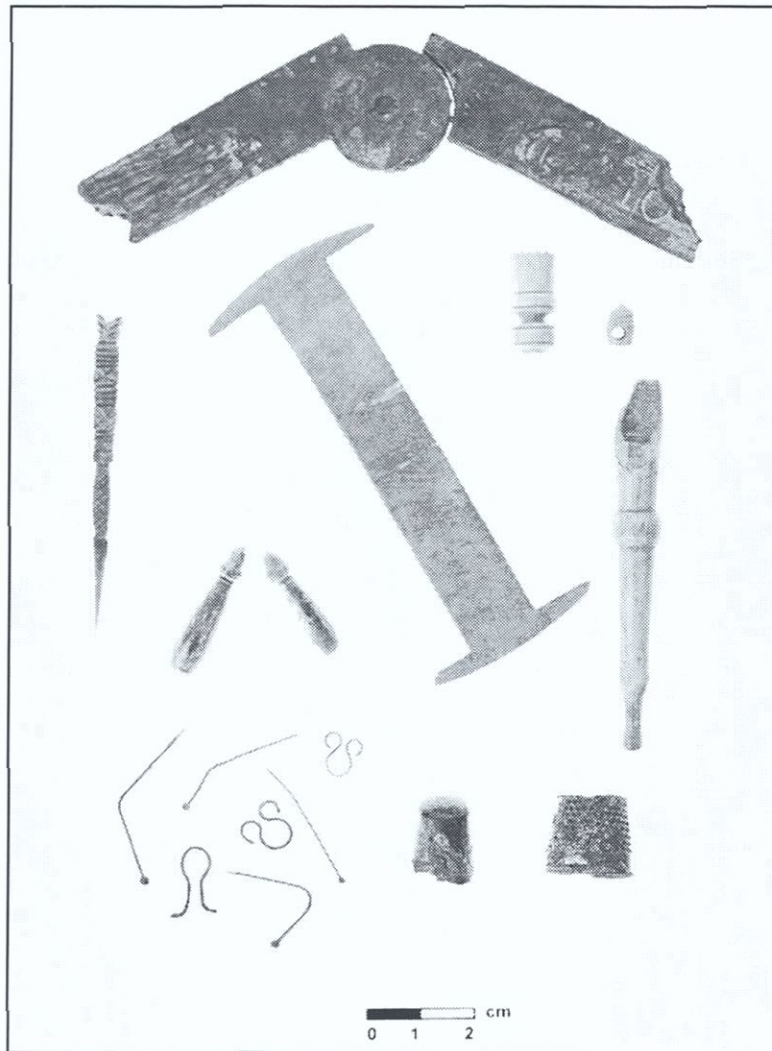


Figure 86. Needlework tools, Feature AG (AS III). In the nineteenth century, elegant needlework tools, often kept in elaborate boxes, provided a source of admiration and conversation in the social lives of women. Top, folding rule; center from left to right, bone stiletto, knitting needle tops, toothless comb used as silk winder, bobbin top, bone handle for an embroidery hook; bottom, pins, eyes, and thimbles.

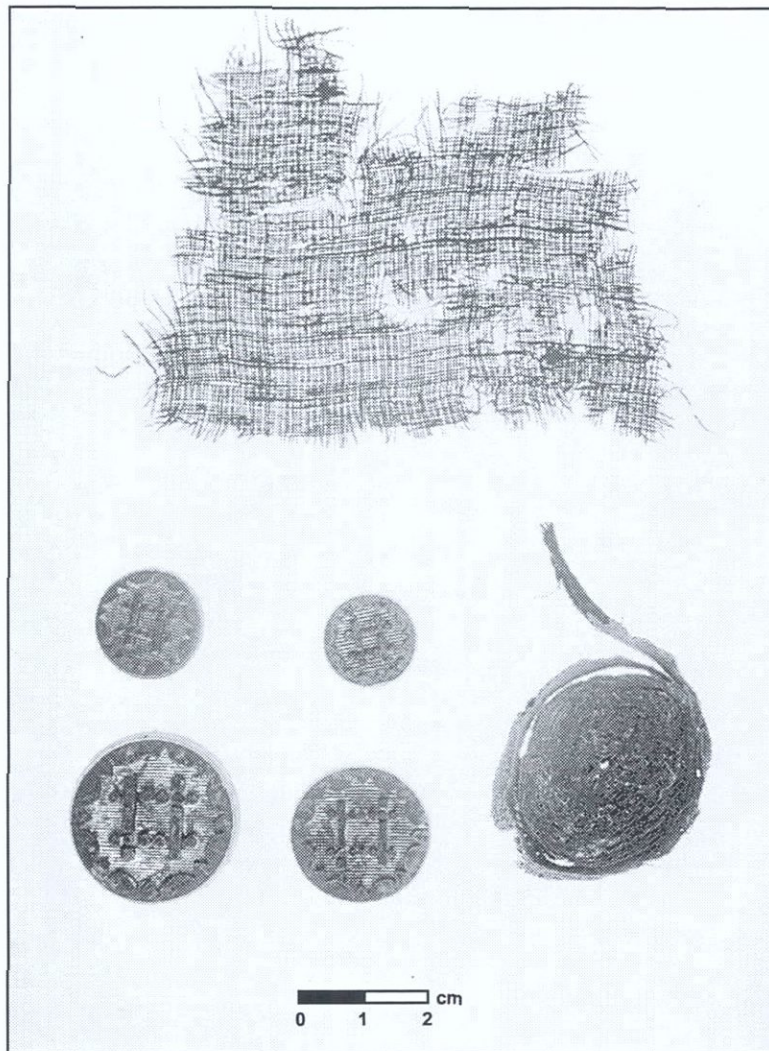


Figure 87. Dyed-black textiles and jet-glass buttons were often used in the production of mourning clothes; black was also the fashionable color worn by many Victorian women. From Feature H (AS II).

The lower deposit in Feature H contained distinctly different sewing-related materials than the upper commercial deposit. These materials were found in AS III and appear to be associated with the household of one of the tailoring families living on the lot. A small number of buttons of various materials, thimbles, pins, a few textiles, and an ivory and copper-alloy tambour hook decorated with an acorn and oak leaf motif (Figure 88) were retrieved. Tambouring is described as follows:

Tambour, meaning drum in French, was the name given to the round frames which tightly stretched white fabric like the top of the drum. The needlewoman embroidered the white fabric with white thread in the tambour stitch which required both hands....Tambouring, as a cottage industry, furnished much employment until machine-made tambour stitching rendered hand tambouring unprofitable in the second quarter of the nineteenth century. But the idea of tambour work never went entirely out of fashion for domestic use (Rogers 1983:190).

One of the thimbles found in this lower deposit was embossed "From [A Friend]" (see Zahlkin 1988:3). Among the few textiles found was a piece of cut herringbone twill with stitching on the side. The contrast between the quantity and quality of the textiles, thread, and other materials from the upper deposit and the lower deposit suggests that the upper deposit represents the cleaning out of a tailoring shop at 8 Baxter Street while the lower deposit represents domestic use. While the materials from the upper deposit are particularly interesting because of their commercial association, the tambour hook and embossed thimble from the lower deposit are among the most ornate sewing tools found on the block.

4.3.4.4 Feature AK—Lot 47, 4 Baxter Street

Feature AK, the red-sandstone-lined privy located at the back of Lot 47, contained a large sample of sewing materials related to the commercial sewing activities at 4 Baxter Street. Tailors and shoemakers worked on the lot from the mid- to late nineteenth century. The deep upper deposit (AS I) yielded 89 buttons and 96 fragments of textile. The wide variety of ceramic, metal, and cloth-covered buttons included a selection of brass uniform buttons comprised of four New York State Militia buttons, a U.S. Army general staff button, a Grand Army of the Republic button, and a New York City municipal police button. Feature AK also produced an assortment of three-piece, cloth-covered buttons. These buttons are constructed of a ferric back filled with compo and covered with twill.

The collection of textiles from Feature AK was one of the largest found. These textiles resembled those found in Feature J, with the exception that many of the fragments in Feature AK had cut edges. The textiles from this feature represent 14 different combinations of weave type and structure, including weft-faced twill, herringbones, steep twills, cotton denim, and a variety of fancy twills. Feature AK also contained fragments of shoddy cloth.

4.3.4.5 Feature AL—Lot 47, 4 Baxter Street

Feature AL, the small circular privy located adjacent to Feature AK, contained sewing materials consisting entirely of buttons and garment fasteners in the upper stratum (AS I). Under normal circumstances, buttons alone would not necessarily constitute a sewing-related collection. However, Feature AL contained 80 identical cloth-covered buttons (Figure 89), 10 military buttons of which eight originate from the same New York State militia regiment, and over 30 small stays that might have been used on garters, corsets, or other undergarments. The 80 cloth-covered buttons are of three-piece construction and are covered with a twill of unidentifiable weave structure. These buttons, in three sizes, resemble the cloth-covered buttons found in Feature AK and the black mohair-covered buttons seen in the *Sears, Roebuck & Company 1897 Catalog* that came in overcoat, coat, and vest sizes (Sears, Roebuck & Company 1968:320).



Figure 88. Carved ivory tambour hook with acorn motif. From Feature H (AS II).



Figure 89. Matching metal-and-wood, twill-covered buttons. From Feature AL (AS I).

4.3.5 Interpretation

Each of these deposits reflects different uses of textiles and other sewing-related articles associated with the needle trades on Block 160. However, the disparate usages of the sewing materials from Block 160 cannot simply be explained in terms of men vs. women or Irish vs. Jewish. The following discussion examines the sewing materials within the specific social environment of a city block on which household makeup and economic strategy were influenced by ethnicity and gender. In 1855, over half of all Irish women who lived on Block 160 were widows or unmarried, the result of high mortality and abandonment rates among married Irish males and late marriage rates among Irish females (Diner 1983:55). Irish women were also less likely to marry because of the higher proportion of Irish women to Irish men (Groneman 1973:73). For Irish women who were unable to find work as servants or who could not work outside the home because they had children, sewing and washing clothes was often the only work open to them (Ernst 1994:68). In addition, many needlewomen, especially widows and their daughters, were supporting or helping to support their families (Groneman 1973:145). These women, most of them immigrants, would have arrived with the basic skills necessary to find work in the needle trades. However, the dismal wages paid to these women were sometimes not even enough to keep their children from starving to death (Stansell 1987:110).

As the primary source of income for themselves or their households, the Irish needlewomen of 472 Pearl Street appear to have gone beyond their primary tasks in the sweated trades, reusing textile scraps in ways that could have augmented their meager wages. The small percentage of textile scraps with cut or selvage edges in Feature J suggests that these textiles had been put to a secondary use prior to their disposal. There are two possibilities. One is that the scraps were the refuse left over from ragpicking. Ragpicking was a common employment from the mid- to late nineteenth century, as can be seen in many of the lithographs of ragpickers found in *Harper's Weekly*. The picking of cotton and wool rags to be sold to paper and shoddy manufacturers, respectively, helped supplement a family's income and removed rubbish from the streets of nineteenth-century New York (Corey 1995). The culling of scraps from garment-making activities to sell to the shoddy and paper manufacturers would have added needed pennies to a seamstress's weekly income.

The second explanation for the textile remainders in Feature J is reuse within the domestic economy. Many of the scraps from Feature J are long strips which may have been used to make floor coverings for domestic use or for sale. These might have been list carpets, which are made by weaving strips of cloth together (Wilson 1979:247), or punched rugs, which would use small scraps of wool like those in the Five Points assemblage (see Section 4.2 above). An early-twentieth-century poem describes the multiple uses of fabrics used in rugs:

The Hooked Rug

I am the family wardrobe, best and worst,
 Of all our generations, from the first:
 Grandpa's Sunday-go-to-meetin' coat,
 and the woolen muffler he wore at his throat;
 Grandma's shawl, that came from Fayal;
 Ma's wedding gown,
 Three times turned and once let down,
 Which once was plum, but now is brown;
 Pa's red flannels that made him itch;
 Pants and shirts;
 Petticoats and skirts;
 From one to the other, but I can't tell which.
 Tread carefully,
 Because, you see,
 If you scuff on me;
 You scratch the bark of the family tree (Whiting 1971:313).

In contrast to the Pearl Street collections, the collections from features on Baxter Street are commercial in both quality and quantity. Cut textiles, matching sets of jet-glass and gilt buttons, thread, hooks, eyes, pins, and thimbles would have been readily available around a tailoring or alteration business. The similarity between the buttons found in Features AK and AL suggests that both of these collections were the refuse from a secondhand clothing shop, perhaps the same shop, at 4 Baxter Street between the 1850s and the 1870s. This provides an explanation for the high percentage of cut and selvaige edges on the textiles in Feature AK, as well as the inclusion of shoddy cloth and military buttons. In fact, a curious coincidence may account for some of the textiles and the military buttons in both of these features. During the Civil War, the gray uniforms of the 40th New York (Mozart) Regiment of the Union Army were considered unsuitable by military leaders and were ordered returned to the manufacturers in Massachusetts. It is likely that instead of being returned, they were sold to secondhand clothing dealers in New York (Haythornthwaite 1990:126).

In 1855, *Valentine's Manual* listed "dealers in secondhand articles" at numbers 4, 6, 8, 10, 12, 16, 22, and 26 Orange/Baxter Street, including David Webster at 4 Orange/Baxter Street (Valentine 1855:323). The secondhand clothing shops in this area would have taken in surplus, out-of-fashion, or unwanted clothing from stores, manufacturers, or individuals and cut or altered them to fit a new owner. Secondhand and used clothing provided a valuable resource to New York's many blue-collar workers. In fact, the relative neatness of urban workers was noticeable to many recently arrived Europeans. "Indeed, it was often pointed out that unlike in Europe, where workers' clothing was a badge of inferiority, in America 'there [was] very little difference,...in the point of appearance, between the young men of most trades and their employers'" (Stott 1990:174-175).

The economic stability afforded by owning a family business, impossible for the unmarried needlewomen of Pearl Street, had its origins in the social patterns and economic strategy of the Jewish family unit. The Polish and Russian Jews on Block 160 were more likely to live as nuclear families (New York State Census 1855). Most of the Jewish men and women were married in Europe and arrived with children as a family unit. German, Polish, and Russian Jewish men did not work in the dangerous laboring trades in the quantities that Irish men did, thus experiencing fewer occupation-related accidents (Ernst 1994:69; Diner 1983:60). It was less likely that Jewish women would be widowed. The stability of the family unit allowed the Jews of Baxter Street to work and save together in their businesses. Figure 90 shows a Jewish family at work in an overcrowded tenement room. While Irish women often entered the needle trades because there were few alternatives, the Jews' preference for running secondhand clothing and tailoring businesses had its origin in the Old World. In Europe, Jews were prohibited from entering many occupations. Commerce and skilled crafts, especially the clothing trades, were among the few activities that were not proscribed (Kessner 1977:37). Shops were run with the help of boarders and apprentices; each man, woman, and child did a part of the labor, enabling a family to increase output.

The data presented thus far reflect contrasting economic strategies within New York's highly competitive needle trades. However, it is when the material remains of wage procurement are considered within the context of each groups' consumption patterns that the subtle components of differing economic strategies begin to appear. An estimation of per-family income for Block 160, based on average wages from the 1850s, found that the area dominated by Polish and Russian Jewish clothiers was more prosperous than the rest of the block (see Volume I, Appendix C). In fact, several of the Baxter Street clothiers employed servants and assistants in their households and businesses. Yet ceramic collections from Baxter Street are not overwhelmingly more expensive or fashionable than those found at 472 Pearl Street (see Volume I, Appendix B). The households at 472 Pearl Street, whose incomes were probably half those earned by the Baxter Street tailors, still purchased Staffordshire printed and white granite tea- and tablewares. The Baxter Street clothiers, who could afford more expensive household goods, however, used the same wares as the Irish. Additionally, faunal remains from Block 160 suggest that while everyone appears to have economized on foods, they did so only if it agreed with ethnic food preferences. The Irish at 472 Pearl Street consumed more expensive cuts of pork, a traditional Irish food, and less fish, which was cheaper (see Section 3.5 above).



Figure 90. " 'Knee-Pants' at forty-five cents a dozen—a Ludlow Street sweater's shop" (Riis 1971:96).

The fancy sewing implements and embossed thimbles from the features on Baxter Street represent another difference between the women on Baxter Street and the women at 472 Pearl Street. They suggest differing attitudes toward leisure and domestic activities. Several of the Jewish households on Baxter Street employed household help. This would have freed the women in the household from cleaning and cooking duties, allowing them to help in the tailoring business or to pursue other activities. The ivory tambour hook in Feature H probably belonged to the wife of one of the tailors or shoemakers who lived and worked at 8 Baxter Street. Although many Jewish women worked around their husbands' businesses, at the counter or doing specialty work, the wives of more prosperous business owners would have been able to enjoy a higher level of luxury, including nice homes and servants (Diner 1992:81). The fine quality of this implement certainly suggests that it was used in a household craft function, rather than for commercial work. By the second quarter of the nineteenth century, most tambour work was machine made, although many women continued to practice it in the home (Rogers 1983:190).

The sewing artifacts from Feature AG also indicate sewing activities not related to wage earning. The quality and condition of the carved bone stiletto and bone handle, as well as the lace bobbin, suggest that they were used in a personal or social setting for making lace and doing whitework. Ceramics and teawares from Feature AG display a level of comfort and civility for the occupants or workers of the cellar brothel that other features from the block have not shown. If the brothel was catering to a middle- or upper-class clientele from nearby City Hall, the genteel display of embroidery and lace making would both create the atmosphere of proper femininity around the women of the establishment and distract the customer from the true nature of the business.

These artifacts also indicate that some working-class women on Baxter Street had leisure time that they chose to spend sewing. This contrasts with the sewing that was a daily chore in the lives of many working-class women. After sewing clothes, darning socks, stitching bedclothes, and sewing and knitting articles to be sold, many of these women had neither the time nor the inclination for leisure sewing. The lack of fancy sewing tools among the artifacts from 472 Pearl Street suggests that all of their sewing was done in the context of work. Leisure time among working-class women was most often limited to females without families, and these women, who often worked in the sewing or domestic industries, rejected artistic activities like watercoloring, building shadowboxes, or embroidering prescribed in Victorian magazines and chose instead to go out "on the town" (Stansell 1987). Even *Godey's Ladies' Book* pointed out that "too much work, especially needlework, made life 'nothing but a dull round of everlasting toil, and too often have eyesight and health, as well as hope and spirits, sunk under the burden'" (Green 1983:83).

4.3.6 Summary and Conclusion

Interpreting economic practices among groups living close together in working-class neighborhoods is more complicated than equating artifact groups with socioeconomic class. On Block 160, the material remains suggest two distinct economic strategies that reflect patterns of wage earning and consumption among households divided by gender and ethnicity. Irish families, including those headed by widows, supplemented their incomes in a variety of ways, including recycling and reusing commercial items. With this income, they purchased fashionable tea- and tablewares and served traditional Irish foods. The Jews of Baxter Street, on the other hand, were better off economically. They found no need to recycle and reuse materials that were plentiful around a tailoring business, but they chose to forgo fancy porcelain teawares and expensive foods, putting the money back into their businesses instead. Some of the businessmen on Baxter Street, like David Finelite, Jacob Levy, and Maurice Silverstein, bought properties and expanded their shops.

The sewing materials from Block 160 reflected several aspects of life in the Five Points neighborhood. Not simply indicators of activities performed by women or men, they reveal ways in which a class of artifacts can be used to view economy and gender through the lens of ethnicity. They allow us to see beyond typologies and chronologies and classes and genders into a place where women and men made choices in their daily lives based on who they were.

4.4 Hidden Industries at Five Points (Gary S. McGowan)

4.4.1 Introduction

The massive influx of immigrants into Five Points brought with it workers possessing a variety of skills such as sewing and other hand crafts that were not primary sources of income. The change from agrarian life to life in a major urban center left many of the newcomers without marketable skills. To supplement their meager earnings as unskilled workers, many engaged in cottage industries that relied on skills developed prior to immigration.

4.4.2 Residents of Five Points

Although census information documents outwork done, for the most part, by women in the tenements of Five Points, there is a lack of comparable documentation on cottage industries. However, census records are limited both because the information was only taken every 10 years, and many of the census takers were afraid to go into the slums.

It is known through Board of Health records that the duration of stay within the tenements for an individual or family was typically one to five years. These records indicate that, in addition to the large numbers of people living within the tenements, there was a yearly turnover of recent immigrants. Therefore, the sheer number of people passing through Block 160 far exceeded the numbers represented in the census. There were clearly instances where families did remain for extended periods of time, such as Widow Hoffman, but many other Five Points residents were transient. As soon as a family improved its economic condition, it left the Five Points area, which was a known haven for pestilence, vermin, and some of the most devastating outbreaks of cholera and other communicable diseases. The demands of relocating, along with a basic need to survive, nurtured a long-standing tradition of producing goods for sale to supplement the household income. Archeological investigations have provided a better understanding of the economic and social hardships within the Five Points tenement district, and they have also provided new information on the cottage industries that thrived there.

4.4.3 Cottage Industries at Five Points

The presence of worked animal bone from Features J, Z, U, O, AM, W, AN, H, and AG may indicate the cottage industries associated with the production of such goods as bone buttons, bone handles, toothbrushes, and sewing materials (Figure 91). In addition to the worked bone, a variety of artifacts such as jewelry-production materials, rags, and glass lamp work suggest the presence of these industries (Figure 92).

Animal bone was a readily available material that was picked and sorted (or scavenged) from slaughter houses, such as those located directly north of the project area. Bone is easy to manipulate with a minimum number of tools. Due to its inherent structure, bone can be carved, cut, and transformed into a wide variety of objects. The worker first picks suitable long bone or thick bone, such as femur heads, tibia, and even ribs. These bones are then boiled or rendered to remove fats and oils (tallow). After boiling or rendering, the bone is cut into either blocks or thin sheets and then worked into a variety of objects, such as handles, brushes, cane handles, or buttons. The final step in this production is burnishing the surface to a high polish.

Bone boiling produced a variety of noxious vapors that added to the overall stench within the Five Points district. Census records indicate a brush manufacturer working just outside the project area on Bayard Street and piecework may have been carried out for this company by occupants within the tenements on Block 160. The New York Board of Health regarded bone working as a major nuisance that needed to be eliminated. Several entries in its annual report for 1856–1859 refer to the noxious malodorous bone-boiling industry (Board of Health 1856–1859). They also report the closing of such businesses within the Sixth Ward. The City Inspector was authorized “to cleanse the rear building at No. 88 Sheriff Street, and remove rags, bones, and filth of every description beyond the limits of the city.” The same order included

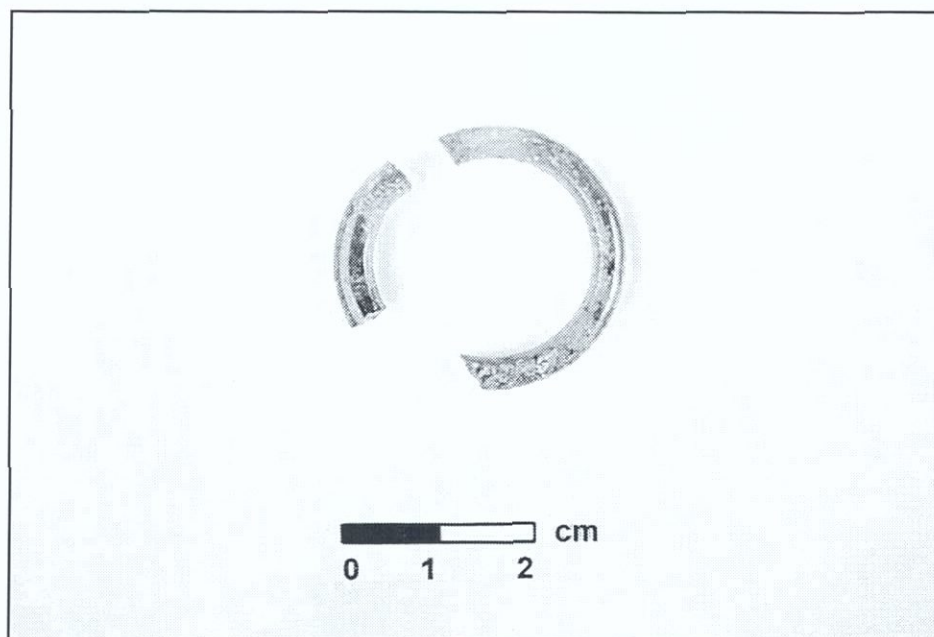


Figure 91. Worked-bone ring from Feature J.

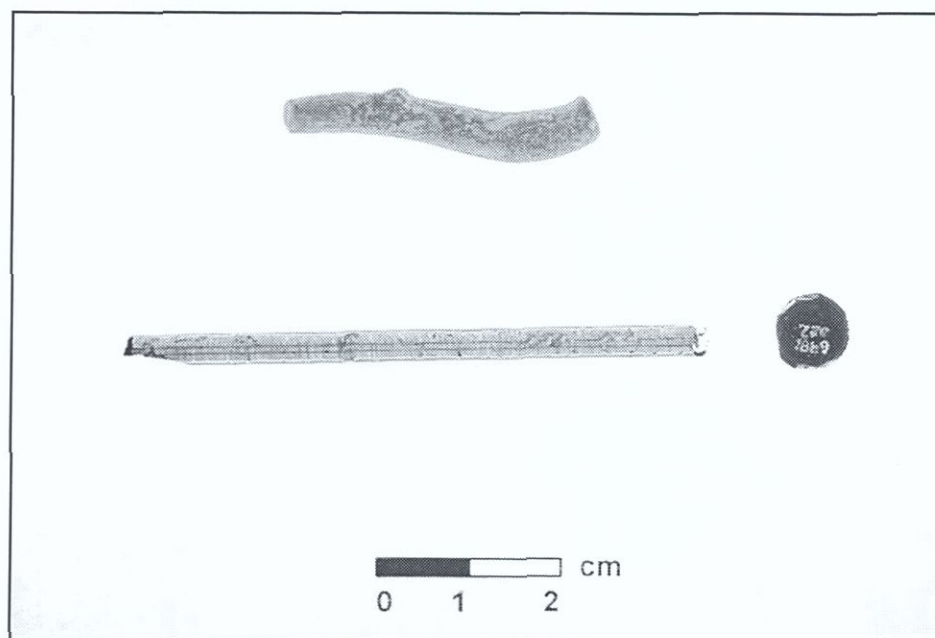


Figure 92. Glass canes, lamp work for the production of faux gem stone jewelry. From Feature J.

No. 90 Sheriff Street, front and rear, and “to pull down or render No. 56 Worth Street in a safe and perfect condition.” Premise Nos. 202, 204, and 206 Third Street (Cottage Row) were ordered to be “cleaned and purified by whitewashing, and all rags, bones, and c., removed from the city immediately” (Board of Health 1860). However, even 40 years later, Jacob Riis described collections of bones in tenement yards: “Look into any of these houses, everywhere the same pile of rags, of malodorous bones and musty paper, all of which the sanitary police flatter themselves they have banished to the dumps and the warehouses” (Riis 1971:54).

There is evidence of the production of bone materials in the assemblage from Block 160. Button blanks (Figure 93) made from thin sections of long bone that had been punched out to produce circular buttons were recovered from Features J and W. In addition, 27 worked bone fragments were recovered from Feature J. These fragments may relate to the production of other bone objects.

Fifteen bone toothbrushes were recovered from Feature AM on Lot 52. The toothbrushes were of a similar lathe manufacture and were stylistically unique (Figure 94, third and fourth from left). No other toothbrushes like these have been seen on New York sites. In addition to the oyster or eating house on Lot 52, a dry goods store located on the block may have been selling locally produced materials. The frequency of toothbrushes within the assemblage suggests their production within the building.

In addition to animal bone, one modified vertebra from a skate fish was recovered from Feature C on Lot 6. The modification to the vertebra suggests the manufacturing of walking sticks. These walking stick whimsies were often produced by sailors passing time on long voyages (Norman Brauer, 1996, personal communication). Canes of animal bone also may have also been produced on the lot.

Two cut sections of tooth or ivory were also recovered from Feature C (Figure 95). Ivory, similar to bone, has long been worked by either carving or cutting. Bone is a hollow tubular structure while ivory is a solid material with an enameled surface. This allows greater flexibility in carving and has resulted in some of the most intricate and delicate objects of art due to its dense, compact structure. Since there is no other apparent use or function for the cut ivory recovered from this feature, it probably represents a manufacturing discard.

Another industry previously unnoticed at Five Points was the production of lime for lime washing of interior walls of tenements, the production of lime-based mortars, and lime for deodorizing privies. The Board of Health discusses the industry in its 1866 annual report:

The business of burning lime and oyster shells still continues, having thus far been protected by the Courts against the efforts of this board. The dust from these establishments fills the neighboring houses, destroying the comfort, endangering the health, and injuring the property of the inhabitants, while the offensive odors from the decomposition and burning of the animal matter contained among these shells, contaminate the air for many blocks around. No hope of relief can be anticipated until the legal restraints upon the action of this Board are removed (Board of Health 1868:25).

Feature W on Lot 47 was a pit filled with oyster shell underlain by a deposit of broken brick. It is likely that the shell and brick relate to the lime industry. Oyster shells were converted into lime by burning them in a large beehive-shaped oven, which was fueled by coal. The oyster shell was shoveled into the upper portion of the oven to burn off the organic component of the shell, leaving the material friable. It was then ground into a fine powder. In addition to the oyster shell refuse found in Feature W, several fragments of refractory kiln brick similar to those used in other furnace industries were recovered. These fragments had coal slag affixed to their surfaces. Collecting and scavenging of oyster shell may have been carried out by tenement dwellers. Lime production would have been possible in the open lot where Feature W was located. The TPQ in the 1870s for the feature suggests that lime production continued at Five Points after the Board of Health claimed it had been nearly eliminated. In 1868 the Board of Health issued the statement: “The Cities of NY and Brooklyn have almost entirely been relieved from the nuisance of lime and shell burning during the past year, and measures have been taken and will be continued to compel an entire removal” (Board of Health 1869:11).

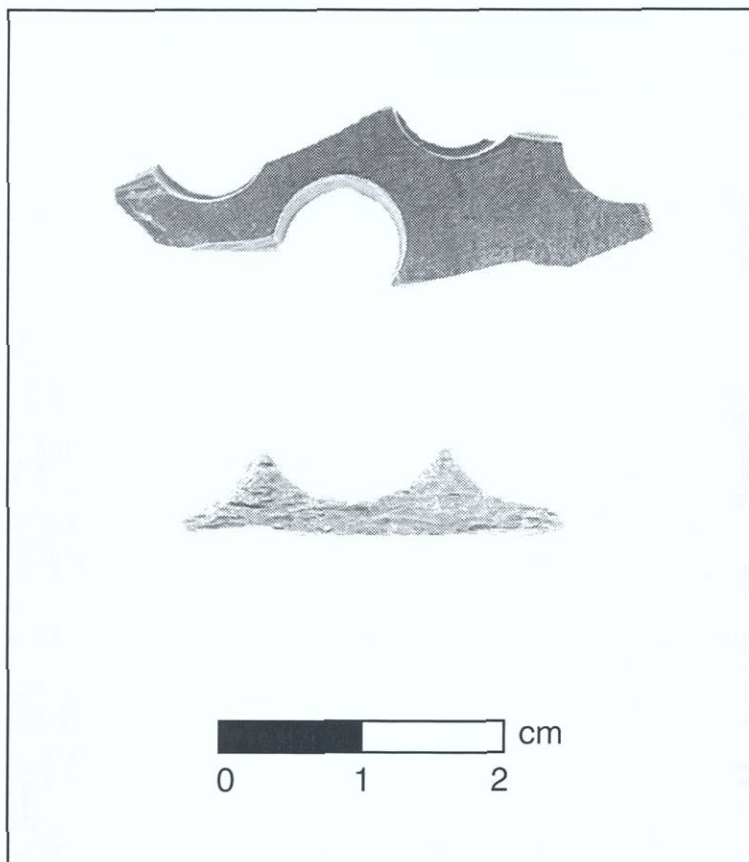


Figure 93. Bone button blanks from Feature W.

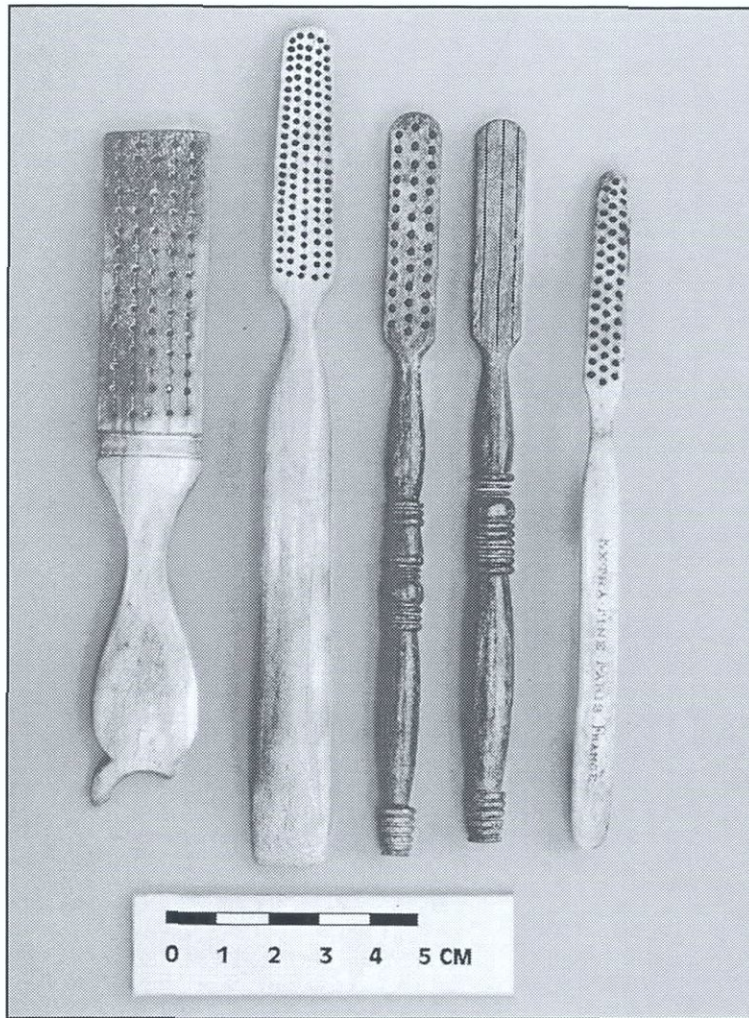


Figure 94. Lathed bone toothbrushes from Feature AM.

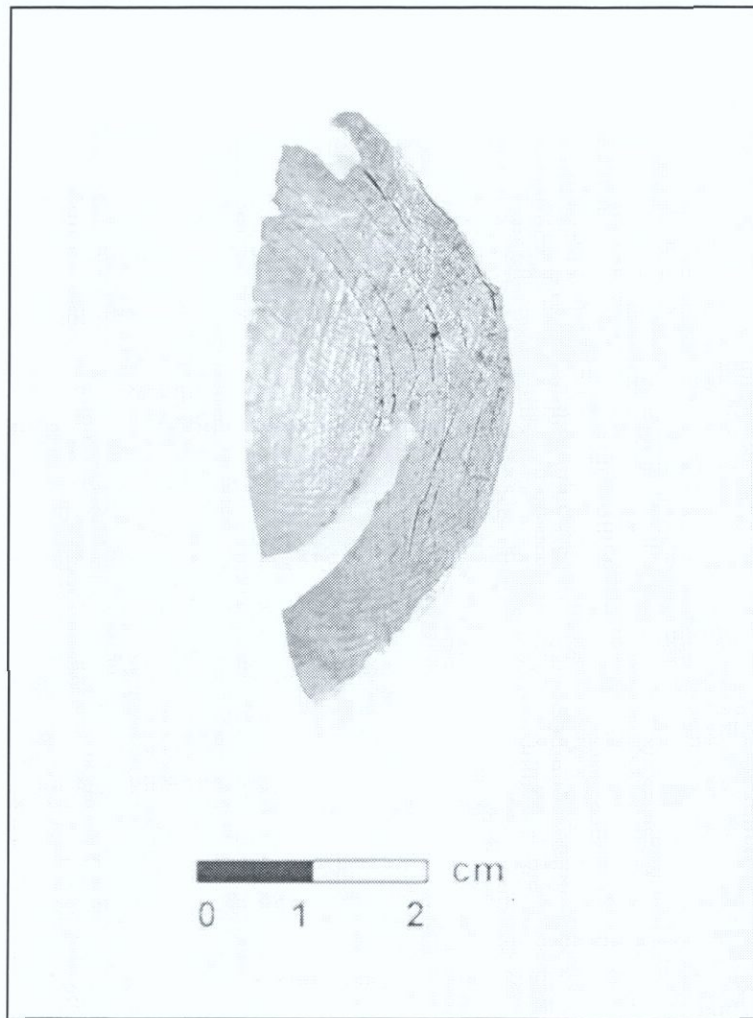


Figure 95. Sliced ivory fragment from Feature C.

Oyster shell was prevalent throughout the project area. In addition to its use in the lime industry, oyster shell appears to have been used in privies to increase drainage and also take advantage of the natural deodorizing effects of the lime from the shell. Coral was also recovered from Features AF, AG, AM, H, J, O, and Z. All of these features were either privies or cess pits. Historians believe that large amounts of coral were brought to the shores of Manhattan as ballast aboard trading vessels from the Caribbean. When these vessels off-loaded their ballast to take on cargo, these materials would be dumped by the water's edge. This could be easily carted away to be used as either fill in the privies or to aid in their drainage similarly to oyster shell.

While the industries described above did not require particular skills, there is also evidence that a highly skilled artisan was working on Block 160. Feature J (a large cess pit) and Features H and C (wood-lined privies) on Lot 6 all contained a variety of jewelry-making materials. The evidence includes glass caning (from cat nos. 829, 787, 767, and 324) and faux gems. Glass caning (Figure 96) consists of colored glass rods that are manipulated within a flame to produce faux gem stones for jewelry or cufflink insets. The process, called lamp work, requires a flame and a small number of hand tools. This kind of work could easily have been done in the tenements, although it would have been somewhat dangerous in areas full of rags, papers, and other refuse. It is not difficult to imagine a trained immigrant jewelry craftsman, unable to obtain full-time wage labor, producing pieces for sale. There were many pawn shops and secondhand clothiers within the Baxter Street portion of the project area who may have dealt in these items.

In addition to the glass canes recovered, one carnelian faceted tear-drop stone was recovered from Feature J (AS IV). This gem stone shows no evidence of any setting and is probably an unfinished piece of jewelry. An oval piece of carnelian was also recovered from the adjacent feature C (AS I) (Figure 97). This piece also showed no evidence of a setting and probably also belonged to the artisan working on Lot 6. It is plausible that while materials were discarded into Feature J, they were also thrown into the upper portion of Feature C. A glass faux gem stone of the type that was produced with glass caning was also recovered from Feature C.

Although no archeological evidence of ephemeral trades, such as making cigars or artificial flowers or peddling of food, was recovered on Block 160, all of these industries are reported for Five Points in historical documents. These organic materials did not survive in the archeological record. Unlike some of the other cottage industries which supplemented meager earnings, jobs such as artificial flower making or cigar making were full-time occupations. Entire families from children to grandparents worked from early in the morning until late in the evening to produce these commodities to hawk on the streets.

Large numbers of shoes and shoe fragments, both for children and adults, were recovered from Feature J on Lot 6. The feature also contained large sheets of scrap leather that may represent either shoe manufacture or repair being carried out within the tenements. Many shoe heels recovered from this feature showed evidence of peg or nail construction. Additional shoe fragments had been machine stitched for sole assembly.

4.4.4 The Five Points House of Industry

In 1850, the Ladies' Home Missionary Society of the Methodist Episcopal Church asked Reverend L. M. Pease to "revive lost souls." Conditions were so shocking and firmly rooted that the good reverend concluded "spiritual aid needed physical support." The Five Points House of Industry, incorporated in 1853, was located at 155-157-159 Worth Street. Under the direction of Reverend Pease the Five Points House of Industry provided a number of services, but its primary goal was to operate as a school and orphanage for children. In his writings, Reverend Pease mentions several instances of trade in refuse, an activity he felt was not only demeaning but contributed to the moral breakdown of the family since the small amount of money gained from this was immediately used for drink and other morally offensive activities. But he also appreciated the ingenuity of the occasionally employed.

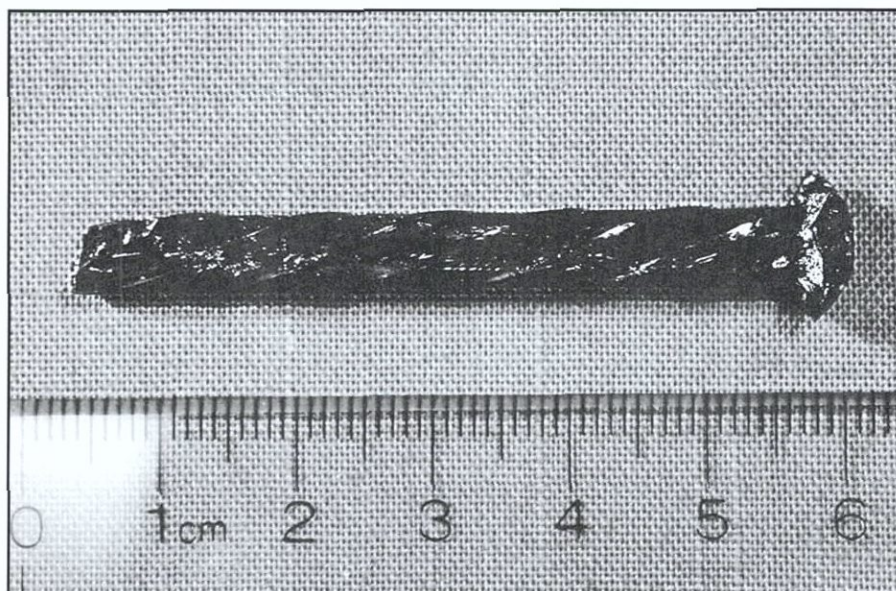


Figure 96. Glass caning.

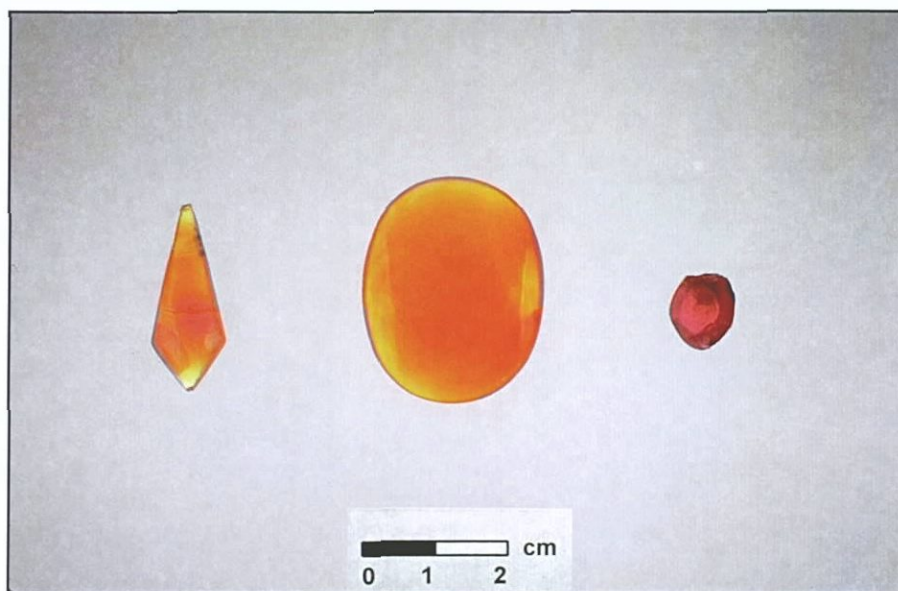


Figure 97. Carnelian pendant (left) from Feature J, carnelian jewelry inset (center) from Feature C, and glass faux gem stone from Feature C (right).

The Italians, I find, are not at all averse to hard labor, very many of them being common day laborers, whenever they can find employment. In this way a great many have been employed at central park resorting to their organs, picking paper, etc., when they could no longer get the employment which they seem to prefer (Five Points House of Industry 1861:16).

Reverend Pease firmly believed that he would be able to save society by saving its children. The school taught basic reading and writing but emphasized salvation through moral acts and sobriety. The Five Points House of Industry also provided training for adults in a variety of handcrafts. Men and women worked to earn both food and lodging. By 1869, three buildings had been built; in 1887, one of the first free dispensaries in the country and a day nursery were opened. Reverend Pease may have borrowed some of his ideas from the earlier eighteenth-century almshouse that was located at the present site of City Hall Park. The almshouse kept its charges occupied by teaching them skills, such as bone working to produce buttons, preventing them from having idle hands while they earned their keep. Recent excavations (1990) in the area of the almshouse, now in City Hall Park, carried out by the NYC Landmarks Commission, recovered several bone button blank fragments as well as many bone buttons.

There are also other references to cottage industries in Reverend Pease's journal. He had a policy of visiting the homes of his students and through these visits observed conditions and activities in the tenements.

I think we must call at No. 9 Mulberry Street....We told her that though they were so poor, she might at least keep her room cleaner; but when she showed us the overalls she was making at fifty cents per dozen, to earn money to pay her rent, we could say no more (Five Points House of Industry 1858:6).

E.G. a fine looking girl of 14....She has learned mantilla making, but can do housework or anything that offers (Five Points House of Industry 1858:189).

A poor old woman picking rags, is the next object that attracts my attention. A large sack hangs across her back, already well-filled with the garbage she has gathered. With her hood she carefully examines every heap of filth, and draws forth the rags and bones, and whatever else she can turn to good accounts (Five Points House of Industry 1861:227).

4.4.5 Conclusion

The archeological record in combination with reports of the time provide a picture of the types of work that were conducted within the tenements of Five Points. Bone boiling, button manufacturing, rag and paper picking, lime manufacturing, and jewelry making are a few of the industries that left traces in the features that were excavated on Block 160. Many of these cottage industries were practiced by women who, widowed or abandoned, were left to fend for the family in any way possible. Despite overcrowded conditions, strong odors, and piles of filth, the immigrant residents tried to eke out an existence the best way they knew how while struggling to maintain the family unit. In many cases, sheer determination made this possible. Describing a woman picking rags, Reverend Pease illustrates this struggle: "The almshouse would be far more comfortable for her than such a life, exposed as she is to the storm and cold. It can not be for self that she thus toils. Some loved object in some little spot called home, inspires that eager look and untiring hand" (Five Points House of Industry 1861:227).

4.5 Wealthy, Free, and Female: Prostitution in Nineteenth-Century New York (Rebecca Yamin)

As the bourgeoisie has the intellectual, organizational and every other advantage, the superiority of the proletariat must be exclusively in its ability to see society from the center, as a coherent whole (Lucács 1971:69).

4.5.1 Introduction

The census records and directory listings for Block 160 do not include any houses of prostitution or identify any women as prostitutes (see Volume III). The institution so often associated with Five Points is invisible in the documentary record, although its evils were decried by virtually every nineteenth-century reformer. The presence of brothels at Five Points, we fully expected; what they would look like, we had no idea. An archeological deposit at the bottom of a privy (Feature AG, AS III) on Lot 43, however, was clearly different from any other assemblage recovered on the block, and the closer we looked at the assemblage the more likely it seemed to represent a brothel. Among the most suggestive artifacts were a large number (37) of chamber pots, most of which were decorated (Figure 98), three glass urinals made especially for women (Figure 99), a ceramic pot with the words “AMAILLE, s.d. Vinaigrier” written on it, and the skeletal remains of two newborn infants. The ceramics and glassware present in the deposit were more numerous and strikingly more elaborate than those recovered from other features on Block 160, and the food remains were more various.

The materials were recovered from the bottommost deposit in the privy (layers 10 and 11 within AS III on Figure 100) and the portion of that deposit that was displaced when the trench for a wall footing was dug through the deposit in the 1890s. The layers in the displaced portion of the deposit are numbered 5, 6, 7, and 8 on Figure 100. Multiple cross-mends indicated that these layers (5–8, 10, and 11) represented one deposit and together they were considered Analytical Stratum III (AS III). Layer 4 (AS II) was apparently material adhering to the privy wall that was missed when the privy was cleaned. The remaining layers of fill, 2–3 (AS I) and 9 (AS IV), related to building construction in the 1890s.

The recorded occupants of Lot 43, No. 12 Orange Street, around the time AS III was deposited (a TPQ date of 1840 was derived from the diagnostic artifacts in the deposit) were Thomas Cogan, a slater, and Joseph Lichtrecker, a coppersmith (U.S. Bureau of the Census 1840). Lichtrecker’s household included two children. The district attorney’s indictments for the 1840s included one against John Donohue for his “common, ill-governed, and disorderly house” in the cellar of 12 Orange Street (State ex rel. Blackall et al. v. Donohue 1843). The proximity of the indictment date, July 28, 1843, and the TPQ for the assemblage, as well as the artifacts themselves, suggest that much of the deposit was made when the brothel was closed. It therefore represents a kind of time capsule—a window into life in a Five Points brothel when it was in full swing.

Very little has been written about life inside New York’s nineteenth-century brothels, although the city’s prostitutes and prostitution have been studied since the nineteenth century. This section reviews the major works dealing with prostitution in nineteenth-century New York and considers the Feature AG assemblage from the perspective of what it tells us about its practitioners. Prostitution was a good living for a working-class girl, and it is in the context of work that it is discussed here.

4.5.2 Published Studies about Nineteenth-Century Prostitution in New York

In 1858, Dr. William H. Sanger published *The History of Prostitution, Its Extent, Causes, and Effects Throughout the World*. He believed, as did many others, that prostitution was a “moral pestilence” threatening “every man, woman, and child in the community” (Sanger 1939:18). Sanger approached his study of prostitution statistically, having confidence that armed with data, society might regulate the pestilence even if it were impossible to eradicate it. Sanger also had enlightened views about what prostitution did to women, and it is no wonder his daughter Margaret became such a champion for women’s reproductive rights. The elder Sanger wrote:



Figure 98. Decorated chamber pots from Feature AG, AS III.

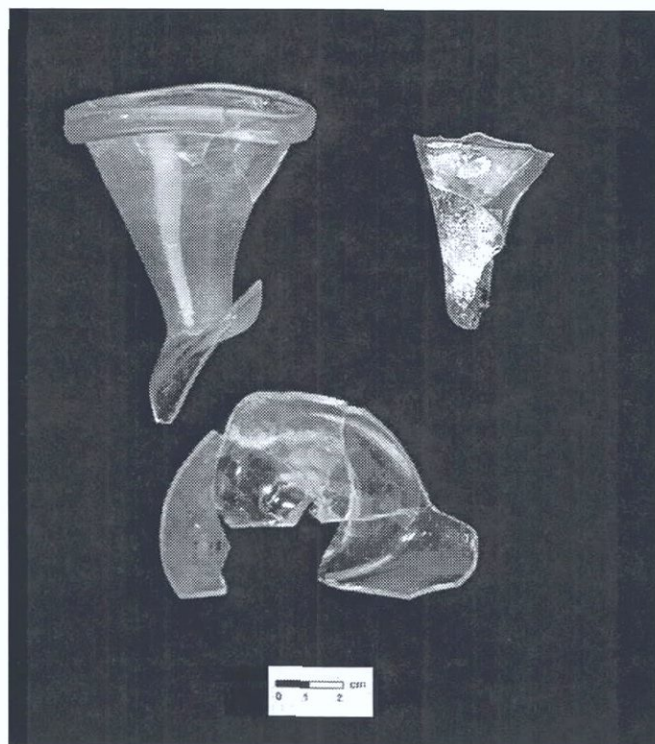


Figure 99. Glass urinals for women, Feature AG, AS III.

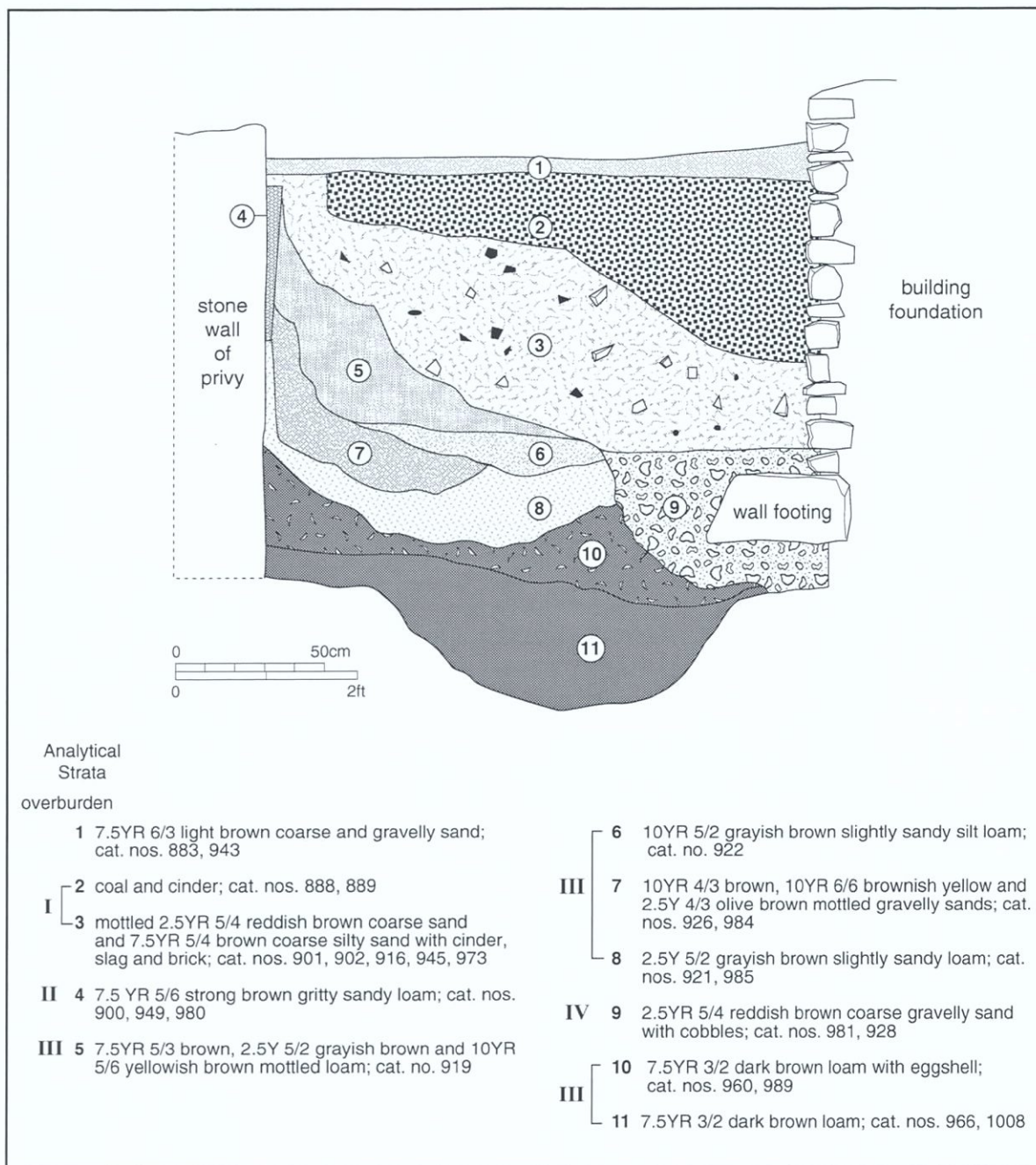


Figure 100. Lot 43, Feature AG, stone-lined privy. Profile of fill layers in western half.

There is another phase of public safety which demands the investigation, namely, the preservation of female honor. Those who frequent these haunts of vice are forever employed in casting about snares to entrap the young, the unwary, or the friendless woman. They tempt her to minister to their libidinous desires, and swell the already overcrowded ranks of frailty (Sanger 1939:23).

He believed there was hope even for reforming courtesans, "for they are human beings, though depraved. Their hearts throb with the same sympathies that move the more favored of their sex....Few of them become vile from natural instincts" (Sanger 1939:23). The moralizing attitude of mid-nineteenth-century reformers is evident in Sanger's writings, but he must also be credited with devising a study that revealed a great deal about the practice of prostitution in mid-nineteenth-century New York. Although the study was initially conceived to investigate syphilis in the prison population at Blackwell's Island under Sanger's care, he thought the disease had to be understood in a broader context. His study looked to the society, its values, and institutions for a framework in which to explain the incidence of venereal disease.

The data for the study came from a schedule of questions administered under Sanger's supervision in 1855 by New York Chief of Police George W. Matsell, Esq., and the captains of police. Two thousand questionnaires were completed, providing information on age, place of birth, marital status, number of children, number of years in the profession and reasons for choosing it, previous occupations, incidence of venereal disease, and a variety of other topics. Particularly pertinent to the study of the brothels at Five Points is his information on various classes of houses of prostitution (Chapter XXXV in Sanger 1939). According to Sanger, the highest class of house, the parlor house, was "furnished with a lavish display of luxury but not good taste...large mirrors, gilt, paintings and engravings, vases and statuettes" (1939:550). The prostitutes—three-quarters of them natives of the United States—in such establishments paid from \$10–\$16 a week to live there; worked from noon to midnight or later; drank champagne with their clients; wore fashionable clothes; and were provided with a "neat and well-arranged breakfast at about 11 or 12 o'clock and dinner at 5 or 6 by an experienced staff of servants usually colored" (Sanger 1939:554).

A second class of house attempted the same standard as the first class, but was "not as lavish." The prostitutes included women whose "charms had begun to fade" and the foreign born. The women drank wine and brandy with their visitors instead of champagne and put up with less experienced servants. The third grade, prevalent in the city's less fashionable districts including the Sixth Ward, was, according to Sanger, "equal in all respects to the second class and sometimes superior." The women were young, good looking, and almost all foreign born, the largest proportion being Irish and German. A German variant on this class, prevalent particularly in the First Ward, consisted of a front barroom—possibly the cellar of an ordinary-sized house—where "can be obtained lager beer and German wines" (Sanger 1939:560). A stranger to the city might not recognize this as a reception room, particularly if he did not know that a crimson and white curtain signified the true purpose of the establishment. Between clients, the prostitutes sat in the room knitting or sewing; there were small bedrooms in the back for the business at hand. Such a place was usually run by a man and his wife, the man to keep the barroom and the woman to do the cooking and general housework while the "girls" attended to their own rooms. Below these categories were a variety of less savory establishments as well as streetwalkers who rented individual rooms and women who entertained in the third tier of theaters.

While Sanger's work was driven by public health concerns, more recent scholarship has focused on prostitution as a gender issue. Marilyn Wood Hill's *Their Sisters' Keepers* (1993) examines the negative and positive aspects of practicing a "trade" that was "at the fringes of the law and outside the realm of respectability" in a society where women's rights and activities were severely restricted (Hill 1993:2). On the positive side, Hill claims that at least 24 known prostitutes were assessed for \$5,000 or more of real and personal property. Converted to 1988 dollars, these women were each worth a half million dollars or more, suggesting that, as a profession, prostitution was "financially the best of the limited occupational alternatives available to nineteenth-century women" (Hill 1993:100). Negatively, it was illegal, although

the definition of this illegality changed over the decades and enforcement was less than stringent. According to Hill, houses of prostitution were allowed to operate in local neighborhoods because law officers did not generally perceive them as criminal or a major problem in the community (Hill 1993:150). The women were treated as neighborhood citizens, and when they or their possessions were threatened, they were not afraid to call the watch, press charges, and give court testimony (Hill 1993:159).

While Hill identifies Five Points as the most famous area of prostitution from 1830 to 1850, her study provides particular insights into the parlor houses visited by the upper classes. Her information comes from previously unpublished letters written by Helen Jewett, who was murdered (probably by a client) in 1836. At the time, she was living in the house of Rosina Townsend who kept the city's most popular brothel, the City Hotel at 41 Thomas Street, west of Broadway. According to Hill (1993:220), Jewett had a large draped bed and other furniture including a work table with "pen, papers, and pamphlets" and a "library of light novels, poetry and periodicals." When she was out of town, she was missed by her regular customers who seemed to long for her company as much as anything else. A letter from a Mrs. Berry to Helen in 1835 reads: "Bill Easy appears rather melancholy at your absence...he is very anxious to see you....Sam and three of his friends were here last night and enquired for you, but as you were not here they went away." According to Hill (1993:262), Easy, whose real name was George Marston, was one of Helen's regular customers; she made and mended shirts for him and he brought her his friends.

For Timothy Gilfoyle (1992), Helen Jewett's career and death "simultaneously represented the dangerous, inevitable results of sexual freedom alongside the tangible benefits of a career in commercial sex" (Gilfoyle 1992:97). Violence against prostitutes—their furniture was destroyed, their persons attacked—was, according to Gilfoyle, part of the climate in which men looked for sexual pleasure and companionship outside the home, which had become a bastion of female power. They sought extramarital companionship, but they also resented the sexually independent women who seemed more in control of their lives than many men who were finding it difficult to marry and support a family on the exploitive wages and new circumstances of the industrial era (Gilfoyle 1992:113). While they risked their health and safety, prostitutes like Jewett lived handsomely—they were "wealthy, free, and female"—a very different condition from their laboring sisters in the working-class districts of the city. They took advantage of the plight of men in a society that was becoming more competitive as capitalistic labor relations became more entrenched. In addition to the money prostitutes got for sexual favors, they took further advantage of their clients by stealing from them when the opportunity arose. For the men—called "sporting men" at the time—sexual liaisons and friendship with prostitutes replaced the intimacy and support of marriage. For the women, it was all business.

In addition to providing a decent living, Christine Stansell (1987) argues that prostitution was a way to make unilateral power relationships into reciprocal ones and a way to escape from, or evade, familial control. Values that called for women to be dependent on men, and for the working class to stay in its place, were defied by women who took on their own support and did not conform to expectations in terms of public behavior (Stansell 1987:175). Often women became prostitutes because they had been deserted or abused, but they also turned to prostitution to escape from the control of their families. It took money to become part of the urban youth culture, to buy clothes and go to the theater. If their earnings were absorbed by their families, there was nothing left for them and no escape into a better life.

These four published studies provide a good picture of prostitution in mid-nineteenth-century New York, and Hill's, in particular, because it includes Helen Jewett's letters, approaches an insider's view. The assemblage of artifacts and food remains that was recovered from the brothel at 12 Orange Street provides a different kind of insider's view. As with the rest of the assemblage from Block 160, the artifacts do not conform to expectations. There is a complete, lavish tea set (Chinese export porcelain with overlaid gilt and painted decoration) that suggests communal entertaining practiced in the kind of reception room described for parlor houses (Figure 101). There are many matching cup plates, probably used to protect good furniture from the rings made by moist teacups or, more likely, wine glasses. There is evidence that specialty foods, including veal, soft-shell clams, and coffee (only present in one other feature on Block



Figure 101. Set of Chinese export porcelain from Feature AG, AS III.

160), were served to clientele. The brothel at 12 Orange Street probably would have been classified as third class by Sanger, and it might even have conformed in some respects to the German model. However, it is more likely that the brothel was like the brothels in more respectable neighborhoods, that it put on the style of the upper classes to attract such a clientele. The artifacts from Feature AG suggest that there was more variation in brothels at Five Points than has previously been noted.

To place the Orange Street brothel in the context of other brothels in the neighborhood, the primary documents were studied with an eye to identifying households that might have been brothels or, at least, included prostitutes. Much has been made of boardinghouses headed by women actually functioning as brothels, and the documentary study aimed at identifying such places on the block.

4.5.3 Census Data

All-female households or households that included a noticeable number of young female boarders on Block 160 were identified in the federal census records for the years 1810, 1820, 1830, 1840, 1850, 1860, and 1870. The 1855 New York State census for Block 160 was also examined in this regard. Table 116 lists the households by year and shows the number of households without boarders, the number of households with boarders, and the number with two or more boarders. Of the 202 households counted with two or more boarders, six included groups of women in their late teens and twenties who fit the profile of prostitutes in this period. However, only one of the households, located at the corner of Pearl and Park Streets, can be classified as a brothel with any confidence. Beginning with 1850, the candidate households are discussed by decade. The census records for the earlier decades do not mention boarders. The 1857 Perris map (Figure 102) shows street addresses on the block.

The tenement at 472 Pearl Street included the only all-female household with boarders in the 1850 census. Headed by Catherine McDonald, a 59-year-old widow, the household was made up of her daughter, age 25; another 25-year-old woman; and a 60-year-old woman. This household was not considered likely to be a brothel. The 1855 New York State census, however, includes two possible brothels on Pearl Street as well as a large boardinghouse on the corner of Pearl and Park Streets. Among the many households within the tenement at 472 Pearl Street, there was one headed by the widow Margaret Gillan, who identified herself as born in Ireland, no occupation. Living with her were her 23-year-old daughter, Mary, a cap maker; 23-year-old Caterine Gancy, a seamstress; and Elizia Reed, a 24-year-old seamstress. While these young women probably did sew for a living, both Gilfoyle and Stansell have suggested that ups and downs in gainful employment led women to turn to prostitution in times of need. They also may have used it to acquire the extra money needed for such niceties as fashionable clothing (Stansell 1987:190; Gilfoyle 1992:56).

Table 116. Number of Block 160 Households With and Without Boarders, 1810–1870

Census Year	No. of Households Without Boarders	No. of Households With Boarders	No. of Households With 2+ Boarders
1810	71	-	-
1820	60	-	-
1830	69	-	-
1840	153	-	-
1850	293	131	85
1855	290	91	40
1860	223	88	56
1870	380	35	21
TOTAL	1,539	345	202



Figure 102. Map of Block 160, William Perris 1857.

The second possible brothel on Pearl Street was at No. 476. This household was also headed by a widow from Ireland—Mary Marr, age 40, no occupation. Her son John, 19, lived with her as did 40-year-old Catherine O’Keefe and 17-year-old Bridget Sullivan, both servants, and Johanna Sullivan, 22, no occupation. The young woman with “no occupation” is particularly suspect although servants also fall into the category of women who may have resorted to prostitution when otherwise unemployed. *The Bachelor’s Guide and Widows’ Manual*, printed in 1842, lists a Mary Ball at 476 Pearl Street. While this guide may have been more of a list of widows than a guide to houses of prostitution (Timothy Gilfoyle, 1996, personal communication), the coincidence of address and first name is suggestive. Perhaps Mary Marr was Mary Ball in her younger years or used the name in her professional capacity. Most madams used false names (Hill 1993:35–40).

The house or houses at the corner of Pearl and Park Streets had 38 boarders in 1855, including 10 children (New York State Census 1855). Table 117 lists each boarder by name, age, place of birth, marital status, and occupation. The first name on the census for this address is Celia West, age 35. Unlike all the names that follow, she is not identified as a boarder. Presumably, she was the keeper of the house, and perhaps Edward Hastings, the only adult male listed, assisted her. She listed no occupation and he called himself a “laborer.” It is also possible that he was her consort, since he is 40, a widower with a child, and his name follows hers in the census.

The age breakdown of the women in the boardinghouse fits the general portrait of houses of prostitution in this period in New York (Sanger 1939:452). Eight of the women who identified themselves as having no occupation were between the ages of 15 and 19, eight were between 20 and 29, and four were between 30 and 39. Of Sanger’s sample of 2,000, the largest number would be 20 on their next birthday and the next largest number would be 19. The five women in the house over 40 all identified themselves as widows. With one exception (Ellen McDaniel), it was the widows who had children living with them. While there is nothing in the census that identified any of these women as prostitutes, the fact that none of them claimed any occupation requires an explanation, the most likely being that their occupation was one they were uncomfortable reporting.

In 1860, two households are listed with multiple young female boarders (U.S. Bureau of the Census 1860). In both cases, the boarders identified occupations, but they are the common occupations that might have been combined with prostitution. At 476 Pearl Street (Lot 19), Mary McCormack, a 27-year-old domestic servant; Margaret McKean, a 22-year-old tailoress; and Mary McKenna, 25, also a tailoress, lived with Frank Whalen, his wife, and child. Whalen made his living as a coachmaker; his wife, just 22, listed no occupation. Winnie Johnston, a storekeeper, headed a household at 65 Park Street that included Catherine Dougherty, 20, a capmaker; Catherine DuBoise, 40, a domestic; Winnie McDermott, 25, wash/ironing; Anne M’Sorly, 40, wash; and Margaret Wallace, 27, a dressmaker, as boarders.

According to the census, there were 11 families living on Lot 22 in 1860, four of them at 55 Park Street and the other seven at No. 53. The women who lived on Lot 22 in 1855 (addresses are not included in the 1855 census) were not listed in 1860, but it is not inconceivable that a brothel was still present at the corner. Nos. 53 and 55, considered Lot 22 in 1860, actually coincide with Lots 23 and 24 on other maps, leaving the large brick structure at the corner unreported.

None of the households in the 1870 census included a conspicuous number of single young women.

4.5.4 District Attorney Indictments and Police Court Papers

District attorney indictments recorded by Timothy Gilfoyle (1996, personal communication) include a number of addresses on Block 160. The listings are arranged in chronological order beginning in the 1820s on Table 118.

Table 117. Boarders on Lot 22 as Listed in the 1855 New York State Census

Name	Age	Place of Birth	Marital Status	Occupation
Hastings, Edward	40	Ireland	widower	laborer
Hastings, Ann	4	New York City		
Simpson, Ann	22	Ireland	unmarried	no occupation
White, Mary	30	Ireland	unmarried	no occupation
Murdock, Margaret	22	Ireland	unmarried	no occupation
Gleeson, Ellen	28	Ireland	widow	no occupation
Gleeson, George	4	New York City		
Green, Ellen	23	Ireland	unmarried	no occupation
Calahan, Mary	20	Ireland	unmarried	no occupation
Devlin, Hanna	16	New York City	unmarried	no occupation
Fitzgerald, Mary	17	New York City	unmarried	no occupation
Pillman, Mary	30	Ireland	unmarried	no occupation
Gaughan, Winaford	40	Ireland	widow	no occupation
Gaughan, John	10	New York City		
Gaughan, Thomas	7	New York City		
Ryan, Margaret	15	Canada	unmarried	no occupation
McDaniel, Ellen	40	Ireland	widow	no occupation
Finegan, Julia	44	Ireland	widow	no occupation
Finegan, Julia	16	New York City	unmarried	no occupation
Finegan, Jane	9	New York City		
Davis, Elizabeth	35	England	widow	no occupation
Davis, Elizabeth	15	England	unmarried	no occupation
Sibbell, Margaret	18	Ireland	unmarried	no occupation
Quinn, Mary	44	Ireland	widow	no occupation
Quinn, Mary	14	New York City	unmarried	no occupation
Barry, Margaret	19	Ireland	unmarried	no occupation
Welch, Mary	20	Ireland	unmarried	no occupation
Howard, Hanha	45	Ireland	widow	no occupation
Howard, Mary	14	New York City	unmarried	no occupation
Howard, Romeo	7	New York City		no occupation
Howard, Henereta	11	New York City		no occupation
Emerson, Bridget	29	Ireland	widow	no occupation
Emerson, George	3	Massachusetts		no occupation
Emerson, John	10	Ireland		no occupation
McElroy, Ann	26	Scotland	unmarried	no occupation
Nicolson, Mary	17	England	unmarried	no occupation
Sullivan, Bridget	35	Ireland	unmarried	no occupation
Sullivan, Thomas	5	Queens Co., NY		no occupation

Table 118. Known Brothels on Block 160
Drawn from New York City District Attorney Indictments and Police Court Papers

Street Address	Date	Source
470 Pearl, rear building	25 December 1820	PC Papers ¹
51 or 53 Cross	15 March 1827	DA Indictments ²
Cross and Orange	16 April 1830	DA Indictments
18 Orange	16 April 1830	DA Indictments
Orange near Five Points	17 May 1832	DA Indictments
Orange near Chatham	1839	Butt Ender
500 Pearl	28 September 1839	PC Papers
71 Cross, cellar	18 June 1842	PC Papers
12 Orange	14 September 1843	DA Indictments
61 Cross	26 October 1850	DA Indictments
63 Cross	26 October 1850	DA Indictments
67 Cross	20 September 1850	DA Indictments
67 Cross	26 October 1850	DA Indictments
69 Cross	26 October 1850	DA Indictments
71 Cross, cellar	26 April 1850	DA Indictments
67 Cross	21 February 1851	DA Indictments
69 Cross	16 April 1851	DA Indictments
69 Cross	23 May 1851	DA Indictments
71 Cross, cellar	21 February 1851	DA Indictments
67 Cross	23 January 1852	DA Indictments
69 Cross	23 January 1852	DA Indictments
71 Cross, cellar	23 January 1852	DA Indictments
71 Cross, cellar	22 April 1852	DA Indictments

¹ PC=Police Courts, New York City 1820–1842

² DA=District Attorney, New York City 1820–1843

The brothels recorded on Block 160 in the 1820s do not cluster near the Five Points intersection as in later years. Only two addresses were recorded, one at 470 Pearl Street and the other near the corner of Pearl and Cross Streets. The 1820 federal census does not show anyone living at 470 Pearl Street although the 1819 New York State census shows two households, one headed by John Barry, an accountant, and the other by Anthony Lymar, a grocer. Both are “aliens” and both include other aliens in their households (three males and three females in Barry’s and two males and two females in Lymar’s). The brothel near the corner of Pearl and Cross Streets (Lots 21 and 22) may have been in the same building as the large boardinghouse/brothel that was located there in 1855.

In the 1830s, there appear to have been brothels all along Orange Street on Block 160, including several at the intersection with Park, but also at the other end of the block near Chatham. However, the largest concentration of brothels was further north on Orange Street (outside Block 160), along both sides of the street. Brothels were closed at Nos. 25, 31, 33, 37, 39, 40, 44, 95, 97, 99, 104, 142, and 154 in the 1830s. The brothel at the corner of Pearl and Cross Streets, this time identified as 500 Pearl Street, was again closed in 1839.

Only two brothels were closed on Block 160 in the 1840s, one in a cellar near the Five Points intersection on Cross Street and the other at No.12 Orange Street. The one at 12 Orange Street is the one for which there is an archeological deposit. Nearby brothels were located further north on Orange Street, as they had been in the previous decade, with a concentration around the intersection.

In the early 1850s, the Cross Street side of Block 160 appears to have been lined with brothels. Establishments at Nos. 67, 69, and 71, the addresses closest to the infamous intersection, appear to have repeatedly reopened after being closed. However, during the decade no actions were recorded against the boardinghouse at the corner of Pearl and Cross Streets, although it is the 1855 census that listed the large number of single women without occupations at that address.

According to Gilfoyle (1996, personal communication), the various brothel guides that were published in the nineteenth century do not go into detail regarding Five Points establishments. The guides were not examined for this study. In fact, no reliable source describes life in a Five Points brothel, although reformers such as Charles Loring Brace and journalists such as George Foster had plenty to say about prostitution. The archeological remains from No. 12 Orange Street, therefore, represent the only available inside picture of a Five Points brothel. The problem, of course, is to figure out what they mean.

4.5.5 *The Archeological Remains*

In many ways, the archeological assemblage from Feature AG (AS III) was unlike all other assemblages from Block 160. Besides the unusual number of chamber pots, the ceramic assemblage included a large number of pitchers (20 out of an assemblage of 300 vessels), substantially more than were found in any other feature on the block. There were also more serving dishes (a total of 17 plus five platters) and more small plates (muffins and twifflers). Muffins (34) and twifflers (22) came in a variety of printed landscape patterns, but they were also decorated in the shell-edge and willow patterns, the least expensive ceramics available in the period. A total of 30 dinner plates was recovered, most of them in the shell-edge pattern, the pattern that also included the most serving dishes. Apparently, the brothel's everyday set of dishes was shell edged.

There were several sets of cup plates (a total of 14), a vessel that is difficult to classify in this case as either a tableware or a teaware. Cup plates were used as coasters, usually for teacups, but they could very well have been used for wine glasses in a brothel. One set of cup plates is decorated in a dark-blue pattern showing cows and sheep against a woodland background (Figure 103) and another with a motif of exotic birds surrounded by flowers.

Portions of 15 teasetts were identified, most of them decorated in the popular printed patterns of the day (Tyrolean, Japonica, Japan Flowers, Oriental Scenery), but there were also Chinese export porcelain cups and saucers in the Nanking Canton pattern and the complete set of Chinese export porcelain mentioned above (Figure 101). In addition to ten teacups and four saucers, this set included a twiffler, a teapot (spout only), a tea caddy, two slop bowls, and ten coffee/chocolate cups. While not unique, it is as elegant as the porcelains recovered on sites associated with upper-class New Yorkers (see Volume I, Appendix B). A unique ceramic type in the assemblage is represented by a set of five matching waisted teacups decorated in a blue-printed landscape motif with bands of pink/purple lustre around their rims. Clearly, many tastes are represented in the assemblage.

The glass assemblage from Feature AG even more specifically reflects the activities of a brothel. Of 105 wine/liquor bottles recovered from AS III, 99 (94%) were for wine, 5 were for beer, and 1 was for whiskey. Hard liquor was generally not allowed in brothels because of its intoxicating properties. Wine was apparently drunk from tumblers (of 87 drinking vessels, 66 were tumblers, 12 were stemware, and the rest were firing glasses) more often than stemware, perhaps because it was not drunk at a table. A bottle coaster was also present in the assemblage as well as two matching punch cups.

An especially large number of wide-mouth flacons (seven out of nine) suggest that they held brandied fruits in alcohol, although flacons were also used for olive oil, capers, or other delicacies. Any or all of their likely contents is consistent with the kinds of snacks that might be served in a brothel. There were also four mustard bottles and an olive oil bottle in the assemblage. Serving pieces included two decanters, three castors or cruets, and a sugar bowl or jam pot.

Personal glass artifacts included perfume bottles (3), a nursing shield, a snuff bottle, a miniature flask, and three female urinals. The urinals would have been used by women who were confined to bed, probably with venereal disease. According to Sanger, nearly half the prostitutes in New York at the time of his study (1857) admitted to having suffered from syphilis (Sanger 1939:676) and undoubtedly many more had other similar problems. Only one of the 39 medicinal bottles recovered—embossed “BRISTOL'S// EXTRACT OF/SARSAPARILLA//BUFFALO”—has been identified as specifically used for venereal disease; several other medicines (Henry's Calcined Magnesia and Essence of Peppermint) were meant for stomach distress of one sort or another.



Figure 103. Unmarked rural pattern on cup plates. From Feature AG, AS III.

Six glass lighting components were recovered, including two (a chamber lamp and a float lamp) that could be carried from one room to another. Additional lamp parts, such as finials, were made of metal. There was also a globe to a fire extinguisher (very thin glass that held fire retardant that was released when the globe was broken) and three decorative bird feeders. These types of bird feeders have previously only been recovered from middle-class sites in New York (e.g., Greenwich Mews in Manhattan [Geismar 1989]; Atlantic Terminal in Brooklyn [Fitts and Yamin 1996]).

A group of sewing materials was found in the brothel deposit that suggests the contents of a sewing box. In addition to the usual hooks, eyes, and straight pins, there was a carved bone stiletto for putting decorative holes or patterning in embroidery; a delicate small thimble possibly manufactured in Norway; a folding copper-alloy and wood ruler; and a thread winder made out of a bone lice comb that had had its tines removed (see Section 4.3, Figure 86). There were several, tiny double knob-shaped objects made out of bone that have been identified as the tops of lace bobbins (Rogers 1983:214). These bobbins, which had a thin spindle and a carved shank (not recovered) around which the thread was wound, were weighted at the bottom with a ring of beads known as the spangle. A total of 17 multi-colored (blue, black, clear, green) beads was recovered with the bone bobbin tops in Feature AG. Every type of bead mentioned in Rogers's description of a spangle is represented in the assemblage:

[The beads] strung on the spangle follow a certain pattern or variations on it. They may number from seven to nine although more or less is not unusual. The top bead on each side of the spangle is called simply that. The next two beads on each side are called square cut because of their shape. To obtain that shape, the bead is heated and then squared with the help of a file. Square cut beads are often red or white but they may also be dark blue, turquoise, amber, brown or green. The bottom bead, if it is a single bead, is usually much larger than the rest and decorated in some special way (Rogers 1983:214).

Other small finds from Feature AG included miscellaneous shoe parts, a syringe, fan parts, a toothbrush, umbrella parts, combs and a hair brush, many (24) mirror fragments, eyeglasses, and a thermometer.

Only 43 of the 118 smoking pipes recovered in the brothel assemblage could be specifically identified. Twenty were the inexpensive fluted type, but none was the short-stemmed cutty style that has been associated with a working-class identity (Cook 1989b). However, the relatively early date of the feature is probably a better explanation for their absence than any pattern of choice. The assemblage also includes an unusual variety of decorative styles: a bowl decorated with thistle motifs, another with a rose on the left face of the bowl and a thistle on the right face, two with Masonic symbols, several marked "A COGHILL/JACKSON ST (a Glasgow-based pipemaker who worked from 1826 to 1909), and an unusually large pipe decorated with diagonal lines and a botanical pattern along the mold seams. A total of 21 different pipe styles is represented, only two of which were found in other Five Points features. It is likely that much of this diversity reflects the pipes' owners, the outsiders who were the brothel's clients. The plain fluted styles, however, could have belonged to the women who lived there.

Although there was no use-related wear on the 14 mouth pieces identified, many of the bowls (47.5%) showed particularly heavy charring and 27.3 percent showed moderate charring, indicating that these pipes had been used over some period of time. The heavily charred ones were generally those that were not heavily decorated and, thus, not particularly expensive. It is perhaps these that belonged to the resident prostitutes. Female smokers may not have worn down mouthpieces in the way that has been noted for their male counterparts, but they very well could have kept pipes in their rooms for recurrent use when they were not working.

4.5.5.1 A Middle-Class Signature

The fanciness of the ceramics, the presence of elegant items for entertaining (e.g., the punch cups, the wine coaster), and decorative items that could only be considered luxuries (e.g., glass bird feeders), as well as the sheer quantity of material recovered from the brothel privy, suggest that its residents enjoyed a

lifestyle that was considerably more comfortable than that of other residents in the neighborhood. In general, the city's brothels were elaborately furnished and presented an image of luxury to their clientele. However, this sort of luxury was not assumed to have characterized Five Points brothels, which were supposedly among the "lowest" sort (Timothy Gilfoyle, 1996, personal communication). The "staff" at 12 Orange Street probably came from the working class, but the artifacts from Feature AG indicate that an effort was being made to present another image, one more conducive to attracting a middle-class clientele.

To place the assemblage from Feature AG in a class context, the tablewares and teawares were compared to a contemporaneous deposit that has been indisputedly associated with an upper-middle-class household. In her study of women's role in the creation of separate masculine and feminine spheres, Diana Wall (1994) used a number of archeological assemblages recovered in New York City to explore the changes in tea- and tablewares as they related to the ritualization of family meals. Among them was a privy (Feature 9) excavated on the Sullivan Street site (Salwen and Yamin 1990) which belonged to a Dr. Robson and his family. The Robsons moved to Washington Square South in 1841, and the artifacts found in their privy probably represent household refuse that was deposited when they installed plumbing in the house several years later. Figure 104 compares percentages of tablewares classified by their decorative motifs from the Robson deposit with percentages of similarly decorated tablewares from Feature AG. The Feature 9 data were taken from Wall's Table E-4c in Appendix E of her 1994 publication (Wall 1994:204). Tables 119 and 120 show the frequency of types of vessels from each of the sites. The TPQ and the mean ceramic dates (1823 for the Robson deposit and 1824 for Feature AG) are comparable. The deposition date for Robson was 1849-1855; for AG, it was 1843.

Table 119. Frequency of Tableware Types from the Sullivan Street Site, Feature 9¹

Vessel Type	Shell-edged	Landscape Willow	Landscape CEP-Canton	Other CEP	Other Print	Plain	Total
Plate	3	9	2	2	3	2	21
Soup	-	1	3	-	-	2	6
Twiffler	1	1	2	2	-	-	6
Muffin	4	2	4	7	-	-	17
Platter	2	-	-	-	1	-	3
Boat	-	-	1	-	-	-	1
Tureen	1	1	-	-	-	-	2
TOTAL	11	14	12	11	4	4	56

¹ Data for Feature 9 from Wall 1994:Table E-4C

² CEP = Chinese export porcelain

Table 120. Frequency of Tableware Types from Feature AG (AS III)

Vessel Type	Shell-edged bl./gr.	Landscape Willow	Landscape CEP-Canton	Other CEP	Other Print	Plain	Total
Plate	11	3	4	-	5	2	25
Soup	6	-	-	-	2	1	9
Twiffler	3	4	-	1	7	-	15
Muffin	8	8	-	-	10	2	28
Platter	5	-	-	-	-	-	5
Dish	9	-	-	3	1	2	15
Tureen	-	-	-	-	-	1	1
TOTAL	42	15	4	4	25	8	98

Although the Robson household apparently continued to use inexpensive tablewares (i.e., shell-edged and willow-decorated whitewares), they also had a set of Canton-style Chinese export porcelain (Figure 104).

MOTIFS

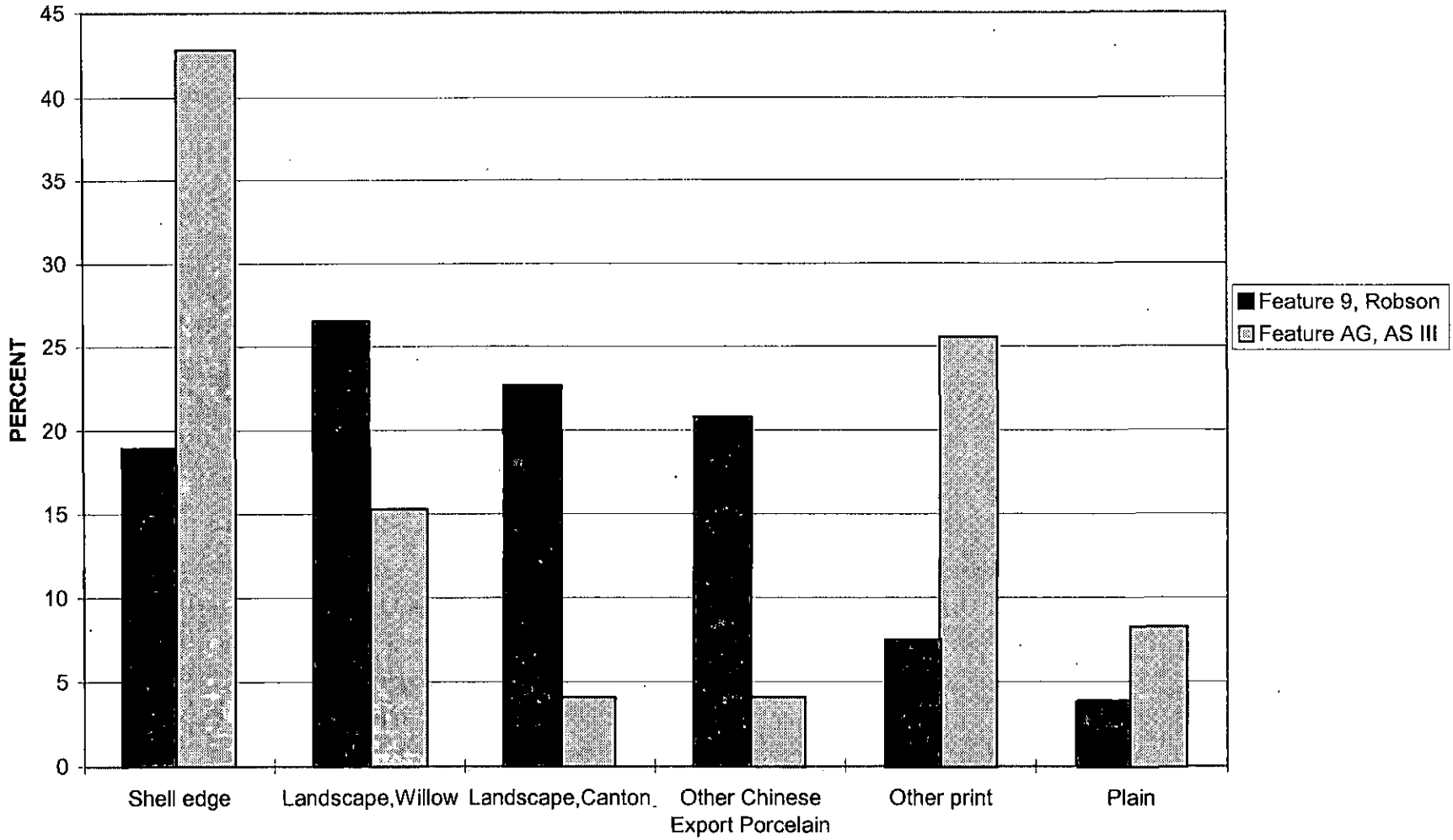


Figure 104. Style of motif on tablewares: Feature 9, Robson, and Feature AG, brothel.

The number of broken vessels that got into the trash (two more than shell edge and two fewer than willow) suggests that the porcelain was used on an everyday basis, not only for entertaining. In contrast, the preponderance (42.8%) of shell-edged tablewares in the Feature AG deposit suggests that everyday meals were served on the least expensive dishes one could buy. The brothel also had Chinese export porcelain, however, including four dinner plates, but these plates do not appear to have belonged to a set. While there were considerably more vessels in the Feature AG deposit, a smaller proportion of them belonged to sets. The many different transfer-printed wares might have been used together, although they may have been used for snacks served away from the table, especially probable since so many of them were small (twifflers or muffins) plates.

The contrast between the upper-middle-class and brothel assemblages is less pronounced for teawares (Figure 105, Tables 121 and 122). The Robsons had several tea sets, possibly used in different contexts, as Wall has suggested (1994). They owned Chinese export porcelain with overglaze decoration in at least three different patterns, a blue Fitzhugh set, and matching cups and saucers with floral printed and floral painted decoration. In the brothel, there were also matching teawares in printed floral and landscape patterns, Japanese and Chinese landscapes printed on cups and saucers, and some vessels with luster decoration. But the most unusual and truly elegant tea service in the brothel was made of Chinese export porcelain decorated in a floral spray pattern done with overglaze enamel painting and gilding. It exceeds the quality of anything owned by the Robsons and certainly anything owned by any other household investigated on Block 160. These elaborate teawares suggest that, for the purpose of entertaining, the brothel put on an elegant face. Tea, coffee, and alcohol, as well as snacks served on small plates, were probably offered to clients rather than full meals. Nel Kimball describes a similar practice in her memoir of days as a prostitute in Saint Louis and New Orleans:

The wine and whiskey were the best, the music good, the surroundings elegant, the service polite. Their every wish attended to. With a few drinks, some little cakes, some good smoked ham, a bit of the best baked bread, iced wine, a last puff of a fine Havana, how better to end an evening? By going up with an attentive, laughing girl (Kimball 1970:89).

Table 121. Frequency of Teaware Types from the Sullivan Street Site, Feature 9¹

Vessel Type	Landscape Chinese ²	Overglaze Floral CEP ³	Overglaze CEP	Landscape Printed	Floral Printed	Floral Painted	Lafayette	Total
Teacup	2	-	1	3	4	-	-	10
Saucer	1	3	1	3	8	8	1	25
Tea bowl/Ir ⁴	-	-	-	4	-	1	-	5
Tea bowl	-	1	2	2	1	3	-	9
Coffee cup	-	-	1	-	-	-	-	1
Pot	-	1	-	-	-	-	-	1
Total	3	5	5	12	13	12	1	51

¹ Data for Feature 9 from Wall 1994: Table E-4C

² soft-paste porcelain

³ CEP stands for Chinese export porcelain

⁴ Irish

Table 122. Frequency of Teaware Types from Feature AG (AS III)

Vessel Type	Landscape Chinese ¹	Overglaze Floral CEP ¹	Overglaze CEP	Landscape Printed	Floral Printed	Floral Painted	Lafayette	Total
Teacup	3	10	-	28	19	-	2	62
Saucer	2	4	-	25	6	2	2	41
Slop Bowl	-	2	-	3	3	-	-	8
Coffee cup	-	10	-	-	-	-	-	10
Pot	-	1	-	-	-	-	-	1
Tea caddy	-	1	-	-	-	-	-	1
Total	5	28	-	56	28	2	4	123

¹ Chinese export porcelain

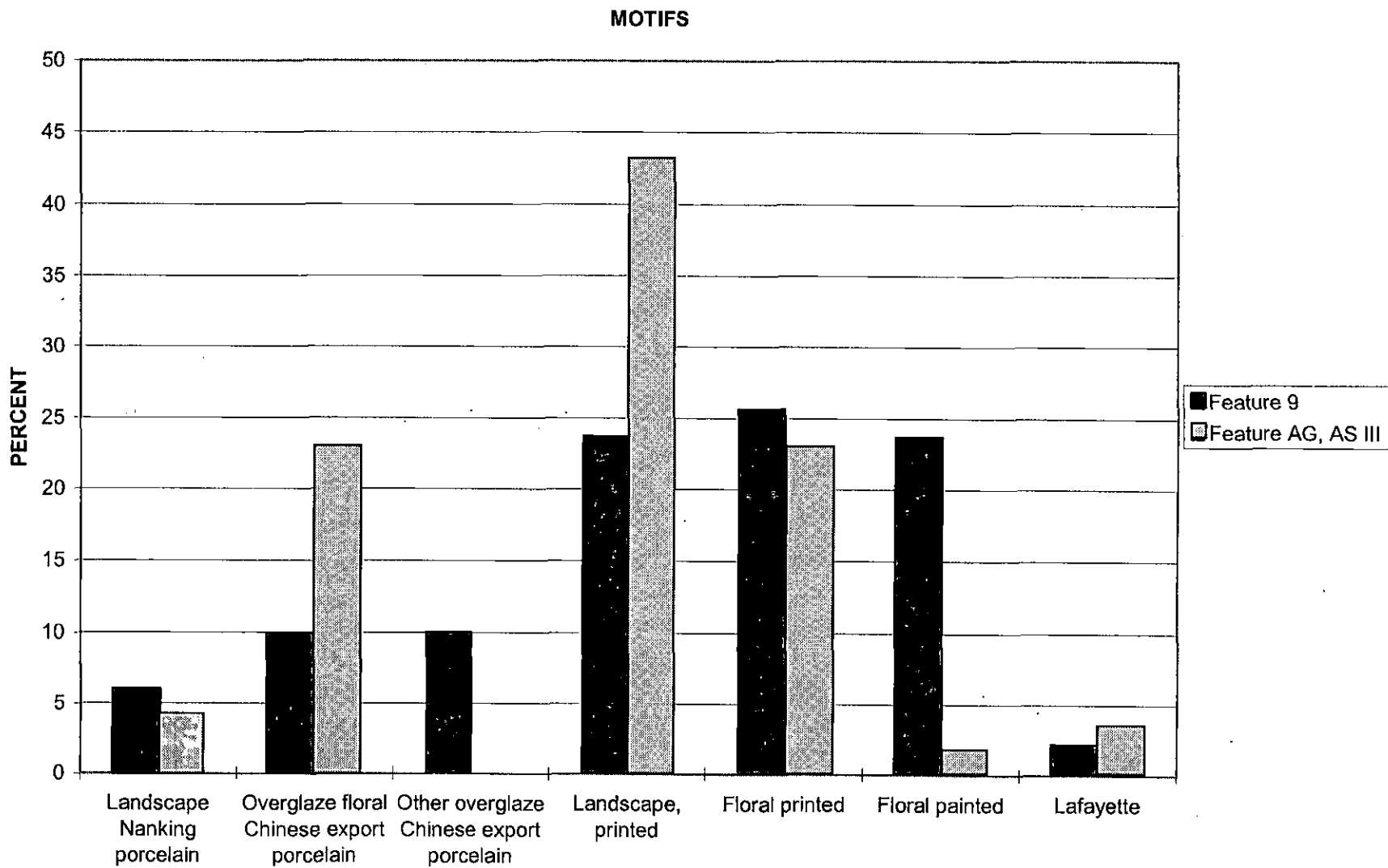


Figure 105. Style of motif on teawares: Feature 9, Robson, and Feature AG, brothel.

The contrast between the brothel's tablewares and teawares suggests a distinction between the meals that were served to the resident prostitutes in private, when they were not working, and the public ones served in the company of clients. For private meals, they ate from dishes that were identical to those being used by their families in the nearby tenements, while in public they enjoyed the accouterments of the middle class.

The food remains from Feature AG reflect the same duality. The cheapest cuts of meat—picnic hams, pork foreshank/hocks—and quantities of inexpensive fish made up the largest portion of food remains from Feature AG (see Section 3.5 for a detailed discussion of the food remains). But the deposit also included exotic foods—veal, soft-shell clams, coffee—that were not found anywhere else on Block 160. Again, everyday fare resembled the common working-class diet; the exotics were unknown in the tenements.

4.5.5.2 The Brothel Pattern

Donna Seifert has argued that differences between the life style of brothel households and working-class households relate to "household composition, function, and income" (Seifert 1991:93). Using data from a midden in a Washington, D.C., neighborhood known as Hooker's Division (for the Civil War general of the same name), Seifert compared functional artifact groups (after South) from the brothel with artifact groups from white and black working-class households. Although her brothel assemblage (a total of 8,184 artifacts) dates approximately 50 years later than the Feature AG assemblage, the key categories that Seifert associates with a brothel life style, i.e., the personal, tobacco, and clothing groups, are proportionately comparable to Feature AG (Figure 106). An exception is the activities group, which includes artifacts related to lighting. While Seifert included lamp glass in this category, such fragments were classified as miscellaneous glass in the Feature AG analysis. This resulted in a considerably lower proportion of lighting artifacts than in the Hooker's Division assemblage, but the number of lamp parts was relatively higher than from other features on Block 160 and included such unusual pieces as a float lamp meant to be suspended from a string and a chamber lamp.

The proportion of smoking pipes for both the Hooker's Division brothel and Feature AG is surprisingly small if the intuitive association of pipes with male clients is assumed. Seifert attributes the low number in her assemblage to the introduction of cigarettes. Feature AG, however, requires another explanation. As noted above, the pipes themselves are a strange mixture of styles. What is constant is their association with sewing materials, and it appears likely that the pipes in the assemblage belonged to the brothel residents rather than their clients.

If we hypothesize that the contents of the reception room were deposited in the privy before the contents of the individual chambers, the bottommost layers in the deposit (Layers 10 and 11 on Figure 100) should include more tea- and tableware than the overlying deposits (Layers 5–8 on Figure 100) which were created when the upper portion of the privy fill was disturbed by the construction of a wall. Indeed, 58.5 percent of the tea- and tableware came from the lowest deposit (Layer 11) and another 24.8 percent came from the overlying layer (Layer 10). Conversely, 75 percent of the tobacco pipes came from the upper four layers (5–8) and another 22.9 percent came from Layer 10. Figure 107 shows the proportions of pipes, sewing materials, and table- and teawares by layer within AS III. It is these upper layers that include more things from individual boudoirs, the contents of which might have been thrown into the privy last.

FUNCTIONAL GROUPS

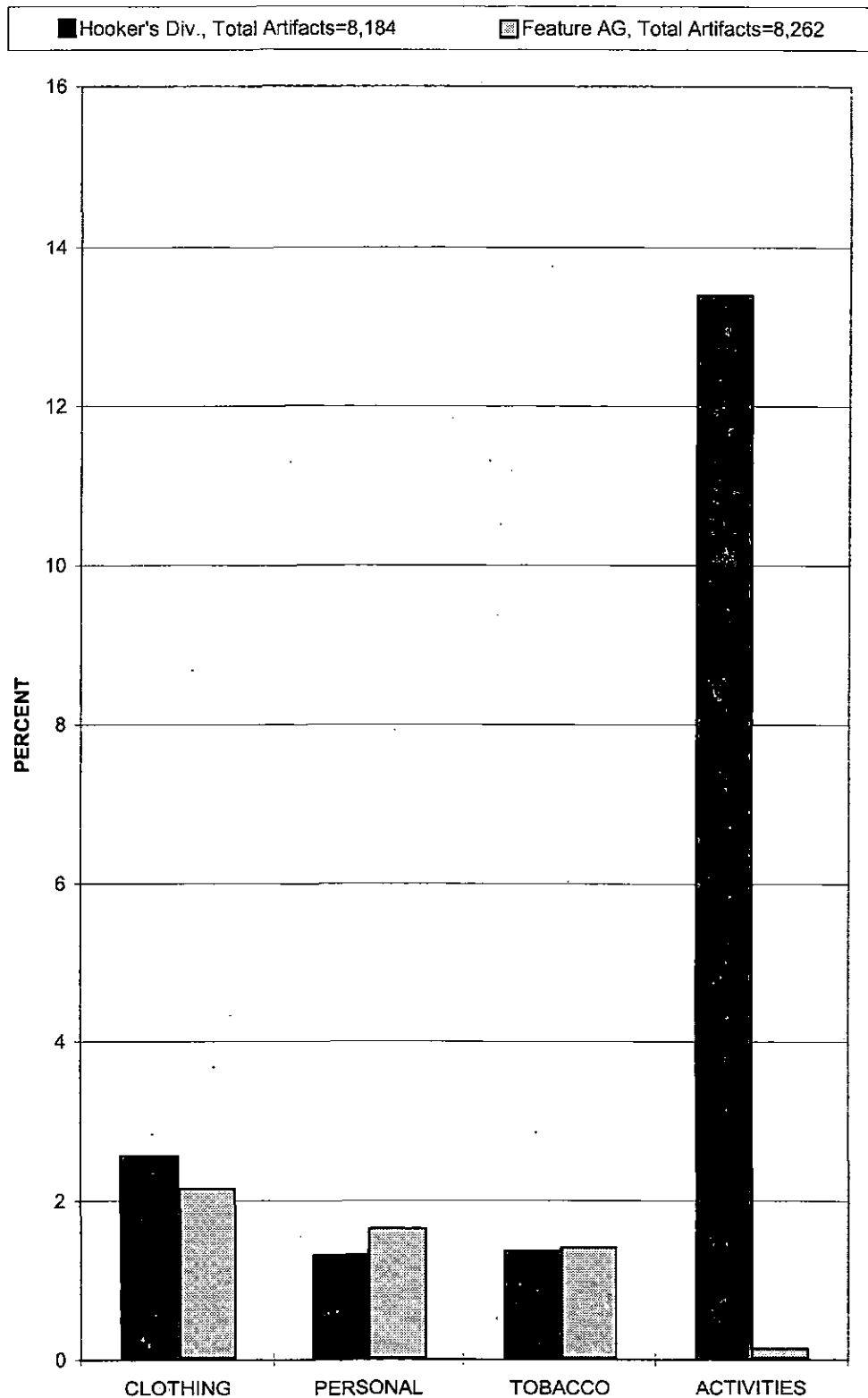


Figure 106. Percentages of functional groups related to prostitution, Hooker's Division (Cheek et al. 1991) and Five Points.

LEVELS WITHIN FEATURE AG/AS III

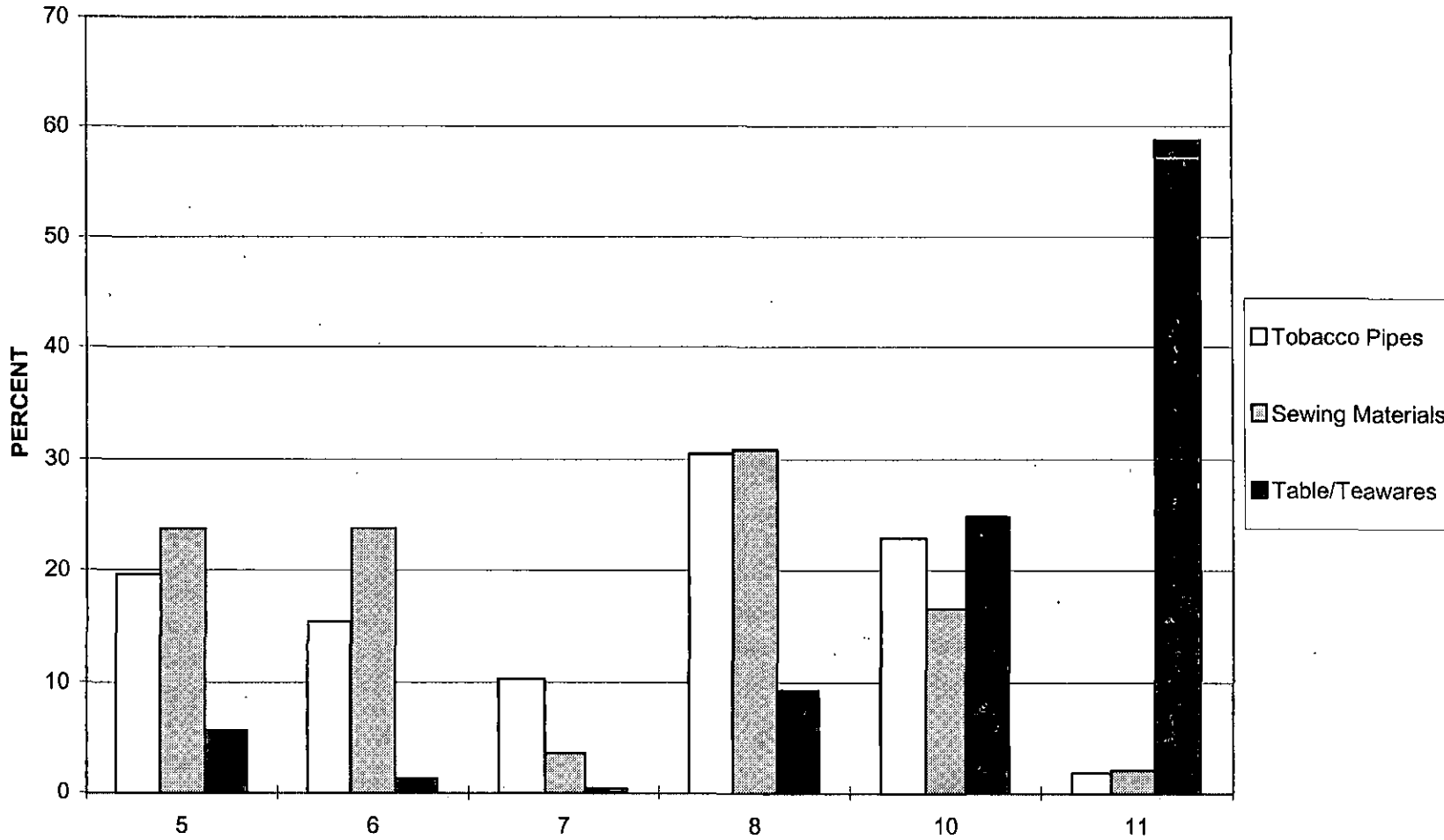


Figure 107. Percentages of tobacco pipes, sewing materials, and table- and teawares by excavated level within Feature AG, AS III.

Almost all of the sewing materials were also found in the upper layers, and pipes and sewing materials were always found together (Table 123).

Table 123. Distribution of Sewing and Smoking Artifacts in Feature AG

Layer	Pipes	Sewing Items
5	23	13
6	18	13
7	12	2
8	36	17
10	27	9
11	2	1
TOTAL	118	55

Prostitutes at 12 Orange Street apparently passed their time sewing and smoking, a slightly different scenario than was suggested by the accouterments of Helen Jewett's room at Rosina Townsend's fashionable brothel on the other side of Broadway. The smoking may have been a working-class girl's indulgence in private, although the literature is silent on smoking behavior among nineteenth-century prostitutes. But while she may have clenched a clay pipe between her teeth like her sisters in the tenements, she didn't have to sew shirts at 6 cents apiece to make ends meet. Instead, she embroidered, made lace, and mended her own fancy clothes, a kind of genteel sewing more usually associated with the upper classes. In this instance, the prostitutes at 12 Orange Street appear to have created their own duality, combining their working-class selves with their invented identities as appropriate companions for middle-class men.

4.5.6 Conclusions

Prostitution is inseparable from Five Points's reputation as a sink of iniquity, but even its most ardent critics have appreciated a prostitute's "style." George Foster found some prostitutes "quite beautifully arrayed and in the latest Parisian style" (Foster 1990:95). Prostitutes not only knew how to make themselves attractive. They also knew how to put on class, to manipulate their image to appeal to the men of means they wanted to attract (see Kimball 1970 for an explicit discussion of putting on class in later turn-of-the-century brothels). The residents of 12 Orange Street were working-class girls who played at being middle class. They lived dual lives, coming from one thing and portraying another.

The assemblage recovered from an Orange Street brothel that was closed in 1843 reflects the dual identities of the prostitutes who lived and worked there. The cheapest dishes were used for everyday meals while the most expensive were available for entertaining. The cheapest cuts of meat made up the largest proportion of food remains, but there were also expensive cuts not seen elsewhere in deposits associated with working-class inhabitants of Block 160. Heavily charred pipes, found consistently with sewing materials, suggest that the women may have spent daytime hours smoking and sewing—doing what their mothers and sisters were doing in the tenements—while at night they looked and acted like the women and wives of their middle-class customers. They suffered stomach distress and venereal disease in private; for their public—very possibly politicians from nearby City Hall—they served tea and wine in chambers bedecked with bird cages and fancy dishes decorated with scenes of war and patriotism (Figure 108). At least one woman clung to her Irish identity by displaying a saucer with the image of *Hibernia* ringed with acorns (Figure 109), and a German inscription on a medicine bottle suggests that there were also German women at 12 Orange Street.

Prostitutes dealt with the risks of the profession while enjoying its benefits. They attempted to avoid pregnancy (Hill 1993:235), but they also endured unwanted pregnancies and bore children. The skeletal remains of two newborn infants (probably twins) found in Feature AG are more than likely a case of infanticide (see Section 5.5), perhaps committed because of the inconvenience of having babies at the very moment the mother's livelihood was threatened and her living space was taken away. There is also evidence that some residents of the brothel were nurturing their children and, in fact, imbuing them with values that have been associated with the middle class (Wall 1994). A child's cup inscribed with a sentimental verse would have been an incentive to learn to read; a toy tea set would have helped a little girl learn the manners of a proper lady.

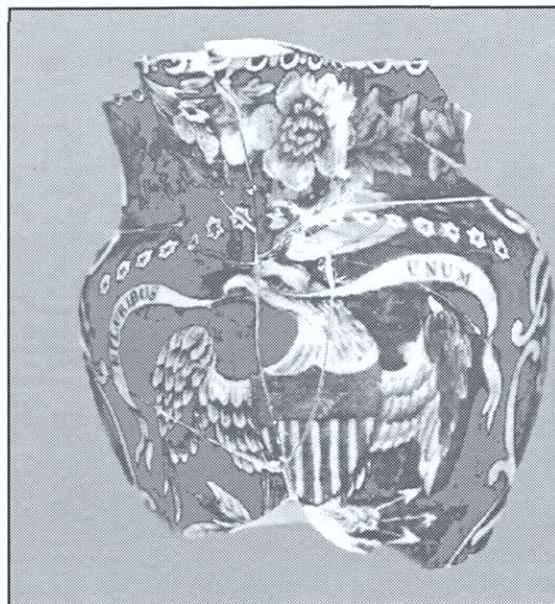


Figure 108. Dark-blue printed serving pitcher decorated with the seal of the United States. From Feature AG, AS III.

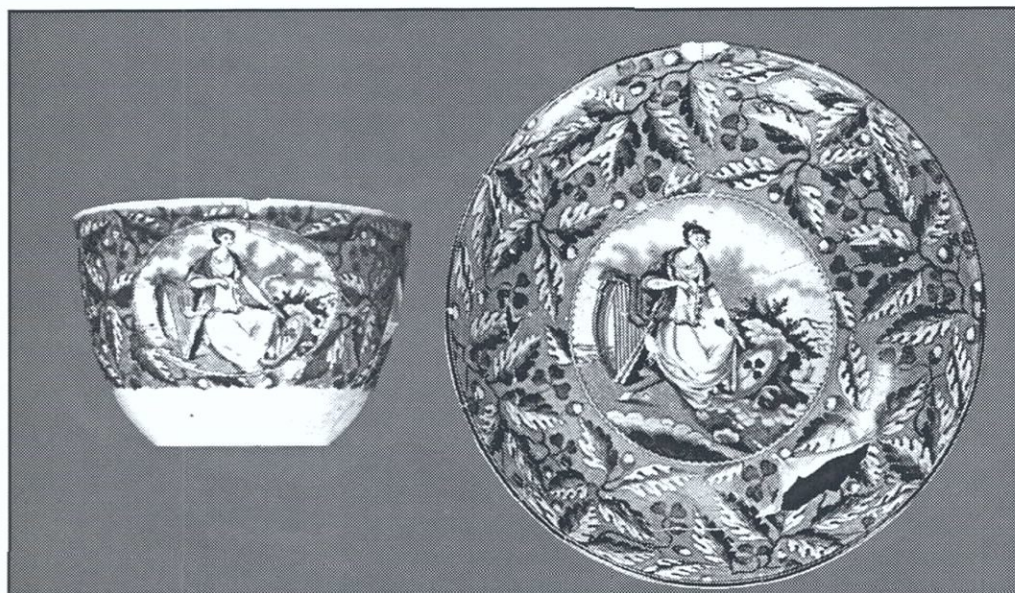


Figure 109. Teaware decorated with the anthropomorphic depiction of Ireland, Hibernia. From Feature AG, AS III.

The brothel at 12 Orange Street was, like many others, tucked between respectable stores and the homes of families with children, but it was also around the corner from a street that was lined with brothels and just a few doors from the intersection that was the center of Five Points' infamy. In their public lives, the brothel's residents may have set themselves apart from the women in less reputable establishments, thus risking alienation from their peers as well as their families. Judith Walkowitz's study (1980) of the contagious Disease Acts in England shows vividly how precarious a prostitute's relationship was within the general community of the laboring poor. Once labeled by the state as deviant, she lost her respectability as a legitimate worker in her own class and she surely lost her opportunity to rise into another. One wonders what happened to the women of 12 Orange Street after they were evicted in 1843. Did they return home in disgrace or could they return home at all? One wonders what happened to women who went to prison to get treated for syphilis, the only way to get treatment in New York. And one wonders what happened to their children.

Being wealthy, free, and female came at a price. The archeological assemblage from Feature AG reveals a contrast between what was public and what was private in the experiences of the women at 12 Orange Street. It reveals positive and negative aspects of a profession that was the most lucrative and sometimes the only one open to working-class women who needed to support themselves. These women's independence may have looked enviable to the men who were feeling squeezed by an increasingly competitive and exploitive economic system, but from the perspective of 12 Orange Street, the women were being squeezed by the same system. The artifacts show us the conflicts in these working women's lives—conflicts between exploitation and material well-being, between private degradation and public performance.

5.0 HEALTH AND HYGIENE IN AN URBAN CONTEXT

5.1 Introduction (Rebecca Yamin)

The notion that slums are unhealthy places that are somehow the fault of the people who live there is still with us. As pointed out in the classic work on the Victorian city (Dyos and Wolff 1973), the growth of industrial capitalism depended on a local, low-paid, casual work force. As a result, every city in the western world developed districts to house the workers who could not afford to live elsewhere no matter how miserable the living conditions. That they lived in overcrowded apartments overlooking sewage-filled yards, however, did not mean that they didn't notice or didn't mind. Alan Mayne's study of Victorian Sydney found that working people living among the inner city's unhealthy lanes and courts "complain bitterly of the awful stink...of 'horrible' smells that stopped them from sleeping at night, odours arising from defective sewers, stinking cesspools, and open surface drains" (Mayne 1982:17). The conditions were not theirs to control as housing was rented from landlords who invested as little as possible in the maintenance of their properties to maximize their own profits, a situation that persists into the present. According to Elizabeth Blackmar (1995:43), access to health in nineteenth-century New York depended primarily on the personal ability to pay for a healthful environment. But the people who couldn't pay for such an environment, the residents of Block 160 among them, had to cope with conditions as they were. The studies included in Section 5.0 describe those conditions, the archeological evidence for coping with those conditions, and the physical evidence for the presence of disease. The analysis of two newborn skeletons that were recovered from a privy is included here since pregnancy and childbirth also fall within the domain of health maintenance.

Milne has organized her study (Section 5.2) of sanitation and health in the tenements at Five Points in three sections: street cleaning and waste disposal; access to fresh water and sewers; and housing conditions. She reviews the major actions taken by the city with regard to each of these issues, finding very little evidence for preventative measures and much evidence for a crisis-driven approach. Recurring cholera and typhus epidemics were blamed on overcrowded tenements, on the immigrants and free blacks who inhabited them, and the unsanitary conditions that prevailed on the properties. Milne shows the relationship between the city's response to epidemics, reformers' efforts to improve sanitary conditions, and the citizens' willingness to support the cost of such improvements, concluding that conditions in the tenements remained relatively unchanged throughout the nineteenth century. As an appendix to her section, she includes a valuable chronology of major events relating to health and sanitation in the city of New York extending from 1670 to 1902.

The contents of most of the glass medicine bottles recovered on Block 160 could not be identified because they were ethical medicines (that is, medicines that were prescribed by a doctor or a dispensary) and were contained in bottles that were unmarked or had lost their labels. However, Bonasera's study (Section 5.3) of the embossed bottles recovered provides some idea of the illnesses being treated. By making a list of all the claims made for the patent medicines found, he speculates that the most common problems treated were rheumatism, strains, and soreness—not surprising in a working-class population. The study also suggests that the Irish tenants at 472 and 474 Pearl Street were more likely to use medicine than the Germans and other Eastern Europeans on Baxter Street. The Irish also apparently used mineral and soda water, considerably less expensive than patent medicines, for medicinal purposes.

Raymer identified 43 plants, including both cultigens and wild varieties, that might have been used as medicinal remedies. Particularly significant is *Chenopodium ambrosoides*, or wormseed, which was used to treat and prevent worms; only one of the 1,845 medicine bottles recovered claimed to cure worms, an omnipresent problem in the nineteenth century. Raymer speculates that the higher frequency of wormseed in early deposits may relate to the higher percentage of African Americans on the block in that period.

Karl Reinhard conducted the first parasitological analysis for an American historical archeological site and has been close to practically every study done since. Using a contextual approach for the Five Points

project, Reinhard (Section 5.4) expected certain results based on dietary information and environmental conditions. Although egg preservation was excellent, certain parasites were completely absent, among them the eggs of pork and beef tapeworms. This appears to reflect the thorough cooking of meat and a probable appreciation for why such cooking was important. Also unexpectedly, the tapeworm associated with the preparation of raw fish and usually found among Jewish women who made gefilte fish was not present in an archeological feature that was unquestionably associated with a kosher household. However, roundworm was present in that feature and in later features associated with an Irish tenement although it declined over time, possibly in response to the use of the oil of chenopodium or wormseed. In general, Reinhard's study shows that parasitic disease was not the rampant problem on Block 160 that was expected.

Children born in nineteenth-century New York had only a 50 percent chance of survival. Although disease was the usual cause of death, there were other causes, one of which is gruesomely demonstrated by the presence of two newborns at the bottom of a privy associated with a brothel at 10-12 Baxter Street that was closed in 1843. Thomas Crist (Section 5.5), JMA's principal physical anthropologist, analyzed the remains to determine whether the babies represented full-term births and whether they were stillborn or viable and therefore subjected to infanticide. According to William Sanger's celebrated study of prostitution in nineteenth-century New York, 60 percent of children born to prostitutes died from one cause or another. The physical evidence suggests that the infants found in the privy died around birth. Both appeared normal, and there was no evidence for infectious disease or nutritional disorder. Although there are no accepted methods for determining the sex or racial ancestry of fetal or infant remains, Crist's analysis suggests that the significant difference in mandible shape between the newborns probably indicates that they were different sexes. Because the remains were found commingled stratigraphically and were exactly the same age, it is likely that they were twins who were thrown down the privy soon after birth in a case of infanticide.

The interdisciplinary nature of an interpretive approach should become particularly evident in this section of the report. While our purpose is to find meaning in the remains, the physical context is fundamental to any understanding of what was going on culturally. Physical facts like those presented in the parasitological analysis and the physical anthropological analysis need little interpretation to convey their message. They are what they are; that they are not necessarily what was expected makes them all the more interesting. The history of sanitation in New York also speaks for itself. The poor—many of them immigrants or African Americans—were at a disadvantage with regard to health care and living conditions in the nineteenth century much in the same way they are today.

5.2 Unhealthy New York: Sanitation and Health in the Tenements at Five Points (Claudia Milne)

The tenement districts of New York City were places in which “thousands of people are living in the smallest space in which it is possible for human beings to exist—crowded together in dark, ill ventilated rooms, in many of which the sunlight never enters and in most of which fresh air is unknown...from the tenements comes a stream of sick and helpless people” (DeForest and Veiller 1970:10).

5.2.1 Introduction

Five Points earned its notorious reputation in the first third of the nineteenth century as epidemic diseases swept through tenements crowded with immigrant laborers and their families. Earlier, however, when the city was still relatively small and immigration had yet to begin on a large scale, many of the streets north of the built-up city in the district around the Collect Pond were occupied by the households of artisans and industrialists.¹ Work and home shared the same space on these owner-occupied properties. In Five Points, the property owners lived among the slaughterhouses, tanneries, breweries, and potteries that characterized the eighteenth-century industrial development of the district. The artisan property owners gradually moved their homes away from their work spaces, leaving behind structures that were converted and subdivided, probably to generate rental income. Additional single-family dwellings and tenant houses were soon built throughout the Collect District to house the city’s growing working-class population. The neighborhood remained an ideal location for wage-earning tenants, within walking distance of the lower city businesses and a number of growing industries, as well as the city’s docks.

The formation of residential neighborhoods in nineteenth-century New York City involved new class dynamics. The rise of an entire class of wage laborers transformed housing into a commodity. Property ownership in this new rental market was dominated by the class of New Yorkers that could afford to separate home and work spaces. For the wage-earning renters, employers and landlords were members of the same proprietary class. This “landed” class, in effect, controlled both the tenants’ income and savings with wide-reaching effects in terms of the development of neighborhoods and the healthfulness of these neighborhoods (Blackmar 1989:5, 68–71).

With regard to health and health care, the voices of the residents of the tenanted neighborhoods, including Five Points, were rarely heard. Historical documents consist of physicians’ records and sanitary reformers’, legislators’, and missionaries’ tracts. Primary sources include the published annual reports from the city inspector’s office and various incarnations of the city’s board of health, addresses to the state legislature and the city’s governing body, the Common Council, as well as records from the Croton Aqueduct Authority. Additionally, many historians have examined health issues specific to New York City; the most comprehensive study was published by John Duffy in 1968. The notion of health as a consequence of New York’s exploitative housing and labor markets was introduced by Blackmar (1989, 1995). In related works, Kraut (1994, 1995) explores the relationship of epidemics and prejudice directed at immigrants. Others have researched specific epidemics (Duffy 1966; Rosenberg 1966; Bates 1992), waste disposal, and sanitation (Corey 1994, 1995). The invaluable *The Tenement House Problem* (1970), first published in 1903 with Robert DeForest and Lawrence Veiller as editors, includes the entirety of New York’s 1900 Tenement House Survey. Their book is a comprehensive history of tenement houses and reform in the city of New York (DeForest and Veiller 1970).

This section summarizes information from a number of sources and examines the health laws and regulations relative to Five Points and the surrounding neighborhood. A short chronology detailing important events in the health of the city is presented at the end of the text. The organization of the section reflects three major health issues that occupied the consciousness of New Yorkers from the early English period: street cleaning and waste disposal; access to fresh water and sewers; and housing conditions. These

¹ In the project area (Block 160) these included Coulthardt (Lot 28) on Cross Street; Hoffman (Lots 7 and 8) and Lorillard (Lots 19–24) on Pearl Street; Matthew Bolmer (Lots 50–52) on Pearl and Chatham Streets (NYCTA 1790–1812; Longworth 1798; Elliot 1812).

issues were key to the health of the city and remained at the forefront of public debate throughout the nineteenth century. All are issues that remain pertinent to late-twentieth-century city dwellers. The sections are arranged in chronological order, with epidemic diseases as the common thread running through each. With respect to all three issues, political and financial considerations, both legal and illegal, stalled almost all attempted preventative reforms. Conditions affecting the health of the city were not dealt with until they became highly visible and obviously dangerous. Substantial remedial action was not taken by civic authorities until the streets of the lower city had become unspeakably dirty; the immigrants' diseases, too frightening and impossible to ignore; and the sheer size of the new metropolis necessitated an adequate sewerage system.

The rhetoric of the nineteenth-century sanitary reform campaigns illustrates the friction between the physicians and reformers, mostly native-born Protestants, and those in need of reform, the recently arrived immigrants and the laboring poor. The difficulty in passing and enforcing legislation to protect the health of the city reveals how issues of public health became interwoven with battles for control over New York City and its resources (Corey 1994:19). The occasional riot or epidemic might have brought more urgency to these issues, but changes in housing stock and sanitation came slowly and differentially to New York City's residents.

5.2.2 Epidemics and the Public Streets

5.2.2.1 Street Cleaning

The role of New York as a major port created a problem for officials charged with protecting the public's health. Streets were used for work and leisure, for the transport of livestock, the vending of food and other goods, and as receptacles for both domestic and industrial debris (Figure 110). Sanitary reform began in New York City in the middle of the seventeenth century, when the streets themselves, frequently covered in filth and trash, were the most visible health problem in the city.

In 1657, New York's municipal assembly, the Common Council of the City of New York, forbade disposal of dead animals in the public streets. The council further charged the residents of the city with the responsibility for keeping the streets in front of their homes clean (Corey 1994:6). In 1670, cartmen licensed by the City of New York were granted the exclusive right to clean and clear the streets of the city. Any waste that could not be resold or salvaged to fill in low-lying areas was tossed into the waters surrounding the city. The cartmen controlled the movements of most of the city's goods and produce. They were paid six pence per load to haul household trash and monopolized this industry until the 1780s. A separate commissioner of street cleaning was appointed in 1779, but by 1792 he was found by a grand jury to have been generally neglectful of his responsibilities and removed from the position (Hodges 1986:30; Corey 1994:xi).

Responding to complaints about the inadequacies of the cartmen in cleansing the city's streets, the Common Council appointed vagrants or "scavengers" to clean certain sections of the city in 1785. Inhabitants were required to sweep household dirt into the streets on appointed days. A year later, necessity prompted the appointment of even more scavengers (Common Council of the City of New York 1785 1:132; Hodges 1986). The value of manure and other waste products made street cleaning a profitable business, and the dispersal of carting and collection rights was a lucrative form of municipal patronage (Corey 1994:12). Despite this, after 1787, the city declined to further regulate street cleaning and contracted with private scavenging companies instead. With the deregulation of carting, an atmosphere of hostile competition grew between licensed cartmen and unlicensed carters, mostly foreign born. The licensed cartmen shunned certain streets as impassable, and in others they collected only the manure or most profitable waste products (Citizens' Association of New York 1866b:14). However, the licensed and organized cartmen were a political and social force to be reckoned with. In 1809, the mayor attempted to mollify them by restricting alien labor to the less lucrative carting of household waste (Duffy 1968:78-79; Hodges 1986:30, 78, 127).



Figure 110. The "most populous place on earth," Manhattan's Lower East Side, ca. 1900 (DeForest and Veiller 1970).

Feral dogs and hogs roaming the streets also scavenged trash, but they, too, soon proved a hazard to the citizenry. The Court of General Sessions heard complaints about the impassable and dirty condition of the streets as well as the numbers of hogs at large. In the 1780s, acting on these complaints, the Common Council determined to fine those who set hogs loose. They also voted to fine those citizens who threw garbage in the streets or left it sitting on their doorsteps overnight. A few months later, the Common Council passed a law forbidding loose hogs, but pigs continued to roam the streets of New York. The Common Council attempted to limit dog ownership by imposing taxes on canines, but there is no evidence this tax alleviated the problem. Small livestock also remained a problem, and in 1795, the council passed a law permitting the slaughter of stray goats (Common Council of the City of New York 1788–1825 1:369, 417, 547, 11:731, 751, 14:363; Corey 1994:8).

By the end of the eighteenth century, new forms of transportation and the growth of factories, public works, and other sources of jobs in the cities encouraged large-scale migration to the cities. In New York, the large pool of labor led to explosive growth in the manufacturing sector, straining the infrastructure and services of the city. The laboring classes desired housing near the manufacturing and business districts of the city, and this extraordinary demand for affordable housing created a sellers' market. The lowest-paid workers and their families were relegated to the most crowded and unhealthy quarters of the city (Cassedy 1986:147–151; Rosner 1995:8). Built on wetlands, surrounded by the remains of the city's most noxious industries, the houses on the streets surrounding the Five Points intersection were some of the least desirable in the city.

5.2.2.2 Epidemic Diseases

No matter how or where one lived, summertime was dangerous in New York City. Without refrigeration, the safety of the city's food supply was a major concern. An 1811 pamphlet of laws published by the Board of Health forbade the use of public streets to sell oysters "or any other fish, provisions, or goods of any kind without permission of the Common Council" under penalty of a \$5 fine per day. Dead animals were to be towed at least 300 feet from the shore. Fines for improper disposal of waste and animals ranged from \$10 to \$25 per offense (Board of Health 1811:14–15). The sale of oysters, salted beef and pork, dried and pickled fish, blubber, hides, and cotton wool was also forbidden between June and November (Board of Health 1812).

It was during the summers that strange fevers with unknown causes were most prevalent in the city. In the spring of 1795, yellow fever was reported in the West Indies. All vessels arriving in New York from these ports were forbidden to land their passengers and cargo unless cleared by the city's health officers. Although the cause of the fever was unknown and not believed to be contagious, New York's medical community understood enough to order the cleaning of streets, cellars, yards, and lots. Still, more than 500 people died between July and October of 1795. The following year the state legislature passed a health law. Published by the Common Council, it provided for the inspection of all streets and lots.

Despite these precautions and regulations, yellow fever returned in the summer of 1798. By the end of August, thousands had fled the city. Those who could afford to permanently removed their homes from the lower city, establishing new residences in Greenwich Village, a small, rural community at this time (Duffy 1966:341–347; Blackmar 1989). These yellow-fever epidemics frightened New Yorkers into establishing a loose public health organization which consisted mostly of the city's politicians. Responsible for enforcing quarantines, this organization was generally inactive except in times of epidemics (Rosenberg 1966:19).

New York City experienced unprecedented growth in the first two decades of the nineteenth century and several public works were undertaken. These included the filling of the freshwater marshlands north of the city, the construction of a new city hall, and the establishment of numerous new streets. The Common Council authorized the establishment of three street-cleaning districts, and the streets in these districts were to be swept clean twice weekly. In 1802, the city's board of health recommended that a municipal work force be established to disinfect privies citywide with lime. The following year a superintendent

of scavengers was appointed to regulate and schedule privy cleanings. To protect the safety and health of the citizens, cleanings and transport of waste were limited to a few overnight hours in the summer and just a few hours more during the winter. Despite regulations set forth by city officials, those hired to clean the streets and privies did not adequately perform their tasks, and citizens complained continuously about filthy streets and lots (Board of Health 1811:16; Common Council of the City of New York 1814–1834, 8:101, 14:85, 19:447, 16:219, 603, 18:617, 19:613, 616; Geismar 1993:60; Corey 1994:10).

In 1825, the Common Council divided the city into 10 sanitary districts and appointed another group of private contractors to handle street cleaning in each district. Like their predecessors, these appointees did not adequately complete their jobs. They were fired and in return sued the city for revenue lost when the city was forced to resume responsibility for the cleaning of the streets. In 1826, the city hired another round of sanitation officers to collect the rubbish that was swept into the street twice weekly for collection (Duffy 1968:357–360).

Threats from disease and epidemics seemed to come from the poorer, working-class districts of the lower city. Both typhus and cholera, epidemics related to overcrowding, spread more rapidly in the crowded portions of the city inhabited by the laboring classes. Cholera is spread through food and water contaminated with the *Vibrio cholerae* bacterium. Typhus is another bacterial disease, caused by the *rickettsia* bacterium commonly transmitted through human body lice or fleas carried by rats (Jubilee 1996:1, 39). Both diseases threatened the city throughout the 1830s and were almost a constant “wherever large numbers of people were thrown together, and conspicuously in such places as the immigrant ships, the urban slums, and the camps for canal or railroad workers” (Cassedy 1986:157–158; Duffy 1968:365). For much of the nineteenth century, several of the streets in the Five Points neighborhood were considered to be “Death’s Thoroughfares.” Mulberry, Mott, Orange (later Baxter), and Elizabeth Streets lay between “the finest street in the city—*Broadway*—one of the finest in the world...but a stone’s throw away from one of the most deadly—*Bowery*” (Board of Health 1869:341).

Cholera spread throughout Europe in 1831, and American port cities rapidly evoked strict quarantines. Nevertheless, many Americans felt they would be spared as they were the “best educated, the freest and most pious of people” and cholera seemed to be a disease of “filth, misery, vice, and poverty” (Rosenberg 1966:15–16). Phillip Hone, the ex-mayor, contended that New York City was dirtier than most European capitals, and districts such as Five Points were “inhabited by a race of being of all colours, ages, sexes, and nations, though generally of but one condition and that...almost of the vilest brute. With such a crew, inhabiting the most central and populous portion of the city, when may we be considered safe from pestilence. Be the air pure from Heaven, their breath would contaminate it, and infect it with disease” (*New York Evening Post* July 23, 1832). The city’s medical society formed a special committee of 15 to formulate a program of public hygiene.

In 1832, the idea that disease was caused by a specific, biological entity was highly suspect. Few medical men believed cholera was contagious; most thought it was atmospheric and could be controlled through cleanliness, temperance, and industrious living (Rosenberg 1966:73–75). Nevertheless, these physicians offered the best medical opinion available at the time: clean the streets by flushing them with hydrant water several times a week. The committee also recommended that the streets, private sinks, yards, and cesspools be disinfected with chloride of lime. Street inspectors were appointed in each ward, and the streets appeared cleaner than they had in 30 years. Regardless of their efforts, the city government was criticized for not acting more quickly, and the 1832 cholera epidemic resulted in the deaths of more than 3,500 people in the city (*The New York Transcript* July 1832; Rosenberg 1966:17–35; Condran 1995:31).

Cholera returned to the city in 1834 and claimed the lives of an additional 971 people. The constant threat of cholera and typhus throughout the decade made it necessary to maintain the street-cleaning system. As the threat of epidemic faded from memory, however, the citizens of New York demanded more efficient, less-costly government. The street-cleaning system was once again privatized. Patronage in the street-cleaning department led to continuously rising costs and a corresponding decline in the quality of

services. It was impossible to implement and enforce sanitary laws against the will of corrupt politicians and without popular public support. Laws proved almost unenforceable in the tenement districts of the city and were imposed only in times of emergency. Another 2,394 people died during the typhus and typhoid epidemics of 1847 and 1848. These deaths, and the appearance of cholera in the city again in 1849, prompted a resurgence of interest in cleaner streets, but, once the danger had passed, laxity, corruption, and inefficiency quickly returned (Duffy 1968:365; Condran 1995:31).

Created in 1807, the city inspector's office was responsible for the health of the city until mid-century. The city inspector's office had been at its strongest in the 1830s under the guidance of Drs. Gerritt Forbes and John Griscom, both staunch advocates of reform in the housing and health-care systems. By 1845, however, corruption in municipal government had reached an all-time high. Under the city inspector there was a system of "health wardens" appointed to inspect conditions in each Ward. These Wardens were not required to have any medical training, and these posts were frequently filled by the "most ignorant and incompetent" of men (Griscom 1845:41-43). The board of health at this time was composed of politicians, including the mayor, aldermen, and assistant aldermen (DeForest and Veiller 1970:205). Necessary legislation was continuously enacted, but as the system was rife with corruption, few of the problems enumerated in Griscom's 1842 report on the sanitary conditions of the laboring class were remedied.

In 1855, a grand jury indicted the street commissioner, the city inspector, and a number of private contractors on charges of corruption. That same year, in an attempt to keep the threat of yellow fever at bay, the city's board of health petitioned the city's water company, the Croton Aqueduct Authority, for nightly use of its water to flush the gutters clean. The Croton officials declined, explaining there was inadequate water pressure to clean trash and solid waste from the gutters. Additionally, Croton officials noted, the city had not provided a sewer system capable of handling the extra water the sewer cleanings required. The Croton Aqueduct Authority relented in August of 1856, but, as predicted, the existing sewers simply were not able to handle the volume of solid waste created daily. The Croton Aqueduct Authority thought it was the city's responsibility to devise an efficient method of trash removal and to cease the disposal of solid wastes in the gutters and surface sewers (Board of Health 1860:23). To that end, a preventative measure forbidding the covering of any full or partly full privy or the disposal of any garbage into any sink, privy, or cesspool was passed by the Common Council in 1860 (Morton 1860 as cited by Geismar 1993:65).

The business of street cleaning remained news as the mayor and Common Council publicly argued over which office would be in charge. In 1858, the Common Council stood behind the existing city inspector's office, while the mayor appointed a second city inspector. The matter remained unresolved, and no work was done as the two appointees and various city officials fought for the right to award lucrative city contracts. Between 1858 and 1862, several other independent companies were hired to clean the streets. Costs continued to rise although, generally, the streets did not appear any cleaner. In 1863, the new city inspector, Francis L. A. Boole, managed to attract the attention of a state senate committee investigating corruption as it came to the committee's attention that in one year Boole spent \$800,000 of taxpayers' money, twice as much as his predecessor. He attempted to use his position to run for mayor that same year. Boole eventually lost his authority to award contracts, but not his influential position which he retained for another three years until the Metropolitan Health Bill was passed (Duffy 1968:369-373; Corey 1994:17).

Keeping city streets clean required smooth, even pavements, but few streets anywhere in the city were judged to be in "good" condition (Figure 111). The Citizens' Association reported that the streets in the Sixth Ward were mostly paved in cobblestones and in very poor condition, summer and winter. Filth of every kind was thrown into the streets "covering their surface, filling the gutters and obstructing the sewer culverts, and sending forth perennial emanations which must generate pestiferous diseases. The garbage boxes are a perpetual source of nuisance in the streets, filth and offal being thrown all around them...the streets have been cleaned occasionally this summer, but unless a system is adopted whereby the inhabitants will be prevented from throwing filth and garbage in the streets, cleanliness is impossible" (Citizens' Association of New York 1866c:70-76; Corey 1994:4).



Figure 111. Photograph of an unidentified Five Points street, ca. 1875. Many streets in this district remained narrow and unpaved well into the second half of the nineteenth century (Nineteenth-Century New York in Rare Photographic Views, Frederick S. Lightfoot, editor, 1981).

Cholera returned to the city in 1854 (2,501 deaths) and again in 1866 (1,137 deaths). Other years saw a resurgence in typhus and typhoid epidemics accompanied by smallpox.² The city contracted for weekly street cleanings throughout the city in the 1860s, but the Board of Health recommended that portions of the First, Fifth, and Sixth Wards be cleaned *daily* (Board of Health 1868:38–40). The frightening epidemics and dramatic increases in the laboring populations of the city gave sharp impetus to municipal reform (Duffy 1966:333). Weary of the corruption and ineffectiveness of the municipal authorities, a number of the city's prominent residents began organizations dedicated to reforming the system.

Throughout the 1840s and 1850s, concerned citizens and some health-care officials pressed for legislation mandating model tenements and an independent board of health. These included the New York Association for Improving the Condition of the Poor (1853), which included a number of the city's physicians and merchants; the New York Sanitary Association; and the Citizens' Association of New York (1866d). Members of the Citizens' Association included Peter Cooper, John Jacob Astor, Jr., and Hamilton Fish. In 1864 and 1865, the Citizens' Association Council of Hygiene spent \$22,000 of its own money on a systematic inspection of housing, public works, and the food supply of New York City. Its findings were reported in an influential 1866 address and publication, part of an extensive lobbying effort on behalf of the passage of a comprehensive health bill (Citizens' Association 1866b:76). This address to the state legislature was signed by Theodore Roosevelt, Charles Loring Brace, and 14 other concerned citizens (Citizens' Association 1866c). It was due to the efforts of voluntary health organizations and reform societies like these that a health bill was finally passed by the state legislature in 1866. The metropolitan health bill provided for the creation of a board of health independent of city and state government.

The Metropolitan Health Bill became a state law in 1866. The bill provided for the creation of a board of health independent of city and state government. It eliminated the system of health wardens, replacing them with a system of 15 sanitary inspectors who were trained physicians and another 60 sanitary policemen to enforce the new legislation (Citizens' Association of New York 1866b:26).

Despite the passage of the health bill, the problems of filthy streets, removal and transport of night soil, the nuisances of the slaughterhouses and pigsties, inadequate sewer and water systems, and substandard housing for the tenant classes remained unresolved or worsened throughout the nineteenth century. The lower wards were described as the "seat of much of the poverty, a great proportion of the crime, and nearly all of the vice of the City" (Board of Health 1869:334). As the century progressed, little was done to remedy steadily worsening housing conditions. Improvements occurred rarely, usually only during emergency situations or when a landlord was able to parlay improvements into a profit.

5.2.3 *The Necessity of Clean Water for Drinking and Bathing*

In 1868, the city board of health expressed concern that the laboring classes had neither the means nor the desire to maintain personal cleanliness (Board of Health 1868:35). As natural water sources became contaminated and the city outgrew its privatized water systems, the need for a public water supply system became more and more obvious. The problem of developing such a system was one of the recurrent public health concerns of the nineteenth century.

5.2.3.1 Privatized Water Systems

During the eighteenth and early nineteenth centuries, the residents of Five Points had access to fresh water from numerous public wells and pumps including the famed "Tea Water Pump" at the corner of Chatham and Orange Streets. Land in the immediate district was advertised as desirably "situated behind the Tea Water Pump, between that and the Fresh Water Pond...an excellent stand for a still-house, brew-house, or sugarhouse, as there is the best water all around it, and it is supposed that the Tea Water Pump feeds itself through said lots" (*New York Packet* 1784 as cited by Neville 1994:36). The pump over the Tea Water

² In 1851, typhus/typhoid fevers resulted in 1,103 deaths. There were another 2,499 deaths in 1864 and 1865. Smallpox killed 585 in 1848 and another 586 in 1851. There were 1,821 deaths attributed to smallpox between 1852 and 1854. Another 674 died in 1865 [Condran 1995:31].

(so called because it was allegedly pure enough to make tea with) was initially powered by horses and eventually by steam. During the time the pump was in operation (ca. 1740 through 1820), it could supply as much as 14,000 gallons per day. "Tea-Water Cartmen" paid the pump owner three cents per 130-gallon hogshead of water. They would then wheel the carts of water around the city, charging their customers one cent per gallon (Koeppel 1994:21).

Businesses in the district used the Collect Pond as a dumping ground for industrial waste, and soon the water from the nearby Tea Water Pump, once pronounced New York's finest, was declared unfit for consumption. An irate citizen's letter to the *Daily Advertiser* read: "the Tea-Water Pump, with which this city is supplied, grows worse every day, so that the common pump water, used only to scrub houses, etc., with, is now preferred in cooking to our Tea Water. The reason is very obvious—let anyone view the pond, which is the spring and source of that pump and you will find it to be a very sink and common sewer" (*New York Journal and Weekly Registar* 1785, as cited by Harlow 1931:122–123; Moehring 1981:24). The water from the Tea Water Pump may have been contaminated by the 1790s, but it was not condemned and sealed until early in the nineteenth century. In 1832, the proprietor of a liquor store at 126 Chatham Street uncovered the remains of the pump in the back room of his store (Harlow 1931:127).

Before the American Revolution, water from the Collect watershed was also utilized in a water system developed by the British. Backed by \$9,000 in public money, the New York Water Works was formed. A steam-operated pump pulled water from the Collect Pond through a network of 13 miles of pine wood pipes, laid to supply homes and businesses along Broadway. More than 200,000 gallons of water per day had been promised by Colles, the system's designer, and his steam engine raised almost twice that amount, but plans were interrupted by the Revolutionary War. It was not until the end of the century that another project to supply water to the city of New York was undertaken (Moehring 1981:25; Koeppel 1994:21–22).

The devastating yellow-fever epidemic of 1798 focused New York's attention on the urgent need for a clean, reliable water supply. Dr. Joseph Browne (the brother-in-law of Aaron Burr) argued for the necessity of clean water from the Bronx River. A group of businessmen and politicians, including Aaron Burr, formed a private bank-run company, the Manhattan Company's Water Works, in 1799 to provide the city with water. They were originally chartered to draw the water from the Bronx River, but instead drew from a pump on Centre Street. Between 1799 and 1833, just 23 miles of wooden pipes (in addition to Colles's original 13 miles) were laid, mostly along Broadway, "branching off along the way to those few elect routes deemed by Fashion as home for New York's opulent" (Moehring 1981:15).

Fire fighting frequently depleted New York's water supply, and 40 public cisterns were added to the Manhattan Company's system in 1815 to meet ever-increasing demands. These cisterns were rendered virtually useless in freezing weather, and the fires in the winter of 1835 led the citizenry to look for new methods of water distribution (Moehring 1981:16). Despite the powerful bank interests which backed the water company, corruption and inefficiency finally led the city to sever its relationship with the Manhattan Company. The cholera epidemic of 1832 and a series of devastating fires overcame the last voices of opposition to the development of a massive publicly owned water conduit (Moehring 1981:27; Ogle 1993:35).

5.2.3.2 A Public Water System

In the 1830s, insurance companies responsible for large settlements due to fire damages and loss actively supported the development of a public water system. Claims for fire damage far exceeded the original estimates of a \$5–7 million water project. Tradesmen including the city's bakers and brewers, tanners and soap makers, and those reliant on steam power needed a regular supply of fresh water and supported the expense. In 1835, voters approved the plan, and construction of the aqueduct began (Moehring 1981:33–39).

Water from the Croton aqueduct system was introduced to lower Manhattan in 1842. By 1851, most of the lower wards had water mains in the streets, but individual house connections were the property owners'

responsibility (Figure 112). Furthermore, only a licensed plumber could open the street and tap a duct. Anyone attempting this without proper licensing risked a \$50 fine (Moehring 1981:46). After 1851, the city's water supply was drawn entirely from public water mains. Older buildings were supplied through public wells and pipes with street pressure only. These older buildings generally had a pump in the back yard, used principally by the first-floor or cellar tenants. At times the water pressure in the streets proved insufficient to reach the upper floors of a building, and pumps were placed in public hallways to force the water upward. These problems continued into the twentieth century, but the Tenement House Commission of 1900 found this lack of pressure to be nothing more than an "inconvenience" to the tenants, unless the lack of pressure also extended to the water closets or proved insufficient to flush out school sinks (DeForest and Veiller 1970:193).

5.2.3.3 Privies, Sinks, and Water Closets

Throughout the 1840s and 1850s, numerous plumbing patents were granted. However, few of the technological innovations made their way into the working-class tenements of the lower city. One improvement on the traditional dry privy was to move it closer to the house and transform it into a water closet. The seats were placed above a brick- or stone-lined vault and the runoff from the eaves or adjacent cistern regularly flushed the wastes into a cesspool or other container (Ogle 1993:44). Despite improvements in plumbing, as late as 1870 few of the buildings in the lower wards had individual sewer hookups; thus, privies and school sinks continued to be emptied manually. The city hired scavengers to clean out both sewers and privies, but the board of health received numerous complaints about the inadequacies of this system. The scavengers were not properly disinfecting the systems they cleaned, and to protect the health of the city, privy cleaning was forbidden during the warmer months (Board of Health 1868:19). The city required that both butchery and human waste be transported through the city in closed containers and regulated the times of day when it could be moved. Until 1867, when the pier was damaged by ice, the city's night soil was dumped into the North (or Hudson) River at 28th Street. There was also a separate dumping ground for manure at the foot of Vesey Street at the Hudson (Board of Health 1868:100).

The 1868 board of health inspection of the First Sanitary District included the Fourth, Sixth, and parts of the Fourteenth Wards. Although the district was generally well provided with sewers, the inspectors noted that "the owners of the property, aiming at economy rather than thoroughness, have complied with the letter, not the spirit of the law" (Board of Health 1869:98). Old privy vaults were simply connected to the sewer mains without insuring either proper connection or adequate water supply. The 1864 inspection of the Sixth Sanitary District (the entirety of the Sixth Ward), conducted by the Citizens' Association, found that half of the water closets located in the yards between front and rear tenements were not connected to street sewers (Citizens' Association of New York 1866a:80). More frequently, complaints were about obstructions related to inadequate water pressure, treatment of solid waste, and street cleaning rather than improper connections. The larger tenement houses were viewed as improvements on the older models as they adopted plans for multiple water closets similar to the ones used in the public schools (school sinks) (Board of Health 1869:98).

Inspections in the 1870s included parts of the First, Second, Third, Sixth, and Fourteenth Wards. Inspectors found little relief from the tenement-house evils of filth and overcrowding. There was irregular garbage collection and "the most offensive privies in the district are those situated below the street or yard. Many tenements cover the entire yard with little thought to the situation of the privy vaults and thus the vaults are placed underground resulting in dark and damp" water closets (Board of Health 1876:199–201).

Water closets were not generally placed *inside* tenements prior to 1879, and many of the tenements built before the 1870s continued to be used well into the twentieth century. The 1900 Tenement House Commission conducted a sanitary inspection of 598 buildings, ranging from the "oldest type and poorest character to the most recent example of modern construction" (DeForest and Veiller 1970:306–307). Of almost 600 tenements, the commission found 40 percent still used back-yard water closets, mainly in older or reconverted tenements built prior to 1881. The back-yard closets were generally divided by wooden

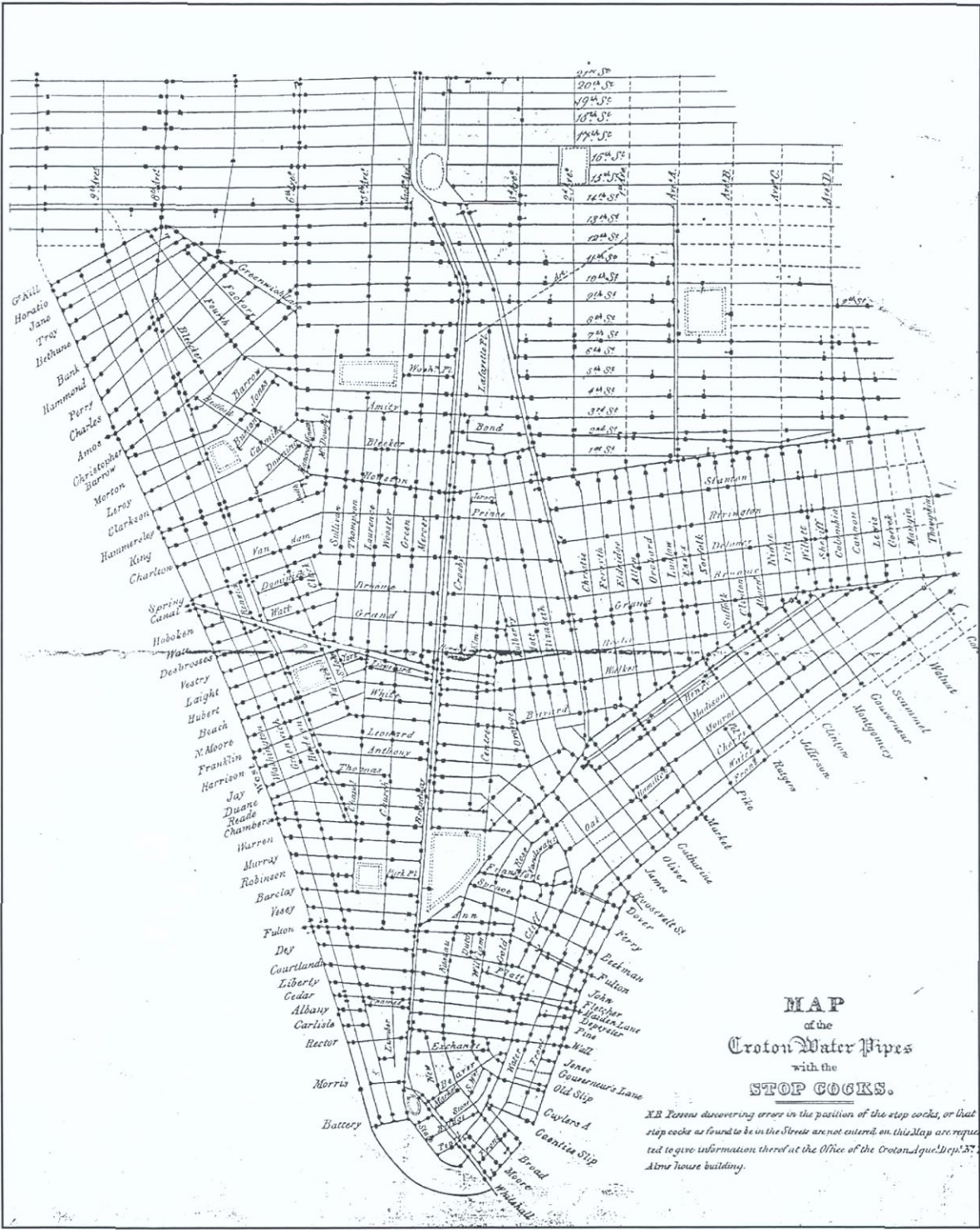


Figure 112. Map of the Croton water pipes with stopcocks. As early as 1850, all three streets surrounding Block 160 had water mains with stopcocks (The Croton Aqueduct Department Annual Report 1851).

partitions into compartments 2 1/2 feet by 3 3/4 feet. They were frequently placed close to the windows and doors of the adjoining tenements, and each compartment was used by one to four families. The closets were generally kept in order by either a janitor or housekeeper and the Commission of 1900 found "in the majority of cases considerable effort is made to keep the compartments as clean as the character of the structure permits" (DeForest and Veiller 1970:306-7; Ford 1936:868).

The majority of the older buildings had school sinks in the back yards (Figure 113). Sinks were constructed with wood seats (generally 18 inches high) over masonry vaults between 10 and 14 feet long, 2 feet wide, and 2 to 3 feet deep. A semi-circular trough of cast iron with a 4-inch outlet was placed at the lower (discharge) end. This end was connected to a drain that was, in theory, connected to a street sewer. The discharge end of the iron trough had a plug and iron grate, the plug connected with a pipe and rod at the upper end of the trough through which water was supplied using a second pipe and bar system (DeForest and Veiller 1970:307-313).

Between 50 and 150 gallons of water and waste could be held in the trough of a school sink at one time. It was generally recommended that school sinks be flushed daily, but it may have been more customary to flush the sink just once or twice a week. Back-yard water closets that permitted the occupant to flush the trough with each individual use were an improvement over the school sinks. These were "cast-iron long, hopper closets, having a trap beneath the frost line, and a water pipe connecting with the flushing rim of the bowl of the individual closets. The water pipe has a spring valve below the frost line, operated by a rod pressed into the seat with use" (DeForest and Veiller 1970:103). Even with this improved design, the Tenement House Commission of 1900 recommended that all yard privies and sinks be removed unless properly ventilated and adequately heated. The commission's recommendations were passed into law, but the constitutionality of ordering the removal of privies was immediately challenged by an association of tenement house owners (DeForest and Veiller 1970:xviii, 105).

Water closets were also located in the halls and basements of some buildings. When located in the hallways, the water closets were generally at the rear of the building, vented through windows; in the middle of the building, vented into the airshafts. These shafts generally also served as the only external ventilation for sleeping quarters in the rear of the individual apartments. The commission recommended the air passageways be sealed to prevent the carrying of contagious diseases between floors. The commission also found deficient pipe and bowl connections kept floors constantly damp and in unsanitary condition and advocated the use on non-absorbent flooring around public sinks and closets. The commission found the water closets located in the basements to be usually ill lit and poorly ventilated. The basement closets were generally used by either the janitors or the first-floor tenants. About 20 percent of the hundreds of buildings examined by the commission had private water closets within individual apartments. These buildings were described as a good grade of modern tenement with a "better class" of inhabitants (DeForest and Veiller 1970:304-313).

As late as 1900, investigators found the worst evils in the older tenement houses to be yard privies and sinks. Although at this time the majority of the privies were connected to sewers, with an ostensible means of flushing, the "condition in which they are usually kept is indescribable. They are seldom flushed, as the process is fraught with difficulty and is most unpleasant....They are, moreover, a serious and potent source of contagion and a means of spreading disease. Located in the yards [the privies] are of easy access from the street, and are often abused and rendered most foul by disorderly persons and casual passers by....The inaccessibility of these yard privies to the tenants on the fourth and fifth stories of a tenement house, and the inconvenience of using them at night and in sickness, must have a very considerable influence upon the health and habits of the tenement house dwellers" (DeForest and Veiller 1970:xvii-xviii).

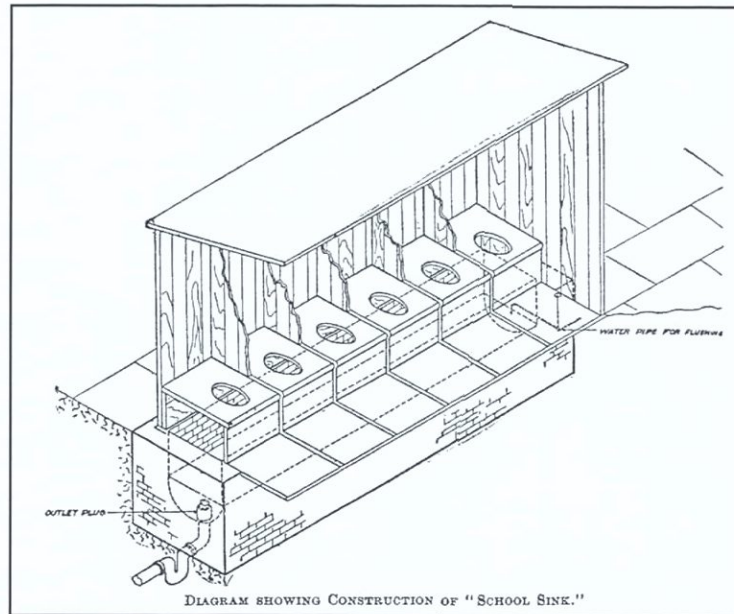


Figure 113a. Multi-seat outhouses, or school sinks, were common in the tenement districts until after 1900 (DeForest and Veiller 1970:308).

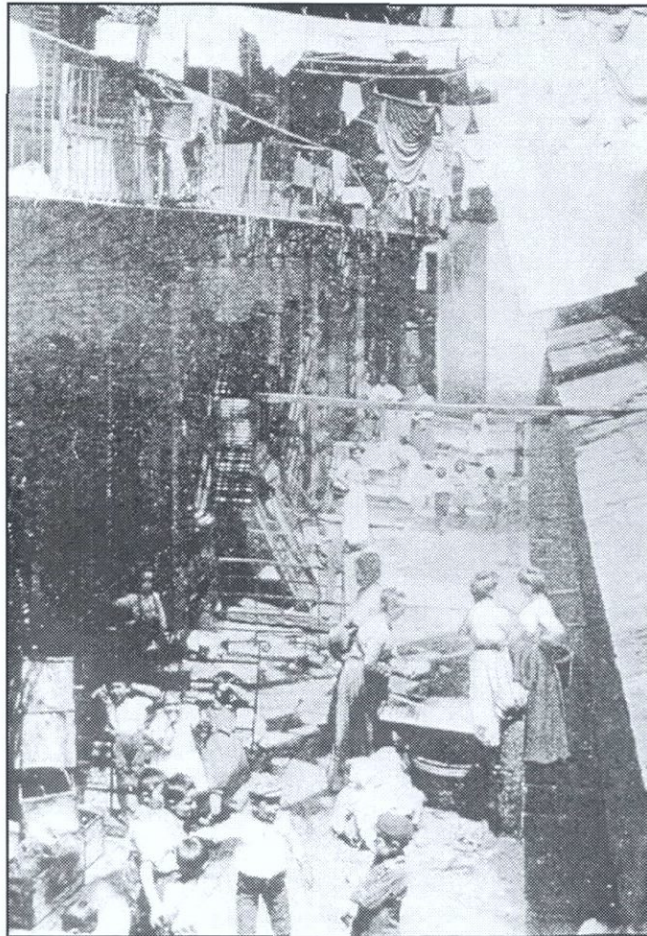


Figure 113b. Elizabeth Street school sink (right). From 1876 Board of Health report (Duffy 1968).

5.2.3.4 New York City's Sewer System, 1850–1880

The city's growth and threats from cholera and yellow fever led to a massive draining and filling program of lower Manhattan's marshlands throughout the first three decades of the nineteenth century. Early street sewers were constructed of either wood or stone, and each street sewer had an outlet to one of the rivers. Springtime was especially hazardous on the lower east side as the winter snows melted and the mouths of the sewers on the East River backed up. Sidewalks were raised as much as 2 feet to avoid the "cascades" of water that flowed down from Broadway and William Street (Moehring 1981:21). Early attempts at sewer construction were generally unsuccessful, but these sewers continued to be used, even as water from the Croton system strained the city's waste disposal systems. Many of the original or common sewers were simply ditches cut into the streets to keep them drained. New outlets were not provided to deal with the increased runoff. Existing drainage culverts, unsuited for carrying a regular stream of water with a solid-waste component, were used instead (Common Council of the City of New York 1789 1:473; Waring 1889:570). As early as 1829, it was estimated that New Yorkers were disposing over 100 tons of excrement each day into cesspools and the rivers themselves (Moehring 1981:15).

When Croton water was introduced in the 1840s, Dr. John Griscom, one of the resident physicians at the New York Dispensary in the 1830s and eventually the city's health inspector, foresaw the problem and wrote: "the rain cisterns being useless, the bottoms of them have, in many instances, been taken out and they have been converted into cesspools into which the refuse matter of the houses is thrown. Great trouble is thus saved to the families and domestics, but it needs no prophetic vision to perceive that an immense amount of offensive material will thus soon be collected" (Griscom 1845:52). Three years after the introduction of Croton water, Dr. Griscom stressed the need for a regular system of sewers to collect the contents of sinks and cesspools and send them into the rivers. Sewer mains were placed in the streets surrounding Block 160 in the early 1850s, about five years after the neighborhood was likely to have received some form of Croton water. In September of 1848, a sewer 1,000 feet long was laid in Pearl Street between Chatham and Elm. Two years later, in August of 1850, a 450-foot sewer was laid in Orange Street between Cross and Chatham Streets. This sewer was the standard 4-foot-by-2.8-foot, elliptical-shaped pipe in cross section. Sewer pipes 815 feet in length and 4 feet in diameter were laid in Chatham Street between Pearl and North William in July of 1851 (Croton Aqueduct Department 1857).³ The upper part of this district was drained through the Canal Street sewer while the lower portion was drained through the Roosevelt Street sewer, the mouth of which remained uncovered at low tide (Citizens' Association of New York 1866c:77).

The Croton Aqueduct Department's 1850 annual report stated: "the period is not distant when [the sewers] will come to be considered as necessary an appendage to every house as supply of water and also as the most ready and certain means of promoting and preserving public health" (Croton Aqueduct Department 1851:27). The previous year, construction and maintenance of the city's sewers was placed under the jurisdiction of the "very efficient" Croton Aqueduct Department. The aqueduct authority also assumed responsibility for the 69.3 miles of sewers already in existence under city streets, but there were few real records or maps of these extant pipes; thus, they were difficult for the authority to maintain. Nevertheless, under the auspices of the Croton Aqueduct Department, the number of miles of sewer piping doubled within six years (Croton Aqueduct Department 1851; Waring 1889:570).

In the summer of 1856, Croton water was made available, free of charge, to cleanse the gutters and streets. However, there was not enough water pressure to handle the solid wastes present and the sewers themselves were not capable of carrying the large amounts of water and waste material (Board of Health 1860:23). Nearly every street with an outlet on one of the rivers had its own outlet sewer, but none prevented the escape of solid matter into the rivers. This resulted in the gradual silting in of many slips and piers which eventually required dredging maintenance. The putrefying materials and pollution of the rivers

³ The annual reports of the Croton Aqueduct Department are housed in the library of the New York Municipal Archives. They contain all sorts of interesting information, including the costs of paving and regrading streets and the length and cost of sewer construction and repair.

limited use of the waterfront. New York was essentially choking the rivers that gave it life and the Croton Aqueduct authorities felt the city should devise more efficient methods of trash removal (Croton Aqueduct Department 1857; Corey 1994).

The Croton Aqueduct Department's annual reports for 1863 and 1864 contain urgent appeals for more money and jurisdiction over the cleaning of the city sewers. A sewerage act was passed in 1864 by the state legislature granting this authority, but several miles of sewers had already been laid beneath many of the most crowded and narrowest streets of the city. These sewers could not be remodeled without the expenditure of much time, money, and labor (Waring 1889:5). Most of the extant pipes operated as gravity sewers. Large collecting sewers were built to intercept solid waste and funnel it further out into the rivers, away from the slips and waterfront, in hopes that the swift currents would carry the waste out to sea (Croton Aqueduct Department 1864, 1865).

A great number of the city's streets had sewers by the 1860s, but some had been graded well above the natural surface of the adjacent lots, therefore inhibiting proper drainage. This was an especially serious problem in the older portions of the city. Most of the Sixth Ward was below "tide level and is largely made ground...the sewers are flooded at high tide and their outlets into the docks filled with canal boats and other vessels, which obstruct the free dissemination of sewerage" (Waring 1889:577). Prior to 1865, pipes for sewers were constructed out of brick masonry; after 1865, house drainage connections were usually made with vitrified clay pipes, usually imported from Scotland or England. Ideally, sewers were located 12 to 15 feet below grade and, when working, used gravity to drain waste and water from lots and septic systems. The city-licensed plumbers who installed sewers could not always be counted on to do an adequate job, and a frequent cause of distress was improper connections. It was not uncommon for a number of houses to be drained through a single connection, creating unhealthy conditions if the sewers were not properly cleaned and maintained (Waring 1889:583-6).

A Board of Health inspection of more than 600 Sixth Ward tenement houses in the late 1860s classified more than half the buildings in bad sanitary condition. A "large number" of the tenements had no sewer connections and no drainage system, except for the surface gutters "by which all manner of trash, urine, and fecal matter are conducted across or immediately below the sidewalk where, from lack of proper grade, they remain stagnant during the summer and freeze in the winter, turning the flow into the cellars. Where water closets do exist they are frequently of imperfect construction, being without traps or sufficient provision for flushing them. Privies are often carelessly built, devoid of sewer construction and inadequate in number. Privies are usually in the yards, but also in the houses and consist of mere 'wells' extending from the upper floors to the cellars with out means of flushing" (Board of Health 1868:26).

Waste was drained beneath basement floors, an unhealthy practice common to single buildings. When laundries, kitchens, and water closets were in the rear and the sewer was in the front of the house it was "by no means unusual to find a brick or clay pipe drain buried in the ground beneath the basement floor taking the drainage of the whole house—the water from the roof, the surface water from the backyards and areas, and in many cases, even the overflow from the privies" (Waring 1889:586).

Although there were sewers in the streets, there is little evidence as to when or how the street sewers were connected to houses within the project area. Absentee owners in Greenwich Village objected to taxes they would be required to pay for sewer connections to their tenanted properties. The absentee landlords felt the class of houses did not "warrant or require the modern luxuries of Bathing rooms or indoor Conveniences that would make the construction of a Sewer a Necessity" (Morton 1860 as cited by Geismar 1993:63). There was no information available on the number of these tenements with sewer connections, but the Citizens' Association inspection of the neighboring Fourth Ward found less than half of the 714 tenements in that ward had sewer pipe connections to their waste pipes or drains (Citizens' Association of New York 1868:44).

With the passage of the Metropolitan Health Bill in 1866, the newly formed Board of Health had the power to issue orders for repairs and maintenance to privies and sewers. Included in the annual reports of the

Board of Health were a description of the labor (skilled, unskilled, or scavenger) and the costs of each repair. In 1868 and 1869 more than 1,000 repairs were ordered, but just two were specific to Block 160. On August 21, 1867, a scavenger was paid \$1.50 for cleaning a privy house at 14 Baxter Street (Block 160, Lot 41 [Board of Health 1868:791]). Order #1919 for the cleaning of a sewer at 8 Baxter Street (Block 160, Lot 45) cost a total of \$8.75 (Board of Health 1869–Appendix).

5.2.3.5 Bathing the Workers

The Special Committee on Public Baths reported in 1849 that “measures should be taken to promote a love of clean linen, and of the customs of bathing among the poorer classes of the city.” Following the epidemics of the 1830s and 1840s and the connection of these epidemics to germs and dirt, this sentiment made sense. There were few tenement apartments at this time with running water, baths, or sinks. Water was generally hauled from back-yard or public pumps; therefore, the regular availability of public baths in “certain quarters of the city” was necessary (People’s Washing and Bathing Association 1853:3). In 1851, the first for-profit public baths in the country were built by the private investors of the People’s Washing and Bathing Association at 141 and 143 Mott Street (near Grand Street) at a cost of \$42,000. Investors and stockholders included, among others, Horace Greeley, Phineas T. Barnum, and Robert Minturn. The two-story brick building erected by the association had two swimming baths in the basement, one for men, the second for women. The second floor had 68 tubs for washing clothes and hanging closets to dry them. In the first year of business, a total of 80,375 bathers paid \$0.10 for each bath. Another 10,038 paid a nickel each to use the laundry facilities. For an additional \$0.25 one could take a vapor bath (People’s Washing and Bathing Association 1853:3–8).

In 1900, all of the 598 buildings examined by the Tenement House Commission had sinks in the hallways or even in the individual apartments. Beginning in 1870, the general practice had been to place individual sinks in apartment kitchens. In buildings built prior to this date, the sinks were located in the hallways. All of the sinks surveyed, with one exception, were of cast iron. They were nailed to walls by their wooden rims and the area surrounding the sinks was continually damp. The public hallways were generally found to be dark and the area around the sinks was usually in less than sanitary condition. Of all the apartments examined, only five were found to have private bathtubs. These were in the newest buildings, ca. 1890s. The washtubs were fixed in the kitchens, next to the sink. Wooden covers were provided, and the tubs became tables adjoining the sinks. Investigators questioned the tenants and found the five bathtubs were enjoyed especially in the summer, but overall public bathing facilities in the tenement districts were adequate. Recommendations for private baths were therefore not included in the 1900 Tenement House Report (Veiller 1970:316).

By the late nineteenth century, it was clearly understood that tenement bathing facilities were not feasible due to the expense of hot water and the impossibility of keeping communal baths clean. The New York Association for the Improvement of the Condition of the Poor led the movement for public bathing facilities. In 1891, the NYAICP opened the People’s Baths at 9 Centre Market. It had 26 compartments—17 “sprays” for men, six for women, and three baths specifically for old women and children. The NYAICP charged \$0.05 each for soap and towels. In 1897, a committee appointed by the mayor recommended six sites as appropriate for public bathing facilities. However, only one, on Rivington Street near the East River, was built with 77 bathing compartments. The Rivington Street baths opened in December of 1900 to NYAICP projections that the project would cost the city at least \$35,000 annually. The NYAICP offered to run the baths themselves at a cost of \$17,000 (DeForest and Veiller 1970:11, 35–51).

5.2.4 Housing the Workers

The tenement house was “practically the only kind of habitation for the great mass of people [and] the tenement house system was fraught with much danger to the welfare of the community. The most terrible of all features of tenement house life in New York however is the indiscriminate herding of all kinds of people in close contact, the fact that mingled with the drunkard, the dissolute and improvident, [and] the diseased, dwell the great mass of the respectable working-men of the city and their families” (DeForest and Veiller 1970:10).

5.2.4.1 Tenants and Landlords

When cholera first appeared in New York in 1832, it struck most intensely in the crowded wards of lower Manhattan. Dr. John Swett of the New York Dispensary tended to patients in the Sixth, Tenth, and Fourteenth Wards. In 1837, he described a single tenant house from which 30 cases of fever originated, all but one in the cellar or first floor. It was a house occupied "principally by Irish and German, whose habits, you know, are more or less filthy, and who lived crowded together with a family in every room of the house" (Griscom 1845:16). When compared with tuberculosis and other endemic diseases, relatively few people died from cholera, but its manifestations were particularly visible and violent. The disease seemed to strike randomly without care for wealth or status. During the first epidemics in the 1830s, wealthier New Yorkers were able to flee the city, much as they had during the yellow-fever scare of the previous decade. Cholera returned to New York in 1849 and again in 1866, but the increasingly urban landscape of the city left the wealthy with fewer avenues of escape (Rosenberg 1966:5-7).

The 1832 epidemic was associated almost exclusively with Irish immigrants to the city. That so many of the stricken Irish were Roman Catholic seemed to confirm the widespread Protestant construction of cholera as a disease of immoral and degraded immigrants (Kraut 1994:33-34). When cholera reappeared in 1849, some of the moral rhetoric of "God's justice" associated with the initial epidemic subsided. Nevertheless, the nation still believed cholera to be a disease of the unpious and intemperate, and President Zachary Taylor called for a national day of fasting and prayer. The 1849 epidemic is believed to have begun in the cellar dwelling of an Irish laborer at 20 Orange Street (Lot 38), two doors down from a tenement that allegedly housed 106 hogs. Four of the five residents of the cellar died within 24 hours of one another (Rosenberg 1966:106) and the city panicked. The city was unable to bury the dead or clean the streets quickly enough; thus, the epidemic increased.

By the middle of the nineteenth century, the tenements that housed many of the immigrants and workers were thought to be the sources of growing immorality and disease. The seemingly constant illnesses of the poorer classes, both native and foreign born, frightened New Yorkers. The epidemics appeared symbolic of the decline and decay of the city, and it was difficult to deny the connection between plagues and people. African Americans and European immigrants suffered extensively from common conditions including pneumonia, diarrhea, smallpox, amenorrhea, and depression. Although epidemics raised the death rate periodically, it was these endemic conditions, compounded by overcrowded and unsanitary living conditions in the tenement quarters, that were responsible for New York City's high death rate (Cassedy 1986).

With the unprecedented growth that characterized New York from the end of the eighteenth century, housing became an important health issue. The artisans, shopkeepers, and merchants who initially inhabited properties in southern Manhattan moved away from the built-up and expanding portions of the city, leaving their properties in the hands of sublandlords, agents, and managers. These property owners became, in effect, the earliest absentee landlords in the city. Many of the city's laboring classes chose to reside within walking distance of the commercial and business districts of the city. Here the workers had greater chances of finding both jobs and homes. No matter how miserable the physical circumstances, "ghetto streets were a grapevine of information that could be converted into opportunities" (Kessner 1977:136).

City health inspector Griscom attributed the real cause of evil in these tenanted districts to be "the sudden increase in the city's population in 1817 and again in 1828, by a horde of ignorant, poverty stricken immigrants, who in the absence of any restraining legislation, were crowded into quarters hardly fit for beasts" (Griscom 1845:22). People lived cheek-by-jowl in these apartments, and the populations of these neighborhoods grew more dense as the century progressed. "Every state in the Union and every nation almost in the world, have representatives in this foul and degrading locality" (Smith 1868:205). Certain streets within the neighborhoods were identified with the reputations of the residents, and islands of populations developed within the larger neighborhoods. *Kleindeutschland* included the area to the north

and east of Block 160, while early in the nineteenth century, Five Points was called "Stagg Town" as the district was home to large numbers of free blacks (Osofsky 1996:9). By the mid-1840s, eastern Orange (later Baxter) Street where Polish and German Jews clustered their homes and secondhand clothing shops was one of the city's "Jew Towns." Further west on Orange Street was the African Mutual Relief Society and large pockets of free-black households (Longworth 1822, 1842; Doggett 1852; Foster 1990:122–127). Tenements owned by Irish men soon filled to capacity with immigrants fleeing the famines. Large numbers of Italian migrants followed, settling along Baxter, Elizabeth, Mott, and Mulberry Streets (U.S. Bureau of the Census 1850, 1870).

Early advocates of housing reform, City Inspectors Gerritt Forbes and John Griscom blamed the frequent illnesses of the laboring population on the subdivided and converted tenements and flats in which they lived. In his 1834 annual report, Forbes found that no cause for ill health "appears so prominent as that of intemperance, and the crowded and filthy state in which a great proportion of our population live and apparently, without being sensible of their situation" (Ford 1936:96 citing DeForest and Veiller 1903:205; Blackmar 1995:51). New York City, hemmed in on both sides by water, could only grow in one direction, and the regions to the north were "rapidly filling up with places of business and the residences of the opulent. Very many of the poor must consequently remain in portions of the city already too densely crowded and destined to still greater concentration as the population increases, and the high value of the land will not allow them comfortable habitations" (NYAICP 1853:7).

The New York Dispensary, where Griscom had been a resident physician, was located at 113 Centre Street at the corner of White Street. The dispensary provided free health care to the residents of the Sixth Ward. After his appointment to the city inspector's position, Griscom published a pamphlet entitled *The Sanitary Condition of the Laboring Classes*. Convinced of the ill effects of substandard housing, he polled other physicians and enlisted a number of the city's tract missionaries to report on health in the tenement districts. As city inspector, Griscom lobbied for legislation that required the city to track vital health statistics. Armed with these statistics and personal experience, Griscom connected the depressed physical conditions in the tenanted buildings to the depressed morality and illnesses of the inhabitants. He argued that "to confine the same family in one room, compel them to perform all their personal and domestic duties in view of one another, to sleep, dress, and undress, in each other's presence, can it be doubted that the nice moral distinctions so necessary to a life of virtue will be gradually subdued or overthrown, the heart hardened against the teachings of the moralist and the wave of lustful passion become of increased power.... This is undoubtedly a principal source of the dreadful amount of licentiousness infesting this city" (Griscom 1845:23). Griscom believed the cause was not solely with the ignorant immigrant as "we are parties to their degradation, inasmuch as we permit the inhabitation of places, from which it is not possible improvement in conditions or habits can come. We suffer the sublandlord to stow them, like cattle, in pens, and to compel them to swallow poison with every breath. They are allowed, may it not be said required, to live in dirt" (Griscom 1845:23).

5.2.4.2 The Tenement Houses

Legally, a tenement house was defined as "any house occupied as the home or residence of three families, or more, living independently of each other, and doing their cooking on the premises" (DeForest and Veiller 1970:37). This definition included tenements, flats, and apartments. All of the buildings that stood in the archeological project area and almost all of the tenanted buildings on the surrounding blocks fit this definition. Some were originally single-family homes, subdivided to accommodate larger numbers of tenants (Lots 7, 37, 45), others were built to house multiple families (Lots 6, 40–42), and still others were commercial or industrial structures converted for residential use (Lots 7, 3/4, 52). The tenement house was "practically the only kind of habitation for the great mass of people [and] the tenement house system was fraught with much danger to the welfare of the community" (DeForest and Veiller 1970:10). The otherness and the illnesses of the immigrant classes were highly visible in the tenement neighborhoods. By mid-century, two-thirds of the population of the Sixth Ward, estimated to be 95 percent foreign born, were considered "the lowest grades of the laboring poor, and of the vicious classes" (Citizens' Association 1866:77).

The area around Block 160 originally included a number of artisans' homes and work spaces. The exact nature of these industrial structures is for the most part unknown. On Pearl Street, a number of these buildings (such as Hoffman's property on Lot 8) were converted to residences in the 1840s. Other buildings were expanded or replaced to accommodate the ward's growing population. Peter McLoughlin, himself an Irish immigrant, purchased a Pearl Street lot (Lot 6) with a small building in the late 1830s. By 1848, he had erected a five-story tenement on the lot. Two years later, this building housed more than one hundred Irish men, women, and children (U.S. Bureau of the Census 1850).

Some of the earliest multi-tenanted buildings in the neighborhood were along Cross and Orange Streets⁴ (U.S. Bureau of the Census 1810, 1820, 1830). By the 1870s, however, most of the original buildings within the project area had been altered or replaced. The oldest surviving buildings were on the Baxter Street side of Block 160, where small frame buildings remained at numbers 10, 12, 20, 22, and 24 Baxter Street until the 1890s (Bromley 1891, 1897). These structures probably resembled the building across the street from the project area, photographed for an 1872 Board of Health report (Figure 114). A number of small, two-story brick buildings were erected along Baxter Street in the 1820s and 1830s. These frequently housed multiple-families and would remain standing until the 1890s when they were replaced with the typical dumbbell tenements designed to house hundreds of people (Figure 115).

For their tenement house report, DeForest and Veiller (1970) quoted extensively from the 1854 NYAICP report to describe the typical tenements in which the working poor dwelled. In the Sixth Ward "many are in a condition incomparably worse than the hovel dwellers, where father, mother, children and swine live and lodge together. These dens of squalid wretchedness, intemperance, and filth pay a rent which should afford the occupants comfortable homes" (NYAICP 1854 as cited by DeForest and Veiller 1970:80). Tenements consisted of just two rooms, the largest in the front, measuring on average 10 by 14 feet. The second room was slightly smaller and might include even smaller sleeping rooms in the back which seldom measured more than seven by seven feet. Only one room would have the benefit of a window and access to fresh air and light. The average number of families in a house was 22, and a family usually shared a 10-by-12-foot room and a single bedroom. While the best housing in these districts was in the most recently constructed buildings, the committee of 1853 found even the best houses to be "overstocked with inmates" (DeForest and Veiller 1970:81).

5.2.4.3 The Tenement-House Problem

As city governments began to keep better records, the statistical studies and development of germ theory led urban physicians to make a connection between the spread of diseases and unsanitary living conditions (Rosenberg 1966:162–169). Dr. Griscom studied the spread of typhus in the 1840s and denounced the system of tenantage as responsible for the ills of the poor. Griscom used a house at 49 Elizabeth Street to make his point. Nine cases of typhus originated from this building in six weeks. The building was occupied by the proprietor of a liquor store and several Irish families. The back lot included a rear building leased entirely by African Americans and a yard with both pigsties and stables. Griscom blamed the sublandlord: "the tenements, in order to admit a greater number of families, are divided into small apartments as numerous as decency will admit. Regard to comfort, convenience, and health is the last motive; indeed the great ignorance of this class of speculators (who are frequently foreigners and keep a grog shop on the premises) would prevent a proper observance of this, had they the desire." The sublandlord and his family "are often steeped as low in depravity and discomforts as any of his tenants, being above them only in possession of money and doubtless often beneath them in moral worth and sensibility" (Griscom 1845:6). Dr. Ezra Pulling, sanitary inspector for the Fourth Ward, described the sublandlords as "proprietors of low groceries, liquor stores, and 'policy shops'...the same individual often being the actual owner of a large number [of buildings]. These are men whose influence, purchased by corrupt politicians, secures [the politicians'] election to municipal offices which they disgrace. Holding in their grasp the votes of their dependents (read tenants), and by their combined action being thus enabled to elect whom they please, [the landlords'] power is almost supreme. In the past they have controlled our health organization and made it what it is today" (Citizens' Association of New York 1866d:58).

⁴ The names of these streets were changed around 1856. Orange became Baxter Street and Cross was renamed Park Street.

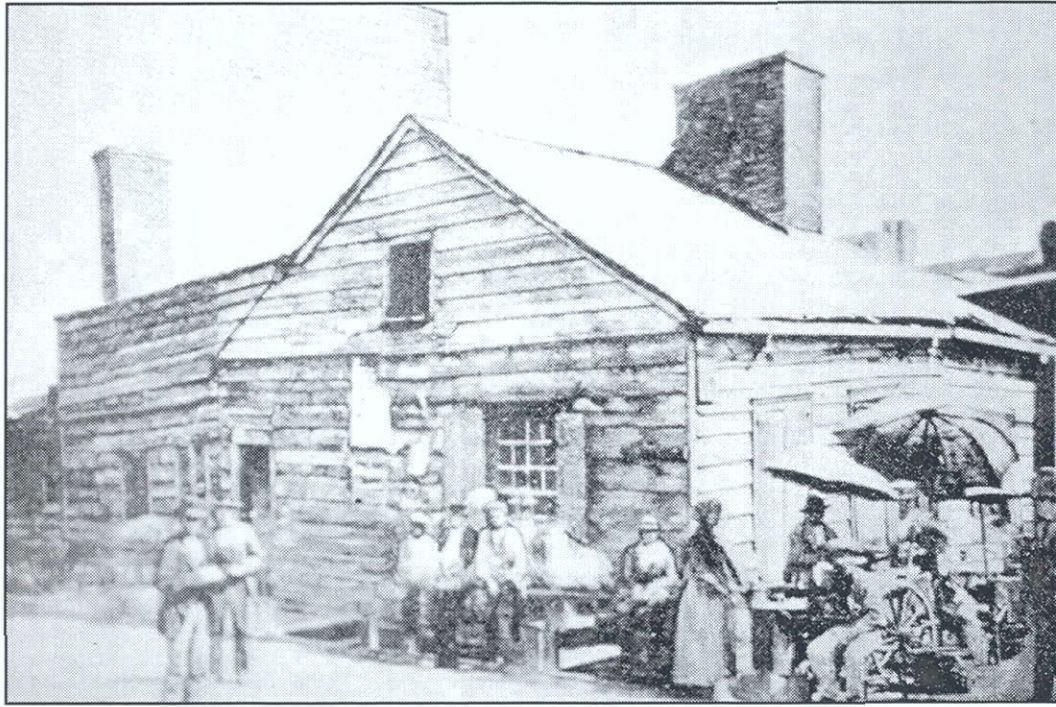


Figure 114. Small frame building at the southwest corner of Mulberry and Orange Streets, across the street from the project area. Photographed for an 1872 Board of Health report, reproduced in DeForest and Veiller's *The Tenement House Problem* (1970).

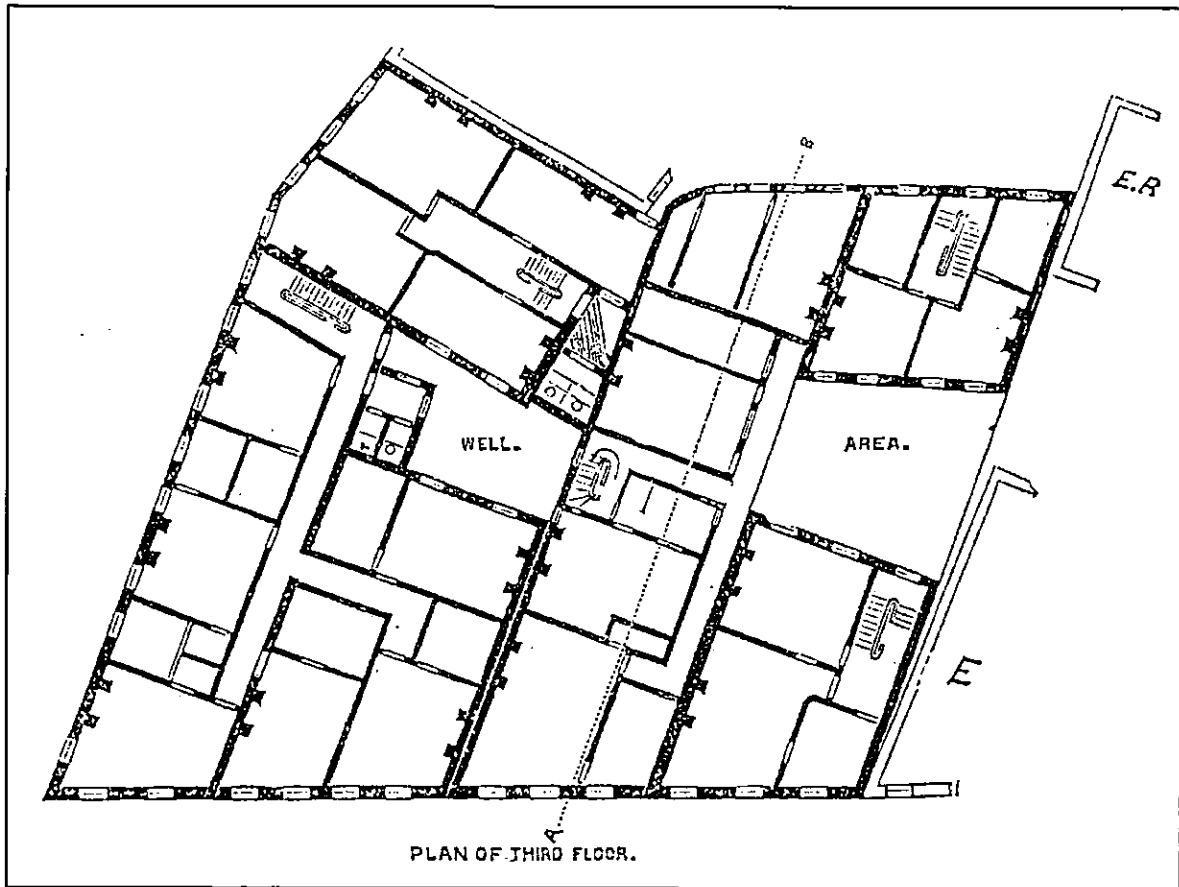


Figure 115. Tenement floor plan (DeForest and Veiller 1970).

Dr. Griscom also placed some of the blame with his own class: "We are parties to their [the immigrants'] degradation in as much as we permit the inhabitation of places, from which it is not possible improvement in condition or habit can come....They are allowed, may it not be said, required, to live in dirt, when the reverse, rather, should be enforced" (Griscom 1845). Other reformers did not specify who was to blame for housing conditions as the correlation between the developing underclass of wage laborers and the shifting relationship of proprietor and tenant was not fully understood (Blackmar 1995:46).

In the 1850s and 1860s, voluntary and reform-oriented groups including the Sanitary Association, the Citizens' Association, and the New York Association for Improving the Condition of the Poor (NYAICP) attempted to fill in the gaps left in the city- and state-run health-care programs. These reform groups formed committees composed of physicians and concerned citizens to inspect housing conditions, compile statistics, and publish reports. Most of their actions were directed toward successful passage of a comprehensive health bill that would imbue the city's physicians and health-care workers with the legal power to remedy unsanitary and unhealthy conditions and establish a board of health independent of city politicians. Almost 20 years passed before a comprehensive health bill was enacted in 1866 (Smith 1911).

Racist and nativist views were frequently and easily incorporated into many of the committee reports and programs aimed at controlling diseases (Cassedy 1986:157; Kraut 1994, 1995; Rosner 1995:2). Discrimination against both free blacks and immigrants was widespread. Blacks in Five Points were considered only "less horribly disgusting" than their white counterparts (Foster 1990:142). The "worthy poor," the German migrants, were favorably compared to the Irish or "unworthy poor" (Children's Aid Society 1854 cited by Bremmer 1970). Similarly, the Italian migrants of the last quarter of the nineteenth century were divided into "hardworking" Ligurians and "thrifless" Neapolitans and Calabrians (Grafton 1977). In New York society, Protestant immigrants were preferred to Catholics (Five Points Monthly Record 1854, cited by Bremmer 1970).

In 1853, the first tenement-house report in America was produced by reformers, and in 1855 they built a "model" tenement, The Workingman's Home, on six city lots. Three of the lots faced Mott Street while the other three faced Elizabeth Street. The six-story tenement was equipped with gas light in the hallways and public sinks supplied with Croton water, but the water closets remained in the yards. The rents were designed to insure a six-percent profit and ranged from \$5.50 to \$8.50 per month. One missionary, however, judged these rents to be fairly high as the "lowest poor" rented rooms costing less than \$4.00 per month (DeForest and Veiller 1970:85-86; Spann 1981:145). Within 30 years of its erection, this building was considered one of the worst in the city. The failure of this project was attributed to the initial African-American occupation of the house as "this meant, as it always does in this City, that the house could never be occupied by respectable white people afterward...so when the class of respectable Negroes moved away it became impossible to secure tenants of the right kind" (DeForest and Veiller 1970:86).

5.2.4.4 Legislating Tenement-House Life

The first State Legislative Commission on Tenement Houses was formed in 1856. Representatives of the commission spent a week visiting the most infamous tenements in the city. Upon completion of their inspection, the commission demanded legislative action on the state level because "scarcely an apartment was free of sickness and disease, and the blighting of the curse of drunkenness had fallen upon almost every family. Here and there might be found, it is true, some attempt at cleanliness, some display of a love of home, some evidences of industry and sobriety with their natural accompaniments of cheerfulness and good health. But these...in some instances were families that had not long been inhabitants of the neighborhood in which they lived, the demoralization and ruin apparent all around had not had time to do their work on them" (DeForest and Veiller 1970:87). Like Dr. Griscom and Charles Loring Brace, the founder of the Children's Aid Society, the commission did not believe the immigrants themselves to be inherently immoral or dissolute. Instead the reformers blamed conditions in the districts inhabited by immigrants for turning them to lives of crime, vice, and moral decay (Spann 1981:269).

There were similar calls to action throughout the 1850s and 1860s, but none of the laws regulating housing and housing conditions was ever regularly enforced, despite numerous epidemics and the general ill health of many residents of the tenement districts. This pattern continued for much of the second half of the century: well-meaning commissions and councils were formed, inspections were made, and recommendations for legislative and administrative changes were submitted, yet few changes were ever adopted. Those actually enacted were rarely enforced.

Typhus, also called immigrant or spotted fever, returned to New York in the 1860s. Dr. Stephen Smith came to the city in 1850 to study medicine at the College of Physicians and Surgeons at Columbia University, eventually joining the Citizens' Association. During his two-year residency at Bellevue Hospital on Blackwell Island, Smith noticed a disproportionately large number of cases originated from a single building inhabited almost entirely by Irish immigrants. Upon inspection, Smith found the building to be "filthy and reeking" and attempted to trace the owner. With some difficulty Smith was finally able to locate the man, a wealthy "member of one of the most popular churches in the city" (1911:36-37). Smith appealed to the man to remedy the situation, but because Smith had no legal recourse, no action was taken. It was not until Smith and William Cullen Bryant, editor of *The Evening Post*, threatened the man with exposure in the press that repairs to the building were undertaken. Smith's actions in this case and others eventually led to the formation of the Sanitary Association, a citizens' group bent on reforming the city-run system over opposition from the city inspector's office (Smith 1911:36-37).

It was a generally held belief among concerned citizens that the health wardens of the city were doing an inadequate job of protecting the city's health. Corruption and influence peddling among these city employees was out of control. The Citizens' Association was formed partly in response to this corruption. With \$22,000 of their own money they surveyed the tenement districts of the city. They used the information they gathered to lobby the state legislature in Albany for the creation of a board of health independent of city politics (Smith 1911:40). The Citizens' Association believed the established system in the Sixth Ward was symbolic of much of what was wrong in the city-run programs. The city-appointed health wardens for the Sixth Ward in the 1860s were John Donnelley and Terence Foley, both liquor store owners. Foley's saloon at 41 Elm Street, near the Tombs, was a "celebrated headquarters not only of the politicians of said ward, but of the city officials in general" (Citizens' Association of New York 1866c: 65). Dr. John Griscom had made similar statements when a health bill advocating reform failed to pass in 1859. Griscom suggested many of the deaths in the previous 20 years might have been prevented, except for the sorry practice of "putting the great interests of the Public Health in the charge of party politicians, ignorant of the causes of diseases or the means of their prevention" (Griscom 1861:13).

The draft riots of 1863 again focused the attention of the city on the tenement districts from which "poured forth mobs that held fearful sway in the city...the high brick blocks of closely packed houses where the mobs originated seemed to be literally hives of sickness and vice. It was wonderful to see and difficult to believe so much misery, disease, and wretchedness could be huddled together and hidden by high walls, unvisited and unthought of so near our own abodes" (N. P. Willis as cited by DeForest and Veiller 1970:92). In 1864 and again in 1866, the Citizens' Association Council of Hygiene and Public Health surveyed the city. They divided the city into 29 districts and appointed a physician as inspector in each district. The content of each report differs slightly, but most were enumerations of health hazards in each district, including the number of cellar residences, liquor stores, vacant lots, and so forth as well as some of the wards' vital statistics (Citizens' Association of New York 1870:73-74).

The Sixth Sanitary District consisted of the entirety of the Sixth Ward, and a Dr. William F. Thoms was the appointed inspector. He counted 609 front tenement houses and another 154 on rear lots. Approximately 23,000 people lived in a total of 763 tenement houses. Of the 763 houses, almost 40 percent (302) were without any sewer connections at all. There were 26 brothels and more than 400 liquor stores. An additional 528 stores and 117 manufactories were counted. In the Sixth Ward, Dr. Thoms found typhus to be the leading cause of death, followed by fever of indeterminate origin. Fevers were responsible for 92 deaths on Mulberry

Street, 53 on Baxter Street, 27 on Park Street, and another 13 on Pearl Street in one 10-month period during 1864 (Citizens' Association of New York 1870:73–74).

As part of the 1866 report, Dr. Thoms described a Sixth Ward "Fever Nest, A Hot Bed of Typhus" (Figure 116) at 500 Pearl Street (just west of the project area). In this large building with three separate entrances lived 79 families, a total of 349 individuals. In 1864, a total of 115 (32.9%) of the inhabitants were stricken with fever. Many of the apartments were without an external source of ventilation; instead, they looked out "upon dismal and fetid well-hole areas that are lined by privies where 350 persons attend calls of nature" (Citizens' Association of New York 1866b:78–79).

Typical tenements were divided into multiple apartments on each floor. Earlier tenements had two. In the 1870s, tenement buildings became more elongated, taking up more of the depth of a 100-foot lot, and four apartments per floor became more common. The only outside windows were those on the front of the building, so only the front room received fresh air and light. There might also be windows onto a back yard, provided a second, or rear, tenement had not been erected against the front building. If there were two buildings on a lot, a small court, or air shaft, might separate the two. In smaller tenements, the bedrooms were located in the rear of the building facing onto the court. In the larger tenements the sleeping quarters were in the middle of the building and received no fresh air or light except that which was provided by the airshaft. The airshafts ran through all the apartments and frequently served as a receptacle for garbage. The airshafts also conveyed noises and smells, resulting in a general lack of privacy for tenement dwellers. This in itself was believed to be a cause of "grave immorality" in the tenement districts (DeForest and Veiller 1970).

After 1862, fire escapes were mandatory on tenement houses, even on buildings erected before the law took effect. Generally, however, landlords did not add fire escapes, nor did the city have any real means of enforcing this law (DeForest and Veiller 1970:278–282). The Tenement House Committee of 1865 believed fresh air and daylight were essential to good health in the tenement districts, and the committee attempted to regulate both the presence and size of air shafts and side- and rear-yard courts. They backed their arguments with mathematical formulas, and their inspection paid strict attention to the amount of air per cubic foot each individual was allotted. The New York Academy of Medicine estimated at least 512 cubic feet of space in the sleeping quarters of each individual was necessary to insure maximum ventilation (Cassedy 1986:159). Dr. Ezra Pulling of the Citizens' Associations Council on Hygiene recommended a minimum of 800 cubic feet as necessary (Citizens' Association of New York 1866d:48). At 500 Pearl Street, Dr. Thoms estimated the average amount of cubic square feet of air available to an individual was 350 cubic feet by day and just 200 cubic feet by night (Citizens' Association of New York 1866d:78). Data compiled for the tenements on Block 160 suggest the cubic feet of space available fits this general pattern (see Volume I, Appendix C: Table 20). Despite the available statistics, the arguments of the commission were generally unsuccessful. As the century progressed and the numbers of immigrants to the city increased, the amount of space left open and unoccupied on lots in the lower wards rapidly diminished (DeForest and Veiller 1970).

Dr. Stephen Smith was an editor at both *The New York Journal of Medicine* and *The American Medical Times*. As a lobbyist for passage of the Metropolitan Health Bill, Smith, a resident physician at Bellevue Hospital and a member of the Citizens' Association, addressed the state legislature in 1865 with mortality statistics he had compiled the previous year. He argued for the creation of an independent state-regulated body in charge of public health, bolstering his argument by comparing the death rate of the Seventeenth Ward with that of the Fourth and Sixth Wards. The Seventeenth Ward, inhabited principally by the wealthy class, had a rate of 17 deaths per 1,000 residents, while the death rates in the Fourth and Sixth Wards averaged between 36 and 40 per 1,000 residents. Smith's appeal to the state legislature was instrumental in the passage of the health bill (Smith 1911).

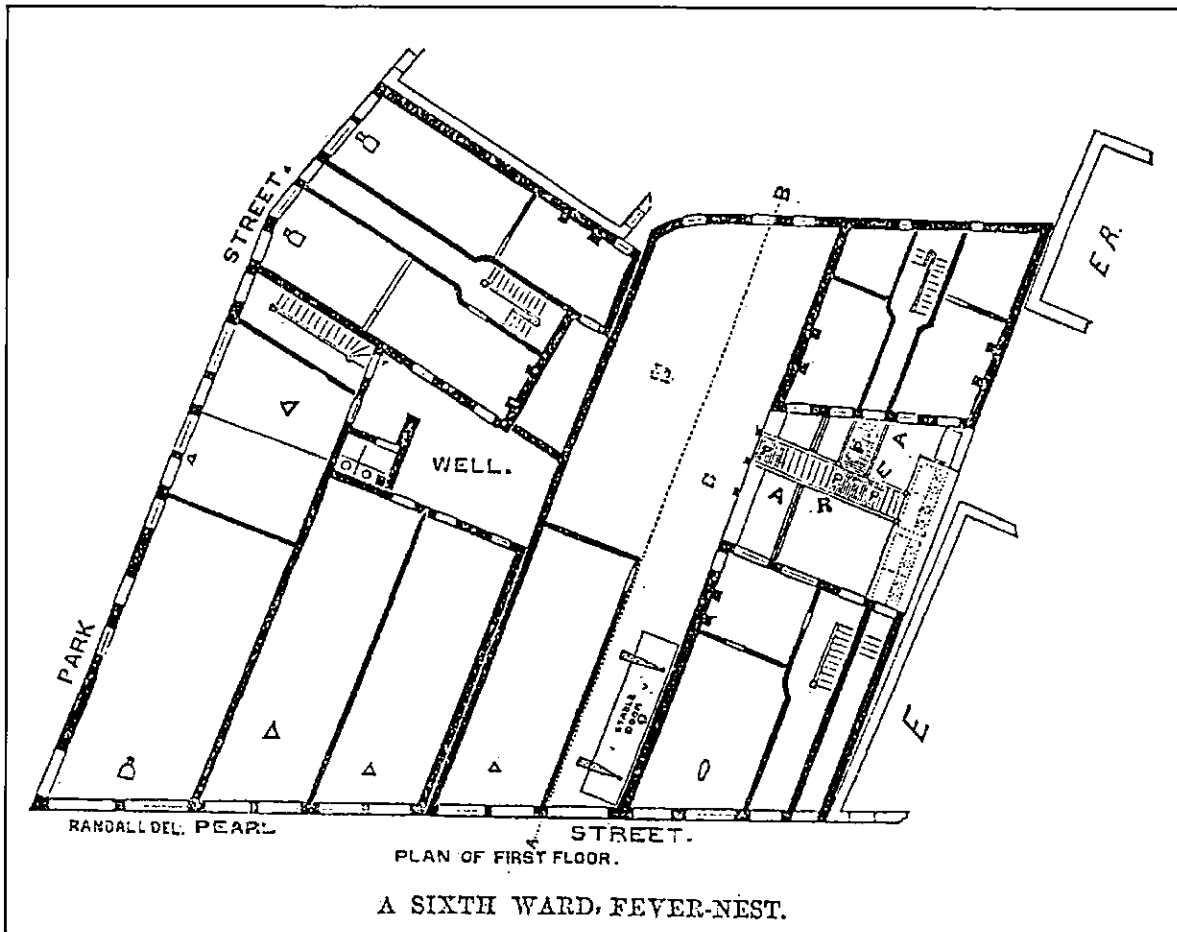


Figure 116. Fever-nest map from the report of the Citizens' Association Council of Hygiene and Public Health (Citizens' Association of New York 1866a).

The first Tenement House Law was passed in 1867. The new law regulated the amount of ventilation available in the tenements and required every habitable room to have a window. The amount of space in the rear yards was also regulated, and cesspools were banned near the buildings except where absolutely necessary. Guidelines were also provided for the proper connection of sewers. The 1867 law forbade the occupation of cellars unless a board of health permit was issued, and it required those cellars that were occupied to have at least one foot of height above the ground surface. Tenements built after 1867 were to have a fireplace in each set of rooms and running water in one or more places in the house or yard. Animals, with the exception of cats and dogs, were forbidden in the tenements, but subsequent board of health reports on the removal of livestock showed just how difficult it was to enforce these laws. Fines were set for each violation to be applied at the discretion of the courts. However, these laws applied to tenements built after 1867 and not to the 15,000 buildings of this type already in existence within the city (Board of Health 1868, 1870; DeForest and Veiller 1970:93–96).

The newly formed Board of Health counted 600 tenements in the Sixth Ward in 1867 (almost one-third of the citywide total of 18,582 tenements). Of the 600, a total of 360 (60%) were judged to be in bad sanitary condition (Board of Health 1868:26). However, examination of the mortality statistics kept for the Sixth Ward for the years 1866 and 1867 led the Board of Health to conclude that the removal of “the excess of filthiness of such wards as the Fourth, Sixth, and Fourteenth, the foulest districts of New York” and enforcement of sanitation regulation among the people of the most crowded wards, led to a decline in the numbers of fatalities and disease (Board of Health 1867:9). A new institution, the Board of Health was optimistic about its role in cleansing the city. However, in its annual report the following year, the members of the board wrote despite the diminished mortality rates in the ward, “the sanitary topography of this [the Sixth] Ward is the worst of any equally large district in the city. From Chatham to Canal streets, its center is a natural slum of filth, and the degraded population of that district both increases the natural unhealthfulness and are destroyed by it. The porous and increasingly moist soil of the ward and the great defects of local drainage make it the worst cholera field in the city. Its overcrowded and unventilated tenements are inveterate fever nests and infant mortality is the highest in this ward” (Board of Health 1868:103–104).

One of the only methods of improving the slums of the city was to clear them. Municipal authorities had been trying to clean and clear Five Points since the 1820s, but efforts were fought by landlords and shop owners and frequently failed (Common Council of the City of New York 1828–1829:17, 18). Slum clearance was accomplished by condemning buildings and widening streets. Such a plan was proposed again for Five Points in the 1860s as the sanitary inspector of the First District, including the Sixth Ward, argued that improvements in the neighborhood could not be undertaken until the older buildings themselves had been removed. The widening and repaving of Park and Worth Streets and the extension of Worth Street through to Chatham Street eliminated portions of Blocks 161, 165, and 166, bounded by Mulberry, Mott, and Baxter Streets (Perris 1867; Board of Health 1868:71–72). It was hoped these improvements would have the desired effect, but subsequent reports from the Board of Health proved otherwise (Board of Health 1870).

In 1873, the State Charities Aid Association assumed many of the responsibilities of the Association for Improving the Condition of the Poor. The state charities solicited plans from the city’s architects for improved tenement housing, and in 1877, more model tenements were built in the city of Brooklyn. In 1879, a new tenement house commission was formed, and a new tenement house law was passed. The 1879 commission recommended all courts be at least 12 feet in depth for a building six stories or 60 feet high.

At mid-century, the rear yards on city lots had generally been about 40 feet deep, but by the turn of the twentieth century, they had diminished, on average, to just 10 feet deep. The 1879 Tenement House Law limited the percentage of each lot that could be occupied by a building to just 65 percent and required that each sleeping room have a window onto outside air. The law also provided for a force of 30 sanitary policemen under Board of Health supervision and created an annual fund of \$10,000 for sanitary inspections (DeForest and Veiller 1970:16, 100).

Over a six-month period in 1884, a second state legislative commission investigated a number of city tenements. The commission made numerous recommendations, including the eradication of all privy vaults; retroactive application of new laws to older, already occupied buildings; water supplied to each floor; janitorial services mandatory in buildings with eight or more families; concrete cellars to alleviate the perpetual dampness; and sources of direct light and external air in the rooms and halls of all new tenements. The commission also recommended that the misuse of water closets should be considered a misdemeanor with an appropriate fine; the Board of Health should make semi-annual tenement inspections; and the sanitary police force should be increased from 30 to 40 members. The commission also wanted the names and addresses of building owners kept on file with the Department of Health. Necessary amenities in the tenement districts included *free* public baths and electric street lights in all tenement districts (DeForest and Veiller 1970:103).

Like most health reforms advocated during the nineteenth century, only a small portion of these recommendations was passed into law. When the new tenement house law was passed in 1887, the number of sanitary policemen was increased, but few amendments were made to the existing 1879 law. A third legislative commission was formed in 1894 after *The Press*, a New York City newspaper, printed a series of articles on the degraded conditions inside the tenements. A total of 8,441 tenement buildings were inspected by this commission. They published their findings in 1895 and recommended there be no wallpaper in the tenements, all hallways be lit with artificial light, and the cellar dwellings have ceilings at least two feet above street grade. The commission continued to lobby for the establishment of free public baths, lavatories, and drinking fountains in the tenement districts. They also advised that the streets of the more crowded districts be paved with asphalt and well lit with artificial lights. Only one of their recommendations was included in the new tenement house act of 1895, and two public parks were created on the Lower East Side (DeForest and Veiller 1970:103–105).

The New York State Tenement House Commission of 1900 published its findings. The commission found that many of the same conditions enumerated by previous investigative commissions continued to exist. The situation in the Sixth Ward had improved somewhat, and the total number of tenements had dropped from over 600 in 1864 to just 423 tenement houses, of which 101 were rear buildings (DeForest and Veiller 1970:198). Despite the improvements, the evils of New York's tenements in 1900 remained much as they had for the previous 60 years. There was an "insufficiency of light and air due to narrow courts or air shafts, undue height, and to the occupation by the building or adjacent buildings of too great proportion of the lot area; danger from fire; lack of separate water closet and washing facilities; overcrowding; foul cellars and courts and other like evils, which may be classed as bad housekeeping" (DeForest and Veiller 1970:xiv). All the commission's recommendations were embraced when the city adopted a new charter, including the formation of a separate tenement-house department. The new law aroused bitter opposition in the building trades and among owners of "unreformed" tenements, and these two groups fought hard in several legislative sessions to overturn the new tenement-house laws. Opponents of the new law were unsuccessful and the older-style tenements were outlawed. Reformers believed the newer model tenements would be an "unqualified success" as they were "sanitary, comfortable, and decent" (DeForest and Veiller 1970:xiii–xv). The authors of the 1900 report, Robert DeForest and Lawrence Veiller, believed "the discredited and horrible 'dumb-bell' tenement, the prevailing type of house built in New York between 1879 and 1901, is now a thing of the past. At one stroke it was wiped out of existence as a type of future multiple dwelling" (DeForest and Veiller 1970:xiv). While it is true this type of housing was no longer constructed, in 1900, hundreds of thousands of people still occupied tenements built between 1879 and 1901, and thousands lived in buildings built prior to 1879. Thus, the new tenement-house laws did little to improve the living conditions of these people.

5.2.5 Summary

Despite numerous laws, legislative committees, petitions, complaints, and mortality statistics, life in the tenements for much of the nineteenth century remained unchanged. These were dangerous, unsanitary, and unhealthful buildings. The addition of running water and regular lighting in the early part of the

twentieth century improved living conditions in many of these buildings, but problems of affordability of housing and overcrowding persisted in many immigrant neighborhoods. Little has changed in New York as the working poor scramble for places to live in a city in which housing has become an increasingly more stratified commodity.

The immigrants in the late twentieth century from China, Haiti, and El Salvador inhabit the same tenements in New York as did their predecessors from Ireland and Germany, and much of the rhetoric surrounding immigration remains the same. In the 1990s, native-born Americans, again frightened by the diseases and overwhelming poverty of the most recent immigrants, have attempted to restrict access to health care and public schooling and the use of native languages. The most recent battles between New York and Albany over rent control and destabilization (*New York Times*, *New York Post* December 9, 1996) illustrate just how little has changed in the last hundred years as the city and state governments argue over who acts more righteously with respect to housing the working class.

5.2.6 Chronology of Important Events Related to Health and Sanitation in New York City

- 1670 New York City cartmen are granted a monopoly on hauling refuse.
- 1696 English build first sewer.
- 1702 Yellow-fever epidemic.
- 1744 Sanitation act removed city's most noxious industries to the area around the Collect Pond. Hatters and starch manufacturers are forbidden to pour their dyes into the gutters.
- 1785 Complaint that cartmen were not cleaning city streets results in an order to hire vagrants to cart the city's trash.
- 1789 Common Council passes a law requiring residents to sweep trash in front of their houses to be collected by carters twice a week. Office of the Commissioner of Street Cleaning is created.
- 1795 Summer yellow-fever epidemic kills 525.
- 1798 Yellow-fever epidemic results in 714 deaths.
- 1803–5 Multiple yellow-fever epidemics.
- 1807 City Inspector's Office (forerunner of the New York City Board of Health) is created.
- 1822 Yellow fever kills 166.
- 1832 Cholera epidemic results in 3,513 deaths.
- 1834 Annual report of the city inspector, Gerritt Forbes, on the evils of overcrowded tenant housing in the city, population now about 270,000. City begins to officially keep records of vital statistics.
- 1834 Cholera causes 971 deaths citywide.
- 1837 Typhus epidemic hits the Sixth Ward particularly hard.
- 1842 John Griscom, city inspector for the Board of Health, completes a survey of the Sanitary Condition of the Laboring Classes which led to the 1845 report advocating model housing, limits on density of occupation, and the development of an effective sewer system.

- 1843 The New York Association for Improving the Condition of the Poor is formed. Surgeon and barber Benjamin Ogden, former Pearl Street resident, is one of the founding members, along with a number of the city's prominent physicians and businessmen.⁵
- 1844 John Griscom, city inspector, addresses the annual state of the city's health, describing the system of tenantry and all its horrors. Pivotal event in the history of housing reform.
- 1846–53 Investigations of housing conditions are made by the New York Association for Improving the Condition of the Poor.
- 1849 Cholera epidemic results in 5,071 deaths.
- 1840s–50s Reformers continually clash with city authorities over corruption in city agencies responsible for overseeing housing, street cleaning, and health care.
- 1853 First *Tenement House Report*, produced by the New York Association for Improving the Condition of the Poor.
- 1854 Cholera responsible for 2,509 deaths.
- 1854 The Children's Aid Society is founded by Charles Loring Brace.
- 1854 Association for Improving the Condition of the Poor forms The Workingman's Home Association in order to build model tenements with private funds.
- 1855 The NYAICP's Workingman's Home is built on six lots between Mott and Elizabeth Streets in the Five Points district. Thirty years later, the building would be banned as unfit for occupation.
- 1856 First New York State Legislative Commission on Tenement Houses is formed.
- 1857 State legislature in Albany attempts to stem corruption in New York City's police force and passes the Metropolitan Police Bill, transferring authority over the police department from the city to the state.
- 1863–5 Typhus epidemic kills 2,499 in two years.
- 1863 Formation of the Citizens' Association. Peter Cooper, John Jacob Astor, Jr., and Hamilton Fish are among its members.
- 1864–5 Citizens' Association Council of Hygiene makes a systematic inspection of the city and publishes its findings in an 1866 report. In February of 1865, Dr. Stephen Smith lobbies the state legislature for the passage of a health bill that would provide for the creation of a board of health independent of city government.
- 1866 Cholera returns, killing 1,137.
- 1867 First Tenement House Law is passed.

⁵ The 1850 and 1852 annual reports of the NYAICP listed its members. Their occupations and addresses were checked in city directories. Few lived or worked in the Five Points district. The NYAICP members were as follows, with the physicians and druggists listed first: Dr. George R. Dean, office at 210 Elm, home at 459 Pearl; Dr. James McClaurry had an office and home at 136 Walker in 1845, but by 1857 had moved his office to Canal and his home to 153 Wooster in the SoHo district; Dr. Benjamin Marshall kept an office at 54 Orange Street, although he moved his home from Bayard Street to Newark, New Jersey; Dr. Reuben Carpenter was listed at 7 Mulberry Street; George Darby, merchant at 52 Wall, home at West 11th; Nicholas C. Everett, Wall Street lawyer, home at 117 White; Nicholas D Herder, grocer at 68 Dey with a home at 132 White; D. B. Hunt, a drygoods merchant, kept a store at 158 William and a home at 84 Cliffe; Stephen Conover had a hardware shop on Broadway and a home on Leonard Street; another hardware merchant, Samuel Burrill, had a Broad Street shop and a home on Broadway; George Delaynes, a merchant located at Old Slip, kept a home in Brooklyn; another merchant, O. K. Wood, kept a shop on Broad Street, but lived uptown on West 13th; Daniel Oakley was a "hatblock" manufacturer along Bowery, but lived in Westchester; George Towerre, a Center Street mahogany dealer with a home at 120 White; Richard Triton, a baker at 105 Bayard; John M. Clawson, a Pearl Street undertaker; and Noah Worrell listed with an Elm Street laundry (Longworth 1840; Rode 1852; Doggett 1857).

- 1870 Government of New York City is reorganized by charter and the Department of Public Works is created with a separate bureau responsible for sewers and drainage.
- 1879 New Tenement House Law is passed limiting size and occupation of tenement buildings.
- 1880–1 Citizens lobby for control over sanitation and streets to be returned to city authorities. In May 1881, a department of street cleaning is formed. Corruption is rampant in the system through the 1890s, and a series of state-run inquiries is instigated.
- 1884 Second state Commission on Tenement Houses is appointed.
- 1887 The 1879 Tenement House Law is amended.
- 1894 Third state legislative Commission on Tenement Houses is appointed.
- 1895 George Waring is appointed commissioner of street cleaning. He designs a system of city-run street cleaning and recycling.
- 1900 New York State Tenement House Commission surveys the city. New Tenement House Law passed based on their recommendations.
- 1902 New York City enacts a new charter which provides for the creation of the separate Tenement House Department.

5.3 Good for What Ails You: Medicinal Practices at Five Points (Michael C. Bonasera)

5.3.1 Introduction

In 1849, less than a year after sweeping through Europe, a cholera epidemic descended on Manhattan. Its first victims were James Gilligan, a laborer, and two of the four women who shared an oozing, doorless basement room with him at 20 Orange Street in Five Points (Rosenberg 1966:101–106). Diarist Philip Hone noted soon after that the cases of cholera reported thus far had all been on Orange Street, “where water was never used internally or externally, and the pigs were contaminated by the contact of the children” (Hone quoted in Rosenberg 1962:107). Hone’s opinion was shared by most New Yorkers—intemperate, debauched, and living amid filth, the poor were responsible for the sicknesses and misery they wallowed in.

Over 140 years later, excavations on Block 160 provided an opportunity to evaluate how Five Points residents coped with the threat and reality of disease. Because personal accounts and health-care records of workers are rare and proselytizers’ narratives are subjective, analysis of cultural remains, with support from floral data, appears to have the greatest potential for an accurate interpretation of health-care practice at Five Points. To evaluate health and hygiene issues, this section will focus on the features that yielded the most medicinal containers (and the documented residents of these lots) and features that are associated with specific commercial enterprises.

As discussed in the previous chapter, urban growth during the nineteenth century placed monumental strains on housing, water supplies, and waste-disposal systems and generated enormous public health problems (Cassedy 1986:149). Until the end of the century, however, disease theory remained largely undeveloped; bleeding was still practiced until mid-century, and *materia medica* was dominated by opium and alcohol. In short, the lack of knowledge allowed mesmerism, hydropathy, and phrenology to flourish well into the century (Haller 1981).

5.3.2 Choices

In theory at least, Five Points residents in need of medical care could choose from a doctor’s care, a dispensary, neighborhood apothecaries, street hucksters or shops where proprietary medicine was sold, or home remedies that used plants grown in or around the residence. While it is not possible to determine how the ethical (prescription) medicine was obtained, most workers could not afford the care of a physician. A dispensary, charitable hospital, or apothecary may have often been the only affordable choice. The New York Dispensary, where “nearly fifty thousand sick poor” were treated annually (Citizens’ Association of New York 1970:81), was located at the corner of Centre and Worth Streets. It was the only dispensary in the Sixth Ward in the 1860s. There were also four charitable institutions devoted to the care of poor children in the Sixth Ward in the mid-1860s (Citizens’ Association of New York 1970:81–82). A children’s hospital at the Five Points House of Industry also operated later, in the mid-1880s. A total of 3,152 prescriptions was administered in 1884 by this hospital (Five Points House of Industry 1884:185). Although apothecaries may have supplied a significant amount of medication to Five Points residents, only one vessel from the assemblage is embossed with a druggist’s address—421 Pearl Street.

5.3.3 Archeological Evidence

5.3.3.1 Ethical Medicine

The ethical vial or bottle was the most commonly recovered medicinal vessel at Five Points. These usually unembossed, cylindrical containers held medications prescribed by a physician or administered by a dispensary or apothecary. The aqua or clear cylindrical vials with flanged lips remained a popular form into the second half of the nineteenth century, exhibiting little change from eighteenth-century forms (Figure 117). Many of these vessels originally had paper labels (McKearin and Wilson 1978:280, Plate 77), although none survived deposition on Block 160. The majority of the ethical medicinal vessels displayed a pontil mark, nearly always created with a blowpipe and less often with a glass-tipped pontil (Jones 1971:68–71).



Figure 117. Cylindrical vials with flanged lips.

In addition to this form, which was identified in various sizes, other undecorated vessel types were noted. Vials and bottles with square, rectangular, octagonal, and 12-sided bodies were recovered in addition to square- and rectangular-bodied vessels with chamfered corners. A small quantity of ampules was also recovered. These aqua vessels with a plain lip have a capacity of less than a dram (McKearin and Wilson 1978:280, Plate 77, No. 1). Medicinal vessels used at Five Points were usually manufactured of aqua or, less often, clear glass; olive green, green, amber, or blue were only occasionally represented. The bore of a vessel, or the interior of the neck, was sometimes ground. This prevented evaporation of costly medicine; however, none of these characteristics can be associated with specific preparations. Some of the vials and bottles may have contained something other than ethical medicine, but this is impossible to determine. Of approximately 376 medicinal vessels from nineteenth-century deposits within the features (Table 124), at least 266 (71%) appear to have contained ethical medicine. Although ethical vials and bottles often represent the majority of the medicinal vessels recovered at a site, corroborating evidence such as dispensary records, floral analysis, or mortality records must be employed to interpret this evidence.

Table 124. Medicinal Vessels in Selected Deposits

Provenience	Glass Vessels	Medicinal Vessels	Percentage of Assemblage	Ethical Medicine	Patent Medicine	Soda/ Mineral Water
AM (AS II)	260	29	11.2	26	2	1
AN (AS I)	20	3	15.0	2	1	-
AN (AS III)	67	9	13.4	4	2	3
H (AS III)	83	5	6.0	-	1	4
J (AS III)	181	66	36.5	35	6	25
J (AS V)	201	67	33.3	56	6	5
Z (AS II)	65	25	38.5	19	4	2
B (AS IV)	31	13	41.9	13	-	-
D (AS V)	26	2	7.7	2	-	-
N (AS I)	22	7	31.8	4	-	3
N (AS III)	124	11	8.9	11	-	-
O (AS III)	110	53	48.2	33	11	9
AF (AS II)	128	15	11.7	12	3	-
AG (AS III)	300	39	13.0	31	8	-
AH (AS II)	42	3	7.1	-	2	1
AL (AS II)	117	5	4.3	-	3	2
AK (AS II)	41	13	31.7	7	2	4
AK (AS IV)	27	11	40.7	11	-	-
TOTALS	1,845	376	20.4	266	51	59

5.3.3.2 Proprietary Medicine

According to Fike, "proprietary drugs are generally protected by secrecy, copyright, or patent against free competition by name, product, composition, or manufacturing process" (1987:3). Bold claims regarding miraculous cures (Young 1961, 1992; Armstrong and Armstrong 1991:89-97, 159-171), the ability to dose oneself at home, a lower price than physician-prescribed drugs, and, possibly, a high alcohol or narcotic content, enticed some New Yorkers to use proprietary medicine.

The proprietary medicinal vessels recovered on Block 160 include some of the most widely marketed preparations of the nineteenth century, as well as concoctions that were only produced for a short time in New York City and have not been reported at other metropolitan sites. These manufacturers' advertisements usually included a number of claims, nearly all false, of afflictions that could be cured with their preparations (Young 1961). This creates difficulty in determining which health problem was being targeted by the consumer. To understand the types of illnesses and occupational stresses from which different individuals suffered, a list of the embossed bottles and their claims was created and the frequency of illnesses was noted. This method is subjective, but provides evidence regarding the kinds of sickness that must have been deemed serious enough to justify the relatively high cost of the drug. This compilation indicates that rheumatism, strains, and soreness were the most frequently mentioned problems in the advertisements. Other health problems that appear to be nearly as prevalent (according to their frequency in the ads) are dyspepsia and other digestive complaints, problems specific to females, colic, scrofula, burns, mouth pain, cholera, blood diseases, and venereal disease. Surprisingly, only two vessels containing patent medicine for treating worms were identified.

Relatively high numbers of embossed patent medicine bottles were recovered on a few lots. An analysis of these bottles and the floral remains will create a foundation on which to interpret the illnesses and health concerns of Block 160 residents and the sanitary conditions that characterized this neighborhood. It is believed that medicine and soda and mineral waters were usually consumed in an attempt to mitigate a health problem, not for other purposes. Specifically, the use of medicines as intoxicants is thought to be limited. If a worker possessing limited assets wished to conceal his or her alcohol consumption, it does not seem logical that they would buy a foul-tasting medicine that cost more than either whiskey or wine. While it is possible that temperance crusaders such as Father Mathew did affect drinking behavior at Five Points, the prevalence of disease, poor sanitary conditions, and financial limitations suggests that in the main, medicinal use was an attempt to alleviate health problems.


Feature J on Lot 6 and Feature O on Lot 7 contained the most embossed proprietary medicine bottles. Feature J was used by residents of 472 Pearl Street, a five-story brick tenement constructed around 1848. Thirty-three percent of the glass bottles in the lower deposit of J were medicinal vessels, and 37 percent were medicinal in the upper deposit. Thirty-nine percent of the vessels recovered in Feature Z were medicinal. Of the 48 proprietary medicinal vessels recovered from Features J and Z, 16 are patent medicines and 32 are soda and mineral waters. Aromatic schnapps is the most common patent medicine associated with the predominantly Irish-American families at 472 Pearl Street. Five case bottles bearing all or part of the inscription UDOLPHO WOLFE'S//AROMATIC/SCHNAPPS//SCHIEDAM were recovered (Figure 118). According to Fike (1987:187), this medicinal gin tonic, diuretic, anti-dyspeptic, and invigorating cordial was introduced by Wolfe in 1848. The preparation was designated specifically as a restorative for women (Davoli 1995). One V. Oldners aromatic schnapps bottle was also excavated. Three patent medicines were each represented by two bottles—Mexican Mustang Liniment, Hyatt's Balsam of Life, and proprietary drugs of Dr. S. S. Fitch.

In an advertisement, Mexican Mustang Liniment is touted as a cure "for the outward ailments of man or beast." A diverse group of health problems that can be alleviated is cited, including burns, sprains, bruises, sore throat, and harness sores (Fike 1987:135). The Doctor S. S. Fitch bottles may have contained a number of remedies including cherry pulmonic syrup, female restorative, or cholera and colic specific (Fike 1987:162). Hyatt's Infallible Life Balsam, manufactured in New York and sold in a large green or aqua paneled bottle, was supposedly effective against colds, coughs, and sore throats. Feature J also contained one Radway's Ready Remedy bottle. This was an anodyne, nervine, and pain killer. Radway's ministering angel was known to generations of New Yorkers (Figure 119) (Rode 1853). A J. R. Stafford's Olive Tar bottle (Figure 120) represents a pharmacological preparation that was recovered solely at Five Points. Olive Tar was primarily marketed for treatment of respiratory ailments (it could be inhaled or ingested) but was also purported to effectively treat cholera, worms, syphilis, and cancers (*New York Evening Post* December 13, 1858) (Figure 121). This proprietary medicine was manufactured from 1856 to 1863 (Trow 1856–1863). Another preparation that appears to be represented exclusively at Five Points and not at other New York sites is a Santal de Midy bottle. This Parisian import contained capsules for the treatment of



Figure 118. Case bottles embossed UDOLPHO WOLFE's//AROMATIC/SCHNAPPS//SCHIEDAM.

To the Nervous and Rheumatic.



Pains of all Kinds instantly Eased!
RADWAY'S READY RELIEF

Is the most powerful, speedy, and effectual antidote for all Nervous and Rheumatic affections in use; it is quicker than all other remedies in its operation. As soon as it is used, either internally or externally, its beneficial effects are experienced. It produces neither nausea nor sickness at stomach; it neither purges nor weakens the patient. Its object is to give instant relief to pain. It can be taken or applied by the babe at the breast and the adult in the prime of life with the same happy results. Taken internally, in doses of from five to sixty drops, and bathing the affected parts, it will relieve pain and cure diseases quicker than any other remedy in use.

RHEUMATISM

The most severe cases of Chronic Rheumatism have been entirely relieved in 15 minutes, by the use of this powerful antidote for pain.

NEURALGIA, TIC DOLOREUX, NERVOUS

Figure 119. Radway's Ministering Angel advertisement (Rode 1853-1854).

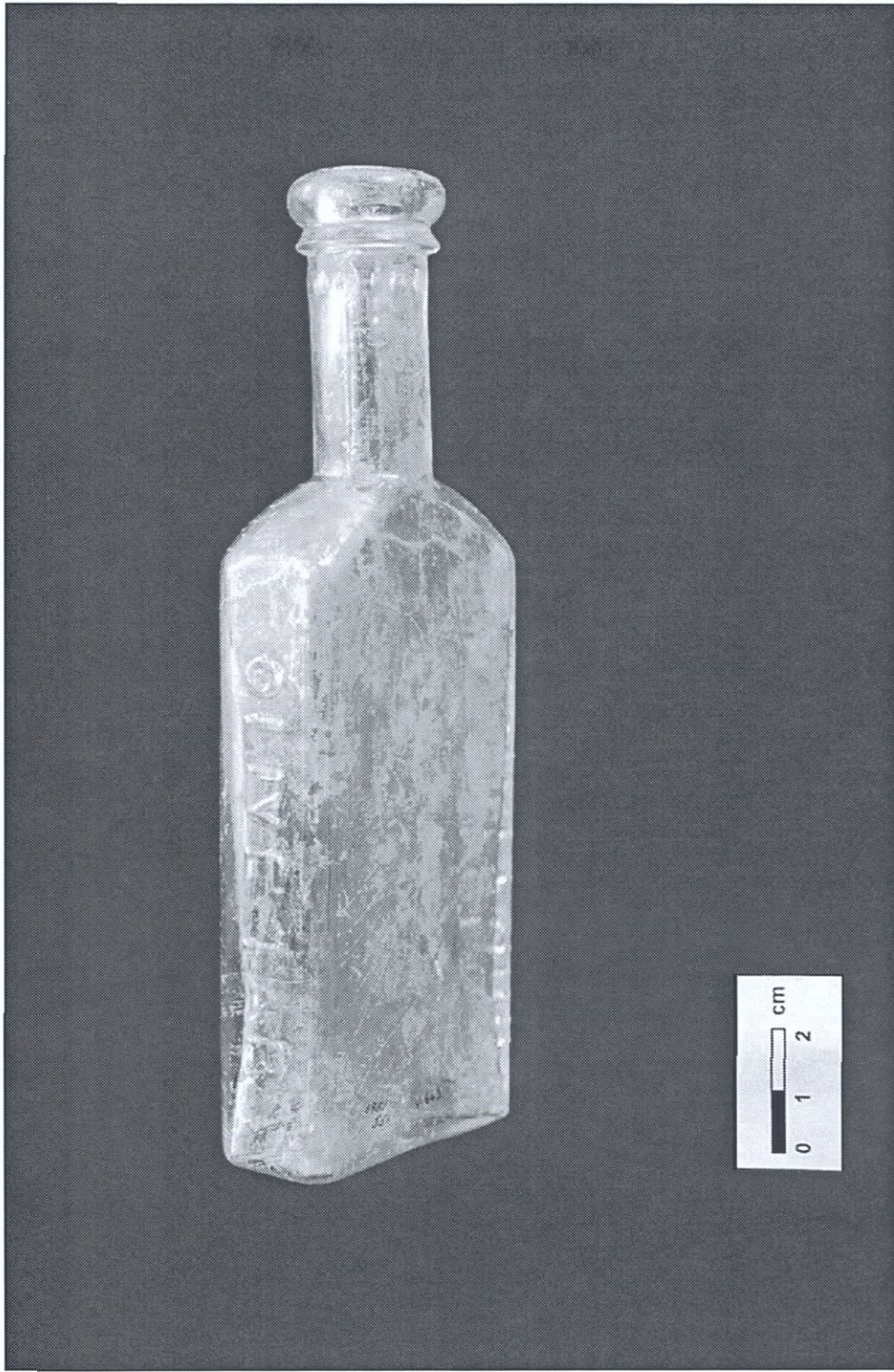


Figure 120. J. R. Stafford's Olive Tar, unique to Five Points.

J. R. STAFFORD'S OLIVE TAR,
AND
Iron and Sulphur Powders.

FOR ASTHMA, BRONCHITIS, COUGHS,
CROUP, INFLAMMATION OF LUNGS,
WHOOPING COUGH, AND
SCARLET FEVER.

Apply OLIVE TAR to the Throat or Chest, rubbing it well in, and also give from two to ten drops of Olive Tar on sugar. In severe cases the Olive Tar may be given every hour until relief is obtained. For Inhaling the odor of Olive Tar, and further directions for its use, and for a large number of testimonials of the highest class ever given to any popular remedy, see the book which accompanies each bottle.

FOR SPASMS, CHOLIC, CHOLERA, CHOLERA MORBUS, DYSENTERY, WORMS, or any Internal Pain, take and apply Olive Tar as above directed. *Relief will be immediate.*

RHEUMATIC AND NEURALGIC
Pains cease when Olive Tar is applied.

FOR BURNS, SCALDS and CHILBLAINS, apply Olive Tar, *pain will instantly cease.*

FOR SCROFULA, SYPHILIS, CANCERS, SALT RHEUM, ULCERS, ERYSIPELAS and all other diseases of the BLOOD, apply Olive Tar, and take

J. R. STAFFORD'S
IRON AND SULPHUR POWDERS.

These Powders are sold at One Dollar a package, and are sent anywhere free by mail.

OLIVE TAR FIFTY CENTS A BOTTLE.
SOLD AT
NO. 312 BROADWAY, NEW YORK.

TESTIMONIALS.

The following is from a lady who has for several years had charge of the Episcopal Parish School in Poughkeepsie, New York.

Poughkeepsie, May 18, 1858.
Dr. J. R. STAFFORD, NEW YORK:
During the past two years I have frequently used and administered your OLIVE TAR and IRON AND SULPHUR POWDERS, and always with great success.
SCARLET FEVER.—OLIVE TAR is a Specific for the Cure and Prevention of *Scarlet Fever*. During the past Winter there have been between twenty and thirty cases

Figure 121. Olive Tar advertisement, New York Evening Post, December 13, 1858.

kidney and bladder troubles and venereal disease (Fike 1987:189). Additional single vessels are Dr. W. Evans Teething Syrup, Hunts Sovereign Ointment, and Dr. Kiersted's Julup for Diarroea. Finally, identifiable embossed fragments of solitary Dr. J. Hostetters Stomach Bitters (dyspepsia, colic, dysenteric), Hegeman & Co. Cod Liver Oil (preventative, constipation), and an unidentified sarsaparilla (blood diseases) vessels were used by Lot 6 residents. Due to its distinctive shape, one unembossed proprietary vessel was identified. Godfrey's *Cordial*—originally advertised in 1721—was one of eight of the most popular old British patent medicines and was offered for teething children. Its principal ingredient was opium (Young 1992:127–128).

Feature O, situated on Lot 7, served at least 51 Irish immigrants living in a tenement above the Lysaight Saloon. This feature contained the largest number of embossed proprietary medicine bottles of any Five Points feature. Feature O fill yielded 110 glass vessels. Fifty-three were medicinal, comprising 48 percent of the deposit—the largest percentage of a medicinal assemblage from the site. Eleven proprietary medicine bottles and nine mineral or soda water bottles were recovered. The 33 remaining medicinal vessels appear to have contained ethical medicine.

A few of the Feature O proprietary drugs were also recovered in other features; however, most embossed vessels recovered from the feature were unique to the Five Points assemblage. Medications for external, possibly work-related, stresses seemed to prevail in this assemblage, but a variety of health problems were represented. Liquid Opodelloc was used to soothe bruises, sprains, burns, rheumatism, and stiffness of joints. This opium-based plaster was formulated around 1767. The vial recovered in Feature O was embossed LIQUID OPODELDOC, indicating a date of manufacture no earlier than the 1820s. The aqua color of this slender cylindrical bottle indicates it was an American copy of the original (McKearin and Wilson 1978:296). Two Radway's Ready Relief bottles were recovered. These paneled bottles are larger than the Feature J bottle and are embossed with the price—one dollar. This was a substantial sum for a mid-nineteenth century laborer. Turlington's Balsam of Life (one bottle was recovered from Feature O) is another proprietary medicine created in the eighteenth century:

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 its kindly Influence into those Parts that are most in Disorder (McKearin and Wilson 1978:291).

Some of the bottles recovered from Feature O were associated with more serious ailments. A bottle embossed F. BROWN'S/AROMATIC ESSENCE OF/JAMAICA GINGER/PHILADA held a potion that was purported to cure rheumatism, dyspepsia, cholera, and even fever. Drawing upon the tradition of mesmerism, which became popular in America in 1837, this preparation promised a cure resulting from ingestion of what was supposed to be an electrically charged liquid (Armstrong and Armstrong 1991). Abel H. Christie, physician and purveyor of "galvano" and magnetic curatives, sold his concoctions from shops at 182 and 128 Broadway between 1846 and 1852 (Doggett 1846–1851; Doggett and Rode 1851–1852). A large rectangular aqua bottle bearing the inscription LAW & BOYD/N. YORK (Figure 122) was produced by a firm at 62 or 68 East Broadway that specialized in botanic medicines from 1848 until the 1870s or later. The purchase of an herbal cure indicates a propensity toward the use of plants as medicine, possibly a significant practice at Five Points. Although its contents are unknown, one proprietary medicine bottle is the sole representative of an apothecary shop within Block 160. This vessel is embossed M. E. HALSEY & Co/DRUGGISTS/421 PEARL ST NY. The shop was at this location between 1851 and 1853 (Doggett and Rode 1851; Rode 1852–1853).

Eight proprietary medicinal vessels were recovered from the two lower deposits of Feature AG. These strata are attributed to a brothel at 12 Orange Street which was closed in 1843. Three of the vessels are square-bodied bottles, embossed HENRY'S//CALCINED//MAGNESIA//MANCHESTER (Figure 123). According to Fike (1987:141), this cure for acute indigestion, acid stomach, heartburn, dispepsia, etc., was introduced by Thomas and William Henry, St. Peters, Manchester, England, in 1772 and was available in the United States in 1804.

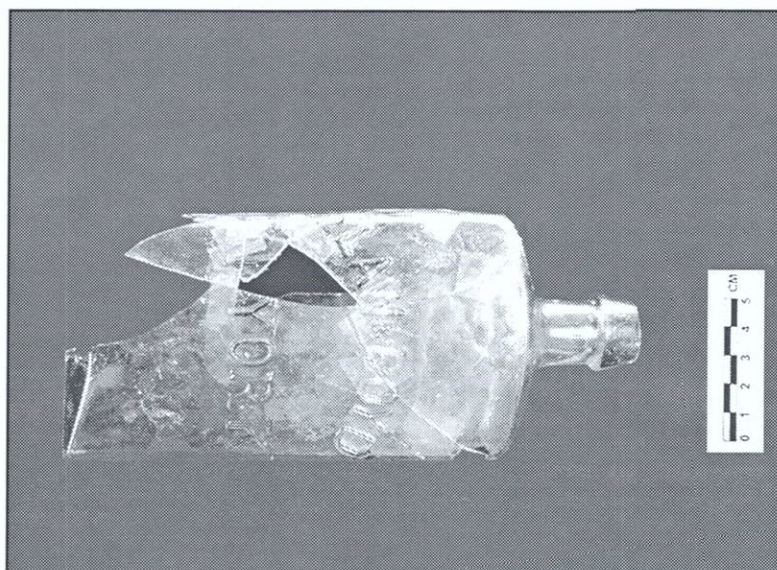


Figure 122. LAW & BOYD/N. YORK.



Figure 123. HENRY'S//CALCINED//MAGNESIA//MANCHESTER.

There is also a chestnut-colored bottle bearing a shoulder seal with the embossment ELIXIR DE GUILLIE G and an olive-green cylindrical vial with an indecipherable foreign-language embossment that spirals around the body. Two vessels embossed BY THE/KINGS PATENT/ESSENCE OF/PEPPERMINT were also noted in the assemblage. This popular early patent medicine was formulated by John Juniper in 1762. It was used as an "aromatic stimulant to allay nausea, relieve spasmodic pains of the stomach and bowels, expel flatus, or cover the taste or qualify the nauseating or griping effects of other medicines" (Hoerr and Osel 1956:883 in Jones 1981:5). Seven of these vials were recovered from Five Points features, the most of any one patent medicine vessel recovered at the site.

The remaining features contained three or fewer proprietary medicine vessels. Feature AF, one of the earliest features on the block (TPQ 1800), yielded three Essence of Peppermint vials. Three Henry's Calcined Magnesia bottles, virtually the same as those recovered from Feature AG, were also recovered from Feature AL's primary deposit. This deposit may also relate to a brothel on the premises. Three patent medicine vessels were also recovered from Feature AM, originally an icehouse situated on Lot 52. There is a clear Liquid Opodeldoc bottle, a fragment of an Essence of Peppermint vial, and a fragment of an aqua, cylindrical bottle with a partial embossment that was identified as NOWILL'S PECT/ORAL HONEY/OF LIVERWORT. This product was manufactured in New York and recommended for consumption (Fike 1987:199).

5.3.3.3 Mineral and Soda Water

Thirty-two vessels which contained mineral or soda water were recovered from the JZU cesspool complex of features on Lot 6. Mineral-water bottles represented include P. Knickerbocker (embossed 1848), two Clarke and White bottles (1852–1866) (Rode 1852–1855; Trow 1855–1866), and a BW & Co. bottle. In addition to these mineral waters from Manhattan companies, there was also a vessel embossed P. KELLETT/NEWARK/NJ (Figure 124, front center). There were five Sealy & Bro (1858–1866) (Trow 1858–1866), three Morton & Bros, Newark, and two T & W soda-water bottles among the 472 Pearl Street vessels (Figures 124 and 125 show a selection of bottles). Four soda-water companies were represented by a single vessel: Kornahrens & Fitschen (1860–1863) (Trow 1860–1863); Tietzen & Menken (1860–1865, bottle embossed 1860) (Trow 1860–1865); D. L. Ormsby, New York; and J. B. & E. S. Cronk, Tarrytown and Port Chester, N.Y. Thirteen vessels were represented by basal or partially embossed fragments only (Figure 125, front).

As was the case with the patent medicine, the JZU cesspool system and Feature O yielded the most soda and mineral waters. Nine of these vessels were recovered from Feature O, including two blue J. & A. DEARBORN bottles. John and Alexander Dearborn's partnership began in 1847 or 1848 and ended in 1855 with the death of Alexander (Doggett 1847–1851; Doggett and Rode 1851–1852; Rode 1852–1855). Other embossed mineral- or soda-water bottles were W.E. BROCKWAY/NEW YORK (1853–post 1870) (Rode 1853–1855; Trow 1855–1870), HARROLD & JOHNSTON/NEW YORK//H.&J. (1860–1862) (Trow 1860–1862), and two BOARDMAN bottles (1846–1858) (Doggett 1846–1851; Doggett and Rode 1851–1852; Rode 1852–1855; Trow 1855–1858).

Two features each contained four mineral- or soda-water bottles. Four of the five medicinal vessels from Feature H contained this allegedly healthful beverage. They include G. CASSIDY/NEW YORK//1861, WM EAGLE//NEW YORK//PREMIUM//SODA WATER (1845–post 1884) (Doggett 1845–1851; Doggett and Rode 1851–1852; Rode 1852–1855; Trow 1855–1884), and J BOARDMAN//NEW YORK//MINERAL WATERS//*THIS BOTTLE IS NEVER SOLD.

Soda- or mineral-water bottles embossed WALSH & O'NEILL/145/WEST 35th ST/NEW YORK, and SEE THAT EACH CORK IS BRANDED/CANTRELL & COHRANE//DUBLIN &...BELFAST, and two others were recovered in Feature AK. The latter vessel is the only embossed glass vessel from Ireland in the Five Points assemblage.



Figure 124. P. KELLETT/NEWARK/NJ.

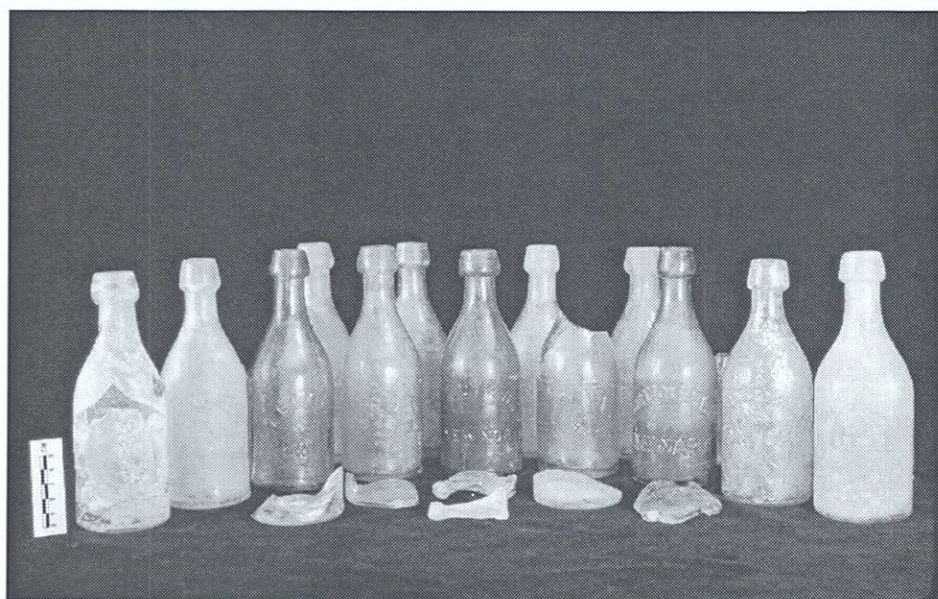


Figure 125. Soda water.

Three of these bottles were found in both the upper deposit of Feature N and the lower deposit of Feature AN. A blue TWEEDLES/CELEBRATED/SODA & MINERAL/WATERS//38/CORTLAND STREET/NEW YORK (1844–1849) (Doggett 1844–1849) was identified in AN. The remaining features contained two, one, or no soda- or mineral-water bottles. Feature AF (128 vessels) is one of only two features that contained significant numbers of vessels and no soda- and mineral-water bottles.

5.3.3.4 Plant Remains

Forty-three of the plant taxa identified by Leslie Raymer through macroplant analysis could have been used as medicinal remedies by the nineteenth-century inhabitants of the Five Points neighborhood.¹ Given the problems with endemic disease that the Five Points residents suffered throughout the nineteenth century and the low economic status of many of the immigrants living in the project area, it is likely that herbal folk remedies were popular among the residents. The recovery of the medicinal plants may document the use of herbal folk remedies by both the artisan- and working-class occupants of the project area. While the recovery of these 43 plants is not proof of their medicinal use by the Five Points residents, it is evidence for the types of plants that may have been utilized as home remedies in the late eighteenth and nineteenth centuries. The potential medicinal plants and their distribution within the features are presented in Table 107 in Section 3.6.

The potential medicinal plants consisted of 23 probable cultivated and/or domesticated plants and 20 annual or perennial herbaceous plants. The probable domesticates include two exotic domesticates (coffee bean, peanut), five locally grown domesticated vegetables (cucumber/cantaloupe, ground cherry, lettuce, maize, squash/pumpkin), two nuts (acorn, hickory nut), and 13 fruits (blackberry, common apple, elderberry, fig, grape, huckleberry, mulberry, peach, plum/cherry, raspberry, serviceberry, strawberry, watermelon). The herbaceous plant taxa consisted (in part) of 10 naturally occurring edible herbaceous plants (carpetweed, catchfly, clover, dock/sorrel, goosefoot, knotweed/smartweed, pigweed, pokeweed, purslane, wood sorrel), one naturally occurring plant that was widely used in the nineteenth century as a worm preventative (wormseed), and three probable naturally occurring yard weeds (jimsonweed, nightshade, ragweed).

Strawberries were used in the nineteenth century as a panacea, with almost every portion of the plant having a reported medicinal value (Duke 1992). The berries were used as a worm preventative, to reduce fevers, to treat kidney stones and gout, and as a cosmetic (Coon 1963; Krochmal and Krochmal 1973; Angier 1978). Unlike cherries and apples, peaches were never very popular among nineteenth-century physicians; however, they were widely used as a folk medicine. Peach fruit, leaves, kernels, and flowers were used to treat stomach ailments, liver problems, expel intestinal worms, as a laxative, and as a topical treatment for wounds and skin diseases (Crellin and Philpott 1989).

The elderberry was an important herbal remedy in the late eighteenth and early nineteenth centuries in America. According to Crellin and Philpott (1989), its popularity declined in the latter half of the nineteenth century. The dried inner bark of the stem has been used for centuries as a purgative. Crellin and Philpott (1989) report that elderberry bushes were commonly planted around nineteenth-century American homes so that the plant would be readily available for the production of medicine. The fruit is used in folk medicines as a cure-all 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).

Although six of the herbaceous plant taxa were definitely cultivated in the nineteenth century and 10 more were sometimes cultivated and often gathered from the wild as potherbs, all of these plants were also widely distributed in the East as naturally occurring herbaceous weeds. Whether or not these plants were grown as ornamentals or consumed as potherbs, they were available to the nineteenth-century Five Points residents for use as medicines.

¹This summary is drawn from Leslie Raymer’s research. See Section 3.6 for Raymer’s in-depth discussion of plant use.

Two plants, purslane and goosefoot/wormseed (*Chenopodium album*, *C. sp.*, *C. ambrosoides*), are virtually ubiquitous in the analyzed features. Purslane was used frequently in salads and as a topical treatment for burns and bruises, one of several applications. In the eighteenth century, it was employed as a treatment for scurvy. Wormseed (*C. ambrosoides*), which is also referred to in the literature as Mexican Tea, may represent a medicinal remedy. Oil derived from the seeds was made into a tonic (vermifuge) that was used to treat intestinal worms in humans as well as in animals. The plant does not actually kill the worms, but rather paralyzes them, after which a purgative or laxative was administered to expel them from the body (Krochmal and Krochmal 1973). Wormseed was a popular treatment for intestinal worms, particularly roundworms, in the nineteenth century. In the early 1800s, African Americans as well as European Americans commonly used wormseed for this purpose. It was widely used in the South in the early twentieth century as a treatment for hookworms (Crellin and Philpott 1989). The syrup was also reported as a useful tonic or cough medicine. In addition, wormseed was used to treat nervous conditions and insect bites, induce menstrual flow, as an asthma treatment, and to lessen the pain of menstruation. Wormseed is mentioned in Colonial literature as a headache cure when mixed with horehound (Krochmal and Krochmal 1973).

Pokeweed was widely used as a folk remedy throughout the eighteenth and nineteenth centuries in the United States. Indeed, this plant was held 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 (Crellin and Philpott 1989). Pokeweed is said to stimulate the entire glandular network, with an effect similar to cortisone. This would account for its success as a rheumatism remedy (Angier 1978). Dock has been used as a medicinal remedy for centuries. It was highly regarded as a laxative, a blood purifier, and also as 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. Jimsonweed was most commonly used as a treatment for the spasmodic coughing associated with asthma. The leaves were also made into an ointment that was applied to sores, boils, pimples, swellings, and skin ulcers (Coon 1963; Krochmal and Krochmal 1973).

Dock or sorrel was primarily associated with artisan (or transitional artisan-tenement) contexts, including Features AF, B, and D. Dock was also recovered from two tenement contexts, Features A and J. Like dock/sorrel, pokeweed was associated with the artisan-class features (B, E, N) and the tenement cesspool (Feature J). Three probably naturally occurring yard weeds, jimsonweed, nightshade, and ragweed, all of which were used in the nineteenth century as folk medicines, were found in the features. Jimsonweed was found in every feature except Feature AL. Nightshade was recovered from six features (AG, AL, B, J, N, Z), and ragweed was restricted to Feature J. All three of these herbaceous weeds are classified as adventive weeds that favor disturbed habitats and grow abundantly around human habitations and in agricultural fields (Radford et al. 1968).

5.3.4 Patterning of the Data

5.3.4.1 Temporal Changes

Changes in medicinal use over time in archeological assemblages are difficult to identify. This is due to a few confounding factors. The most significant of these is the scarcity of embossed vessels during the late eighteenth and early nineteenth centuries, the period when the earliest material was discarded on Block 160, rendering identification of medicine impossible except for one or two instances. Although about 31 percent of the medicine bottles were identified from embossments or distinctive shapes, these identifications usually do not provide a concise identification of the illness that was being treated. One of few patterns that emerged from this sample was the large number of embossed vessels manufactured during the 1840s and 1850s. This may have been caused by the increase in various patent medicine brands during and after this period (Young 1992). It may also reflect the relatively intensive patent medicine use by Irish immigrants and the dramatic increase in population at Five Points during these years.

A degree of ambiguity is also inherent in the macroplant assemblage. The 214,039 macroplant remains recovered from the features, consisting of charred and uncharred seeds and other reproductive structures, may represent folk or herbal remedies grown or procured and processed by Five Points inhabitants. The extensive ranges of many of these flora and their dietary potential make interpretation difficult. The distribution of wormseed (*Chenopodium*) remains is interesting. The sample is comprised of an equal number of artisan and tenement features; yet, wormseed remains were documented in four of the artisan features and only two of the tenement features, as well as in one commercial feature. The higher frequency of *Chenopodium* in the earlier artisan features may indicate more extensive use of this important medicinal plant during the period when significant numbers of African Americans resided at Five Points. Use of *Chenopodium* in the Northeast is not as well documented as in the South and Mid-Atlantic regions (Weller 1909); however, the recovery of only one proprietary medicine bottle (J. R. Stafford's Olive Tar, Feature J) from Block 160 that contained a preparation for treating worms may indicate a reliance on wormseed.

5.3.4.2 Characteristics of the Brothel Assemblages

The primary deposits from Feature AG, Lot 43, and Feature AL, Lot 47, were at least partially composed of refuse from houses of prostitution. A brothel managed by John Donohue was located in the cellar at 12 Orange Street from ca. 1830 to 1843, when it was closed. The deposit associated with this operation (Feature AG, AS III) was quite distinctive, differing both qualitatively and quantitatively from other Five Points deposits. Relatively expensive vessels such as blown three-mold, decorated, handled punch cups and fancy scent bottles were recovered, as well as bird-watering dishes—a novelty that was beyond the reach of nearly all Five Points residents. As noted for other brothel assemblages (Seifert 1991:104), there was a fairly large lighting component including a float lamp and a portable peg lamp that reflects the use of artificial light for night work.

The medicinal assemblage was also unusual. The 39 medicinal vessels recovered from Feature AG included a greater-than-average number of embossed vials and bottles for this period. It is notable that all of the identifiable patent medicines could have been used to soothe stomach distress, and, in the case of the essence of peppermint vials, to improve the taste of foul-tasting medicines (Jones 1981). Although the French elixir bottle could not be identified, elixirs contained opium used as a depressant, to induce sleep, restore composure, or relieve pain (Fike 1987:114–116).

A wineglass measure (Jackson 1981:19), used to insure an exact dose of medication, was recovered from Feature AG. The measure, the only vessel of its type from the site, may indicate more intensive medicinal use, or use that was being regulated.

Three hygiene vessels may also provide some insight into the health issues experienced by prostitutes at the time. Two glass, upright, female urinals (Jackson 1981:24) (Figure 126) and a nursing shield were recovered. The urinals may have been used by bedridden prostitutes suffering from one occupational malady or another. Children were often born to prostitutes and were sometimes raised in the establishment (Gilfoyle 1992). The nursing shield was probably used by a mother to protect her good clothes.

The Feature AL assemblage also appears to relate to a house of prostitution. Like the Feature AG assemblage, the glass artifacts from Feature AL were more expensive, suggesting a degree of refinement that was unusual for the neighborhood. Once again, matching punch cups were recovered, as well as a bird-watering dish and a celery-serving vessel. Twelve perfume or scent bottles were found in this deposit. The medicinal assemblage again included three Henry's calcined magnesia bottles and two mineral water bottles. While a small medicinal assemblage in this context may seem odd, a brothel deposit might contain a moderately sized medicinal assemblage because serious illness would require an individual to leave the house. The number of medicine vessels (and frequency of almost every other glass vessel) from Feature AG may reflect a greater number of occupants at this establishment than the AL-associated brothel, a longer period of operation, or both.

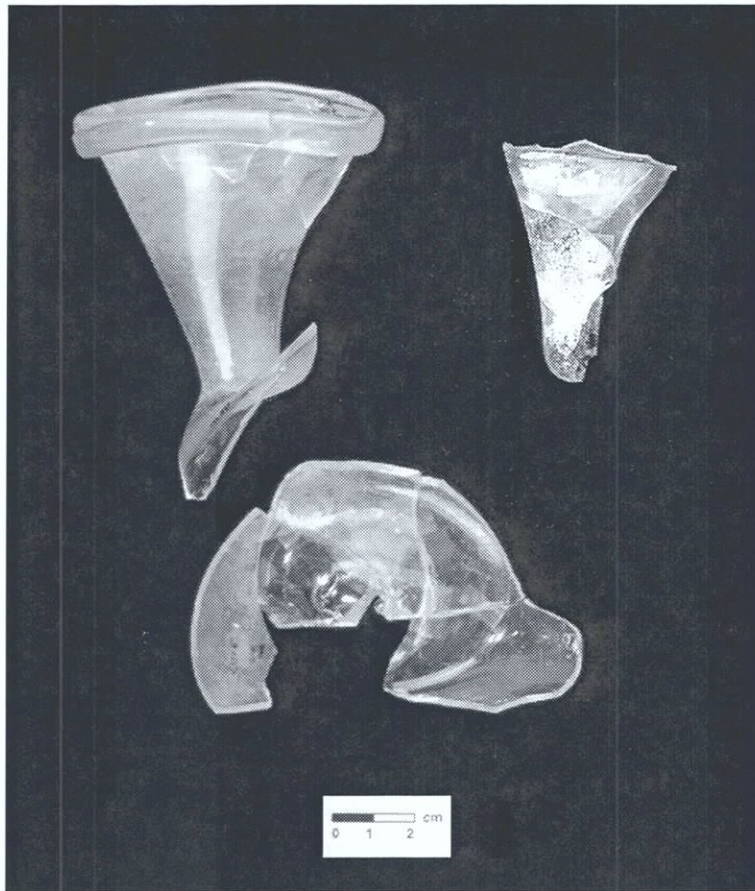


Figure 126. Female urinals.

5.3.4.3 Irish-American Medicinal Use

The Feature J complex on Lot 6 and Feature O on Lot 7 served the tenement dwellers at 472 and 474 Pearl Street during the third quarter of the nineteenth century when the residents of both properties were almost all Irish. As noted above, these features contained much of the proprietary medicine from the site. Comparative research indicates that the alternative medicinal assemblage (proprietary drug and soda and mineral water) from the JZU complex included a smaller percentage of patent medicine than two contemporary middle-class sites in Manhattan. The Greenwich Mews site (Geismar 1989) and the Sullivan Street site (Salwen and Yamin 1990) yielded alternative medicinal vessels comprising 39 percent and 43 percent of their respective assemblages. The Feature JZU alternative medicinal assemblage was only 30 percent of all medicinal vessels recovered. The Feature O alternative medicine assemblage was 38 percent, indicating that some residents chose to spend a larger portion of their wages for patent medicine, rather than obtaining free ethical preparations that were available at the nearby New York Dispensary at the intersection of Centre and Worth Streets. This may also reflect the severity of health problems and a search for relief after other cures had failed. The predominance of preparations for treatment of rheumatism, sprains, and other external ailments is not surprising for a group composed of many manual laborers (U.S. Bureau of the Census 1850; New York State Census 1855; NYCTA 1866). Since the most prevalent remedy in the JZU complex, aromatic schnapps, was not recovered in Feature O, it is possible that only a few consumers, or a single individual, was particularly fond of the remedy.

The JZU alternative medicinal assemblage consisted of 67 percent soda- and mineral-water vessels as compared to 33 percent and 35 percent for these bottles at Greenwich Mews and Sullivan Street. This indicates that Irish Americans at Five Points favored the least expensive alternative remedy. This is supported by the Feature O soda- and mineral-water vessels which comprised 45 percent of the alternative remedies. The consumption of mineral water was an alternative remedy that persisted through the nineteenth century. Mineral water was used in two ways: soaking in it at exclusive spas or ingestion. The cartoon in Figure 127 makes fun of the practice of soaking. It was believed that the minerals in this water, absent from wells or public water, could cure a variety of ailments including constipation, diarrhea, asthma, bronchitis, diseases of the skin, dyspepsia, diabetes, kidney and urinary-tract infections, paralysis, and nervous prostration from mental and physical excesses (Armstrong and Armstrong 1991:90). Mineral water was employed as a cure for different ailments at different times during the century. During the first half of the nineteenth century, it was used primarily to treat gout and rheumatic ailments, but just before the Civil War, it was touted as a cure for neurasthenia—the stress of nineteenth-century civilization (Armstrong and Armstrong 1991:91). Some of the cures Glassie (1982:139–140) observed in a village not far from the area from which many of the immigrants on Block 160 came would not appear in the archeological record. For example, in Ulster, cures for specific diseases might entail drinking a whiskey punch to calm a cold. A cup of milk into which red hot tongs have been plunged was imbibed to alleviate a sore throat.

The Feature JZU complex and Feature O assemblages are significant because no other relatively large features contained a comparably high percentage of medicinal vessels and no other assemblage exhibited such a pronounced preference for soda and mineral waters. Explanations for the character of these two medicinal assemblages seem to be that Irish Americans experienced more health problems than other Five Points residents due to living conditions, diet, dangerous work conditions, or other factors; or Irish Americans chose to spend more money for medicine than other ethnic groups.

William F. Thoms, M.D., reported that the mortality rate in New York City in the 1860s exceeded that of most other cities and, furthermore, “in the Sixth Ward, which is noted for insalubrity, the death rate, in the year 1863, was one in every 24 of the population...[however,] there are to be found very marked differences in the rates of mortality in different localities and particular tenant-houses in the Sixth Ward itself” (Citizens’ Association of New York, Council of Hygiene and Public Health 1970). The city’s average mortality rate at this time was a little less than one in 35. In the Fifteenth Ward in 1863, it was one in 60 (Citizens’ Association of New York, Council of Hygiene and Public Health 1970:xliv–xlvi).

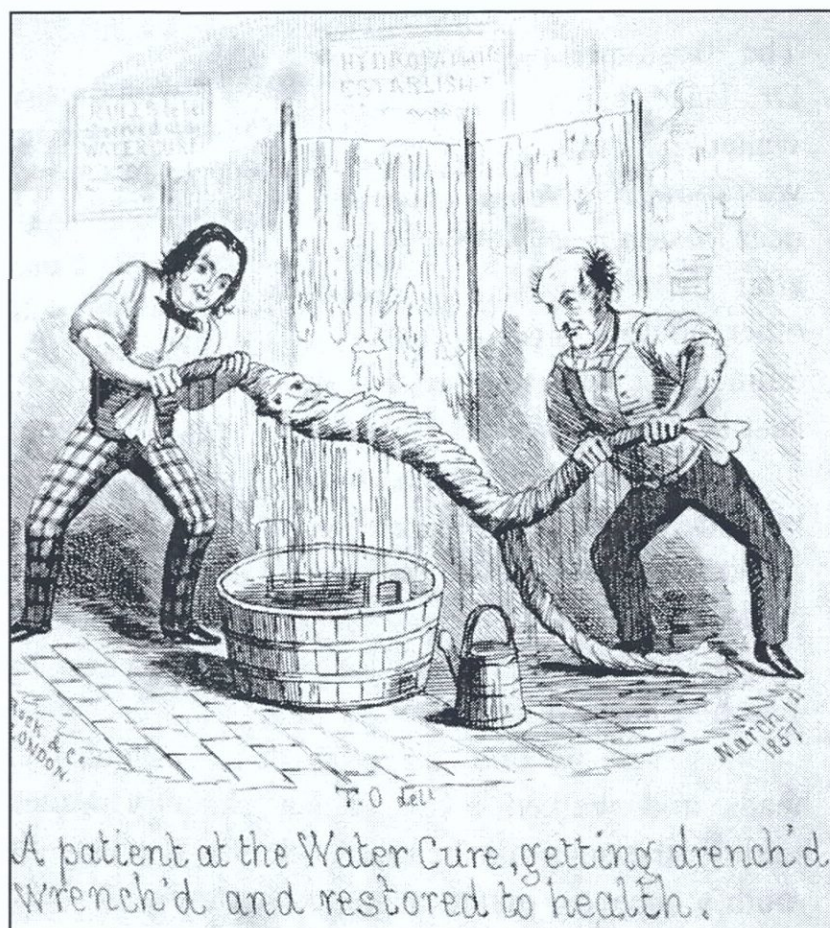


Figure 127. Mineral-water caricature (Armstrong and Armstrong 1991).

According to Hasia Diner, Irish newcomers were generally unhealthy. Irish immigrants entered insane asylums more often than all other foreign-born individuals in every place they lived. A physician at Blackwell's Island stated that Irish-American women constituted the largest group there, due to "the combined moral and physical influences of their leaving the homes of their childhood, their coming almost destitute to a strange land, and often after great suffering." However, that other immigrants had a lower rate of insanity than the Irish undermines the notion that mental instability grew directly out of the process of migration (Diner 1983:109–110). Furthermore, she corroborates the accounts of Thoms, noting that the physical health of Irish immigrants may have also been poor in relation to others. During the early twentieth century, Irish females between the ages of 25 and 44 died younger on average than all other women (Diner 1983:110). Hazardous working conditions were responsible for injuries and high mortality rates for Irish-American men (Stott 1990:127). Ernst (1994:53–56) also notes that "among the immigrants, the Irish were the chief victims of disease." He adds, "Natives of Ireland comprised 53.9 percent of New York City's foreign-born inhabitants in 1855, but at Bellevue Hospital, 85 percent of all the foreign born admitted from 1849 to 1859 were born in Ireland" (Ernst 1994:54). The number of Irish immigrants struggling with psychological problems suggests that their increased use of mineral and soda waters, purported to alleviate symptoms of the psychological disorder neurasthenia, not only reflects the relatively low cost of these remedies, but also indicates an attempt to address a mental-health problem.

5.3.4.4 German-American Medicinal Use

The four features attributed to German immigrants, AN, N, AF, and B, generally contained relatively fewer medicinal vessels. Feature AN, associated with the Samuel Stone household, yielded only 12 medicinal bottles comprising 13 percent (9 vessels) of the lower deposit and 15 percent (3 vessels) of the upper deposit. The lower deposit of Feature N, attributed to Widow Hoffman, contained only 11 ethical medicine containers—nine percent of the deposit. Feature AF, an earlier deposit relating to the Hoffman family, contained 15 medicinal vessels comprising just 12 percent of the deposit.

A lower deposit of Feature B is the only German-American deposit with a significant, albeit small, medicinal assemblage. Harris Goldberg, a Jewish tailor and a leader of the *Shaarey Zadek* synagogue (Grinstein 1945), who was probably from eastern Germany, lived at 472 Pearl Street with six other adults—two men and four women. Thirteen ethical medicinal vessels were recovered from the deposit associated with the Goldberg household. According to Ernst, the comparatively good health of the Germans is in striking contrast to the Irish. While 29.4 percent of the city's foreign-born population was German, only 6.25 percent of admissions to Bellevue were German-born (Ernst 1994:54). While alluding to an assertion that "the Germans were more cleanly and orderly in their living habits," Ernst argues that the health differences between the two groups is more likely attributable to the superior economic status of the Germans which enabled them to live in more comfortable surroundings. He also states that, in general, German immigrants were not as physically debilitated as the poorer Irish when they arrived in New York (Ernst 1994:54).

5.3.5 Conclusion

The most commonly used medicinal preparations at Five Points were ethical medicines which came in unembossed vials and bottles that were acquired from a dispensary, purchased at an apothecary shop, or prescribed by a doctor. Unlike ethical vials and bottles, embossed vessels which contained proprietary medicine can provide insight into the character of health problems, the economic status of the patient, and may assist in determining the nature of the businesses operating on the lot. This investigation indicates that, in general, Irish-American medicinal use at Five Points was intensive relative to other immigrant groups, such as German Americans, living within Block 160. Furthermore, the Irish-American reliance on mineral and soda waters is thought not only to reflect its relatively lower price, but may have been an attempt to alleviate psychological distress. Intensive medicinal use by Irish immigrants may be due to a familiarity with, and reliance on, health care in Ireland; their poverty and debilitated state upon arrival in America; and the unsanitary conditions in the Pearl Street tenements.

The Feature AG and AL assemblages, identified at least in part as refuse from houses of prostitution, included some distinctive medicinal vessels. Deposits attributed to the brothels were characterized by a heavier reliance on patent medicine. All five vessels recovered in the primary deposit of AL were embossed patent or soda/mineral-water bottles. Even though it dates before the explosion in the number of patent medicines available at mid-century, the 12 Orange Street brothel deposit (AG) yielded eight proprietary vessels. Both brothel assemblages contain a significant number of medicines for intestinal or stomach distress.

In his report of the Sixth Sanitary District, Dr. Thoms proposed a number of remedial measures. These included an improvement of sewerage, an educational program about sanitation for residents, regulations regarding tenant-house construction, regulation of dram-shops and brothels, vaccination for small-pox, and implementation of sanitary measures to control typhus and other diseases (Citizens' Association of New York 1970:82-84). Because of the efforts of people such as John Griscom and William Thoms, sanitary conditions in the Sixth Ward did gradually improve.

5.4 Parasitic Disease at Five Points: Parasitological Analysis of Sediments from the Courthouse Block (Karl J. Reinhard)

5.4.1 Introduction

The study of archeoparasitology in the United States has lacked a case study with a planned strategy for parasite recovery from multiple features in a single urban setting. Consequently, the evaluation of parasitological data in the United States is reliant on comparison with British studies of urban disease ecology (Taylor 1955; Pike 1975; Jones 1979, 1982, 1985, 1986, 1988; Moore 1981) and, to a lesser extent, German (Herrmann 1985, 1986) and French (Bouchet et al. 1989) studies of Medieval parasite epidemiology. The comparison with European studies is not ideal since most of these studies focus on the Medieval setting. This is a period that predates the establishment of the germ concept, recognition of parasite worm infection, and effective treatment of parasite infections. Goodman et al. (1988) document fecal contamination as a major health hazard in urban environments from historical documentation. The direct evidence of such infection can be found in the examination of privy sediments for parasite eggs.

The excavation of Block 160 rectifies this problem. Parasitological analysis was included in the research design, and features that had a high potential for parasite recovery were extensively sampled. Furthermore, the soil conditions at the site ranged from good to excellent with regard to preservation of parasite eggs. Therefore, the Five Points analysis provides the best North American glimpse into the parasitic disease state in a truly urban environment.

Analysis of privy sediments from Five Points shows that the inhabitants were potentially subject to a variety of parasitic diseases. Analysis shows that fecal contamination was the main source of disease. Importantly, tapeworm infection was absent. The deposits show that the pattern of fecal-associated disease was established before the tenements were built. Surprisingly, the occupants of the tenement that is associated with Feature J actually showed reduced parasitism in comparison to features that predated the influx of Irish immigrants. The immigrants seemed to be especially successful in controlling infection with the giant intestinal roundworm, *Ascaris lumbricoides*.

Presented below is an overview of historical archeological studies of parasitism followed by a consideration of parasitic health threats in the urban setting. The analysis of Five Points sediments is then presented, and the data are evaluated with respect to the control of infectious disease in a crowded, urban setting.

5.4.2 Historical Archeology and Parasitology

The first historical archeologist to sponsor parasitological study was Steven A. Mrozowski in his analysis of Queen Anne Square, Providence, Rhode Island (Reinhard et al. 1986). Mrozowski excavated three privies dating to the American Revolutionary War era. His methodological sampling of the privies for parasite eggs, pollen grains, and seeds resulted in the discovery that dietary pollen varied in distribution with parasite eggs and plant seeds. Also, these fecal residues tended to be concentrated in the lower 10–30 cm of the latrine deposits. The analysis also showed that even though there was substantial difference in diet between artisan and merchant households, both classes were subject to parasitic disease. Ultimately, the processing methods pioneered on the Queen Anne Square project were tested and presented as ideal for the recovery of pollen grains and parasite eggs (Warnock and Reinhard 1992). Although Queen Anne Square represented an urban setting, the lots were open, large, and developed with single-family dwellings. Therefore, the sediments do not represent a densely occupied urban setting.

The next major study of an urban site was of Philadelphia (Reinhard n.d.). This study evaluated the efficiency of different privy styles in controlling parasitic disease. The study showed that parasitism was an unavoidable aspect of life, despite sanitation practices. For example, barrel-style privies from the seventeenth-century Swedish settlement of Philadelphia contained as many as 7,400 eggs per gram of soil. Later cyst-style privies from the nineteenth century contained 9,000 eggs per gram of soil. Therefore, establishing more formal sanitation practices did not seem to reduce the problem of parasitic disease in the urban setting.

Two subsequent studies addressed parasitism through the late nineteenth century and early twentieth century. Privy deposits from Wilmington, Delaware (Fries et al. 1990), showed that fecal-borne parasitism was a constant health threat through the early twentieth century. A second study of parasitism in the later nineteenth century and early twentieth century at Harpers Ferry, Virginia, demonstrated that parasitic disease was a constant health threat until the 1930s (Reinhard 1994). Modern sanitation practices were actually resisted by the inhabitants of Harpers Ferry (Ford 1991).

Other studies have demonstrated that parasitic disease was an aspect of life for the earliest colonists in the New World. Fecal-borne disease is evident in one of the earliest settlements of Colonial Williamsburg (Reinhard 1989a, 1990a). Regional variation in parasitic disease was evaluated by a study of privies dating to the middle of the nineteenth century from Minneapolis, Minnesota. There, tapeworm infection was more common than roundworm infection. Fish tapeworm infection was especially prominent, due to the ethnicity of the group studied. Norwegian immigrants have long hosted fish tapeworm because of the practice of eating poorly cooked fish (Reinhard 1996). In contrast to tapeworm infections from meat, fecal-borne parasitism is minimal in the Minneapolis samples which indicates that such parasitism was controlled by refined hygiene, public sanitation, or both.

Only two studies of soil samples from historic New York City were previously analyzed. Soil samples from privies in the Greenwich Mews and the Mugavero projects revealed parasitism with whipworm and *Ascaris* (Reinhard 1989b, 1990b).

From 1989 to the present, methodological sampling of sediments from Charleston, South Carolina, has been conducted by Martha Zierden of the Charleston Museum (1996, personal communication). A series of studies has defined patterns of ecological change associated with urbanization through pollen analysis. Unfortunately, the analysis of Charleston sediments has revealed little evidence of parasitism.

Various other studies of Civil War sites, rural farmsteads, and small villages have been conducted. However, these do not directly relate to the issue of urban lifestyle and parasitism. In fact, none of the studies mentioned above really addresses the parasitic state in truly crowded urban settings with the exception of Philadelphia and the Greenwich Mews studies. However, the studies have demonstrated several important points: (1) parasitism was a significant problem for Euro-Americans and African Americans throughout the period during which they occupied North America; (2) parasites do not respect socio-economic boundaries; (3) ethnicity affects the diversity of parasites through dietary practices; and (4) variants in sanitation practices do not differentially reduce parasitic disease.

With these points in mind, we can turn to the Five Points analysis and make some predictions concerning the parasitic problems posed to the community and then address the predictions with data retrieved from the Five Points sediments.

5.4.3 Parasitic Disease in the Urban Setting

5.4.3.1 Zooarcheology Implications

Based on various forms of documentation, several sources of parasites threatened the health of Five Points inhabitants. The analysis of animal bones provides direct evidence of the types of meat eaten at Five Points and also points to the presence of non-food animals in the area (see Section 3.5 of this volume). The meats used included pork, beef, mutton, shellfish, and fish. Of these, tapeworm, roundworm, and/or protozoa infections are associated with pork, beef, and fish.

Pork poses the greatest danger of infection. Pork was widely infected with *Trichinella spiralis*, a roundworm which encysts in the muscle and then infects humans when the cysts are eaten. This causes the dangerous disease trichinosis, which can be fatal. Secondly, cysts of the tapeworm *Taenia solium* are carried in the muscle of pigs and when eaten result in infection with the adult tapeworm within the human intestine. If humans consume food or water contaminated with the eggs of the tapeworm from feces, they are subject

to the disease cysticercosis. This can also result from autoinfection when gravid segments of the tapeworm move upward in the intestine due to reverse peristalsis. When this happens, the cysts of larval tapeworms establish themselves in various organs, including the eye and brain. Blindness and neurological disorders result.

Beef carries another tapeworm, *Taenia saginata*. Like *T. solium*, *T. saginata* infection results in the development of a long tapeworm in the human host. Unlike *T. solium*, *T. saginata* does not cause cysticercosis. Beef is also the source of infection with *Toxoplasma* which occasionally causes severe retardation in children born to women who become infected while pregnant.

Some fish, especially salmon and whitefish traded from the Great Lakes to New York, are a source of diphyllbothriasis, which is infection with the tapeworm *Diphyllobothrium latum*. This parasite eventually became associated with subsets of the Jewish population of New York City, specifically mothers and grandmothers. Imported fish was used to make gefeltfish in New York. Although the fish is cooked and the tapeworms are eventually killed, the mothers and grandmothers who prepared the food tasted the uncooked fish to test the seasoning. Consequently, mothers and grandmothers became infected and *D. latum* earned the reputation of being a "Jewish grandmother disease." *D. latum* is extremely pathogenic due to the affinity of the adult worms for vitamin B₁₂. Infection often results in extreme anemia.

The animals associated with the urban setting, both domestic and wild, can be a source of disease. Domestic dogs are a source of disease. In the urban setting, the roundworm *Toxocara canis* is a serious health threat. This is a parasite of dogs and has coevolved a very specific infection mode. Eggs of the parasite are passed in dog feces and mature. The eggs are eventually consumed by a dog and hatch in the intestine. The larval worms migrate to somatic tissue and undergo hypobiosis. This is a suspended development that is not detected by the dog immune system. If the worms are in a male dog, this usually ends their life cycle. However, in the female, the worms migrate to the developing fetuses when the dog becomes pregnant. The puppies are born with active infections. The risk to humans comes when eggs are ingested. The eggs hatch in humans, but since this is not the host with which they have coevolved, they do not undergo hypobiosis. Instead they migrate through the tissues causing a disease called visceral larval migrans. The worms have an affinity for central nervous tissue and ocular tissue. Especially in children, toxocariasis causes neurological problems, blindness, and is occasionally fatal. Cats carry a similar parasite *T. cati*. Some parasitologists suspect that this parasite causes the same problems in humans as *T. canis*, but this is far from certain. Cat skeletons were found in the Five Points excavations.

Importantly, rat skeletons were also found. The flea parasites of rats carry bubonic plague and, therefore, are a source of disease if the rat population is not controlled.

5.4.3.2 Fecal-Borne Disease

Several parasites have evolved direct anal-oral life cycles among humans. These are some of the most tightly coevolved parasites of humans and are exclusively parasites of humans. They are nearly ubiquitous among urban human populations. Three roundworm species are among the most common of human parasites: pinworm (*Enterobius vermicularis*), whipworm (*Trichuris trichiura*), and the giant intestinal roundworm (*Ascaris lumbricoides*).

The pinworm is the oldest human parasite. Cladistic studies of the human pinworm in comparison to ape pinworms show that the human pinworm coevolved with hominids since the ape-human divergence in the Pliocene. It is the only worm parasite of humans that has evolved aerosol infection. The female worms crawl out of the anus at night to lay their eggs on the perianal folds. Sometimes the worms desiccate and burst, showering eggs into the air and onto bedding. The eggs have evolved to stay aloft on air currents for a period of time before settling onto the local environment and contaminating household surfaces and food. The eggs can also be inhaled with resulting infection when the larvae hatch on the nasal mucosa. Also, when the eggs are laid, the female excretes a pruritic substance. The resulting itching causes nocturnal scratching which transfers the eggs directly to hand surfaces. Therefore, human-to-human

contamination occurs when an infected individual touches another person. Also, the pinworm can retro infect. Retro infection occurs when the eggs hatch on the perianal folds and the larvae reenters the intestinal tract. Therefore, once the pinworm is established in a human community, it is very difficult to eradicate. Before the advent of parasitology and an understanding of the pinworm life cycle, it was probably impossible to eliminate them. Crowded dwellings severely aggravate infection levels. The author's studies of prehistoric Anasazi coprolites in the Southwest show that these early "apartment" dwellers suffered extreme infection levels. Fortunately, although the worms cause substantial discomfort, they do not cause significant pathology in most cases.

Whipworm is another human-specific parasite. Whipworm eggs are passed in human feces and require three weeks in optimal conditions to become infective. They are consumed in contaminated food or water and hatch in the intestine. The worms cause minor ulceration of the intestinal tissue. In massive infections, they can cause rectal prolapse in children. Interestingly, although whipworm was known as a human infection in Roman times, it was not known as a parasite during medieval times. Whipworm was rediscovered by German researchers in the mid-eighteenth century, but its importance as a human parasite was not recognized until the mid-nineteenth century. Even though the inhabitants of Five Points may not have known of whipworm, nearly every historic privy studied in Europe and North America contains whipworm eggs.

Ascaris lumbricoides has always been recognized as a human parasite. The life span of the worm is approximately one year. When it dies, it is passed. Since the worms are about 8 mm in diameter and 30 cm long, they are noticed when they pass. Also, these worms migrate from the intestine, through the blood stream to the lungs where they mature. They then migrate to the trachea and are usually swallowed to the stomach and then migrate to the intestine where they live out their adult lives. However, if they migrate at night, they are likely to emerge through the nose or mouth. Although the disease impact of such occurrences is minimal, the emotional impact is extreme. Human populations all over the world developed vermifuges to kill the worms in the intestinal tract. Therefore, because *A. lumbricoides* is an obvious human parasite, a number of effective anthelmintic drugs have been available through the centuries to control infections. Therefore, it is likely that Five Points inhabitants had access to vermifuges for *Ascaris* infection.

Dysentery and other intestinal complaints are caused by a variety of intestinal protozoa including amoebas such as *Entamoeba histolytica*, coccidia such as *Cryptosporidium* species, flagellates such as *Giardia lamblia*, and ciliates such as *Balantidium coli*. Because the cysts of these animals are not recognizable in privy sediments, their presence can only be inferred based on discovery of the more durable eggs of fecal-borne worms. It is probable that at least the amoebas and *G. lamblia* were present in urban settings.

The inhabitants of Five Points were potentially subject to all of these diseases and, therefore, the analyst predicted that evidence would be found of parasites derived from eating various types of meat, from domestic animals, and from fecal contamination of food and water.

5.4.4 Evaluating Parasitic Disease at Five Points: Sediment Analysis

5.4.4.1 Materials and Methods

The sediments were processed by the Texas A&M University Palynology Laboratory following the protocol of Warnock and Reinhard (1992). The goal of processing is to dissolve and/or extract various soil components while leaving the organic debris containing parasite eggs. Thirty milliliters of soil were first measured and then weighed from each sample except for laboratory sample number 15, which had only 10 milliliters of sediment. A tablet of *Lycopodium* spores was added to each sample. Each *Lycopodium* spore tablet contains 11,300 plus or minus 400 spores. The addition of a known number of identifiable spores to the samples enables accurate measurement of the number of parasite eggs per milliliter of soil by calculating a ratio of eggs or pollen to known spores.

The individual samples were first treated with 30 percent hydrochloric acid in 300-milliliter beakers. Hydrochloric acid dissolves calcium carbonates. The acid was slowly added to the soil samples until all acid/carbonates reactions ceased. Distilled water was then added to the samples. After the carbonates were removed, the samples were sedimented and screened to remove any large, heavy components. Sedimentation was accomplished by rigorously swirling the samples in the beakers until the soils were in suspension. The beaker was then set aside for 30 seconds to allow heavy fractions to settle out. The supernatant was then poured through a 0.25-millimeter mesh screen into a 500-milliliter beaker. This process was repeated until the supernatant was nearly clear. The remains left on the screening were dried on blotter paper and examined for macroscopic remains. Any heavy sand sediment remaining in the original 300-milliliter beakers was discarded. The microscopic remains in the 500-milliliter beakers were concentrated by centrifugation, and then washed three times in distilled water to removed any traces of hydrochloric acid which would otherwise react with chemicals in later processing stages.

The samples were then treated with 72 percent hydrofluoric acid, which dissolves any fine silicates in the sample. This was accomplished by transferring the concentrated remains to 700-milliliter plastic beakers and 50 milliliters of hydrofluoric acid was added to each sample. The samples were set aside for 24 hours to allow for completion of the reaction, stirring approximately every seven hours to ensure complete interaction between remains and acid. After 24 hours, distilled water was added to the mixtures and allowed to settle for two hours. The supernatant was then aspirated off, with care taken not to suction off any remains. This process was repeated two more times. The remaining sediments were then concentrated by centrifugation into 50-milliliter centrifuge tubes. Distilled water was added and the tubes were placed in a sonicator and sonicated for four minutes. This treatment loosens fine organic debris and separates microscopic particles. After sonication, the microscopic remains were transferred to 12-milliliter glass centrifuge tubes. After the microscopic remains were concentrated by centrifugation and the supernatant poured off, a heavy-density mixture of zinc bromide (specific gravity 2.0) was added to the tubes. The tubes were then spun in a centrifuge at 1,500 r.p.m. for 15 minutes. This process results in the separation of light organic remains, including parasite eggs, from heavier organic detritus. The heavy detritus sinks to the bottom of the tubes, while the light organic remains float to the surface of the heavy density mixture and are easily removed. The light organic remains formed a dark band at the top of the tubes. These light organic remains were then removed by suction with pipettes and transferred into 50-milliliter beakers. The samples were rinsed with distilled water and spun down in 12-milliliter glass centrifuge tubes until all evidence of the heavy density mixture was gone.

At this point, a subsample from each sample was transferred to a glass vial in glycerol for parasite egg examinations. Microscope preparations of each sample were made by placing a drop of glycerol with suspended sediment on a microscope slide. The microscope preparations were then scanned at a 240 power of magnification. When potential parasite eggs were encountered, they were examined at 500 power. Verification of parasite genus was accomplished by examination of details of the morphology of the eggs and by measuring the dimensions of each egg. Examination was done with a Jenaval microscope under differential interference phase contrast. Photographs were taken of significant finds in TMAX 100 black-and-white film. An attempt was made to count at least 10 *Lycopodium* spores per sample to insure that comparable data were recovered from each count.

5.4.4.2 Results

The laboratory and provenience numbers are presented in Table 125. The parasite egg counts are listed by sample in Table 126. The egg concentration values are listed in Table 127, and arranged by feature units in Table 128. Stratigraphic distributions of egg counts are presented in Table 128 and in Figures 128–130. Table 129 shows the parasite species predicted for Five Points compared to those found.

Table 125. Texas A&M Laboratory Numbers with Field Proveniences

Lab #	Bag #	Cat #	EV #	AS #	Feature	Lot #
1	2B	272	2	IV	N	7
2	3B	812	16	V	J	6
3	4B	950	5	II	AF	7
4	5B	209	5 (5 1/2)	IV	B	6
5	7B	202	5	II	B	6
6	8B	276	5	V	B	3
7	9B	269	2	IV	N	7
8	10B	795	16	V	J	6
9	11B	270	2	IV	N	7
10	12B	823	16	V	J	6
11	13B	708	7	V	J	6
12	14B	243	5	IV	B	6
13	16B	833	4	IV	AK	3-4
14	18B	752	7	V	J	6
15	19B	723	15	V	B	6
16	21B	268	2	IV	N	7
17	23B	254	4	V	E	6
18	25B	224	2	IV	N	7
19	26B	226	2	IV	N	7
20	27B	948	17	V	E	6
21	28B	225	2	IV	N	7
22	30B	238	5	IV	B	6
23	31B	586	12	III	C	6
24	33B	223	2	IV	N	7
25	34B	239	5	IV	B	6
26	35B	649	6	IV	N	7

Table 126. Parasite Egg Direct Counts

Lab #	1	2	3	4	5	6	7
<i>T. trichiura</i>	1	45	6	9	12	6	98
<i>A. lumbricoides</i>	29	3	8	5	3	6	98
<i>E. vermicularis</i>	38	1	0	0	0	5	0
<i>Oxyuris Equi</i>	0	0	0	0	0	0	2
other <i>Trichuris</i>	0	1	0	0	1	0	0
<i>Syngamus trachea</i>	0	1	0	0	0	0	0
<i>Capillaria</i> spp.*	0	0	0	0	1	0	0
<i>Toxocara canis</i>	0	0	0	0	0	1	0
Unknown operculated	0	0	0	0	0	0	2
<i>Lycopodium</i> spores	19	0	10	10	88	15	10
Lab #	8	9	10	11	12	13	14
<i>T. trichiura</i>	80	47	29	66	120	15	72
<i>A. lumbricoides</i>	15	41	4	1	29	44	7
<i>E. vermicularis</i>	0	2	0	1	0	0	1
<i>Oxyuris Equi</i>	2	0	0	0	0	0	0
other <i>Trichuris</i>	0	0	0	0	0	0	0
<i>Syngamus trachea</i>	0	0	0	0	0	0	0
<i>Capillaria</i> spp.	0	0	0	0	0	0	0
<i>Toxocara canis</i>	0	0	0	0	0	0	0
Unknown operculated	0	0	0	1	0	0	1
<i>Lycopodium</i> spores	10	11	3	12	10	10	11

Table 126. Parasite Egg Direct Counts (cont.)

Lab #	15	16	17	18	19	20	21
<i>T. trichiura</i>	10	67	56	10	24	85	30
<i>A. lumbricoides</i>	27	48	14	9	40	67	48
<i>E. vermicularis</i>	0	0	0	0	1	0	0
<i>Oxyuris Equi</i>	0	0	0	0	0	0	0
other <i>Trichuris</i>	0	0	0	0	0	0	0
<i>Syngamus trachea</i>	0	0	0	0	0	0	0
<i>Capillaria</i> spp.*	0	0	0	0	1	0	0
<i>Toxocara canis</i>	0	0	0	0	0	0	0
Unknown operculated	1	0	0	0	1	0	0
<i>Lycopodium</i> spores	10	18	10	5	10	6	10
Lab #	22	23	24	25	26	27	
<i>T. trichiura</i>	14	15	9	12	92	0	
<i>A. lumbricoides</i>	12	8	3	2	99	0	
<i>E. vermicularis</i>	0	0	0	0	0	0	
<i>Oxyuris Equi</i>	0	0	0	0	0	0	
other <i>Trichuris</i>	0	0	0	0	0	0	
<i>Syngamus trachea</i>	0	0	0	0	1	0	
<i>Capillaria</i> spp.*	0	0	0	0	0	0	
<i>Toxocara canis</i>	0	0	0	0	0	0	
Unknown operculated	0	0	0	0	0	0	
<i>Lycopodium</i> spores	5	14	10	10	10	0	

*possibly *Capillaria putorii*

Table 127. Egg Concentration Values in Numbers of Eggs Per Milliliter of Sediment

Sample #	<i>T. Trichiura</i>	<i>A. Lumbricoides</i>	<i>E. Vermicularis</i>
1	575	754	0
2	1,697	113	38
3	226	302	0
4	339	189	0
5	51	13	0
6	151	126	0
7	3,695	3,695	0
8	3,016	566	0
9	1,611	1,405	69
10	3,644	503	0
11	2,074	31	31
12	4,524	1,093	0
13	566	1,697	0
14	2,468	264	34
15	1,131	3,054	0
16	1,403	1,005	0
17	2,111	528	0
18	754	716	0
19	1,093	1,508	38
20	5,340	3,896	0
21	1,131	1,810	0
22	1,056	905	0
23	435	215	0
24	339	113	0
25	452	75	0
26	3,468	3,732	0

Table 128. Egg Concentration Values by Feature

No.	Feature	Strat # (AS)	<i>T. Trichiura</i>	<i>A. Lumbricoides</i>	<i>E. Vermicularis</i>
AF		3/XIX(II)	226	302	0
AK		13/VI(IV)	566	1,697	0
B		5/X(II)	51	13	0
		6/XI(V)	151	126	0
		22/XI(V)	1,056	905	0
		4/XII(IV)	339	189	0
		25/XII(IV)	452	75	0
		12(IV)	4,524	1,093	0
		15/XVII(V)	1,131	3,054	0
C		23/IX(III)	435	215	0
E		20/XIV(V)	5,340	3,896	0
		17/XX(V)	2,111	528	0
J		2/VII B2(V)	1,697	113	38
		8/VII(V)	3,016	566	0
		10/VIII 2(V)	3,644	503	0
		11/XXVIII(V)	2,074	31	31
		14/XXVIII(V)	2,468	264	34
N		24/XXI(IV)	339	113	0
		18/XXII(IV)	754	716	0
		21/XXIII(IV)	1,131	1,810	0
		26/XXIII(IV)	3,468	3,732	0
		19/XXIV(IV)	1,093	1,508	38
		16/XXV(IV)	1,403	1,005	0
		7/XXVI(IV)	3,695	3,695	0
		9/XXVII(IV)	1,611	1,405	69
		1/XXIX(IV)	575	754	0

Table 129. Parasite Species Predicted for the Urban Setting and Those Found at Five Points

Species Predicted	Found	Implicated
<i>Taenia solium</i>	No	
<i>Taenia saginata</i>	No	
<i>Trichinella spiralis</i>		No
<i>Diphyllobothrium latum</i>	No	
<i>Toxoplasma gondii</i>		No
Parasites from Animals		
<i>Toxocara canis</i>	Yes	
Parasites from Fecal Contamination		
<i>Trichuris trichiura</i>	Yes	
<i>Ascaris lumbricoides</i>	Yes	
<i>Entamoeba histolytica</i>		Yes
<i>Iodamoeba butshlii</i>		Yes
<i>Cryptosporidium</i> species		Yes
<i>Giardia lamblia</i>		Yes
<i>Balantidium coli</i>		Yes

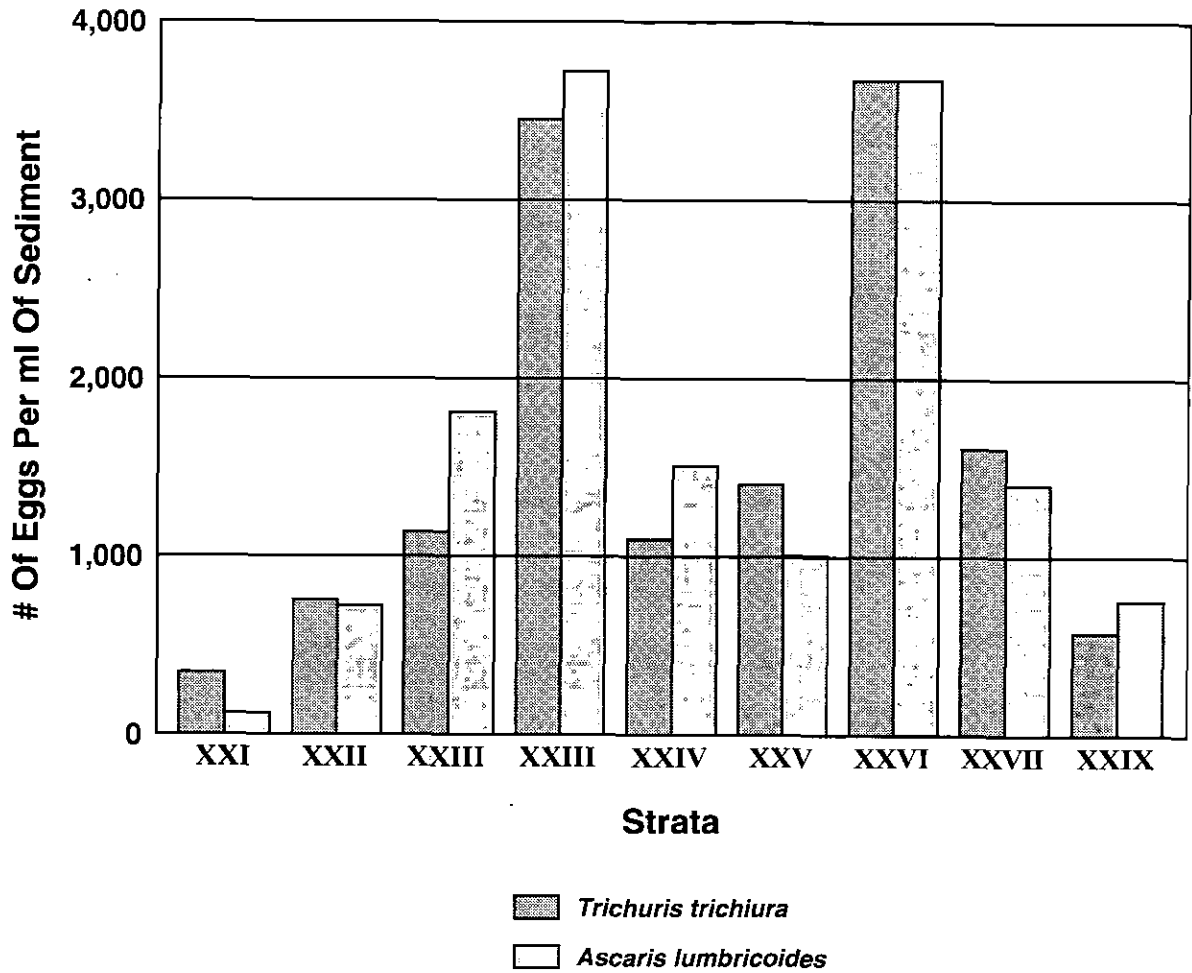


Figure 128. Stratigraphic distribution of parasite eggs in Feature N. Strata designations correspond to AS IV. In general, eggs of the two species occur in a near 1:1 ratio in all strata.

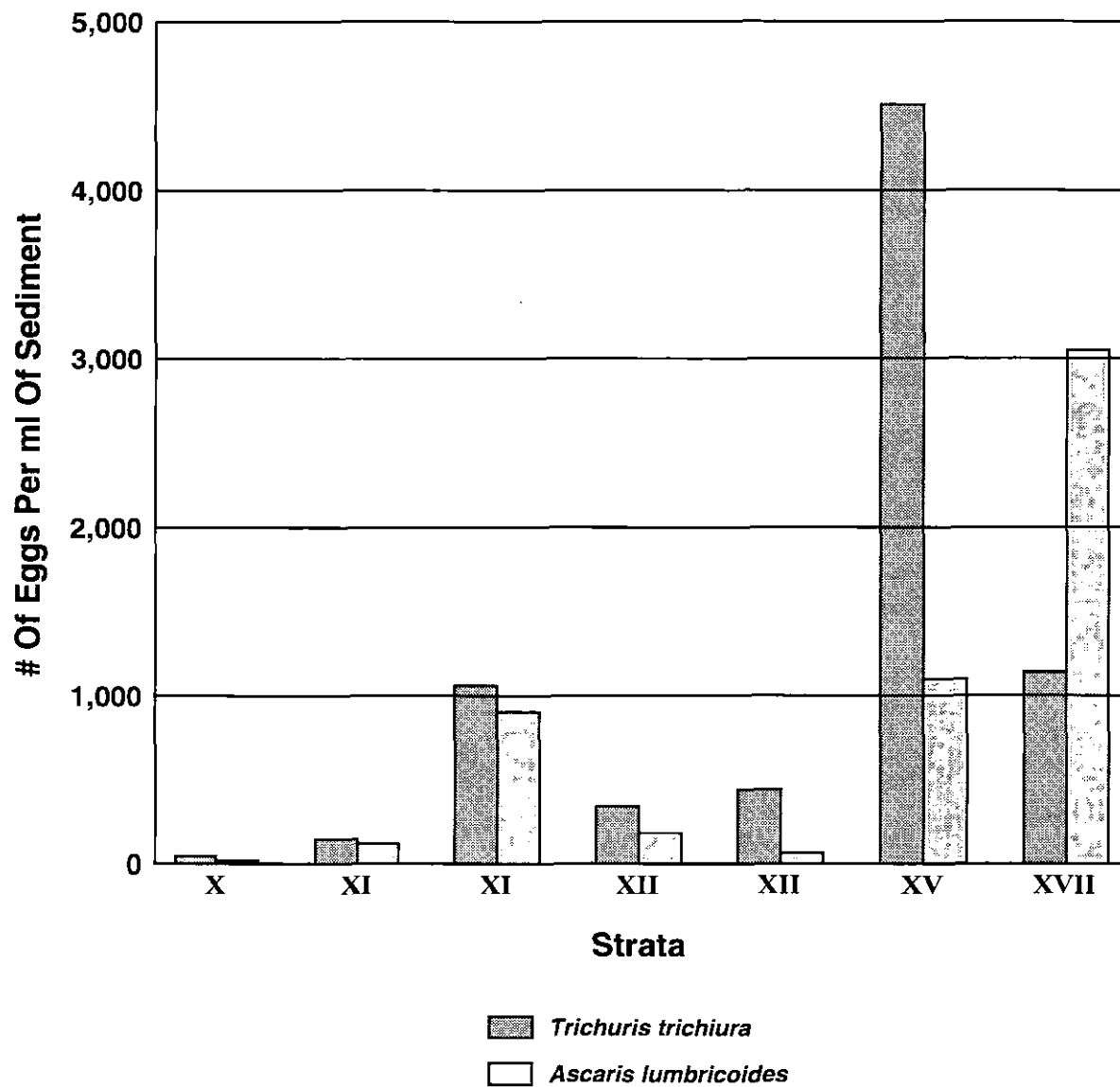


Figure 129. Stratigraphic distribution of parasite eggs in Feature B. Strata designations correspond to AS V. The major species show little covariance between contexts.

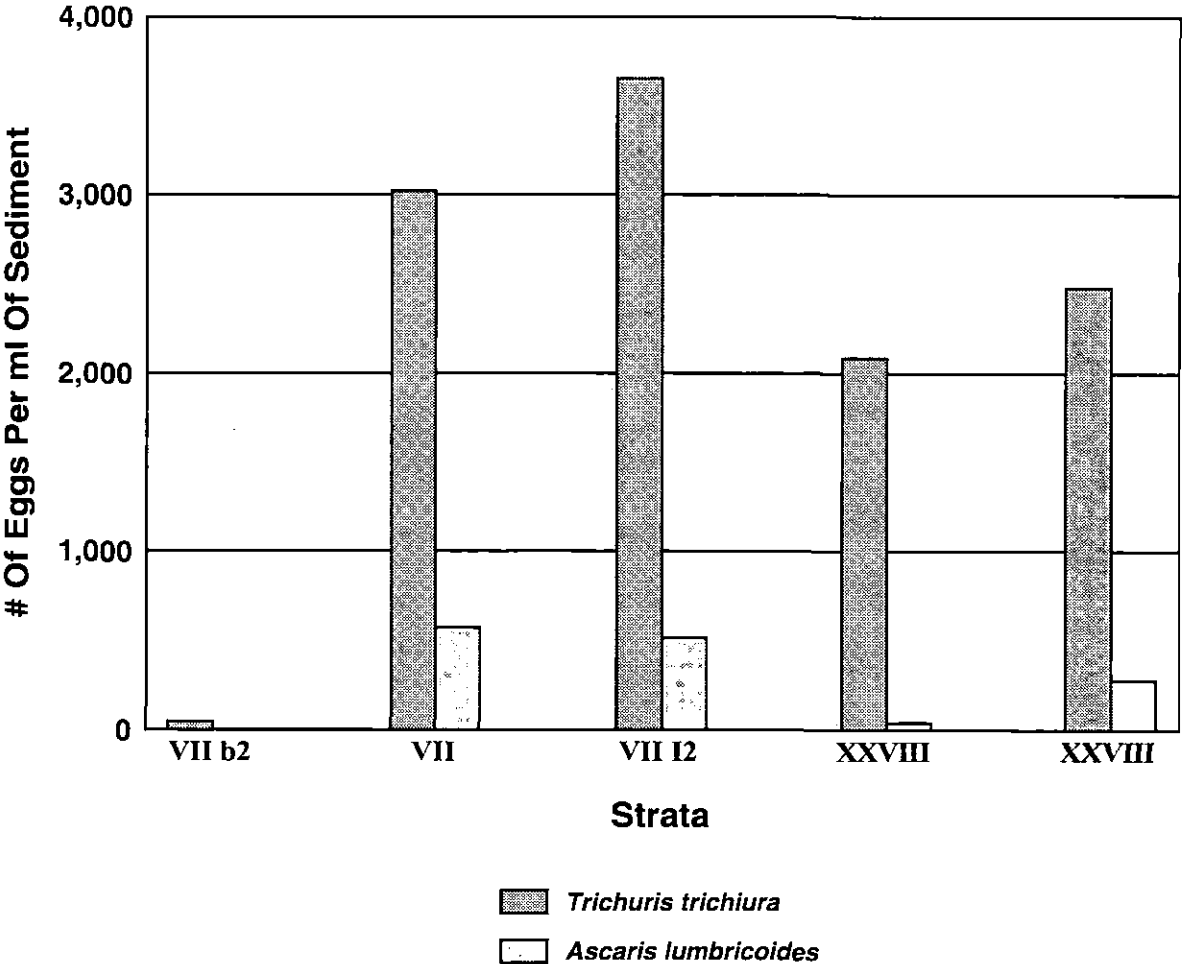


Figure 130. Stratigraphic distribution of parasite eggs in Feature J. Strata designations correspond to AS V. The data show that although *Trichuris trichiura* infection was high, *Ascaris lumbricoides* infection was limited at the tenement.

Animal parasites were found in some samples. Features J (lab number 8) and N (lab number 7) contained eggs of the horse pinworm, *Oxyuris equi*, which is not infective to humans. They do show that horses were active in the area. Features J (lab number 2) and N (lab number 26) also contained eggs of *Syngamus trachea* which is a parasite of birds. A wide variety of birds are parasitized by this roundworm. The diversity of bird hosts for *S. trachea* includes pigeons, chickens, turkeys, guinea fowl, partridges, geese, ducks, and swans. It is not infective to humans. Small *Trichuris* eggs of an unknown species were found in Features B (lab number 5) and J (lab number 2). These are about half the size of *Trichuris trichiura* and are not parasites of humans. *Capillaria* eggs were found in Features B (lab number 5) and N (lab number 19). These are not human parasites. The egg from Feature B is most consistent with *Capillaria putorii*, a parasite of cats. An egg consistent with *Toxocara canis* was found in Feature B (lab number 6). This is a parasite of dogs that is infective to humans. Several operculated eggs were found in Features B (lab number 15), J (lab numbers 11 and 14), and N (lab numbers 7 and 19). It is not clear what parasite produced these eggs; they are certainly not from human parasites.

The largest numbers of eggs came from human-specific roundworms. It is noteworthy that not a single egg of tapeworms of humans was found. The eggs of *Trichuris trichiura* and *Ascaris lumbricoides* were present in all features in varying abundance. Features AF and C had the lowest abundance of parasite eggs. The concentrations of eggs per milliliter of sediment for Feature AF was a maximum of 226 *T. trichiura* eggs and 302 *A. lumbricoides* eggs. For Feature C, the concentrations were 435 *T. trichiura* eggs and 215 *A. lumbricoides* eggs. For the remaining features, concentrations of eggs exceeded 1,000 eggs per milliliter. Feature AK contained a maximum of 566 *T. trichiura* and 1,697 *A. lumbricoides* eggs per milliliter of sediment. Feature B contained a maximum of 4,524 *T. trichiura* and 3,054 *A. lumbricoides* eggs per milliliter of sediment. The relative numbers of whipworm eggs fluctuated in comparison to *Ascaris* with whipworm being dominant in all but the lowest strata. Feature E contained a maximum of 5,340 *T. trichiura* and 3,896 *A. lumbricoides* eggs per milliliter of sediment. Feature J contained a maximum of 3,644 *T. trichiura* and 566 *A. lumbricoides* eggs per milliliter of sediment. All strata in the feature exhibited a dominance of whipworm eggs. Feature N contained a maximum of 3,695 *T. trichiura* and 3,732 *A. lumbricoides* eggs per milliliter of sediment with the eggs occurring in the same proportions in all strata.

Enterobius vermicularis (pinworm) eggs have never been found in historic latrine sediments before. However, sediment samples from Features J and N contained pinworm eggs in very small numbers.

5.4.4.3 Discussion

The absence of certain types of eggs in all sediment samples speaks to food preparation techniques that prevented certain parasites from becoming established in the Five Points population. No eggs of pork or beef tapeworm were encountered. Beef and pork were not adequately checked for worm cysts until late in the nineteenth century. It is certain that the beef and pork eaten at Five Points was infected with tapeworm. The fact that tapeworm infections were not present at Five Points is due to thorough cooking of meat, which is the only way to kill cysts of the roundworm *Trichinella spiralis*, the organism that causes trichinosis. Therefore, it is safe to infer that the major diseases associated with beef and pork were not present at Five Points.

The presence of a Jewish household represented by Feature B provides the opportunity to assess whether diphyllobothriasis was a problem for the New York Jewish community in historic times (Desowitz 1981). The eggs of *Diphyllobothrium* species are ovoid structures with an operculum at one pole. Operculated eggs were found in Feature B, but their structure was not consistent with *Diphyllobothrium* and they probably represent another species of parasite non-infective to humans. Therefore, diphyllobothriasis and, by association, anemia were not health problems at Five Points. Also, analysis (Section 3.5, this volume) indicates that salmon was relatively rare compared to locally obtained marine fish. This further limits the possibility that diphyllobothriasis occurred at Five Points.

One egg of *Toxocara canis* was found. This indicates that dogs were in the area and that they carried *Toxocara* infections. This would have been a health problem at Five Points, especially among children who accidentally consumed the eggs.

By far the most critical problem was fecal-borne disease. Several issues can be addressed by the parasite data. First, it is possible to evaluate whether or not fecal-borne disease existed at Five Points before the immigrant tenements were established. Thus, it is possible to assess whether or not the tenements aggravated the problem. The use of medicines available at the time may have helped control roundworm infection. This can be assessed by examining the proportion of eggs of different roundworm species to each other.

It is clear that the fecal-borne parasites whipworm and *Ascaris* were established before the tenement was built. Features N, AF, and B predate the influx of Irish immigrants. All features contain eggs of roundworm parasites, and features N and B contain remarkable numbers of roundworm eggs. The maximum combined number of parasite eggs in features N and B are 7,390 and 5,617 eggs per milliliter of sediment respectively. These very high egg concentrations show that the inhabitants of the area were already carrying substantial whipworm and *Ascaris* worm burdens before the Irish tenement was built. The sediments from the tenement cesspool deposits (Feature J) have a maximum of 4,147 eggs of whipworm and *Ascaris* per milliliter. There is, therefore, an actual decline in parasite egg concentrations in the Irish tenement. This indicates that the establishment of the Five Points slum did not witness an aggravation of existing fecal-borne disease.

The relative numbers of eggs of whipworm and *Ascaris* suggest that the inhabitants of the tenement had some degree of success in controlling *Ascaris* infection. Of the pre-tenement features, both have roughly comparable numbers of whipworm and *Ascaris* eggs. The average egg counts for all stratigraphic levels from Feature B were 1,101 whipworm eggs and 779 *Ascaris* eggs per milliliter of sediment. The same calculations for Feature N were 1,563 whipworm eggs and 1,638 *Ascaris* eggs. In contrast, the average concentration of eggs from Feature J was 2,580 whipworm eggs per milliliter and only 295 *Ascaris* eggs. Clearly, the tenement inhabitants were limiting *Ascaris* infections. (It should be noted that the larger average of whipworm eggs in the sediments from Feature J does not represent a greater level of infection. The fecal deposits in Feature J were more concentrated than in the other features. As a measure of how much non-fecal debris is deposited in privies, the amount of microscopic charcoal per sediment sample is measured while examining the slides. Charcoal made up 23 percent of all objects seen microscopically in Feature N, 20 percent of all objects in Feature B, and eight percent of the objects seen in sediments from Feature J. Therefore, there is less trash and consequently more eggs in Feature J.)

There were several treatments for *Ascaris* infection available in the mid-1800s, the most common of which was oil of *Chenopodium*, an extract from *Chenopodium ambrosioides anthelminticum*. Therefore, in terms of fecal-borne worm infection, the tenement dwellers were actually healthier in comparison to the previous occupants of Five Points. However, the continued presence of whipworm reflects fecal contamination of food and/or water. Therefore, fecal-borne disease continued to be a problem at Five Points and was undoubtedly the major health hazard in the area.

As mentioned in the overview of urban parasitism, whipworm was probably not treated because it is not easily visible. Besides whipworm, there are a number of parasitic protozoa that are fecal borne and were not recognized as pathogens in the mid-1800s. Like whipworm, these protozoa probably proliferated in ignorance of germ theory. It is likely that Five Points inhabitants were subject to dysentery due to protozoa, especially amoebas.

An aspect of parasitic disease that was not anticipated but is evident in the Five Points sediments is pinworm infection. Pinworm (*E. vermicularis*) eggs are not passed in feces unless a mature female loses its place in the intestine and is defecated. Pinworm eggs have never been documented in any latrine deposits in North America or Europe. They are found, however, in prehistoric coprolites and mummies. A very small number of pinworm eggs were found in Features J and N. The find of pinworm eggs shows that such infection was present in the tenement and in the households that predated the tenement.

5.4.5 Conclusion

The inhabitants of Five Points were not suffering from parasitism to the extent predicted in the overview of urban parasitism. None of the parasites that are transmitted by consumption of poorly cooked meat was found. Only one zoonotic parasite, *Toxocara canis*, was evident. The fecal-borne parasites were either

found or are implicated by the find of worm eggs. Importantly, the egg counts indicate that the Five Points inhabitants were successful in controlling one of the parasites they would have been aware of, *Ascaris lumbricoides*. The data indicate that Five Points was not riddled with parasitic disease. In actuality, the inhabitants had dietary practices that minimized tapeworm infection, and they significantly reduced roundworm infection once the tenement was built and inhabited. Nonetheless, fecal-borne disease undoubtedly led to severe problems with morbidity and mortality as has been documented elsewhere in the historic northeast by Goodman et al. (1988).

5.5 Infanticide at Five Points: The Anthropological Analysis of Twin Neonates from a Nineteenth-Century Privy (Thomas A. J. Crist)

5.5.1 Nineteenth-Century Infant Mortality

Nineteenth-century New York City was characterized by the rapid increase of tenement housing in response to an influx of immigrants drawn to the city's emerging manufacturing economy. Concomitant with this increase in population density was a marked upsurge in both infant mortality and the incidence of infectious diseases. Both phenomena were associated with poor sanitation and polluted water and food supplies. While infant mortality in the colonial United States was always excessive (in 1751, Benjamin Franklin noted that one-half of all children would not reach the age of 20), rates during the first half of the nineteenth century were exceedingly high. This was true for both African- and European-descended populations, although in most urban areas African-American rates were disproportionately greater. Newborns and young children suffered the highest mortality rates in all of America's cities. In Philadelphia, mortality rates for the period 1807–1827 indicate that 47 percent of children's deaths occurred before the age of one year while 81 percent of all childhood deaths occurred before the age of five years (Emerson 1827). These figures do not include stillbirths or fetal deaths.

Nationally, deaths of children under 10 years of age accounted for 40 to 50 percent of the total mortality for the American population prior to 1850 (Curry 1981). Unfortunately, this estimate is derived from incomplete mortality schedules that are unlikely to reflect the actual number of deaths that occurred. Analyses of demographic patterns at historical cemeteries excavated by archeologists throughout the eastern United States indicate that infants and children regularly comprise between 35 to 40 percent of the identified interments. These results do not include remains buried in the separate children's graveyards often favored during the nineteenth century.

Official government census data also reflect the steadily increasing childhood mortality that marked the first half of the nineteenth century. In 1820 in New York City, children under 14 years of age comprised 37.4 percent of the white population and 26.7 percent of free persons of color. By 1840, these figures had dropped to 26 percent and 20 percent, respectively. By 1850, the rates had fallen even further, to 23.6 percent and 18.8 percent, respectively (Curry 1981:256). Thus, between 1820 and 1850 the number of living children in the white population fell 37 percent, while those in the free African-American population fell 30 percent.

Although mortality records prior to 1900 are typically incomplete and often classify specific diseases under broad headings, the prevalence of the diseases that dominated the nineteenth century can be estimated from the existing documentation. The primary causes of death for children during this period were dysentery, cholera, and numerous other bowel disorders and infections related to poor sanitation and nutritional inadequacies. Coroners often classified these diseases according to symptoms rather than etiologies and did not report specific differential diagnoses. Although tuberculosis (then known as consumption) was the primary cause of death for adults in America throughout the nineteenth century, the majority of infant and childhood deaths were largely due to poor maternal care and unsanitary living conditions prior to the advent of twentieth-century health reforms.

5.5.2 Infanticide in the American Historical Period

The primary causes of death for children during the antebellum period were dysentery, cholera, and numerous bowel disorders and infections related to poor sanitation and nutritional inadequacies. However, infanticide or neonaticide was another significant, though generally unmentioned, cause of infant death. So odious was this transgression that both British and American midwives' laws dating from the seventeenth century specifically mandated that illegitimate births be reported to the authorities (Piers 1978; Rose 1986). Social mores based on religious beliefs and strict inheritance laws made concealment of the death of an illegitimate birth a capital offense. Indeed, laws passed in the American colonies equated obscuring the death of a baby, whether born alive or not, with murder. These laws were not repealed until the early twentieth century.

In her excellent report linking infant remains recovered from an eighteenth-century privy pit in Philadelphia and illegitimate births in colonial America, Burnston (1982:169) notes that New York City's Common Council passed a law in 1716 that defined the numerous duties of a midwife. Quoting Fox (1966:442-445), Burnston relates the sections of the *Oath of a Mid Wife* that deal with abortion and infanticide:

You Shall not Suffer any Womans Child to be Murthered Maimed or Otherwise hurt as much as you say....You Shall not Give any Counsel or Administer any Herb Medicine or Potion or any other thing to any Woman being with Child whereby She Should Destroy or Miscarry of that she goeth withall before her time....You shall not Consent Agree Give or Keep Counsel that any Woman be Delivered secretly of that she goeth with but in the presence of Two or three Witnesses ready....You shall not Conceal the Birth of any Bastard Child within the Corporation of the City of New York but Shall forthwith upon Understanding thereof Give Knowledge of the same to the Mayor Recorder and Aldermen of the City of New York...or [to the] Chief Magistrate of the Ward where such Bastard Child Shall be born.

Clearly a woman carrying an illegitimate baby not only risked social ostracism but also the full wrath of the law, as did those who might assist her. During this period of strict social divisions an unmarried or unfaithful pregnant woman may very well have given birth and then disposed of her baby. Even in modern society, media accounts of live babies abandoned by desperate parents in places where authorities might find them are not infrequent. Most often the police approach these cases as reflecting psychological or economic difficulties rather than criminal intent. Burnston (1982) reasoned that both sets of infant remains found in the urban privy pit in Philadelphia probably reflect concerns both of moral judgments as well as economic ruin for the woman or women involved.

A remarkable glimpse of prostitution in New York City during the 1850s offers some unique insights regarding illegitimate births and infant mortality. Under the direction of William Sanger, resident physician at the City Almshouse at Blackwell's Island, police officers circulated a questionnaire among the prostitutes of the city in 1855 (Sanger 1939). These three questions were included: "If you have had children, how many? Were these children born in wedlock? Are these children living or dead?" The answers to these questions illuminate the often wretched conditions into which babies were born in 1850's New York.

The questionnaire data collected by Sanger indicate that "of every hundred children borne by women who [were] prostitutes...fifty-seven were the fruit of promiscuous intercourse" (Sanger 1939:480). The "excessive mortality among this class of children" was demonstrated through the third question, the results of which indicate that of 1,917 children born to prostitutes (including 1,090 illegitimate births), 62 percent died. Using comparative data from the New York State Census of 1855 and the city inspector's reports of 1854, 1855, and 1856, Sanger calculated that the infant mortality rate for the general population of New York City was 18.5 percent (Sanger 1939:481). Therefore, the infant mortality rate among prostitutes was almost four times that for the general population between 1854 and 1856. To underscore the excessive rate of infant mortality, Sanger continued: "This calculation must be taken in connection with the cases of abortion produced by extraneous means, not admitted to in the replies of the interrogatories, and which will probably never be known. It is impossible to doubt that these are far more frequent than recorded in the tables" (Sanger 1939:481).

When analyzed by whether the mother was single, married, or widowed, the infant mortality rate for children of single women who were prostitutes was over 14 percent greater than that for the other two categories (Sanger 1939:481). His data also indicated that between 1854 and 1856 premature births and stillbirths together accounted for 12.5 percent of the births reported for New York City. Applying the same rate to births among prostitutes, Sanger calculated that the infant mortality rate for the children of prostitutes presented "features which place it almost on a level with the infanticide of some Eastern nations" (Sanger 1939:482).

5.5.3 Clinical Determination of Viability

Clinically, the determination of whether a baby was stillborn or had died from neglect or abandonment is based on the viability of the fetus at birth. As modern medicine has evolved, so has the definition of viability, but in the late eighteenth and early nineteenth centuries it was based on anecdotal rather than medical evidence (Williams 1957; Hoffer and Hull 1981; Weir 1984). The criteria for viability included whether the lungs of the infant floated when immersed in water, thought to demonstrate that the baby had breathed before expiration. It has since been proven that this test has no value. Additionally, coroners searched for dermal petechial hemorrhages (*bruising*) that might indicate that circulation (and therefore cardiac function) had occurred after delivery. Since numerous physiological and taphonomic factors can obscure or confound these criteria, even today the determination of viability is based on the specific circumstances of each case.

Polson (1955:403) notes that “proof of live-birth, an essential ingredient of infanticide, is notoriously difficult and for this reason alone the charge is likely to fail.” At present, the only absolute evidence that a baby survived after birth is the presence of extraneous material in the baby’s digestive tract or stomach (Polson 1955). This could include saliva or milk in the stomach or air in the gastrointestinal tract. Under current legal guidelines, when the remains of a full-term fetus are recovered medical examiners assume the baby was viable if there are no medical or physiological reasons to preclude spontaneous breathing. A fetus is now considered viable if development had progressed past 26 weeks *in utero*, at which stage more than 50 percent of deliveries survive. Between 21 and 26 weeks survival is problematic, and under 21 weeks a fetus is insufficiently developed to survive.

The cause of death in the vast majority of infanticide cases is mechanical asphyxia through smothering, strangulation, or choking (Polson 1955). Most of these modes leave little or no physical traces, and are virtually impossible to identify in dry skeletal remains. In addition, deaths that occur from natural causes are also unlikely to be reflected in dry skeletal remains. Other modes of infant death typically result in cranial fractures, particularly of the frontals and parietals. These fractures may accompany suffocation and other types of violent action. Weapons are less commonly involved. It is fairly rare for infants to be deliberately stabbed or shot, and in most reported instances these types of deaths are ruled accidental.

5.5.4 The Analysis of Fetal and Infant Skeletal Remains

When the skeleton of an immature human is recovered within the forensic context, physical anthropologists attempt to reconstruct the demographic profile of the individual and then examine the remains for a possible cause of death. These determinations are particularly important for legal purposes as penalties vary significantly for child abuse cases, negligence and accidental deaths, the different degrees of murder, and abandonment. For instance, soft tissue and skeletal lesions in suspected child abuse cases must be carefully documented since other, noncriminal, factors may also create lesions that mimic those of abuse (Snow and Luke 1970; Hobbs 1984; Duhaine et al. 1987; Crist et al. 1996). Since fetal and full-term cranial bones look very different from those in the adult skull, pathologists and other criminal investigators often misdiagnose unfused sutures and normal skeletal variants as evidence of trauma and fractures.

As in the past, law enforcement authorities first seek to determine if fetal remains represent an abortion, a stillborn baby, or a baby that died after delivery. Because the skeleton of a fetus or newborn baby is immature, the morphological characteristics used by anthropologists to determine sex and racial ancestry from post-pubescent skeletal remains are not applicable. At present, there are no accurate, commonly accepted methods to determine the sex or racial ancestry of fetal or infant skeletal remains. Some research suggests that the morphology of the fetal and neonate ilium varies by sex (Boucher 1957; Weaver 1980, 1986), but methods based on this bone have not yet been proven consistently accurate. More recent research on a documented historical period sample of 61 children under 11 years of age (including 16 infants between birth and 6 months old) suggests that the morphology of both the mandible and ilium is sexually dimorphic (Schutkowski 1993). This research demonstrated that the sex of children under five years old was correctly determined for 70–90 percent of the remains included in the study when assessed using these two bones.

It is likely that advances in biochemical technology will allow sex and racial ancestry determinations to be made using DNA from bone samples, but research in this area is far from complete. The efficacy of such a method is based in large part on whether suitable DNA samples can be recovered from skeletal remains and if potential postmortem contamination can be fully accounted for and controlled.

The determination of the age at death is much more precise. Estimating the age at death from immature remains consists of establishing the physiological age of the skeleton and then correlating that result with chronological age (Ubelaker 1987). Anthropologists employ a range of methods to estimate physiological age, depending on which skeletal elements are present and their degree of preservation. These include the appearance and union of epiphyses, measurements of long bone length, and the assessment of the calcification and development of both the deciduous and permanent dentitions (Ubelaker 1987). With fetal remains, the additional measurements of body length and other regression formulae are used (Fazekas and Kósa 1978; Kósa 1986). Because males and females differ in their rates of skeletal development, each aging technique includes standard deviations designed to reflect the biological variation inherent in chronological aging.

Clinicians and anthropologists report the age range of fetal and neonate remains in terms of lunar months (Fazekas and Kósa 1978; Kósa 1986). Clinically, gestational age is divided into three stages (Avery 1981): pre-term (less than 259 days or 37 weeks from the first day of the last menstrual period), term (259 to 286 days inclusive), and post-term (287 or more days or 41 or more weeks). Anthropologists always report an age range rather than a specific age to reflect human variation and the potential statistical errors of the aging techniques.

Examination of the remains for lesions related to abnormal development, perimortem trauma, or disease completes the anthropological autopsy. Since only chronic diseases affect the skeleton, the vast majority of dry fetal remains do not present lesions related to acute diseases that primarily involve the organ systems, like dysentery and cholera. More frequently, immature skeletal remains present lesions resulting from infection. These are classified under the general term periostitis if the infection is limited to the periosteal covering of the bones or categorized as porotic hyperostosis when observed on the surfaces of the cranial bones. Only the distribution of these lesions can suggest a differential diagnosis. For instance, excessive bilateral porosity of the orbital roofs typically reflects sickle cell or iron-deficiency anemia. Bowing of the lower limbs in conjunction with nodular swelling at the sternal rib ends indicates vitamin D deficiency or rickets (Steinbock 1976; Ortner and Putschar 1985). However, it is rare that skeletal lesions on immature remains allow anthropologists to assign a specific cause of death.

5.5.5 The Neonate Remains from Five Points, Block 160, Lot 43

5.5.5.1 Methods

The skeletal remains of two neonates from Feature AG on Block 160 were initially identified at the Foley Square Archeological Laboratory in New York City. The remains were processed at the Foley Square laboratory, where they were cleaned and stabilized. Each bone and tooth was dry brushed and in some cases cleaned with distilled water and then dried in open-air storage racks. The remains were repackaged individually in 4-mm-gauge polyethylene bags. These bags were stored in the Foley Square laboratory in buffered acid-free fiberboard archival containers.

The human remains were subsequently transferred to the John Milner Associates (JMA) osteology laboratory in Philadelphia for analysis. The analysis began by laying out each bone in anatomical position on a table lined with an inert polyethylene foam (Ethafom). The foam is used to reduce the potential for breakage and to protect the remains from abrasion during examination. Each bone was then identified and grouped together by individual. The individuals were again placed in anatomical order on the tables for examination. The use of the anatomical position facilitates identification of each skeletal component and determination of the minimum number of individuals represented. It also assists researchers in identifying patterns of trauma and pathology.

Subsequent to identification, JMA's anthropologists assessed each bone and tooth macroscopically and microscopically for morphological characteristics, anomalies, lesions, and indications of trauma. The anthropologists then measured each bone using sliding and spreading calipers according to standardized anthropometric guidelines for immature human remains (Fazekas and Kósa, 1978; Buikstra and Ubelaker 1994). Teeth were identified using the standard Universal System of tooth charting (adult teeth numbered 1–32; deciduous teeth lettered a–t). The age range of each individual was estimated by assessing diaphyseal length and degree of dental development using comparative data included in Moorees et al. (1963a, 1963b); Fazekas and Kósa (1978); and Ubelaker (1989).

Osteological lesions were classified as representing either antemortem, perimortem, or postmortem events. Perimortem lesions are those that occur around the time of death and potentially exhibit partial healing. Postmortem damage refers to lesions that result from taphonomic processes prior to excavation as well as damage that may have occurred during excavation or subsequent laboratory processing. Pathological lesions were either recorded as trauma or under the general term periostitis. Periosteal lesions are defined as areas of abnormal proliferative growth found on the external surfaces of long bones and the ectocranial and endocranial surfaces. Each lesion was recorded by location, extent of involvement, and degree of remodeling. Reactions were graded as mild, moderate, and severe, and reported as either remodeled (healed) or unremodeled (unhealed).

5.5.5.2 Results: Inventory, Age at Death, and Pathological Lesions

The skeletal remains from Block 160 represent two immature individuals. Development of the long bones and cranial elements indicate that each set of remains represents an infant who died around birth (neonate). Viability at birth cannot be determined from the remains (see above), although both individuals appear to have developed normally. The first individual, designated Neonate 1, is almost completely intact, including six deciduous tooth crowns, most of the left ribs, and most of the unfused vertebrae. The second individual, Neonate 2, consists only of cranial elements and portions of the upper limbs. Both sets of remains are well preserved, with minimal fragmentation and little erosion.

Both sets of remains were recovered from a privy shaft (Feature AG) on Block 160, located behind 10-12 Orange (later Baxter) Street on Lot 43. Feature AG includes deposits made in the early 1840s, as indicated by the ceramic and glass artifacts found at the same stratigraphic level. Historical documentation indicates that one of the buildings using the privy may have been a brothel and that neighborhood complaints forced authorities to close the business in 1843. The privy was probably closed at this time. The privy shaft was subsequently disturbed by construction of a stone wall sometime in the early 1870s.

Disturbance to the privy shaft disarranged the skeletal remains of both infants, spreading them out vertically. Portions of both skeletons were recovered from layers designated with four different catalog numbers that were analytically combined into one stratum (AS III). The profile of Feature AG appears as Figure 100 in Section 4.5 above. Table 130 provides the catalog numbers for each of the two neonates.

Table 130. Provenience of Skeletal Components from Neonates 1 and 2

Catalog Number	Neonate 1 ¹	Neonate 2
973	L tibia, L fibula, L radius	Cranium, mandible, L and R humeri, L ulna, L radius, 1 L rib
981	—	R clavicle
984	L ulna, L femur	—
985	Cranium, mandible, and all postcranial elements except those from Catalog Units 973 and 984	—

As indicated by the data in Table 130, both neonates were partially commingled in the privy. Except for the right clavicle, cat. no. 973 contained the cranial and postcranial remains from Neonate 2 and the left radius and portions of the left lower limb from Neonate 1. Cat. no. 973 represents the stratigraphic level containing the backdirt that was excavated from the privy shaft during construction of the intrusive stone wall in the 1870s. Cat. no. 985, which represents the original privy deposit in which both neonates were discarded, contained the majority of remains from Neonate 1 and had no skeletal elements associated with the second infant. It is possible that ribs and unfused vertebral portions recovered from cat. no. 985 are associated with both individuals; however, the subsequent disturbance of the original stratigraphic units precludes assignment of the separate elements to a specific individual. Since all of these axial components were recovered from cat. no. 985, they are most likely associated with Neonate 1.

In summary, cat. no. 973 represents an upper stratigraphic layer in the privy shaft and includes disturbed deposits that had been shoveled back into the privy during construction of the intrusive wall in the 1870s. The deposits in cat. no. 973 had been originally mixed with those from cat. no. 985, found at a greater depth. The 1870's disturbance most likely accounts for the lack of skeletal components from Neonate 2 and probably also explains why only three bones from Neonate 1 were found in the disturbed fill comprising cat. no. 973.

The inventory of skeletal remains from both neonates is reported in Table 131. All skeletal elements were in excellent condition, with most intact (Figures 131–138). In addition to skeletal remains, Neonate 1 also included six deciduous tooth crowns (Table 132). These were found in situ in the maxillary and mandibular crypts. The remaining crowns were most likely lost postmortem. No tooth crowns were recovered with the second individual.

As discussed above, anthropologists have yet to adopt methods that consistently indicate the sex and racial ancestry of immature human remains. However, the mandibles of both neonates were assessed for sex determination according to guidelines offered by Schutkowski (1993). The shapes of the two mandibles are distinctly different, suggesting that Neonate 1 was of a different sex than Neonate 2. The mandible associated with Neonate 1 presented the following: (1) a prominent chin with elevated structures on either side of the midsagittal plane; (2) a U-shaped dental arcade; and (3) buttressing and eversion of the horizontal rami and gonial angles. According to Schutkowski (1993) these are all features characteristic of immature males. The mandible from Neonate 2 presented none of these features, and its shape was markedly parabolic compared to the mandible from Neonate 1 (Figures 135 and 136). This suggests that Neonate 2 was female.

The ilia from Neonate 1 also suggest the infant was male. On both bones the cranial extensions of the vertical side of the greater sciatic notch pass along the lateral rim of the auricular surface. Both sciatic notches are fairly narrow and the curvatures of both iliac crests exhibit a marked S-shape when viewed superiorly. The remains from Neonate 2 did not include ilia.

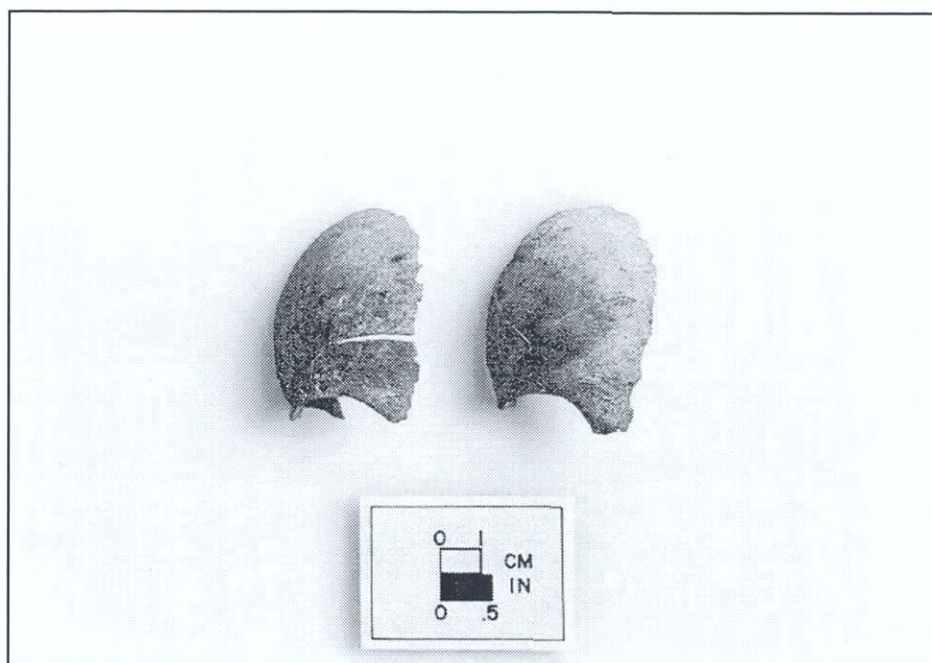


Figure 131. Anterior aspect of right frontals from neonates (cat. no. 985, at left, and cat. no. 973, at right).

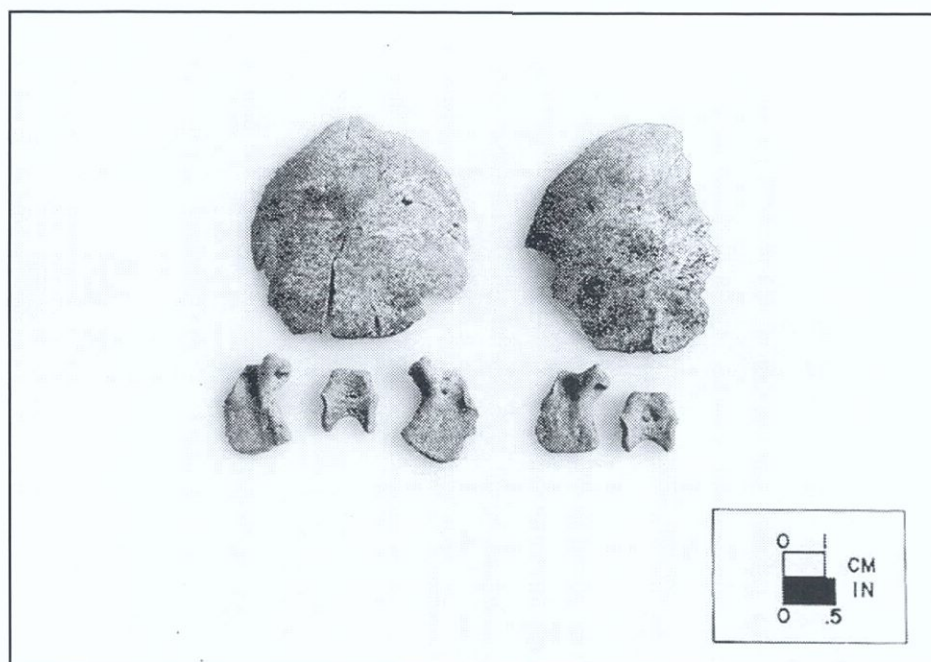


Figure 132. Posterior and inferior aspects of occipitals from neonates (cat. no. 985, at left, and cat. no. 973, at right.) Note unfused basilar and lateral portions at bottom.

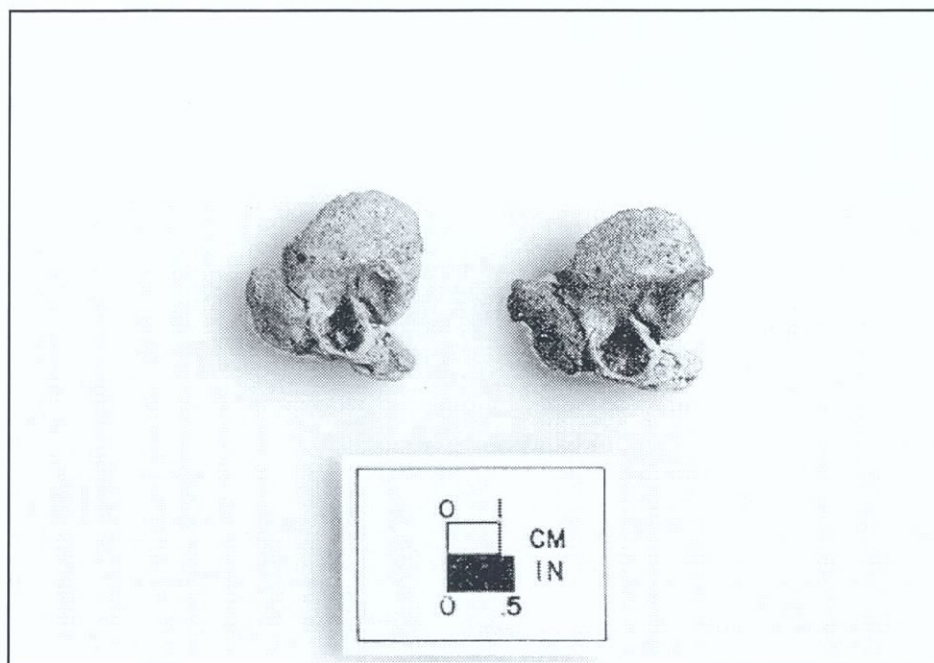


Figure 133. Lateral aspect of right temporals from neonates (cat. no. 985, at left, and cat. no. 973, at right). Note completed fusion of tympanic rings and squamosal portions to petrous portions of both bones.



Figure 134. Anterior aspect of right and left humeri from neonates (cat. no. 985, at left, and cat. no. 973, at right).

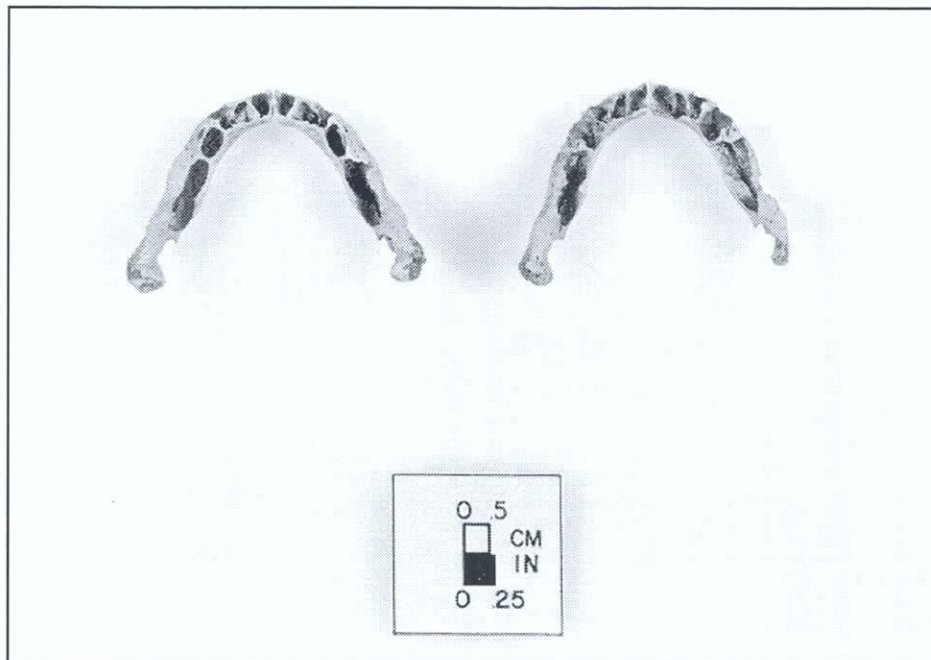


Figure 135. Superior aspect of mandibles from neonates (cat. no. 985, at left, and cat. no. 973, at right).

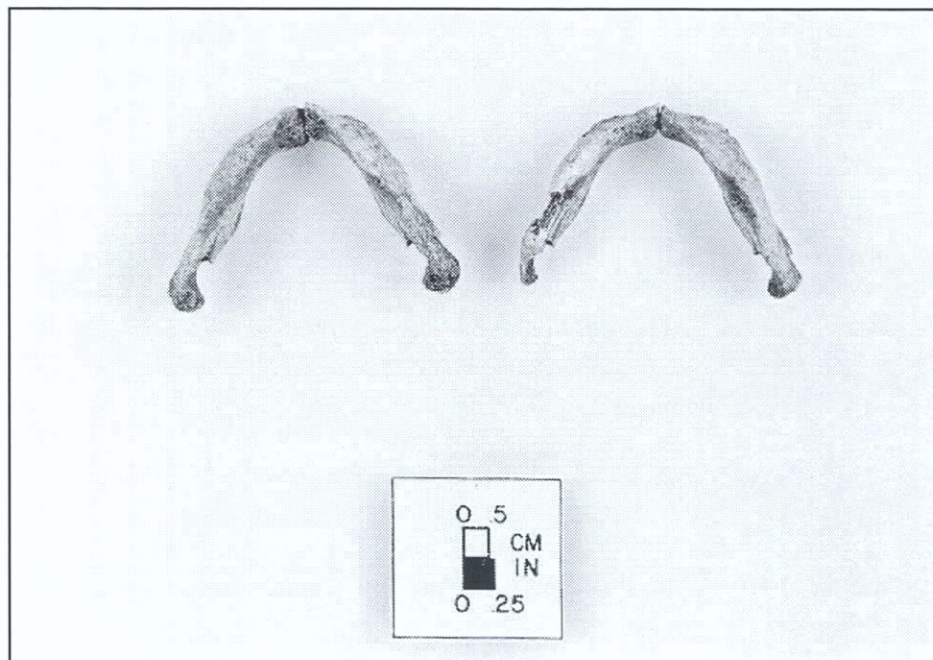


Plate 136. Inferior aspect of mandibles from neonates (cat. no. 985, at left, and cat. no. 973, at right).

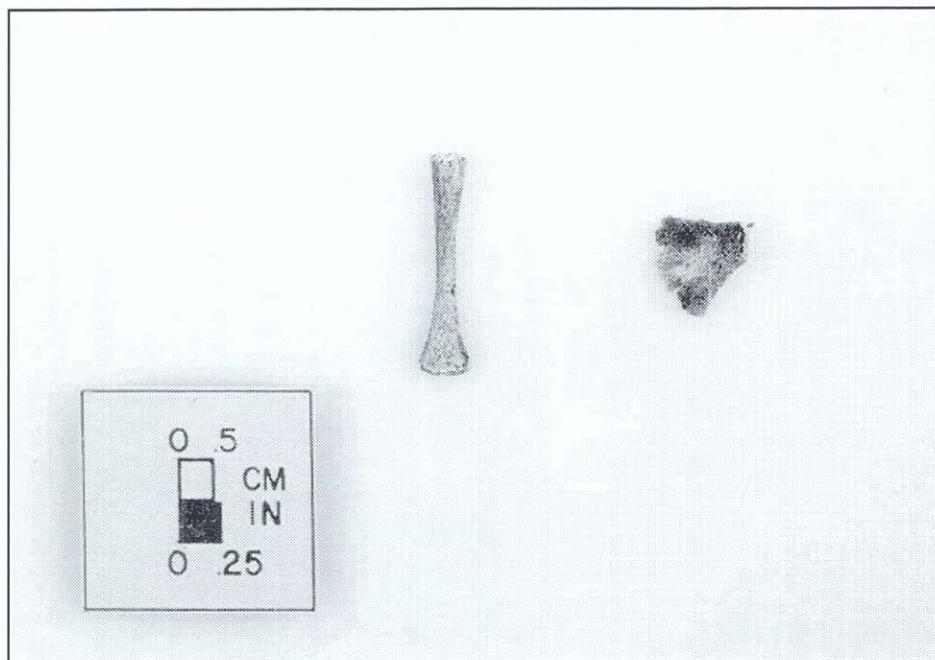


Figure 137. Anterior aspect of right humerus and left scapula of 5-5/2-month fetus from cat. no. 980.

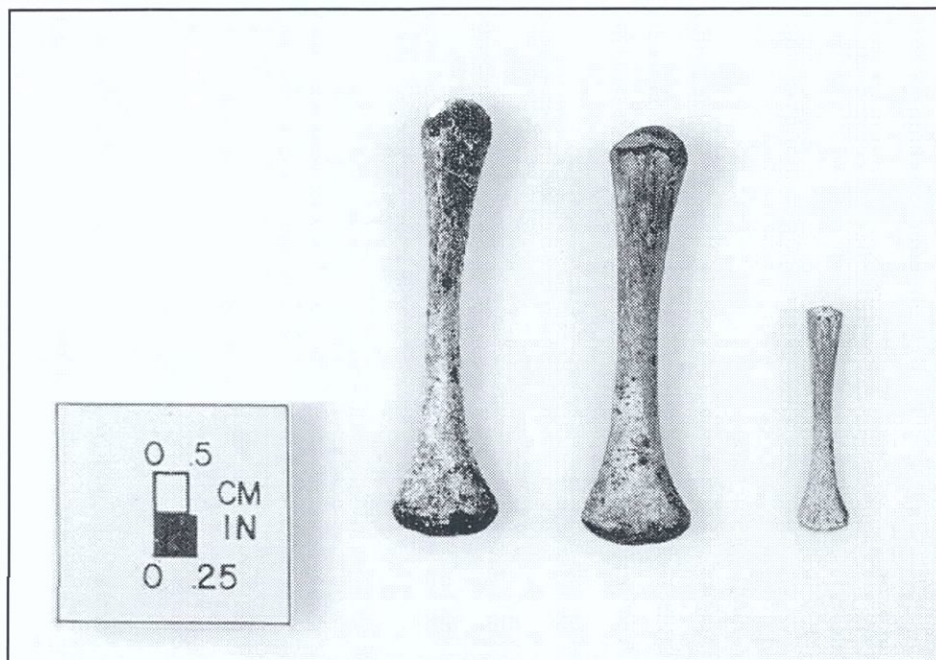


Figure 138. Anterior aspect of right humeri from neonates and the 5-5/2-month fetus from cat. no. 980 (from left to right).

Table 131. Inventory of Skeletal Components from Neonates 1 and 2 (cont.)

Bone	Neonate 1	Neonate 2
Skull		
Left frontal	Partial	Partial
Right frontal	Complete	Complete
Left parietal	Complete	Fragments
Right parietal	Fragments	Fragments
Left temporal	Complete	Complete
Right temporal	Complete	Complete
Occipital squamous	Complete	Partial
Occipital basilar	Complete	Complete
Occipital left lateral	Complete	Complete
Occipital right lateral	Complete	—
Left maxilla	Complete	Partial
Right maxilla	Complete	—
Left mandible	Complete	Complete
Right mandible	Complete	Complete
Sphenoid body and lesser wings	Complete	Complete
Sphenoid left greater wing	—	Complete
Sphenoid right greater wing	Complete	—
Vomer	Partial	—
Left zygomatic	Complete	—
Right zygomatic	Complete	—
Upper Limb		
Left scapula	Complete	—
Right scapula	Complete	—
Left clavicle	Complete	—
Right clavicle	Complete	Complete
Left humerus	Complete	Complete
Right humerus	Complete	Complete
Left ulna	Complete	Complete
Right ulna	Complete	—
Left radius	Complete	Complete
Right radius	Complete	—
Lower Limb		
Left ilium	Complete	—
Right ilium	Complete	—
Left pubis	Complete	—
Right pubis	Complete	—
Left ischium	—	—
Right ischium	Complete	—
Left femur	Complete	—
Right femur	Complete	—
Left tibia	Complete	—
Right tibia	Complete	—
Left fibula	Complete	—
Right fibula	Complete	—
Axial Components		
Left ribs	10 present (including first)	1 present
Right ribs	3 present (including first)	—
Vertebral centra	4 cervical, 7 thoracic, 5 lumbar	—
Vertebral arches	35 unfused arches	—

Table 132. Dental Inventory for Neonate 1

Arcade and Tooth ¹	Calcification Stage ¹	Age Estimate ²
Maxillary		
Deciduous right central incisor (dri ¹)	Crown 3/4	Birth ± 2 months
Deciduous right lateral incisor (dri ²)	Crown 3/4	Birth ± 2 months
Deciduous right first molar (drm ¹)	Crown 1/2	Birth ± 2 months
Mandibular		
Deciduous left lateral incisor (dli ¹)	Crown 3/4	Birth ± 2 months
Deciduous right first molar (drm ¹)	Crown 1/2	2 months ± 1 month
Deciduous left first molar (dlm ¹)	Crown 1/2	2 months ± 1 month

¹ Following Moorees et al. (1963a, 1963b).

² Following Moorees et al. (1963a, 1963b) and Ubelaker (1989).

The age at death for each infant from Block 160 was determined by comparing metrical data from these remains (Table 133) with developmental data from documented fetal and full-term skeletons collected by Fazekas and Kósa (1978). Their study sample consisted of 138 human fetuses (71 males and 67 females) ranging in age between the third and tenth lunar months. Body length of the sample ranged between 9 and 55 cm. The fetal remains were from autopsies performed in Hungary and represent a very narrow sample for comparative purposes. However, since documented immature remains constitute a tiny percentage of the forensic and archeological cases recorded by physical anthropologists, a more appropriate comparative sample currently does not exist.

The results of the metrical analyses of the Block 160 remains using regression formulae developed by Fazekas and Kósa (1978) indicate that both individuals died around the time of birth (Table 134). The degree of calcification of the dental remains from Neonate 1 also supports this age range (Table 132). The overall age range for Neonate 1 is nine and one-quarter to nine and one-half lunar months (259–266 days), while Neonate 2 died between nine to nine and one-half lunar months (252–266 days). These estimates fall within the clinically defined full-term period (259 to 286 days inclusive from the first day of the last menstrual period). The body lengths of both neonates also place them within the full-term period. Therefore, both individuals from Block 160 represent normally developed full-term fetuses who were almost certainly delivered. The viability of the infants at birth cannot be determined from the skeletal remains, although there is no osteological evidence to suggest the infants were unable to survive after delivery.

Table 133. Measurements of Neonates 1 and 2

Bone and Measurement ¹	Neonate 1		Neonate 2	
	Left	Right	Left	Right
Cranial Bones				
Frontal height	—	52	—	52
Frontal width	—	(37)	—	38
Temporal height	22	22	23	21
Temporal width	28	28	28	28
Temporal petrous length	35	38	38	36
Temporal petrous width	17	17	17	17
Tympanic ring diameter	—	10	10	10
Occipital height	55	57		
Occipital width	53	—		
Occipital basilar length	11.5	12		
Occipital basilar width	14	14		
Occipital lateral length	26	26	25	—
Occipital lateral width	15	15	14	—
Sphenoid greater wing length	—	24	(23)	—
Sphenoid greater wing width	—	9	10.5	—
Maxilla height	22.5	(18.5)	20	—
Maxilla oblique length	(27)	30.5	—	—

Table 133. Measurements of Neonates 1 and 2 (cont.)

Bone and Measurement ¹	Neonate 1		Neonate 2	
	Left	Right	Left	Right
Mandible body length	37	37	35	—
Mandible arc width	(17)	16	15	—
Mandible full length	47.5	47	45	—
Upper Limb				
Humerus length	64.5	64	60.5	60.5
Humerus width	16	15.5	16	15.5
Humerus diameter	5	5	6	6
Radius length	52	51	46	—
Radius diameter	4	3.5	5	—
Ulna length	58	57.5	54	—
Ulna diameter	4	4	5	—
Clavicle length	43.5	42.5	—	41
Clavicle diameter	3.5	4	—	4
Scapula length	34.5	33.5	—	—
Scapula width	26.5	26.5	—	—
Scapula spine length	30	30.5	—	—
Lower Limb				
Femur length	75	75	—	—
Femur width	18.5	18.5	—	—
Femur diameter	6	6	—	—
Tibia length	66	66	—	—
Tibia diameter	6.5	6.5	—	—
Fibula length	61	61.5	—	—
Fibula diameter	4	4	—	—
Ilium length	34.5	34	—	—
Ilium width	30	30	—	—
Ischium length	—	17.5	—	—
Ischium width	—	11.5	—	—
Pubis length	21	21.5	—	—

¹ Following Buikstra and Ubelaker (1994) and Fazekas and Kósa (1978).

Table 134. Age and Body Length Estimates for Neonates 1 and 2

Bone and Measurement ¹	Neonate 1		Neonate 2	
	Body Length ²	Age Estimate ³	Body Length ²	Age Estimate ³
Cranial Bones				
Frontal height	47.4	9½-10	47.4	9½-10
Frontal width	40.2	8-8½	41.4	8-8½
Temporal height	44.7	8½-9	44.7	8½-9
Temporal width	42.8	9½-10	42.8	9½-10
Tympanic ring diameter	36.5	9-9½	36.5	9-9½
Occipital height	50.3	9½	52.0	9½
Occipital width	46.2	9½-10	—	—
Occipital basilar length	43.5	9½	45.7	9½
Occipital basilar width	49.3	9½	49.3	9½
Occipital lateral length	55.3	9½	55.3	9½
Occipital lateral width	57.0	9½	53.8	9½
Maxilla height	46.1	9½	41.1	9-9½
Maxilla oblique length	46.3	9½	—	—
Mandible body length	53.0	9½	50.1	9-9½
Mandible arc width	45.7	9½	43.1	9-9½
Mandible full length	48.9	9½	46.8	9-9½
Average	47.1±5.1	9½-10	46.4±5.1	9-9½

Table 134. Age and Body Length Estimates for Neonates 1 and 2 (cont.)

Bone and Measurement ^{1,2}	Neonate 1		Neonate 2	
	Body Length ²	Age Estimate ³	Body Length ²	Age Estimate ³
Cranial Bones				
Upper Limb				
Humerus length	50.1	8-8½	48	8-8½
Radius length	53.1	>10	46.7	9-9½
Ulna length	49.9	8½-9	46.7	8-8½
Clavicle length	50.1	>10	47.7	>10
Average	50.8±1.3	9-9½	47.3±0.6	8½-9½
Lower Limb				
Femur length	52.8	7½-8	—	—
Tibia length	52.7	8½	—	—
Fibula length	51.0	8½-9	—	—
Average	52.2±0.8	8½-8½	—	—
Combined Postcranial Average	51.5±1.1	8½-9	47.3±0.6	8½-9½
Best Overall Average	49.3	9¼-9½	46.9	9-9½

¹ Following Buikstra and Ubelaker (1994) and Fazekas and Kósa (1978).

² In centimeters; from regression formulae in Fazekas and Kósa (1978).

³ In lunar months; based on comparative data from Fazekas and Kósa (1978).

Neither individual presented compelling evidence of infectious disease or nutritional disorders. Small patches of mildly raised, porotic bone on the anterior surfaces of the distal femora from Neonate 1 may be related to infection, but more likely represent normal development at the metaphyseal plates. The frontals from both individuals present porosity with evidence of remodeling and fairly deep vascular grooves on their endocranial surfaces. While also possibly indicating infection, it is more likely these areas reflect rapid growth of the cranial bones and adjacent brain tissue. Additionally, the ectocranial surfaces of the parietals from both neonates present irregular porosity and a transversely organized linear appearance. Although similar in appearance to cranial lesions associated with rickets (vitamin D deficiency), most nutritional deficiency disorders rarely appear before two to four months postpartum and are atypical of neonates. This is because the required vitamins continually pass from mother to fetus, where they are stored in the liver (Ortner and Putschar 1985:270-280). Even if no vitamin intake occurs after birth it takes several months before most nutritional diseases are manifest.

5.5.5.3 Interpretations

The two neonates from the privy on Block 160 in Five Points represent in microcosm the tragedy that often accompanied inner-city life in nineteenth-century New York City. The remains of these two infants almost certainly reflect a deliberate attempt to conceal their deaths, and probably their births as well. Considering that some of the harshest legal penalties of the day were aimed at women carrying illegitimate children, it is not difficult to imagine a woman at Five Points delivering an illegitimate child alone and then purposely discarding her baby in the nearby privy. If the two neonates were twins, as may be the case here, the compunction to remove any evidence of childbirth may have been overwhelming.

The close similarities in the size, skeletal morphology, and degree of development of the two neonates strongly suggests that they were twins. Since the remains were disposed of simultaneously, it is more likely that they represent twins from the same delivery rather than two infants from different women who then discarded their babies together. Genetic testing using DNA samples, if obtainable, may allow the familial affinity of the two sets of remains to be determined.

To summarize the osteological results, the privy on Lot 43 (10-12 Orange Street) in Five Points yielded the partially commingled skeletal remains of two normally developed neonates, one possibly a boy and the other a girl. Neither set of remains presented evidence of infection, nutritional disorders, or a cause of death. Based on morphological and metrical similarities, the two individuals may have been twins.

The evidence that the remains represent a case of infanticide is convincing. The skeletons were partially commingled and had originated from the same stratigraphic deposit prior to disturbance of the privy during construction of an intrusive wall in the 1870s. The osteological analysis indicates that both individuals were normally developed full-term fetuses that were almost certainly delivered. This indicates that both neonates were disposed of at the same time shortly after birth. There were no obvious fractures or any other evidence of trauma.

That the viability of the infants cannot be determined from the osteological analysis does not affect the fact that their presence in the privy, after more than 155 years, represented a criminal act. Since the remains were deposited in a privy shaft rather than properly interred in a cemetery, it appears that parties unknown chose to conceal the remains, regardless of whether they were stillborn or viable. Moreover, the remains were thrown down the shaft together with the remains of numerous animals including several fetal pigs, significantly reducing the likelihood that someone would inadvertently discover the privy's secret. This suggests that someone familiar with the normal refuse that was thrown in the privy disposed of the infants' remains there as well.

Possible perpetrators include someone who lived at the tenements that shared the privy, neighbors in adjoining buildings or blocks, and even the nightsoil men who cleaned the city privy shafts at regular intervals. Former tenants or servants who lived on the block or in the neighborhood may also be included among the suspects. And in the midst of the teeming tenements located in Five Points it is possible that the privy was chosen completely at random by someone seeking an anonymous place to discard the remains.

However, the most likely scenario to account for the presence of the neonate remains in the privy comes from contemporary municipal records. These records indicate that until at least 1843 a brothel operated at one of the buildings that used the privy. As recorded by Sanger (1939[1858]) just a decade later, more than 60 percent of the children born to prostitutes in New York City died, most due to poor maternal care, abortions, and stillbirths. This represents an infant mortality rate almost four times higher than that for the city's general population. It is plausible to expect that cases of infanticide likewise occurred at a higher frequency among New York City's prostitutes. Considering the stratigraphic relationships in the privy and the osteological and historical evidence, it is certainly reasonable to consider a prostitute living at 10-12 Baxter Street prior to 1843 as the primary suspect in this crime of concealment.

5.5.6 Conclusions

Infant mortality rates for American cities during the first half of the nineteenth century were exceptionally high, yet do not accurately reflect the actual number of casualties. Although it was not morally acceptable, infanticide accounted for a significant number of unrecorded deaths in nineteenth-century New York. Prostitutes were among the women who committed infanticide and also aborted unwanted pregnancies. Neither infanticide nor abortion was illegal for much of the century (Amy Srebnick, 1998, personal communication). However, strict moral codes may have driven women of all social stations to conceal their pregnancies and take the lives of their babies. Subject to rare exceptions, infanticide is the result of an act that is not premeditated. It is effected by the means immediately at hand, and usually by a person who is, at least temporarily, legally irresponsible (Polson 1955).

The remains from the privy at 10-12 Orange Street represent two of the innumerable infants who died unceremoniously during the nineteenth century. While the names of these two infants never appeared on a tombstone, nor were their births or deaths ever officially recorded, the archeological discovery of their remains grants them a sort of immortality. They serve as a poignant reminder of the often terrible times into which they were born, their fleeting lives uncommemorated and forgotten amongst the bustling chaos of Five Points.

6.0 THE SOCIOECONOMIC AND IDEOLOGICAL PROCESSES THAT CONTRIBUTED TO THE SOCIAL CONSTRUCTION OF THE FIVE POINTS "SLUM"

6.1 Introduction (Rebecca Yamin)

From the very beginning of the Five Points project, it was obvious that there was a disparity between the reputation of the neighborhood and the artifacts that were recovered on Block 160. We first considered the possibility that the block was not part of Five Points at all and set out to define the actual boundaries of the district by examining contemporary sources (Yamin and Milne 1994). Once it became clear that Block 160 abutted the intersection for which Five Points was named and was, therefore, immediately adjacent to the symbolic center of the district, the problem was to explain how the archeological data could be so different than contemporary representations.

As has been mentioned throughout this report, the construction of the nineteenth-century slum is a subject that has received a considerable amount of scholarly attention (e.g., Ward 1989; Blumin 1990; Mayne 1993). The three papers in this section address different aspects of the social construction of the Five Points slum in particular, although the issues raised pertain to other working-class neighborhoods that were portrayed similarly in the nineteenth century. The analyses also point to issues and attitudes that are with us today and continue to distort the portrayal of working-class neighborhoods.

Fitts's study of the Five Points missions and the ideological orientation of the missionaries reveals the relationship between middle-class values and representations of slums. He argues that the genre of literature that described the "horrors of slum life" reassured the middle class that it lived by superior values and served to warn any who might stray from the ideals of the cult of domesticity what the results could bring. The literature, therefore, is more about middle-class values than any working-class reality which is portrayed in caricature. After briefly summarizing the history of the two missions at Five Points, Fitts uses their publications (including books, newsletters, and reports) to examine the focus of missionaries' efforts and their attitudes toward the people they claimed to be helping. Protestant missionaries were apparently more interested in ridding the Five Points populace of Catholicism than attacking the physical and economic conditions that made working-class life such a struggle. They equated the physical deterioration of housing with moral failings and the lack of furnishings inside with debauchery. What is particularly telling from Fitts's examination of these writings is the tolerance the missionaries showed for the worthy poor, that is, a poor person who bought into the cult of domesticity and thereby demonstrated that anyone could rise above poverty if he or she accepted the right values. This tolerance was, of course, self serving since it demonstrated the worthiness of the missionaries' cause and provided a reason for supporting their efforts.

Drinking and smoking were among the behaviors condemned by reformers. Although the middle class continued to indulge, at least to some degree, in alcohol and tobacco use, the rhetoric of temperance called for complete abstinence and, according to the authors of Section 6.3, it was the working class that was supposed to abstain. Using the archeological assemblage from Five Points, a middle-class site in Brooklyn, a site associated with a native-born tradesman in Manhattan, and the Boott Mills in Lowell, Massachusetts, Reckner and Brighton compare the physical evidence for alcohol and tobacco use with the ideals of the temperance movement. While there is substantial evidence for drinking and smoking at Five Points, there is also evidence—including a cup decorated with the image of Father Mathew, a major proponent of temperance in Ireland—for temperance. Two of the middle-class families in Brooklyn appeared to completely abstain, but four others did not. Reckner and Brighton also consider the role of alcohol and tobacco in immigrant, working-class culture and suggest that temperance rhetoric, as well as coercive acts like the liquor laws passed by the New York State Assembly in 1857, were used to control the working class and berate immigrant groups. The paper ends with a methodological postscript that raises some important points with regard to the ambiguity of drinking-related vessels and bottles and the selective curation of pipes, especially in the later nineteenth century.

Cook confronts the issue of slum representation head on. His "visual archeology" of images of Five Points demonstrates how conventions used in lithographs and even photographs contributed to the construction of certain ideas about class and ethnicity. By comparing images of virtually the same place, such as the Five Points intersection and the Old Brewery, he shows how the content of an image is manipulated to influence the viewer's interpretation. The manipulation is not so much a conscious construction as an expression of how the neighborhood was viewed from the outside through middle-class sensibilities. Drawing on an approach used to analyze mass visual media in the 1950s and 1960s, which identified something called "spectacle," Cook applies the same techniques to the analysis of nineteenth-century images. Even photographs become spectacles with real people in real places representing an "other" that is alien to most people who have never entered a working-class neighborhood and never would. Special attention is paid to Jacob Riis's photographs of Five Points and other slums, published in *How The Other Half Lives* (1890, 1971 edition), which are some of the most famous images of nineteenth-century New York. Cook's analysis includes several Depression-era images of Five Points and working-class subjects that reflect a very different attitude toward poverty than was expressed in the nineteenth century. Once analyzed, the construction of the slum is fairly obvious. What is harder, and ultimately impossible, is to know what the reality was.

In 1995, the Museum of the City of New York mounted an exhibit of new prints of Jacob Riis photographs juxtaposed with photographs of poor people in present-day New York. While the point of the show may have been that things have not changed very much, our analysis of the construction of the slum in the nineteenth century has made us aware that those of us who do not live in poverty may not know what we are looking at. In fact, the pictures of current poverty suggest that things have changed, that people are more isolated from each other, that neighborhoods that were once overcrowded and alive with activity have become desolate stretches of decaying buildings and vacant lots. That abject poverty persists in the midst of affluence seems even less excusable in the late twentieth century than it was in the nineteenth. Perhaps the most valuable thing that can come out of our study of Five Points is an awareness of how much of the present comes out of the past. The Industrial Revolution set the stage for the development of an economic system we now see in full flower. Five Points was an early manifestation of that system. There are many more around us.

6.2 The Rhetoric of Reform: The Five Points Missions and the Cult of Domesticity (Robert K. Fitts)

6.2.1 Introduction

The Five Points...surrounded by want and suffering, by beggary, shame, and crime... We have been compelled by our relation to this people, to witness little bare feet treading the icy pavements, until the nails have been frozen from their toes...; to see boys ripen into criminal manhood, and girls into wanton womanhood (Pease 1856:4).

When I next entered those dark precincts, I saw with astonishment...the old rookeries where thieves, villains, and poor forsaken wretches herded....The scenes that I there witnessed cannot be told by tongue or pen....Every room was a den of infamy. Every species of crime and villainy was planned and executed there. Often at night the cry of murder resounded within those walls, and criminals of the deepest die walked in and out at all hours unmolested....Not a room in all these buildings but had witnessed death in its most frightful and unnatural forms, either by the hand of the assassin, by famine, or by hideous disease....The...basements were all rum-holes, all devoted to rapine, violence and lust; all overflowing with depraved and hardened outlaws who would not shrink from any crime. Often four and five families inhabited a room, and many of these took boarders, so that at night the floors were covered. Not a week passed but the Poor-house dead-cart stopped in front, and amid howls and shrieks enough to literally "wake" the dead, some poor creature was carted off to Potter's field (Eells 1856:10-11).

This image of Five Points, contained in an issue of the newsletter associated with the area's missionaries, starkly contrasts with the archeological and historical evidence which shows Block 160 to be a complex, vibrant, working-class, immigrant community. Both the archeological and census data indicate that although the Five Points neighborhood was poor and contained abysmal sanitary conditions, it also housed many stable families and a variety of small businesses. These immigrants, striving to make a new home in America, are rarely present in nineteenth-century reformers' accounts of Five Points. This omission strongly suggests that the accounts do not draw an accurate picture of the area. Written by members of the middle class for a middle-class audience, the reformers' descriptions of Five Points actually tell us more about their values than about working-class life. This discussion will examine the writings of the missionaries in Five Points to show how this neighborhood was depicted as the antithesis of the middle-class ideology of domesticity.

6.2.2 The Ideology of Domesticity

The ideology of domesticity, also known as the cult of domesticity, developed out of changing attitudes toward children and the reaction to orthodox Calvinism of the Second Great Awakening (ca. 1800-1830). Throughout the seventeenth and most of the eighteenth centuries, American Protestantism was based on the Calvinist doctrines of predestination and human depravity. Basically, these doctrines stated that humans were inherently evil but through the grace of God a select few would be allowed into heaven. God selected these individuals before their birth and earthly accomplishments could not alter a person's fate. Although these doctrines evolved during the eighteenth century, they still formed the underlying assumptions of most Protestant sects in early-nineteenth-century America. During the Second Great Awakening, Calvinist doctrine was transformed to incorporate theological ideas of the enlightenment which argued that God was rational, kind, and forgiving. As a result, by the 1830s American Protestant religions bore little resemblance to earlier forms of orthodox Calvinism. Instead of the doctrines of predestination and total human depravity, most Protestants came to believe that humans were naturally good and moral creatures who were born into a wicked world. God promised salvation to any human who maintained a moral path and accepted Jesus Christ as the savior. With this radical change, individuals became responsible for their own salvation (Ladies of the Mission 1854; Rosenberg 1971:60-69; Johnson 1978:95-115; McLoughlin 1978:98-140).

This new form of Protestantism viewed children as innocent and close to God as they were untainted by the evils of the world (McLoughlin 1978:116). Preachers argued that this innocence provided the

opportunity to teach them the values that would ultimately lead to salvation (Ryan 1981:99; Beecher and Stowe 1994:219). The separation between the work-place and the home and the development of distinctly different gender roles in the nineteenth century gave women control of child rearing and domestic duties (Ryan 1981; Green 1983; Clark 1986; Mathews 1987; Blumin 1989; Wall 1994). With the very souls of their children in the balance, middle-class mothers began transforming their homes into moral sanctuaries designed to shield their families from the world's evils and instill in their children Christian values.¹ This not only included instructing them with the basic beliefs and traditions of Protestantism, but it also included instruction on how to be a moral, or respectable, member of society. Values taught included honesty, hard work, thriftiness, cleanliness, temperance, courtesy, and various rules of behavior commonly called gentility. To protect their children from ungentle habits, many mothers banished improper behavior such as cursing, smoking, and drinking from their homes (Beecher and Stowe 1994:84).

The ideology of domesticity transformed nineteenth-century middle-class homes into highly symbolic zones designed both to influence their inhabitants and make statements to visitors (Clark 1986:114; Kasson 1990:169–170). For example, architectural symbols of a respectable Christian home included Gothic designs, plants, nature motifs, and the general orderliness of the house and landscape (Green 1983:59; Clark 1986:28; Marsh 1990:11). As the display of these symbols implied acceptance of the cult of domesticity and maintenance of a Christian home, women were judged by the state of their house, and the presence or absence of the appropriate symbols was interpreted as a sign of morality or immorality (Green 1983:59).

Victorian writers were adamant that respectability was not based on birth or wealth but could be learned by anyone who accepted the ideology of domesticity and exhibited appropriate genteel behavior (Kasson 1990:43; Bushman 1992:xv). Individuals who displayed rude behavior were seen as degenerates who made no attempt either to improve themselves or create an environment which would lead their children to salvation (Bushman 1992:278). Increasingly, members of the middle class argued that since respectability, and ultimately prosperity, were within the grasp of all Americans, those who remained poor and rude could only blame themselves for their lowly position. Thus, poverty was seen as a symptom of moral failure (Bushman 1992:424).

Nearly all proponents of the ideology of domesticity argued that rural areas provided the best environment to create a domestic sanctuary. Writers, such as Andrew Jackson Downing, argued that the proximity to nature was not only healthy but that its beauty brought one closer to God (Stilgoe 1988:33–37). In contrast, cities were seen as poor places to raise moral children. The presence of large numbers of destitute immigrants, mob violence, crime, and disease caused most of the middle class to view urban areas as centers of immorality (Clark 1986:100–102). In the 1840s and 1850s, just as numerous authors were extolling the virtues of domesticity, others created a genre of literature which exposed the horrors of urban life (Siegel 1981; Mayne 1990). Most of these works were highly formulaic. The author took readers on a tour of a city including the cultural highlights but spending undue space on the city's slums and the underworld (e.g., Bobo 1852; Smith 1868; Foster 1990). The slums and their poverty were described in minute detail, painting a vivid picture for the reader. Recent studies (e.g., Siegel 1981; Mayne 1990), however, have shown that the descriptions of the slums and the people who inhabited them are only caricatures which represent common nineteenth-century perceptions of poverty. These studies conclude that the entire genre provides little information on the realities of nineteenth-century working-class life.

Nevertheless, during the mid-nineteenth century, these accounts of urban life were popular among middle-class readers. Many of these books were reprinted several times and sold over 100,000 copies (Siegel 1981:156, 161; Blumin 1990:38). Although they were ostensibly written to warn wary travelers and newcomers of the dangers of urban life, few were purchased for their advice. Instead, a variety of reasons account for their popularity. First and foremost, they were entertaining. By concentrating on the steamier side of urban life, the books allowed Victorians to voyeuristically experience behavior defined as immoral by the ideology of domesticity and Protestant doctrine.

¹ It must be remembered that during this period most Protestants did not consider Catholicism to be a true form of Christianity.

The Socioeconomic and Ideological Processes that Contributed to the Social Construction of the Five Points "Slum"

Second, the descriptions of poverty, and especially poor children, appealed to the many members of the middle class involved in reform movements. As evangelical Protestants believed that salvation was open to anyone who would adopt a Christian lifestyle, many believed it was their duty to help others see the light and follow this path (Rosenberg 1971:60–69; Johnson 1978:95–115; McLoughlin 1978:98–140). Alarmed by the rise of urban poverty and violence, many moral reformers concentrated their efforts on the poor. Descriptions of slums, often authored by individuals involved in the moral reform movement, raised public awareness to the plight of the poor and publicized the need for reform. Often included in the accounts were stories about successful missionaries, which showed that poverty could be conquered through the intervention of a spirited middle class. This optimistic message proved to be popular. The reform-minded middle class enjoyed reading about the successes and concluded that an end to urban poverty and disorder was an attainable goal (Siegel 1981:155, 167). As a result, the reforming organization received greater support in the form of volunteers and donations.

Third, the sensational accounts contained moral lessons which upheld the ideology of domesticity. Descriptions of the poor directly linked poverty with immoral behavior. This acted as a warning to those who might forsake proper behavior. *To abandon domesticity and gentility was to abandon respectability, prosperity, and happiness.* The lesson was extremely popular among the many members of the middle class, who built their homes and lives around the concept of respectability.

By creating a sensational image of urban poverty to appeal to the middle class, writers created an image of nineteenth-century working-class neighborhoods that would survive into the mid-twentieth century. The books de-emphasized, or entirely omitted, the strengths and stability of working-class culture and instead focused on behavior that contrasted with the ideology of domesticity. As a result, the image of a depraved and dangerous working class became fixed in the minds of middle-class Victorians and was accepted by many later historians of nineteenth-century urban American.

Nearly all sensational accounts of life in New York City contained a visit to Five Points. The literature made this working-class slum legendary as the most depraved and immoral spot in the United States. Among the texts responsible for creating this image of Five Points were the publications of the area's missions. The newsletters, reports, and books produced by these organizations were given special credence because of the missions' location within the slum and because the missionaries' altruistic motives and religious conviction seemingly made them above reproach. Thus, the images they created played an important role in their contemporaries' and our own view of life in Five Points.

6.2.3 *The Missions at Five Points*

Two missions, the *Five Points Mission* and the *Five Points House of Industry*, directly served the Five Points area. Their location, as well as their gift for self-aggrandizement, made these missions celebrated throughout the northern states. As a result, contemporaries and later historians treated their writings on life in the Five Points as authoritative. As a number of excellent discussions of the origins of both the moral reform movement and the history of the Five Points missions already exist (e.g., Rosenberg 1971; Boyer 1978; Johnson 1978; Walters 1978; Stansell 1987), this section will only outline the history of the Five Points missions to provide the background for the body of the paper.

In the late 1840s, the New York Ladies' Home Missionary Society of the Methodist Episcopal Church decided that the Five Points area needed a mission to "raise the fallen and to save the lost" (Ladies of the Mission 1854:36). Although initially it could not find a property suitable for its needs, the society opened its mission in a 20-by-40-foot room at the corner of Little Water and Cross Streets in 1850. The society appointed Lewis M. Pease as the lead missionary and immediately embarked on its reforms. Appalled by the prevalence of alcohol in the mostly Irish neighborhood, the missionaries ran temperance meetings and induced a thousand "of the very worst of the inhabitants" to sign a temperance pledge (Ladies of the Mission 1854:39). To abate the area's poverty, it provided the "worthy poor" with clothes, food, and medical care and even helped some inhabitants find work in the garment trade by setting up a workshop (Rosenberg 1971:227–229).

The main focus of the Methodist mission, however, was moral reform. In accordance with Protestant philosophy common in the first half of the nineteenth century, the mission ladies believed that following the teachings of Jesus Christ, accepting the associated values of domesticity, and keeping a Christian home would lead to a better life. As the Protestant missionaries viewed Catholicism as a doctrine which fostered ignorance and dependence on "the Anti-Christ at Rome," most "assumed that, given a decent exposure to the tenets of reformed Christianity, the Irish might actually welcome proselytization" (Knobel 1986:66, 81). Therefore, the ladies focused on converting the inhabitants of Five Points to Methodism. To achieve this goal, members of the mission distributed religious tracts, preached to individuals receiving aid, conducted prayer meetings, and established a Sunday school for local children. Soon after, a day school was established because "it was found that weekly impressions were too evanescent to be of much benefit to children who, during the other six days, were exposed to influences which ever rest upon those residing there" (Ladies of the Mission 1854:38–39).

This focus on religious conversion led Pease and the mission to part company. Pease became convinced that the lack of adequate employment was the primary cause for many of the Five Pointers' miseries. He argued that once employed the poor would begin to lead a more genteel lifestyle. For Pease, it was poverty and tenement life which led to moral destruction. Following this philosophy, Pease concentrated on job-training programs and job placement instead of preaching about moral reform and looking for converts. In contrast, the mission ladies argued that converting the Five Pointers to Methodism was of paramount importance since in their view the primary cause of unemployment was moral failing, not the lack of opportunity. They believed that once an individual adopted the Christian values of hard work, temperance, honesty, and thriftiness, employment and a better life would be forthcoming. These different philosophies led Pease to leave the mission in 1851 and establish his own workshop to concentrate on teaching marketable skills and care for the down and out. This enterprise, which will be described in more detail below, became the Five Points House of Industry (Ladies of the Mission 1854:40–41; Barnard 1893:12–13; Rosenberg 1971:228–232).

After Pease departed, the Ladies of the Mission appointed Reverend Luckey, previously the chaplain at Sing-Sing prison, to head the mission. The following year (1853), the Ladies purchased and razed the infamous tenement known as the Old Brewery and constructed a new mission on the property (Figure 139). Taking over "the great landmark of vice and degradation" raised the Ladies' prominence and helped them collect donations for their reforms (Ladies of the Mission 1854:64). In the new location, their strategy of reforming both the body and the soul continued. The new mission was centered around a chapel which seated 500 comfortably, but also included a parsonage, a school room, and 20 tenement apartments "in which poor and deserving families [were]...provided with very comfortable accommodations at...low rent" (Ladies of the Mission 1854:80). Over time, the mission ladies lessened their attempts to convert the overwhelmingly Catholic adult Five Pointers to Methodism and concentrated on providing relief (Rosenberg 1971:240–242). The mission, however, continued to teach Protestant values to the children enrolled in the school (Ladies' Home Missionary Society 1867, 1868). The Five Points Mission continued to provide relief and religious services to the area into the 1890s.

After leaving the Ladies' mission, Pease quickly turned his workhouse into one of the most successful missions in the United States. Incorporated in 1854 as the Five Points House of Industry, the board established a number of objectives: "I. To assist the destitute to support themselves, by providing for them employment, protection, and instruction....II. To provide partial or entire support...to children and others incapable of self-support....III. To imbue the objects of its care with the pure principles of Christianity...without bias from the distinctive peculiarities of any individual sect" (Barnard 1893:23).

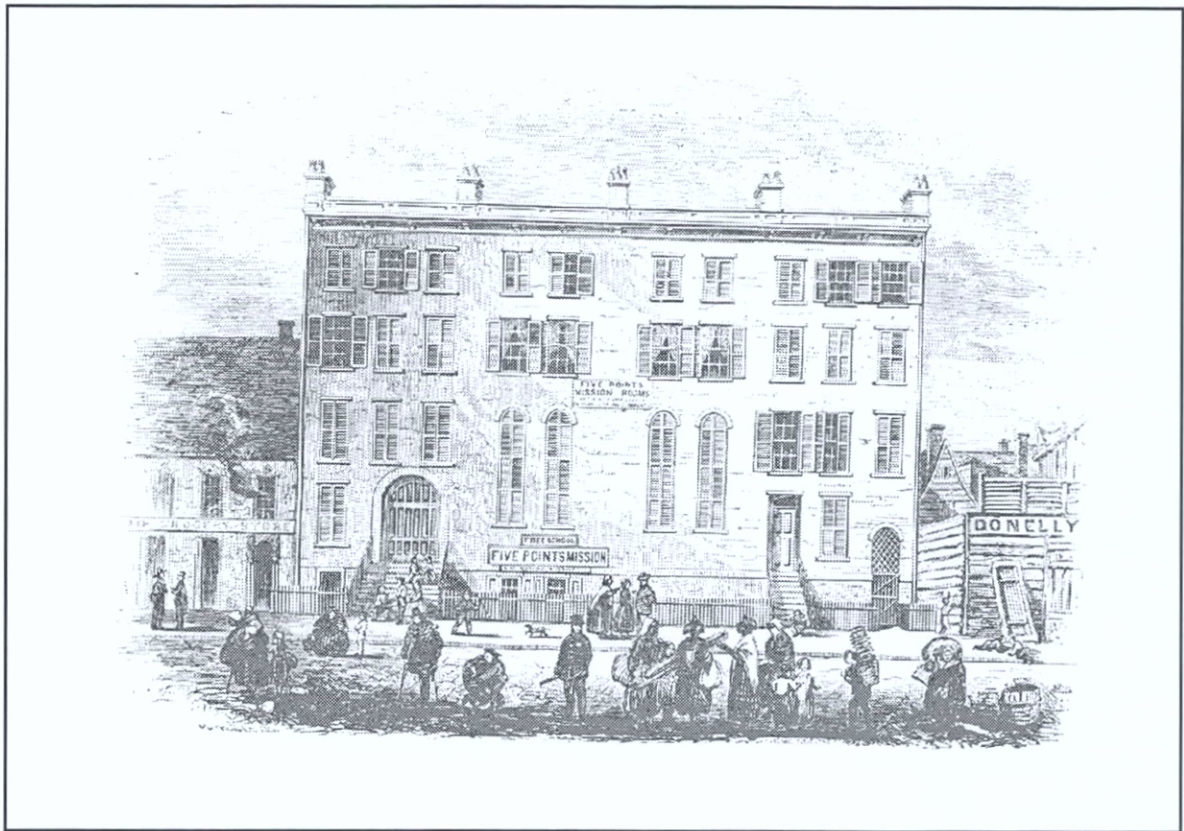


Figure 139. The Five Points Mission House on Park Street in the 1850s and 1860s. Courtesy of Robert Fitts.

The physical location of the Five Points House of Industry changed through time. It started in a small "house on the Five Points" and quickly expanded to include eight unconnected houses throughout the neighborhood. In 1856, the first official mission building was completed at 155 Worth Street. In 1864, the house purchased the property known as Cow Bay, demolished the tenement, and built a two-story mission. Five years later, this building was replaced with a five-story structure (Figure 140). This mission survived until it was declared unsafe in 1895. The following year, a new eight-story mission was erected on the same site (Barnard 1893:14–15; Five Points House of Industry 1913:25–26).

Although the Five Points House of Industry attempted a variety of enterprises, including a farm school, a working woman's home, a free dispensary, and public bathrooms, the boardinghouse and school for children became the most famous and successful aspect of the mission (Five Points House of Industry 1884:180, 1913:26). In this institution, missionaries taught the poor children of the Five Points English, job skills, and the values treasured by the middle class, including cleanliness, order, self-control, and discipline. William Barnard, the mission's superintendent for the last three decades of the nineteenth century, explained: "We feel that our school has a most potent influence in the matter of drilling these little recruits from sunny Italy into the American ways of decent living and good habits. We commence first on the line of cleanliness, as that is close to Godliness....Besides the education, the habits of neatness and order are inculcated with such effect as to call forth the unsolicited testimony of Missionaries of other Societies" (1893:36–37).

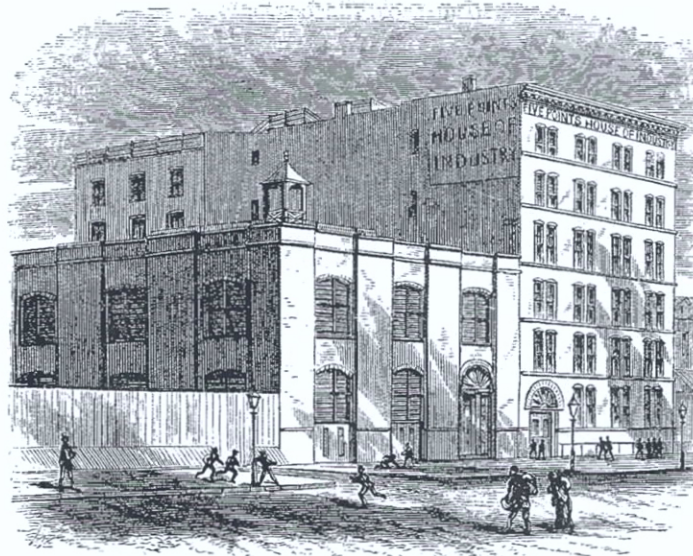
Pease, and subsequent superintendents of the house of industry, believed it was their duty to rescue deprived children from Five Points and place them in country homes to be raised with proper values. This often meant permanently separating the children from their natural (and usually Catholic) parents and sending them to a Protestant family in the country. There, they would be "contented and happy, and...educated for a life of respectability and usefulness" (Five Points House of Industry 1855:17). When placements were successful, Protestant families often formally adopted the children and raised them as their own. Some Catholic parents resisted the missionaries' efforts. At least once, a Catholic mother appealed to a magistrate to order Pease to return her child (Five Points House of Industry 1857:97). Barnard's history of the house of industry relates how the Five Pointers reacted to Pease: "religious bigotry asserted itself to harass at every step, and even judicial authority endeavored to hinder. More than once was he subjected to personal assault and stones were hurled at him on the street" (1893:16). Nevertheless, Pease and the missionaries prevailed. By the early 1890s, Barnard boasted that between the two Five Points missions "sixty thousand children have been rescued...from the streets and had their feet set in the better way" (1893:75).

In 1909, a diphtheria epidemic hit the city and the missionaries started to seriously consider moving their home to the countryside. The following year, the children were moved to temporary quarters in the country until the Children's Village in Rockland County, New York, was finished in 1911. At the same time, the mission's headquarters moved to 442 West 23rd Street (Five Points House of Industry 1913:26–27).

6.2.4 The Sources

To identify how the Five Points missionaries helped create and perpetuate the image of the district as a vicious slum, the newsletters, reports, and book-length publications of the Five Points Mission and the Five Points House of Industry were examined.

The Ladies' Home Missionary Society produced three publications, the most important of which was a 300-page book entitled *The Old Brewery and the Mission House at the Five Points* (Ladies of the Mission 1854). This book describes the first three years of the mission's existence and contains many vignettes of the missionaries' interactions with poor Five Pointers. As this volume was produced partly to raise contributions for the mission, the book emphasized the missionaries' success reforming the Five Pointers' morals and converting them to Methodism. To make this transformation more spectacular, the book exaggerated the area's poverty and crime. Thus, while it is not a good source for studying working-class life at Five Points, the volume is an excellent source for examining how the myth of debauchery was perpetuated.



Five Points' House of Industry,

No. 155 Worth street, New York.

TRUSTEES.

(Who are also Incorporators.)

Archibald Russell, *President.*

Hugh N. Camp, *Treasurer.*

R. B. Lockwood, *Secretary.*

Charles Ely,
Marshall Lefferts,
Frederick G. Foster,

Morris K. Jesup,
D. Lydig Suydam,
George F. Betts.

INCORPORATORS.

James Donaldson,
W. E. Caldwell,
J. R. Spalding,
H. R. Remson,
D. Willis James,
L. M. Pease,
J. H. Earle,
W. R. Vermilye,
C. H. Dabney,
C. H. Shipman,

T. B. Bronson,
R. A. Witthaus,
John Slade,
William Smith Brown,
Richard Warren,
Hiram Barney,
C. B. Tatham,
Daniel S. Schanck,
W. W. Cornell,
J. S. Leverett,

William T. Booth.

S. B. Halliday, *Superintendent.*

Figure 140. *The Five Points House of Industry at 155 Worth Street in the 1860s. Courtesy of Robert Fitts.*

Descriptions of the poor are also found in the mission’s monthly publication, *The Monthly Echo of the Original Five Points Mission*. This newsletter, first published on January 1, 1861, and continuing at least until June 1, 1898, contained articles promoting temperance, news about the mission, extracts from letters received by the mission, stories with Christian morals, and word games. For this study, the issues available at the New York Public Library, dating between August 1, 1874, and June 1, 1898, were examined. The *Annual Reports of the New York Ladies’ Home Missionary Society* were also examined. These reports are devoted mainly to information on the organization, such as lists of officers and donors, financial reports, and news-worthy events, but occasionally they provide insight into the mission’s relationship with the neighborhood. For this analysis, the annual reports from 1867 to 1895, available at the New York Public Library, were surveyed.

The Five Points House of Industry also produced three publications: a book, a monthly newsletter, and an annual report. In 1893, William Barnard, the house’s superintendent, published *Forty Years at the Five Points*, the only book on the Five Points House of Industry. This history and description of the contemporary institution emphasizes the house of industry’s role in transforming Five Points from the infamous “den of inequity” to a less dangerous slum. As attitudes toward the poor had changed between the publication of the Ladies’ Home Missionary Society’s book in 1854 and Barnard’s book in 1893, the later work contains fewer stereotyped images of the Five Points slum. The book does provide details on the history of reform in the area and a few stereotypes of New York’s later immigrants, such as Italians and Chinese.

Starting in August 1857, the institution also produced the *Monthly Record of the Five Points House of Industry*. All the issues available at the New York Public Library (1857–1864, 1872–1909) were examined. In general, these are factual reports containing descriptions of the Five Points House of Industry’s activities, programs, and construction projects. They contain few descriptions of the Five Points area. The *Annual Report of the Trustees of the Five Points House of Industry* was first published in 1855 and continued publication into the early twentieth century. For this study, the copies available at the New York Public Library (1855, 1884–1913) were examined. Although the 1855 reports contain moralistic vignettes depicting slum life, the later reports are basically factual. They describe the institution’s organization and physical plant, list its officers, and provide statistical information on its inmates and on the diseases treated in the infirmary.

A fourth publication, called the *Five Points Monthly* between January 1856 and April 1857 and thereafter *The Message*, was not officially associated with the Five Points House of Industry, but nevertheless contained articles about its work. Reverend Pease was a regular author in 1856, and issues contained the *Monthly Record of the House of Industry* in the fall of 1857 and the house’s annual report in the June 1858 issue. The publication included a variety of moralistic stories, descriptions of the Five Points slum, and editorials on methods of urban reform. The New York Public Library holds issues from January 1856 through June 1858, and each of these issues was examined for this study.

6.2.5 The Five Points Described

The “Five Points!”—a name which has hitherto been banished from the vocabulary of the refined and sensitive, or whispered with a blush, because of its painful and degrading associations. The “Five Points!” What does that name import? It is the synonym for ignorance the most entire, for misery the most abject, for crime of the darkest dye, for degradation so deep that human nature cannot sink below it. We hear it, and visions of sorrow—of irremediable misery—flit before our mental vision. Infancy and childhood, without a mother’s care or a father’s protection: born in sin, nurtured in crime; the young mind sullied in its first bloom, the young heart crushed before its tiny call for affection has met one answering response. Girlhood is there; not ingenuous, blushing, confiding youth, but reckless, hardened, shameless effrontery from which the spectator turns away to weep. Woman is there; but she has forgotten how to blush, and she creates oblivion of her innocent children’s home, and of the home of riper years, with its associations of fond parental love and paternal sympathies, by the incessant use of ardent spirits. Men are there—whose only occupation is thieving.And boys are there by scores, so

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fearfully mature in all that is vicious and degrading, that soon, O how soon, they will be fit only for the prison and the gallows (Ladies of the Mission 1854:34–35).

This quotation typifies how reformers depicted the Five Points. It was cited as the antithesis of middle-class respectability and domesticity, a symbol for the misery that could occur if the ideologies of gentility and domesticity were not followed. According to the ideology of domesticity, women were to create moral sanctuaries to raise their families with Protestant Christian values. An 1857 article in favor of tenement reform, published in *The Five Points Monthly*, begins: “Every building is characteristic of its builder—nothing more so—and no less does every dwelling fit itself or find a characteristic inhabitant.... A lair, a den, a hole in the mud or in the sand or in the rock, satisfy the instincts of some creatures [i.e., the immoral]. Others require a warm nest for the comfort of their young [i.e., the followers of domesticity]. A cleanly, an orderly, and even beautifully designed habitation, is characteristic of a still higher rank, and repays as much as it owes, to their delicate organization” (*Five Points Monthly* 1857:7).

It is not surprising, therefore, that the reformers’ descriptions of dwellings in the Five Points usually include words such as filth, slovenliness, dark, disorder, misery, and decay (e.g., Ladies of the Mission 1854:48, 104, 147–148, 263–264; Eells 1856:41; Pease 1856:23–24; *Five Points Monthly* 1857). By using these adjectives to describe the homes of Five Pointers, the reformers implied that their inhabitants were lazy and immoral. For example, one missionary explained: “He said I would find the house very dirty; but no anticipation could equal the sad reality. The entry through which I was obliged to pick my steps led to the door of a room, the air of which was almost intolerable, so offensive was the odor on opening the door. It was on the ground floor, and the crevices and holes of the broken flooring were a receptacle for the refuse food and slops” (Ladies of the Mission 1854:120).

According to the middle-class ideology of domesticity, a proper home should not only be clean and orderly but also contain the symbols of gentility and nurturing. Items such as plants and flowers, matching tablewares, carpets, parlor furniture, pictures, and clocks were required in middle-class homes (Green 1983:37; Williams 1985:76–78; Kasson 1990:174; Bushman 1992:265; Fitts and Yamin 1996). To show the misery and debauchery of the Five Points, descriptions of tenement interiors usually stress the lack of genteel material culture. Rooms are empty, except for a broken table or chair and a pile of rags in the corner, while tablewares are chipped, broken, or even non-existent (e.g., Ladies of the Mission 1854:48–49; Eells 1856:112; Pease 1856:24). For example, the Ladies of the Mission reprinted the following account of a visit to the Old Brewery: “When our company entered; women lay on a mass of filthy, unsightly rags in the corner...an old table covered with a few broken dishes; two women were peeling potatoes, and actually pulling off the skins with their finger nails; the smoke and stench of the room was so suffocating that it could not be long endured....On the front side of the building...sat two women, who looked as low and debased as any human beings could. No furniture was in the room, with only the floor for their bed” (1854:48–49).

The illustration *The Home of the Astor House Beggar* included in the Ladies of the Mission Society’s book *The Old Brewery* provides an excellent example of a “depraved” home (Figure 141). The picture shows the middle-class missionary viewing the squalid and immoral conditions of her student’s home. Both parents, dressed in ragged clothes, are drunk. The father slumps on a chest, while the mother is passed out on the floor. The scene emphasizes filth and disorder. Empty bottles, pipes, trash, and an overturned stool lie on the floor, showing that the parents are too lazy and savage to tidy the dwelling. The liquor bottles and the pipes are symbolically important. The missionaries actively campaigned against drinking and tobacco smoking, behavior associated with the working class. The presence of these items both emphasizes the inhabitants’ class and their rejection of the missionaries’ pleas to abandon “immoral” behavior. They also act as a reminder to middle-class viewers that these habits can lead to utter debauchery. Although the viewer cannot see the entire room, the scene implies that the family lacks the basic furniture and material culture associated with civilization. There are no beds, no tables, no proper chairs, pictures, or plants. As the book contains few illustrations, this image of degradation and immorality is all the more powerful. The picture warns readers that the lack of a proper genteel home can only lead to immorality.



Figure 141. Illustration of the "Astor House Beggar" featured in the *Ladies of the Mission's* book, *The Old Brewery*, 1854.

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In both the written and drawn images, the lack of material culture was used to emphasize the debauchery and savagery of Five Points inhabitants. In the mid-nineteenth century, middle-class writers went to great lengths to specify the differences between "civilized" peoples and "savages" (Williams 1985:20–21). Etiquette, housing, and appropriate material culture were among the many characteristics cited to differentiate the two groups. As many writers argued that the defining features of respectability could be adopted by anyone regardless of wealth, the lack of these features was interpreted as laziness and indifference to Christian morality (Bushman 1992:423–424). By stressing their absence, the writers were portraying the inhabitants as uncivilized degenerates, an image that was quickly accepted by their middle-class readers.

The archeology of Block 160, however, shows that these depictions of the Five Points were probably gross exaggerations. The evidence suggests that some, if not many, inhabitants of Five Points owned an extensive variety of goods, including many of the items used by the middle class as symbols of respectability. For example, matching sets of Gothic-shaped ceramic tablewares, porcelain tea sets, and Staffordshire figurines were recovered in the 1991 excavations. The dichotomy between the reformers' images and the recovered artifacts emphasizes how the literature does not accurately represent life in Five Points, but instead uses caricatures and exaggerations to hammer home the importance of domesticity.

To properly raise children according to the canons of domesticity, not only must the parents create an appropriate home, but they must also surround the child with Christian behavior to set a proper example. As the missionaries went to Five Points to teach Protestant morals and middle-class behavior, they found actions that did not conform to these standards objectionable. The missionaries promptly labeled these behaviors immoral and began to preach against them. As a result, the reformers' literature portrays a variety of behaviors practiced by Irish immigrants, or the working class in general, as acts of debauchery.

From the early nineteenth century, evangelical Protestants spearheaded the temperance movement. Many Protestants, including the influential preacher Lyman Beecher, argued that moral Christians should avoid alcohol entirely (Walters 1978:125–126). Drunkenness, and especially intemperance, were viewed as moral failings that could lead to a life of sin. Many members of the middle class followed this advice, and by mid-century alcohol consumption had dropped dramatically (Walters 1978:137). In contrast, alcohol consumption was an important part of working-class and immigrant life (Stott 1990:217–222). Socializing at taverns and drinking at wakes was a part of daily life in Five Points. For example, Mr. B., an educated Irish immigrant living in Five Points, found that "his occupation..., canvassing the city with books, brought him into daily contact with friends from the old country, with whom he was induced to take a social glass" (Ladies of the Mission 1854:206). This working-class immigrant pattern of drinking helped support the Five Points' many drinking establishments. From 1851 to 1854, there were at least 59 porterhouses, bars, and liquor stores in the four blocks bordering Five Points (Doggett 1851–1852; Rode 1853–1854).

Shocked by the preponderance of drinking establishments and the open consumption of alcohol, reformers concluded that intemperance was the major cause of poverty at Five Points (Ladies of the Mission 1854:39, 58). As a result, most of the descriptions of Five Points emphasize intemperance and the evils of alcohol. For example, a reformer wrote: "There goes a poor drunken woman: how she howls and raves...Oh, what a frightful wretch!—features bloated and horribly distorted: her matted and tangled hair hanging loosely around her shoulders; her clothes, a mere garment or two, torn into strips, scarcely cleaving to each other and to her form!" (Eells 1856:113). Through countless similar descriptions, readers are given the impression that the entire neighborhood consisted of drunks. Furthermore, in nearly all of their stories, the reformers explicitly linked intemperance, and even casual alcohol consumption, with moral failing. The descriptions of intemperance at Five Points were a powerful message to middle-class readers. Stories of formerly respectable families forced into poverty by the fathers' drinking were used to convince genteel families that even casual drinking could lead to disaster.

Intemperance was only one of many behaviors reformers found immoral. Open displays of sexuality were also considered highly objectionable. As the ideology of domesticity transformed middle-class homes into moral sanctuaries, Victorian attitudes towards sex changed. Some contemporary writers argued that these sanctuaries should not be defiled by lust and impure behaviors; therefore, they urged that the only legitimate purpose of sex was procreation. At the same time, the ideology of domesticity stressed women's higher morality and purity. As a result, women were said to lack sexual passion. Writers implored men to follow their wives' moral behavior and "keep their sexual appetites under tight control" (Mathews 1987:29). The consequence was a decline in the middle-class birth rate and the controlled sexuality we now associate with the Victorian era (Ryan 1981:156–157; Mathews 1987:27–29).

Gender relations among the immigrants in Five Points followed a different pattern. Men and women were more free with displays of public affection, and women openly flirted and dressed "immodestly" (e.g., Foster 1990:175–176). Furthermore, overcrowded tenements provided few opportunities for privacy. Many people shared a single room, making personal grooming, courtships, and even sexual relations visible to neighbors. The missionaries seized upon these differences and incorporated them into their image of Five Points.

Reformers stressed that open sexuality created an unhealthy environment for raising moral children. Although the literature is vague on sexuality, a recurring image of debauchery depicts unrelated men, women, and children packed into the same sleeping quarters. For example, a missionary wrote: "One need not go many blocks from here [the Five Points House of Industry] to find men, women, and children living in perfect holes, in the most abject poverty, and consequently misery, where, added to the lack of necessary means of support, are habits of vice....In these holes are gathered promiscuously both sexes, often eating, drinking, sleeping and carousing together" (Barnard 1893:70). At a time when respectable people had individual and private bedchambers (Clark 1986:12–16, 40–42), the sharing of rooms, a common seventeenth- and early-eighteenth-century practice (Deetz 1977), was thought to be immoral. Reformers worried that the close quarters would lead to premarital sex or incest or that children would observe sexual activity leading them to vice and immorality.

Surprisingly, the reformers' works contain few discussions or open references to prostitution, even though contemporary accounts (e.g., Foster 1990) and modern scholarly works (Gilfoyle 1992; Hill 1993) indicate that the trade was openly practiced at Five Points. Indeed, the remains of a brothel were uncovered in the 1991 archeological excavations. There are veiled references to prostitutes as wanton women, but prostitutes are rarely characters in their literature. Their absence is surprising because prostitution would have been a good symbol of the area's debauchery. Perhaps, prostitution was glossed over because the Victorian missionaries and middle-class readers viewed it as an indelicate subject; however, definite reasons for the invisibility of prostitution in these works may never be determined.

The belief that children should be raised in a moral sanctuary extended beyond the home to the surrounding neighborhood. In the mid-nineteenth century, as a result of this and other factors, middle-class Americans began to flee urban areas and establish homes in the suburbs (Spann 1981:108–109; Jackson 1985:25–33). During this period, writers constantly berated city life and created an image which emphasized urban filth, debauchery, and crime. For many New York writers, Five Points was a symbol for the problems of urban America. Following this genre, the reformers exaggerated aspects of life in Five Points to show the area's immorality. Two images which were used to show the immorality of the area were crime and interracial interaction and miscegenation.

The reformers' literature on Five Points abounds with images and references to crime: "Button up your pockets, look out for your handkerchief—thieves and villains are all around you. The jingling of your money or the sight of your gold watch may cost you your life—human life is cheap up the alley, for it is on the Five Points" (Eells 1856:41). Like many of the references to crime, this one focuses on murder. The reformers' literature and the penny press maintained that in the Five Points murder "belonged] to the order of day and night" (Ladies of the Mission 1854:45). Yet, this frightening claim was clearly an exaggeration. In the 1840s and 1850s, Manhattan's yearly murder rate was 2.5 per 100,000 inhabitants,

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or approximately 10 per year (Kantrowitz 1995:923; Snyder 1995:297–298). Even allowing for the under-reporting of crimes among the poor, it is obvious that the reformers' references to murder are more of a literary device designed to emphasize the horrors of the slum than an accurate description of crime.

More common than references to murder are stories of robbery in Five Points. Indeed, nearly every negative description of the neighborhood mentions the preponderance of thieves, and particularly dismal dwellings, such as the Old Brewery, are usually called a "den of thieves." Supposedly, swindlers were also commonplace. Unlike the penny-press writers, reformers rarely discussed the confidence men and their frauds; however, they occasionally gave examples of dishonest beggars. A description of the Five Points House of Industry's neighbors published in the August 1856 issue of the *Five Points Monthly* states:

that laughing, frolicking company of Italian beggars...are seated around a huge dish of macaroni and feasting luxuriously. The blind beggar has opened his eyes; the crippled beggar who walks on crutches has thrown them aside; the paralytic who crawls on his hands and knees, now stands upright; the heart-broken woman who sits all day long on the steps of St. Paul's Churchyard, with her poor helpless child, born without arms—her face is now full of smiles, while the child, borrowed as it is, is sleeping on that pile of rags in the corner, almost exhausted by the cruelty of this heartless woman, who had lashed her arms behind her all day (Eells 1856:112).

Vague references to violence are common in the reformers' writings. For example, the Ladies of the Mission describe inhabitants of Five Points as "brutal men with black eyes and disfigured faces, proclaiming drunken brawls and fearful violence" (1854:33). A study of the police blotters in the *Transcript*, *City Sun*, and *Morning Courier* for June and August of 1834 suggests that robberies, burglaries, and prostitution were rampant at Five Points. From June 23 to August 12, 1834, at least 20 crimes were reported in the police blotters. These included seven thefts, four robberies, two references to prostitution, two assaults, two fights, one account of disorderly conduct, one combined robbery and stabbing, and one full-scale riot. It is therefore surprising that the gang brawls so enthusiastically described in the penny press, and confirmed in recent historical works (e.g., Gilje 1987:260–264; Stott 1990:230, 243), are absent from the reformers' literature. Also missing are discussions of riots and mob behavior, even though riots and small violent disturbances occurred in the area throughout the early- to mid-nineteenth century (Brown 1976; Gilje 1987:240; Bernstein 1990). The reasons for these omissions are unknown; however, missionaries needed to walk a fine line between creating an image of immorality and showing that their reforming efforts were not misplaced. Perhaps references to riots, which the middle class viewed with outright fear, would have reduced charitable donations.

In keeping with the open racism common in mid-nineteenth-century America, the reformers' literature used examples of interracial interaction and especially miscegenation to depict Five Points as morally debased. In most descriptions, blacks are described as violent and dirty (e.g., Ladies of the Mission 1854:198–202). For example, the following passage is from an 1856 issue of *The Five Points Monthly*: "Let us enter. Bah!—what nauseating reek, what piles of filth. As we pass on, a dozen Negroes squeeze past us—don't mind them, they are only chimney sweeps. Here we are at the door of the Old White Woman, who lives among the Negroes....Beside the fire is a large black man, with his face tied up with a cotton bandanna. He is cross and not disposed to be communicative. Speak kindly to him, there is murder in his heart....In a corner sits a female monster, a counterpart of the man" (Eells 1856:41).

An aspect of race relations especially feared by middle-class white Americans was miscegenation. Since the mid-seventeenth century, whites feared that blurring the distinction between black and white would erode the ideologies which upheld slavery. By the mid-nineteenth century, these ideologies were so firmly in place that even after slavery, many whites believed that sexual relations with African Americans would "pollute the white race" and lead to immorality (Bennet 1993:297–325). As women were believed to be morally superior and purer than men, relations between white women and black men were seen as especially debased. It is probably no coincidence that passages portraying miscegenation found in the reformers' literature depict white women with black men. These same passages often imply that the relationship has robbed the women of all her decency and doomed their children to immorality. For example, in August 1856, *The Five Points Monthly* included this description of the neighborhood:

Over neighbor Crown's store live Italians and Negroes in great numbers. I see there a picture, framed by the empty easing of a window. The black and woolly head of a Negro lies in the lap of a white woman: four children, of an amalgam of base metals, lie about the floor in a state of nature, flourishing their heels to the edification of a half-starved dog and a cat with her ears cut off and her tail singed to the bone, both of which sit apparently looking on with a listless interest, at the antics of their more vicious companions, younger in miserable experience, but fated to a worse experience in the end" (Eells 1856:112).

Although the reformers' literature stresses the presence of African Americans to show the dangers of Five Points, the 1855 New York State census shows that few blacks actually inhabited the area. Only 332 African Americans (represented in the census as Negroes or Mulattos) were listed as living in blocks surrounding Five Points (election districts 3 and 5). Indeed, for the entire Sixth Ward only 573 individuals out of a population of 25,562, or two percent, are listed as black (New York State Census 1855; Ernst 1994:191). Although African Americans were habitually undercounted in nineteenth-century censuses (Swan 1989), the statistics suggest that reformers over-represented the presence of African Americans and miscegenation in their accounts to create a particular image of Five Points rather than accurately portraying life in the area.

As the above analysis shows, the reformers' literature used exaggerated images of Five Points to send specific messages to their middle-class readers. Descriptions of squalid living conditions, drinking, open sexuality, crime, and miscegenation, as well as other images not discussed here, show how not following the ideology of domesticity led to an immoral life of misery. This message warned readers to defend their respectability by creating moral sanctuaries to protect their families from the world's evils symbolized by the Five Points. Furthermore, the stories showed how immoral behavior could lead to ruin and, thus, acted as reminders for readers to follow evangelical Protestant values of orderliness, temperance, and control of bodily appetites. Not all characters in the missionaries' descriptions of the Five Points, however, rejected the ideology of domesticity. The missionaries classified the Five Pointers into two categories: the depraved poor, who made no effort to create the proper domestic environment; and the worthy poor, moral people who strived for respectability but were unlucky. The worthy poor appear in the literature for two reasons. First, they highlight the progress of the missionaries' reforms. Second, they show that anyone can become respectable and rise above poverty if he or she chooses a moral life and internalizes the ideology of domesticity.

6.2.6 The Worthy Poor

The missionaries recognized that "there are those living in the Five Points who have once known and seen better days; that many hundreds are virtuously poor, and that they are alive to kindness, and most grateful for our attentions to them and their children" (*Ladies of the Mission* 1854:146). In the missionaries' writings these individuals tended to be Protestants who led moral lives, but whose ignorance of the finer points of gentility prevented them from bettering their position. Through home visits, missionaries identified these people and expounded the canons of domesticity. "These people, in many instances, only want some one to tell them what to do. They need to be instructed in the very first steps toward making their conditions better; and we generally find them very teachable" (*Ladies of the Mission* 1854:151).

Missionary writings abound with stories of virtuous poor rescued from poverty through proper instruction. Yet, throughout the reformers' works the worthy poor are stereotyped. As Alan Mayne (1990) found in his analysis of the slums of Sydney, Australia, the characters do not reflect real people as much as perceptions of a type of city dweller. The moral character of the worthy poor mirrors the values stressed in post-Awakening Protestantism: honesty, industry, and temperance. Not surprisingly, the worthy poor are often Protestants or convert during the course of the story (e.g., *Ladies of the Mission* 1854:191-194, 223-239). In a typical tale, the *Ladies of the Mission* (1854:123) described a sympathetic character as "a strictly honest, sober man." These adjectives were used to characterize nearly every member of the worthy poor introduced to the reader. Despite their poverty, the individuals are clean and sometimes bear "the marks of respectability" (*Ladies of the Mission* 1854:239). They dress neatly but their clothing is old, worn, and occasionally patched.

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The worthy poor's homes contrast with the more usual descriptions of Five Points' squalid conditions. Despite their poverty and location in the Five Points, the worthy poor created homes that followed the ideology of domesticity. Their homes are characterized as simple, but clean and orderly, with touches of ornamentation such as plants, flowers, and pictures (Ladies of the Mission 1854:74–75, 122). For example, in the March 1856 issue of the *Five Points Monthly*, a missionary described the home of a respectable, but poor, black family.

The room is as cozy as one could wish to see. The table is spread for dinner—not with a loaf of bread and a huge knife lying alongside of a piece of soap, or a tallow candle, as we generally see it in the abodes of foreigners—not so is the table spread—but it is adorned with various-colored crockery, some blue, some pink, some white. One plate in particular we notice, which probably is appropriated to baby's use. It represents the "selling of Joseph into Egypt." On the walls are hung several brightly-colored prints, all illustrative of Scripture subjects. No pictures of the Virgin Mary, no crucifixes here, to distress our Protestant sensibilities (L.E.C. 1856:46–47).

The material symbols of respectability, the table, tableware, pictures, and the plate depicting an Old Testament story, show that this family has created a suitable home to raise moral children. These symbols would have been instantly recognized as such by middle-class readers; the effect is to make readers feel sympathy for the family and admire their desire to better their condition.

Similar feelings were probably aroused by the illustration *The Dying Mother*, found in *The Old Brewery* (Ladies of the Mission 1854:131). This picture (Figure 142) depicts the bed-ridden dying mother surrounded by her family and a middle-class missionary. Despite the crucifix on the wall, the room's material culture symbolizes a respectable but poor family following the ideology of domesticity. The mother lies in a solid bed, made for a single person, that is covered by an attractive quilt (perhaps symbolizing the home industry and mastery of crafts stressed by writers on domestic life). Behind her is another piece of furniture with framed pictures or mirrors and several unidentifiable items placed on top. Notice that the frames are arranged neatly and symmetrically, emphasizing orderliness. Above the center frame is a branch, probably from a willow. The bent willow branch, seen on countless nineteenth-century gravestones, symbolizes the mother's death; but as a plant, it is also a middle-class symbol of domesticity and a mother's nurturing of her children. In the foreground, a turned-over child's bench, a garment, and a pull-toy lie in a heap on the floor. As the material culture of childhood, these items suggest that the family has adopted the middle-class attitudes toward childhood that stress nurturing, learning, and play instead of viewing children as extra workers. Yet, their disorderly position on the floor is more complex. It could suggest the children's grief, which caused them to discard their toys in such a manner, or the disorder may emphasize that the family aspires to respectability but has not yet achieved it. Both, and other interpretations, are possible. Finally, all family members are dressed modestly but neatly. The girl in the center even has a bow on her dress and matching decorated bloomers. As dress was an important marker of social class and gentility, this once again shows how the family strived for respectability. Although the picture itself contains numerous symbols of domesticity, the most powerful statement is made when it is contrasted with *The Home of the Astor House Beggar*, described above. As there are only six illustrations in the *Old Brewery*, the contrast between the two pictures is inescapable. Undoubtedly, this contrast helped reinforce the relationship between immorality and poverty, and domesticity and respectability.

Even though descriptions of Five Points rarely include the worthy poor, they are important characters in missionary works because they lead readers to several conclusions. First, they demonstrate that the missions were helping deserving families escape from poverty and become respectable members of the community. This helped justify the missions' existence and raise charitable donations. If the missionaries only focused on the stereotyped depravity of Five Points, many benefactors would have viewed the situation as hopeless and withdrawn their financial support.



Figure 142. Illustration of "The Dying Mother," featured in the Ladies of the Mission's book, *The Old Brewery*, 1854.

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Second, the stories show the importance of domesticity and leading a moral life. Most stories of the worthy poor have the same happy ending. A family member finally finds employment and, through hard work, thrift, and temperance, becomes successful. The family moves from Five Points to a more respectable neighborhood and lives contentedly. *This tale upholds the middle class's ideology of domesticity by showing readers that success is open to all Americans who can follow a moral and respectable lifestyle.*

The third conclusion grows from the second. If poor inhabitants of Five Points could become respectable and prosperous by adopting the canons of domesticity, then anyone could do the same. Thus, poverty stemmed not solely from economic opportunity, but from laziness and other moral failings. As a result, these vignettes of the worthy poor helped perpetuate the belief that the poor were the primary cause of their own poverty.

Despite their importance as symbols in the reformers' literature, the worthy poor did not figure prominently in the popular perception of Five Points. Instead, the image depicts Five Pointers as drunk, depraved, and violent immigrants who embody all that is wrong with American urban life.

6.2.7 Conclusion

The reformers' literature paints a vivid picture of the Five Points: immoral immigrants inhabiting filthy dilapidated tenements devoid of household goods, while drunkenness and debauchery abound. Yet, comparing these images with the archeological and documentary evidence suggests that the reformers grossly exaggerated the poverty at Five Points. Instead, the descriptions tell us more about middle-class values.² Throughout the reformers' works, Five Points symbolized the immorality of urban life and was used to show middle-class readers the importance of their own ideology of domesticity. To use Five Points as the antithesis of middle-class domesticity, the reformers exaggerated the area's poverty and stereotyped its inhabitants. As a result, these descriptions should be considered poor sources on working-class life in Five Points. Nevertheless, the popularity and wide circulation of these descriptions led the general public to focus on the images of depravity, ignoring the subtleties of life in Five Points.

These idealized descriptions of the poor were not limited to Five Points. Around the globe, middle-class observers depicted poor working-class areas as dangerous slums. Indeed, the descriptions of the slums of New York, San Francisco, Birmingham, England, and the Rocks of Sydney, Australia, are surprisingly similar (Mayne 1993; Karskens 1994:48–49). Buildings are described as dark and decaying, their inhabitants as drunken and animal-like, and all are surrounded by intolerable stench. Alan Mayne (1993) has found that in each case the descriptions are mere stereotypes and are not accurate descriptions of the places or their inhabitants. *Instead, these images reflect middle-class perceptions of poverty.*

Throughout the modernizing world, industrialization widened the economic gap between manual workers and white-collar employees, resulting in urban enclaves of poor living in over-crowded and unsanitary conditions (Homberger 1994b:16–25). Accompanying these conditions were increases in disease, crime, and civil unrest in cities across the globe. This widespread misery directly challenged the bourgeois belief in an orderly, just world. In response, middle-class writers created a body of literature explaining the causes of poverty. The vast majority linked poverty with immoral behavior by focusing on alcohol use and prostitution or blamed specific ethnic groups, such as the Irish, Chinese, or Africans, for the social ills (Solomon 1956; Knobel 1986; Mayne 1993). To capture their audiences' imaginations and make their point, these writers relied on stereotyped images of poverty. "Stereotypes are inherently bipolar and reductive, visualizing clear and absolute borders between normalcy and difference. They function thereby to externalize society's anxieties by projecting the sources of those anxieties on to villainous other-siders" (Mayne 1993:10).

² Although this discussion focuses on how images served to promote the middle-class ideology of domesticity, other scholars have examined nineteenth-century descriptions of the city to uncover middle-class attitudes and prejudices towards the Irish (e.g., Knobel 1986), urbanization (e.g., Siegel 1981; Stilgoe 1988; Ward 1989; Mayne 1990), and poverty (e.g., Groneman 1973; Boyer 1978; Ward 1989; Haley 1993).

With this simplistic explanation for poverty, middle-class reformers throughout the world believed that poverty was only a stage which could be conquered by educating the poor with the ideology of domesticity and proper moral behavior (Mayne 1993:137). Numerous benevolent associations were formed to teach the poor gentility, temperance, and other middle-class values in an effort to free them from poverty (Boyer 1978). Yet, despite the reformers' zealous efforts, instead of being abated, poverty grew. It was only after decades of unsuccessful attempts to attack poverty through gentrifying the working class that reformers accepted the economic causes of poverty. No longer blinded by their zealous, but well-meaning, insistence that moral reform would cure poverty, steps toward actually improving living and working conditions were taken in the closing decades of the nineteenth century.

6.3 "Free From All Vicious Habits": Archeological Perspectives on Class Conflict and the Rhetoric of Temperance (Paul F. Reckner and Stephen A. Brighton)

American temperance organizations of the mid-nineteenth century stressed abstinence from alcohol and tobacco. Their rhetoric, primarily aimed at freeing impoverished groups from the bonds of addiction, was deployed in a two-tiered fashion, however. Nothing less than abstinence was demanded of impoverished immigrant groups, while many middle-class partakers continued to smoke and drink in moderate amounts. The temperance-abstinence question became a focal point of class-based social control and resistance. Cultural, religious, and political issues also animated temperance debates, and informed the philosophies of reformist institutions. The responses of diverse social groups to temperance reform will be explored through an analysis of period documents and archeological material from New York City and Lowell, Massachusetts.

6.3.1 "Dead Rabbits" and Bowery Boys³

Frank Leslie's Illustrated Newspaper, a New York weekly, opened its July 4, 1857, "City Gossip" column with this optimistic announcement:

We are at this present moment enjoying all the blessings and the prosperity which attends upon a state of profound peace and tranquillity. Brothers' hands are no longer raised against brothers' heads; club law is most eloquently silent (*Frank Leslie's Illustrated Newspaper*, July 4, 1857).

Frank Leslie's Illustrated hit the streets as saloons around New York City's legendary Five Points opened their doors to business on Saturday, July 4, 1857. Patrons celebrated Independence Day in their accustomed manner, carousing with friends and political allies, but the atmosphere was tense. The state assembly had finally outmaneuvered Mayor Fernando Wood, and on their order the municipal police had been disbanded, at the cost of many local Irish officers' jobs. Adding insult to injury, the newly commissioned metropolitan force was threatening to enforce the assembly's highly restrictive April liquor laws.

As the afternoon of the Fourth of July rolled on, a metropolitan police patrol entered the neighborhood. The patrol encountered a two-man fight in Bayard Street, surrounded by an unruly crowd of spectators. The crowd turned on the police, scattered them, and put them in retreat. Men from the native-born Bowery Boy gang protected the fleeing officers, then engaged the angry mob. After initial skirmishes, a pitched battle raged between barricades thrown up across Bayard Street (Figure 143). Blows were exchanged, bricks and rocks thrown, and shots fired. The stand-off at the barricades continued for several hours until negotiators succeeded in arranging a cease fire. By 8:30 p.m. the scene had quieted down, but the incident left at least 11 people dead and 37 wounded (*Frank Leslie's Illustrated Newspaper*, July 18, 1857).

6.3.2 Politics and the Sabbath

In April of 1857, several months prior to the July uprising, the New York State Assembly enacted liquor laws which reduced the number of saloon licenses available in the city, placed limits on the amount an individual was allowed to drink, and ordered all liquor-dealing establishments to close on Sundays. The law also eliminated "shops, houses, outhouses, yards or gardens" from the list of establishments which could legally dispense liquor (Brown 1976:13, 35). All of these venues were traditional gathering places for working-class men and centers of neighborhood "machine" politics (Rosenberg 1971; Brown 1976:35; Stott 1990:217-222). The state assembly passed these regulations in conjunction with legislation to eliminate the old New York City police force, a center of Tammany Democrat power, and replace it with a metropolitan force, beholden to the assembly alone (Brown 1976:13).

³ Analysis of the July 4 and 5, 1857, Five Points uprising is summarized from Brown (1976).

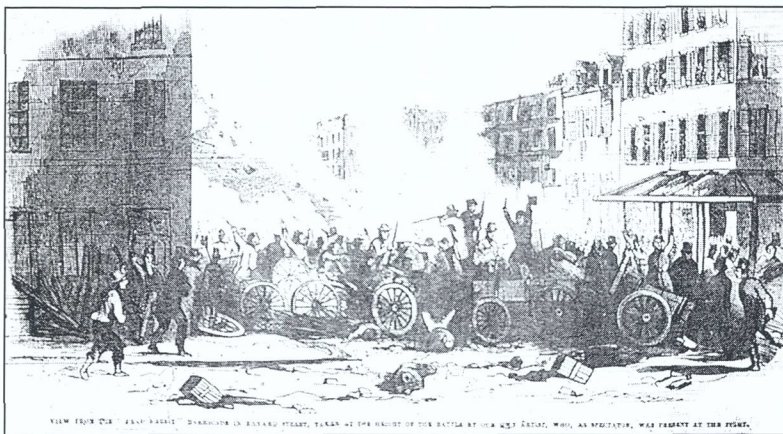


Figure 143. Bayard Street barricaded on July 4, 1857 (Frank Leslie's Illustrated Newspaper, July 18, 1857).

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After a protracted battle for control of the city's police, Mayor Wood reluctantly disbanded the municipal force on July 3. The metropolitan force was hastily re-organized and expanded to fill the void left by the outgoing municipals. This nascent force faced the prospect of the inevitable civil unrest accompanying Independence Day celebrations. Metropolitan officials also announced that on Sunday, July 5, the new liquor laws would be enforced for the first time. A large garrison was stationed near the Five Points in anticipation of a violent Sixth Ward response to the disbanding of the municipal force and the threatened enforcement of the state's new blue laws (Brown 1976).

The state assembly's moves were explicitly calculated to reduce the power of Tammany Hall, oust Democratic Mayor Fernando Wood, and force New York's ethnic underclasses to observe the Sabbath in an "appropriate" manner (Brown 1976:13–20). At Five Points, a strongly Irish-Catholic working-class neighborhood with Tammany sympathies, the April legislation was perceived as a direct challenge to their cultural identity and political welfare. Saloons were social and political centers for the community and a place where neighborhood men typically gathered to celebrate, especially on nationalistic or political holidays such as Independence Day (Brown 1976:13–35; Stott 1990:217–222).

6.3.3 A Week of Unrest

In the pre-dawn hours of Saturday, July 4, an incident occurred between a group of young men and boys and a small contingent of the new metropolitan police. One of the fleeing police was reported to have entered a Sixth Ward bar frequented by the nativist Bowery Boy gang.⁴ Another brief brawl erupted when the men pursuing the escaping officers accosted the customers of the bar. Saturday afternoon, reports of a disturbance in the Seventh Ward reached the metropolitan police stationed near Five Points. On their way to investigate, while still in the Sixth Ward, the police stumbled on two men duking it out in Bayard Street. A battle erupted between the onlookers and the metropolitans, sparking the bloody confrontation later referred to as the "Dead Rabbit"-Bowery Boy riot.

On the following day, Sunday, July 5, a second riot erupted at Five Points. The uprising was only quelled when a group of negotiators, one of them the Reverend Pease of the Five Points House of Industry, negotiated a cease-fire agreement (Brown 1976:31). Between 30 and 40 individuals were reported injured, and a number of people were arrested after the battle as National Guard troops swept the ward and cleared the streets of stragglers (Brown 1976:32). A week later, an incident occurred in the city's Seventeenth Ward, part of New York's *Kleindeutschland*. German residents resisted the metropolitan police as they attempted to clear the street after making an arrest for a violation of the new liquor law (Brown 1976; Gutman 1977:69; Boyer 1978:77).

The New York press covered the riots and their aftermath for weeks following the events of the Fourth of July. *Frank Leslie's Illustrated Newspaper* July 11 issue carried a small piece entitled "Terrible Riots in New York" which explained that "at two o'clock 4th of July morning a riot occurred between a lot of thieves inhabiting the Five Points." The popular press referred obliquely to ethnic divisions behind the clash between the native-born Bowery Boys and the Irish "Dead Rabbits" (*Frank Leslie's Illustrated Newspaper*, July 18, 1857; Brown 1976). The overall impression was of the rowdy Irish of Five Points once again threatening native-born Americans and the authority of the state. The *Kleindeutschland* disturbance was similarly cast in terms of a foreign-born threat to law and order. With few exceptions, the relationship between the April liquor laws, working-class Irish and German culture, and the overtly anti-Tammany agenda of the New York State Legislature were never discussed. Eliminating these factors, the uprisings were reduced to ethnic conflicts—symbols serving nativist, anti-immigrant ideologies.

The issues underlying the July riots reflect broader discourses engendered in the nineteenth-century American temperance movement (Brown 1976; Gusfield 1986; Tropman 1986). The American temperance phenomenon has been extensively explored by historians, generating a wealth of interpretive material.

⁴ The term "gang" is used as a convention and is not intended to carry negative connotations. Often, these street-level, working-class social organizations played complex roles within their communities.

However, the archeological remains of alcohol and tobacco use offer a unique opportunity to explore the clash of class and culture and morality and law which pivoted on the issue of temperance.

6.3.4 Alcohol and Tobacco—Custom and Consumption before Temperance

Alcohol and tobacco were widely used throughout the American federal era. Virginia and Caribbean tobacco were readily available; prepared snuffs were regular import commodities; and English, Dutch, and domestic clay pipes (called clays) were abundant (Heimann 1960:62–65). While cost and custom influenced one's choice of alcoholic beverage, inexpensive, locally produced hard cider flowed freely (Rorabaugh 1979:610).⁵ The offer of an alcoholic beverage was considered a civilized gesture in this period, and the local tavern was a center of male socializing and leisure activity (Larkin 1984:294). Politics also had its place in the tavern, and casks of liquor, wine, and cider were a key campaign expense (Rorabaugh 1979:20, 26, 35). Elections could be won or lost depending on which candidate's supply of drink lasted longer (Tice 1992:27–28).

The use of these substances was not generally considered harmful during the late eighteenth and early nineteenth centuries. Popular humoral and miasmatic notions of health and illness held that alcoholic drinks strengthened the body and tobacco smoke cleansed the lungs and defended against disease-bearing clouds of vapors (Armstrong and Armstrong 1991:40; Tice 1992:16–17; Goodman 1994:76–82, 117). Only a handful of religious and secular reformers spoke out on the physical and moral hazards of liquor and tobacco abuse. Dr. Benjamin Rush, perhaps most notable among the early temperates, advised moderate use of fermented beverages to bolster body and spirit, but strict avoidance of distilled liquors (Armstrong and Armstrong 1991:41–43).

6.3.5 Temperance into Abstinence

Temperance, defined as moderation in the literal sense, accurately characterizes the American movement's early philosophy. As the nineteenth century progressed, however, this moderate ideology was transformed into the rhetoric of abstinence. Oddly, the term "temperance" continued to be applied to the movement of the later nineteenth century, despite its emphasis on abstinence.

The first stirrings of an organized American temperance movement arose among urban, northeastern social elites in the early nineteenth century (Gusfield 1986; Blumin 1989:195). Their vision of a temperate and moral American populace has been interpreted as an effort to shore up fading social and political power in a period of radical growth and change among America's middle and working classes (Blumin 1989:195). In this era, rural farmers and urban craftsmen were articulating distinct social agendas which diverged from those of the old elite and challenging entrenched political powers. Alcohol continued to play a role in politics, but it was more frequently viewed by elites as a tool of machine politics, abused to sway ignorant minds. From its inception, American temperance expressed social conflict, seeking to restrict behaviors among rising middling and working classes which were perceived as boisterous, immoral, and detrimental to the Republic.

The effort bore some fruit, but not without the involvement of revivalist religious groups. In the 1830s and 1840s, these organizations spread the gospel of temperance and radicalized the movement's message. Rhetoric equating alcohol with sin grew stronger, and tobacco was given equal emphasis in proscriptive literature. The same morally debilitating effects first associated with "Demon Rum" were now attributed to the "Devil's Weed" as well (Goodman 1994:117).

Temperance-oriented organizations proliferated in the second quarter of the nineteenth century. Sunday schools gathered together to parade under the banner of the Cold Water Army (Boyer 1978:77). A group

⁵ Estimates suggest that the total amount of alcohol consumed in all forms of drink (beer, cider, wine, liquor) rose steadily from 1800 to a high of nearly four gallons per capita, per annum, then dropped rapidly between 1830 and 1845 to a low of approximately one gallon (Rorabaugh 1979:8–9). There are no equivalent estimates of changing tobacco consumption patterns during the nineteenth century, but one source estimates a per capita rate of four to five pounds of tobacco per year during the middle decades of the nineteenth century (Heimann 1960:58–59, 92–93).

of self-proclaimed "reformed drunkards" formed the Washington Temperance Society, espousing a revivalist and experiential approach to the liquor problem (Blumin 1989:203). They attracted a large working-class following with tumultuous meetings involving emotional personal accounts of members' struggles. The New York City Temperance Society, founded in 1829 by "wealthy men, and men becoming wealthy," eventually absorbed the Washingtonians and reformed their methods to reflect a more restrained approach to temperance (Blumin 1989:198, 203). A number of old-guard Washingtonians left the organization in protest, suggesting that class divisions were already operating within the temperance movement. Increasingly, leadership positions in the movement were filled by businessmen and professionals, and their wives (Boyer 1978:15; Blumin 1989:193–203). The high tide of pro-temperance sentiment in New York City led to the creation of the New York Sabbath Committee, which in turn assisted passage of the state's April 1857 liquor laws (Rosenberg 1971:150–151).

6.3.6 Manners and the American Middle Class

Conceptions of American middle-class respectability grew up around principles of Protestant piety, physical and moral discipline, economic self-sufficiency, and abstinence from alcohol and tobacco. There was little room for intoxication and addiction in the middle-class Victorian ideology. Temperance provided a vehicle by which individuals could distinguish themselves from the lower classes while maintaining moral superiority over the upper classes and their sumptuary excesses. Involvement in temperance organizations reinforced notions of middle-class social status and community, and a whole host of temperance clubs, benevolent societies, and church groups were born in the Victorian associational craze (Boyer 1978:78). The Sons of Temperance, an alcohol-free fraternal order founded in the 1840s, claimed a membership of 250,000 (Boyer 1978:78). The twin perils of alcohol and tobacco were often presented as sources of spiritual and economic dissipation among the middle class. Cautionary tales told of the upright family men whose occasional indulgence in alcohol inevitably undid their lives, leaving them penniless and in prison, without family or hope (Blumin 1989:200).

Victorian-era manner books actively discouraged women from drinking and smoking (Kasson 1990:125). The use of either substance by women, especially in the public sphere, was considered lewd and offensive and was eschewed by the model middle-class Victorian woman (Kasson 1990:125) (Figure 144). Their use also conflicted with the female role as defined within the cult of domesticity, that of moral legislator to her children and spiritual guardian of the home (Sklar 1973:86; Ryan 1981:190; Rorabaugh 1987:42; Blumin 1990:24). An entire genre of literature developed around the premise of the morally upright young girl who is introduced to the fast ways of city life, begins smoking and drinking, and is soon mired in sin (Van Every 1972:150, 188–198; Blumin 1990:24).

The same etiquette guides also reproached the gentleman who smoked in "mixed company," and public smoking was prohibited by law in mid-century Boston (Kasson 1990:125) (Figure 145). Chewing tobacco attracted practitioners from all classes of American society, and social critics bemoaned the prevalence of tobacco chewing in every public place frequented by men (Kasson 1990:125–126). The use of chew had the double stigma of being both addictive and repulsive. Spitting of tobacco juice greatly offended middle-class Victorian sensibilities, as expectoration was felt to be a bodily function which was appropriately carried out in private. Snuff was looked upon with similar distaste because the user tended to sneeze and fiddle with his/her nose, inappropriate behavior among persons of delicate sensibility (Kasson 1990: 124–125). Bushman characterizes the rising tenor of middle-class American proscriptive literature in the following: "As they came to recognize the deepening cultural divide in American society, middle-class social critics transmuted genteel conventions into universal moral principles and tried to convert everyone" (1992:276).

Despite alarms on all fronts, many members of America's middle class continued to run afoul of "Demon Rum" and other addictive substances. Many fashionable men and women used opium-derived sleeping aids, and use was believed to be even higher among prostitutes (Hill 1993:245–246). Some middle-class women reportedly took to drinking alcohol-based medicinal concoctions as a means of covert consumption (Rorabaugh 1979:12–13). Expensive mail-order cures for chronic inebriation and tobacco addiction were



Figure 144. "Temptations of Handsome New York Working-Girls," from *Sins of New York* as "Exposed" by the Police Gazette (Van Every 1972).



Figure 145. "How She Cured Him," from Sins of New York as "Exposed" by the Police Gazette (Van Every 1972).

popular items in the second half of the nineteenth century (Tice 1992:67–70). Specialized sanitariums opened their doors to those patients (many registering anonymously) who could afford the institution's fees (Tice 1992:67–70). Curiously, the abuse of opium-based products was not generally addressed by mainstream reformers of the mid-nineteenth century. However, by the 1870s a number of asylums catered to the "opium inebriate" (Tice 1992:65–67).

6.3.7 Nativism and Religious Ideology

Temperance rhetoric provided a vehicle for native-born Americans who wished to separate themselves from impoverished foreign-born populations of the 1840s. In opposition to the successful middle-class abstainer, strong drink and frequent use of tobacco were explicitly linked with the state of poverty (Ladies of the Mission 1854; Campbell 1893; Riis 1971; Foster 1990). Jacob Riis described convicts "pleading incessantly for tobacco...as the next best thing to the whiskey they cannot get" (1971:22) and "rows of old women, some smoking stumpy, black clay-pipes...under the trees that hedge in the almshouse" (1971:202). From mid-century onwards, clay pipes signified poverty, impropriety, and non-native ethnicity in the eyes of middle-class Americans and were part of a suite of elements commonly used in immigrant stereotypes and caricatures (Cook 1989b:229; Knobel 1986). The American media depicted the Irishman and his whiskey and his clay (Figure 146), the German with his lager beer and *tabakpfeif* (Figure 147), and contrasted these with a sober, industrious "Native Son" (Knobel 1986).

Many temperance tracts urged immigrants to divest themselves of "Old World" habits, describing drunkenness as a foreigner's problem (Boyer 1978:28–29). George Foster (1990:158) took his readers into one New York theater "regularly attended by the respectable German men and women residing in the city." The price of admission included "a drink of Rhine wine or a swig of bierisch...immense quantities of these liquids phlegmatically engulfed in the Germanesque oesophagi of the visitors, both male and female" (Foster 1990:158). Hyperbolic language and attention to the mixed-sex crowd implied the impropriety of the scene, playing on stereotypes of the German immigrant. In some medical circles, the Irish "race" was believed to be innately more susceptible to alcohol abuse than the native-born American (Kraut 1996:160). Thomas Grattan wrote of violence among America's urban, Irish populations: "Goaded by the stimulus of ardent spirits, their natural excitability of temperament knew no bounds" (in Brown 1976:139). The majority of Irish immigrants of the 1840s were ostensibly Catholic as well, eliciting harsh criticism from native-born American Protestants. Catholicism was viewed as an inferior faith opposed to American republicanism, and speculations about the Irish "servants of the Papacy" abounded in the American press (Knobel 1986; Higham 1988:5–6). Middle-class sensibilities were also disturbed by Irish wakes, with their attendant drunkenness, smoking, and unseemly emotionalism (Ladies of the Mission 1854:202–203).⁶ Despite the activities of many Catholic-sponsored temperance organizations, the image of the besotted, papist, Irish-Catholic held sway in many native-born American minds (Knobel 1986). Ironically, one of the most renowned temperance advocates was Father Theobald Mathew, a Capuchin priest from County Cork, Ireland (Malcolm 1986). He led an energetic and charismatic campaign first in his home country, and later, as his reputation grew, he traveled widely and administered his pledge of abstinence. New York's Bishop Hughes was instrumental in bringing Father Mathew to the city in 1849, where he gave the pledge to thousands at city hall.

American nativists marshaled temperance rhetoric against their great fear: miscegenation. George Foster, and later Jacob Riis, "exposed" European immigrants and African Americans of both sexes carousing in New York's Five Points (Foster 1990:142; Riis 1971:13). Alcohol and tobacco played a prominent role in these sketches, implicating their use in the mixing of the races. Riis described the infamous "black and tan" bars where these couples gather to carouse, and Foster observed with ironic detail the formalities of mixed-race dancing at Dickens' Place. "Probably three quarters of the women...are negresses....Each gentleman...draws' his 'chaw'r' of tobacco, and depositing it carefully in his trowsers pocket, flings his arms about his buxom inamorata and salutes her whisky-breathing lips with a chaste kiss" (1990:142).

⁶ A basket of clay pipes was commonly made available to those attending Irish wakes (Casey 1996, personal communication).



Figure 146. Irish stereotypes: "Paddy" the porter and others depicted at lower left and in the foreground (Harper's Weekly, August 27, 1859).

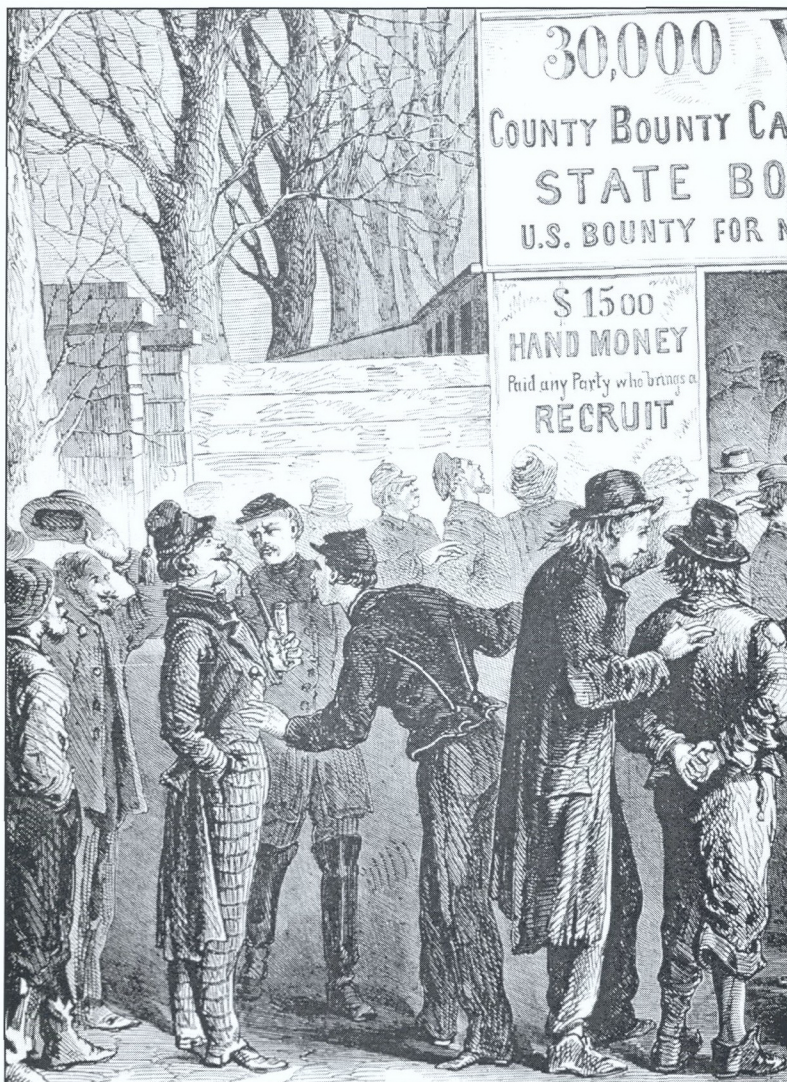


Figure 147. Irish and European (probably Germanic) immigrants at a Union recruiting station in City Hall Park, New York City (Frank Leslie's Illustrated Newspaper, March 19, 1864).

6.3.8 Health Reform

Issues of class formation and conflict were also articulated through developments in the areas of hygiene and public health. Disputes over the medicinal effects of alcohol and nicotine continued unabated, despite experiments which established the toxic nature of both (Rorabaugh 1979:38; Goodman 1994:116). While there was general agreement among temperates concerning the ill effects of these substances, some considered coffee an acceptable substitute to strong drink, adopting it as a means of weaning inebriated and addicts of their habits (Rorabaugh 1987:45; *Harper's Weekly* November 20, 1880). A few groups tolerated "small" or low-alcohol beers, and even lager beer, but these also became stigmatized under the philosophy of abstinence. Fresh water, fruit juices, tea, and chocolate drinks were proposed as healthful and stimulating substitutes for alcohol, but limited availability and high cost precluded use by many poor temperates (Rorabaugh 1987:25, 45–46; Riley 1991:260).

Contradicting earlier beliefs concerning the healthful effects of alcohol and tobacco use, temperates of the mid-nineteenth century associated "excesses" with ailments from poor digestion to tuberculosis and cholera (Kraut 1994:158). Outbreaks of the latter among America's immigrant poor were seen as evidence of the intemperance and immorality of these populations. Thomas Mooney, offering advice to the would-be Irish emigrant, urged his countrymen "not to touch or taste any spirituous or fermented liquors of any kind, or use tobacco in any shape" (Mooney 1850:52). In his *Nine Years in America*, Mooney combined his message of abstinence with a chilling lesson in human biology. He explained to his reader how tobacco dried the body and alcohol interfered with proper digestion (Mooney 1850:52–54). "If you are so fortunate as to be already a teetotaler—one of Father Mathew's disciples," Mooney stated, "you will do well in the New World" (Mooney 1850:52).

6.3.9 Changes in the Workplace

The growth of industrial capitalism in the second half of the nineteenth century prompted employers, many involved in the temperance movement, to urge their workers to cease drinking and smoking, citing these behaviors as "immoral and inefficient" (Gutman 1977:21; Roediger 1991:152). A paternalistic philosophy of social engineering inspired rigorous company-based moral and temperate campaigns (Gutman 1977:21). One New Hampshire cotton mill threatened employees with "immediate and disgraceful dismissal" for those caught drinking hard liquor or smoking tobacco on company property, and other manufacturers levied fines against intoxicated employees (Gutman 1977:21). In Lowell, Massachusetts, company owners of the Boott Mills enacted similar restrictions, going so far as to forbid liquor establishments within three miles of employee housing (Bond 1989:23).

6.3.10 Middle-Class Brooklyn

Household material excavated from Block 2006 in the Fort Greene area of Brooklyn, New York, reflects this city's growing middle-class population in the 1860s and later (Fitts and Yamin 1996).⁷ Residents of the block were native-born Americans employed as merchants and manufacturers, lawyers, clerks, and bookkeepers (Fitts and Yamin 1996). Evidence of alcohol and tobacco use found in these residential deposits illustrates the varying extent to which the rhetoric of abstinence penetrated the daily lives of the American middle class.

Vessels related to alcohol use from two Block 2006 households (Draper and Elmendorf) account for 10 and 9 percent of their respective glass assemblages.⁸ Two other deposits (representing the Goff and Bates households) each include 4 percent alcohol-related vessels. Alcohol-related vessels are entirely absent from two deposits relating to the McGuires and Atwaters. Tobacco-related material culture from the Atwater and Goff assemblages includes 1 spittoon each and 5 and 6 clay pipes, respectively. The Elmendorf, McGuire,

⁷ In 1995, John Milner Associates excavated seven shaft features (four cisterns and three privies) on Block 2006 in the Fort Greene area of Brooklyn, New York, prior to development of the Atlantic Terminal Urban Renewal Area by the Atlantic Housing Authority (Fitts and Yamin 1996).

⁸ Glass alcohol bottles from Block 2006 include wine/liquor, "spirit," and beer bottles. Ceramic alcohol bottles were absent from all Block 2006 deposits.

and Draper households have fewer than 10 pipes associated with each, and spittoons were absent. The Bates household's tobacco material is distinct on the block, consisting of a minimum of 66 clay tobacco pipes and 2 spittoons.

Archeological evidence suggests that the Atwater and McGuire households conformed to the mainstream middle-class temperance ethic, realized in this period as abstinence. Beyond these two households, however, no broad pattern or signature of middle-class abstinence is discernible. Other families on Block 2006 seem to have adhered to a philosophy of moderation, indulging in an occasional drink, bowl of tobacco, or plug of chewing tobacco. The Bates deposit is most suggestive of what nineteenth-century reformers might have termed an "intemperate" use of tobacco. Besides the large number of pipes in the Bates assemblage, the choice of common clay pipes is also remarkable. As a lawyer, Bates would probably have been expected to smoke a fine briar or meerschaum pipe more in keeping with his social standing, rather than the "Peter Dorn" and fluted clays he preferred. Bates's use of clay pipes places him outside mainstream middle-class values, yet he seems not to have overtly flaunted Victorian manners. Patterns of deposition and mending in the Bates pipe assemblage suggest that he curated his clays carefully, as they appear to have been entirely intact and functional when discarded, though heavily charred from use. It is unlikely that these fragile objects would have survived had Bates been smoking in the street; thus, his use was probably restricted to the home (Fitts and Yamin 1996:110). Despite the presence of common clay tobacco pipes, with all their pejorative associations, the manner of their use—the private context in which they were used—describes a certain middle-class sensibility.

Material from Block 2006 suggests that abstinence was not the norm among this middle-class American population, and "excessive" use was apparently tolerated, provided the user observed accepted codes of decorous consumption. The mid-century temperance movement's emphasis on abstinence was not successful in eliminating middle-class American smoking and drinking behaviors.

6.3.11 *Missionaries at Five Points*

An examination of the temperance debate at Five Points offers evidence of the limited impact of American temperance rhetoric on working-class Irish and German populations, despite reformers' intense focus on these groups. At mid-century, Five Points was a bustling working-class enclave populated by recently immigrated Irish Catholics and German Jews, native-born Americans, African Americans, and others. The area also boasted a lively commercial component, including saloons and groceries, secondhand clothiers, and tobacconists' shops. Nineteenth-century social critics broadly characterized the community as "a sad, an awful sight—a sight to make the blood slowly congeal and the heart to grow fearful and cease its beatings" (Foster 1990:120). Charles Dickens visited with a police escort and pronounced what he saw as "quite unsurpassed in all the vice, neglect, and devilry of the worst old town in Europe" (Dickens 1985:91). The highly public use of alcohol and tobacco within the community was central to these critics' diatribes (Ladies of the Mission 1854:119; Five Points House of Industry 1860:228; Foster 1990).

Five Points's reputation attracted the attention of several reform-minded institutions. The New York Ladies' Home Missionary Society of the Methodist Episcopal Church opened its first mission at Five Points in 1850, with the intention of converting the neighborhood's Irish-Catholic residents to Methodism and administering their pledge of abstinence from alcohol and tobacco (Ladies of the Mission 1854:39, 119). As with other reformist institutions of the period, many of the ladies were wives of some of New York City's developing class of entrepreneurs and industrialists (Rosenberg 1971:227). They were generally wealthy, but only recently so, and they set forth a canon of values reflecting mainstream middle-class ideologies, stressing Protestant piety, personal control, industry, and abstinence (Ladies of the Mission 1854; Rosenberg 1971:227–228). Their organization published tracts informing supporters of the dreadful moral and physical conditions of life at Five Points. Depictions of the neighborhood touched on vices which the reformers knew would inflame their middle-class readership—poverty, filth, domestic violence, children ignored or abused, Catholicism, and, of course, the abuse of alcohol and tobacco.

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In one vignette of their work at Five Points, the ladies describe the plight of a local boy named Joseph. He is found chewing tobacco, and under questioning he admits that his mother is a user of alcohol (Ladies of the Mission 1854:119). The mission worker offers him a tract on the successes of children in reforming their drunken parents, and urges Joseph to do all that he can "to free himself and [his] family from the vices to which they [are] addicted" (Ladies of the Mission 1854:119).

A second reformist institution opened at Five Points when Reverend Lewis Pease, the Five Points Mission's first preacher, split with the Ladies' Home Missionary Society to form his own Five Points House of Industry in 1851. Pease's philosophy focused more on education and employment than the mission, but retained a degree of the ladies' Methodist conversion agenda (Five Points House of Industry 1884:180; Barnard 1893:23). Pease's philosophy included the removal of Five Points children to what was considered a superior nurturing environment (Five Points House of Industry 1855:17). They were taken from their poor Irish-Catholic homes and placed with respectable, middle-class Protestant families living in the country (Five Points House of Industry 1855:17). These activities created considerable tension between the Five Points House of Industry and some of its neighbors. At least one mother demanded that her daughter, taken from her by Pease, be returned (Five Points House of Industry 1857:97; Rosenberg 1971:241). Pease was reportedly assaulted by residents on several occasions (Barnard 1893:16). By the 1860s, the Five Points House of Industry's staff began to express the feeling that their exhortations were falling on deaf ears. "We have long ceased to expect any marked results of our labors among this class of people" (in Rosenberg 1971:242).

Rosenberg sums up the relationship between the Five Points House of Industry and the surrounding neighborhood:

The predominantly Irish-Catholic population of the Five Points, having resisted centuries of British efforts to wean them from their traditional beliefs, view[ed] with hostility and resentment the appeals of these new-world Protestants...they boycotted "Old Pease's school"...refused tracts and Bibles and ignored the House's temperance meetings (1971:241).

Irish-Catholic temperance reformers were also active in the Five Points community. Father Felix Varela, "Vicar-General of the Irish," founded the Transfiguration Church within walking distance of Five Points and formed a local temperance league when it was perceived that the health of his flock had been diminished by the "ravages of alcohol" (Transfiguration Church 1977:8). The league claimed a membership of one thousand men of Five Points (Transfiguration Church 1977:8). These individuals appear to have favored an Irish-Catholic organization rather than an American-Protestant institution.

6.3.12 *The Saloon in Immigrant Working-Class Communities*

The realities of life within working-class immigrant communities conflicted radically with the middle-class values espoused by the Ladies' Home Mission and the Five Points House of Industry. Fresh drinking water was promoted by the Cold Water Army and other abstinence reformers as one solution to the intemperance problem. However, access to potable water, while vastly improved after the completion of New York's Croton Aqueduct, was still limited for many working-class tenants (Duffy 1968:398-399). Property owners in the city were required to cover the cost of connecting their properties to Croton water mains (Duffy 1968:398-399). When tenants petitioned for water and sewage services, at least a few landlords refused to bear this expense (Geismar 1989:38).⁹ Alcohol, particularly lager beer, was inexpensive and relatively safe (Tice 1992:21). Additionally, many immigrant groups still conceived of both alcohol and tobacco as health-benefiting substances (Tice 1992:21; Goodman 1994:117).

⁹ City records indicate that water mains had been laid around Block 160 by 1851, but dates for connection to these lines are not known. Records containing this information were destroyed when the individual buildings were demolished. However, the presence of a cesspool requiring running water for its use at 472 Pearl Street (Lot 6) suggests that this property was connected shortly after mains were laid in Pearl Street. No evidence of early connection was observed from other lots excavated on Block 160.

To escape their cramped and poorly ventilated living spaces, Five Points tenement dwellers spent much leisure time outside their homes (Stott 1990:216). Unlike the majority of middle-class renters and home owners, they did not have the spacious, comfortable rooms upon which middle-class etiquette was predicated. People gathered on stoops and rooftops where they smoked, drank, and offended genteel eyes (Cook 1989b:214; Kasson 1990:77–78; Stott 1990:216). Public spaces—streets, saloons, and theatres—served as a major setting for a range of working-class social activities which many middle-class Americans considered inappropriate beyond the walls of private, interior spaces.

In Ireland, the pub was “the epicenter” (Duggan 1996:35) and the American saloon continued to serve as a community center for Irish immigrants. Figure 148 shows the location of saloons (also known as porterhouses) in the vicinity of Five Points. In many Sixth Ward drinking establishments, patrons were able to contact Tammany Hall insiders, ward healers, and aldermen, who assisted with employment, voting privileges, and political appointments (Miller 1985:329; Stott 1990:221; Allen 1993:36; Diner 1996:102). One nineteenth-century social critic, showing unusual insight into the relationship between the saloon, politics, and working-class communities, remarked that “liquor-dealers are the medium, and the only medium, through which political preaching or control can reach a very large body of the voters of the city....The notion that city missionaries or Republican philanthropists, or scholars and gentlemen from Fifth Avenue can be substituted for them is absurd” (Godkin in Brown 1976:86–87).

Sunday was the working-class holiday, the only day wholly available for socializing outside of the work environment, and recreation often included a stop at the local saloon (Stott 1990:221). Reformers considered this practice antithetical to the pious observation of the Christian Sabbath. New York Germans, also accustomed to Sunday family outings to the local beer garden, also resisted the state assembly’s 1857 liquor laws (Gutman 1977:69; Boyer 1978:77; Stott 1990:221). The *biersalons* of *Kleindeutschland* were similar in character to American-style saloons, and *lokals* were another common German drinking establishment resembling beer gardens or beer halls, including seating and often catering to families (Stott 1990:221). Lager beer was served, pipes were smoked, and musical and stage performances entertained the patrons (Stott 1990:221).

6.3.13 Five Points Archeological Data

Excavations on New York’s Block 160, at Five Points, recovered a large and varied array of alcohol- and tobacco-related objects. Material from three mid-century deposits underscores the negligible response of Irish and German Five-Pointers to the temperance messages of the Ladies’ Home Mission and the Five Points House of Industry.

A large cesspool at the rear of 472 Pearl Street (Lot 6, Feature J, AS III and V) yielded material associated with a five-story tenement which stood on the lot at mid-century. Approximately 132 individuals, comprising 31 families, lived at this address (U.S. Bureau of the Census 1850; New York State Census 1855). Federal and state census records indicate that 97 percent of the lot’s residents had immigrated from Ireland within five years of the census, and most of the employed males worked as porters or day laborers. A liquor dealer and a tobacconist also maintained stores on the ground floor of the building from the 1840s through the 1870s. The impact of these businesses on residents’ consumption and the amount of material they contributed to the cesspool deposit are unknown. Fifteen percent (68 vessels) of the glass assemblage is associated with alcohol consumption.¹⁰ Additionally, eight percent (32 vessels) of the ceramic assemblage relates to alcohol consumption.¹¹ A total of 259 clay pipes was also recovered from 472 Pearl, along with one ceramic spittoon.

¹⁰ In all cases for Five Points material, this figure is based on the distribution of glass vessels identified as wine bottles, beer bottles, case bottles, whiskey bottles, and flasks.

¹¹ In all cases for Five Points material, this figure is based on the distribution of ceramic vessels identified as stoneware beer bottles and stoneware whiskey jugs.

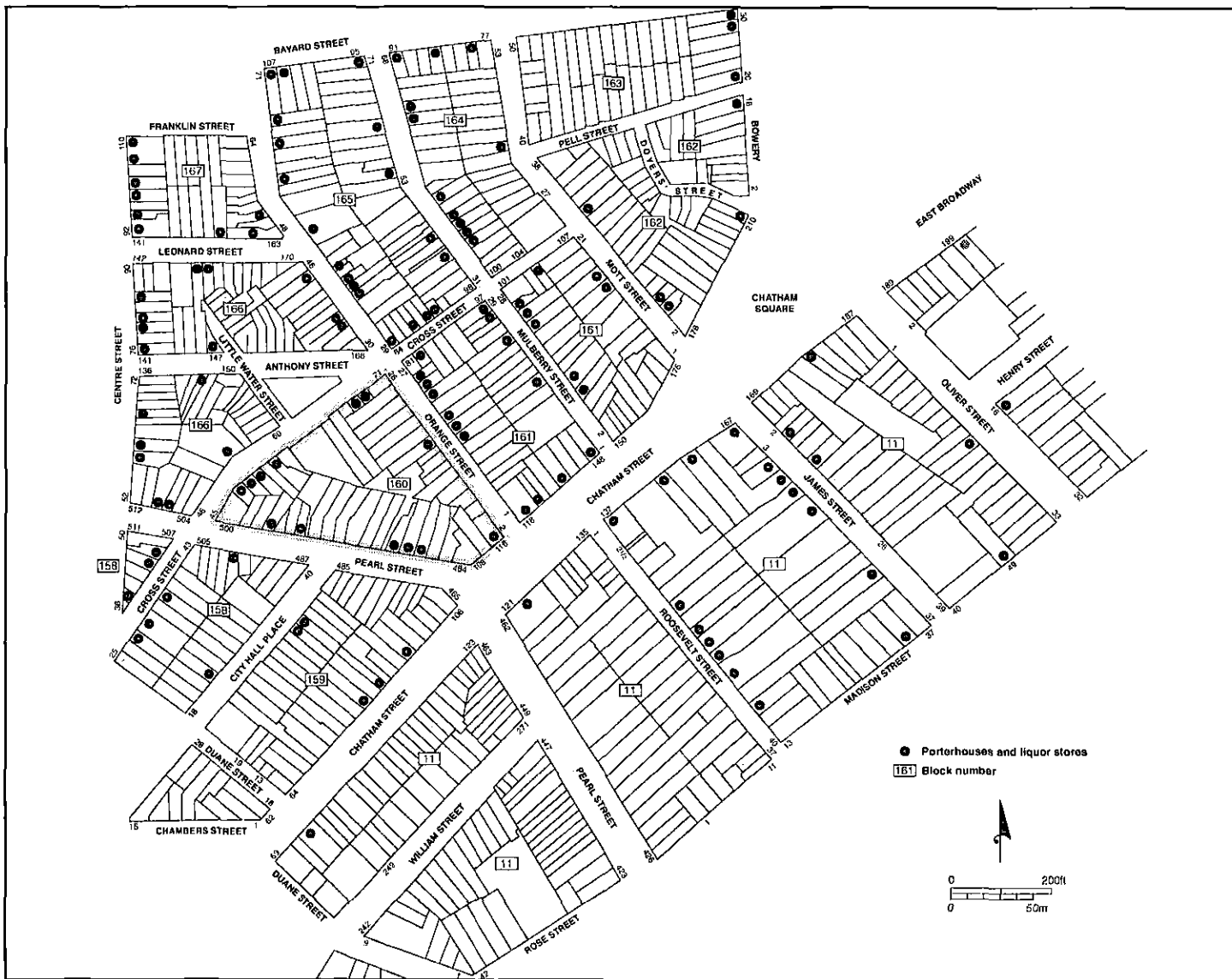


Figure 148. Locations of liquor establishments near Five Points at mid-century. Compiled from Rode's New York City Directory (1853-1854).

Contrasting with the alcohol- and tobacco-related material culture, a teacup bearing the transfer-printed image of the Irish-Catholic temperance reformer Father Theobald Mathew was also recovered from the cesspool at 472 Pearl Street. Father Mathew is depicted administering his pledge of abstinence to a rapt group of men and women, and the slogan "Temperance and Industry/Industry Pays Debts" appears on the interior of the cup with a beehive motif (symbol of productivity and industry). The cup shows no evidence of stir marks or other wear patterns and probably served as a keepsake and daily reminder to the owner's household.

A surprising number of soda or mineral water bottles was also associated with this deposit. Thirty-one vessels, just over eight percent of the glass assemblage, may have contained some form of carbonated water. These bottled waters relate to alcohol consumption in two contradictory ways. They may have been utilized as a stimulating substitute to alcoholic beverages or as a balm for many of the physical complaints associated with overindulgence (McKearin and Wilson 1978:233–234; Armstrong and Armstrong 1991:39–41, 89–93). An unusual serving pitcher with a sieve at the spout was recovered from this context as well, and it is possible that a temperant family was serving fruit drinks, such as lemonade, with this vessel.

A deposit from 474 Pearl Street (Lot 7, Feature O, AS III) shows a pattern of alcohol-related material resembling its neighbor at 472 Pearl. Nine percent of the glass assemblage (16 vessels) and eight percent of the ceramic assemblage (10 vessels) have been identified as alcohol containers. Sixty-three clay pipes and one spittoon constitute the lot's tobacco-related assemblage. Nine soda or mineral water bottles (eight percent of the glass assemblage) were also excavated from this lot. This deposit has been associated with the mid-century Irish occupants of a tenement similar to 472 Pearl Street (U.S. Bureau of the Census 1850; New York State Census 1855). A saloon occupied the ground floor of 474 Pearl Street during the period of deposition, and this may account for a substantial percentage of the alcohol-related material. However, it is impossible to estimate the frequency or intensity of tenants' use of this establishment.

Evidence of another temperate household on Block 160 comes from the single family dwelling at 8 Orange (Baxter) Street (Lot 45, Feature H, AS II and III). In this deposit, only one percent of glass vessels (seven vessels) and two percent of ceramic vessels (two vessels) are alcohol-related. Tobacco consumption appears to have been fairly high, however, represented by a minimum of 38 clay tobacco pipes. Families of Polish and German heritage, perhaps of the Jewish faith, lived at this address with several male borders, working as clothiers, shoemakers, and secondhand dealers (U.S. Bureau of the Census 1850; New York State Census 1855).

The Father Mathew teacup from 472 Pearl Street is perhaps most provocative because it alludes not only to values of total abstinence, but to the temperate ideology of a prominent Irish-Catholic figure. This teacup may have served an Irish-Catholic household as a symbol of defiance, confronting the Ladies' Home Mission and the Five Points House of Industry. Numerous soda and mineral water bottles from 472 and 474 Pearl Street suggest either temperate behavior or the deleterious effects of excessive use, and the sieved pitcher may have been purchased by a temperate Irish household at 472 Pearl for serving fruit juices. On warm summer days it was considered appropriate for temperate families to "squeeze lemons and add white sugar" to serve lemonade (Rorabaugh 1987:46). Material from 8 Orange (Baxter) Street offers evidence of relatively moderate alcohol use within two Polish/German (possibly Jewish) households. Relatively high numbers of tobacco-related objects, particularly clay pipes, in all three Five Points deposits seem to corroborate missionaries' reports of frequent use by residents. However, this frequency must also be considered in relation to the clay pipe's prominent role in the construction of immigrant and working-class identities. Though many Five Pointers continued to consume alcohol and tobacco, working-class Irish and German usage revolved around emic constructions of cultural and class identity, politics, and community.

6.3.14 Comparing Working-Class Drinking Patterns

A comparison of Five Points data to other working-class assemblages and material from Brooklyn's Block 2006 offers further insight into working-class alcohol consumption and illuminates subtle class, cultural, and religious biases in American temperance rhetoric.

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The Greenwich Mews site, located on Manhattan's West Side, was tenanted by native-born Americans, tradesmen "of the better class" (Geismar 1989:69).¹² Archeological data show a level of alcohol use similar to and occasionally higher than the Irish tenements at 472 and 474 Pearl Street. In the light of similar consumption patterns among native-born and immigrant working-class assemblages, American reformers' emphasis on Irish and German intemperance appears unfounded, accentuated by cultural and religious intolerance.

Material recovered from the Boott Mills (Operations A and B) at Lowell, Massachusetts, reveals percentages of alcohol-related vessels significantly higher than those at Five Points and Greenwich Mews. Drinking was actively discouraged on company property, including worker housing; thus, these high percentages are particularly remarkable and have been interpreted as evidence of active resistance by mill employees to company efforts at moral legislation (Bond 1989).

Relating the data from working-class Five Points, Greenwich Mews, and Lowell to the middle-class residents of Block 2006 in Brooklyn, the middle-class households were clearly the more temperate group. Two deposits refute a simplistic model of class differentiation of alcohol and tobacco use, however. While even the most intemperate Brooklyn assemblages have relatively few alcohol-related vessels (percentages are only one-half those seen at Five Points and Greenwich Mews), the 8 Orange Street deposit at Five Points actually contains a lower percentage of alcohol-related vessels than the four moderate Brooklyn households (Bates, Draper, Elmendorf, and Goff). The two abstinent Brooklyn households, Atwater and McGuire, are unique among the deposits examined in this study. However, the presence of the Father Mathew cup at 472 Pearl Street suggests at least one household of teetotalers.

Spittoons are present in roughly equal numbers in both the Brooklyn and Five Points material, indicating that chewing tobacco bridged boundaries of class and culture, as suggested by nineteenth-century American social critics. However, snuff bottles only appear in the working-class Irish assemblage from 472 Pearl Street. This absence correlates with documentary evidence of the incompatibility of snuff-taking with American middle-class manners. Clay pipes are present in very small numbers in all Brooklyn deposits, and in every case save one, working-class Five Pointers made greater use of these objects than middle-class Americans. As discussed above, the pipe-wielding stereotypes of working-class Irish and Germans were apparently based in part on frequent use of clays by these groups, and an awareness of these stereotypes probably played some part in middle-class reluctance to use these pipes. To the extent that middle-class Americans used tobacco, they appear to have chosen different methods of consumption. The Bates single-family household in Brooklyn is the exception to patterning in the tobacco-related material, with 66 clay pipes and two spittoons. This exceeds the number of objects in both the working-class Irish assemblage from 474 Pearl Street, a multi-family Irish tenement, and the German-Jewish tradesperson's household at 8 Orange Street.

When approached within a contextualized historical framework, cross-site comparisons of tobacco- and alcohol-related material culture reveal further evidence of the class, cultural, and religious biases which served to direct the rhetoric of abstinence against foreign-born working-class populations, while moderation and occasional excess were accepted among middle-class Americans.

6.3.15 The Culture of Coercion

Reform inevitably places social groups in an antagonistic relationship. Joseph Gusfield (1986) identifies two primary philosophies of reform in his study *Symbolic Crusade: Status Politics and the American Temperance Movement*. He discusses the fundamental difference in outlook between what he terms assimilative and coercive methods of instituting behavioral change. Assimilation-minded reformers approach their work under the assumption that potential converts truly desire the social status and lifeways offered by the reformer and merely require assistance and tutelage to achieve a "reformed" state. Coercive

¹² The residents of the Greenwich Mews site have been categorized as working class in this study, though documentary and archeological sources suggest that many could be more accurately ascribed to the "lower middle class."

methods arise when reformers perceive that their ideology has been rejected, and the unreformed individual constitutes a threat. Attempts at forcible behavioral change often follow, typically through criminalization.

The mid-nineteenth-century American temperance movement exemplifies a transition from assimilative to coercive approaches. At Five Points, the work of the Ladies’ Home Mission pivoted on assimilative religious conversion and inculcation of genteel, middle-class Victorian values, while the Five Points House of Industry offered economic and educational opportunities. Simultaneously, coercive legislation, such as the New York State Assembly’s 1857 liquor laws and the Reverend Pease’s child placement program, reflected fears that Five Points inhabitants and other poor immigrant populations had refused middle-class American rhetoric of reform. When met with resistance, reformers interpreted it as proof of the incorrigible nature of these people.

This study is not intended to deny the existence of the working-class drunkard or to implicate the entire American middle class in closet alcoholism. However, it is important to realize that in the temperance debate, concepts of use and abuse were defined by middle-class American reformers based on values particular to their own social group. Archeological perspectives on the temperance question support a critical approach to reformist literature and documentary sources. The anti-immigrant, anti-Catholic subtext of mid-century temperance rhetoric is drawn out through analyses and comparisons of culturally diverse working-class sites. Reformers berated poor immigrant groups with the rhetoric of abstinence, while within the middle class moderate and even excessive consumption was tolerated, provided genteel social conventions were observed. The archeological record also provides evidence of this class-based disparity in adherence to the temperance movement’s message.

Philosophies of reform are often predicated on two problematic positions: a hegemonic notion of what is socially acceptable, healthy, and pious; and a compartmentalized or modular theory of cultural transformation. The first argues that one social group may determine a society’s normative culture, and the second assumes that particular behavior patterns exist as isolated and unrelated elements within the entirety of a social group’s identity. There is no indication that missionaries at Five Points realized that for many Irish and German residents social activities involving smoking, drinking, and saloon-going constituted a definitive part of their identity and their relationship to their community. Historians and archeologists must be wary of approaching their work in the same way nineteenth-century moral reformers addressed their would-be flocks. Recognition of the complexity of social groups—of interrelationships of class, culture, and religious ideology in constituting group identities—are essential to a deeper understanding of reformist ideologies and social conflict.

6.3.16 Methodological Postscript

It is possible to associate a wide range of glass and ceramic vessels with alcohol consumption. However, the class of alcohol (beer/cider, wine, liquor, etc.) which a vessel originally contained is often difficult to determine. The question of vessel reuse presents additional problems (Busch 1987:67). Alcohol-related bottles may have been refilled with alcoholic beverages several times before discard or may have been used to store foodstuffs unrelated to alcohol. Empty liquor bottles were commonly used to store linseed oil, turpentine, etc., and an anonymous quote from 1900 states that people kept soda and beer bottles for their own personal use, particularly in the fall, “that period of the year when the good housewife begins to bottle her ketchup and make her preserves” (Busch 1987:70–71). There is also some evidence to suggest that European immigrants were more likely to reuse bottles than native-born Americans (Busch 1987:78). Any form of bottle reuse will skew attempts to relate numbers of vessels to actual intensity of alcohol use. During the mid-nineteenth century, exotic fruit juices and drinking water would have been served in stemware and decanters, usually analyzed as alcohol-related material. The Atwaters, from Block 2006, Brooklyn, had no alcohol-related bottles, and yet they had a high number of what could be considered alcohol-related stemware. To minimize these ambiguities of use, only alcohol storage vessels (glass and stoneware beer bottles, wine/liquor bottles, stoneware whiskey jugs, etc.) were considered in generating the artifact distributions used in this study.

The Socioeconomic and Ideological Processes that Contributed to the Social Construction of the Five Points "Slum"

Clay tobacco pipes are highly visible artifacts, but pipes of briar and meerschaum were generally curated to a higher degree than clays and are not well represented in the archeological record. This becomes especially important when looking at assemblages from the mid-nineteenth century and later. Cigar and cigarette smoking can involve substantial material culture, such as lighters, cases, humidors, and cigar cutters, but these items are not well represented in the archeological record. Evidence of the use of snuff survives in the form of snuff bottles, boxes, and tins, and occasional grating or grinding implements. Chewing tobacco relies on the smallest amount of associated material culture and is arguably the least visible form of tobacco use. Spittoons, while not strictly necessary and often improvised, are the major material components of the practice.

Residential archeological samples offer a window into a very specific realm of human action. While they are a rich source of data on day-to-day activities within the home, much of what people do (and the things they utilize) in their daily lives outside the home are not readily visible in household deposits. This is of key importance in reference to working-class drinking and smoking behaviors, which, as discussed above, often took place beyond the residential setting. Along this same line of reasoning, residential archeological deposits may more accurately reflect middle-class consumption patterns, given that the use of these substances was more often restricted to the home among this group. The limited sample utilized in this study must be acknowledged, particularly in terms of archeological assemblages associated with middle-class households. Future comparisons which build on this preliminary analysis are needed to develop a stronger basis for interpreting the artifact patterns discussed above within the nationwide framework of American temperance. Within the context of New York City, archeological deposits from the Five Points, Greenwich Mews, and Brooklyn Block 2006 sites provide substantial insight into drinking and smoking behaviors and the social complexities of temperance reform in this urban center.

6.4 The Construction of a Slum: A Visual Archeology of Five Points (Lauren J. Cook)

6.4.1 Introduction

Seeing is never a mere reception; it anticipates and projects, in terms of what culture has taught (Lowe 1982:80).

Anthropologists have come to understand that much of what they experience in the course of their fieldwork cannot be written down: much of it is visual. The field of visual anthropology, which is concerned with the capture, presentation, and analysis of visual imagery, initially arose as an extension of ethnography, a broadening of the range of information recorded. As visual anthropology has increasingly shifted to analysis, the field has begun to emerge in its own right. Visual anthropologists have contributed to a broader critique of the relationship between Western intellectuals and indigenous peoples and examined modern European culture through the analysis of artwork and films.

Archeologists have long realized the importance of the visual aspects of fieldwork. The archeological record photograph has a long history and is now increasingly supplemented by archeological films, produced with the assistance of archeologists to interpret archeological sites to the public (e.g., Robinson and Pinzini 1988). Where archeologists have lagged behind other anthropologists is in the analysis and interpretation of visual sources. Analysis of graphics (particularly maps) and photographs for site-specific or regional information and for information on types and location of particular sites, structures, or features likely to be encountered is fairly common (e.g., Orr 1977; Fisher 1983; Blades 1986; Beaudry 1989). Some archeologists have gone further, to examine period artworks for information on the nature and use of material items in the past. For instance, Ivor Noël Hume (1969:38–45) used Hogarth's etchings and Flemish paintings to stress the utility of visual sources to material culture studies. Olive Jones and E. Ann Smith (1985) utilized period prints to illustrate the function and social uses of glass vessels and artifacts during the eighteenth and nineteenth centuries, and South et al. (1988) used paintings to illuminate the variety and utility of Hispanic ceramics. Yet archeologists seldom carry their analyses beyond the level of the artifact. We have not, to date, looked at what art might tell us about the society and culture within which it was produced and viewed. There are several reasons for this. The first, and most obvious, is that the analysis of graphic images, except for the narrow range of purposes discussed above, is not generally seen as the proper concern of archeologists. There may also be a tendency to assume that, as potentially biased sources, images may present more problems than they resolve and, thus, be of limited utility.

This section will analyze selected graphic images produced in New York City between 1850 and 1940. These images, predominantly streetscapes, created a spectacular view of street life centered on Five Points. The unacknowledged consequences of that view—constructed ideas of class, ethnicity, and the slum—guided social policy and, in many respects, are still with us today.

This study is a visual archeology. Like more traditional archeology, a visual archeology involves the systematic gathering of information concerning a geographically limited area. The sources used have presumably been subject to differential preservation, as are traditional archeological materials (Schiffer 1996). Like any other archeology, it concerns the analysis of meaningful things—items of material culture, in this case graphic images—that were produced and used in social and physical contexts. That analysis addresses what these complex artifacts tell about the site and the people who lived there. Even more importantly, they inform us about people who did not reside in the neighborhood, but viewed it and interpreted it from the outside.

The visual has always intrigued historians and journalists, and there is no shortage of critical analytical approaches to visual sources. This discussion has benefited from the lessons of several of these. Michael Lesy juxtaposed the photographs taken by Charles Van Schaik in Black River Falls, Wisconsin, between 1890 and 1910 with newspaper items published locally and elsewhere in the state between 1885 and 1900 and with excerpts from admissions documents from insane asylums during the same period (Lesy 1973).

Lesy paints a vivid portrait of a psychologically devastating rural hell accentuated by the hard economic times of the 1890s, conjuring a state of paranoiacs, religious maniacs, and suicides, far from the idyll held up by Charles Loring Brace in his efforts to send city children to adoption in the Midwest. Lesy's use of images involves no in-depth analysis or commentary, and little information on individual images appears in his volume. Rather, they are left to speak for themselves or for the texts with which he placed them. He admits juxtaposing and altering images as part of his elaborate visual construction, but most of the alterations were intended to be obvious, consisting of juxtaposition of mirror images and catalog illustrations outside of the photographic frame. The photographs add power and a sense of actuality to the texts and are an integral component of his imaginative, if problematic, thesis (Sontag 1977:72-75).

By contrast, Luc Sante's *Evidence* (1992) uses New York City Police evidence photographs, combined with a detailed analysis of their contents, to reconstruct deep, if narrow, slices of New York life (and death) between 1914 and 1918. Sante's images were chosen for their aesthetic qualities from a collection fortuitously preserved in the Archives of the City of New York. In good archeological fashion, he moves from a discussion of the context of the images to the evidence; to an aesthetic overview of the collection; to detailed analysis of the images; to a discussion of the social, professional, and practical conditions under which the images were formed (a "police aesthetic"); and moves beyond to explore the insights that the images offer about the human condition.

Thomas Schlereth (1992:113-143) used visual sources to examine the material life of artisans in the early Republic. He concluded that although graphic evidence is "not without its explanatory limitations and evidential biases, [it] better focuses our present image of past artisanry....Its full research potential has only begun to be realized in widening our understanding of everyday life" (Schlereth 1992:140).

6.4.2 *The Vision Thing, or Seeing is Believing*

The definition of art in any society is never wholly intra-aesthetic and, indeed, but rarely more than marginally so. The chief problem presented by the phenomenon of aesthetic force, in whatever form and in result of whatever skill it may come, is how to place it within the other modes of social activity and how to incorporate it into the texture of a particular pattern of life. And such placing, the giving to art objects a cultural significance, is always a local matter (Geertz 1983:97).

The relationship between verbal communication, the written word, and the visual is rich and complex. Like verbal and written descriptions, graphic images utilize in their form and content, at a variety of levels, symbolic conventions that are both culturally and historically based (Leppert 1996). That is to say, graphic conventions are created and interpreted in contexts that vary from one culture or community to another; many graphic conventions may be shown to occur in particular times and places and not in others and are, as Geertz reminds us, local, not merely in a geographic sense, but in a cultural sense as well. The developing sensibilities of middle-class culture in the Victorian era involved particular relationships between form and content in graphic arts. As pointed out by Lowe (1982:79-80), bourgeois painting presupposed a hierarchical structure of three levels of visual connection: the convention of visual perspective founded on mathematical ratio gave the illusion of depth to the two-dimensional canvas; the pictorial image, constructed by color and line, light and shade, occupied the three dimensional spatiality opened by visual perspective; and together, visual perspective and pictorial image gave the viewer the illusion of realistic representation. These formal elements, perspective, and drawing conventions required something more, symbolic content, in order to communicate meaning. The meaning or iconography of the image depended upon referential values shared by painter and viewer.

Cartesian perspectivalism, which originated in Renaissance Italy, is based on techniques of representing space and the relationships of objects in space, involving the viewer by mimicking the appearance of relationships as the eye experiences them (Panofsky 1991). The facility with which the viewer is drawn in and made complicit with the spatial point of view used by the artist makes this set of conventions powerful and has given it a nearly hegemonic position in representational art (Jay 1988).

Graphic images have some important qualities that are worth summarizing:

1. Graphic images are intentional constructs, created by people. They do not themselves reproduce reality, but rather represent reality.
2. Graphic images are in practice embedded in contexts of presentation or performance, where they serve a mediating or communicative function between individuals, who may be separated from one another in space and time.
3. Production of graphic images utilizes symbolic conventions of form and content that are culturally and historically based.
4. Interpretation of graphic images is aided by understanding the cultural and historical contexts of production of the image, as well as by understanding the cultural and historical contexts of the symbolic conventions utilized in their production. Although conventions change with time, society, and culture, they are not easily reduced to the social (Focillon 1991).

In a modern society that is capable of mass-producing and distributing images, the visual may to some degree stand in for the actual. During the 1950s and 1960s, a group of graphic artists, urban planners, and film makers developed a radical critique of modern mass culture. Known as the Situationists, they criticized the tendency of mass visual media to present a unified facade, which they referred to as "the spectacle." Guy Debord, a Situationist film maker, described the spectacle as not a collection of images, but a social relation among people, mediated by images. The spectacle cannot be understood as an abuse of the world of vision or as a product of the techniques of mass dissemination of images. It is, rather, "a *Weltanschauung* which has become actual, materially translated. It is a world vision which has become objectified...the spectacle is nothing other than the sense of the total practice of a social-economic formation (Debord 1983:4–5, 11).

This sense of spectacle as a sort of visual macro-production of society, a totalizing framework, all the more powerful because of its pervasiveness, is an important element in the development of postmodern approaches to art and philosophy and has recently been applied to the field of cultural studies (Plant 1992). The creative use of the spectacular in ways not intended (which the Situationists called *detournement*, or "turning aside") can be a key strategy in the construction and negotiation of class and ethnicity (Ball 1995).

As projected in contemporary cultural debates, the spectacle is most often equated with film, television programming, and advertising, which have, by intention, a seamless quality (Wollen 1989, 1995; Bukatman 1995). While the florescence of the spectacular is a phenomenon of the television age, it is prefigured in the graphic arts of the nineteenth century. The use of graphics to illustrate written texts may in fact be the initial phase of the spectacular. Graphic conventions and content enable us to label many nineteenth-century images as "old"; but they are nevertheless products of mass culture, mass produced in the thousands. This level of production was enabled by the development of lithographic processes early in the nineteenth century and fed the tastes and interests of bourgeois consumers (Benjamin 1968), who were in the process of evolving their own class-based modes of perception (Lowe 1982). The visual arts have long served the interests of their patrons in one manner or another, whether by portraying women as property or by portraying property as owned and controlled (Berger 1972:45–64, 106–108), and images of the Five Points are no exception.¹³ Images reinforced bourgeois conceptions of others and, by extension, themselves and provided a persuasive element in arguments for reform or surveillance of working-class environments and behaviors.

¹³ Both a warning and an apology are in order. There are many graphic conventions in some of these images that are no longer in vogue. Some involve stereotypical representations of racial and ethnic groups, particularly African Americans and Irish immigrants that had, were probably intended to have, and may still have the effect of ridiculing, dismissing, and demeaning large segments of the population. These images are presented here in the full understanding that some people may be, as the author is, offended by some of those representations.

6.4.3 Depicting the Slum

As discussed at length in Section 6.2, members of the middle classes defined themselves as "civilized" and "christian" by their participation in an ideology of domesticity and their skill in the rituals of gentility. The effect of the cult of domesticity was to construct alterity, that is, to define entire segments of the city's population as others, based on their failure to share in bourgeois culture by neither participating in that ideology of domesticity nor practicing gentility. The naturalization of poverty as a necessary consequence of the failure to be middle class was an essential element in this alterity. The poor were either "worthy" or "unworthy," depending on the degree to which they subscribed to the proper ideology and at least attempted competence in the proper rituals.

There are some parallels between the alterity discussed here and the alterity constructed by nineteenth-century ethnographers, whose differentiation between "savage" and "civilized" peoples was metaphorically extended to groups closer to home. Although lower-class women and criminals might differ in many respects, they shared a similarity to "savages." The list of social categories thus equated was quite extensive: in addition to criminals, women, and children, it included peasants, rustics, laborers, beggars, paupers, madmen, and Irishmen—all of whom were at times likened to savages or to "primitive" man (Stocking 1987:229).

The production of the other as a device in anthropology has been the subject of recent criticism (e.g., Fabian 1983). In both Britain and the United States, the metaphorical extension of anthropological alterity during the nineteenth century included missionary work among the urban poor, which Gareth Steadman Jones (1974) saw as evidence of the perceived cultural gulf between the bourgeoisie and the poor. African tribesmen and immigrant Irish were seen as having similar spiritual needs. Defining immigrants, African Americans, and the poor as others served, in one way at least, to distance them. That distancing made for a convenient if trite and overutilized contrast between the physical proximity and the cultural distance between Five Points and Broadway.

Alterity, or otherness, of all sorts was represented graphically through stereotypical depictions of clothing, behavior, and the exaggerated portrayal of ascribed physical characteristics, particularly facial features. (Nearly all cultural differences were ascribed to race at one point or another, and race was felt to be definable through physical characteristics.) Lithographs and engravings often signal ethnicity through such visual cues, which would have been familiar to the original viewers and many of which are easily interpreted today. Photographs leave us to our own devices in many respects, though skin tone, facial hair, clothing, signs on business establishments, and accompanying texts often provide information on the social class, race, and national origin of the individuals portrayed.

The first two images are the Perris 1857 and 1867 maps (Figures 149 and 150). It is customary to think of maps as more objective and less biased than other types of graphic sources, at least in terms of varying degrees of accuracy and correctness, however those qualities may be defined (e.g., Seasholes 1988:92). But geographer Denis Wood reminds us that maps are powerful and seductive guesses, fantasy images that show things that otherwise would not be seen. Much of their power comes from their pretense of objectivity; at the same time, they are highly selective (Wood 1992). Insurance maps such as the Perris maps (Figures 149 and 150) provided underwriters with information on the construction, spatial relationship, and size of various structures, so that the risk of fire could be estimated. What they did not show, to list only a few of the omissions, are the locations of refuse in the streets or the locations of privies in the yards. They did not identify which streets were paved and which were not; which structures were used for purposes of prostitution or gambling; provide the names, race, ethnicity, or social class of the occupants of dwellings; or indicate which street gangs (or fire companies) drew their members from which blocks. Any map that attempted to do all of these would soon become so crowded as to be useless. Quite apart from the *intentional* use of maps to deceive (Monmonier 1991), any map must balance the fiction of completeness and accuracy against the need for utility.



Figure 149. Map of Block 160 (Perris 1857).

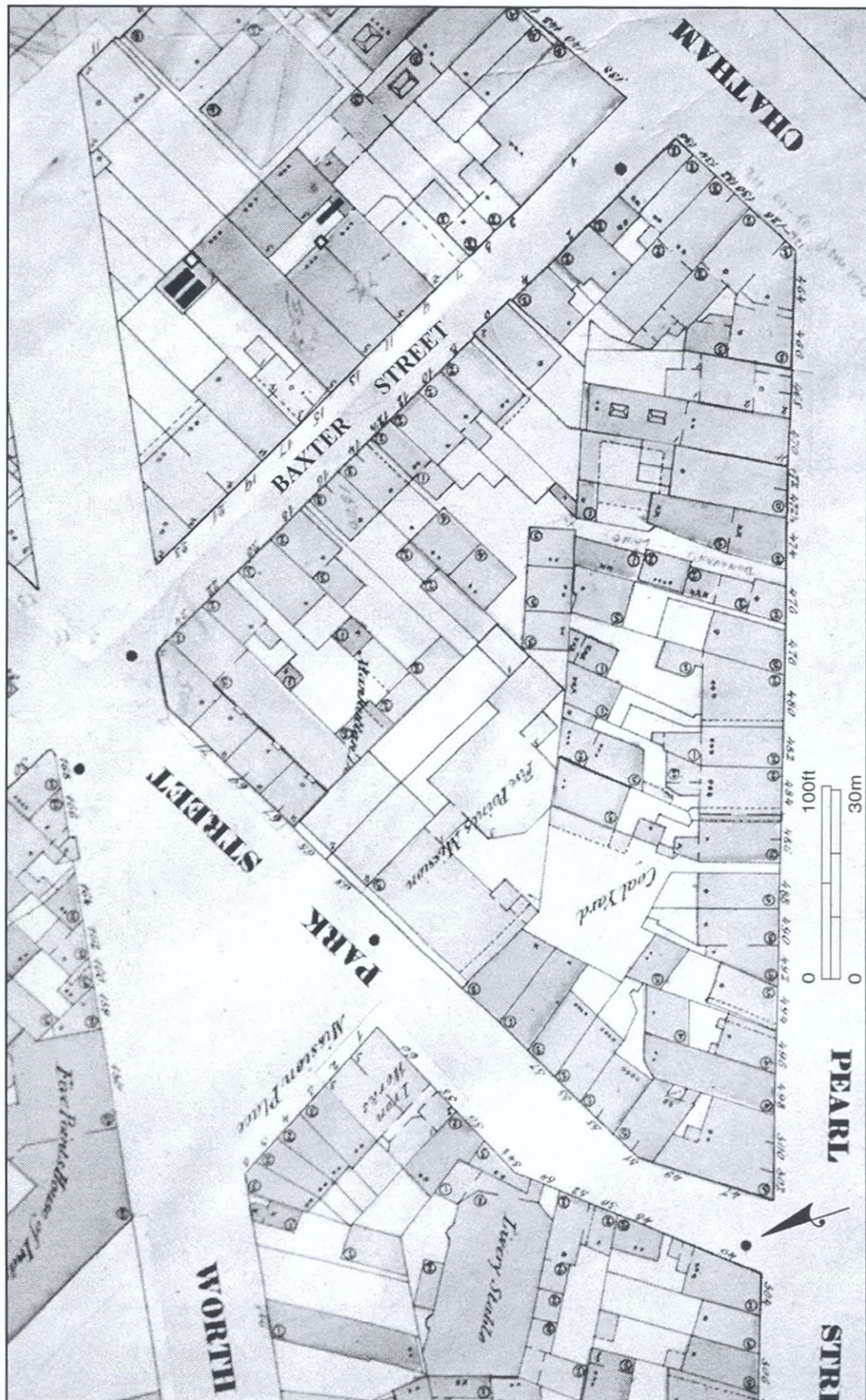


Figure 150. Map of Block 160 (Perris 1867).

Figure 151 may be the best known image of the Five Points, and it certainly qualifies as spectacular. Included in the 1855 edition of David T. Valentine's *Manual of the Corporation of the City of New York*,¹⁴ it represents the intersection of Anthony, Cross, and Orange Streets some 28 years earlier. Through the device of Cartesian perspective, viewers of the image find themselves situated on the southeast side of the intersection, in the middle of Orange [Baxter] Street, looking northwest. There is a lot going on here. Architecturally, we are looking at the sort of two-, two-and-one-half-, and three-story streetfronts that characterized mixed commercial and residential districts in the city during the late eighteenth and early nineteenth centuries (Huxtable 1964:31–57). In this landscape, there are more than 200 distinct individuals doing a variety of things. Some idea of their social class is conveyed by their dress. The top hats, vests, and coats or jackets on several of the figures in the foreground would seem to place them among the bourgeoisie, although the man in the top hat brandishing the stick in the far left foreground is probably intended to represent the "Bowery B'hoj" working-class type of the mid-nineteenth century (Stott 1990:223–225; Sante 1991:77–80). The male figures who are attired in shirtsleeves were almost certainly intended as working class. Women are less easily categorized in terms of class on the basis of clothing, for reasons that will soon be apparent.

The image includes lively indications of legitimate commercial and other activities of various sorts. Women in the foreground are selling various unidentifiable commodities. A man armed with a stick, perhaps with the assistance of an African-American boy, herds several pigs through the street. A woman fills a washtub from a public pump at the southwest corner of the intersection. Less legitimate activities are indicated first by the large number of establishments (7 are visible) selling some form of alcoholic beverages. Signs advertise, roughly from left to right, and ignoring duplication, "wiskey," gin, liquors, "good liquors," beer, "porter," "liquor store," rum, "best of liquors," and "spirits." These signs were almost certainly the creation of the artist. They would have been unnecessary in any event, as in lower Manhattan after about 1825, "groceries," for which there are numerous signs, were generally known to be illegal grog-shops with a few items on hand to provide a semblance of legal purpose (Sante 1991:105–106). At least one person in the lithograph, the man seated on the ground at left, appears to be showing the effects of alcohol.

Violence is also evident throughout the streetscape. On the far left, a "Bowery B'hoj" with a stick threatens a woman. Two African Americans are fighting to their right, while a woman and a child try to stop them. Two women, probably prostitutes, appear to be fighting to their right. A short distance up Anthony Street, two men appear to be fighting over a woman, as do two men on the far right. Just to the right of center, a crowd gathers around two more men fighting, and a similar gathering is visible in the distance, to the right up Orange Street. Fear of working-class violence was clearly a concern to the middle class in 1855, when the lithograph was published. In 1854, serious disturbances had occurred on at least four occasions: a dance-hall riot on February 26; a religious disturbance on May 28 that involved about 20,000 people, in the course of which the militia were called out and 60 rioters were arrested; a June 4 riot between Irish and native-born Americans; and a September 3 riot by Irish Catholics against Protestant street preachers. In addition, the Astor Place riots of 1849 would have been clear in the public memory, not to mention minor religious riots in 1851, 1852, and 1853 (Headley 1873:111–128, 310).

The major focus of the image, however, is neither liquor nor violence. Instead, sex is presented as the predominant activity. There are at least 20 couples visible in the streets and pavements. Another may be seen in the upstairs window of the building in the center. At least five clearly identifiable women are hanging out of second-story windows, a sixth is barely visible, with an expression of misery on her face, in

¹⁴ Valentine's *Manual*, as it is commonly known, has an interesting history, some of which is discussed by Eric Humberger (1994b:145–147). First published in the early 1840s, it was a small directory of city departments with several maps, one showing the contemporary city and another reproducing a historic map. By 1849, when McSpedon and Baker of 29 Beekman Street took over printing the directory, it took on a larger format and began to include some historical information and graphics showing contemporary views. By the early 1850s, many of the graphics were historical in nature and were sometimes placed in proximity to historical articles to which they related. These volumes were printed in editions of about 10,000 and distributed without charge to New Yorkers (Brown 1916:xiii). By 1868, Joseph Shannon had taken over the editorship, and E. Jones had become the printer. The graphics in that year were principally of architectural landmarks. From 1916 into the 1920s, a publication known as *Valentine's Manual*, edited by Henry Collins Brown and composed entirely of historical articles, was published, expressly to trade on the popularity of the manuals of the 1850s and 1860s, which were sought by antiquarians and armchair historians.

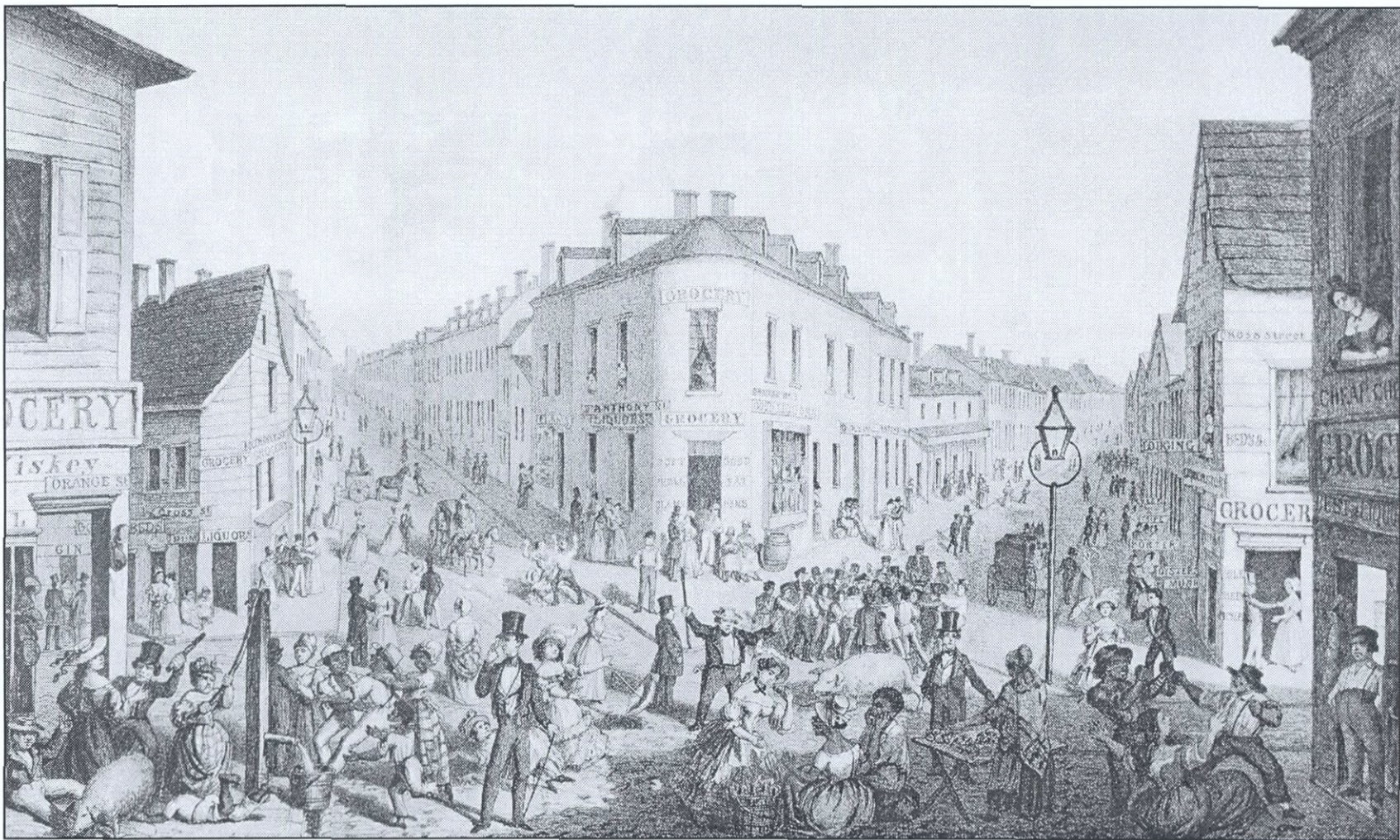


Figure 151. "Five Points 1827," lithograph, McSpedon and Baker (Valentine 1855:112).

the window on the far left. The rightmost window in the second building from the right, shows what appear to be a woman's feet, wearing shoes, sticking up in the air. There are 15 unaccompanied women standing about, at least some of whom are apparently intended to represent prostitutes. Based on dress, it would appear that much of their clientele, in the image at least, consists of middle-class men. The principal reason that it is difficult to determine the class membership of most of the women here is that fine clothing may have been one way in which the artist signaled the occupation of his subjects: George Foster wrote of "that damning draught of ambition for dress and display, that makes so many prostitutes" (Foster 1990:131). Finally, signs throughout the image imply the availability of sex. Several announce the availability of beds, one offers "entertainment." Several of the foods that are advertised may have sexual connotations, such as clams, oysters, pickles, "soft shell clams," and "good fat hams." Finally, beneath the woman in the window on the far right, there is the notation "cheap cheap."

The "soft shell clams" reference may have political connotations as well, referring to the so-called "soft" faction of the Democratic Party which controlled Tammany Hall and the city for much of the 1850s. Fernando Wood, a "soft," was elected as mayor three times during the decade, and occupied that office when the image (Figure 151) was published. Tammany leaders were often accused by their Republican opponents (and not unjustly) of protecting the trade in liquor and sex, as well as violent gangs of Five Points and the Bowery. This notation may have been intentionally polyvocal: symbolizing both prostitution and the dominant Tammany faction in the written equivalent of the same breath would be a clever way of linking them in the mind of the viewer.

The thread that unites the various spectacular aspects of this image is the belief, common among the bourgeoisie, that the working classes lacked the ability to moderate their appetites for stimulation of various sorts. This lack of self-control was believed to lead to violent behavior, over-consumption of alcohol, and sexual promiscuity—in short, the rule of passion over intellect. The concept of the gaze is important here. The gaze is the visual embodiment of the forms of surveillance discussed by Foucault (Bryson 1988; Olin 1996). In this image, the gaze may be represented by the man in the foreground, who is obviously bourgeois. Seemingly disinterested, he watches some of the action going on around him and turns his back on the rest. But was he intended here as an instrument of control, or as a tourist, perhaps a potential consumer? In any event, the gaze is conveyed in this image in a more basic manner. Cartesian perspective injects the viewer directly into the streetscape.

Several versions of "The Five Points Seventy-five Years Ago" (Figure 152) exist, including an engraving (reproduced in Asbury 1928:frontispiece). Figure 152 is a later version, from a postcard produced in 1898. The setting is the same, but there are fewer people. The clothing and racial stereotypes are characteristic of the turn of the century. The disinterested middle-class observer within the image is shown as a slummer, someone who visits and participates in slum life as recreation. He is obviously drunk and removing his coat to fight with a resident in working-class attire. By updating the image to what was then the present, the postcard maker continued the spectacular image of Five Points as a perennially dangerous and immoral place. In addition, he portrayed the several conflicting stereotypes about African Americans that were held by many white New Yorkers. The central African-American figure is about to fight with the gentleman who is taking off his coat. He clearly represents the threat of violence. The older man in the left foreground stoops to pick up the gentleman's hat, implying servility. Other African Americans, including the man skipping across the street in the background and the women to the right, may be intended as comic figures. This image was made at a time when such demeaning and humiliating "comic" traits were at the height of their popularity as a staple of popular entertainment performed for audiences that were increasingly segregated, and at a time when African-American males were increasingly represented as dangerous (Nasaw 1993:53–61). The 1898 image replaces the Irish as the other with the African American as the other, and reminds us that as the spectacle—the body of social relationships that are mediated by images—changes, so will the content of the images themselves.

Both of these images are unique among those considered in this section in their virtual freedom from textual context. Figure 151 bears a minimal relationship to the recitation of municipal police ordinances within which it is to be found in the 1855 *Valentine's Manual*. As a postcard, Figure 152 constituted a textual vacuum, calling for the purchaser to write the text. Yet, they are both powerful images. Their independence



Figure 152. "The Five Points Seventy-Five Years Ago," postcard dated 1898.

from textual constraints, the fact that they were not required to clarify or illustrate anything in particular, gave their artists full rein and permitted the employment of several rhetorical devices. Both of these images construct a past, a sense of history for the Five Points. By purporting to show events 25 years and 75 years before they were produced, respectively, they lend those constructs a legitimacy that they may not deserve. The temporal assignment of the scenes in these images to a specific point in the past, the late 1820s, served to distance them from the time and place in which they were produced and thus provided "space" between event and portrayal, a temporal "point of view" that is characteristic of historical narration, as opposed to fictional narration (Ricoeur 1983:178). There are several possible motivations for these images. Presenting pasts in which others—immigrants and African Americans—are portrayed as the source of vice or violence, helps to justify discriminatory attitudes in their respective presents (i.e., 1855, when the Irish were extensively discriminated against, and 1898, when racial discrimination was on the rise). At the same time, portraying a past that is much worse than the present is one way of validating past actions, such as social reform (Lowenthal 1985:40–41).

Paradise Square (actually triangular) was located immediately to the west of the intersection of Anthony and Cross Streets. Figure 153 shows the square from the east. Cross Street is on the left and Anthony Street is on the right. This image was used as an illustration in a book describing the efforts of the Ladies' Home Mission of the Methodist Episcopal Church to convert and reform the Irish Catholic residents of the neighborhood. Those efforts centered on the Old Brewery, visible in the figure to the left of center, along Cross Street (Ladies of the Mission 1854). Accompanying the picture was the following description of Paradise Square:

In the center of this area is a small triangular space, known as "Paradise-square," surrounded by a wooden paling generally disfigured by old garments....Miserable-looking buildings, liquor-stores innumerable, neglected children by scores, playing in rags and dirt, squalid-looking women, brutal men with black eyes and disfigured faces, proclaiming drunken brawls and fearful violence, complete the general picture (Ladies of the Mission 1854:33).

Bourgeois writings on the neighborhood exhibit a pattern that continues to the present day: metaphorically, the physical decay of buildings was linked to illness of the body, and both the decay of the built environment and of the body were considered symptomatic of the moral failings of neighborhood residents. In his description of the Five Points, published in 1842, Charles Dickens described how "debauchery has made the very houses prematurely old. See how the rotten beams are tumbling down, how the patched and broken windows seem to scowl dimly, like eyes that have been hurt in drunken frays....A square of leprous houses, some of which are attainable only by crazy wooden stairs without (Dickens, quoted in Ladies of the Mission 1854:17–18).

Indeed, Figure 153 shows evidence of the poverty of the neighborhood, in the lame and apparently injured man in the foreground and the apparently able-bodied men standing in front of the Brewery, and a nearby "grocery." Two men fight in the street. A seated woman at the far left appears to be crying. Children and a stray dog are evident as well. The apparently regular spacing of people along the laundry-covered fence around the square may reflect an effort to ward off thieves. The slouched postures of many of the people and of the horse in the right foreground may have been intended to convey the despair of the neighborhood before the Ladies of the Mission arrived.

In 1850, the Ladies of the Mission leased a room in a building on the northwest corner of Little Water and Cross Streets (Figure 154),¹⁵ opposite the Old Brewery. They immediately fitted it for services and established a Sunday school which was later expanded to a day school (Ladies of the Mission 1854:37–39). Figure 154 shows the three-and-one-half-story commercial building within which the mission room was located. The presence of a woman and child in the doorway, and the file of children crossing the street in

¹⁵ In fact, the northwest corner is the only corner where the mission room could have been located. Little Water Street dead-ended at Cross Street, and the northeast corner of the intersection was occupied by Paradise Square. A comparison of Figure 154 with maps of the time bears this location out. This structure is located directly above the fire plug in Figure 153, across Paradise Square.

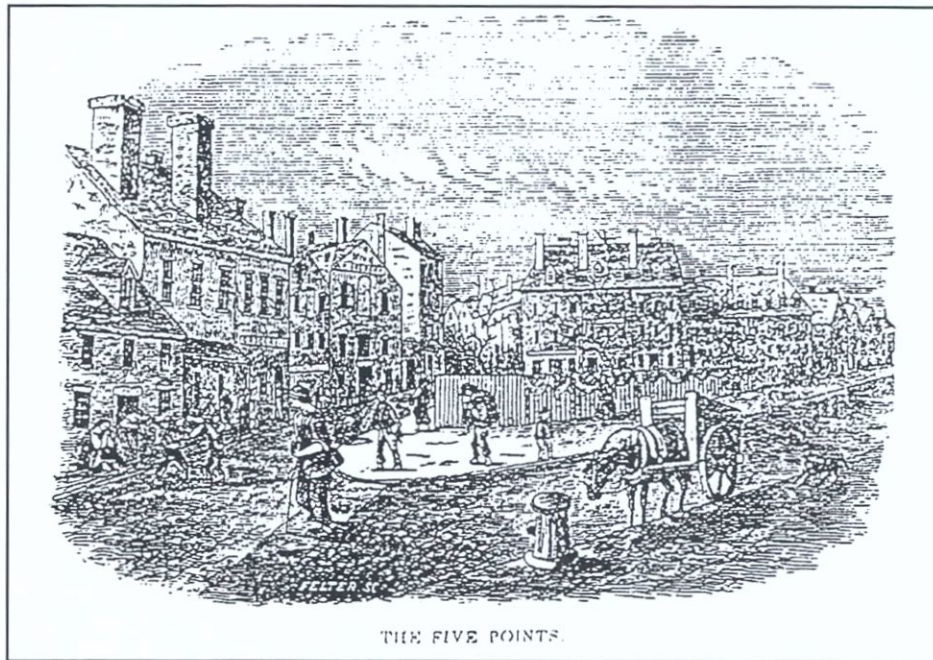


Figure 153. "The Five Points" (*Ladies of the Mission* 1854:opp. p. 33).

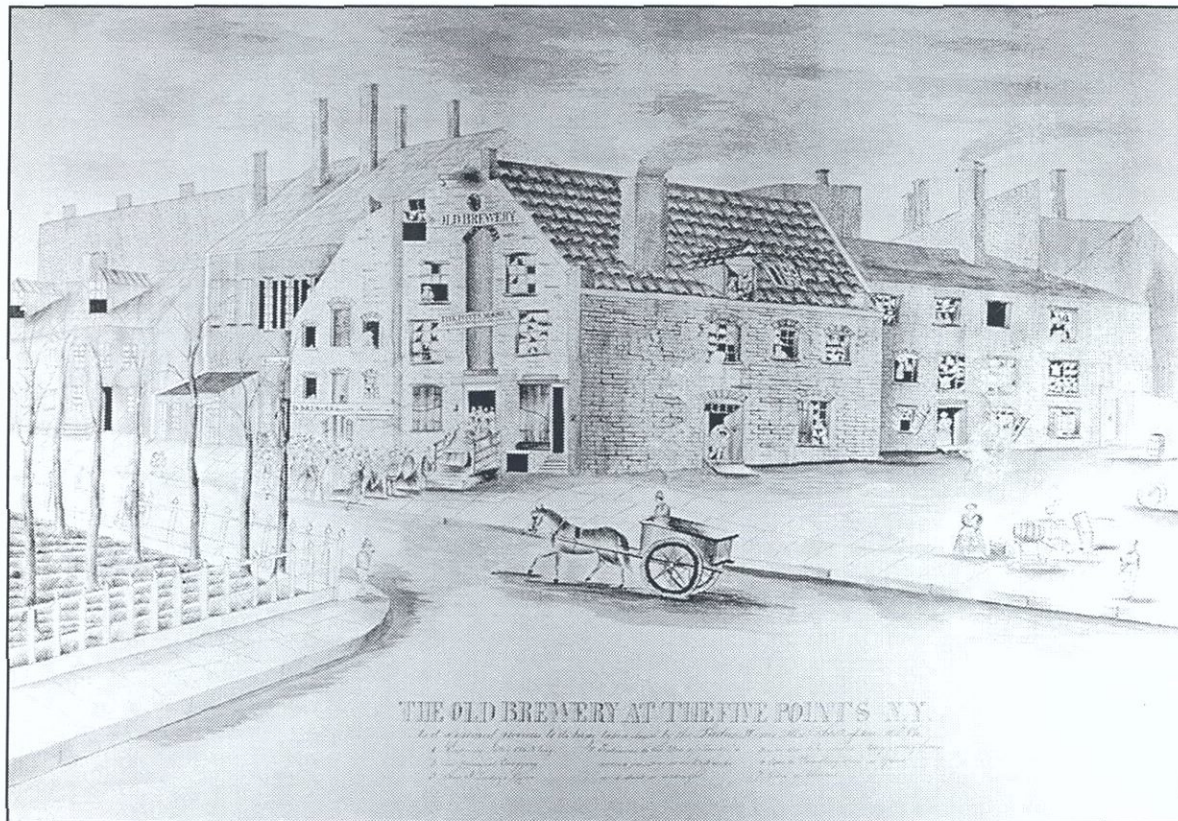


Figure 154. "The Old Brewery at the Five Points, N.Y., as it appeared previous to its being taken down by the Ladies Home Mission Soc. of the M.E.Ch." Pen-and-ink wash, Museum of the City of New York, J. Clarence Davies Collection, 29.130.

the direction of the Old Brewery, support the textual assertions of the popularity of the school and its intended function as a haven for neighborhood residents, particularly women and children. The ladies' description of their efforts, entitled *The Old Brewery and the Mission House* at the Five Points, concentrated on the Old Brewery and would make the Old Brewery one of the city's more famous (or at least infamous) structures. With Cow Bay, a tenement at the north end of Little Water Street, the Old Brewery exemplified the worst living conditions in the neighborhood.

For misery, degradation, filth, and populousness they cannot be exceeded, and it requires considerable physical and moral courage to climb to garrets and descend to cellars, where every sense is offended by the extreme wretchedness which abounds on every hand (Ladies of the Mission 1854:104).

The Old Brewery had been built as a commercial enterprise, Coulter's Brewery, in 1792, and by 1837 it was no longer fit for its intended purpose. The owners removed the brewing equipment and divided the interior of the building into small rooms, which were rented to the Irish who were entering the neighborhood in large numbers. One of the entrances was a narrow door to an equally narrow hallway, known (according to the missionaries) as "Murderers' Alley." It led to a large room dubbed the "Den of Thieves." The cellars and garrets were also occupied. According to reformers' accounts, the brewery may have held several hundred people, "sometimes two or three families in a room" (Ladies of the Mission 1854:57). Asbury estimated the population of the Old Brewery at 1,000 and that of the Den of Thieves at 75. He also wrote of children born in the Old Brewery reaching their teen years without leaving the building (Asbury 1928:14), but this, with his population estimates, was obviously exaggeration. Other aspects of his description, including the prevalence of prostitution within the building, appear to be based on George Foster's 1850 account (Foster 1990:122). The missionaries found that the best way to reform the Old Brewery was to physically destroy it. Accordingly, they purchased the building in March 1852 and used it as a mission building until December of that year, when they demolished it. They replaced it with a newly constructed mission building.

Structurally, the Old Brewery consisted of a large three-and-one-half-story building, with a smaller adjacent structure at its east end, also three-and-one-half stories. At some point, the space between the ridgelines of the two structures was roofed and converted to interior space. Both structures had basements, and window wells in the larger building admitted some light to the basement (something not recorded by the missionaries). The facade of the larger structure had both a central entrance and the narrower door to "Murderers' Alley." The smaller structure was occupied by D. Brennan's grocery and liquor store. Illustrations of the brewery used the unevenness of both the rooflines and the surface texture of the building to suggest decay. In fact, to most viewers, the facade of the building, with its lack of symmetry, would appear to violate the rules of perspective and, thus, would have been inherently suspect.

Figure 154 is a pen-and-ink drawing showing the Old Brewery at the time that the Ladies of the Mission took it over and ejected the occupants. It is the only extant image that shows the side of the building and the rear ell that contained the "Den of Thieves" (although the artist had to remove the coal yard in order to do so). There are some perspective problems with this image that probably testify to the lack of formal training on the part of the artist, rather than any conscious manipulation. In this case, the rooflines appear straight, with the exception of the structure at the far left, and structural decay is represented by broken windowpanes and broken or missing sashes. Differences in surface texture, particularly in the brickwork on the side of the building, indicate missing mortar, another sign of neglect. Either the main building was roofed with tiles or the shingles were badly curved and in need of replacement. Most of the shutters appear to be missing or dangling from a single hinge. A door in a wall at the rear of the structure leads to "the Gambling area of yard."

The signs of human activity in Figure 154 are interesting. A large crowd has formed in front of the building. Whether these are intended to represent the ejected occupants, residents of the neighborhood who wish to visit the mission, Ladies of the Mission anxious to superintend the progress of their good works, or some combination of those is not clear. They, and some of the people in the windows, may represent the throng of bourgeois visitors who toured the Old Brewery prior to demolition. Several people, either

sightseers or residents who have not yet been evicted, are visible in the windows and doorways. Laundry is suspended in some of the windows. On the right, a woman and child, who have presumably been evicted, stand with their possessions, which include a stove, a kettle, a chair, a bureau, crates and a trunk, a large keg, a washtub, and washboard. Several bystanders, including an apparent neighborhood resident in a battered hat and smoking a pipe, and the ubiquitous horse-cart and driver, who seem to figure in all of the exterior depictions of the Old Brewery, round out the human element of the image.

The Ladies of the Mission included an image of the structure in their book (Figure 155). The point of view is from the sidewalk of Little Water Street. The building on the extreme right housed the original mission room, and Paradise Square is at the far left. The idea of decay is reinforced by foreshortening and distorting the structures to the left of the brewery, but the overall mood of the image is light: the children appear to be clean and shod, and active commerce is visible in front of the grocery. With the exception of the idle man on the far left (who bears resemblance to a similarly situated individual in Figure 154), and the ubiquitous cartman, who appears to be drinking from a bottle, everyone in the image appears to be productively, or at least innocuously, occupied. Modestly dressed women, accompanied by a child, speak with a well-dressed man on a street corner. People carry goods about. Children play or observe the artist. A woman on a doorstep reads a newspaper. The poor gather at the door to the Old Brewery, which is now a mission.

Figure 156 stands in stark contrast. Apparently modeled on the image in Figure 155, judging by the similarities in point of view, the similar relationships between elements of the built environment, and the identical signs on the facade of the Old Brewery, the image is distinctive for its use of artistic convention and human figures to create a different impression. The surfaces of the buildings are made to appear more decrepit. The shadows are darker, and the reflection of the very word itself on the pavement lends an ominous quality to the image. A crowd has gathered on the corner to the left. On its fringes stand a woman and children dressed in rags. The woman holds a baby, and the child, barefoot, reaches up to her. A fistfight is in progress, and bystanders either watch passively or encourage the participants. On the right a less than demurely attired woman (prostitute? thief?) guides a drunkard, who has lost his hat, by the arm. A barrel of rubbish lies overturned in the gutter. The signs of commerce are gone. Instead many of the people in the distance appear idle, sitting against buildings. The cartman whips his horse, which strains at the traces of a loaded cart, contributing to the air of brutality that surrounds the image. Yet the artist's intent was not a contrast between his streetscape and that of his model, Figure 155, but rather between the Old Brewery and the houses of the wealthy (represented by A. T. Stewart's mansion at the corner of Fifth Avenue and 34th Street). The very contrast has the effect of naturalizing the differences between rich and poor, making them appear to be as certain and as rooted in the laws of nature as the difference between sunshine and shadow. This image points up the status that the Old Brewery came to have (and still has) as the original tenement in the original American slum, as the embodiment of crime and poverty and despair. Here, the Old Brewery is mythical, in Roland Barthes's (1972:109–117) sense of the word. It was a powerful and easily recognized symbol that became an element in a larger symbolic opposition, the Manichaeian contrast of wealth and poverty, virtue and vice, class, religious, and racial differences; Light and Darkness.

Demolished in 1852, the Old Brewery was replaced by an up-to-date structure that combined residential, educational, institutional, and proselytizing functions. Missionaries and reformers were anxious to show their supporters that they had brought order to a chaotic neighborhood. The new mission, shown in Figure 157, exhibits a regularity of form that must have been infinitely more pleasing to bourgeois tastes. The activities of the neighborhood residents tend towards conversation and play, with productive activity in the form of a man and a woman carrying bundles or objects of various sorts. The centrality of the mission building is reflected by the centrality of the policeman in the foreground, a relationship that may reflect one aspect of the role that the missionaries saw themselves as filling: policing the spiritual life of the community. In 1850, the Five Points House of Industry, a competing institution, was built on the north side of Paradise Square (Figure 158). Although these reform efforts undoubtedly had some effect, especially the Five Points House of Industry which stressed the material need of Five Pointers for gainful employment as well as spiritual guidance, much about the area would remain unchanged, including the laundry on the fence in Paradise Square shown in the foreground of Figure 158.

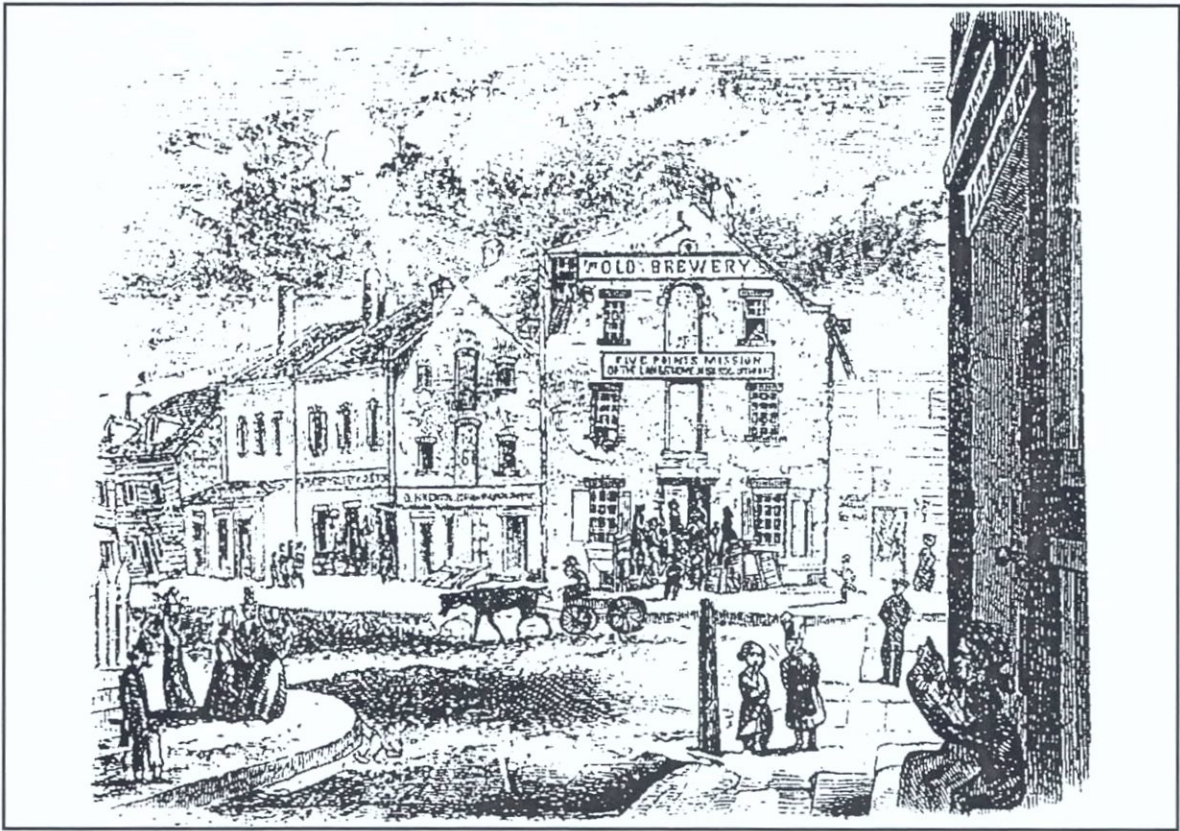


Figure 155. "The Old Brewery" (Ladies of the Mission 1854:opp. p. 45).

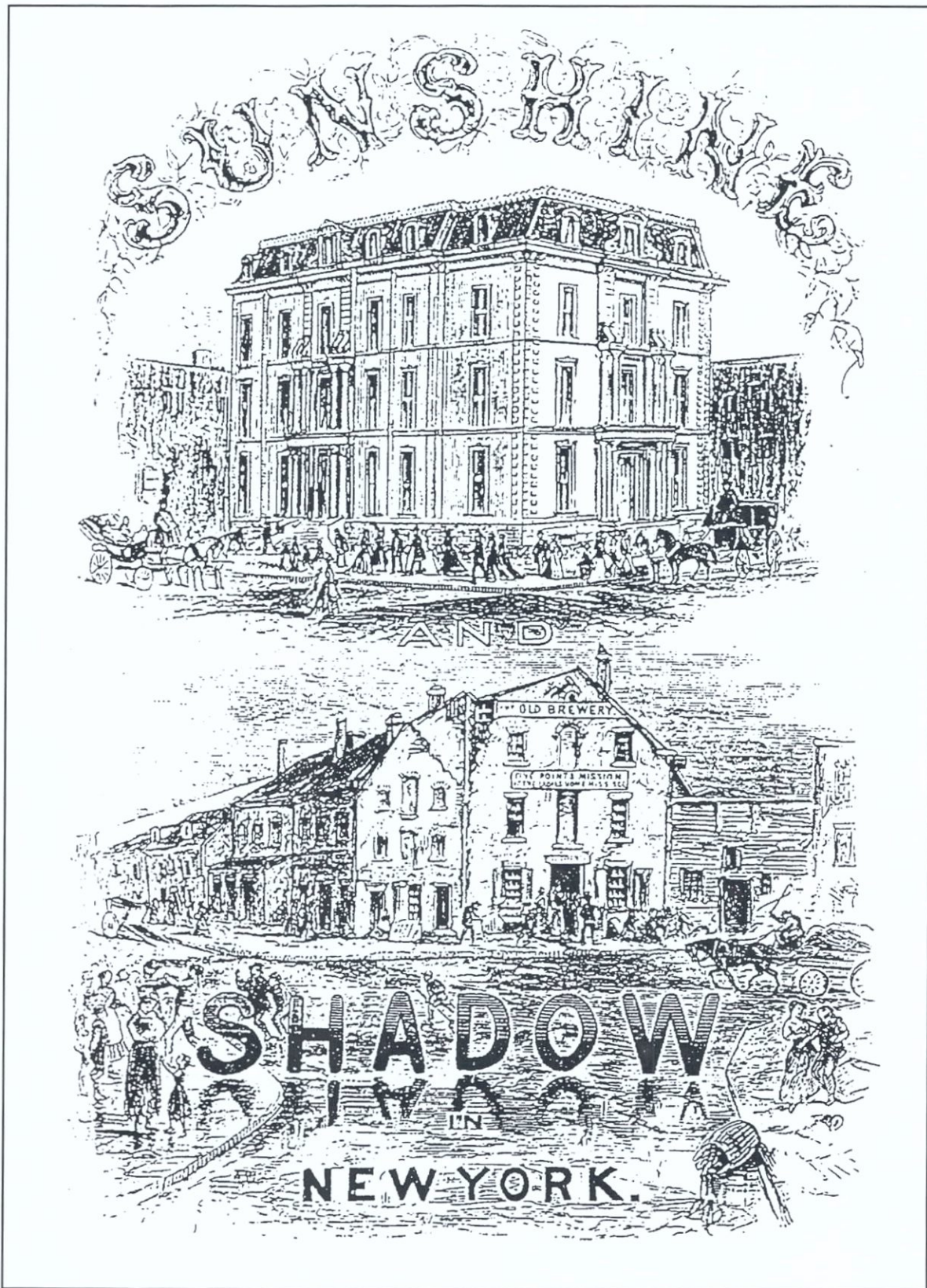


Figure 156. "Sunshine and Shadow in New York" (Smith 1868:frontispiece).

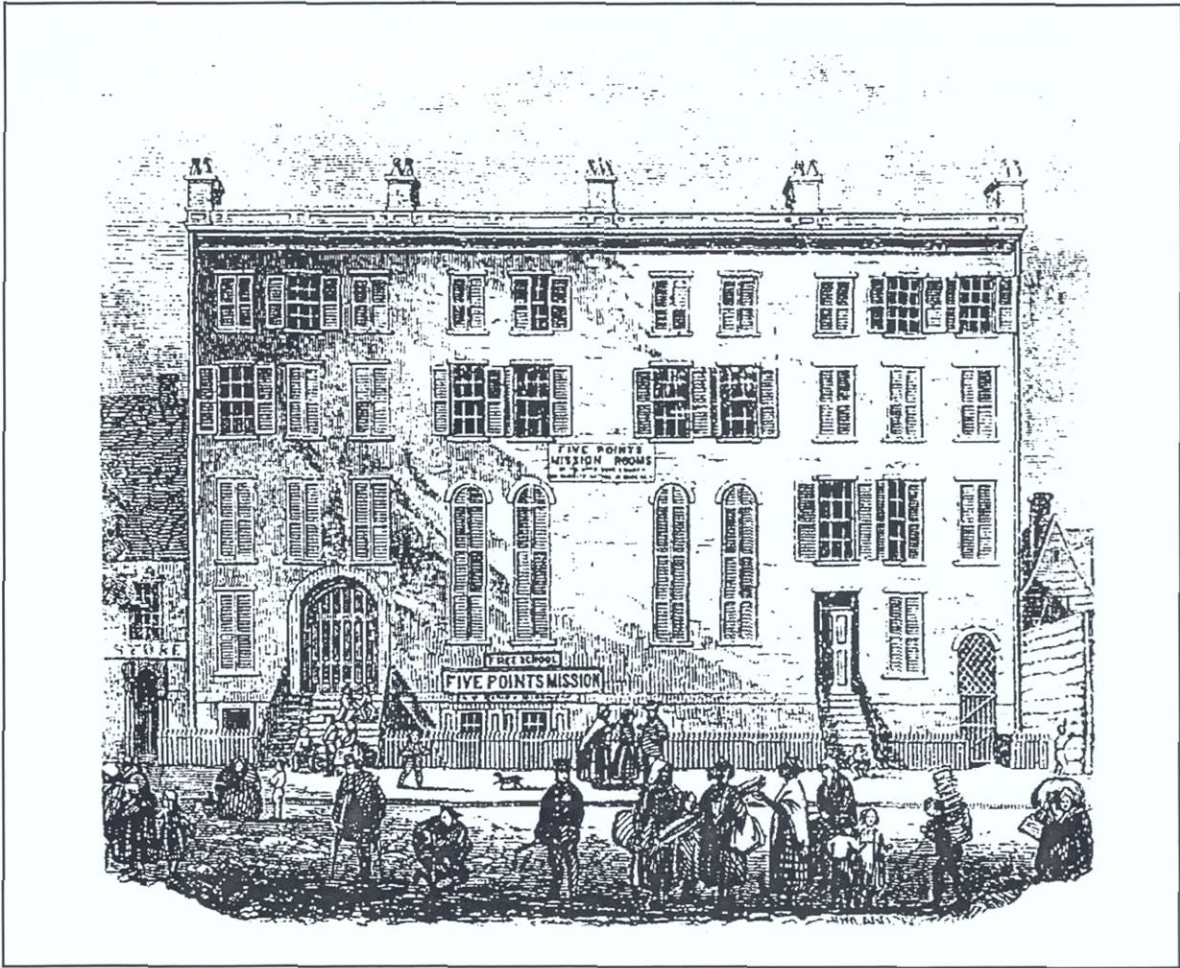


Figure 157. "The New Mission House at the Five Points" (*Ladies of the Mission* 1854:frontispiece).

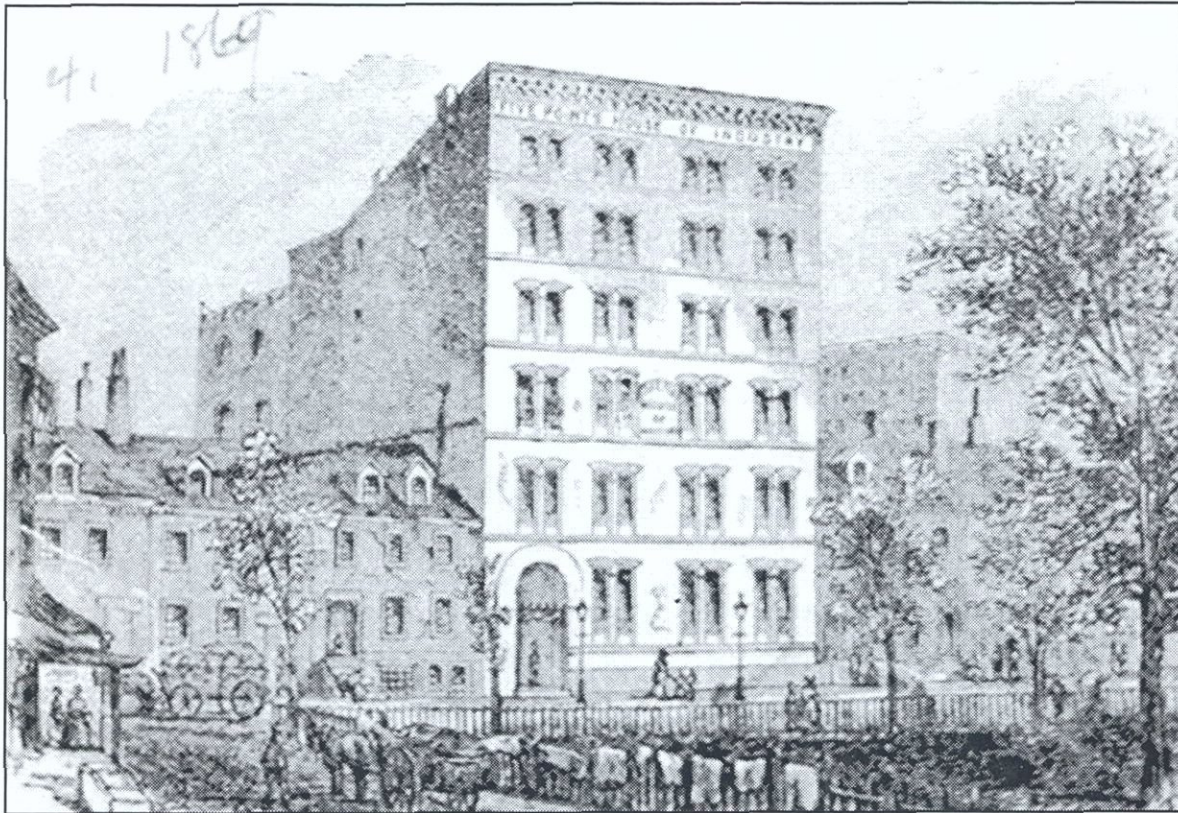


Figure 158. "The Five Points House of Industry," 1869. Museum of the City of New York, Print Archives, Worth Street File.

The Socioeconomic and Ideological Processes that Contributed to the Social Construction of the Five Points "Slum"

Figure 159 shows the intersection of Five Points from the southwest corner, looking northeast. The architectural mix now includes the cliff-like sides of the tenements that characterized new construction in the neighborhood during the second half of the century (Callard et al. 1991), as well as the older, two- and three-story structures. The sign on the side of the tenement at left probably read "tenement lodgings." A solitary piece of laundry flies from the flagstaff in front of the tenement in the center. The architectural representation in this image is problematic. The artist has added a lower story to the building on the corner, just to the right of center. Note that the leftmost opening in the wall of the second story is set rather low and extends to the first story; in fact, this was a door opening on the street, which has rather clumsily been converted to a window by the insertion of a ground floor. This has the visual effect of drawing the viewer's eye along the east side of Baxter Street, past the tenement, to the dark expanse of the building's side, which oddly appears to be more in shadow than those up the street, emphasizing it as the focus of the image, as well as its central point. There are also problems in the scale of the figures in the middle distance, most of whom are too large for the built environment in which they are shown.

Eighteen people and a horse are shown. A man and a woman, who may not be together, are visible in the distance beneath an awning. A man loiters, hands in pockets, by the doorway of a store. A man pushes a woman into the gutter, drawing the immediate attention of a policeman. A woman and child run from the scene. A man in the background pauses from the work of unloading a cart to watch the commotion. An African-American man in the foreground walks along the street smoking a cigar. His top hat, cravat, and what appears to be a cutaway tailcoat seem rather extravagant, in combination with his patched knees and the chimney-sweeping (or street-sweeping) tools that he is carrying. A well-dressed African-American woman and an apparent Irish woman with a child buy fish from a cartman and his assistant, the latter of whom holds a scale. A woman examines produce under the awning of the central structure. Vice may be suggested by the African-American woman on the street corner, whose risqué pose suggests that she is a prostitute, as well as the woman in the doorway above her, across Park Street.

All in all, Figure 159 shows a district that is still characterized by run-down housing, small-scale street commerce, rough-and-tumble violence, and prostitution. Still, by comparison to Figure 151 the scene is almost placid. The police are notably present; the sale and (one assumes) consumption of alcohol, as well as the scale of the prostitution, are considerably lessened in the later image. Whether or not this was intended as a comment on the work of the Mission and the House of Industry is unclear.

6.4.4 Photographing the Points

The advent of photography posed problems for graphic artists that continue to trouble and interest modern scholars.¹⁶ The first of these is that the "accuracy" that photography permitted came with some severe limitations. Among these were a complex relationship between light and time, where one could be traded for the other. Initially, photographic emulsions were "slow," and required lengthy exposure times. (In the earliest photograph to show a human being, a Paris streetscape, a passerby had time to walk into the image, get his shoes shined, and walk out the other side before the exposure was completed.) Night photography was generally an impossibility, as was indoor photography except in the well-lit studio.

The requirement that people know that they were being photographed, so that they did not move, and the novel nature of the technology are responsible for the posed quality that dominates many early photographic streetscapes. They *were* to some extent posed and paradoxically had to be so, sacrificing the fluidity of action, the narrative function seen in lithographs, to more faithfully mimic the world as it is sorted out by human vision. Also sacrificed was much of the opportunity for powerful symbolic content. The streetscape and the people in it were shown as they were, barring outright fraud on the part of the photographer. Liquor dealers or prostitutes or drunks could not be added. The subject matter and the photographic moment itself carried whatever symbolism was in the mind of the photographer. The buildings and the street were either in good repair or not—the people well-dressed or not. Comparative images of different subjects were a popular means

¹⁶ These have been explored in Susan Sontag's excellent work, *On Photography* (1977).

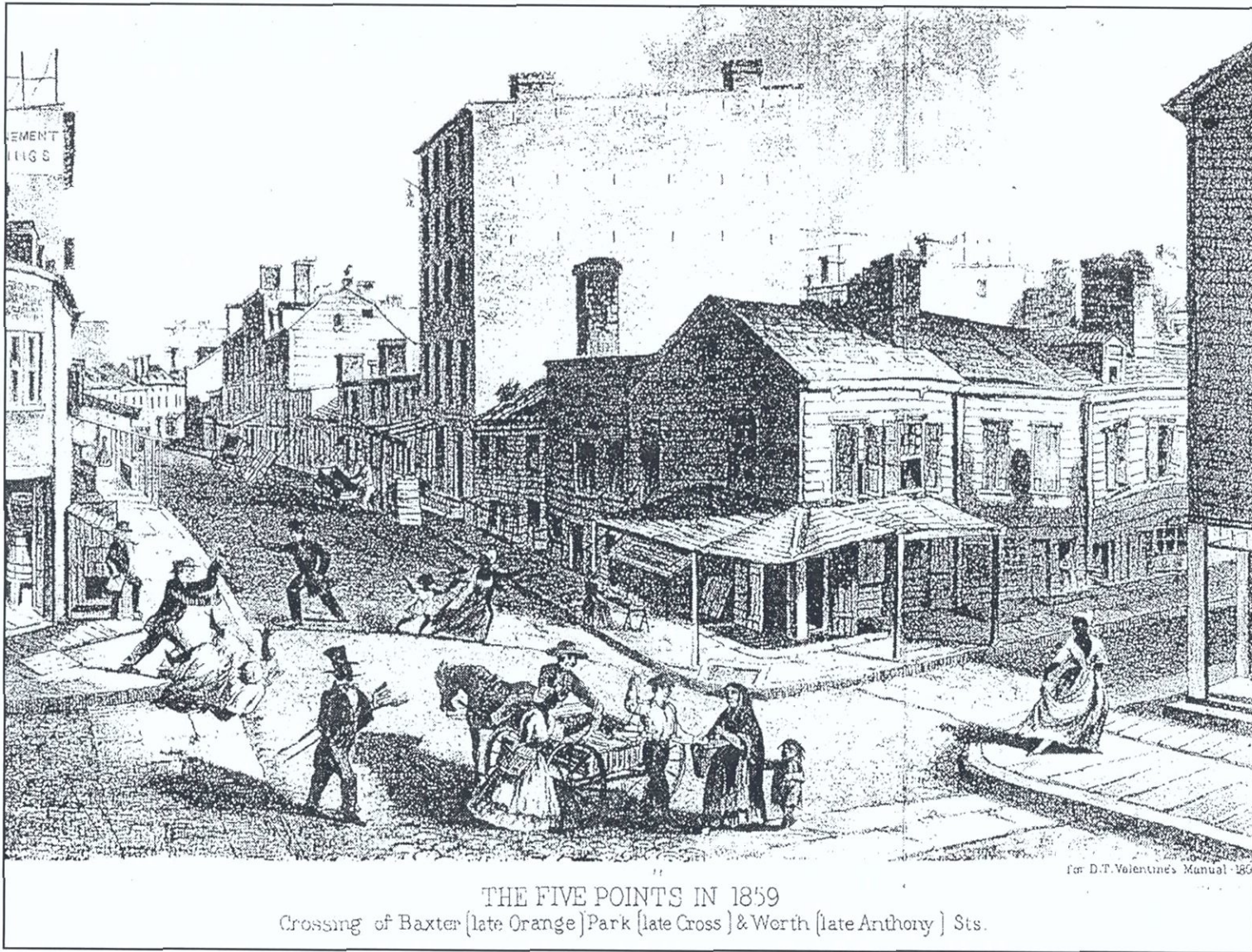


Figure 159. "Five Points in 1859, Crossing of Baxter (late Orange), Park (late Cross) & Worth (late Anthony) Sts." (Valentine 1860:opp. p. 372).

of achieving symbolic content in photographs, just as they had been with engravings, but that was generally as complex as it got. The burden of persuasion was shifted to the accompanying words. The photograph, which was at one level self-explanatory, required interpretation at another.

The earliest boom in photography involved portraits. This resulted in a "democratization" of portraiture, or at least its extension throughout the middle classes (Orvell 1989:75; Corbin 1990:463). The evidentiary qualities of photography soon led to a different sort of portraiture altogether. By the 1850s and 1860s, police departments in Europe and Britain began photographing criminals for purposes of identification (Tagg 1981). New York's police department began its "Rogues' Gallery" in 1858 (Sante 1992:87).

The evidentiary value of photography led to applications beyond the rogues' gallery, all of them, as John Tagg (1981) points out, bound up in the extension of bourgeois surveillance and power over individuals who were regarded as potentially troublesome, such as the poor and the insane. Some bourgeois reformers who had set out to grapple with the social issues raised by urbanism and industrialism, such as health and sanitation, poor and overcrowded housing, child labor, sweatshops, immigration and immigrant life, turned to photography as a new and powerful tool. Photography cut through the hyperbole of written and engraved representations of slum conditions. The photograph involved viewers and brought them to the slums and allowed them to see by proxy places where they might not dare to venture.

6.4.4.1 The 1850s and 1860s

Figures 160 and 161 were apparently taken for the New York City Health Department. Jacob Riis (1902:12) titled Figure 160 "One of the Five Points Fifty Years Ago," which, if true, would date the image to the early 1850s. The photograph shows the northeast corner of Baxter and Park Streets and focuses on the central building shown in Figure 159. It is clear that the corner building is only one-and-one-half stories, and to the left is the door that appears as a low window in Figure 159. A poster on the side of the building advertises a "pic-nic," sponsored by some organization whose name is not visible. There may be as many as 14 people shown in the image, although some of them have moved, making a precise count difficult. No fights are in progress, and neither of the two women in the image appears to be a prostitute. The two men on the far left appear to be better dressed than the others and stand apart. They may be with the photographer or present in some official capacity, perhaps to ensure the photographer's safety. Several people appear to be involved in the sale and purchase of foodstuffs from vendors on the Park Street side of the structure. This side of the building is in sunlight, and the vendors have erected umbrellas to protect their wares and, perhaps, themselves from the sun. The sidewalk on the Baxter Street side appears to have been torn up, which may account for their not taking advantage of the shade. The vendors are operating from at least one two-wheeled cart and are using several baskets and a bucket as well.

Most of the people in the image are staring at the photographer and, hence, in a way, at the viewer. The unidirectional gaze of the engraved image is gone. Lutz and Collins remind us that the photograph is "an intersection of gazes," of which at least five are relevant to this image. First, there is the gaze of the photographer, what he saw through the viewfinder. Then there is the institutional gaze, reflected in the choice of subject matter, cropping, and utilization in a particular context of presentation. There is the viewer's gaze, which takes in the details of the image and is related to the context in which it is presented. There is the gaze of the subjects (the other), most of whom in this image are staring directly into the camera. Finally, there is our own analytical gaze (Lutz and Collins 1994:364).

The subjects' gaze is particularly important to bear in mind as we examine these photographs. The subjects can either be looking directly at the photographer, at something or someone else in the frame, at something or someone out of the frame, or at nothing in particular at all. A gaze at the camera acknowledges its presence and can be either confrontational or indicate complicity in the act of being watched (Lutz and Collins 1994:369-370). An important effect of the direct gaze is to empower the subjects by making them appear more human, by giving the illusion of communication.¹⁷ The viewer is involved, a party to the communication that took place between the photographer and the subject, making it more difficult to see the subject as the other.

¹⁷ This illusion is powerful, and can occasionally lead to overinterpretation (e.g., Lesy 1973).

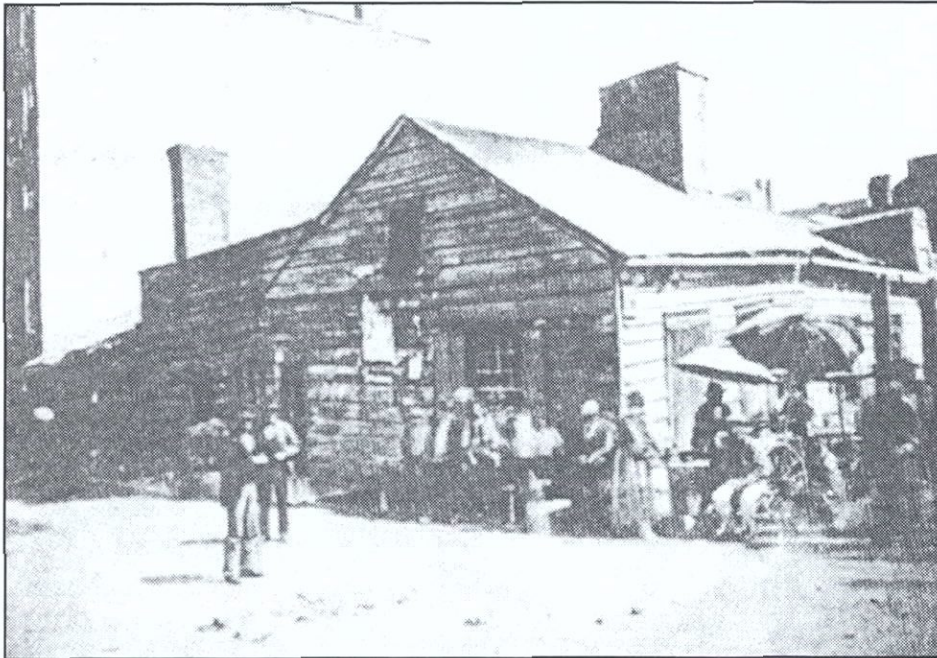


Figure 160. "One of the Five Points Fifty Years Ago" (Riis 1902:12).



Figure 161. "Dens of Death" (Riis 1902:21).

Both Figure 160 and Figure 161 provide clear evidence that the graphic convention of representing the decay of the built environment through unpainted walls and trim, sagging and uneven rooflines, missing windows, and ill-fitting shutters had some basis in reality. Figure 161 shows the rear yards of structures along Baxter Street. The proximity of the facade on the building in the distance suggests that the nearer structures fronted on the street, rather than an interior courtyard. The location of the dark tenement sidewall in the distance on the far left and the position and appearance of the tenement across the street suggest that the three structures in the foreground are numbers 33, 35, and 35½ Baxter Street on the east side. These are the low structures visible just beyond (north of) the four-story tenement shown in Figure 159. The vantage point is most likely a structure in the rear yard of 37 Baxter Street. It appears from the laundry extending from the second-story window as if 33 Baxter Street is inhabited; the situation of 35 and 35½ is less certain. There are no signs of life at 35 Baxter Street, and although the ground floor of 35½ may be in use (all the windowpanes and an outer storm door appear to be intact), the second story may be abandoned. Map evidence indicates that these structures were demolished and replaced between 1867 and 1875, so Figure 161 must date before 1875 and may have accompanied a board of health report issued in 1869. Riis described these structures in horrific terms:

Where the "dens of death" were in Baxter Street, big barracks crowded out the old shanties. More came every day. I remember the story of those shown in the picture. They had been built only a little while when complaint came to the Board of Health of smells in the houses. A sanitary inspector was sent to find the cause. He followed the smell down in the cellar, and digging there, discovered that the waste pipe was a blind. It had simply been run three feet in the ground and was not connected with the sewer. The houses had been built to sell. That they killed the tenants was no concern of the builder's (Riis 1902:20).

The health inspector described them in 1869 as "houses into which the sunlight never enters...that are dark, damp, and dismal throughout the days of the year, and for which it is no exaggeration to say that the money paid to the owners as rent is literally the 'price of blood,' where the mortality rate was a staggering 17.5 percent" (quoted in Riis 1902:14–16).

Both Figures 160 and 161 were reproduced along with several others that probably originated with the same source, in Riis's book *The Battle with the Slum* (Riis 1902). They are used to show the sort of slum conditions characteristic of the mid-nineteenth century. Although both are now in the Jacob A. Riis collection at the Museum of the City of New York, they clearly date well before 1888 when he began his photographic work and were probably given to him by board of health personnel who were sympathetic to his project.

6.4.4.2 The 1870s

Figure 162 shows Park Street just east of Baxter, looking east, in about 1875. The street slopes up to Mott Street, a block and a half away. The large stone structure with the steeple at the end of the street is the Church of the Transfiguration. Mulberry Street crosses in the middle distance, but the oblique angle of the facades of the structures makes it difficult to see. The large end-chimney structure on the left side of the street, the rear of which is shown here, fronted on Mulberry Street, and was both 98 Park Street and 31 Mulberry Street. The site of the corner structure shown in Figure 160, which had been demolished by the time this image was taken, would be over the left shoulder of the photographer. Several varied commercial enterprises are visible, including a blacksmith and farrier (at 94 Park), a dealer in lager beer (89 Park), and an establishment selling "choice family groceries" (87 Park) which was more than the stereotypical grogshop, if the milk cans and brooms displayed on the stoop and hanging from the wall are any indication. A sign suspended over the street on the left advertises a "C.S.C. Picnic Chatham" the remainder of which is illegible (Chatham Square was located several blocks to the east). Several posters, too oblique to be read, plaster the doorway to a passageway at the far right. A bakery wagon and a cart with a keg on it may have been doing business with the grocery (though the latter may also have been transporting the products of the establishment next door. The photograph is dated by the telegraph wires and insulators in the upper left corner and the spire on the Church of the Transfiguration, which was added in 1868 (Huxtable 1964:21).

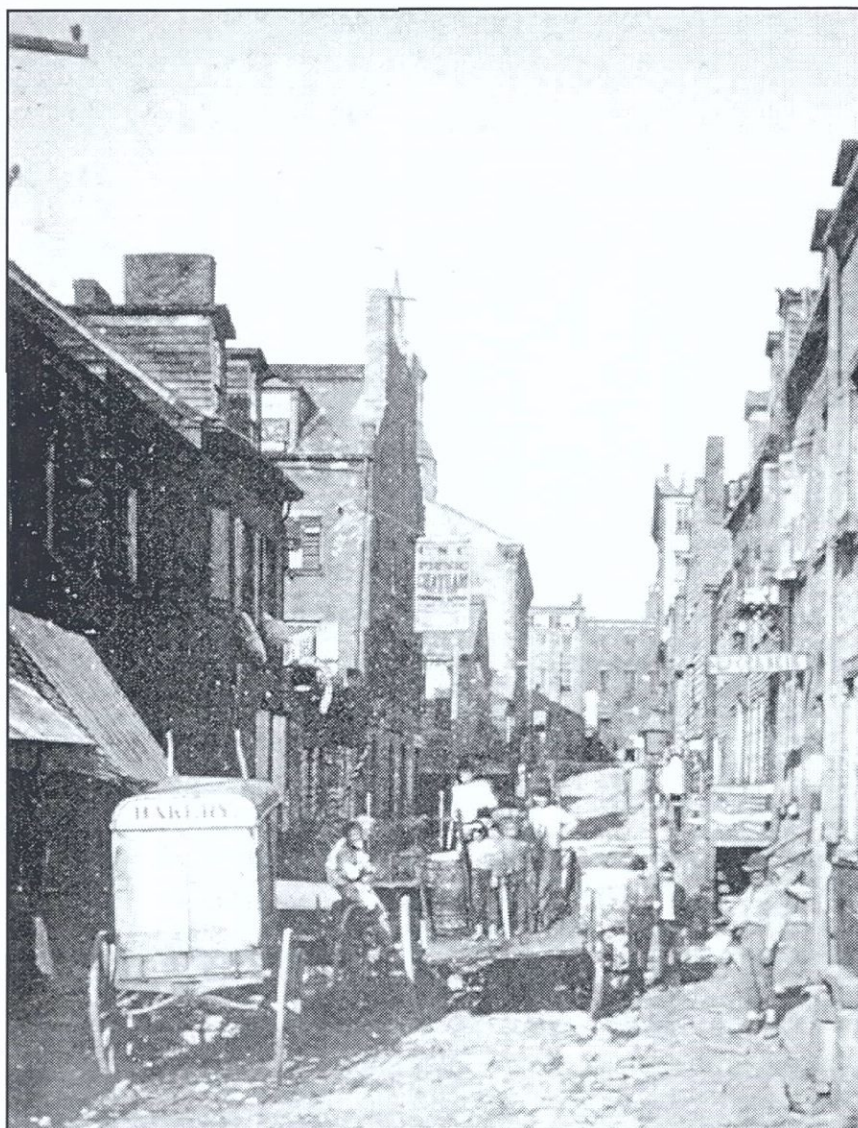


Figure 162. *Five Points ca. 1875, publisher unknown. From Nineteenth-Century New York in Rare Photographic Views, Frederick Lightfoot (1981).*

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Ten people are visible in the image. Nearly all of these are children, one barefoot, who were either playing on the wagons, helping to load or unload them, or had climbed on them for the photograph. One holds a lath or a barrel-stave like a sword. The photograph does not appear to be an unwelcome intrusion on their play. A single adult, perhaps the cartman, is on the right. All appear interested in the photographer.

This image shows, as it was probably intended to, the conditions that continued to characterize the neighborhood: poor housing and crowded, narrow streets. The lack of pavement or drainage and the slope have eroded stones from the roadbed. The photographer turned his back on the newer structures to the west and chose instead this older and more picturesque streetscape, populated mostly with some of the neighborhood's younger residents.

6.4.4.3 Jacob Riis

Despite the increasing use of photography to record slum conditions, publishers were unable to directly reproduce photographs until the introduction of the half-tone printing process in 1880 (Barth 1980:93). Even then, photographs were expensive complements to published works. The usual procedure, which had been in place since the 1860s, was to have a lithograph or engraving made from the photograph, which allowed both accuracy in presentation and a certain degree of artistic license. A generation of artists who have been described as "social realists" (Gladstone 1994) had arisen in the periodical press, including Winslow Homer, whose style was influenced by the realism embodied in photography.

In 1888, Jacob Riis, a Danish immigrant who had become a journalist, expressed his concern about the effects of the slum environments of lower Manhattan on the health and moral fiber of their inhabitants. He assembled a lecture on the plight of the poor, in which he advanced the novel view that many of the problems of the poor resulted not from their moral failings, but from the environment in which they lived. His lecture "The Other Half, How It Lives and Dies in New York" was accompanied by music and illustrated with "magic lantern" slides, glass transparencies that were projected on a screen (Stange 1989:4–13). The images were powerful, and his lecture was very popular. In 1890, the lecture was expanded and published, including some of the images, as *How the Other Half Lives* (Riis 1971). The book was more effective than previous efforts in interesting the public and ran to several editions. Its popularity depended in large part on the sympathy of its author towards the people about whom he was writing and on the images of the homes and daily lives of the poor that accompanied and illustrated the text. In the slide show and in later books (e.g., Riis 1902), particularly powerful images of poor children were contrasted with scrubbed children doing calisthenics in schools. Those images and many others are now held at the Museum of the City of New York.

Riis came late to photography and apparently collected and used some images from other sources, including the health department photographs analyzed above. Dr. Henry G. Pfiffard, who was associated with Bellevue Hospital, was also an amateur photographer and early supporter of Riis. The existence of some identical images in the Richard Hoe Lawrence collection at the New York Historical Society implies that Lawrence, another amateur photographer who also supported Riis's reform agenda, may have given him some of the images that have since been interpreted as Riis's work (Stange 1989:8–10).

Riis (and others working with him) could not always capture the moments or activities that they wanted. In some cases, Riis paid subjects to sit for him, and at times he posed subjects and set up shots. According to a recently published study

Riis gained the cooperation of his subjects to play themselves for the camera....Riis manipulated his representation of poverty to reflect a preconceived image of the poor, turning his subjects into types before the eye of the camera....Riis gives us, with the often willing and knowing collaboration of his subjects, a metonymic typology of urban slums, representing for us "the poor," "the miserable," "the other half." He is after the general truth of a general category, and the finer truths of individuals necessarily escape him (Orvell 1989:96–97).

The artificiality of certain aspects of Riis's project, the fact that it was no less a construct than the views to which it was a reaction, does not negate what he did, nor can it obscure the fact that for the most part, his images show real people in real places. The conditions of their existence, as well as their humanity, figure prominently.

Figures 163 and 164 are overlapping images showing the courtyard of 24 Baxter Street, in the same block as the project area. They imply that every square foot of exterior space on these blocks was paved. The pile of cut stone piled on the left may have been scavenged somewhere in the neighborhood by a resident of the tenement. The doorways and stairs provided access to rear tenements, and the pump on the far right supplied water to the occupants. Laundry appears, as usual. For people who were supposed to be living in horrendous conditions, some residents of the Five Points neighborhood always seem to have devoted attention to clean clothes and bedding. Photographs such as these showed people as they allowed themselves to be seen (if not as they wanted to be seen), unlike lithographs, where the subjects were at the mercy of the draftsman and engraver. The people in these images have a humanity that comes through in facial expressions and in posture, even when faces are blurred.

6.4.4.4 The 1890s and Early Twentieth Century

Figure 165, entitled *The Five Points—New York*, was taken by Alfred Stieglitz, one of several well-known urban photographers at the time. Himself an immigrant from Germany, Stieglitz was often drawn to immigrants as subjects, though, unlike Riis, he was motivated more by aesthetic concerns. The photograph is among Stieglitz's earlier work, taken in 1894 while he was still working for his father's photoengraving firm. It shows the northwest corner of Worth and Baxter Streets, looking north up Baxter, away from the project area. The Five Points Clothing House is both the focus of the view and the only identifiable business. The ubiquitous laundry hangs from clotheslines (see the shadow on the building in the upper left), open windows, and tenement balconies. The clothing on the pedestrians would seem to indicate cold weather, although one man, at the far right, is carrying his coat over his shoulder. The piles of brown matter along Worth Street, in the foreground, are either dirt or a mixture of dirt and melting snow. This image is less concerned with the built environment than with the people passing by, most of whom seem to be hurrying, lost in their own concerns, though a crowd is gathering in front of the clothing store. One senses that they are watching a demonstration of some sort or listening to an animated discussion or perhaps an argument.

Images continued to be produced that emphasized the picturesque elements of the neighborhood, though now within realist representational frameworks. Figure 166 is an etching from around the turn of the century, showing the southwest corner of Baxter and Worth Streets. The large tenement in the upper left is 18 Baxter. The three-story boxlike structure with the awning, immediately below 18 Baxter, is 20 Baxter, and the gated alley to the right of it leads back behind 22 Baxter Street to the court shown in Figures 160 and 161. The ground floor of 22 Baxter Street appears to be occupied by a grocery. Number 24 Baxter contains a lager beer seller or distributor. A brick addition behind 24 Baxter is not visible from this angle. The brick corner structure is shown on maps as both 26 Baxter and 73 Park and is occupied by a retail clothing store. This building was either built or remodeled after the widening of Worth Street to the south in 1860. The large structure on the right is on the far side of Paradise Square. There is a bandstand visible within the square. The people and animal in the image appear to be going about their business.

6.4.5 Depression

The Great Depression, which began in 1929, left 30 percent of New York's working-class population unemployed. Figure 167 shows a small triangular building at the corner of Baxter and Worth Streets. Its shape, and the overwhelming visual effect of its signs, made it a favorite subject with photographers, who were no doubt also drawn by its use as a drivers' license photo studio. The open space visible on the left side of this cartoon, drawn by William Sharp in 1935, is Jacob Riis Park. The steeple of the Church of the Transfiguration is visible beyond it. The large structure in the background is the Baratocci Bank, which provided a variety of financial and communications services for the neighborhood's Italian-speaking community.



Figure 163. "Baxter Street Court" (Jacob A. Riis Collection, #108, Museum of the City of New York).



Figure 164. "Court at #24 Baxter Street" (Jacob A. Riis Collection, #107, Museum of the City of New York).



Figure 165. *Five Points - New York, 1894*, by Alfred Stieglitz, from the collection of Dorothy Norman, Philadelphia Museum of Art.

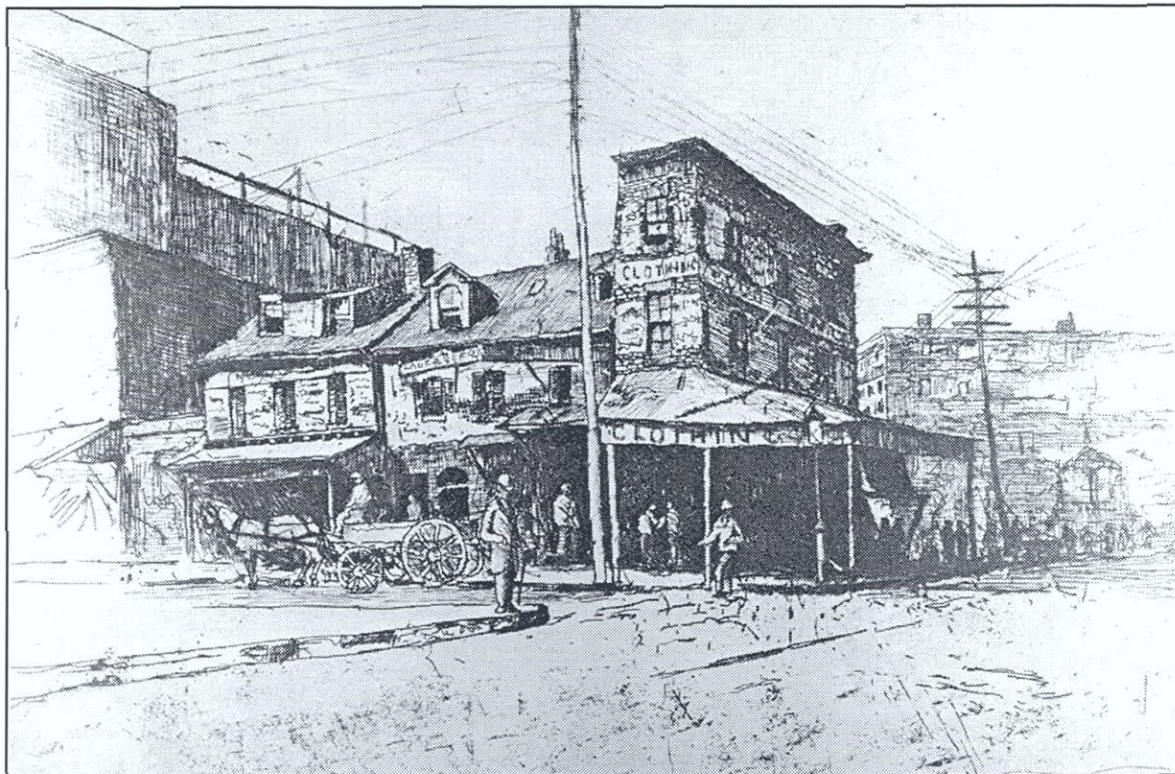


Figure 166. "A Bit of Baxter Street." Etching by Charles F. W. Mielatz. Museum of the City of New York, Print Archives.

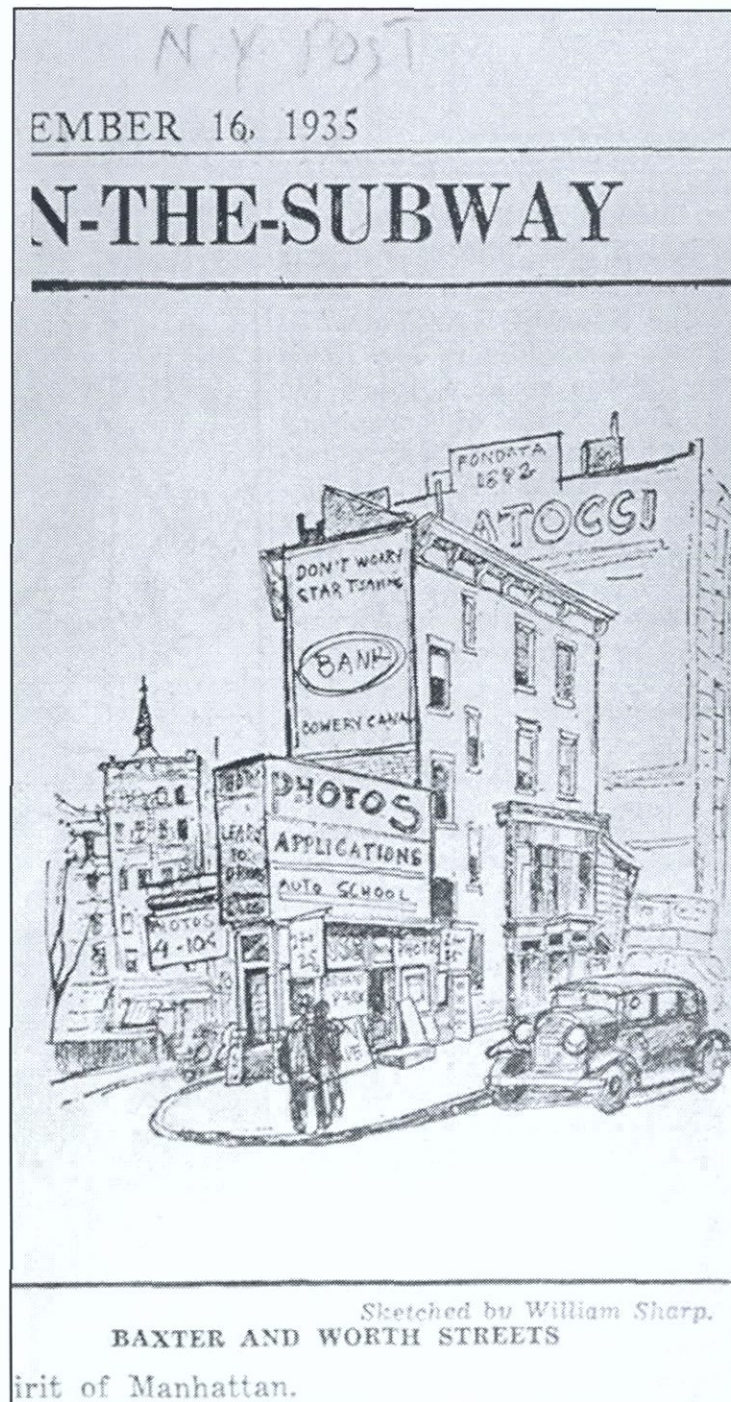


Figure 167. "Baxter and Worth Streets" by William Sharp. New York Evening Post 1935. Museum of the City of New York, Print Archives.

Figure 168 is a Walker Evans photo of the north (Park Street) side of the same building shown in Figure 167, taken in 1934. Signs promise photos in five hours and advertise driving lessons and the services of a notary on the premises to facilitate the completion of license applications. Their exuberant tone is dampened by their weather-beaten condition and the overall poor shape of the structure. One imagines that the demand for drivers' licenses must have fallen off by the fifth year of the depression. A sign advertising "A[uto] Driving School \$10" above the door appears to be painted out. The graffiti on the walls, executed in chalk, are of some interest. Beneath the stairway, "DON [or RON] SHEED" appears to have written "COME UP AND SEE ME SOME TIME," an elaborate pun revolving around the presence of the stairway and the function of the building as a photographic studio. The inspiration for this clearly originated in popular culture, as the phrase is repeated to the right of the pointing finger, with the additional notation "BY MAY WE." The central bar is missing from the "E," indicating that the writer was interrupted or lost interest before finishing Mae West's name. Don Sheed probably also wrote "DON S" between the two invitations. At the base of the stairs, the inscription "TOOTSIE LOVE FINA" is clearly visible. The rest of the graffiti are either illegible, incomplete, or otherwise obscure to the point that they are meaningless today. Trolley tracks are visible along Worth Street. Unfortunately, the building across the street is too dark to see any details, except that it is considerably taller than the two-story license photo shop.

While Figure 167 portrays the structure as picturesque and vibrantly visual, Evans's photo of a year earlier conveys the gritty side of poverty in the stark terms of photography and shows the fragility of exuberance. The peeling paint, the rust, the stains, the bits of paper lying around are all aspects of the landscape that Sharp chose to ignore, and that Evans, by taking this photograph, chose to show.

Figures 169 and 170, by Albert Potter (reproduced in Nolan 1993), express the anger and despair that many felt during those years. *Brother, Can You Spare a Dime* (Figure 169) contrasts nightclub signs and skyscrapers, signs of opulence and business success, with the poverty of the working classes. "Organizational Improvements" (Figure 170) shows "sandwich board men" advertising incongruous products; the rubbish, like the men, is labeled. Death is present in both images.

Between 1936 and 1942, the New York City Graphics Division of the federal government's Works Progress Administration (or WPA) employed hundreds of artists, primarily to keep them from starving. The WPA artists created thousands of images, inspired by their surroundings, which for some included Lower Manhattan. Many of these images use artistic conventions to humanize their subjects. Saul Kovner's *One Summer Night* (Figure 171) reminds us that roofs and fire escapes often doubled as living space in the warmer months. What appear to be abuses of the rules of perspective serve to de-emphasize the structural elements of the landscape and focus the viewer's attention on the people. Carlos Anderson's *Red Hots* (Figure 172) draws the viewer into a group of patrons surrounding a street-vendor's cart. The arrangement of the principal figures, particularly the child and dog in the foreground, leave the impression that one step forward would bring you within their circle. Don Freeman's *Late Edition* (Figure 173) shows newsboys awaiting delivery of the evening papers, smoking, playing cards, and roughhousing. The dignity of every one of these people is visible. Freeman once described the motivation for his art:

I had to keep drawing so as to let the world know what wonderful people I had come across—not only the way they looked, but the way they invented lives for themselves out of nothing: carrying signs, fishing for change through sidewalk gratings, peddling gardenias, selling corsets, plugging song hits, washing windows, sharpening knives (Don Freeman, quoted in Nolan 1993:n.p.).

The WPA images represent a shift in the spectacle, but they are still part of it. They were mass produced, with more than 200,000 copies. To an extent, the treatment of subjects may have reflected prevailing government policy in times of economic distress (Harris 1995). In addition, by the 1930s, some immigrants of the nineteenth century had prospered, and many Irish, Italian, and Eastern-European families had moved to suburbs outside of Manhattan. To an extent, these images may have fed nostalgia on the part of people who were developing political and economic power.

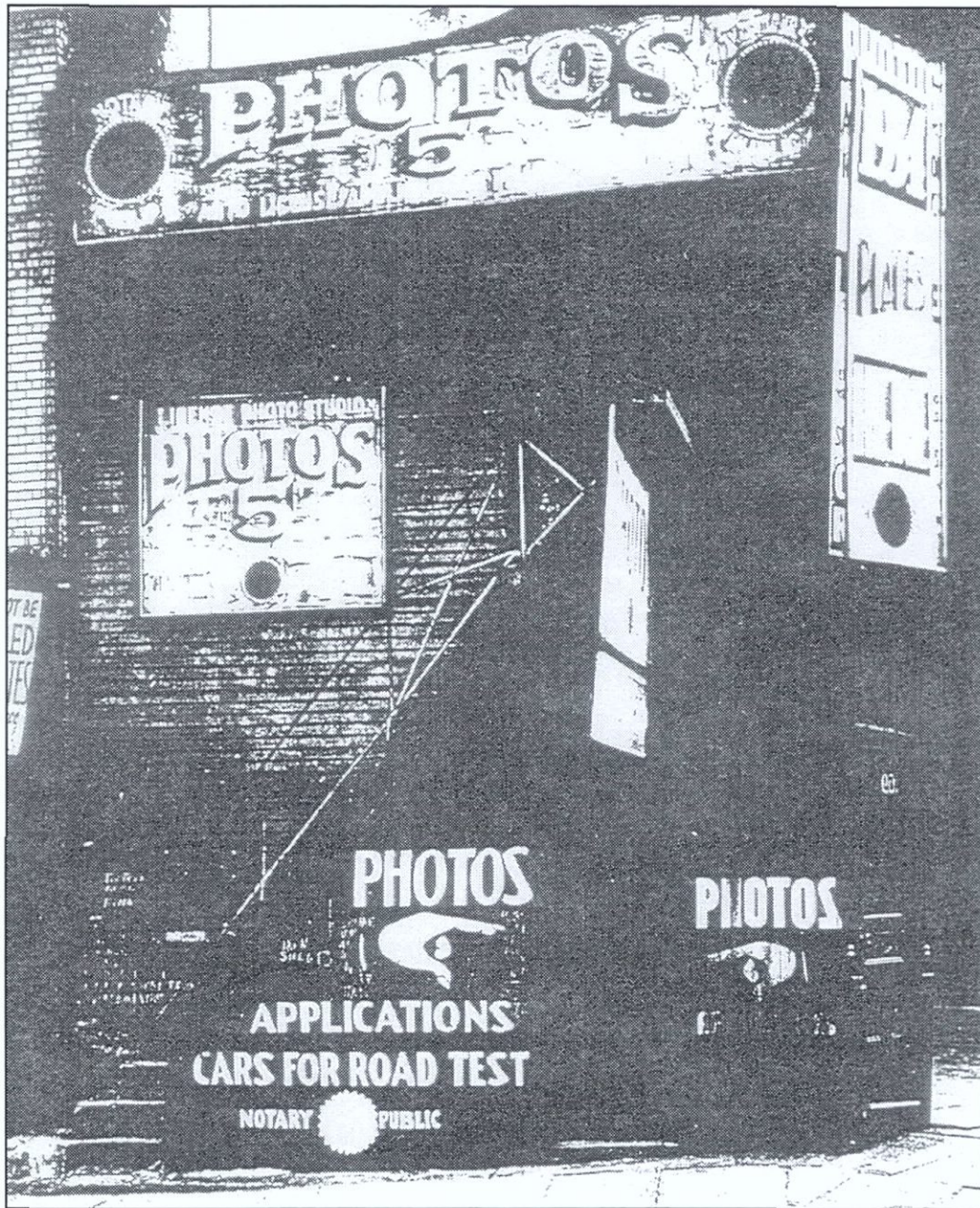


Figure 168. Walker Evans photograph of the corner of Baxter and Worth Streets (Evans 1988).



Figure 169. "Brother, Can You Spare a Dime?" Woodcut by Albert Potter (Nolan 1993).



Figure 170. "Organizational Improvements." Woodcut by Albert Potter (Nolan 1993).



Figure 171. "One Summer Night" by Saul Kover (Nolan 1993).

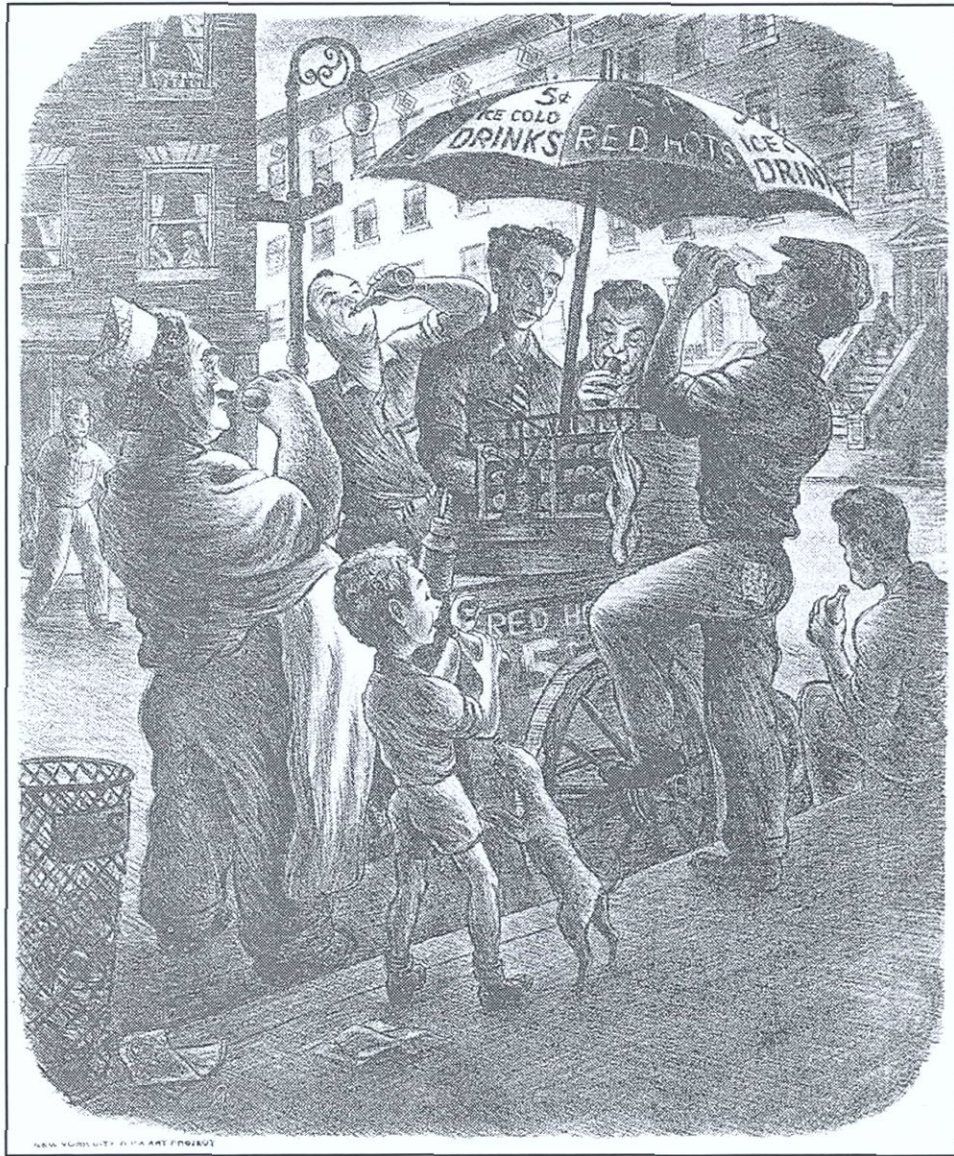


Figure 172. "Red Hots" by Carlos Anderson (Nolan 1993).



Figure 173. "Late Edition" by Don Freeman (Nolan 1993).

6.4.6 Conclusion

Archeological sites are by definition human constructs. No less constructed are the realities of the people who lived on them and the realities of people who did not. A major focus of this study has been the process by which the realities of people who lived elsewhere came to color, and indeed control, the popular impression of the neighborhood in which our site lies.

We have seen how the spectacular power of images was used to set immigrants apart from the bourgeoisie, as a group dangerous both for their otherness and their physical proximity and, later, how they were used to bring immigrants back within, as the ethnic composition of the bourgeoisie changed. The setting apart was done by representing poverty and moral failings as inextricably linked with one another. Employment of aspects of the gaze in these images supported the bourgeois idea that immigrants and the working classes should be watched and that middle-class observers should be present, in the form of police, health authorities, and missionaries, to intercede, and to channel working-class lives and actions in ways considered appropriate by the bourgeoisie.

Early images of Five Points adopted a narrative format, portraying poverty and vice as the predominant characteristics of the neighborhood. They also conveniently distanced those constructions by situating them in the past, whether by a generation or by a few years. This had various effects. Reformers could point to their accomplishments, and city residents could sleep easier knowing that New York used to be worse. With the advent of photography, the gaze was no longer a simple, one-way affair. Now the subjects could look back at the viewer, and their humanity could no longer be denied. At the same time photography had the power to strip the picturesque elements from poverty and so became a powerful tool in the arsenal of social reformers, such as Jacob Riis.

The nineteenth-century images included here are for the most part at odds with the impressions of daily life that emerge from the archeological record, as other sections in this volume show. It is difficult to be surprised by those differences. An archeology of the visual supports the contention that images are intended to, and, in a very real sense do, create realities, rather than merely presenting them.



7.0 WORKING-CLASS LIFE IN NINETEENTH-CENTURY NEW YORK (Rebecca Yamin)

7.1 The Imagined Slum and Five Points

The excavation of Block 160 and the assemblage recovered raised many questions about a period in New York's history that has received considerable attention in the last decade or so. This relatively recent scholarship has made our own task both easier and more difficult: easier because it provided a context for interpreting the meaning of the artifacts and features on Block 160 and more difficult because we have had to read and digest the many books by social historians (Wilentz 1984; Gilje 1987; Stansell 1987; Blackmar 1989; Stott 1990; Gilfoyle 1992; Bayor and Meagher 1996) that were directly relevant to our own research questions. Whether we were doing history or doing anthropology did not concern us on this project. As has undoubtedly become evident, our major goal was to understand as much as we could about life on Block 160 and from there move outward.

The process of moving outward led in many directions—to Tammany because it was so important to Irish New Yorkers (Section 2.5), to Masonic lodges because there were clay pipes in the assemblage with Masonic imagery (Section 3.4), to the local missionary society which tried to reform the residents of Five Points (Section 6.2), and to Father Mathew and the temperance movement (Section 3.8). But most importantly, the process led to a consideration of how and why Five Points was characterized by contemporaries as a notorious slum. Neither the documentary data nor the artifacts suggested that the residents of the block were among the city's most destitute. Rather, they appeared to be skilled and unskilled workers who ate well and shopped for locally available consumer goods. At least some residents of Block 160 put money in the Emigrant Savings Bank, and others bought property when they could afford it. What set Five Points apart from other working-class neighborhoods was not so much the economic condition of the residents but their ethnicity. In the early decades of the nineteenth century, Five Points was home to a large African-American population which found work in the industries around the Collect Pond and a spiritual connection to the nearby burial ground that had served their eighteenth-century ancestors (Hodges 1996:108). As the demand for affordable housing grew, Irish immigrants and German Jews joined the African Americans, and by mid-century the neighborhood was primarily Irish.

Like other working-class districts in other nineteenth-century cities, this enclave of non-native-born workers was viewed as a center of depravity. Historian Alan Mayne has characterized such places as "imagined slums" (1993:1):

The slums described by apparent fact gatherers like [Jacob] Riis were not unproblematic reflections of social realities in the past. All slumland depictions were mediated by the cultural milieux within which they were framed and upon which their creators depended for comprehension and credibility. The slum was employed by both reformers and entertainers as a potent trigger device which mobilized bourgeois interest because it dovetailed with basic axioms of prevailing common-sense opinion about the good and the bad in contemporary society (Mayne 1993:3).

Mayne emphasizes the function of imagined slums for the bourgeoisie to "consolidate their own hegemony" (1993:137). They viewed life in the slums as the opposite of what life should be and thereby reassured themselves that their chosen way was the best. But, of course, they did not really see how lives were led in the places they called slums. Prejudice and fear interfered with any honest appraisal of how the people who inhabited these imagined places actually conducted their lives.

The imagined slum also served to mask the relationship between the people who owned and operated the means of production (bosses and managers) and the labor force. Tucked away in neighborhoods considered uninhabitable by the middle class, workers were deprived of their humanity. They could be exploited at work and subjected to abysmal living conditions because they were viewed as less than human. Charles Dickens likened Five Points residents to pigs (1985:88): "Many of those pigs live here. Do they ever wonder why their masters walk upright in lieu of going on all-fours? and why they talk instead of

grunting?" Inner-city neighborhoods in Birmingham, England; San Francisco, California; and Sydney, Australia; were referred to as "dens, hides, nests, burrows, rat holes, lairs, bee hives, and rabbit warrens" (Mayne 1993:181).

Race was also used to dehumanize the work force. Newly emancipated African Americans were feared and despised in nineteenth-century New York, and much of Five Points' notoriety rested on the neighborhood's association with a black population (Blackmar 1989:175). Even after the proportion of blacks in the Sixth Ward (including Five Points) had declined precipitously as a result of the influx of Irish immigrants in the late 1840s and the passage of the Fugitive Slave Act in 1850 (Hodges 1996:116), blacks were omnipresent in descriptions of Five Points (e.g., Campbell 1893; Foster 1990). On Block 160, six percent (55 out of a total of 924) of the population was African American in 1840 whereas it had been 18 percent (71 out of 400) in 1820. While it is likely that some black households were missed by the census taker and Irish women married to black men may not have reported their husbands, it is also likely that the presence of African Americans at Five Points has been exaggerated as part of the imagined slum construct.

The Irish were also classified as an alien race when they first arrived, and they, too, could be relegated to the slum as less than human. A recent book (Ignatiev 1995) describes an intentional pattern of distancing between Irish immigrants and African Americans. According to Ignatiev, the Irish embraced "whiteness" as a function of the Democratic Party's opposition to nativism (Ignatiev 1995:76). Nativism, which appealed to many artisans who were resentful of immigrants, consigned the Irish to an inferior race. The Democratic Party protected Irish workers from the Nativists and "guaranteed them a favored position over those whom they regarded as the principal threat to their position, the free black people of the North (the only group as free of either property or marketable skills as the Irish)" (Ignatiev 1995:87). In this complicated argument Ignatiev claims that the Irish were forced to subordinate their country, religious, and national animosities to achieve solidarity based on color (Ignatiev 1995:96) and to demand, along with other white workers, that black men not do white man's work (1995:112). The disappearance of African Americans from Block 160 by 1840 may not have been as complete as suggested in the census records, but it is likely that the Irish effort to become white would have made the neighborhood less hospitable than it had been in earlier years.

Whatever the realities inside Five Points and inside other nineteenth-century working-class districts, outsiders did not see them. They substituted the imagined slum, a construct that has lasted into the present day. Several studies conducted recently in Australia (Karskens 1996–1997; Mayne and Lawrence 1998), as well as this one, do more than analyze the bourgeois basis for imagining the slum. Combining archeological and historical research, these studies look at the material remains of life in several celebrated slums—Little Lon in Melbourne, Australia; the Rocks in Sydney; and Five Points in New York—and see something more than the homogenized descriptions of low life that have previously been available. In addition, recent historical studies (Ross 1993; Kearns 1994) of late-nineteenth-to-early-twentieth-century working-class districts in London and Dublin, which draw on oral informants as well as the documentary record, contribute insights into working-class neighborhoods. What all of the studies have in common is a focus on everyday domestic life, and what all of them have concluded is that respectability was an important value in working-class life.

7.2 Respectability at Five Points

The artifactual evidence from Block 160 suggests that from the beginning of the nineteenth century to the 1870s at least some residents of the block possessed the accouterments of respectability. Not surprisingly, the artisans of the early decades of the century owned sets of dishes that suggest differentiation between everyday meals and special occasions, but even the workers in the mid-century tenements had matching sets of dishes that included at least a few serving pieces and extensive teawares. These households also owned decorative items—figurines and flowerpots—that suggest attention to the decor of living spaces, no matter how cramped, and educational items for children, such as miniature tea sets, individualized cups, and a ball decorated with the alphabet. While such things were not prohibitively expensive, their

presence (and they have also been noted at Little Lon, the Rocks, and in London and Dublin tenement neighborhoods) indicates a concern with household rituals that had previously been associated with middle-class concepts of gentility and domesticity.

Ellen Ross's study (1993) of London's East End from 1870 to 1918 provides some insight into the meaning of these things in a nineteenth-century working-class context. In the East End "meals signified maternal service—the safety and comfort it brought and also, if the food was served and eaten properly, respectability for everyone at the table" (Ross 1993:27). Mothers also understood the relationship between diet and well-being; they "knew that they needed to keep their families 'full,' that milk was good for babies, that meat was food for everyone, that cooked meals were preferable to cold, and that people needed spicy accents to a dull diet" (Ross 1993:28). At great sacrifice to herself, a mother juggled the finances, which often involved trips to the pawn shop, in such a way that the man of the house, at least, always had meat and the whole family had a decent Sunday dinner, served with considerable formality. The male head of the household presided at Sunday dinner no matter how absent he had been during the week. He carved the meat, and demanded silence from the children, saw that they ate everything on their plates, said grace, and minded their manners (Ross 1993:39). According to Ross, the ritual of Sunday dinner was so important that some people ate bread and tea all week to save for a good Sunday meal; if it were still impossible, they rattled the plates at appropriate times so the other tenants would think they were sitting down to dinner (Ross 1993:29).

The juggling of the finances involved a good deal of resourcefulness, including the concealment from the father of trips to the pawn shop even if it was his clothes that were pawned. Mothers also found jobs for their children and exchanged the ornaments on the mantle ("mother's altarpiece") for cash when necessary (Ross 1993:46). The ornaments apparently did double duty in the tenements, creating beauty when they weren't needed for the more practical purpose of feeding the family. Shopping was a social event, but it was also a matter of strategic importance. Women conventionally went marketing on Saturday night to prepare for the Sunday meal, and on Sunday mornings they were entirely absent from the parks in working-class districts.

Not all of this is directly applicable to New York, but it is suggestive. The ornaments found in the feature associated with the Irish tenement at 472 Pearl Street may well have been cycled back and forth between the mantle and the pawn shop. Meat had enormous symbolic significance in New York and was, according to Richard Stott (1990:177), eaten twice, sometimes three times, a day. It was one of the reasons for being in New York. Meat was not as cheap as fish, but it was clearly preferred among the Irish on Block 160 who ate more pork than anything else in contrast to the Germans who, at least in one case, ate more mutton (Section 3.5).

The expression of ethnic boundaries is evident in the material remains from Block 160 and may be seen as another aspect of respectability. It has been well documented (e.g., Gutman 1977; Lees 1979; Kalcik 1984) that immigrants used ethnic traditions as an anchor in the process of adapting to a new culture. The deposits associated with the mid-century tenements at 472 and 474 Pearl Street are very similar in a number of ways and differ in a patterned way from deposits associated with German households on Baxter Street (Sections 3.5, 3.7, 4.3). The faunal remains suggest that the Irish diet was predominantly meat spiced with various sauces, while the Germans preferred fish and possibly sausages. (Although sausages don't appear in the faunal record, the higher proportion of mustard bottles in German deposits is suggestive.) The Irish expended more of their incomes on table- and teawares, perhaps because tea was such an integral part of Irish culture. They also ate pigs' feet and drank porter, what Kearns (1994:42) calls the necessary ingredients for a "fullfledged hooley" in Dublin. A hooley is a kind of institutionalized Saturday- and Sunday-evening gathering of families and neighbors around front steps and at corners. One can easily imagine such gatherings on Pearl Street.

Block 160 was sandwiched between two Catholic churches (the Church of the Transfiguration and St. Andrews), and it is likely that the churches played an active role in community life. In London, Lees

(1979:191) claims that the church created confraternities, clubs, and temperance groups as alternatives to the pubs and trade-union meetings of the English working class. In New York, Tammany served the interests of Irish workers, but the cup decorated with the image of Father Mathew recovered from 472 Pearl Street and a variety of possible substitutes for alcohol found in the same deposit (Section 6.3) suggest that the temperance leader had at least some followers on Block 160. Besides the Father Mathew cup, no artifacts were recovered with specifically Catholic associations.

Respectability on Block 160 appears to have involved a combination of traditional practices and active participation in New York's consumer culture. Shopping, the social act of acquiring consumer goods, provided women with an opportunity to demonstrate their taste for goods appropriate to their status as members of the working class and their talent for acquiring such goods at a reasonable price. In his study of shopping in a small town in Trinidad, Daniel Miller (1993:6) found that the people experienced shopping "as the antithesis of their recent experience of sugar-cane estates and village life." The past seemed a kind of "dark age of repetitive mundane daily tasks" compared to the delight of shopping. Similarly, shopping in New York where goods were available from all over the world must have been a new and wondrous experience for most immigrants. Work, of course, is what made it all possible.

7.3 Working-Class Identity

Five Points existed because there was work in New York. The residents of Block 160 were coopers, tinsmiths, blacksmiths, and gas fitters; they worked in construction as carpenters, painters, metal roofers, plasterers, and glass cutters; in the garment industry as milliners, capmakers, seamstresses, tailors, and clothiers. At the port they were porters, sailmakers, and boatmen, and in printing they were printers, bookfolders, and typesetters. There were shoemakers, plumbers, grocers, and butchers; furniture-makers; teachers, policemen, and clerks. Some people identified themselves as pedlars, others as musicians, and many as laborers. None called herself a prostitute, but prostitutes were there too.

Stott (1990) describes a high-energy work environment in antebellum New York. Most workers labored from seven in the morning until noon, took an hour for dinner, and then worked until six (Stott 1990:131). They drank on the job to keep up the pace, and in some trades it was the bosses who provided the liquor (Stott 1990:143). Laborers, according to Stott, tolerated the pace and the pressure for the reward of higher wages than they had ever received in Europe and a higher standard of living (1990:134). Immigrant workers had never known that "common people might live comfortably" (1990:134) with rugs and furniture in their tenement apartments and meat on the table at every (or almost every) meal. Stott paints an exuberant picture of the worker's world, very different than the bleak picture painted by contemporary reformers.

The artifacts recovered on Block 160 complement that exuberant picture. They reflect active participation in consumer society, not in imitation of the middle class but in celebration of what was available and what could be acquired with honestly earned wages. The shops at Five Points overflowed with food; George Foster called Mr. Crown's store one of Five Points' "most remarkable and characteristic features" (1990:128).

On either hand piles of cabbages, potatoes, squashes, egg-plants, tomatoes, turnips, eggs, dried apples, chesnuts [sic] and beans rise like miniature mountains round you. At the left hand as you enter is a row of little boxes, containing anthracite and charcoal, nails, plug-tobacco, etc. etc. which are dealt out in any quantity, from a bushel or a dollar to a cent's-worth. On a shelf near by is a pile of firewood, seven stickes [sic] for sixpence, or a cent apiece, and kindling-wood three sticks for two cents. Along the walls are ranged upright casks containing lamp-oil, molasses, rum, whisky, brandy, and all sorts of cordials, (carefully manufactured in the back room, where a kettle and furnace, with all the necessary instruments of spiritual devilment, are provided for the purpose). The cross-beams that support the ceiling are thickly hung with hams, tongues, sausages, strings of onions, and other light and airy articles, and at every step you tumble over a butter-firkin or a meal-bin....The shelves behind are filled with an

uncatalogueable jumble of candles, allspice, crackers, sugar and tea, pickles, ginger, mustard, and other kitchen necessities. In the opposite corner is a shorter counter filled with three-cent pies, mince, apple, pumpkin and custard—all kept smoking hot—where you can get a cup of coffee with plenty of milk and sugar, for the same price, and buy a hat-full of “Americans with Spanish wrappers” for a penny (Foster 1990:128-129).

This is not a picture of deprivation, and the remains of meals (floral and faunal) recovered on Block 160 suggest that the workers took full advantage of the plenty (Sections 3.5 and 3.6). Shopping for food, as well as fashionable household goods, expressed a working-class woman’s membership in working-class culture. It demonstrated her connection to the urban economy (Section 2.4). Although Stott sees working-class culture as fundamentally masculine (1990:270), the organization of the very consumption that made work worthwhile was the domain of women. If the short-stemmed pipe was the worker’s emblem of identity, the shopping basket may have been his wife’s (see Vol. I, Figure 22).

The energetic work regimen is also evident in the archeological remains which include remnants of the secondhand clothing businesses on Baxter Street and outwork done in the tenements along Pearl Street (Sections 4.2 and 4.3). Outwork included shoemaking, shirt-making, and rug-making. There was also a jeweler working on the block; scrap bone was being made into buttons and toothbrushes; and oyster shells were being converted into lime (Section 4.4). There is no written record for any of these activities on Block 160, nor do the documents mention houses of prostitution which co-existed with the secondhand clothing dealers along Baxter Street (Section 4.5). Work was not invisible in a working-class neighborhood; it was everywhere. And home was not the quiet refuge from work that it had become for the middle class by the mid-nineteenth century. While accidents, exhaustion, and irregular employment may have plagued workers, it is clear from the archeological remains that they found ways to augment incomes and get through bad times.

It is also clear that no matter how dreary the physical conditions of the tenements, workers used some of their incomes to express their viability as workers. They decorated their rooms with ornaments and plants, set a decent table, and probably served a good deal of tea on very respectable transfer-printed Staffordshire china. Most important of all, they served meat-based meals that were unheard of in Europe. While working-class identity may have been publicly expressed in other ways (this volume includes a discussion of clay smoking pipes in the political arena, Section 3.3), its private expression may have been one of the things that made life bearable in the tenements.

7.4 Living Conditions

If the word slum only referred to the physical conditions of poor urban neighborhoods, Five Points would certainly qualify (Section 5.2). The physical evidence for overcrowded, unsanitary living conditions is all too clear. The artisan houses that lined Pearl Street in the early nineteenth century had been replaced with tenements by 1850, and there were back tenements on several lots and a building that covered an entire lot by the 1870s. The small subdivided structures along Baxter Street continued in use into the 1870s when they, too, were replaced with brick tenements. The block always included some industry: tanneries, a brewery, and a bakery in the early decades of the century, and lumber and coal yards by the 1850s. Rectangular wooden privies had been replaced with stone-lined circular ones by the 1830s, and a large (11-foot-diameter) stone-lined cesspool served the tenement on Lot 6. The back tenement on the lot, which appears to have been equipped with a water closet, was built over the edge of the cesspool, presumably to allow the waste from the water closet to drain directly into it. A school sink with no apparent outlet to the street ran along the edge of the lot. The remaining open space on the lot where women did laundry and children played measured 20 by 25 feet.

Such plumbing arrangements surely exacerbated disease, and there is plenty of parasitological evidence that residents suffered from fecal-borne disease (Section 5.4). However, there is also evidence that they controlled tapeworm by cooking meat thoroughly and kept roundworm at bay, probably by using

Chenopodium ambrosioides, which was found in quantity among the floral remains (Section 5.3). This kind of information points to the value of an interdisciplinary approach and to the non-intuitive nature of the results such an approach can provide to an archeological analysis.

Five Points was known as the center of several cholera epidemics that swept through the city in the nineteenth century, but residents of Block 160 were not simply passive victims of every communicable disease. In this very personal area of their lives, as well as in the more public ones, they exerted a certain amount of control in spite of the physical infrastructure which was not theirs to modify.

7.5 Agency and the Working Class

An oral history of tenement life in early-twentieth-century Dublin describes how women arranged a weekly schedule for washing hallways and stairs because, said the informants, they took the greatest pride in cleanliness; it was a matter of respectability (Kearns 1994:28). Respectability in this sense is not something with a monetary value, nor is it measurable on a middle-class standard. It was part of a woman's identity to contribute to the communal effort of keeping the public spaces in her building clean. It reminds us that expressions of identity permeate everyday life often in subtle ways that do not leave an archeologically retrievable signature. But the many roles played by residents on Block 160, especially women, do emerge from the material record.

As Milne and Crabtree show in their study of meals (Section 3.5), women stretched limited budgets to feed large households that included relatives and boarders, and they found ways to construct ethnically distinct diets using newly available foods. While they minded their households and raised their children, women worked in the garment industry at home, some as outworkers, others as members of family operations. Griggs (Section 4.3) shows that here, too, ethnic identity influenced how women contributed to the household income.

Children also worked, but the presence of toys in the assemblage, some virtually identical to the toys of middle-class children (individualized cups, matching plates and cups inscribed with poetic verses, miniature tea sets), suggests that some mothers on Block 160 may have been preparing their children for lives outside the tenement districts of the city. No matter how much of an improvement life in New York was over life in Europe, anyone who had seen greater comfort than the crowded and unsanitary tenement districts would appreciate the difference. Since many Irish women worked as maids in middle-class homes, it is likely that they saw advantages that they might not require for themselves but would surely wish for their children.

Women were also prostitutes, a profession that has been treated in the literature as an understandable alternative to the less well-paid options open to working-class women (e.g., Stansell 1987). The archeological perspective on a Baxter Street brothel, however, suggests that better pay was exchanged for a variety of dangers and exploitative working conditions (Sections 4.5 and 5.5). But like their sisters in the tenements, these women also played many roles including knowing how to act "middle class" for their middle-class customers.

Men are less visible in the archeological remains from Block 160, which is understandable since so much of their lives was conducted outside the home—in the workplace and the saloon (Stott 1990:Chapter 9). Reckner's study of clay tobacco pipes (Section 3.3) shows how this marker of male working-class identity was manipulated in the political context and how ethnicity continued to play a role in male allegiances. Otherwise, the presence of men is elusive except, of course, as providers and consumers of the meals and alcoholic beverages that are represented in the assemblage. Alcohol bottles are not as prevalent in the domestic deposits as might be expected, probably because so much drinking was done in public places. However, there were saloons on the ground floors of the tenements at 472 and 474 Pearl Street, and at least some of the remains from the privy behind 474 Pearl Street appear to relate to the saloon.

Griggs found that some men had fairly substantial accounts in the Emigrant Savings Bank (Section 2.3); on meager wages, even laborers managed to save. She also found several notes by women in bank records requesting that their husbands not be entrusted with banking transactions. The tensions between men and women that have been noted in other studies of working-class culture in mid-nineteenth-century New York (e.g., Stansell 1987; Stott 1990) are also suggested by the study of Block 160, tensions over money and also over lifestyle. Stott argues that while men relished the physicality of working-class life, some women may have been attracted to "feminine genteel culture" (Stott 1990:272). Because women's lives, more than men's, were confined to the uncomfortable and unsanitary environment of the tenements, it is understandable that they would aspire to something else. In addition, the experience of women—especially unmarried women—as wage earners outside the family provided new incentives and a new model of what it was (or could be) to be a woman. As pointed out by Stansell (1987:218), the Bowery Gal "signaled a female presence where once existed only others' projections of the female; as such, she represented for laboring women a break with misogynistic culture something like that which the 'true' woman represented for middle-class women."

The world that working-class men and women at Five Points created for themselves was not the world that outsiders imagined. Working-class life was full of energy and struggle—to keep a steady job, to work at a breakneck pace, to make a living wage, to raise children in an unhealthful environment, to face sickness, and to find pleasure—but it was also full of hope and promise. It was fraught with tensions—between men's lives and women's lives, between the plenty in the markets and limited family incomes, between traditional customs and urban participation, between the fantasy of Broadway and the reality of tenements—and warmed by communal ties. Workers imagined a better life and they used all their powers to achieve it. The archeological analysis of Block 160 revealed portions of the struggle from the inside and glimpses of residents' hopes for a better future. Cook's visual analysis of Five Points (Section 6.4) shows how outsiders manipulated images to convey a negative view of the working class. Looked at another way, the image on the front cover of this report, at least, shows the vibrancy of working-class life. It is a matter of perspective.

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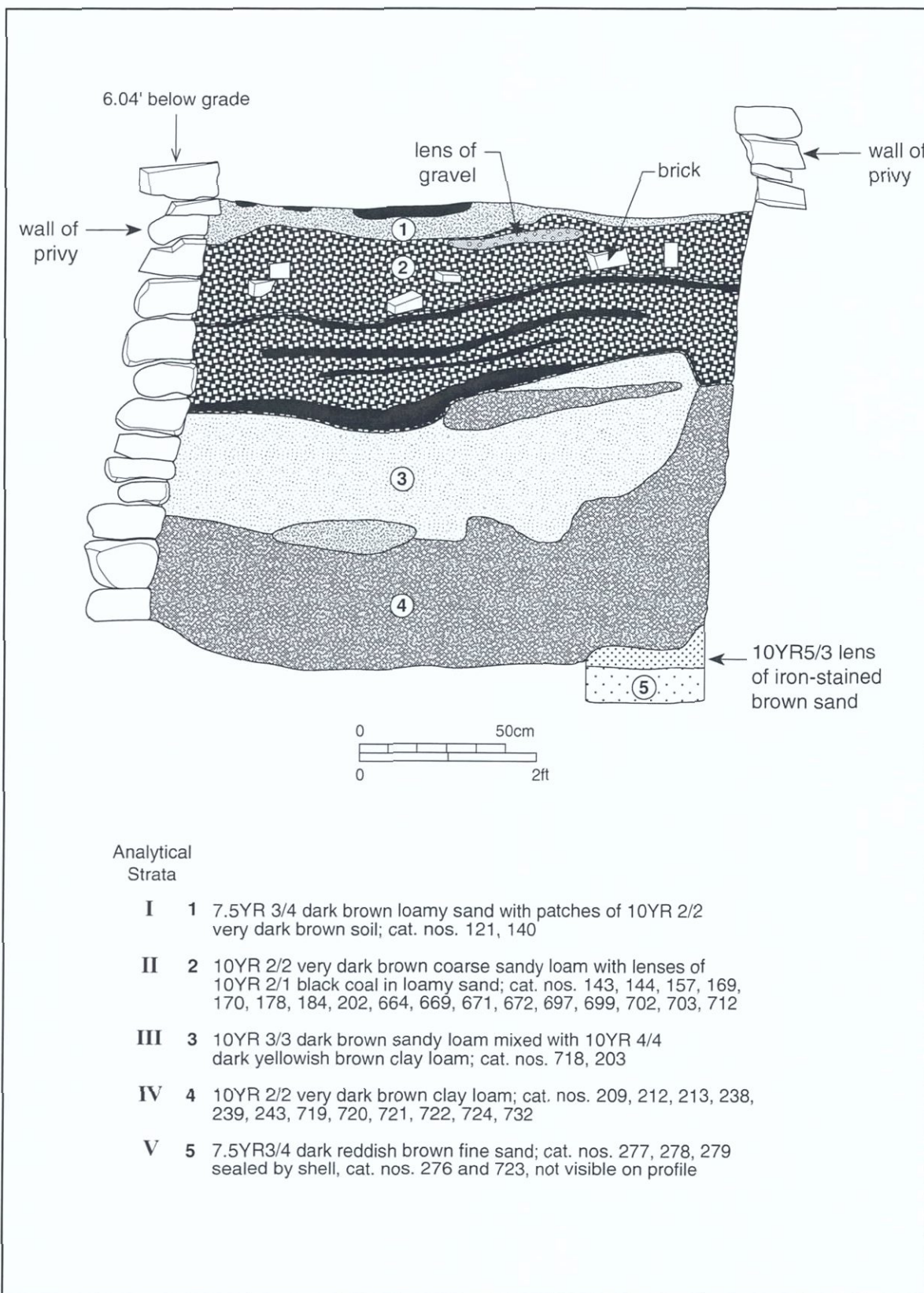
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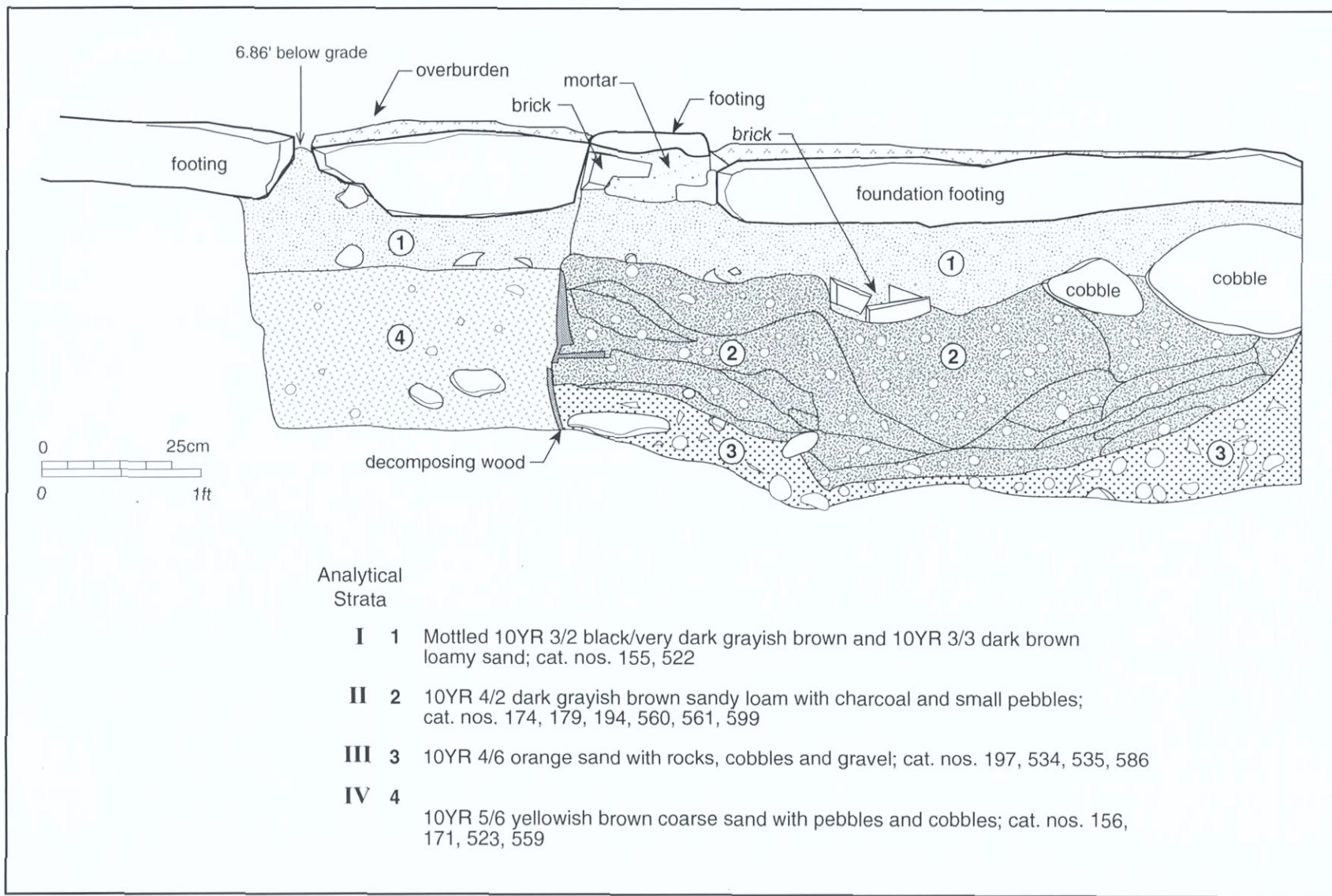
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Appendix A
Feature Profiles

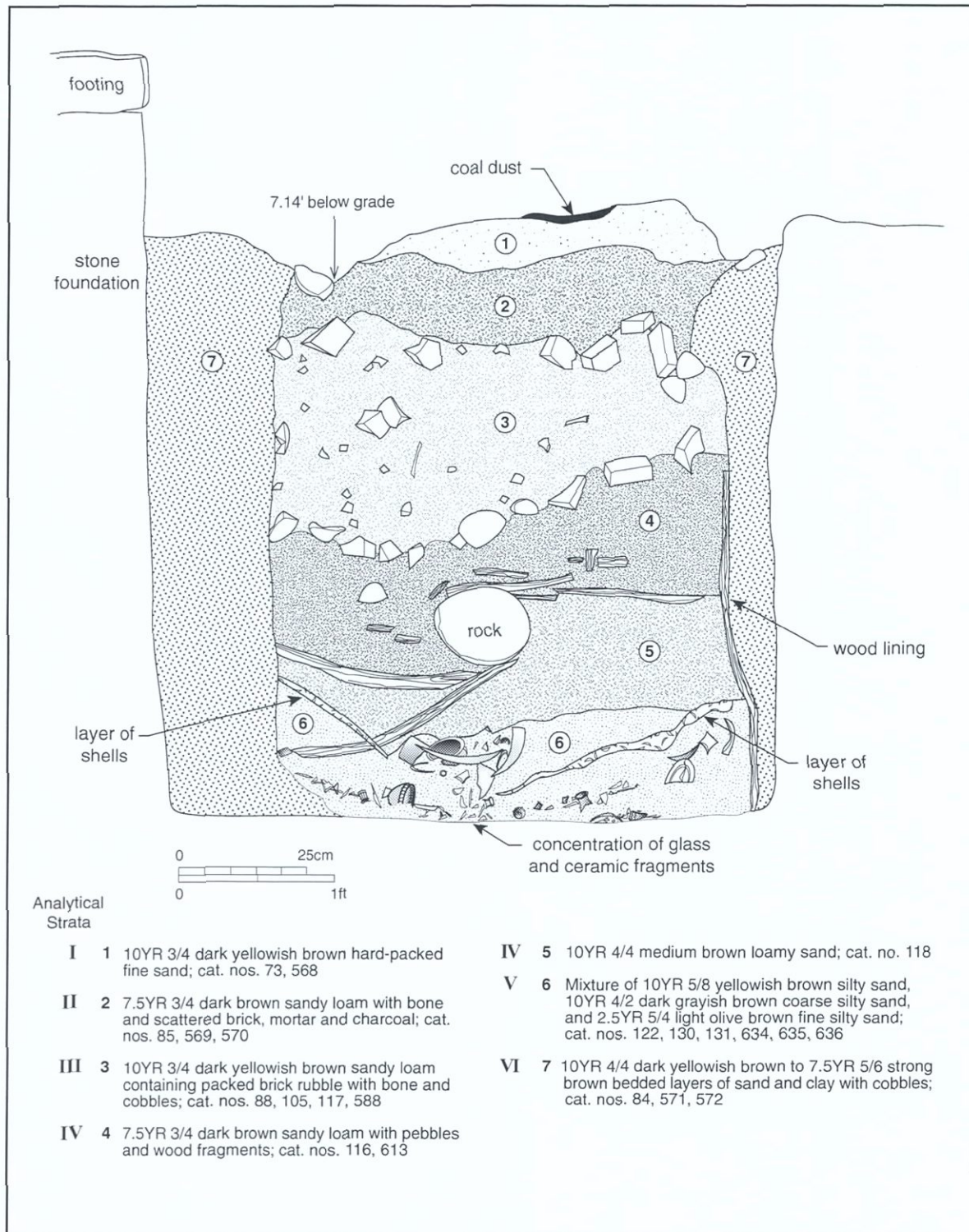


Feature B, Lot 6, stone-lined privy. Profile of fill layers in southern half.

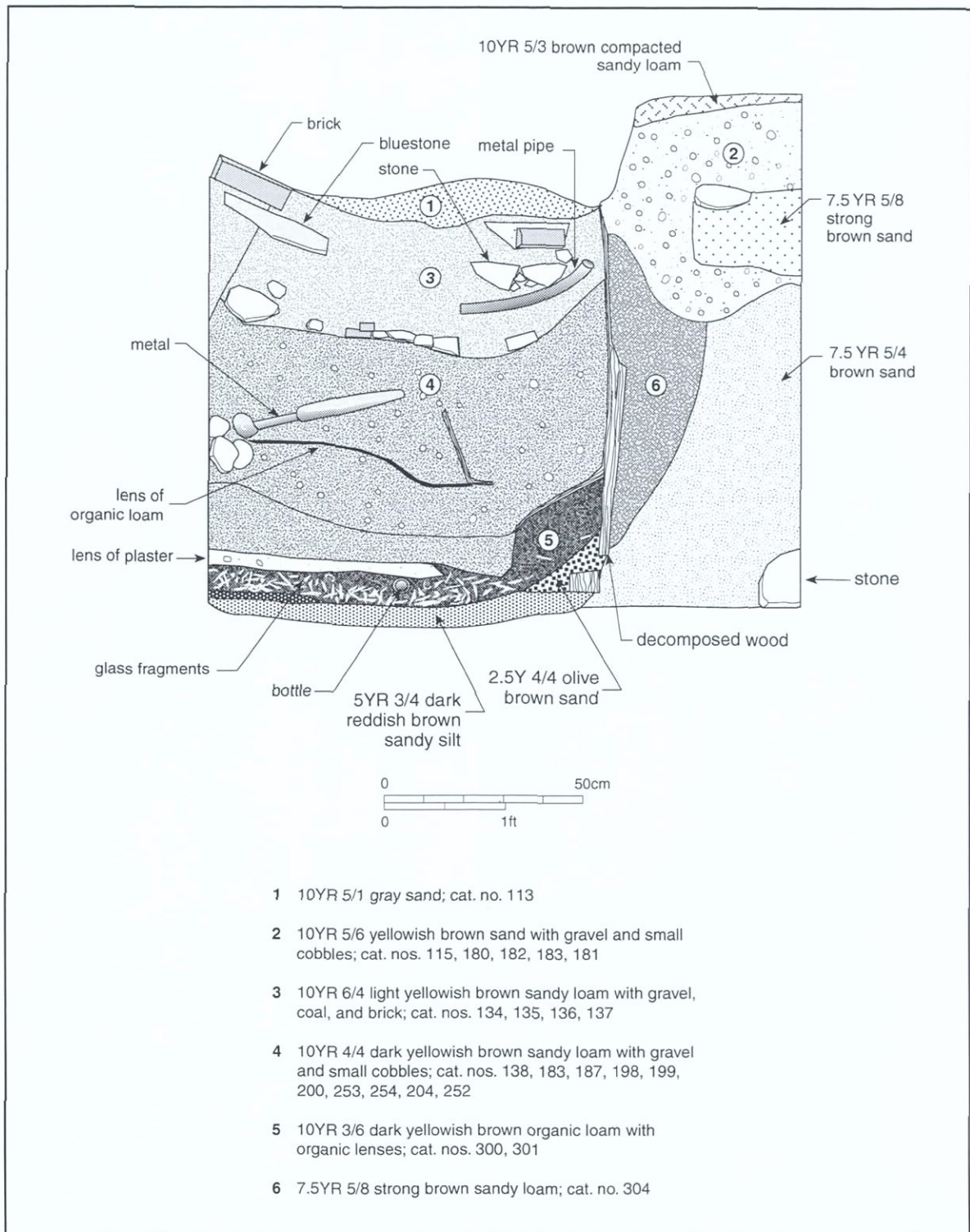


A-3 Feature C, Lot 6, wood-lined privy. Profile of fill layers in eastern half.

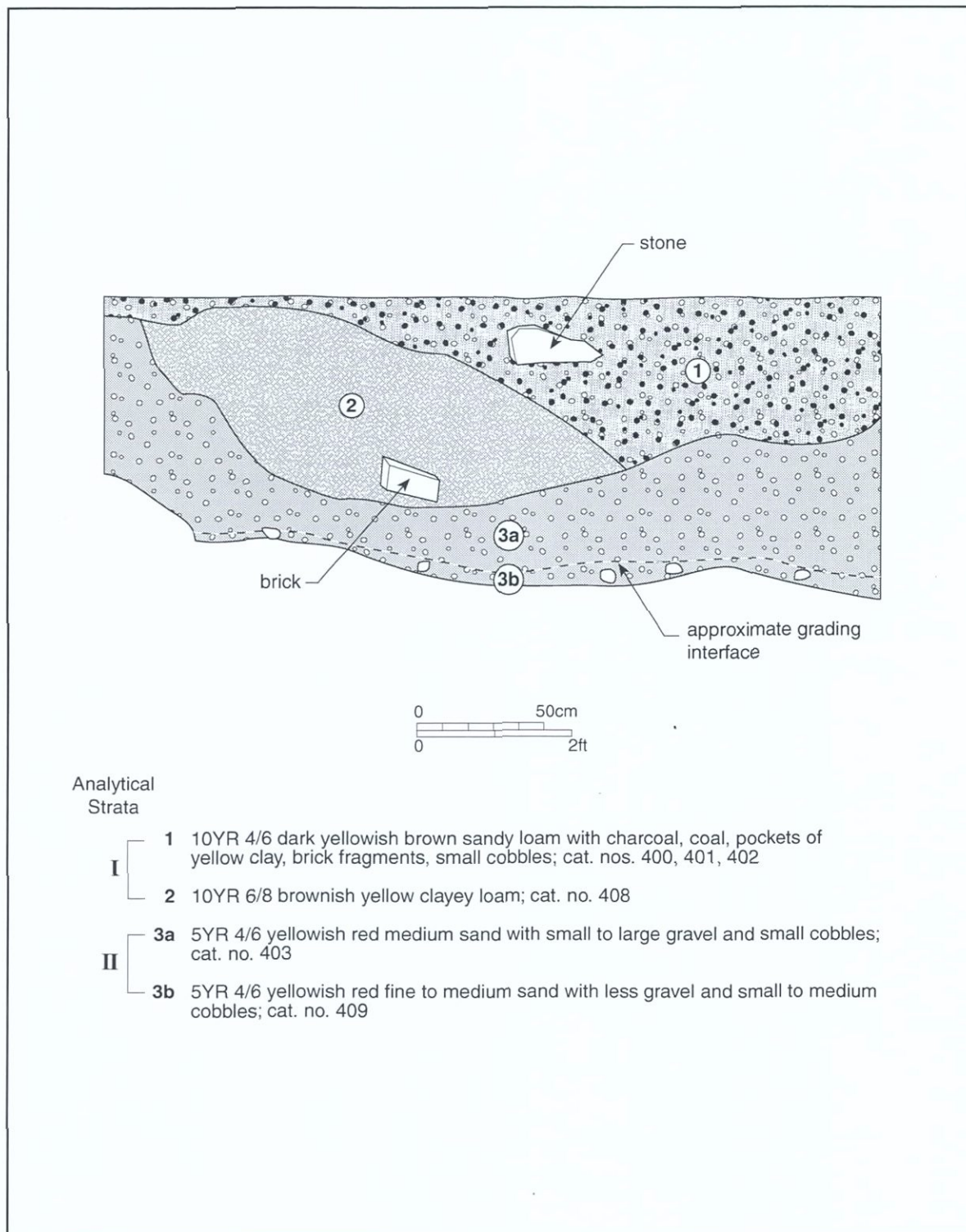
Appendix A
Feature Profiles



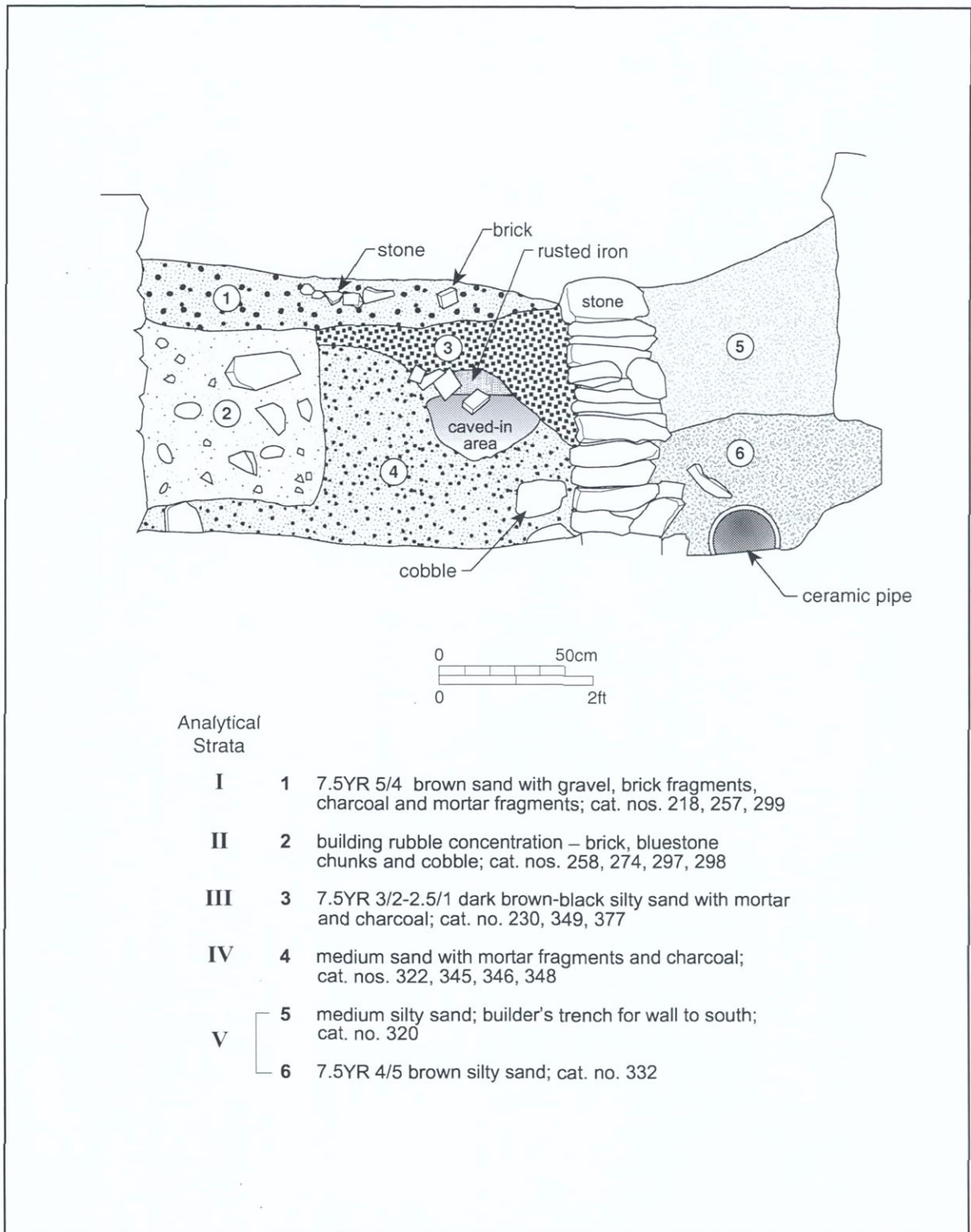
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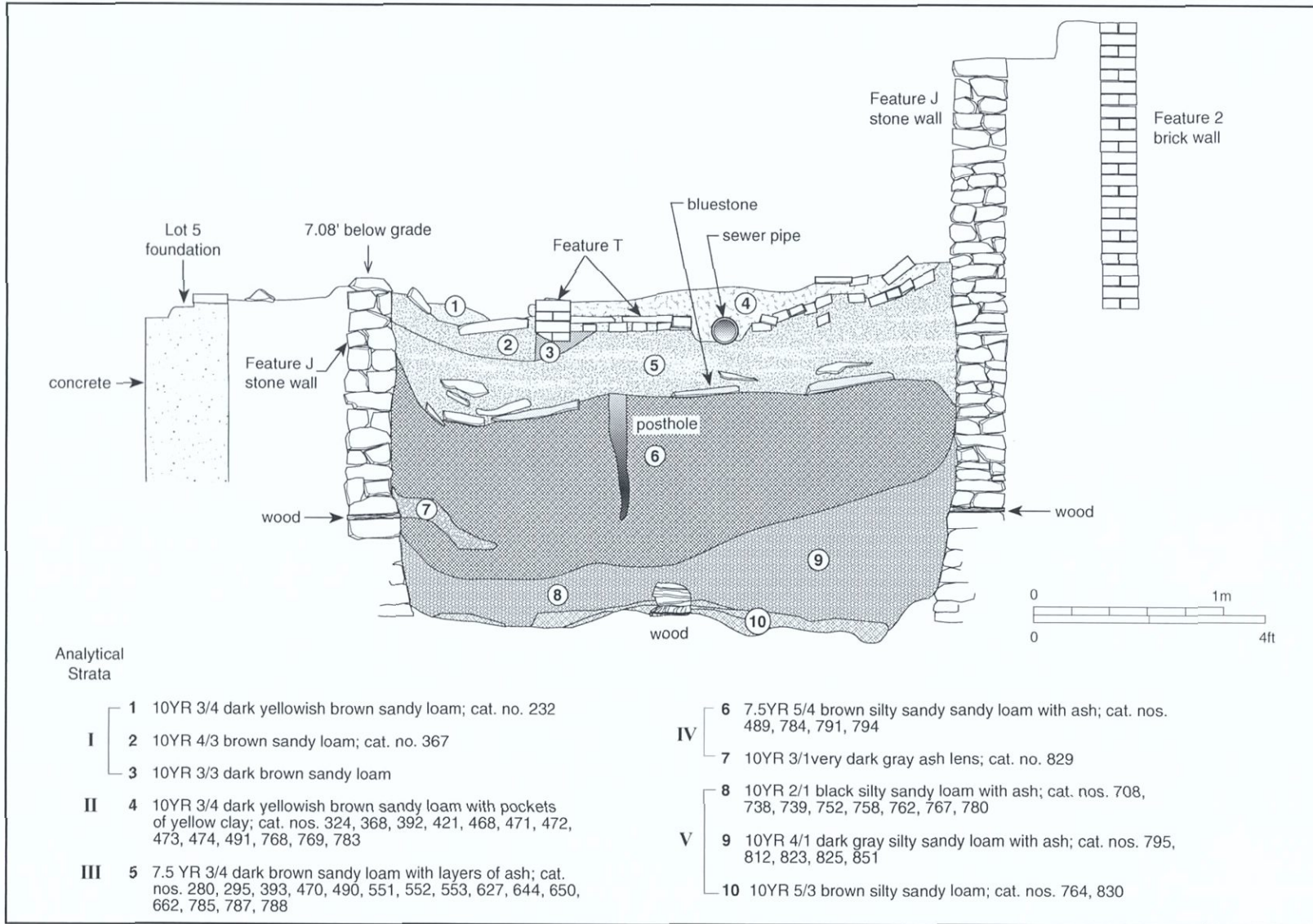
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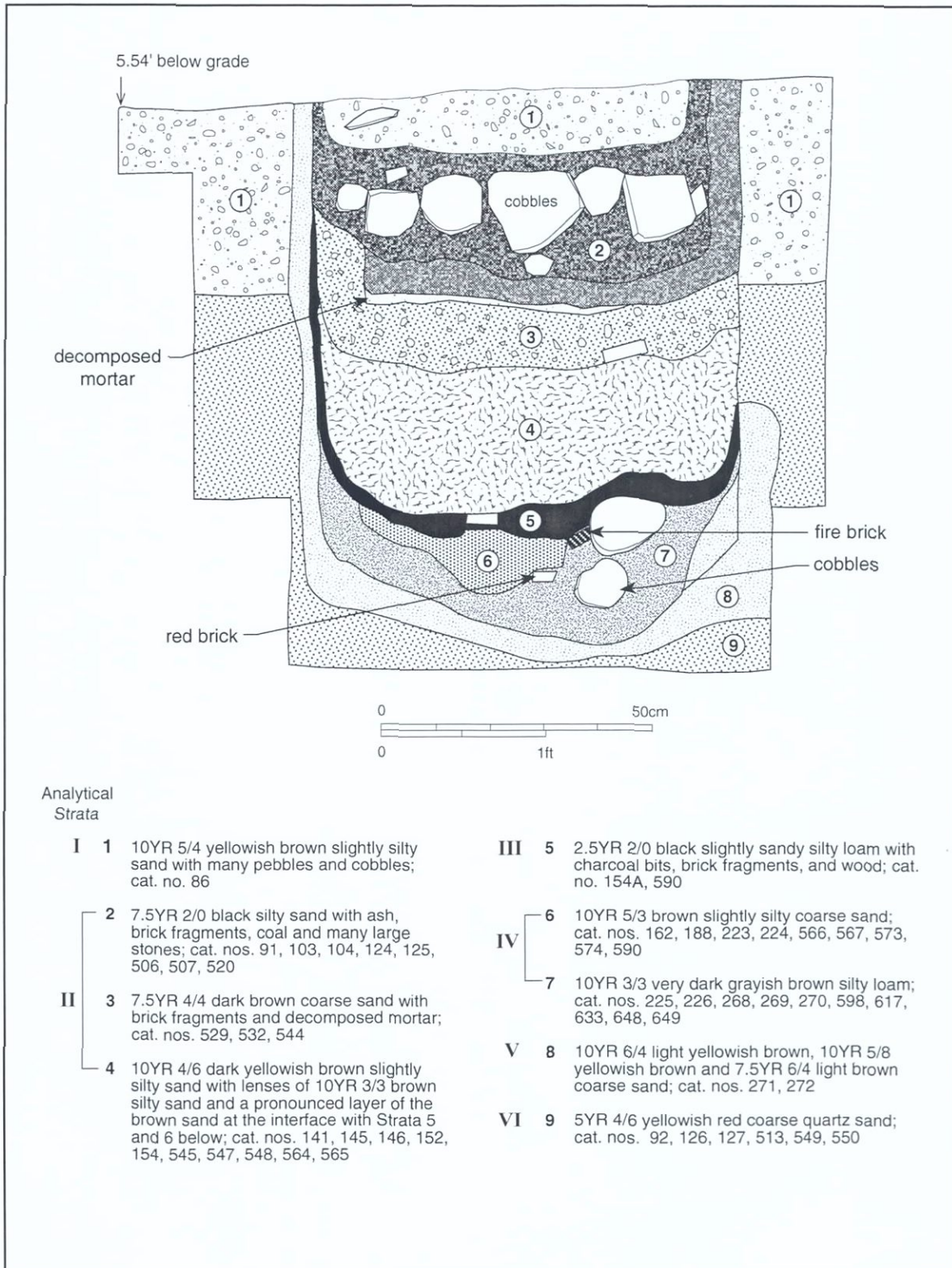
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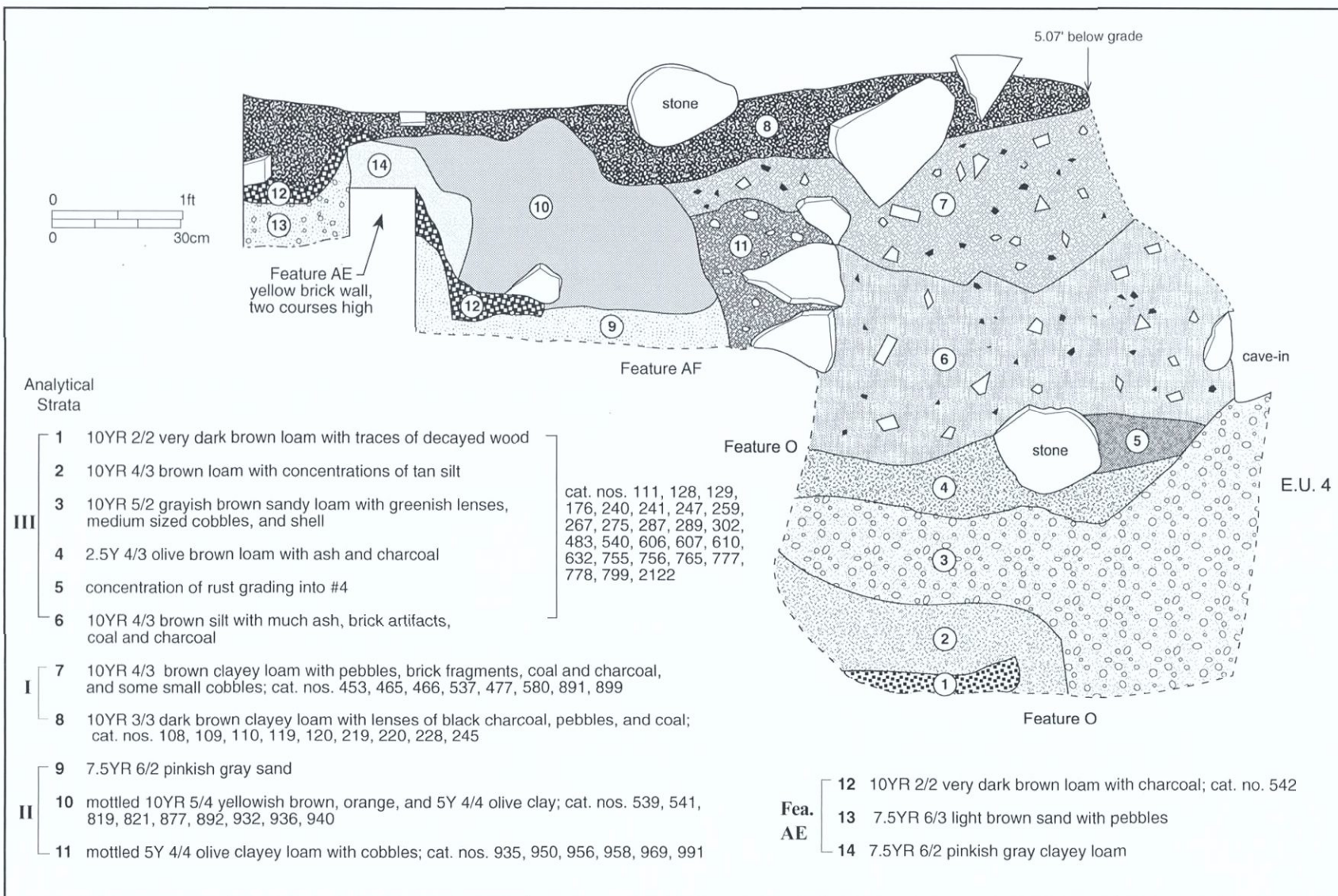
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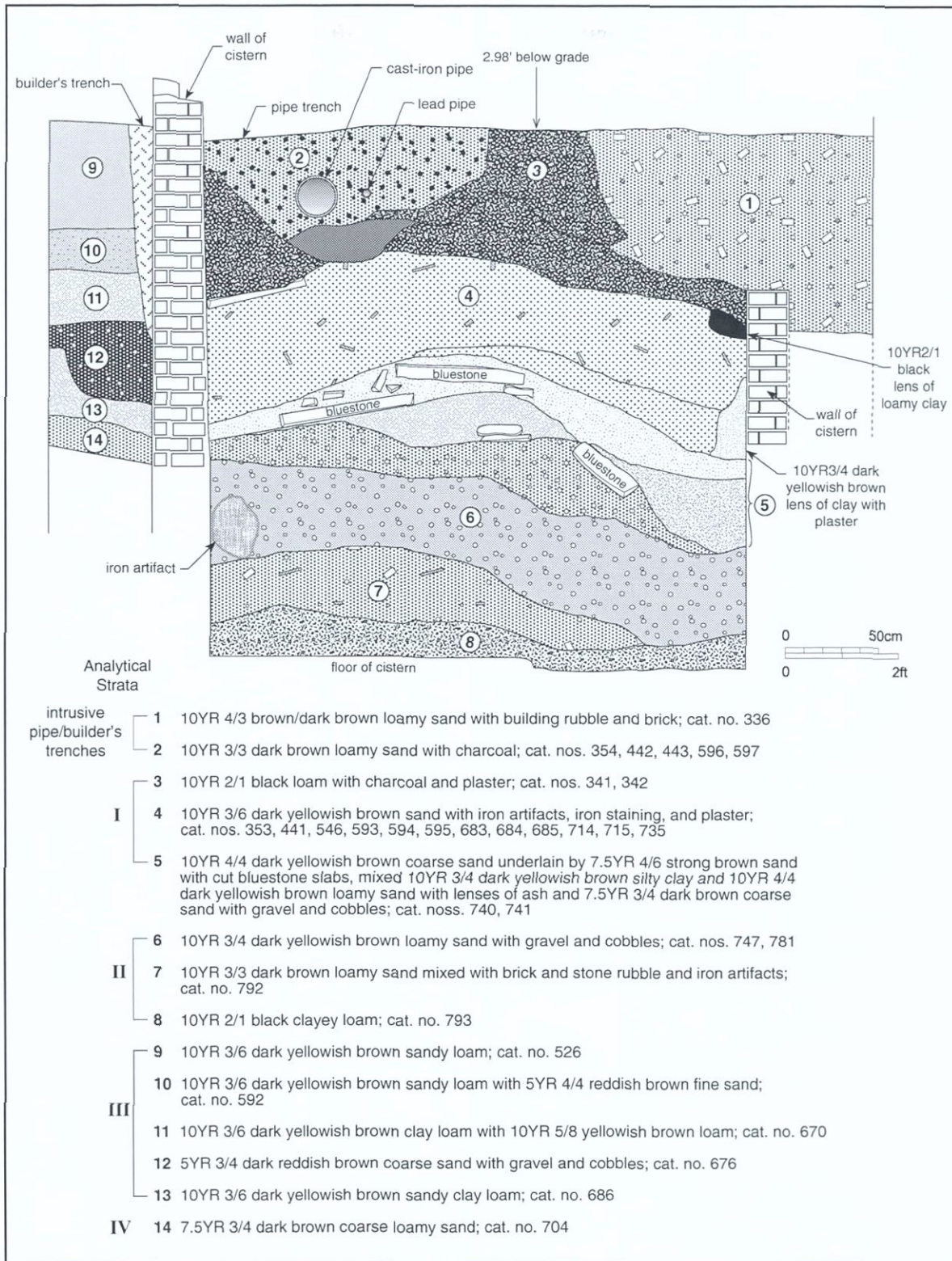
Feature J, Lot 6, stone-lined cesspool. Profile of fill layers in southern half.



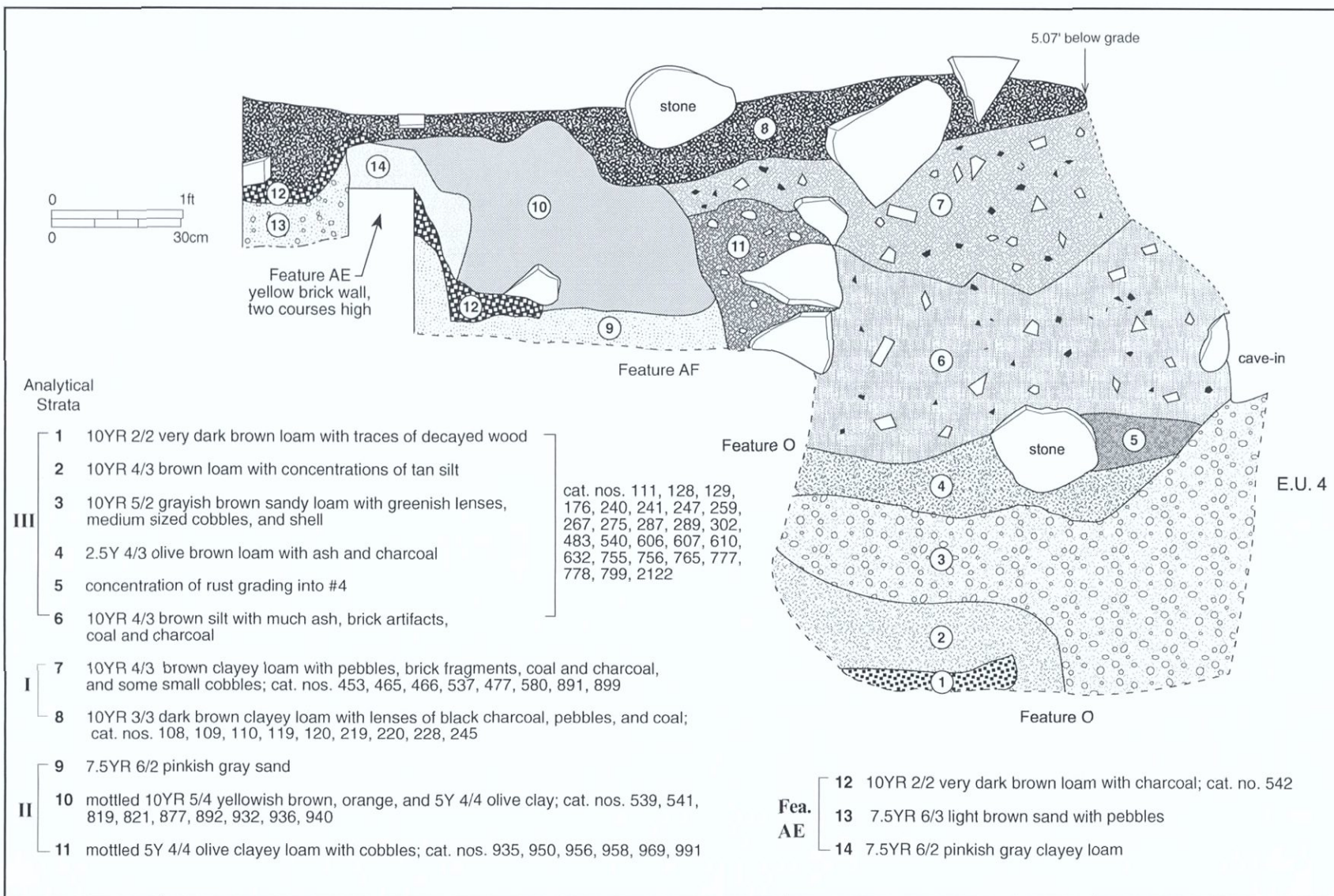
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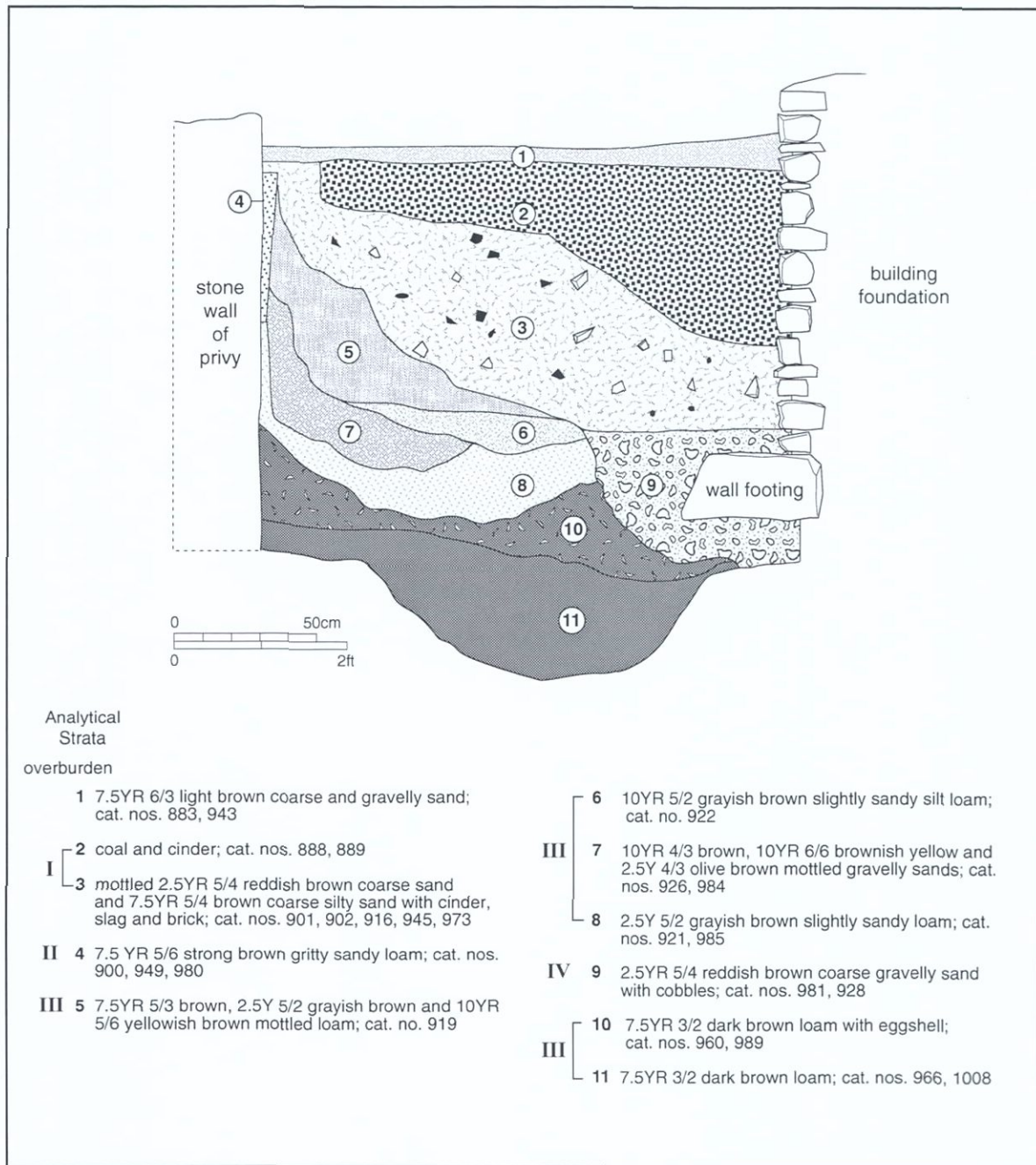
Feature O, Lot 7, stone-lined privy, and Feature AF, wood-lined privy. Profile of fill layers in western half of each feature.



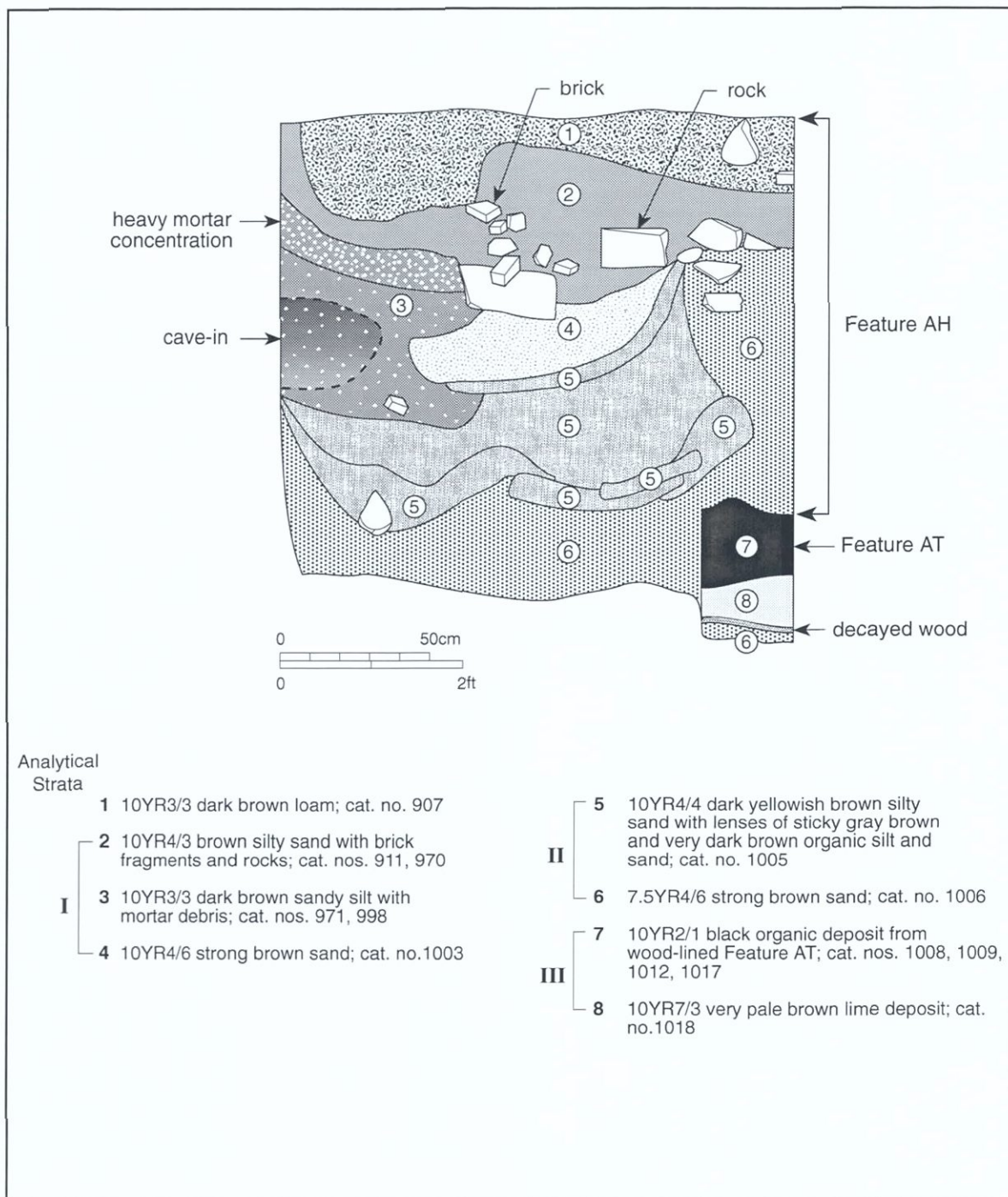
Feature Z, Lot 6, brick-lined cistern. Profile of fill layers in western half.



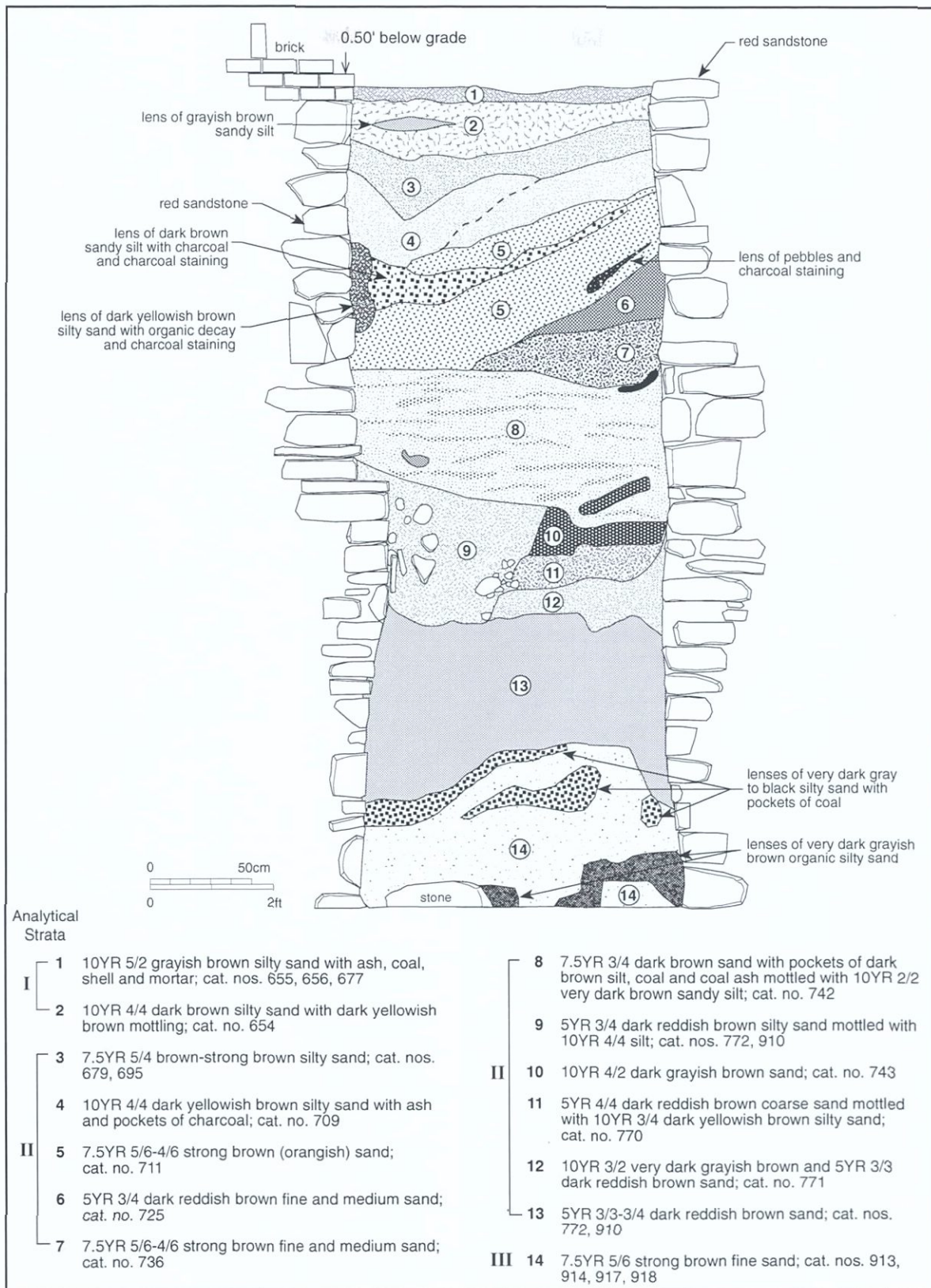
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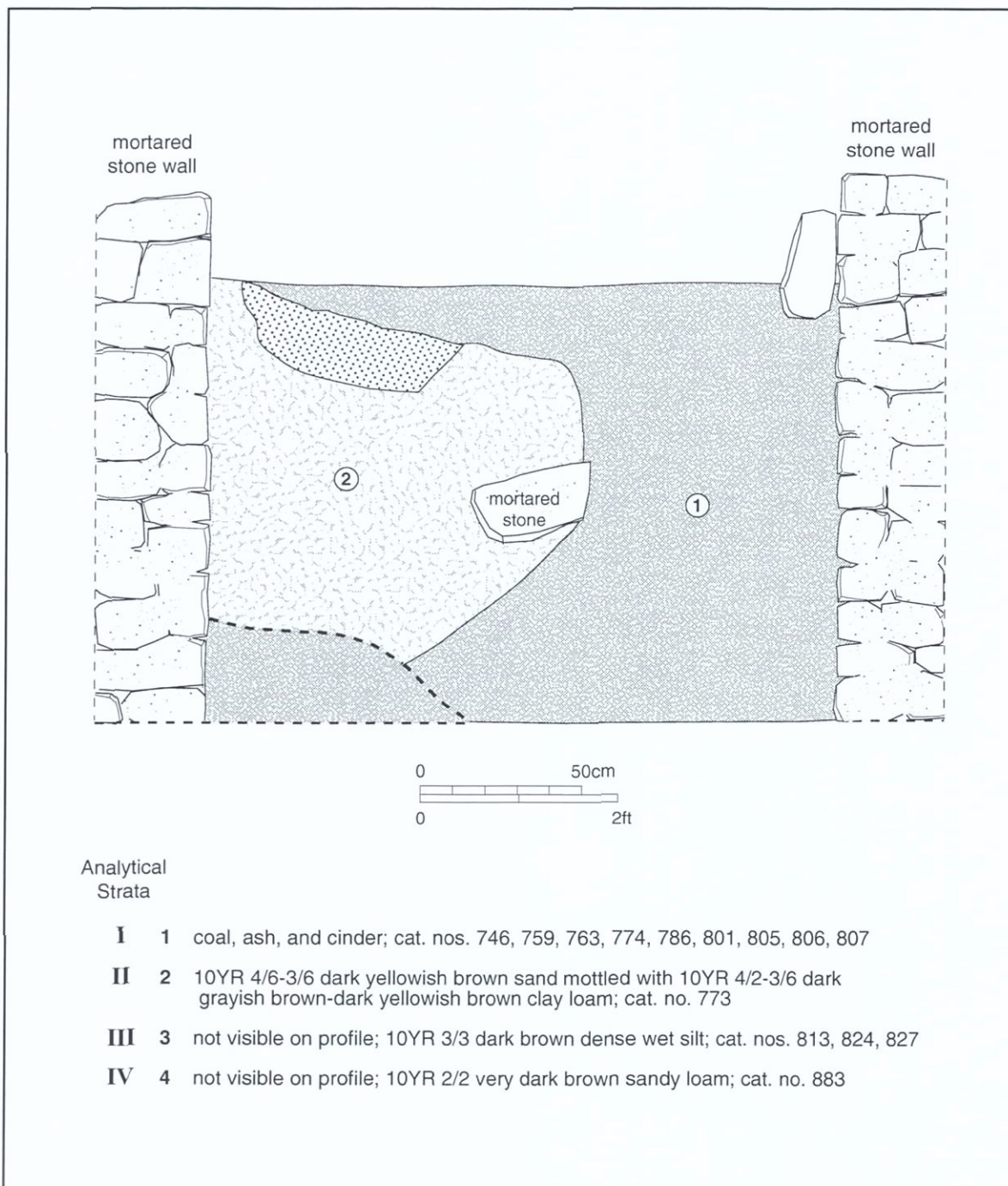
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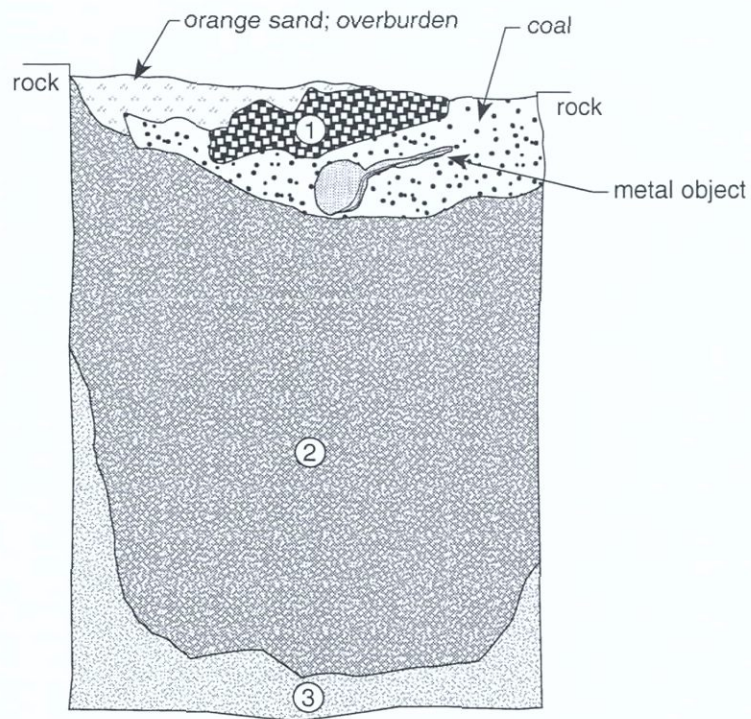
Features AH and AT, Lot 47. Profile of fill layers in western half of each feature.



Feature A1, Lot 47, stone-lined privy. Profile of fill layers in northeastern half.



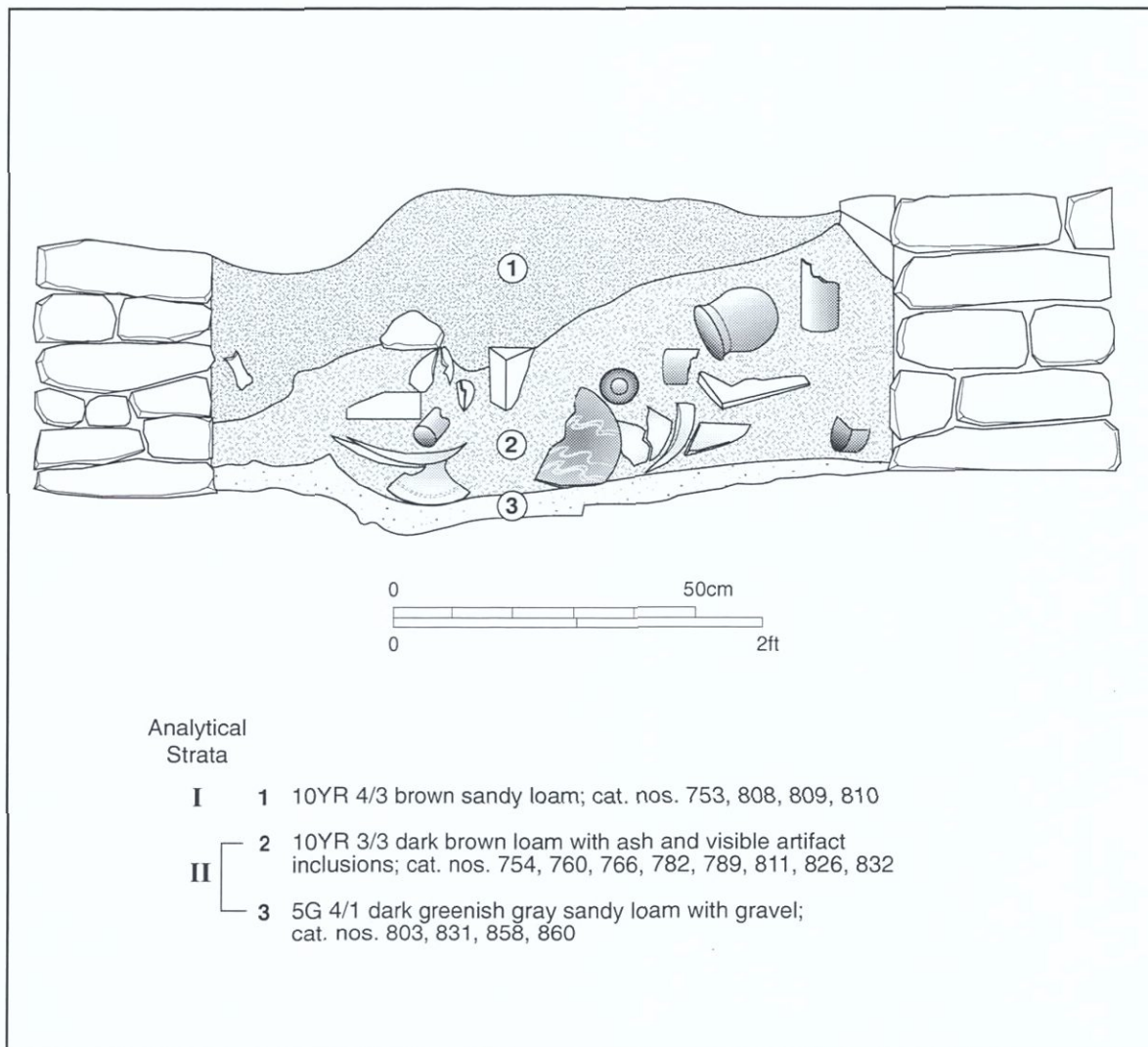
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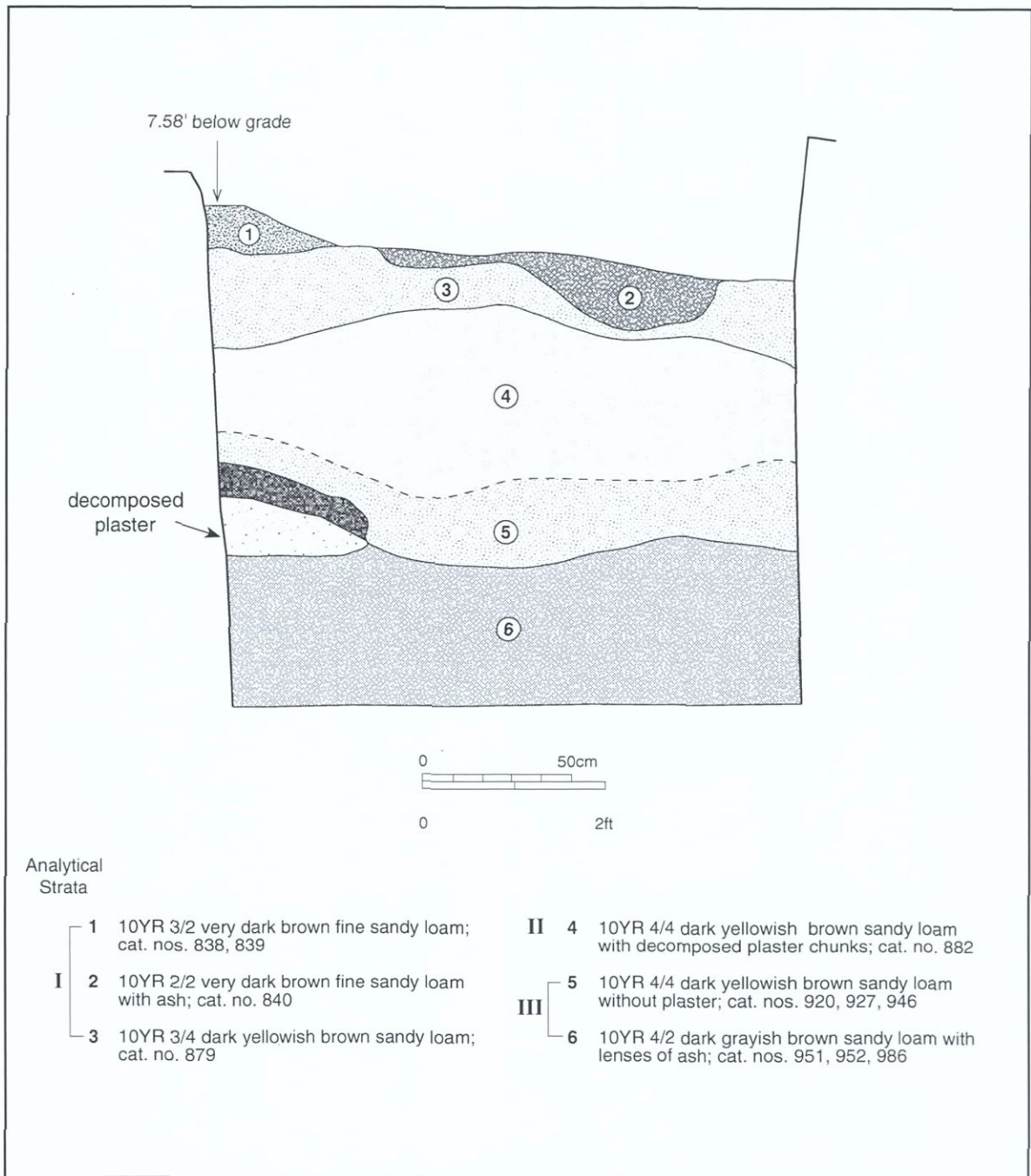
Analytical Strata

- | | | | |
|-----------|---|---|---|
| I | [| 1 | Mottled mixture of 10YR 2/1 black coal-stained silty loam with ash and coal; cat. nos. 815, 816 |
| | | 2 | 2.5YR 4/4 reddish brown clayey loam with ash and coal; cat. nos. 828, 909, 1001 |
| II |] | 3 | 10YR 4/2 dark grayish brown loamy clay; cat. nos. 1000, 1021, 1023 |

Feature AL, Lot 47, stone-lined privy. Profile of fill layers in northern half.



Feature AM, Lot 52, sandstone-lined icehouse. Profile of fill layers in western half.



Feature AN, Lot 34, brick-lined cistern. Profile of fill layers in northern half.

Appendix B
Additional Data on Bottle Embossments
Jesse Ponz

Additional Data on Bottle Embossments

Table 1. Distribution of Local and Imported Products by Feature Deposit.

TPQ	Fea/AS	S	WA	FD	PM	BR	WN	LQ	SC	BE	CO	IN	GL	UN	TO	PER
30	N (IV)	L													0	0.0
30	N (IV)	I		1											1	100.0
34	B (IV)	L													0	0.0
34	B (IV)	I		1											1	100.0
40	B (V)	L													0	0.0
40	B (V)	I		1											1	100.0
40	N (III)	L		1											1	100.0
40	N (III)	I													0	0.0
41	AG (III)	L													0	0.0
41	AG (III)	I			6		5								11	100.0
50	B (III)	L													0	0.0
50	B (III)	I		3									1		4	100.0
50	J (V)	L	1		3	1				1			1	1	8	72.7
50	J (V)	I		2							1				3	27.3
50	AL (II)	L	1								1				2	22.2
50	AL (II)	I			3		1	1			2				7	77.8
57	H (III)	L									1				1	16.7
57	H (III)	I	3			1					1				5	83.3
59	AL (I)			1											1	100.0
59	AL (I)														0	0.0
60	AM (II)	L	1					1							2	66.7
60	AM (II)	I					1								1	33.3
60	AN (III)	L	1												1	50.0
60	AN (III)	I		1											1	50.0
60	AH (I)	L			1						1		1		3	60.0
60	AH (I)	I			2										2	40.0
62	O (III)	L	5		5		3				1	1			15	71.4
62	O (III)	I		1				3			1	1			6	28.6
64	J (II)	L	1						3						4	100.0
64	J (II)	I													0	0.0
70	J (III)	L	7	2	5	2			3	1	1				21	77.8
70	J (III)	I			1	1				1	1		1	1	6	22.2
80	AK (I)	L	1		2										3	75.0
80	AK (I)	I			1										1	25.0
83	Z (I)	L		1											1	50.0
83	Z (I)	I											1		1	50.0
92	AG (I)	L			1								1		2	100.0
92	AG (I)	I													0	0.0
	B (I)	L													0	0.0
	B (I)	I					1								1	100.0

(Key: TPQ = 1800 + no.; Fea = feature; AS = analytical stratum; S = source; L = local; I = import; WA = water; FD = food; PM = patent medicine; BR = beer; WN = wine; LQ = liquor; SC = schnapps; BE = unknown beverage; CO = cosmetics; IN = ink; GL = glass; UN = function unknown; TO = total number of vessels per row; PER = percent of deposit).

Table 2: Distribution of Local and Imported Products by Decade.

DEC	S	WA	FD	PM	BR	WN	LQ	SC	BE	CO	IN	GL	UN	TO	PERCENT
30s	L													0	0.0
30s	I		2											2	100.0
40s	L		1											1	7.7
40s	I		1	6		5								12	92.3
50s	L	5	1	4	2					2			1	15	48.4
50s	I		5	3		1	1			4		2		16	51.6
60s	L	8		6	3			3		2	1	1		24	68.6
60s	I		1	3		3				3	1			11	31.4
70s	L	7	2	5	2			3	1	1				21	77.8
70s	I		1	1					1	1		1	1	6	22.2
80s-	L	1	1	3								1		6	75.0
80s-	I			1		1								2	25.0

(Key: DEC = decade; S = source: L = local, I = import; WA = water; FD = food; PM = patent medicine; BR = beer; WN = wine; LQ = liquor; SC = schnapps; BE = unknown beverage; CO = cosmetics; IN = ink; GL = glass; UN = unknown; TO = total number of vessels per row; PERCENT = percent of deposit).

Appendix C
Faunal Remains from Additional Features
and Analytical Strata on Block 160
Claudia Milne and Pamela Crabtree

Faunal Remains from Additional Features and Analytical Strata on Block 160

Each of the following features has been divided into analytical strata. The bones recovered from each stratum are listed by species and anatomical part. The following abbreviations were used, roughly in the same order the species appears in the tables:

COW\Domestic Cattle; <i>Bos taurus</i>	SHE\Sheep; <i>Ovis aries</i>
GOA\Goat; <i>Capra hircus</i>	S/G\Sheep or Goat; <i>Small caprine</i>
PIG\Pig; <i>Sus scrofa</i>	HOR\Horse; <i>Equus caballus</i>
DOG\Dog; <i>Canis familiaris</i>	CAT\Cat; <i>Felis domesticus</i>
RAB\Rabbit; <i>Oryctolagus cuniculus</i>	LAR\Large artiodactyl
SAR\Small artiodactyl	OXO\Large ungulate
CARN\Carnivore	ROD\Rodent
UNM\Undetermined mammal	FOW\Domestic chicken; <i>Gallus gallus</i>
GOO\Domestic goose; <i>Anser anser</i>	DUC\Mallard / Domestic duck; <i>Anas platyrhynchos</i>
TUR\Turkey; <i>Meleagris gallopavo</i>	PGN\Pigeon; Family <i>Columbidae</i>
FWZ\Fowl-sized bird	GSZ\Goose-sized bird
UNB\Unidentified bird	SUNB\Small perching bird; Order <i>Passeriformes</i>
WOOD\Woodcock; <i>Scolopax minor</i>	DOV\Mourning Dove; <i>Zenaidura macroura</i>
OWL\Barn Owl; <i>Tyto alba</i>	PAR\Parrot species; Order <i>Psittachformes</i>
UNF\Unidentified fish	TOR\Tortoise; <i>Testudo graeca</i>
UNX\Undetermined species	LARGE\Large mammal
MEDIUM\Medium mammal	SUNM\Small unknown mammal
MOUSE\ <i>Mus musculus</i> ; House Mouse	RAT\ <i>Rattus</i> species; Black or Brown Rat
CEBUS\ <i>Cebus</i> species, New World Monkey	SUNF\Small unknown fish
GAD\ <i>Gadidae</i> Family; The Cods	MOR\ <i>Gadus morhua</i> ; Atlantic Cod
POL\ <i>Pollachius virens</i> ; Pollack	HAD\ <i>Melanogrammus aeglefinus</i> ; Haddock
LING\ <i>Molva molva</i> ; Ling	WHITE\ <i>Merlangius merlangus</i> ; Whiting
SPAR\ <i>Sparidae</i> Family; The Porgies	SCUP\ <i>Stenotomus chrysops</i> ; Common Scup
SHEP\ <i>Archosargus porbatoccephalus</i> ; Sheepshead	CLUP\ <i>Clupidae</i> Family; The Herrings
HERR\ <i>Clupea harengus</i> ; True Herring	SHAD\ <i>Alosa sapidissima</i> ; Shad
PLEU\ <i>Pleronectidae</i> Family; The Flounders	FLO\ <i>Pseudopleuronectes americanus</i> ; Winter Flounder
FLUK\Summer Flounder	PLAC\ <i>Hippoglossoides platessoides</i> ; Plaice
LEFT\Indet. Left Eye Flounder	HAL\ <i>Hippoglossus hippoglossus</i> ; Halibut
HIP\ <i>Hippoglossus</i> species	SAL\ <i>Salmonidae</i> Family
SALMO\ <i>Salmo salar</i> ; Atlantic Salmon	RAIN\ <i>Salmo gairdneri</i> ; Rainbow Trout
BROOK\ <i>Salvelinus fontinalis</i> ; Brook Trout	TROUT\Indet. Trout
SERR\Family <i>Serranidae</i> ; The Basses	SBASS\ <i>M. saxatilis</i> , small; Striped Bass
BASS\ <i>Morone saxatilis</i> ; Striped Bass	SEA\ <i>Centropristis striata</i> ; Black Sea Bass
PERCH\ <i>Morone americana</i> ; White Perch	PERC\ <i>Percichthyidae</i> Family; Temperate Basses
BLUE\ <i>Pomatomus saltatrix</i> ; Bluefish	BLACK\ <i>Tautoga onitis</i> ; Blackfish
GREY\ <i>Eutrigla gurnardus</i> ; Grey Gurard	WEAK\ <i>Cynoscion regalis</i> ; Weakfish

Faunal Remains from Additional Features and Analytical Strata on Block 160

SCOM\ <i>Scombridae</i> Family; The Mackerels	MACK\ <i>Scomber scombrus</i> ; Atlantic Mackerel
SPAIN\ <i>Scomberomorus maculatus</i> ; Spanish Mackerel	OYS\ <i>Crassostrea virginica</i> ; Oyster
CLAM\ <i>Mercenaria mercenaria</i> ; Hard-shell Clam	SOFT\ <i>Mya arenaria</i> ; Soft-shell Clam
MUSS\ <i>Mytilis edulis</i> ; Atlantic Blue	SCALP\ <i>Pectinidae</i> Family; Scallop
SNAIL\Indet. Snail	LIMP\ <i>Crepidula</i> species; Slipper Shell
CONC\ <i>Busycon</i> species; Indet. Whelk	UNSH\Indet. Shell Fragment
MUD\Mud shell	CRAB\Order <i>Brachyura</i>
MOON\Moon shell	CORAL\Indet. Coral
BARN\Barnacle	
LOB\ <i>Homarus americanus</i> ; Lobster	
CRUST\Indet. crustacean	
HOMO\ <i>H. sapiens sapiens</i>	
EGG\Indet. Eggshell	

Faunal Remains from Additional Features and Analytical Strata on Block 160

ADDITIONAL FEATURES

Lot 47, Feature AH (stone-lined privy) and Feature AT (wood-lined privy)

Feature AH/AT (AS I), TPQ - 1860

Feature AH/AT was a stone-lined privy that was built over an earlier wood-lined privy. A total of 526 bone fragments and 2.3 pounds of shell were recovered from three analytical strata. The uppermost deposit (AS I), from which 344 mammal, 12 bird (Table 1), and 17 fish (Table 2) bones were recovered, had a TPQ of 1860.

Table 1. Mammals and Birds from AH/AT (AS I)

		COW	SHE	S/G	PIG	CAT	SAR	OXO	ROD	UNM	FOW	TUR	UNB	FWZ	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	8	-	255	-	-	4	-	267
JAW	Mandible	-	-	-	1	-	-	-	-	-	-	-	-	-	1
VC01	Atlas (1st Cervical)	-	-	2	-	-	-	-	-	-	-	-	-	-	2
VC02	Axis (2nd Cervical)	-	-	1	-	-	-	-	-	-	-	-	-	-	1
VC	Cervical vertebra	-	-	2	-	-	2	-	-	-	-	-	-	-	4
VT	Thoracic vertebra	2	-	-	-	-	-	-	-	-	-	-	-	-	2
VL	Lumbar vertebra	-	-	5	-	-	1	2	-	-	-	-	-	-	8
VD	Caudal vertebra	-	-	-	-	1	-	-	-	-	-	-	-	-	1
VS	Sacrum	1	-	-	-	-	-	-	-	-	-	-	-	-	1
VX	Vertebra, indetermin.	-	-	-	-	-	1	2	-	-	-	-	-	-	3
CC	Costal cartilage	-	-	-	-	-	1	-	-	-	-	-	-	-	1
RIB	Rib	2	-	1	1	-	9	-	-	-	-	-	-	-	13
STX	Sternum	-	-	-	-	-	-	-	-	-	-	-	-	1	1
OC	Pelvis	-	-	2	1	-	-	-	-	-	-	-	-	-	3
ILM	Ilium	2	-	-	1	-	-	-	-	-	-	-	-	-	3
ISH	Ischium	-	-	-	2	-	-	-	-	-	-	-	-	-	2
PUB	Pubis	-	-	2	-	-	-	-	-	-	-	-	-	-	2
FEM	Femur	3	2	-	1	-	-	-	2	-	-	-	-	-	8
TIB	Tibia	2	-	1	1	-	-	-	1	-	-	-	-	-	5
SCAP	Scapula	1	-	-	-	-	-	-	-	-	-	1	-	-	2
HUM	Humerus	2	-	-	1	1	-	-	-	-	-	-	-	-	4
RAD	Radius	-	1	-	-	-	-	-	-	-	-	-	-	-	1
ULN	Ulna	1	1	-	1	-	-	-	-	-	-	-	-	-	3
AST	Astragalus	1	-	-	-	-	-	-	-	-	-	-	-	-	1
CAL	Calcaneus	1	-	-	-	-	-	-	-	-	-	-	-	-	1
MAL	Malleolus	1	-	-	-	-	-	-	-	-	-	-	-	-	1
CARU	Ulnar carpal	1	-	-	-	-	-	-	-	-	-	-	-	-	1
MCD	4th metacarpal	-	-	-	1	-	-	-	-	-	-	-	-	-	1
MP	Metapodial	-	-	-	-	1	-	-	-	-	-	-	-	-	1
APH	1st phalanx	-	-	-	1	-	-	-	-	-	-	-	-	-	1
BPH	2nd phalanx	1	-	-	-	-	-	-	-	-	-	-	-	-	1
UM2	Upper 2nd molar	-	-	-	1	-	-	-	-	-	-	-	-	-	1
PHL	Phalanx	-	-	-	-	-	-	-	-	-	-	-	-	4	4
TMT	Tarsometatarsus	-	-	-	-	-	-	-	-	1	-	-	-	1	2
LFRAG	Long bone fragment	-	-	-	-	-	-	3	-	-	-	-	-	-	3
Col. Total		21	4	16	13	3	14	15	3	255	1	1	4	6	356

Table 2. Fish from Feature AH/AT (AS I)

		UNF	GAD	MOR	SPAR	PLEU	SERR	TOTAL
FRAG	Bone Frag.	7	-	-	-	-	-	7
VD	Caudal vertebra	-	-	-	-	-	1	1
PMAX	Premaxilla	-	-	1	-	-	-	1
ETH	Ethmoid	-	-	-	1	-	-	1
PARA	Parasphenoid	-	-	-	1	-	-	1
SUPRA	Supraoccipital	-	-	-	1	-	-	1
DENT	Dentary	-	-	1	-	-	-	1
PREOP	Preopercle	-	-	-	-	1	-	1
ANG	Angular	-	-	1	-	-	-	1
HYOM	Hyomandibular	-	1	-	-	-	-	1
CLEI	Cleithrum	-	-	-	-	1	-	1
Col. Total		7	1	3	3	2	1	17

Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature AH/AT (AS II)

Only 85 bone fragments were recovered from AS II. Nearly all of these were unidentifiable mammal fragments (N = 70). In addition, there was a single cow (N = 1), a sheep/goat (N = 1), a small ungulate (N = 1), and several pig, cat, and rodent bones. There were also 1 fowl, an unidentified bird, and a fowl-sized bird.

Table 3. Mammals and Birds from Feature AH/AT (AS II)

		COW	S/G	PIG	CAT	SAR	OXO	ROD	UNM	FOW	UNB	FWZ	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	69	-	1	-	70
VX	Vertebra, indetermin.	-	-	-	-	-	2	-	-	-	-	-	2
RIB	Rib	-	-	-	-	-	-	-	1	-	-	-	1
OC	Pelvis	-	1	-	-	-	-	-	-	-	-	-	1
FEM	Femur	-	-	1	-	-	-	1	-	-	-	-	2
TIB	Tibia	-	-	-	-	-	-	2	-	-	-	-	2
FIB	Fibula	-	-	-	1	-	-	-	-	-	-	-	1
HUM	Humerus	-	-	-	-	-	-	-	-	-	-	1	1
RAD	Radius	-	-	-	1	-	-	-	-	-	-	-	1
CARU	Ulnar carpal	1	-	-	-	-	-	-	-	-	-	-	1
CPH	3rd phalanx	-	-	1	-	-	-	-	-	-	-	-	1
TBT	Tibiotarsus	-	-	-	-	-	-	-	-	1	-	-	1
LFRAG	Long bone fragment	-	-	-	-	1	-	-	-	-	-	-	1
Col. Total		1	1	2	2	1	2	3	70	1	1	1	85

Feature AH/AT (AS III), TPQ - 1790

The earliest deposit (AS III) in the privy dates to the 1790s. The bones from this level were recovered from the earlier wood-lined privy, Feature AT. A total of 68 mammal (cow, sheep, pig, cat, and rat) bones were recovered from this deposit. In general, no more than one individual of each species was represented in the assemblage. Unusual was the presence of a cattle horn core. Horn cores were also present in Feature AF, associated with another late-eighteenth-century occupation, when tanneries occupied much of Block 160.

Table 4. Mammals and Birds from Feature AH/AT (AS III)

		COW	SHE	PIG	SAR	OXO	UNM	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	45	45
SKL	Skull	-	-	1	-	-	-	1
HC	Horn core	1	-	-	-	-	-	1
JAW	Mandible	-	-	1	-	-	-	1
VX	Vertebra, indetermin.	-	-	-	3	-	-	3
PAT	Patella	1	-	-	-	-	-	1
AST	Astragalus	-	-	1	-	-	-	1
CAL	Calcaneus	-	-	1	-	-	-	1
CENT	Central tarsal	-	-	1	-	-	-	1
TARC	3rd tarsal	-	-	1	-	-	-	1
TARD	4th tarsal	-	-	1	-	-	-	1
MTC	3rd metatarsal	-	-	1	-	-	-	1
MTD	4th metatarsal	-	-	1	-	-	-	1
MC	Main metacarpal (ung)	-	1	-	-	-	-	1
MPG	Lateral (ancillary)	-	-	1	-	-	-	1
APH	1st phalanx	-	-	2	-	-	-	2
BPH	2nd phalanx	-	-	3	-	-	-	3
LFRAG	Long bone fragment	-	-	-	1	1	-	2
Col. Total		2	1	15	4	1	45	68

Faunal Remains from Additional Features and Analytical Strata on Block 160

Lot 47, Feature AI (stone-lined privy)

Feature AI (AS I), TPQ - 1840

Feature AI was a stone-lined privy with three distinct analytical strata from which a total of 1,998 animal bone fragments and 38.8 pounds of shell were recovered. Just a small number of bones (N = 275) were recovered from the upper portion of the feature. Of the total number, 243 were identified as mammal, 32 bones were identified as bird (Table 5), and the remaining six as fish (Table 6).

Table 5. Mammals and Birds from Feature AI (AS I)

	COW	S/G	PIG	DOG	SAR	OXO	ROD	UNM	FOW	UNB	UNX	RAT	FWZ	GSZ	TOTAL
FRAG Bone Frag.	-	-	-	-	-	-	-	187	-	19	11	-	-	-	217
SKL Skull	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
JAW Mandible	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2
VT Thoracic vertebra	1	-	-	-	1	1	-	-	-	-	-	-	-	-	3
VL Lumbar vertebra	1	-	-	1	-	-	2	-	-	-	-	-	-	-	4
VD Caudal vertebra	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
VS Sacrum	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
VX Vertebra, indetermin.	-	-	-	-	-	1	-	-	-	-	-	-	1	1	3
CC Costal cartilage	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
RIB Rib	-	-	-	-	1	-	-	-	-	1	-	-	1	-	3
OC Pelvis	-	-	-	-	-	-	1	-	-	-	-	-	-	1	2
FEM Femur	-	-	-	-	-	-	5	-	-	-	-	-	-	-	5
PAT Patella	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
TIB Tibia	1	1	-	-	-	-	1	-	-	-	-	-	-	-	3
SCAP Scapula	3	-	-	-	-	-	-	-	-	-	-	-	-	-	3
HUM Humerus	4	-	-	-	-	-	-	-	1	-	-	-	1	-	6
ULN Ulna	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
CAL Calcaneus	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CQ Centro-quartal	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
CARD 4th carpal	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MC Main metacarpal (ung)	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
BPH 2nd phalanx	1	-	-	1	-	-	-	-	-	-	-	-	-	-	2
UM Upper molar	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
COR Coracoid	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2
PHL Phalanx	-	-	-	-	-	-	-	-	-	1	-	-	2	-	3
TMT Tarsometatarsus	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
LFRAG Long bone fragment	-	-	-	-	-	4	-	-	-	-	-	-	-	-	4
Col. Total	17	3	2	2	2	6	10	187	4	21	11	3	5	2	275

Table 6. Fish from Feature AI (AS I)

	UNF	LING	PLEU	TOTAL
MAX Maxilla	1	-	-	1
VD Caudal vertebra	1	-	1	2
DENT Dentary	1	1	-	2
QUAD Quadrate	-	-	1	1
Col. Total	3	1	2	6

Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature AI (AS II), TPQ - 1873

The largest assemblage (N = 1408) of animal bones in the feature was recovered from AS II. Although the vast majority (N = 846) were the unidentified fragments of mammal bone, the following species were identified: cattle, sheep and sheep/goat, pig, dog, cat, and rat. Domestic chicken, turkey, duck, and goose comprise the bird assemblage (Table 7), and eleven species of fish were identified (Table 8).

Table 7. Mammals and Birds from Feature AI (AS II)

		COW	SHE	S/G	PIG	DOG	CAT	SAR	OXO	ROD	UNM	FOW	GOO	DUC	TUR	UNB	UNX	RAT	FWZ	GSZ	WOOD	TOTAL	
FRAG	Bone Frag.	-	-	-	-	-	-	-	-	-	842	-	-	-	-	80	9	-	-	-	-	-	931
SKL	Skull	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	-	3
OCIP	Occipital	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LAC	Lacrimal	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
SFRAG	Skull frag.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
HC	Horn core	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
JAW	Mandible	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
VC01	Atlas (1st Cervical)	2	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	4
VC02	Axis (2nd Cervical)	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
VC	Cervical vertebra	-	-	3	-	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	9
VT	Thoracic vertebra	4	-	2	-	-	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	13
VL	Lumbar vertebra	4	-	1	1	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	11
VS	Sacrum	2	-	-	1	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	6
VX	Vertebra, indetermin.	-	-	-	-	-	-	7	3	-	-	-	-	-	-	-	-	-	-	2	5	-	17
CC	Costal cartilage	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
RIB	Rib	40	-	3	1	-	-	37	5	-	4	-	-	-	-	-	-	-	-	4	-	-	94
STX	Sternum	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	3
ACET	Pelvis (w/acetabulum)	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
OC	Pelvis	-	-	-	-	1	1	-	-	2	-	2	-	-	-	-	-	-	1	-	-	-	7
ILM	Ilium	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
ISH	Ischium	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
FEM	Femur	3	-	1	5	1	-	-	-	2	-	1	-	-	-	-	-	-	2	-	-	-	15
TIB	Tibia	2	-	2	3	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	9
FIB	Fibula	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	6
SCAP	Scapula	11	1	5	1	-	-	-	2	-	-	6	-	1	-	-	-	-	-	-	-	-	27
HUM	Humerus	10	1	4	-	-	2	-	-	3	-	7	-	-	2	-	-	-	3	-	-	-	32
RAD	Radius	9	1	2	1	-	-	-	1	-	-	1	-	-	1	-	-	-	3	2	-	-	21
ULN	Ulna	5	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	9
AST	Astragalus	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CAL	Calcaneus	5	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
CQ	Centro- quartal	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MAL	Malleolus	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CARR	Radial Car.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CARI	Interme- diate carpal	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CARU	Ulnar car.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CARD	4th carpal	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CARG	Fused 2nd & 3rd carp	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MT	Main meta- tarsal (ung)	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MC	Main meta- carpal (ung)	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 7. Mammals and Birds from Feature AI (AS II) (continued)

		COW	SHE	S/G	PIG	DOG	CAT	SAR	OXO	ROD	UNM	FOW	GOO	DUC	TUR	UNB	UNX	RAT	FWZ	GSZ	WOOD	TOTAL	
MCC	3rd meta-carpal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MP	Metapodial	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
APH	1st phalanx	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
BPH	2nd phalanx	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PSES	Proximal sesamoid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DSES	Distal sesamoid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
TFRAG	Tooth frag.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LC	Lower canine	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UI	Upper incisor	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DUP3	Deciduous upper 3rd	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
DLP	Deciduous lower prem.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DUP	Deciduous upper prem.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LM	Lower molar	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UM	Upper molar	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
SYN	Synsacrum	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	3	-	-	5
COR	Coracoid	-	-	-	-	-	-	-	-	-	-	6	-	2	2	-	-	-	-	-	-	-	10
FUR	Clavicle (Furcula)	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
CMC	Carpometacarpus	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	-	1	-	4
PHL	Phalanx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	6	-	-	-	7
TBT	Tibiotarsus	-	-	-	-	-	-	-	-	-	-	1	2	-	-	1	-	-	6	-	-	-	10
TMT	Tarso-metatarsus	-	-	-	-	-	-	-	-	-	-	2	1	-	1	1	-	-	3	-	-	-	8
LFRAG	Long bone fragment	-	-	-	-	-	-	1	12	-	-	-	-	-	-	1	-	-	-	-	-	-	14
Col. Total		121	6	29	32	2	11	54	34	9	846	33	3	3	7	84	9	1	39	8	2	1333	

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 8. Fish from Feature AI (AS II)

		UNF	GAD	MOR	LING	SPAR	PLEU	LEFT	SERR	BASS	SEA	BLUE	BLACK	GREY	TOTAL
FRAG	Bone Frag.	10	-	-	-	-	-	-	-	-	-	-	-	-	10
FRNT	Frontal	-	-	-	-	-	-	-	-	-	1	-	-	-	1
SFRAG	Skull frag.	10	-	-	-	-	-	-	-	-	-	-	-	-	10
VT	Thoracic vertebra	-	1	-	-	-	-	-	-	-	1	1	-	-	3
VD	Caudal vertebra	3	-	1	-	2	-	2	1	4	5	-	1	3	22
VX	Vertebra, indetermin.	1	-	-	-	-	-	-	-	-	-	-	-	-	1
SCAP	Scapula	-	-	-	-	-	-	-	1	-	-	-	-	-	1
CER	Ceratohyal	-	-	-	-	-	-	-	-	-	1	-	-	-	1
PMAX	Premaxilla	-	-	-	-	1	-	-	-	-	-	-	-	-	1
PARA	Parasphenoid	-	-	-	-	1	1	-	2	-	-	-	-	-	4
OPIS	Opisthotic	-	1	-	-	-	-	-	-	-	-	-	-	-	1
NAS	Nasal	-	-	1	-	-	-	-	-	-	-	-	-	-	1
DENT	Dentary	1	-	-	1	-	-	-	-	-	-	-	-	-	2
ANG	Angular	-	1	-	-	-	-	-	-	-	1	-	-	-	2
OPER	Opercle	-	-	-	-	-	-	-	2	-	-	-	-	-	2
QUAD	Quadrate	-	-	-	-	-	-	-	-	-	1	-	-	-	1
HYOM	Hyomandibular	-	-	-	-	-	1	-	-	-	1	-	-	-	2
SPINE	Indet. Spine/Ray	10	-	-	-	-	-	-	-	-	-	-	-	-	10
Col. Total		35	3	2	1	4	2	2	6	4	11	1	1	3	75

Feature AI (AS III), TPQ - 1855

There were 309 bone fragments recovered from the lowest deposit within Feature AI (AS III). A total of 226 were identified as mammal. Species present include cattle, sheep/goat, and pig. There were 52 bird bones (Table 9) and 31 bones identified as fish (Table 10).

Table 9. Mammals and Birds from Feature AI (AS III)

		COW	S/G	PIG	SAR	OXO	ROD	UNM	FOW	GOO	DUC	TUR	UNB	UNX	FWZ	GSZ	TOTAL
FRAG	Bone Frag	-	-	-	-	-	-	148	-	-	-	-	24	1	-	-	173
OCIP	Occipital	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
ZYG	Zygomatic/Malar	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SFRAG	Skull frag.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MAX	Maxilla	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
VC01	Atlas (1st Cervical)	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
VC02	Axis (2nd Cervical)	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
VC	Cervical vertebra	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	4
VT	Thoracic vertebra	1	-	2	1	-	-	-	-	-	-	-	-	-	-	-	4
VL	Lumbar vertebra	2	-	1	2	-	-	-	-	-	-	-	-	-	-	-	5
VS	Sacrum	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
VX	Vertebra, indetermin.	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	4
CC	Costal cartilage	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
RIB	Rib	9	2	2	14	1	-	2	-	-	-	-	-	-	3	-	33
STX	Sternum	-	-	1	-	-	-	-	1	1	-	-	-	-	3	1	7
OC	Pelvis	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
ISH	Ischium	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	3
FEM	Femur	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2
TIB	Tibia	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
FIB	Fibula	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
SCAP	Scapula	2	-	-	-	1	-	-	-	-	-	-	-	-	1	-	4
HUM	Humerus	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	3
RAD	Radius	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
ULN	Ulna	-	2	-	-	-	1	-	2	-	-	-	-	-	-	-	5
MP	Metapodial	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
BPH	2nd phalanx	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
LI	Lower incisor	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LC	Lower canine	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 9. Mammals and Birds from Feature AI (AS III) (continued)

		COW	S/G	PIG	SAR	OXO	ROD	UNM	FOW	GOO	DUC	TUR	UNB	UNX	FWZ	GSZ	TOTAL
LPM4	Lower 4th premolar	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
COR	Coracoid	-	-	-	-	-	-	-	1	-	-	1	-	-	1	-	3
FUR	Clavicle (Furcula)	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
CMC	Carpometacarpus	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	3
PHL	Phalanx	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3
TBT	Tibiotarsus	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Col. Total		28	7	14	22	4	1	150	6	1	2	2	24	1	11	5	278

Table 10. Fish from Feature AI (AS III)

		UNF	MOR	LING	CLUP	PLEU	SERR	SEA	BLUE	TOTAL
FRNT	Frontal	-	-	-	2	-	1	-	-	3
SFRAG	Skull frag.	3	-	-	2	-	-	-	-	5
VD	Caudal vertebra	1	-	-	-	-	-	1	1	3
VX	Vertebra, indetermin.	1	-	-	-	-	-	-	-	1
CER	Ceratohyal	-	-	-	-	-	-	1	-	1
PREOP	Preopercle	-	-	-	-	1	-	-	-	1
PAL	Palatine	-	-	-	-	-	-	1	-	1
QUAD	Quadrate	-	-	-	-	-	2	-	-	2
POST	Post temporal	-	1	-	-	-	-	-	-	1
CLEI	Cleithrum	-	-	1	-	-	1	-	-	2
SPINE	Indet. Spine/Ray	11	-	-	-	-	-	-	-	11
Col. Total		16	1	1	4	1	4	3	1	31

Lot 47, Feature AK (stone-lined privy)

Feature AK is another stone-lined privy that produced a small faunal assemblage. Just 9.7 pounds of oyster and clam shells were recovered along with a total of 144 bone fragments identified as bird and mammal. There was no fish bone recovered from AS I - III.

Table 11. Mammals and Birds from Feature AK (AS I)

		COW	SHE	S/G	PIG	CAT	SAR	OXO	UNM	GOO	UNB	HUMAN	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	1	41	-	3	-	45
HC	Horn core	1	-	-	-	-	-	-	-	-	-	-	1
VT	Thoracic vertebra	1	-	-	1	-	-	-	-	-	-	-	2
VX	Vertebra, indetermin.	-	-	-	-	-	-	1	-	-	-	-	1
RIB	Rib	2	-	1	-	-	3	-	-	-	-	-	6
FEM	Femur	1	-	-	-	-	-	-	-	-	-	-	1
TIB	Tibia	1	-	3	-	-	-	-	-	-	-	-	4
HUM	Humerus	-	1	-	1	-	-	-	-	-	-	-	2
MC	Main metacarpal (ung)	-	-	1	-	-	-	-	-	-	-	-	1
TFRAG	Tooth frag.	-	-	-	1	-	-	-	-	-	-	-	1
LI	Lower incisor	-	-	-	1	-	-	-	-	-	-	-	1
UPM	Upper premolar	-	-	-	-	1	-	-	-	-	-	-	1
UM	Upper molar	-	-	-	-	-	-	-	-	-	-	1	1
COR	Coracoid	-	-	-	-	-	-	-	-	1	-	-	1
LFRAG	Long bone fragment	-	-	-	-	-	4	3	-	-	-	-	7
Col. Total		6	1	5	4	1	7	5	41	1	3	1	75

Table 12. Shellfish from Feature AK (AS I)

		OYS	CLAM	TOTAL
HALF	Shell including hinge	21	12	33
SHL	Shell fragment	35	10	45
Col. Total		56	22	78

Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature AK (AS II)

Table 13. Mammals from Feature AK (AS II)

COWOXOUNMTOTAL					
FRAG	Bone Frag.	-	-	6	6
VL	Lumbar vertebra	1	-	-	1
RIB	Rib	-	1	-	1
CARI	Intermediate carpal	1	-	-	1
Col. Total		2	1	6	9

Table 14. Shellfish from Feature AK (AS II)

		OYS	CLAM	TOTAL
HALF	Shell including hinge	3	1	4
SHL	Shell fragment	6	2	8
Col. Total		9	3	12

Feature AK (AS III)

Table 15. Mammals from Feature AK (AS III)

COWSARUNMTOTAL					
FRAG	Bone Frag.	-	-	6	6
RIB	Rib	1	1	-	2
TIB	Tibia	1	-	-	1
HUM	Humerus	1	-	-	1
Col. Total		3	1	6	10

Table 16. Shellfish from Feature AK (AS III)

		OYS	CLAM	TOTAL
HALF	Shell including hinge	27	2	29
Col. Total		27	2	29

Feature AK (AS IV), TPQ - 1880

Table 17. Mammals and Birds from Feature AK (AS IV)

		PIG	CAT	SAR	OXO	UNM	FOW	TUR	UNB	UNX	FWZ	GSZ	TOTAL
FRAG	Bone Frag.	-	-	-	-	5	-	-	4	3	-	-	12
SKL	Skull	-	1	-	-	-	-	-	-	-	-	-	1
VT	Thoracic vertebra	2	-	1	-	-	-	-	-	-	-	-	3
VX	Vertebra, indetermin.	-	-	1	-	-	-	-	-	-	-	1	2
RIB	Rib	2	2	2	6	-	-	-	-	-	2	-	14
OC	Pelvis	-	-	-	-	-	3	-	-	-	-	-	3
ILM	Ilium	-	1	-	-	-	-	-	-	-	-	-	1
ISH	Ischium	-	1	-	-	-	-	-	-	-	-	-	1
FEM	Femur	1	1	-	-	-	-	-	-	-	-	-	2
TIB	Tibia	-	1	-	-	-	-	-	-	-	-	-	1
HUM	Humerus	-	-	-	-	-	-	1	-	-	-	-	1
RAD	Radius	-	2	-	-	-	-	-	-	-	1	-	3
ULN	Ulna	1	1	-	-	-	1	-	-	-	-	-	3
SYN	Synsacrum	-	-	-	-	-	1	-	-	-	-	-	1
FUR	Clavicle (Furcula)	-	-	-	-	-	1	-	-	-	-	-	1
CMC	Carpometacarpus	-	-	-	-	-	1	-	-	-	-	-	1
Col. Total		6	10	4	6	5	7	1	4	3	3	1	50

Faunal Remains from Additional Features and Analytical Strata on Block 160

Lot 47 (lot 3/4), Feature AL (stone-lined privy)

A total of 4.0 pounds of shell and 636 mammal and bird bones were recovered from Feature AL.

Table 18. Mammals and Birds from Feature AL

	COW	S/G	PIG	CAT	SAR	OXO	ROD	UNM	FOW	GOO	DUC	TUR	UNB	UNX	RAT	FWZ	GSZ	TOTAL
FRAG Bone Frag.	-	-	-	-	-	3	-	285	-	-	-	-	19	7	-	-	-	314
SKL Skull	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2
SFRAG Skull frag.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
JAW Mandible	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	4
VC02 Axis (2nd Cervical)	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
VC Cervical vertebra	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2
VT Thoracic vertebra	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	4
VL Lumbar vertebra	6	3	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	13
VS Sacrum	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	3
VX Vertebra, indetermin.	-	-	1	-	1	4	-	-	-	-	-	-	-	-	-	2	3	11
RIB Rib	12	3	-	11	19	5	2	-	-	-	-	-	-	-	-	6	1	59
STX Sternum	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	3
ACET Pelvis (w/acetabulum)	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
OC Pelvis	-	1	1	-	-	-	4	-	1	-	-	-	-	-	-	5	-	12
ILM Ilium	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
ISH Ischium	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
FEM Femur	-	3	3	-	-	-	4	-	3	-	-	-	-	-	-	1	-	14
TIB Tibia	-	1	7	-	-	-	5	-	-	-	-	-	-	-	-	-	-	13
FIB Fibula	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
SCAP Scapula	-	1	-	-	-	-	-	-	5	1	-	-	-	-	-	-	-	7
HUM Humerus	1	-	-	2	-	-	1	-	3	-	-	-	-	-	-	1	-	8
RAD Radius	2	1	3	-	-	-	1	-	-	-	-	-	-	-	-	1	-	8
ULN Ulna	2	1	3	1	-	-	1	-	3	-	-	-	-	-	-	1	-	12
AST Astragalus	1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
CAL Calcaneus	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
CENT Central tarsal	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
TARD 4th tarsal	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
TAR Tarsal	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CARR Radial carpal	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
CARI Intermediate carpal	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CARU Ulnar carpal	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
CARC 3rd carpal	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CARD 4th carpal	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MTC 3rd metatarsal	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MTD 4th metatarsal	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
MCC 3rd metacarpal	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
MCD 4th metacarpal	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
MP Metapodial	-	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
MPG Lateral (ancillary)	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
APH 1st phalanx	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
BPH 2nd phalanx	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
CPH 3rd phalanx	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
LI Lower incisor	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
COR Coracoid	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	3
CMC Carpometacarpus	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	2
PHL Phalanx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
TBT Tibiotarsus	-	-	-	-	-	-	-	-	4	-	1	-	-	-	-	1	-	6
TMT Tarsometatarsus	-	-	-	-	-	-	-	-	2	-	-	2	-	-	-	-	-	4
LFRAG Long bone fragment	-	-	-	-	6	14	-	-	-	-	-	-	3	-	-	-	-	23
Col. Total	31	21	113	16	29	31	21	285	26	1	1	3	22	7	6	19	4	636

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 19. Fish and Shellfish from Feature AL

	UNF	GAD	MOR	SHAD	SBASS	MACK	OYS	CLAM	SCALP	MOON	TOTAL
FRAG Bone Frag.	5	-	-	-	-	-	-	-	-	-	5
MAX Maxilla	-	-	-	-	1	-	-	-	-	-	1
PVD Precaudal vertebra	-	-	-	-	-	1	-	-	-	-	1
VD Caudal vertebra	-	-	-	-	-	2	-	-	-	-	2
VX Vertebra, indetermin.	-	1	-	-	-	-	-	-	-	-	1
COR Coracoid	-	1	-	-	-	-	-	-	-	-	1
PREOP Preopercle	-	-	-	1	-	-	-	-	-	-	1
ANG Angular	-	-	-	-	1	-	-	-	-	-	1
OPER Opercle	-	-	-	-	1	-	-	-	-	-	1
PTCLE Postcleithrum	-	-	1	-	-	-	-	-	-	-	1
SPINE Indet. Spine/Ray	6	-	-	-	-	-	-	-	-	-	6
HALF Shell including hinge	-	-	-	-	-	-	3	53	1	-	57
SHL Shell fragment	-	-	-	-	-	-	14	71	-	-	85
WHL Whole Shell	-	-	-	-	-	-	-	-	-	1	1
Col. Total	11	2	1	1	3	3	17	124	1	1	164

ADDITIONAL ANALYTICAL STRATA

Lot 6, Feature B (stone-lined privy)

Feature B (AS I), TPQ - 1903

Table 20. Mammals and Birds from Feature B (AS I)

	COW	PIG	SAR	OXO	ROD	UNM	FOW	FWZ	TOTAL
FRAG Bone Frag.	-	-	-	-	-	26	-	-	26
VT Thoracic vertebra	-	-	1	-	-	-	-	-	1
VL Lumbar vertebra	-	-	-	-	2	-	-	-	2
VD Caudal vertebra	-	1	-	-	1	-	-	-	2
RIB Rib	-	1	4	-	-	-	-	-	5
STX Sternum	-	-	-	-	-	-	-	1	1
OC Pelvis	-	-	-	-	2	-	-	-	2
FEM Femur	-	-	-	-	2	-	-	-	2
TIB Tibia	-	-	-	-	1	-	-	-	1
SCAP Scapula	-	1	-	-	-	-	-	-	1
HUM Humerus	-	-	-	-	2	-	-	-	2
ULN Ulna	-	-	-	-	1	-	1	-	2
CAL Calcaneus	2	-	-	-	-	-	-	-	2
MCD 4th metacarpal	-	1	-	-	-	-	-	-	1
LFRAG Long bone fragment	-	-	-	1	-	-	-	-	1
Col. Total	2	4	5	1	11	26	1	1	51

Table 21. Fish and Shellfish from Feature B (AS I)

	UNF	OYS	CLAM	MUSS	TOTAL
BRAY Branchiostegal Ray	1	-	-	-	1
HALF Shell incl hinge	-	3	-	1	4
SHL Shell fragment	-	2	8	-	10
Col. Total	1	5	8	1	15

Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature B (AS II), TPQ - 1873

Table 22. Mammals from Feature B (AS II)

		COW	SHE	S/G	PIG	DOG	CAT	SAR	OXO	ROD	UNM	RAT	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	-	-	328	-	328
SKL	Skull	-	-	-	-	-	-	-	-	1	-	-	1
FRNT	Frontal	-	-	-	-	-	1	-	-	-	-	-	1
TEMP	Temporal	-	-	-	1	-	-	-	-	-	-	-	1
LAC	Lacrimal	-	-	-	1	-	-	-	-	-	-	-	1
MAX	Maxilla	-	-	1	1	-	-	-	-	1	-	1	4
JAW	Mandible	-	-	-	2	1	-	-	-	1	-	12	16
VC01	Atlas (1st Cervical)	-	-	-	2	-	-	-	-	1	-	-	3
VC02	Axis (2nd Cervical)	-	-	-	-	-	-	-	-	1	-	-	1
VC	Cervical vertebra	1	-	3	-	1	-	-	1	-	-	-	6
VT	Thoracic vertebra	1	-	3	1	-	-	-	2	1	-	-	8
VL	Lumbar vertebra	5	-	4	-	-	-	3	1	-	1	-	14
VD	Caudal vertebra	-	-	-	1	-	-	-	-	1	-	-	2
VS	Sacrum	4	-	-	-	-	-	-	-	1	-	-	5
VX	Vertebra, indetermin.	-	-	1	-	-	-	4	1	-	-	-	6
RIB	Rib	8	-	6	12	1	1	51	2	2	-	-	83
OC	Pelvis	-	-	-	1	-	1	2	-	10	-	-	14
ILM	Ilium	1	-	4	1	-	1	-	-	-	-	-	7
ISH	Ischium	1	-	1	1	-	1	-	-	-	-	-	4
PUB	Pubis	-	-	2	1	-	-	-	-	-	-	-	3
FEM	Femur	-	-	3	6	-	-	-	-	12	-	-	21
TIB	Tibia	2	-	-	2	-	-	-	-	11	-	-	15
FIB	Fibula	-	-	-	1	-	-	-	-	-	-	-	1
SCAP	Scapula	2	1	1	-	-	1	-	3	1	-	-	9
HUM	Humerus	-	-	5	3	-	2	-	-	7	-	-	17
RAD	Radius	1	1	3	2	-	1	-	-	1	-	-	9
ULN	Ulna	1	-	2	2	-	1	-	-	-	-	-	6
AST	Astragalus	1	-	-	-	1	-	-	-	-	-	-	2
CAL	Calcaneus	-	-	-	3	1	-	-	-	-	-	-	4
CARR	Radial Carpal	1	-	-	-	-	-	-	-	-	-	-	1
CARI	Intermediate carpal	1	-	-	-	-	-	-	-	-	-	-	1
MCC	3rd metacarpal	-	-	-	2	-	-	-	-	-	-	-	2
MP	Metapodial	-	-	-	1	6	1	-	-	-	-	-	8
MPG	Lateral (ancillary)	-	-	-	7	-	-	-	-	-	-	-	7
APH	1st phalanx	-	-	-	6	-	-	-	-	-	-	-	6
BPH	2nd phalanx	-	-	-	2	-	-	-	-	-	-	-	2
CPH	3rd phalanx	-	-	-	3	1	-	-	-	-	-	-	4
LI	Lower incisor	-	-	-	1	-	-	-	-	-	-	-	1
DLI	Deciduous lower inci.	-	-	-	2	-	-	-	-	-	-	-	2
LC	Lower canine	-	-	-	1	-	-	-	-	-	-	-	1
UI	Upper incisor	-	-	-	-	-	-	-	-	2	-	-	2
DUI	Deciduous upper inci.	-	-	-	1	-	-	-	-	-	-	-	1
M	Molar	-	-	-	1	-	-	-	-	-	-	-	1
LFRAG	Long bone fragment	-	-	-	-	-	-	1	4	-	-	-	5
Col. Total		30	2	39	71	12	11	61	14	54	329	13	636

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 23. Birds from Feature B (AS II)

		FOW	GOO	DUC	TUR	FWZ	GSZ	PGN	UNB	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	14	14
SKL	Skull	1	-	-	1	-	-	-	-	2
MAX	Maxilla	1	-	-	-	-	-	-	-	1
VX	Vertebra, indetermin.	-	-	-	-	5	2	-	1	8
RIB	Rib	-	-	-	-	1	-	-	2	3
STX	Sternum	2	-	1	-	4	-	-	-	7
OC	Pelvis	1	-	-	-	1	-	-	-	2
FEM	Femur	1	-	1	1	-	-	-	-	3
FIB	Fibula	1	-	-	1	-	-	-	-	2
SCAP	Scapula	3	1	1	-	-	-	-	-	5
HUM	Humerus	2	-	-	-	3	-	1	-	6
RAD	Radius	2	-	-	-	1	-	-	-	3
SYN	Synsacrum	3	-	-	-	1	-	-	-	4
COR	Coracoid	3	-	2	-	-	-	-	-	5
FUR	Clavicle (Furcula)	1	-	1	-	-	-	-	-	2
CMC	Carpometacarpus	3	-	-	1	-	-	-	-	4
PHL	Phalanx	-	-	-	-	4	-	-	-	4
TBT	Tibiotarsus	1	-	-	1	-	-	-	-	2
TMT	Tarsometatarsus	2	-	1	-	-	-	-	-	3
Col. Total		27	1	7	5	20	2	1	17	80

Table 24. Fish from Feature B (AS II)

		UNF	GAD	MOR	SPAR	HAD	SHAD	PLEU	SBASS	SERR	SEA	TOTAL
FRAG	Bone Frag.	7	-	-	-	-	-	-	-	-	-	7
SFRAG	Skull frag.	3	2	-	-	-	-	-	-	-	-	5
MAX	Maxilla	-	-	-	1	-	-	-	-	-	1	2
VT	Thoracic vertebra	-	1	-	1	-	-	-	-	-	-	2
VD	Caudal vertebra	-	2	1	9	2	1	-	1	-	1	17
VX	Vertebra, indetermin.	1	-	-	-	-	-	-	-	-	-	1
RIB	Rib	17	-	-	-	-	-	-	-	-	-	17
SCAP	Scapula	-	-	-	1	-	-	-	-	-	-	1
CER	Ceratohyal	-	-	-	-	-	-	-	-	1	-	1
PMAX	Premaxilla	-	-	-	2	-	-	-	-	-	-	2
PRO	Prootic	-	-	-	1	-	-	-	-	-	-	1
DENT	Dentary	-	-	-	1	-	-	-	-	-	-	1
PREOP	Preopercle	-	-	-	2	-	-	-	-	-	-	2
ANG	Angular	-	-	-	1	-	-	-	-	-	-	1
OPER	Opercle	-	-	-	3	-	-	-	-	-	-	3
INOP	Interopercle	-	-	-	1	-	-	-	-	-	-	1
BRAY	Branchiostegal Ray	1	-	-	-	-	-	-	-	-	-	1
PAL	Palatine	-	-	-	1	-	-	-	-	-	-	1
META	Metapterygoid	-	-	-	1	-	-	-	-	-	-	1
QUAD	Quadrate	-	-	-	1	-	-	-	-	-	-	1
HYOM	Hyomandibular	-	1	-	2	-	-	-	-	-	-	3
POST	Post temporal	-	-	-	1	2	-	-	-	-	-	3
SPCLE	Supracleithrum	-	-	-	1	-	-	-	-	-	-	1
BASIP	Basipterygium	-	-	-	-	-	-	1	-	-	-	1
PVD	Precaudal Vertebrae	-	-	-	-	3	-	-	-	-	-	3
ULT	Ultimate Vert.	-	-	-	2	-	-	-	-	-	-	2
SPINE	Indet. Spine/Ray	10	-	-	-	-	-	-	-	-	-	10
Col. Total		39	6	1	32	7	1	1	1	1	2	91

Table 25. Shellfish from Feature B (AS II)

		OYS	CLAM	MUSS	SCALP	TOTAL
HALF	Shell incl hinge	29	18	8	1	56
SHL	Shell fragment	68	56	32	-	156
Col. Total		97	74	40	1	212

Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature B (AS III), TPQ - 1850

Table 26. Mammals from Feature B (AS III)

		COW	SHE	S/G	PIG	DOG	GAT	ROD	UNM	RAT	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	289	-	289
SKL	Skull	-	-	-	1	1	-	-	-	-	2
OCIP	Occipital	-	-	-	-	1	-	-	-	-	1
TEMP	Temporal	-	-	-	-	1	-	-	-	-	1
INC	Incisive	-	-	1	-	-	-	-	-	-	1
SFRAG	Skull frag.	-	-	-	-	1	-	-	-	-	1
MAX	Maxilla	-	-	-	-	1	-	-	-	-	1
JAW	Mandible	-	-	-	3	2	-	-	-	1	6
VC01	Atlas (1st Cervical)	-	-	-	-	1	-	1	-	-	2
VC02	Axis (2nd Cervical)	-	-	-	-	1	-	-	-	-	1
VC	Cervical vertebra	1	-	1	-	6	-	-	-	-	8
VT	Thoracic vertebra	2	-	1	-	13	-	-	-	-	16
VL	Lumbar vertebra	3	-	1	2	12	-	-	-	-	18
VD	Caudal vertebra	-	-	-	-	4	-	-	-	-	4
VS	Sacrum	-	-	-	1	1	-	-	-	-	2
VX	Vertebra, indetermin.	-	-	-	-	9	-	2	-	-	11
RIB	Rib	4	-	7	1	55	-	-	-	-	67
STX	Sternum	1	-	-	-	1	-	-	-	-	2
OC	Pelvis	-	-	2	-	2	1	-	-	-	5
ILM	Ilium	-	-	1	-	1	-	-	-	-	2
ISH	Ischium	-	-	1	1	-	-	-	-	-	2
PUB	Pubis	1	-	-	-	-	-	-	-	-	1
FEM	Femur	1	-	1	4	4	-	-	-	-	10
PAT	Patella	1	-	1	1	-	-	-	-	-	3
TIB	Tibia	2	-	2	3	5	-	-	-	-	12
FIB	Fibula	-	-	-	1	4	-	-	-	-	5
SCAP	Scapula	1	2	-	4	2	-	-	-	-	9
HUM	Humerus	-	2	-	-	3	-	1	-	-	6
RAD	Radius	-	1	1	-	5	-	-	-	-	7
ULN	Ulna	-	1	1	-	3	-	-	-	-	5
AST	Astragalus	-	-	2	-	3	-	-	-	-	5
CAL	Calcaneus	2	1	-	1	3	-	-	-	-	7
MAL	Malleolus	-	-	1	-	-	-	-	-	-	1
TAR	Tarsal	-	-	-	-	1	-	-	-	-	1
CAR	Carpal	-	-	-	-	1	-	-	-	-	1
CARR	Radial Carpal	1	-	-	-	-	-	-	-	-	1
CARI	Intermediate carpal	2	-	-	-	-	-	-	-	-	2
CARG	Fused 2nd & 3rd carp.	1	-	-	-	-	-	-	-	-	1
MT	Main metatarsal (ung)	-	-	1	-	-	-	-	-	-	1
MP	Metapodial	-	-	-	-	27	-	-	-	-	27
MPG	Lateral (ancillary)	-	-	-	2	1	-	-	-	-	3
APH	1st phalanx	-	-	-	4	18	-	-	-	-	22
BPH	2nd phalanx	-	-	-	2	5	-	-	-	-	7
CPH	3rd phalanx	-	-	-	4	1	-	-	-	-	5
PSES	Proximal sesamoid	-	-	-	-	1	-	-	-	-	1
TFRAG	Tooth frag.	-	-	-	1	-	-	-	-	-	1
LI	Lower incisor	-	-	3	3	-	-	-	-	-	6
LC	Lower canine	-	-	-	3	2	-	-	-	-	5
DUI	Deciduous upper incisor	-	-	-	-	1	-	-	-	-	1
UC	Upper canine	-	-	-	1	2	-	-	-	-	3
DUC	Deciduous upper canine	-	-	-	-	2	-	-	-	-	2
DLP4	Deciduous lower 4th	-	-	-	-	2	-	-	-	-	2
DUP3	Deciduous upper 3rd	-	-	-	-	1	-	-	-	-	1
DUP4	Deciduous upper 4th	-	-	-	-	1	-	-	-	-	1

Table 26. Mammals from Feature B (AS III) (continued)

		COW	SHE	S/G	PIG	DOG	CAT	ROD	UNM	RAT	TOTAL
LPM2	Lower 2nd premolar	1	-	-	-	-	-	-	-	-	1
UPM3	Upper 3rd premolar	-	-	-	1	-	-	-	-	-	1
UPM4	Upper 4th premolar	-	-	-	1	1	-	-	-	-	2
UPM	Upper premolar	-	-	-	2	-	-	-	-	-	2
UM1	Upper 1st molar	-	-	-	1	1	-	-	-	-	2
UM2	Upper 2nd molar	-	-	-	1	-	-	-	-	-	1
UM3	Upper 3rd molar	-	-	-	1	-	-	-	-	-	1
LFrag	Long bone fragment	-	-	-	-	-	-	-	1	-	1
Col. Total		24	7	28	50	213	1	4	290	1	618

Table 27. Birds from Feature B (AS III)

		FOW	TUR	FWZ	GSZ	UNB	TOTAL
FRAG	Bone Frag.	-	-	-	-	5	5
SKL	Skull	1	-	-	-	-	1
MAX	Maxilla	2	-	-	-	-	2
VX	Vertebra, indetermin.	2	-	4	1	2	9
RIB	Rib	2	-	1	-	-	3
STX	Sternum	-	-	1	-	-	1
OC	Pelvis	2	-	2	-	-	4
SCAP	Scapula	1	-	-	-	-	1
HUM	Humerus	1	-	-	-	-	1
RAD	Radius	-	-	1	-	-	1
ULN	Ulna	-	-	1	-	-	1
SYN	Synsacrum	2	-	-	-	1	3
COR	Coracoid	-	3	-	-	-	3
PHL	Phalanx	-	-	1	-	-	1
TBT	Tibiotarsus	-	2	-	-	1	3
Col. Total		13	5	11	1	9	39

Table 28. Fish from Feature B (AS III)

		UNF	GAD	MOR	SUNF	SPAR	SHAD	PLEU	FLO	PLAC	LEFT	BLACK	PERCH	SERR	TOTAL
FRAG	Bone Frag.	36	-	-	-	-	-	-	-	-	-	-	-	-	36
SKL	Skull	-	-	-	-	1	-	-	-	-	-	-	-	-	1
SFRAG	Skull frag.	-	-	-	-	-	12	-	-	-	-	-	-	-	12
VT	Thoracic vertebra	-	9	-	1	-	3	-	-	-	-	-	-	-	13
VD	Caudal vertebra	2	-	1	3	-	75	3	10	6	4	-	2	2	108
PVD	Precaudal Vertebrae	2	-	-	12	-	-	2	3	1	-	-	1	-	21
ULT	Ultimate Vert.	2	-	-	-	-	-	-	-	-	-	-	-	-	2
SCAP	Scapula	-	-	-	-	1	-	-	-	-	-	-	-	-	1
PMAX	Premaxilla	-	-	-	-	-	-	-	-	-	-	-	1	-	1
DENT	Dentary	-	-	-	-	1	-	-	-	-	-	-	-	-	1
PREOP	Preopercle	-	-	-	-	-	-	3	-	-	-	-	-	-	3
ANG	Angular	-	-	-	-	-	-	1	-	-	1	-	1	-	3
SBOPE	Subopercle	-	-	-	-	1	-	-	-	-	-	-	-	-	1
QUAD	Quadrate	-	-	-	-	1	-	-	-	-	-	-	-	-	1
PHRPL	Pharyngeal Plate	-	-	-	-	-	-	-	-	-	-	1	-	-	1
POST	Post temporal	-	-	-	-	-	1	-	-	-	-	-	-	-	1
CLEI	Cleithrum	-	1	-	-	-	-	-	1	-	-	-	-	-	2
SPINE	Indet. Spine/Ray	33	-	-	-	-	-	-	-	-	-	-	-	-	33
Col. Total		75	10	1	16	5	91	9	14	7	5	1	5	2	241

Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature B (AS IV), TPQ -1840

Table 29. Mammals from Feature B (AS IV)

		COW	SHE	S/G	PIG	DOG	CAT	ROD	UNM	MOUSE	RAT	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	420	-	-	420
SKL	Skull	-	-	-	-	-	-	-	-	-	1	1
OCIP	Occipital	-	-	-	1	-	-	-	-	-	-	1
ZYG	Zygomatic/Malar	-	-	1	-	-	-	-	-	-	-	1
INC	Incisive	-	-	1	-	-	-	-	-	-	-	1
SFRAG	Skull frag.	-	-	1	1	1	-	-	-	-	-	3
MAX	Maxilla	-	-	1	-	1	-	-	-	-	-	2
JAW	Mandible	-	-	2	2	-	2	-	-	-	6	12
HYD	Hyoid	1	-	-	1	-	-	-	-	-	-	2
VC01	Atlas (1st Cervical)	-	-	-	-	1	-	-	-	-	-	1
VC02	Axis (2nd Cervical)	-	-	2	-	1	-	1	-	-	-	4
VC	Cervical vertebra	1	-	2	-	4	-	-	-	-	-	7
VT	Thoracic vertebra	9	-	2	-	9	-	1	-	-	-	21
VL	Lumbar vertebra	5	-	8	-	4	-	4	-	-	-	21
VD	Caudal vertebra	-	-	-	2	1	-	-	-	-	-	3
VS	Sacrum	1	-	1	-	-	-	-	-	-	-	2
CC	Costal cartilage	16	-	-	-	-	-	-	-	-	-	16
RIB	Rib	24	-	7	1	16	-	-	-	-	-	48
STX	Sternum	3	-	-	-	-	-	-	-	-	-	3
OC	Pelvis	-	-	1	1	-	-	3	1	-	-	6
ILM	Ilium	1	-	3	1	1	-	-	-	-	-	6
ISH	Ischium	-	-	1	1	-	-	-	-	-	-	2
PUB	Pubis	-	-	-	1	-	-	-	-	-	-	1
FEM	Femur	3	-	4	4	-	-	5	1	-	2	19
PAT	Patella	1	-	-	-	-	-	-	-	-	-	1
TIB	Tibia	4	-	2	1	1	-	5	-	1	-	14
FIB	Fibula	-	-	-	2	1	-	-	-	-	-	3
SCAP	Scapula	5	1	2	-	4	-	2	-	-	1	15
HUM	Humerus	12	3	6	-	3	2	5	-	-	-	31
RAD	Radius	28	1	3	-	1	2	1	-	-	-	36
ULN	Ulna	22	-	1	1	1	1	2	-	-	-	28
AST	Astragalus	4	-	-	-	2	-	-	-	-	-	6
CAL	Calcaneus	2	-	1	2	1	-	-	-	-	-	6
CQ	Centro-quartal	4	-	-	-	-	-	-	-	-	-	4
MAL	Malleolus	2	-	-	-	-	-	-	-	-	-	2
TARG	Fused 2nd & 3rd tars.	1	-	-	-	-	-	-	-	-	-	1
CAR	Carpal	4	-	-	-	2	-	-	-	-	-	6
CARR	Radial carpal	8	-	1	-	-	-	-	-	-	-	9
CARI	Intermediate carpal	9	-	-	-	-	-	-	-	-	-	9
CARU	Ulnar carpal	11	-	-	-	-	-	-	-	-	-	11
CARD	4th carpal	9	-	-	-	-	-	-	-	-	-	9
CARG	Fused 2nd & 3rd carpal	8	-	-	-	-	-	-	-	-	-	8
MT	Main metatarsal (ung)	-	1	-	-	-	-	-	-	-	-	1
MC	Main metacarpal (ung)	-	1	1	-	-	-	-	-	-	-	2
MP	Metapodial	-	-	-	-	17	-	-	-	-	-	17
MPG	Lateral (ancillary)	-	-	-	2	-	-	-	-	-	-	2
APH	1st phalanx	-	-	-	7	15	-	-	-	-	-	22
BPH	2nd phalanx	-	-	-	7	9	-	-	-	-	-	16
CPH	3rd phalanx	-	-	-	3	4	-	-	-	-	-	7
UI	Upper incisor	-	-	-	2	-	-	-	-	-	-	2
DLP4	Deciduous lower 4th	1	-	-	-	-	-	-	-	-	-	1
BAC	Baculum	-	-	-	-	1	-	-	-	-	-	1
Col. Total		199	7	54	43	101	7	29	422	1	10	873

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 30. Birds from Feature B (AS IV)

		FOW	TUR	FWZ	PGN	DOV	PAR	UNB	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	51	51
SKL	Skull	-	-	-	-	-	1	-	1
VT	Thoracic vertebra	2	-	-	-	-	-	-	2
VX	Vertebra, indetermin.	-	-	2	-	1	-	-	3
RIB	Rib	-	-	3	-	-	-	-	3
STX	Sternum	-	-	1	-	-	-	-	1
OC	Pelvis	-	-	-	2	-	-	-	2
FEM	Femur	1	-	1	1	-	-	-	3
SCAP	Scapula	1	-	-	1	1	-	-	3
HUM	Humerus	1	-	1	1	1	-	-	4
RAD	Radius	-	-	1	-	-	-	-	1
CPH	3rd phalanx	1	-	-	-	-	-	-	1
COR	Coracoid	2	1	-	1	1	-	-	5
CMC	Carpometacarpus	-	-	-	1	1	-	-	2
PHL	Phalanx	-	-	2	-	-	-	-	2
TBT	Tibiotarsus	2	2	1	-	-	-	-	5
TMT	Tarsometatarsus	1	-	-	-	-	-	-	1
LFRAG	Long bone fragment	-	-	-	-	-	-	6	6
Col. Total		11	3	12	7	5	1	57	96

Table 31. Fish from Feature B (AS IV)

		UNF	MOR	SUNF	SPAR	HAD	SHAD	PLEU	FLO	BLUE	BLACK	SBASS	PERCH	SERR	SEA	MACK	TOTAL
FRAG	Bone Frag.	175	-	-	-	-	-	-	-	-	-	-	-	-	-	-	175
SKL	Skull	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2
FRNT	Frontal	-	-	-	16	-	-	-	-	-	-	-	-	-	-	-	16
SFRAG	Skull frag.	20	-	-	51	-	1	-	-	-	-	-	-	-	-	-	72
MAX	Maxilla	-	-	-	21	-	-	-	-	-	-	-	-	-	-	-	21
VT	Thoracic vertebra	2	1	-	7	-	-	-	-	-	-	7	-	-	-	-	17
VD	Caudal vertebra	3	3	3	54	4	47	1	1	5	-	15	-	7	4	15	162
VX	Vertebra, indetermin.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PVD	Precaudal Vertebrae	-	-	-	3	-	-	-	-	-	-	1	-	-	-	-	4
ULT	Ultimate Vert.	1	-	-	11	-	-	-	-	-	-	-	-	-	-	-	12
PEN	Penultimate Vert.	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
SCAP	Scapula	1	-	-	8	-	-	-	-	-	-	-	-	-	-	-	9
CER	Ceratohyal	-	1	-	21	-	-	-	-	-	-	-	1	-	-	-	23
PMAX	Premaxilla	-	-	-	26	-	2	-	-	-	1	-	-	-	-	-	29
VOM	Vomer	-	-	-	16	-	-	-	-	-	-	-	-	-	1	-	17
MEST	Mesethmoid	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2
PARA	Parasphenoid	-	-	-	16	-	-	-	-	-	-	-	-	-	-	-	16
SUPRA	Supraoccipital	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	10
BAS	Basioccipital	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	4
PRO	Prootic	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	5
DENT	Dentary	-	-	-	25	1	1	-	-	-	2	-	-	-	-	-	29
PREOP	Preopercle	-	-	-	17	-	-	-	-	-	-	-	-	-	-	-	17
ANG	Angular	-	-	-	18	1	1	-	-	-	-	-	-	-	-	-	20
OPER	Opercle	-	-	-	17	-	-	-	-	-	-	-	-	-	-	-	17
SBOPE	Subopercle	-	-	-	10	-	-	-	-	-	-	-	-	1	-	-	11
INOP	Interopercle	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	15
BRAY	Branchiostegal Ray	3	-	-	11	-	-	-	-	-	-	-	-	-	-	-	14
PAL	Palatine	-	-	-	23	-	-	-	-	-	-	-	-	-	-	-	23
MESOP	Mesopterygoid	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	9
QUAD	Quadrate	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	15
HYOM	Hyomandibular	-	-	-	18	-	-	-	-	-	-	-	1	-	-	-	19
EPIH	Epihyal	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	2
PHRPL	Pharyngeal Plate	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2
PHARY	Pharyngobranchial	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	2
POST	Post temporal	-	-	-	13	-	3	-	-	-	-	-	1	-	-	-	17
SPCLE	Supracleithrum	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	3
CLEI	Cleithrum	-	-	-	6	-	-	-	-	-	-	-	-	1	1	-	8
SPINE	Indet. Spine/Ray	144	-	-	4	-	-	-	-	-	-	-	-	-	-	-	148
SCALE	Scale	104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104
Col. Total		454	7	3	480	7	56	1	1	5	3	23	2	10	6	15	1073

Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature B (AS V), TPQ - 1834

Table 32. Mammals from Feature B (AS V)

		COW	SHE	S/G	PIG	DOG	CAT	SAR	OXO	ROD	UNM	RAT	SQUIR	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	-	-	311	-	-	311
SKL	Skull	-	1	1	-	2	1	-	-	-	-	4	-	9
FRNT	Frontal	-	-	-	1	-	-	-	-	-	-	-	-	1
OCIP	Occipital	-	-	-	-	-	-	-	-	2	-	-	-	2
ZYG	Zygomatic/Malar	-	-	2	-	1	-	-	-	-	-	-	-	3
INC	Incisive	-	-	2	-	-	-	-	-	-	-	-	-	2
SFRAG	Skull frag.	-	-	3	-	16	-	-	-	2	-	1	-	22
MAX	Maxilla	-	-	3	-	2	-	-	-	1	-	2	-	8
JAW	Mandible	-	-	3	-	4	-	-	-	16	-	10	1	34
VC01	Atlas (1st Cervical)	-	-	3	-	2	-	-	-	6	-	-	-	11
VC02	Axis (2nd Cervical)	2	-	2	-	1	-	-	-	1	-	-	-	6
VC	Cervical vertebra	10	-	8	7	1	-	4	2	2	-	-	-	34
VT	Thoracic vertebra	19	-	7	7	12	1	5	1	4	-	-	-	56
VL	Lumbar vertebra	8	-	7	-	7	3	3	1	24	-	-	-	53
VD	Caudal vertebra	4	-	-	-	5	-	1	-	7	1	-	-	18
VS	Sacrum	3	-	1	-	1	-	-	1	5	-	-	-	11
VX	Vertebra, indetermin.	-	-	-	-	-	-	36	10	-	-	-	-	46
CC	Costal cartilage	-	-	-	-	-	-	6	12	-	-	-	-	18
RIB	Rib	34	-	43	15	16	-	32	7	14	-	-	-	161
STX	Sternum	7	-	10	2	5	-	4	-	-	-	-	-	28
ACET	Pelvis (w/acetabulum)	-	-	-	-	-	-	-	-	1	-	-	-	1
OC	Pelvis	-	-	1	8	2	-	-	-	14	-	2	-	27
ILM	Ilium	1	-	-	2	-	1	-	-	6	-	-	-	10
ISH	Ischium	3	-	-	2	-	-	-	-	-	-	-	-	5
PUB	Pubis	-	-	1	2	-	-	-	-	-	-	-	-	3
FEM	Femur	2	-	1	25	3	-	1	-	26	-	-	-	58
PAT	Patella	1	2	-	2	-	-	-	-	-	-	-	-	5
TIB	Tibia	1	-	3	8	2	-	-	-	33	-	-	-	47
FIB	Fibula	-	-	-	2	2	-	-	-	-	-	-	-	4
SCAP	Scapula	6	1	-	1	-	-	-	1	12	-	-	1	22
HUM	Humerus	9	4	1	2	1	1	-	-	20	-	6	-	44
RAD	Radius	13	3	-	-	2	-	-	-	3	-	-	-	21
ULN	Ulna	12	-	4	1	2	-	-	-	8	-	1	-	28
AST	Astragalus	-	-	1	-	2	-	-	-	-	-	-	-	3
CAR	Carpal	3	-	-	1	-	2	-	-	-	1	-	-	7
CARR	Radial carpal	4	-	-	-	-	-	-	-	-	-	-	-	4
CARI	Intermediate carpal	4	-	1	-	-	-	-	-	-	-	-	-	5
CARU	Ulnar carpal	4	-	1	-	-	-	-	-	-	-	-	-	5
CARD	4th carpal	3	-	-	-	-	-	-	-	-	-	-	-	3
CARG	Fused 2nd & 3rd carpal	4	-	-	-	-	-	-	-	-	-	-	-	4
MP	Metapodial	-	-	-	-	9	-	-	-	1	-	-	-	10
MPG	Lateral (ancillary)	-	-	-	4	-	-	-	-	-	-	-	-	4
APH	1st phalanx	-	-	-	5	12	-	-	-	-	-	-	-	17
BPH	2nd phalanx	-	-	-	8	1	-	-	-	-	-	-	-	9
CPH	3rd phalanx	-	-	-	1	3	1	-	-	-	-	-	-	5
LI	Lower incisor	-	-	3	-	-	-	-	-	-	-	-	-	3
LC	Lower canine	-	-	-	-	3	-	-	-	5	-	-	-	8
UI	Upper incisor	-	-	-	2	-	-	-	-	-	-	-	-	2
UC	Upper canine	-	-	-	-	1	-	-	-	1	-	-	-	2
UP	Upper cheek tooth	-	-	-	-	2	-	-	-	-	-	-	-	2
UPM4	Upper 4th premolar	-	-	-	-	1	-	-	-	-	-	-	-	1
UPM	Upper premolar	-	-	1	-	1	-	-	-	-	-	-	-	2
UM1	Upper 1st molar	-	-	-	-	2	-	-	-	-	-	-	-	2
UM3	Upper 3rd molar	-	-	1	-	-	-	-	-	-	-	-	-	1
UM	Upper molar	-	-	3	-	-	-	-	-	-	-	-	-	3
M	Molar	-	-	-	-	1	-	-	-	-	-	-	-	1
LFrag	Long bone fragment	-	-	-	-	-	-	1	-	-	-	-	-	1
Col. Total		157	11	117	108	127	10	93	35	214	313	26	2	1213

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 33. Birds from Feature B (AS V)

		FOW	DUG	TUR	FWZ	UNB	TOTAL
FRAG	Bone Frag.	-	-	-	-	12	12
SKL	Skull	2	-	-	-	-	2
VX	Vertebra, indetermin.	2	-	-	9	-	11
RIB	Rib	1	-	-	7	7	15
STX	Sternum	1	-	-	-	-	1
OC	Pelvis	1	-	-	-	-	1
FEM	Femur	-	1	-	-	1	2
FIB	Fibula	1	-	-	-	-	1
HUM	Humerus	2	-	2	-	-	4
BPH	2nd phalanx	-	-	-	1	-	1
SYN	Synsacrum	1	-	-	-	-	1
FUR	Clavicle (Furcula)	1	-	-	-	-	1
PHL	Phalanx	-	-	-	8	1	9
TBT	Tibiotarsus	2	1	-	2	-	5
TMT	Tarsometatarsus	1	-	-	-	-	1
LFrag	Long bone fragment	-	-	-	-	2	2
Col. Total		15	2	2	27	23	69

Table 34. Fish from Feature B (AS V)

		UNF	GAD	MOR	SPAR	CLUP	HERR	SHAD	PLEU	FLO	BLUE	BLACK	SBASS	BASS	SERR	SEA	MACK	TOTAL
FRAG	Bone Frag.	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39
SKL	Skull	-	-	-	23	-	-	-	-	-	-	-	-	-	-	-	-	23
FRNT	Frontal	-	-	-	12	-	-	-	-	-	-	-	-	-	-	1	-	13
SFRAG	Skull frag.	121	5	-	8	-	-	-	-	-	-	-	-	-	-	2	-	136
MAX	Maxilla	-	-	-	47	-	-	-	-	1	-	-	-	-	1	2	-	51
VT	Thoracic vertebra	-	2	-	41	-	-	1	-	-	-	-	5	-	-	5	2	56
VD	Caudal vertebra	-	-	-	132	-	3	62	-	-	24	-	-	8	-	3	20	252
PVD	Precaudal Vertebra	-	-	-	60	-	2	-	-	1	-	-	5	-	-	4	-	72
ULT	Ultimate Vertebra	-	-	-	12	-	-	-	1	1	-	-	-	-	-	-	-	14
PEN	Penultimate Vertebra	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
VX	Vertebra, indetermin.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SCAP	Scapula	-	-	-	18	-	-	-	-	-	-	-	-	-	-	1	-	19
COR	Coracoid	1	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	6
CER	Ceratohyal	-	-	-	23	-	-	-	-	-	-	-	-	-	-	2	-	25
PMAX	Premaxilla	-	-	-	37	-	-	-	-	-	-	6	-	-	-	-	-	43
VOM	Vomer	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	-	14
PARA	Parasphenoid	-	2	-	13	-	-	-	-	-	-	-	-	-	-	1	-	16
SUPRA	Supraoccipital	-	-	-	5	-	-	-	-	-	-	-	-	-	-	1	-	6
BAS	Basioccipital	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	4
PRO	Prootic	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2
DENT	Dentary	-	1	-	31	-	-	1	-	-	-	2	-	-	-	2	-	37
SPOPE	Supraopercle	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	4
PREOP	Preopercle	-	-	-	60	-	-	-	-	-	-	1	-	-	-	2	-	63
ANG	Angular	-	-	-	24	-	-	-	-	-	1	-	-	-	-	1	-	26
OPER	Opercle	-	-	-	10	-	-	-	-	-	-	-	-	-	-	1	-	11
SBOPE	Subopercle	-	-	-	18	-	1	-	-	-	-	-	-	-	-	1	-	20
INOP	Interopercle	-	-	-	64	-	-	-	-	-	-	-	-	-	-	-	-	64
BRAY	Branchiostegal Ray	-	-	-	13	-	-	-	-	-	-	-	1	1	-	-	-	15
PAL	Palatine	-	-	-	36	-	-	-	-	-	-	-	-	-	-	-	-	36
MESOP	Mesopterygoid	-	-	-	21	-	-	-	-	-	-	-	-	-	-	-	-	21
META	Metapterygoid	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	8
QUAD	Quadrate	-	-	-	25	-	-	-	-	-	-	-	-	-	-	2	-	27
HYOM	Hvmandibular	-	-	1	36	-	-	-	-	-	-	-	-	-	-	1	-	38
EPIH	Epihval	-	-	-	2	-	-	-	-	-	-	-	-	-	-	1	-	3
PHRPL	Pharyngeal Plate	-	1	-	6	-	-	-	-	-	-	-	-	-	-	-	-	7
CERBR	Ceratobranchial	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 34. Fish from Feature B (AS V) (continued)

	UNF	GAD	MOR	SPAR	CLUP	HERR	SHAD	PLEU	FLO	BLUE	BLACK	SBASS	BASS	SERR	SEA	MACK	TOTAL
POST Post temporal	-	-	-	25	1	-	1	-	-	-	-	-	-	-	1	-	28
SPCLE Supracleithrum	-	-	-	14	-	-	-	-	-	-	-	-	-	-	1	-	15
CLEI Cleithrum	-	-	-	23	-	-	-	-	-	-	-	-	-	1	1	-	25
CORA Coracoid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
SPINE Indet. Spine/Rav	235	-	-	40	-	-	-	-	-	-	-	-	-	-	-	-	275
SCALE Scale	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
Col. Total	450	11	1	916	1	6	65	2	2	25	9	6	14	3	33	26	1570

Lot 6, Feature C

Feature C (AS I), TPQ - 1800

Table 35. Mammals from Feature C (AS I)

	PIG	CAT	SAR	OXO	UNM	RAT	TOTAL
FRAG Bone Frag.	-	-	-	-	24	-	24
JAW Mandible	1	-	-	-	-	1	2
VC Cervical vertebra	1	-	-	-	-	-	1
VX Vertebra, indetermin.	-	1	2	-	-	-	3
RIB Rib	-	-	3	1	-	-	4
OC Pelvis	-	-	-	-	-	1	1
FEM Femur	-	-	-	-	-	1	1
TIB Tibia	-	2	-	-	-	2	4
MP Metapodial	-	1	-	-	-	-	1
LFRAG Long bone fragment	-	-	3	-	-	-	3
Col. Total	2	4	8	1	24	5	44

Table 36. Shellfish from Feature C (AS I)

	OYS	CLAM	SNAIL	TOTAL
HALF Shell incl hinge	4	3	-	7
SHL Shell fragment	26	3	-	29
WHL Whole Shell	-	-	1	1
Col. Total	30	6	1	37

Feature C (AS II), TPQ - 1800

Table 37. Mammals from Feature C (AS II)

	COW	PIG	CAT	SAR	UNM	RAT	TOTAL
FRAG Bone Frag.	-	-	-	-	26	-	26
SFRAG Skull frag.	-	1	-	-	-	-	1
JAW Mandible	-	-	-	-	-	1	1
VC Cervical vertebra	-	1	-	-	-	-	1
VT Thoracic vertebra	1	-	-	-	-	-	1
VX Vertebra, indetermin.	-	-	-	1	-	-	1
RIB Rib	3	-	-	8	-	-	11
OC Pelvis	-	-	-	-	-	1	1
FEM Femur	-	-	1	-	-	-	1
TIB Tibia	-	-	-	-	-	1	1
HUM Humerus	-	-	-	-	-	1	1
MCC 3rd metacarpal	-	1	-	-	-	-	1
MCD 4th metacarpal	-	1	-	-	-	-	1
MP Metapodial	-	-	1	-	-	-	1
MPG Lateral (ancillary)	-	1	-	-	-	-	1
LFRAG Long bone fragment	-	-	-	3	-	-	3
Col. Total	4	5	2	12	26	4	53

Table 38. Shellfish from Feature C (AS II)

		OYS	CLAM	TOTAL
HALF	Shell incl hinge	5	3	8
SHL	Shell fragment	21	4	25
Col. Total		26	7	33

Feature C (AS III), TPQ - 1800

Table 39. Mammals from Feature C (AS III)

		COW	SHE	UNM	TOTAL
FRAG	Bone Frag	-	-	11	11
RIB	Rib	2	-	-	2
OC	Pelvis	3	-	-	3
FEM	Femur	1	-	-	1
TIB	Tibia	-	1	-	1
AST	Astragalus	-	1	-	1
Col. Total		6	2	11	19

Table 40. Shellfish from Feature C (AS III)

		OYS	CLAM	TOTAL
HALF	Shell incl hinge	3	-	3
SHL	Shell fragment	12	2	14
Col. Total		15	2	17

Feature C (AS IV)

Table 41. Mammals from Feature C (AS IV)

		SAR	UNM	TOTAL
FRAG	Bone Frag	-	1	1
RIB	Rib	1	-	1
Col. Total		1	1	2

Table 42. Shellfish from Feature C (AS IV)

		CLAM	TOTAL
HALF	Shell incl hinge	1	1
Col. Total		1	1

Faunal Remains from Additional Features and Analytical Strata on Block 160

Lot 6, Feature D (wood-lined privy)

There was no bone or shell recovered from Feature D, AS I. Two shell fragments were recovered from AS II. Four shell fragments were recovered from AS III and another three from AS IV. All analytical strata had TPQ dates between 1800 and 1810. Twenty-one pounds of shell were recovered from AS V, mostly from C636.

Table 43. Mammals from Feature D (AS II)

		COW	SHE	S/G	PIG	SAR	OXO	ROD	UNM	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	89	89
VC	Cervical vertebra	3	-	1	-	1	-	-	-	5
VL	Lumbar vertebra	9	-	-	-	1	-	-	-	10
VD	Caudal vertebra	1	-	-	-	-	-	-	-	1
VS	Sacrum	-	-	-	-	-	1	-	-	1
VX	Vertebra, indetermin.	3	-	-	-	1	4	-	-	8
RIB	Rib	12	-	2	1	-	-	-	-	15
STX	Sternum	2	-	-	-	-	-	-	-	2
ACET	Pelvis (w/acetabulum)	1	-	-	-	-	-	-	-	1
ILM	Ilium	3	-	1	1	-	-	-	-	5
ISH	Ischium	5	-	-	-	-	-	-	-	5
FEM	Femur	3	-	1	-	-	-	1	-	5
TIB	Tibia	-	-	1	-	-	-	1	-	2
SCAP	Scapula	2	1	-	-	-	-	-	-	3
HUM	Humerus	1	-	1	-	-	-	-	-	2
RAD	Radius	-	1	2	-	-	-	-	-	3
ULN	Ulna	2	-	-	-	-	-	-	-	2
CAL	Calcaneus	1	-	-	-	-	-	-	-	1
Col. Total		48	2	9	2	3	5	2	89	160

Table 44. Birds from Feature D (AS II)

		UNM	FOW	UNB	UNX	FWZ	GSZ	TOTAL
FRAG	Bone Frag.	1	-	6	2	-	-	9
VX	Vertebra, indetermin.	-	-	-	-	1	1	2
OC	Pelvis	-	1	-	-	-	-	1
FEM	Femur	-	-	-	-	1	-	1
SCAP	Scapula	-	1	-	-	-	-	1
HUM	Humerus	-	1	-	-	-	-	1
ULN	Ulna	-	2	-	-	-	-	2
CMC	Carpometacarpus	-	1	-	-	-	-	1
TBT	Tibiotarsus	-	3	-	-	2	-	5
TMT	Tarsometatarsus	-	3	-	-	-	-	3
Col. Total		1	12	6	2	4	1	26

Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature D (AS V), TPQ - 1800

Table 45. Mammals from Feature D (AS III)

		COW	SHE	S/G	PIG	SAR	OXO	ROD	UNM	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	109	109
VC01	Atlas (1st Cervical)	-	-	1	-	-	-	-	-	1
VC02	Axis (2nd Cervical)	-	-	1	-	-	-	-	-	1
VC	Cervical vertebra	-	-	-	1	1	-	-	-	2
VT	Thoracic vertebra	6	-	2	-	-	-	-	-	8
VL	Lumbar vertebra	12	-	1	-	-	-	-	-	13
VD	Caudal vertebra	4	-	-	-	-	-	-	-	4
VS	Sacrum	2	-	-	-	-	-	-	-	2
VX	Vertebra, indetermin.	1	-	-	-	-	8	-	-	9
RIB	Rib	17	-	5	-	1	-	-	-	23
STX	Sternum	2	-	-	-	-	-	-	-	2
ACET	Pelvis (w/acetabulum)	1	-	-	-	-	-	-	-	1
ILM	Ilium	2	-	1	-	-	-	-	-	3
ISH	Ischium	1	-	-	-	-	-	-	-	1
PUB	Pubis	1	-	-	-	-	-	-	-	1
FEM	Femur	2	-	3	-	-	-	-	-	5
TIB	Tibia	-	-	1	-	-	-	1	-	2
SCAP	Scapula	6	-	4	-	-	-	-	-	10
HUM	Humerus	3	1	-	-	-	-	-	-	4
RAD	Radius	-	-	1	1	-	-	1	-	3
ULN	Ulna	-	-	1	-	-	-	-	-	1
UM	Upper molar	-	-	1	-	-	-	-	-	1
Col. Total		60	1	22	2	2	8	2	109	206

Table 46. Birds from Feature D (AS III)

		FOW	UNB.	FWZ	TOTAL
FRAG	Bone Frag.	-	11	-	11
SFRAG	Skull frag.	-	-	2	2
VX	Vertebra, indetermin.	-	-	10	10
RIB	Rib	-	-	4	4
STX	Sternum	2	-	1	3
FEM	Femur	3	-	-	3
FIB	Fibula	1	-	-	1
SCAP	Scapula	1	-	-	1
HUM	Humerus	3	-	1	4
RAD	Radius	2	-	-	2
ULN	Ulna	4	-	-	4
SYN	Synsacrum	-	-	1	1
COR	Coracoid	5	-	-	5
FUR	Clavicle (Furcula)	1	-	-	1
CMC	Carpometacarpus	1	-	-	1
PHL	Phalanx	-	-	2	2
TBT	Tibiotarsus	2	-	1	3
TMT	Tarsometatarsus	2	-	-	2
Col. Total		27	11	22	60

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 47. Mammals from Feature D (AS IV)

		COW	S/G	PIG	OXO	UNM	TOTAL
FRAG	Bone Frag.	-	-	-	-	7	7
OCIP	Occipital	1	-	-	-	-	1
TEMP	Temporal	1	-	-	-	-	1
VC01	Atlas (1st Cervical)	-	-	1	-	-	1
VC02	Axis (2nd Cervical)	-	-	1	-	-	1
VT	Thoracic vertebra	-	-	1	-	-	1
VL	Lumbar vertebra	3	-	-	-	-	3
VS	Sacrum	2	-	-	-	-	2
VX	Vertebra, indetermin.	-	-	-	1	-	1
RIB	Rib	1	-	1	-	-	2
OC	Pelvis	-	1	-	-	-	1
ILM	Ilium	2	-	-	-	-	2
TIB	Tibia	-	1	-	-	-	1
ULN	Ulna	-	-	1	-	-	1
MPG	Lateral (ancillary)	-	-	2	-	-	2
APH	1st phalanx	-	-	1	-	-	1
LM2	Lower 2nd molar	-	-	1	-	-	1
LM3	Lower 3rd molar	-	-	1	-	-	1
Col. Total		10	2	10	1	7	30

Feature D (AS V), TPQ - 1800

Table 48. Mammals from Feature D (AS V)

		COW	SHE	S/G	PIG	CAT	SAR	OXO	ROD	UNM	TOTAL
FRAG	Bone Frag	-	-	-	-	-	-	-	-	52	52
SKL	Skull	-	-	-	1	-	-	-	-	-	1
INC	Incisive	-	-	-	2	-	-	-	-	-	2
MAX	Maxilla	-	-	-	2	-	-	-	-	-	2
JAW	Mandible	-	-	-	2	-	-	-	1	-	3
VC01	Atlas (1st Cervical)	1	-	-	1	-	-	-	-	-	2
VC02	Axis (2nd Cervical)	-	-	-	1	-	-	-	-	-	1
VC	Cervical vertebra	2	-	-	3	-	-	-	-	-	5
VT	Thoracic vertebra	1	-	-	17	-	-	1	-	-	19
VL	Lumbar vertebra	3	-	1	10	-	1	-	-	-	15
VD	Caudal vertebra	-	-	-	-	-	-	1	-	-	1
VS	Sacrum	3	-	-	-	-	-	-	-	-	3
VX	Vertebra, indetermin	-	-	-	3	-	2	3	-	-	8
CC	Costal cartilage	-	-	-	-	-	1	-	-	-	1
RIB	Rib	8	-	3	21	-	2	-	-	-	34
ILM	Ilium	1	-	-	2	-	-	-	-	-	3
ISH	Ischium	3	-	1	2	-	-	-	-	-	6
PUB	Pubis	-	-	-	1	-	-	-	-	-	1
FEM	Femur	1	-	1	4	-	-	-	-	-	6
TIB	Tibia	2	-	1	2	-	-	-	-	-	5
FIB	Fibula	-	-	-	4	-	-	-	-	-	4
SCAP	Scapula	3	1	2	2	1	-	-	-	-	9
HUM	Humerus	4	-	-	2	-	-	-	-	-	6
RAD	Radius	1	-	-	2	-	-	-	-	-	3
ULN	Ulna	-	-	1	2	-	-	-	-	-	3
CAL	Calcaneus	1	-	-	1	-	-	-	-	-	2
CARI	Intermediate carpal	1	-	-	-	-	-	-	-	-	1
CARU	Ulnar carpal	1	-	-	-	-	-	-	-	-	1
MTC	3rd metatarsal	-	-	-	1	-	-	-	-	-	1
MTD	4th metatarsal	-	-	-	1	-	-	-	-	-	1
MP	Metapodial	-	-	-	7	1	-	-	-	-	8
MPG	Lateral (ancillary)	-	-	-	4	-	-	-	-	-	4
APH	1st phalanx	-	1	-	3	-	-	-	-	-	4
DLI	Deciduous lower incisor	-	-	-	1	-	-	-	-	-	1
LC	Lower canine	-	-	-	1	-	-	-	-	-	1
LFRAG	Long bone fragment	-	-	-	-	-	2	-	-	-	2
Col. Total		36	2	10	105	2	8	5	1	52	221

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 49. Birds from Feature D (AS V)

		FOW	TUR	UNB	UNX	FWZ	TOTAL
FRAG	Bone Frag.	-	-	24	1	-	25
SKL	Skull	2	-	-	-	-	2
SFRAG	Skull frag.	1	-	-	-	-	1
JAW	Mandible	2	-	-	-	-	2
VX	Vertebra, indetermin.	4	-	-	-	-	4
RIB	Rib	10	-	-	-	5	15
STX	Sternum	3	-	-	-	2	5
OC	Pelvis	4	-	-	-	3	7
FEM	Femur	4	-	-	-	-	4
FIB	Fibula	2	-	-	-	-	2
SCAP	Scapula	5	-	-	-	-	5
HUM	Humerus	8	-	-	-	-	8
RAD	Radius	6	-	-	-	-	6
ULN	Ulna	6	-	-	-	-	6
SYN	Synsacrum	2	-	-	-	-	2
COR	Coracoid	6	1	-	-	-	7
FUR	Clavicle (Furcula)	2	-	-	-	-	2
CMC	Carpometacarpus	2	-	-	-	-	2
TBT	Tibiotarsus	6	-	-	-	-	6
TMT	Tarsometatarsus	7	-	-	-	-	7
Col. Total		82	1	24	1	10	118

Table 50. Fish and Shellfish from Feature D (AS V)

		UNF	HERR	SERR	SEA	OYS	CLAM	MUSS	SCALP	TOTAL
FRAG	Bone Frag.	13	70	-	-	-	-	-	-	83
SKL	Skull	-	2	2	-	-	-	-	-	4
FRNT	Frontal	-	12	-	-	-	-	-	-	12
SFRAG	Skull frag.	-	46	-	-	-	-	-	-	46
MAX	Maxilla	-	17	-	-	-	-	-	-	17
VD	Caudal vertebra	-	-	-	1	-	-	-	-	1
CER	Ceratohyal	-	19	4	1	-	-	-	-	24
PMAX	Premaxilla	-	4	-	-	-	-	-	-	4
VOM	Vomer	-	-	1	-	-	-	-	-	1
PARA	Parasphenoid	1	8	-	-	-	-	-	-	9
EXOC	Exooccipital	-	-	1	-	-	-	-	-	1
BAS	Basioccipital	-	4	5	-	-	-	-	-	9
DENTI	Dentary	-	25	9	2	-	-	-	-	36
PREOP	Preopercle	-	18	4	1	-	-	-	-	23
ANG	Angular	-	17	9	1	-	-	-	-	27
OPER	Opercle	-	14	-	-	-	-	-	-	14
SBOPE	Subopercle	-	11	-	-	-	-	-	-	11
INOP	Interopercle	-	15	-	1	-	-	-	-	16
ECTO	Ectopterygoid	-	18	-	-	-	-	-	-	18
QUAD	Quadrates	-	5	3	3	-	-	-	-	11
HYOM	Hyomandibular	-	9	2	-	-	-	-	-	11
EPIH	Epihyal	-	9	-	-	-	-	-	-	9
POST	Post temporal	-	7	-	-	-	-	-	-	7
CLEI	Cleithrum	-	8	-	1	-	-	-	-	9
ULT	Ultimate Vert.	-	6	-	-	-	-	-	-	6
SPINE	Indet. Spine/Rav	-	73	-	-	-	-	-	-	73
HALF	Shell incl hinge	-	-	-	-	260	41	15	1	317
SHL	Shell fragment	-	-	-	-	141	24	90	-	255
SCALE	Scale	1	-	-	-	-	-	-	-	1
Col. Total		15	417	40	11	401	65	105	1	1055

Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature D (AS VI)

Table 51. Mammals from Feature D (AS VI)

		COW	OXO	TOTAL
VD	Caudal vertebra	1	-	1
VX	Vertebra, indetermin.	-	1	1
RIB	Rib	-	1	1
Col. Total		1	2	3

Lot 6, Feature E

A total of 1.5 pounds of shell were recovered from all of Feature E.

Table 52. Mammals and Birds from Feature E

		COW	S/G	PIG	CAT	SAR	OXO	UNM	FOW	TUR	UNB	UNX	FWZ	GSZ	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	63	-	-	30	1	-	-	94
SFRAG	Skull frag.	-	-	-	-	-	-	-	1	-	-	-	-	-	1
JAW	Mandible	-	-	-	-	-	-	-	3	-	-	-	-	-	3
VT	Thoracic vertebra	1	2	-	-	-	1	-	-	-	-	-	-	-	4
VL	Lumbar vertebra	2	-	-	-	-	-	-	-	-	-	-	-	-	2
VX	Vertebra, indetermin.	-	-	-	-	4	-	-	-	-	1	-	1	-	6
RIB	Rib	1	1	-	-	1	-	-	-	-	-	-	1	-	4
STX	Sternum	-	-	-	-	-	-	-	-	-	-	-	-	1	1
FEM	Femur	-	-	1	-	-	-	-	1	-	-	-	-	-	2
FIB	Fibula	-	-	1	-	-	-	-	2	-	-	-	-	-	3
SCAP	Scapula	-	-	-	1	-	-	-	-	-	-	-	-	-	1
HUM	Humerus	-	-	1	2	-	-	-	5	-	-	-	-	-	8
RAD	Radius	-	-	-	1	-	-	-	-	1	-	-	1	-	3
ULN	Ulna	-	1	-	1	-	-	-	1	1	-	-	-	-	4
AST	Astragalus	1	-	-	-	-	-	-	-	-	-	-	-	-	1
CARI	Intermediate carpal	-	-	1	-	-	-	-	-	-	-	-	-	-	1
MP	Metapodial	-	-	1	-	-	-	-	-	-	-	-	-	-	1
APH	1st phalanx	-	-	1	-	-	-	-	-	-	-	-	-	-	1
CPH	3rd phalanx	-	-	1	-	-	-	-	-	-	-	-	-	-	1
LI	Lower incisor	1	-	-	-	-	-	-	-	-	-	-	-	-	1
DLI	Deciduous lower incis.	-	-	1	-	-	-	-	-	-	-	-	-	-	1
SYN	Synsacrum	-	-	-	-	-	-	-	-	-	-	-	1	-	1
FUR	Clavicle (Furcula)	-	-	-	-	-	-	-	3	-	-	-	-	-	3
CMC	Carpometacarpus	-	-	-	-	-	-	-	2	-	-	-	-	-	2
PHL	Phalanx	-	-	-	-	-	-	-	-	-	-	-	5	-	5
TMT	Tarsometatarsus	-	-	-	-	-	-	-	5	-	-	-	-	-	5
Col. Total		6	4	8	5	5	1	63	23	2	31	1	9	1	159

Table 53. Fish from Feature E

		UNF	BLUE	BLACK	TOTAL
FRAG	Bone Frag.	1	-	-	1
VX	Vertebra, indetermin.	1	-	-	1
PREOP	Preopercle	-	1	-	1
BRAY	Branchiostegal Ray	1	-	-	1
QUAD	Quadrate	-	-	1	1
PHARY	Pharyngobranchial	-	-	1	1
SCALE	Fish Scale	1	-	-	1
Col. Total		4	1	2	7

Table 54. Shellfish from Feature E

		OYS	GLAM	MUSS.	TOTAL
HALF	Shell including hinge	28	7	-	35
SHL	Shell fragment	18	-	7	25
Col. Total		46	7	7	60

Lot 6, Feature F

Table 55. Mammals and Birds from Feature F

		COW	SHE	S/G	PIG	SAR	OXO	UNM	GOO	UNB	UNX	FWZ	GSZ	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	446	-	7	1	-	-	454
SKL	Skull	1	-	-	-	-	-	-	-	-	-	-	-	1
TEMP	Temporal	-	-	1	-	-	-	-	-	-	-	-	-	1
ZYG	Zygomatic/Malar	-	-	1	-	-	-	-	-	-	-	-	-	1
INC	Incisive	-	-	2	-	-	-	-	-	-	-	-	-	2
MAX	Maxilla	-	-	1	1	-	-	-	-	-	-	-	-	2
JAW	Mandible	-	-	2	-	-	-	-	-	-	-	-	-	2
VC	Cervical vertebra	-	-	-	-	1	-	-	-	-	-	-	-	1
VT	Thoracic vertebra	1	-	1	1	1	-	-	-	-	-	-	-	4
VL	Lumbar vertebra	3	-	1	-	-	2	-	-	-	-	-	-	6
RIB	Rib	10	-	2	1	11	-	-	-	-	-	1	-	25
STX	Sternum	2	-	-	-	-	-	-	-	-	-	-	-	2
ILM	Ilium	-	-	-	2	-	-	-	-	-	-	-	-	2
ISH	Ischium	1	-	-	-	-	-	-	-	-	-	-	-	1
FEM	Femur	3	-	1	-	-	-	-	-	-	-	-	-	4
TIB	Tibia	2	-	3	1	-	-	-	-	-	-	-	-	6
SCAP	Scapula	2	-	2	1	-	-	-	-	-	-	-	-	5
HUM	Humerus	1	1	-	-	-	-	-	1	-	-	-	-	3
RAD	Radius	1	-	-	-	-	-	-	-	-	-	-	-	1
ULN	Ulna	-	-	1	-	-	-	-	-	-	-	1	-	2
AST	Astragalus	-	-	-	1	-	-	-	-	-	-	-	-	1
CQ	Centro-quartal	1	-	-	-	-	-	-	-	-	-	-	-	1
CARU	Ulnar carpal	-	-	-	1	-	-	-	-	-	-	-	-	1
MT	Main metatarsal (ung)	5	-	-	-	-	-	-	-	-	-	-	-	5
MTD	4th metatarsal	-	-	-	1	-	-	-	-	-	-	-	-	1
MC	Main metacarpal (ung)	2	-	-	-	-	-	-	-	-	-	-	-	2
MCE	5th metacarpal	1	-	-	-	-	-	-	-	-	-	-	-	1
MP	Metapodial	1	-	-	-	-	-	-	-	-	-	-	-	1
BPH	2nd phalanx	2	-	-	-	-	-	-	-	-	-	-	-	2
CPH	3rd phalanx	4	-	-	-	-	-	-	-	-	-	-	-	4
DSES	Distal sesamoid	1	-	-	-	-	-	-	-	-	-	-	-	1
TFRAG	Tooth frag.	2	-	-	1	-	-	-	-	-	-	-	-	3
LI	Lower incisor	-	-	1	1	-	-	-	-	-	-	-	-	2
DUP	Deciduous upper premolar	1	-	-	-	-	-	-	-	-	-	-	-	1
UPM	Upper premolar	1	-	-	1	-	-	-	-	-	-	-	-	2
UM2	Upper 2nd molar	-	-	-	2	-	-	-	-	-	-	-	-	2
UM3	Upper 3rd molar	-	-	1	-	-	-	-	-	-	-	-	-	1
UM	Upper molar	-	-	2	-	-	-	-	-	-	-	-	-	2
COR	Coracoid	-	-	-	-	-	-	-	1	-	-	-	-	1
PHL	Phalanx	-	-	-	-	-	-	-	-	-	-	-	1	1
LFRAG	Long bone fragment	-	-	-	-	-	1	-	-	-	-	-	-	1
Col. Total		48	1	22	15	13	3	446	2	7	1	2	1	561

Faunal Remains from Additional Features and Analytical Strata on Block 160

Lot 45, Feature H (stone-lined privy)

There were 8.2 pounds of shell recovered from Feature H. The majority of the shell came from the lower portion of the feature (Table 56) and likely facilitated drainage within the privy. Two pieces of unidentified coral were recovered from AS IV in C322.

Table 56. Distribution of Shellfish within Feature H

	OYS	CLAM	MUSS	LOB	CRAB	CRUST	CORAL	TOTAL
C218	15	8	1	1	-	-	-	25
C257	10	1	-	-	-	-	-	11
C274	1	1	2	-	-	-	-	4
C297	2	5	-	-	-	-	-	7
C298	16	11	-	-	-	-	-	27
C322	33	19	2	-	-	6	2	62
C345	2	62	2	-	-	-	-	66
C346	-	5	-	-	1	-	-	6
C348	7	238	14	-	-	-	-	259
C349	2	1	-	-	-	-	-	3
C377	-	1	-	-	-	-	-	1
Col. Total	88	352	21	1	1	6	2	471

Feature H (AS I), TPQ - 1850

Table 57. Mammals from Feature H (AS I)

	COW	S/G	PIG	CAT	SAR	ROD	UNM	TOTAL
FRAG Bone Frag.	-	-	-	-	-	-	26	26
VC01 Atlas (1st Cervical)	-	1	-	-	-	-	-	1
VC02 Axis (2nd Cervical)	-	-	-	-	-	1	-	1
VC Cervical vertebra	-	-	-	-	1	-	-	1
RIB Rib	1	-	-	-	1	-	-	2
OC Pelvis	-	-	-	1	-	-	-	1
ILM Ilium	-	-	1	-	1	-	-	2
FEM Femur	-	-	1	-	-	2	-	3
SCAP Scapula	1	-	-	-	-	-	-	1
RAD Radius	-	-	1	-	-	-	-	1
MP Metapodial	-	-	1	-	-	-	-	1
CPH 3rd phalanx	-	-	1	-	-	-	-	1
TFRAG Tooth frag.	-	1	-	-	-	-	-	1
LFRAG Long bone fragment	-	-	-	-	-	1	-	1
Col. Total	2	2	5	1	3	4	26	43

Table 58. Birds from Feature H (AS I)

	TUR	FWZ	UNB	TOTAL
FRAG Bone Frag.	-	-	4	4
VX Vertebra, indetermin.	-	1	-	1
RIB Rib	-	2	-	2
HUM Humerus	1	-	-	1
PHL Phalanx	-	2	-	2
Col. Total	1	5	4	10

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 59. Fish from Feature H (AS I)

		UNF	MOR	SPAR	CLUP	HERR	TOTAL
SFRAG	Skull frag.	1	-	-	-	-	1
VT	Thoracic vertebra	-	1	-	-	-	1
VD	Caudal vertebra	-	-	-	-	1	1
VX	Vertebra, indetermin.	1	-	-	-	-	1
OPER	Opercle	-	-	1	-	-	1
HYOM	Hyomandibular	-	1	1	2	2	6
EPIH	Epihyal	-	-	-	-	1	1
POST	Post temporal	-	1	-	-	-	1
SPINE	Indet. Spine/Ray	4	-	-	-	-	4
Col. Total		6	3	2	2	4	17

Feature H (AS II), TPQ - 1880

A large quantity of egg shell was recovered from AS II.

Table 60. Mammals from Feature H (AS II)

		COW	SHE	S/G	PIG	CAT	SAR	OXO	ROD	UNM	RAT	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	-	112	-	112
SKL	Skull	-	-	-	-	-	-	-	-	-	1	1
ZYG	Zygomatic/Malar	-	-	-	-	1	-	-	-	-	-	1
SFRAG	Skull frag.	-	-	-	1	1	-	-	1	-	-	3
MAX	Maxilla	-	-	-	1	-	-	-	-	-	-	1
JAW	Mandible	-	-	-	-	-	-	-	-	-	6	6
VC01	Atlas (1st Cervical)	-	-	1	-	-	-	-	-	-	6	7
VC02	Axis (2nd Cervical)	-	-	-	-	-	-	-	-	-	2	2
VC	Cervical vertebra	2	-	2	1	-	-	1	-	-	-	6
VT	Thoracic vertebra	1	-	1	-	-	1	-	-	-	-	3
VL	Lumbar vertebra	2	-	-	-	-	2	-	2	-	-	6
VD	Caudal vertebra	-	-	-	-	1	-	-	1	-	-	2
VS	Sacrum	-	-	-	-	-	1	1	-	-	-	2
VX	Vertebra, indetermin.	-	-	-	-	-	4	1	-	-	-	5
RIB	Rib	5	-	8	6	1	5	-	1	-	-	26
STX	Sternum	-	-	3	-	-	1	-	-	-	-	4
OC	Pelvis	-	-	-	1	-	-	-	3	-	-	4
ILM	Ilium	3	-	-	1	-	-	-	-	-	-	4
ISH	Ischium	1	-	-	-	-	-	-	-	-	-	1
FEM	Femur	1	-	-	1	-	-	-	5	-	-	7
TIB	Tibia	-	-	3	-	-	-	-	6	-	-	9
FIB	Fibula	-	-	-	2	-	-	-	-	-	-	2
SCAP	Scapula	1	-	-	-	-	-	-	-	-	-	1
HUM	Humerus	1	-	1	-	1	-	-	3	-	-	6
RAD	Radius	1	-	-	-	1	-	-	1	-	-	3
ULN	Ulna	1	-	1	-	1	1	-	1	-	-	5
CAL	Calcaneus	1	1	-	-	-	-	-	-	-	-	2
CAR	Carpal	1	-	1	1	-	-	-	-	-	-	3
MCD	4th metacarpal	-	-	-	1	-	-	-	-	-	-	1
MP	Metapodial	-	-	-	1	1	-	-	6	-	-	8
MPG	Lateral (ancillary)	-	-	-	1	-	-	-	-	-	-	1
APH	1st phalanx	-	-	-	2	-	-	-	-	-	-	2
BPH	2nd phalanx	-	-	-	1	-	-	-	-	-	-	1
TFRAG	Tooth frag.	-	-	-	-	-	-	-	-	2	-	2
LI	Lower incisor	-	-	-	1	-	-	-	-	-	-	1
UI	Upper incisor	-	-	-	1	-	-	-	-	-	-	1
LFRAG	Long bone fragment	-	-	-	-	-	1	1	-	-	-	2
Col. Total		21	1	21	23	8	16	4	30	114	15	253

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 61. Birds from Feature H (AS II)

		FOW	GOO	FWZ	UNB	TOTAL
	Unknown anatomy	-	-	-	7	7
SFRAG	Skull frag.	1	-	-	-	1
VX	Vertebra, indetermin.	-	-	1	-	1
RIB	Rib	-	-	4	-	4
STX	Sternum	-	-	-	1	1
OC	Pelvis	1	-	-	-	1
FEM	Femur	-	-	1	-	1
TIB	Tibia	1	-	2	-	3
SCAP	Scapula	1	-	-	-	1
RAD	Radius	-	-	1	-	1
SYN	Synsacrum	1	-	-	-	1
COR	Coracoid	-	1	-	-	1
CMC	Carpometacarpus	-	-	1	1	2
PHL	Phalanx	-	-	2	10	12
TMT	Tarsometatarsus	2	-	-	-	2
LFRAG	Long bone fragment	-	-	-	6	6
Col. Total		7	1	12	25	45

Table 62. Fish from Feature H (AS II)

		UNF	GAD	MOR	SUNF	SPAR	HAD	POL	HERR	SHAD	PLEU	HAL	BLACK	BLUE	SBASS	SERR	SEA	TOTAL
FRAG	Bone Frag.	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
FRNT	Frontal	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2
SFRAG	Skull frag.	1	-	3	-	4	-	-	2	-	-	-	-	-	-	-	-	14
MAX	Maxilla	-	-	-	-	2	-	-	-	-	-	1	1	-	-	-	-	8
VT	Thoracic vertebra	-	3	1	-	2	-	-	-	-	-	-	-	-	-	-	-	6
VD	Caudal vertebra	-	-	-	-	-	2	-	-	-	-	-	-	-	-	2	-	4
VX	Vertebra, indetermin.	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
PVD	Precaudal Vertebra	-	-	1	1	1	-	-	-	-	1	-	1	-	-	-	-	5
SCAP	Scapula	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
CER	Ceratohyal	1	-	2	-	-	-	-	-	-	-	-	-	-	1	-	3	7
PMAX	Premaxilla	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	4	5
ETH	Ethmoid	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
PARA	Parasphenoid	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2
SUPRA	Supraoccipital	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
DENT	Dentary	-	-	1	-	3	-	-	-	4	-	-	-	2	-	-	2	12
SPOPE	Supraopercle	-	-	-	-	1	-	-	1	-	-	-	-	-	-	2	-	4
PREOP	Preopercle	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	3	5
ANG	Angular	-	1	1	-	3	-	-	-	-	-	-	-	1	-	-	2	8
OPER	Opercle	1	-	-	-	3	-	-	-	-	-	-	-	-	-	-	4	8
SBOPE	Subopercle	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	2	5
INOP	Interopercle	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	2	4
BRAY	Branchiostegal Ray	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	12	13
PAL	Palatine	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	4	6
ECTO	Ectopterygoid	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	3	4
QUAD	Quadrate	-	-	1	-	1	-	-	-	-	-	-	-	1	-	-	2	5
HYOM	Hyomandibular	-	-	1	-	2	-	-	-	-	-	-	-	-	-	1	2	6
EPIH	Epihval	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
HYPH	Hypohal	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
EPIB	Epibranchial	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
POST	Post temporal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
SPINE	Indet. Spine/Rav	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
OTO	Otolith	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
SCALE	Scale	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75
Col. Total		123	10	12	1	30	2	1	3	4	2	1	1	11	1	5	58	265

Feature H (AS III), TPQ - 1857

There were two fragments of unspiciated coral recovered from AS III, along with some (N=20) eggshell fragments and eight pieces of turtle or tortoise shell.

Table 63. Mammals from Feature H (AS III)

		COW	SHE	S/G	PIG	CAT	RAB	SAR	OXO	ROD	UNM	RAT	CEBUS	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	-	-	705	-	-	705
FRNT	Frontal	-	-	-	-	2	-	-	-	-	-	-	-	2
PAR	Parietal	-	-	-	-	2	-	-	-	-	-	-	-	2
OCIP	Occipital	-	-	-	-	1	-	-	-	-	-	-	-	1
TEMP	Temporal	-	-	1	-	2	-	-	-	-	-	-	-	3
LAC	Lacrimal	-	-	-	1	-	-	-	-	-	-	-	-	1
ZYG	Zygomatic/Malar	-	-	-	1	-	-	-	-	-	-	-	-	1
SFRAG	Skull frag.	-	-	-	4	2	-	-	2	8	1	-	-	17
MAX	Maxilla	-	-	-	2	1	-	-	-	-	-	-	-	3
JAW	Mandible	1	-	-	2	2	1	-	-	5	-	3	1	15
VC01	Atlas (1st Cervical)	2	-	1	-	2	-	-	-	5	-	-	-	10
VC02	Axis (2nd Cervical)	-	-	1	-	3	-	-	-	-	-	-	-	4
VC	Cervical vertebra	4	-	5	-	5	-	8	8	2	-	-	-	32
VT	Thoracic vertebra	3	-	3	3	15	-	6	5	8	1	-	-	44
VL	Lumbar vertebra	4	-	4	1	9	-	2	4	10	-	-	-	34
VD	Caudal vertebra	2	-	-	-	3	-	2	1	8	-	-	-	16
VS	Sacrum	-	-	1	1	1	-	-	-	2	-	-	-	5
VX	Vertebra, indetermin.	-	-	-	-	-	-	8	18	-	1	-	-	27
CC	Costal cartilage	-	-	-	-	-	-	4	7	-	1	-	-	12
RIB	Rib	23	-	4	2	24	-	39	15	3	10	-	-	120
STX	Sternum	-	-	1	-	-	-	2	-	-	2	-	-	5
ACET	Pelvis (w/acetabulum)	-	-	-	2	2	-	-	-	-	-	-	-	4
OC	Pelvis	1	-	4	2	-	-	-	-	4	2	-	-	13
ILM	Ilium	3	-	1	6	2	-	-	-	-	1	-	-	13
ISH	Ischium	1	-	4	1	-	-	-	-	-	-	-	-	6
PUB	Pubis	-	-	1	-	-	-	-	1	-	1	-	-	3
FEM	Femur	4	-	2	7	2	-	3	-	5	-	-	1	24
PAT	Patella	1	-	1	1	-	-	-	-	-	-	-	-	3
TIB	Tibia	1	1	3	5	5	1	-	-	4	-	-	-	20
FIB	Fibula	-	-	-	2	-	-	-	-	-	-	-	-	2
SCAP	Scapula	3	2	3	6	3	-	1	1	3	1	-	1	24
HUM	Humerus	3	-	6	4	6	-	-	-	4	-	-	1	24
RAD	Radius	3	1	5	3	2	-	-	-	-	-	-	-	14
ULN	Ulna	1	-	5	2	2	-	1	-	4	-	-	-	15
AST	Astragalus	-	-	1	1	3	-	-	-	-	-	-	-	5
CAL	Calcaneus	-	-	-	5	4	-	-	-	-	-	-	-	9
CENT	Central tarsal	-	-	-	1	-	-	-	-	-	-	-	-	1
CQ	Centro-quartal	-	-	1	-	-	-	-	-	-	-	-	-	1
TAR	Tarsal	-	-	-	3	1	-	-	-	-	-	-	-	4
CAR	Carpal	8	-	5	1	1	-	-	-	-	-	-	-	15
CARD	4th carpal	-	-	2	-	-	-	-	-	-	-	-	-	2
CARG	Fused 2nd & 3rd carpal	-	-	1	-	-	-	-	-	-	-	-	-	1
MT	Main metatarsal (ung)	-	-	3	-	-	-	-	-	-	-	-	-	3
MTC	3rd metatarsal	-	-	-	2	-	-	-	-	-	-	-	-	2
MTD	4th metatarsal	-	-	-	7	-	-	-	-	-	-	-	-	7
MC	Main metacarpal (ung)	-	3	-	-	-	-	-	-	-	-	-	-	3
MCD	4th metacarpal	-	-	-	1	-	-	-	-	-	-	-	-	1
MP	Metapodial	-	-	-	3	19	-	-	-	-	-	-	-	22
MPG	Lateral (ancillary)	1	-	-	2	-	-	-	-	-	-	-	-	3
APH	1st phalanx	-	3	-	10	1	-	-	-	1	-	-	-	15
BPH	2nd phalanx	1	-	-	5	1	-	-	-	-	-	-	-	7
CPH	3rd phalanx	1	-	-	9	1	-	-	-	-	-	-	-	11
TFRAG	Tooth frag.	-	-	-	3	-	-	-	-	-	2	-	-	5
LI	Lower incisor	-	-	-	1	-	-	-	-	-	-	-	-	1

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 63. Mammals from Feature H (AS III) (continued)

		COW	SHE	S/G	PIG	CAT	RAB	SAR	OXO	ROD	UNM	RAT	CEBUS	TOTAL
DLI	Deciduous lower incisor	-	-	-	1	-	-	-	-	-	-	-	-	1
LC	Lower canine	-	-	-	1	-	-	-	-	1	-	-	-	2
DLC	Deciduous lower canine	-	-	-	-	1	-	-	-	-	-	-	-	1
UM3	Upper 3rd molar	-	-	-	1	-	-	-	-	-	-	-	-	1
UM	Upper molar	-	-	-	1	-	-	-	-	-	-	-	-	1
LFRAG	Long bone fragment	-	-	-	-	-	-	1	1	-	4	-	-	6
Col. Total		71	10	69	116	130	2	77	63	77	732	3	4	1354

Table 64. Birds from Feature H (AS III)

		FOW	GOO	DUC	TUR	FWZ	UNB	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	76	76
INC	Incisive	2	-	1	-	-	-	3
SFRAG	Skull frag.	2	-	-	-	-	-	2
JAW	Mandible	-	-	-	-	3	-	3
VX	Vertebra, indetermin.	-	-	-	6	28	4	38
RIB	Rib	-	-	-	-	15	5	20
STX	Sternum	3	-	-	-	5	-	8
OC	Pelvis	3	-	-	-	3	-	6
FEM	Femur	1	-	-	-	1	-	2
TIB	Tibia	3	-	-	-	-	-	3
FIB	Fibula	-	-	-	-	4	-	4
SCAP	Scapula	1	-	-	1	1	-	3
HUM	Humerus	2	-	-	1	1	-	4
RAD	Radius	-	-	-	-	5	-	5
ULN	Ulna	1	-	-	-	-	-	1
SYN	Synsacrum	1	-	-	-	-	-	1
COR	Coracoid	3	-	1	-	-	-	4
FUR	Clavicle (Furcula)	1	-	-	-	-	-	1
CMC	Carpometacarpus	1	-	-	-	2	-	3
PHL	Phalanx	-	-	-	-	20	1	21
TBT	Tibiotarsus	3	1	-	-	3	-	7
TMT	Tarsometatarsus	5	-	-	-	1	-	6
Col. Total		32	1	2	8	92	86	221

Appendix C
Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 65. Fish from Feature H (AS III)

	UNF	GAD	MOR	SUNF	SPAR	HAD	POL	LUNG	CIUP	HERR	SHAD	PLEU	FLO	HAL	PLAC	TROUT	BLACK	BLUE	GREY	SBASS	BASS	SERR	SEA	MACK	TOTAL
FRAG Bone Frag.	81	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	83
FRNT Frontal	1	-	5	-	8	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2	-	17
SFRAG Skull Frag.	498	100	6	-	3	-	-	-	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	612
MAX Maxilla	-	2	12	-	14	-	2	-	1	-	-	2	-	-	-	-	6	1	-	-	-	3	-	-	43
VCOI Atlas (1st Cerv.)	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
VT Thoracic Vert.	-	11	20	-	4	1	10	-	-	1	-	14	-	-	1	-	2	-	-	2	1	3	-	-	70
VD Caudal Vert.	2	1	30	5	32	28	2	2	-	26	18	17	-	7	-	1	19	6	3	3	6	11	1	13	233
VX Vertebra, Indet.	59	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	65
SCAP Scapula	-	2	2	-	5	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	11
CER Ceratohyal	-	34	10	-	4	-	1	-	-	8	2	-	-	-	-	-	-	-	-	-	-	-	3	-	62
PMAX Premaxilla	2	-	9	-	20	2	-	-	1	1	-	-	-	-	-	-	7	1	-	-	2	2	1	-	48
ETH Ethmoid	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
VOM Vomer	-	-	3	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	9
PARA Parasphenoid	-	3	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
SUPRA Supraoccipital	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
EXOC Exoccipital	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
BAS Basioccipital	2	4	1	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
PTER Pterotic	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
OPIS Opisthotic	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
PRO Prootic	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
DENT Dentary	2	1	8	-	4	3	3	-	6	6	-	1	1	-	-	-	6	-	-	-	-	-	2	-	43
RETRO Retroar.	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SPOPE Supraopercle	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
PREOP Preopercle	2	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	5	-	-	14
ANG Angular	-	3	14	-	11	2	3	-	-	1	2	7	-	1	-	-	5	-	-	-	-	-	2	-	51
OPER Opercle	-	1	11	-	10	2	2	-	-	4	2	-	-	-	-	-	-	-	-	1	2	-	-	-	35
SBOPE Subopercle	-	-	4	-	4	1	-	-	-	1	-	-	-	-	-	-	-	-	-	3	1	-	-	-	14
INOP Interopercle	-	1	4	-	4	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	1	1	-	13
BRAY Branchio. Ray	3	43	7	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	55
PAL Palatine	-	1	6	-	6	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
ECTO Ectopterygoid	-	1	4	-	-	-	-	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-	-	10
QUAD Quadrate	-	2	12	-	11	-	2	-	-	2	-	3	-	-	4	-	2	2	-	-	-	-	2	-	42
HYOM Hyomandibula	1	7	9	-	8	1	2	-	1	5	-	2	-	-	-	-	3	-	-	-	-	-	-	-	39
SYM Symplectic	-	8	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
EPIH Epihyal	-	1	13	-	-	2	-	-	-	1	-	3	-	-	-	-	-	-	-	-	-	1	1	-	22
HYPO Hypohyal	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
PHRPL Pharyngeal Plate	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	11
EPIB Epibranchial	-	14	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	17
CERBR Ceratobranchial	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
HYPOR Hypohal	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
BASIB Basibra.	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
BASPL Basibra.	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UROH Urohyal	-	-	-	-	1	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	5
PHARY Pharyngobranch.	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	7
POST Post temporal	-	1	10	-	3	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	17
SPCLE Supracleithrum	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
CLEI Cleithrum	-	2	17	-	6	4	1	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	34
PTCLE Postcleithrum	-	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CORA Coracoid	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
BASIP Basipterygium	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
PVD Precaudal Vert.	1	10	37	-	22	13	4	-	1	6	18	22	-	1	2	-	-	3	4	-	-	-	-	1	145
ULT Ultimate Vert.	3	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	4
PEN Penultimate Vert.	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	3
SPINE Indet. Spine/Ray	154	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	157
OTO Otolith	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
SCALE Fish Scale	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61
Col. Total	893	287	289	5	204	64	36	2	14	64	43	85	3	10	11	1	53	15	7	10	15	27	16	16	2170

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 66. Shellfish from Feature H (AS III)

		OYS	CLAM	MUSS	CRAB	CRUST	CORAL	TOTAL
CLAW	Claw Crustacean	-	-	-	1	6	-	7
HALF	Shell incl hinge	32	127	8	-	-	-	167
SHL	Shell fragment	12	198	10	-	-	2	222
Col. Total		44	325	18	1	6	2	396

Lot 6, Feature J (stone-lined cesspool)

Feature J (AS I), TPQ - 1850

Table 67. Mammals from Feature J (AS I)

		PIG	OXO	UNM	UNB	TOTAL
FRAG	Bone Frag.	-	-	4	5	9
VC01	Atlas (1st Cervical)	-	1	-	-	1
RIB	Rib	-	-	1	-	1
BPH	2nd phalanx	1	-	-	-	1
Col. Total		1	1	5	5	12

Table 68. Fish from Feature J (AS I)

		UNF	MOR	SPAR	HAD	TOTAL
MAX	Maxilla	-	-	1	-	1
VD	Caudal vertebra	-	1	-	-	1
VX	Vertebra, indetermin.	1	-	-	-	1
PAL	Palatine	-	-	2	-	2
HYOM	Hyomandibular	-	-	1	-	1
PVD	Precaudal Vertebrae	-	-	-	1	1
Col. Total		1	1	4	1	7

Table 69. Shellfish from Feature J (AS I)

		OYS	CLAM	MUSS	UNSH	TOTAL
HALF	Shell incl hinge	7	3	-	1	11
SHL	Shell fragment	18	10	3	-	31
Col. Total		25	13	3	1	42

Feature J (AS II), TPQ - 1864 is designated Feature T

Feature J (AS III), TPQ - 1870

Table 70. Mammals and Birds from Feature J (AS III)

		COW	SHE	S/G	PG	DOG	CAT	RAB	SAR	OXO	ROD	UNM	POW	GOO	DUC	TUR	UNB	TOR	RAT	HOMO	FWZ	SUNB	SUNM	GSZ	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	62	12	-	5310	-	-	-	-	78	-	-	-	-	-	4	-	5466
SKL	Skull	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	5
FRNT	Frontal	-	-	-	18	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
PAR	Parietal	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
OCIP	Occipital	-	-	-	13	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
TEMP	Temporal	-	-	-	11	1	6	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
LAC	Lacrimal	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
PET	Petrous port.	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SPH	Sphenoid	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
ZYG	Zygomatic/Ma.	-	-	-	10	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
INC	Incisive	-	-	-	8	2	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	13
SFRAG	Skull Frag.	1	-	-	28	2	8	-	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	44
MAX	Maxilla	-	-	-	13	2	4	-	-	-	-	-	1	-	-	-	-	-	6	-	-	-	-	-	26
JAW	Mandible	-	-	1	25	2	5	1	1	2	6	-	-	-	-	-	-	-	16	-	-	-	-	-	59
VC01	Axis (1st Cer.)	7	-	5	7	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
VC02	Axis (2nd Cer.)	5	-	7	3	1	1	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	21
VC	Cervical vert.	6	-	7	7	6	2	-	52	28	6	-	-	-	-	-	-	-	1	-	-	-	-	-	115
VT	Thoracic vert.	2	-	6	4	5	6	-	21	13	3	-	-	-	-	-	-	-	-	-	-	-	-	-	60
VL	Lumbar vert.	1	-	3	10	2	8	-	31	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	70
VD	Caudal vert.	1	-	-	1	-	1	-	3	1	-	10	-	-	-	-	-	-	-	-	-	-	-	-	17
VS	Sacrum	1	-	-	5	-	1	-	3	1	1	-	2	1	1	-	-	-	-	-	3	-	-	-	19
VX	Vertebra, ind.	-	-	-	4	-	1	-	108	31	2	2	11	3	-	-	7	-	-	-	-	12	-	-	181
CC	Costal cartilage	-	-	-	-	-	-	-	6	16	-	2	-	-	-	-	-	-	-	-	-	-	-	-	24
RIB	Rib	29	-	65	41	8	3	-	164	92	2	1	-	-	-	-	8	-	-	-	2	-	-	-	415
STX	Sternum	2	-	3	4	-	-	-	2	-	-	-	-	-	-	-	2	-	-	-	5	-	-	-	18
ACET	Pelvis (w/am)	1	-	3	2	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	7
OC	Pelvis	1	-	2	1	-	-	-	4	1	8	-	-	-	-	-	1	-	-	-	-	-	-	-	18
ILM	Ilium	2	-	3	4	-	2	-	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	14
ISH	Ischium	2	-	5	6	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
PUB	Pubis	1	-	3	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
FEM	Femur	18	4	6	25	-	6	2	4	5	21	-	7	-	-	-	-	-	1	-	-	-	1	-	100
PAT	Patella	3	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
TIB	Tibia	16	1	12	20	2	4	-	2	8	22	-	-	-	-	-	-	-	3	-	-	-	-	-	90
FIB	Fibula	-	-	-	7	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	9
SCAP	Scapula	10	1	7	16	2	2	-	7	2	2	-	4	-	-	5	-	-	-	-	2	-	-	-	60
HUM	Humerus	15	2	12	11	2	9	-	1	2	12	-	5	2	5	1	-	-	1	-	3	1	-	-	84
RAD	Radius	12	6	17	20	4	3	-	-	-	1	-	4	-	-	1	-	-	-	-	-	-	-	-	68
ULN	Ulna	4	1	11	21	3	3	-	3	-	5	-	2	-	1	1	-	-	-	-	-	1	-	-	56
AST	Astragalus	9	-	6	12	3	3	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36
CAL	Calcaneus	6	-	3	9	1	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	22
CENT	Central tars.	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
TARD	4th tarsal	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CQ	Centro-quart	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
MAL	Malleolus	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
TARG	Fused 2nd & 3rd	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
TAR	Tarsal	4	-	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
CAR	Carpal	4	-	2	5	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
CARR	Radial carpal	6	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
CARI	Intermediate	1	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
CARU	Ulnar carpal	-	-	3	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
CARC	3rd carpal	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
CARD	4th carpal	4	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
CARG	Fused 2nd & 3rd	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 70. Mammals and Birds from Feature J (AS III) (continued)

		COW	SHE	S/G	PIG	DOG	CAT	RAB	SAR	OXO	ROD	UNM	FOW	GOO	DUC	TUR	UNB	TOR	RAT	HOMO	FWZ	SUNB	SUNM	GSZ	TOTAL
MT	Main metatar.	2	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
MTC	3rd metatar.	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
MTD	4th metatar.	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
MC	Main metacag.	-	4	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
MCC	3rd metacar.	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
MCD	4th metacar.	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
MP	Metapodial	-	-	-	47	9	29	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	88
MPG	Lateral (anc.)	-	-	-	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49
APH	1st phalanx	1	1	2	79	10	1	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	97
BPH	2nd phalanx	-	-	-	38	5	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44
CPH	3rd phalanx	-	-	-	28	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31
SES	Sessamoid	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PSES	Proximal ses.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
TFRAG	Tooth frag.	-	-	-	112	2	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	116
LI	Lower incisor	-	-	2	18	1	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	28
DLI	Deciduous low.	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
LC	Lower canine	-	-	-	7	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
UI	Upper incisor	-	-	-	14	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	17
DUI	Deciduous up. in.	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
UC	Upper canine	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UP	Upper cheek	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
DLP3	Deciduous low.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DLP4	Deciduous low.	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
DUP4	Deciduous up.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DUP	Deciduous um.	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
LPM3	Lower 3rd prem.	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UPM3	Upper 3rd prem.	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
UPM4	Upper 4th prem.	-	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
LPM	Lower premol.	-	-	-	17	4	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	22
UPM	Upper premol.	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
LM1	Lower 1st mol.	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
LM2	Lower 2nd mol.	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
LM3	Lower 3rd mol.	-	-	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
UM1	Upper 1st mol.	-	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
UM2	Upper 2nd mol.	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
UM3	Upper 3rd mol.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LM	Lower molar	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UM	Upper molar	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
COR	Coracoid	-	-	-	-	-	-	-	-	-	-	2	-	-	2	-	-	-	-	-	1	-	-	-	5
CMC	Carpometacar.	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	1	-	-	-	4
PHL	Phalanx	-	-	-	-	1	3	-	2	-	-	1	-	-	1	11	-	-	-	-	14	-	-	1	34
TBT	Tibiotarsus	-	-	-	-	-	-	-	-	-	-	5	1	-	1	-	-	-	-	-	1	-	-	-	8
TMT	Tarsometatar	-	-	-	-	-	-	-	-	-	-	10	-	-	1	2	-	-	-	-	4	-	-	-	17
PM	Premolar	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SHEL	Carapace	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
LFRAG	Long bone fr.	-	-	-	-	-	-	-	32	132	-	64	-	2	-	-	71	-	-	-	42	-	3	3	349
SHL	Shell frag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	3
Col. Total		192	20	208	921	92	128	3	526	362	118	5390	62	9	7	13	180	4	30	1	90	2	8	4	8370

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 71. Fish from Feature J (AS III)

	UNP	GAD	MOR	SUNF	SPAR	HAD	POL	CLUP	HERR	SHAD	PLEU	FLO	PLAC	LEFT	SALMO	BLUE	BLACK	SBASS	BASS	PERCH	SERR	SEA	MACK	TOTAL
FRAG Bone Frag.	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
SKL Skull	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
FRNT Frontal	-	-	-	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
SFRAG Skull frag.	44	-	-	-	34	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82
MAX Maxilla	2	-	1	-	34	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	39
VT Thoracic vertebra	1	14	-	-	2	-	-	-	-	-	6	-	-	-	-	-	-	2	-	4	-	-	-	29
VD Caudal vertebra	9	41	39	-	91	26	8	-	-	8	-	4	1	39	1	21	20	-	2	1	14	3	9	337
VX Vertebra, ind.	19	16	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	36
CER Ceratohyal	-	-	-	-	7	-	-	1	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	11
PMAX Premaxilla	-	-	2	-	25	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	29
ETH Ethmoid	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
VOM Vomer	1	-	-	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	42
MEST Mesethmoid	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	8
PARA Parasphenoid	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
SUPRA Supraoccipital	-	-	-	-	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52
BAS Basioccipital	1	1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
DENT Dentary	1	-	-	-	23	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	26
PREOP Preopercle	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	4
ANG Angular	-	-	2	-	14	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	19
OPER Opercle	-	2	1	-	15	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
SBOPE Subopercle	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	5
INOP Interopercle	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PAL Palatine	-	-	-	-	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
MESOP Mesopterygoid	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
QUAD Quadrate	-	1	2	-	3	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	7
HYOM Hyomandibular	-	3	-	-	16	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	20
EPIH Epihyal	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PHRPL Pharyngeal Plate	-	2	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
EPIB Epibranchial	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CERBR Ceratobranchial	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
PHARY Pharyngobranchial	-	1	-	1	14	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	18
POST Post temporal	-	-	2	-	3	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
SPCLE Supracleithrum	-	4	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
CLEI Cleithrum	-	-	-	-	1	3	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	6
PVD Precaudal Vertebrae	-	4	13	-	19	2	4	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	43
ULT Ultimate Vert.	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2
SPINE Indet. Spine/Ray	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31
SCALE Scale	442	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	442
Col. Total	565	91	62	1	482	34	13	7	1	12	13	4	1	40	1	23	27	2	2	1	20	3	9	1414

Table 72. Shellfish from Feature J (AS III)

	OYS	CLAM	MUSS	SCALP	UNSH	CONC	CORAL	TOTAL
HALF Shell incl hinge	115	51	13	-	-	-	-	179
SHL Shell fragment	117	67	32	1	2	2	2	223
Col. Total	232	118	45	1	2	2	2	402

Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature J (AS IV), TPQ - 1860

Table 73. Mammals and Birds from Feature J (AS IV)

		COW	SHE	S/G	PIG	SAR	OXO	ROD	UNM	FOW	TUR	UNB	TOR	SUNB	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	1	-	175	-	-	22	1	-	199
SFRAG	Skull frag.	-	-	-	1	-	-	-	-	-	-	-	-	-	1
JAW	Mandible	-	-	-	1	-	-	-	-	-	-	-	-	-	1
VC01	Atlas (1st Cervical)	-	-	2	-	-	-	-	-	-	-	-	-	-	2
VC	Cervical vertebra	-	-	2	-	-	1	-	-	-	-	-	-	-	3
VT	Thoracic vertebra	-	-	-	-	-	2	-	-	-	-	-	-	-	2
VL	Lumbar vertebra	-	-	1	-	-	1	-	-	-	-	-	-	-	2
VS	Sacrum	-	-	-	-	1	-	-	-	1	-	-	-	-	2
VX	Vertebra, indetermin.	-	-	-	-	-	4	-	-	6	-	-	-	-	10
RIB	Rib	5	-	-	-	10	5	-	-	-	-	7	-	-	27
STX	Sternum	-	-	-	-	-	-	-	1	-	-	-	-	-	1
OC	Pelvis	-	-	-	-	-	-	1	-	-	-	-	-	-	1
ILM	Ilium	-	-	-	-	-	-	-	-	3	-	-	-	-	3
ISH	Ischium	-	-	-	1	-	-	-	-	-	-	-	-	-	1
PUB	Pubis	1	-	-	-	-	-	-	-	-	-	-	-	-	1
FEM	Femur	1	-	-	-	-	-	1	-	3	-	-	-	-	5
TIB	Tibia	2	-	-	-	-	-	-	-	3	1	-	-	-	6
FIB	Fibula	-	-	-	-	-	-	-	-	3	-	-	-	2	5
SCAP	Scapula	-	-	-	1	-	-	-	-	1	-	-	-	-	2
HUM	Humerus	2	1	-	5	-	1	-	-	3	1	-	-	-	13
RAD	Radius	-	-	-	-	-	-	-	-	7	-	-	-	-	7
ULN	Ulna	1	-	1	-	-	-	-	-	2	-	-	-	-	4
AST	Astragalus	-	1	-	-	-	-	-	-	-	-	-	-	-	1
CAL	Calcaneus	1	1	-	1	-	-	-	-	-	-	-	-	-	3
CQ	Centro-quartal	1	-	-	-	-	-	-	-	-	-	-	-	-	1
CARI	Intermediate carpal	-	-	-	1	-	-	-	-	-	-	-	-	-	1
APH	1st phalanx	1	-	-	4	-	-	-	-	-	-	-	-	-	5
LI	Lower incisor	3	-	-	-	-	-	-	-	-	-	-	-	-	3
DUP3	Deciduous upper 3rd	1	-	-	-	-	-	-	-	-	-	-	-	-	1
LM	Lower molar	1	-	-	-	-	-	-	-	-	-	-	-	-	1
UM	Upper molar	2	-	-	-	-	-	-	-	-	-	-	-	-	2
COR	Coracoid	-	-	-	-	-	-	-	-	3	1	-	-	-	4
FUR	Clavicle (Furcula)	-	-	-	-	-	-	-	-	2	-	-	-	-	2
CMC	Carpometacarpus	-	-	-	-	-	-	-	-	3	-	-	-	-	3
PHL	Phalanx	-	-	-	-	-	-	-	-	-	-	1	-	-	1
TBT	Tibiotarsus	-	-	-	-	-	-	-	-	2	5	-	-	-	7
LFrag	Long bone fragment	2	-	-	-	3	6	-	-	-	-	6	-	-	17
Col. Total		24	3	6	15	14	21	2	175	43	8	36	1	2	350

Table 74. Fish from Feature J (AS IV)

		UNF	MOR	SPAR	POL	HERR	SHAD	PLEU	BLUE	BASS	MACK	TOTAL
FRAG	Bone Frag.	5	-	-	-	-	-	-	-	-	-	5
MAX	Maxilla	-	-	-	-	-	-	1	-	-	-	1
VD	Caudal vertebra	1	16	1	3	1	9	-	-	1	10	42
PMAX	Premaxilla	-	-	-	-	-	-	-	1	-	-	1
VOM	Vomer	-	-	1	-	-	-	-	-	-	-	1
DENT	Dentary	-	-	-	-	-	1	-	2	-	-	3
PREOP	Preopercle	-	-	-	-	-	-	1	-	-	-	1
ANG	Angular	-	-	2	-	-	-	-	-	-	-	2
BRAY	Branchiostegal Ray	1	-	-	-	-	-	-	-	-	-	1
QUAD	Quadrate	-	-	-	-	-	-	1	-	-	-	1
HYOM	Hyomandibular	-	-	1	-	-	-	-	-	-	-	1
SPINE	Indet. Spine/Ray	24	-	-	-	-	-	-	-	-	-	24
Col. Total		31	16	5	3	1	10	3	3	1	10	83

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 75. Shellfish from Feature J (AS IV)

		OYS	CLAM	MUSS	TOTAL
HALF	Shell incl hinge	57	10	1	68
SHL	Shell fragment	503	116	7	626
Col. Total		560	126	8	694

Feature J (AS V), TPQ - 1850

Table 76. Mammals and Birds from Feature J (AS V)

		COW	SHE	S/G	PG	DOG	CAT	SAR	OYO	ROD	UNH	FOW	GOO	DUC	TUR	UNB	TOR	RAT	EGG	FWZ	SUNB	PGN	SUNW	GSZ	TOTAL
	Unknown anat.	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	4	-	-	-	-	-	5
FRAG	Bone Frag.	-	-	-	-	-	-	-	11	-	3697	-	-	-	-	54	101	1	-	-	-	-	-	-	3864
SKL	Skull	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	3
FRNT	Frontal	2	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
PAR	Parietal	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
OCIP	Occipital	2	-	1	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
TEMP	Temporal	2	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
LAC	Lacrimal	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
ZYG	Zygomatic/Ma.	-	-	-	6	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
INC	Incisive	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
SFRAG	Skull frag.	-	-	1	13	-	8	1	5	-	4	-	-	-	-	1	-	1	-	-	-	-	-	-	34
HC	Horn core	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MAX	Maxilla	-	-	1	9	-	1	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
JAW	Mandible	4	-	4	25	3	7	-	-	2	1	-	-	-	-	-	-	8	-	-	-	-	-	-	54
HYD	Hyoid	1	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
VC01	Atlas (1st Cer.)	3	-	3	3	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
VC02	Axis (2nd Cer.)	4	-	2	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
VC	Cervical vert.	28	-	36	11	1	3	36	17	3	1	-	-	-	-	-	-	2	-	-	-	-	-	-	138
VT	Thoracic vert.	20	-	50	21	1	7	36	26	2	-	-	-	-	-	-	-	3	-	-	-	-	-	-	166
VL	Lumbar vert.	7	-	13	12	-	12	19	7	14	-	-	-	-	-	-	-	4	-	-	-	-	-	-	88
VD	Caudal vert.	1	-	-	3	1	6	5	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	20
VS	Sacrum	6	-	4	6	-	-	3	4	-	4	1	4	1	-	-	-	-	2	-	-	-	-	1	36
VX	Vertebra, ind.	6	-	15	10	-	1	134	74	-	9	8	-	12	8	-	-	-	16	-	-	-	-	8	301
CC	Costal cartilage	4	-	2	-	-	-	14	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36
RIB	Rib	86	-	90	30	3	8	223	82	2	81	2	-	2	11	-	2	-	25	-	-	3	1	-	651
STX	Sternum	1	-	4	5	-	-	10	1	-	-	5	2	1	2	27	-	-	-	-	-	-	-	-	58
ACET	Pelvis (w/ac)	3	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
OC	Pelvis	1	-	5	4	-	-	9	1	9	-	3	-	-	1	-	5	-	2	-	-	-	-	1	41
ILM	Ilium	6	-	13	9	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
ISH	Ischium	5	-	7	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
PUB	Pubis	3	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
FEM	Femur	19	-	24	39	1	7	4	1	14	-	7	-	2	1	-	-	7	-	2	1	-	-	-	129
PAT	Patella	5	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
TIB	Tibia	22	2	30	32	-	4	4	1	12	1	-	1	-	-	-	-	6	-	-	-	-	-	-	116
FIB	Fibula	-	-	-	24	-	-	-	-	-	-	2	-	1	3	-	-	-	3	-	-	-	-	-	33
SCAP	Scapula	26	6	14	14	-	4	5	13	2	-	8	-	1	-	-	2	-	1	-	-	-	-	1	97
HUM	Humerus	28	9	18	27	1	14	1	-	8	-	3	-	3	-	-	12	-	-	-	-	-	-	-	124
RAD	Radius	12	9	27	35	-	4	3	-	1	-	5	2	-	1	2	-	-	4	-	1	-	-	-	106
ULN	Ulna	8	1	20	31	-	3	-	-	5	-	13	1	-	-	-	-	-	1	-	-	-	-	-	83
AST	Astragalus	7	2	4	21	1	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38
CAL	Calcaneus	12	2	7	28	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52
CENT	Central tars.	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
TARD	4th tarsal	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
CQ	Centro-quart	14	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
MAL	Malleolus	3	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
TARG	Fused 2nd & 3rd	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
TAR	Tarsal	1	-	-	6	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
CAR	Carpal	2	-	6	9	-	-	3	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	21
CARR	Radial carpal	5	-	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
CARI	Intermediate	5	-	2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 76. Mammals and Birds from Feature J (AS V) (continued)

		COW	SHE	S/G	PIG	DOG	CAT	SAR	OXO	ROD	UNM	FOW	GOO	DUC	TUR	UNB	TOR	RAT	EGG	FWZ	SUNB	PGN	SUNM	GSZ	TOTAL
CARU	Ulnar carpal	3	-	4	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
CARC	3rd carpal	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CARD	4th carpal	3	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
CARG	Fused 2nd & 3rd	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MT	Main metatar.	-	1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
MTC	3rd metatars.	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
MTD	4th metatars.	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
MC	Main metacar.	-	2	4	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
MCC	3rd metacarp.	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
MCD	4th metacarp.	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
MP	Metapodial	2	-	3	42	4	17	-	-	1	-	-	-	-	-	-	-	2	-	-	-	-	-	-	71
MPG	Lateral (anc.)	-	-	-	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64
APH	1st phalanx	-	2	3	84	1	2	-	-	-	1	2	-	-	-	-	-	-	-	2	-	-	-	-	97
BPH	2nd phalanx	-	1	3	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94
CPH	3rd phalanx	-	-	-	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	60
SES	Sessamoid	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
PSES	Proximal ses.	-	-	7	5	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
TFRAG	Tooth frag.	6	-	4	29	-	2	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46
LI	Lower incisor	1	-	3	13	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
DLI	Deciduous low	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
LC	Lower canine	-	-	-	5	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
UI	Upper incisor	-	-	-	6	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
DUI	Deciduous up.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UC	Upper canine	-	-	-	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
UP	Upper cheek	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
DLP2	Deciduous low.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DLP3	Deciduous low.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DLP4	Deciduous low.	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
DUP2	Deciduous up.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DUP3	Deciduous up.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DUP4	Deciduous up.	3	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
DLP	Deciduous low.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DUP	Deciduous up.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LPM3	Lower 3rd pre.	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UPM1	Upper 1st pre.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UPM2	Upper 2nd pre.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UPM3	Upper 3rd pre.	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
UPM4	Upper 4th pre.	-	-	-	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
LPM	Lower premolar	-	-	-	6	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
UPM	Upper premolar	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
LM1	Lower 1st mol.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LM2	Lower 2nd mol.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LM3	Lower 3rd mol.	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
UM1	Upper 1st mol.	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
UM2	Upper 2nd mol.	-	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
UM3	Upper 3rd mol.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LM	Lower molar	2	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
UM	Upper molar	2	-	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
COR	Coracoid	-	-	-	-	-	-	-	-	-	8	1	1	-	-	-	-	-	-	1	-	1	-	-	12
CMC	Carpometacar.	-	-	-	-	-	-	-	-	-	9	-	-	1	-	-	-	-	-	1	1	1	-	-	13
PHL	Phalanx	-	-	-	-	-	-	-	-	-	24	-	-	3	3	-	-	-	-	28	-	-	-	2	60
TBT	Tibiotarsus	-	-	-	-	-	-	-	-	-	16	-	2	4	-	-	-	-	-	4	-	-	-	1	27
TMT	Tarsometatar.	-	-	-	-	-	-	-	-	-	21	-	3	1	-	-	-	-	-	1	-	-	-	-	26
PM	Premolar	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MARG	Marginal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
SHEL	Carapace	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	17
IFRAG	Long bone fr.	1	-	1	-	4	55	40	-	76	-	-	-	-	-	71	-	1	-	7	-	-	-	-	256
RING	Troc. Ring	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	2	-	-	-	-	8
Col. Total		394	37	474	998	29	125	566	302	86	8876	149	9	18	32	178	119	57	4	103	2	3	3	15	7579

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 77. Fish from Feature J (AS V)

	UNF	GAD	MOR	SUNF	SPAR	HAD	POL	CLUP	HERR	SHAD	PLEU	FLO	HAL	PLAC	LEFT	SALMO	TROUT	BLUE	BLACK	SBASS	BASS	PERCH	SERR	SEA	MACK	TOTAL
FRAG Bone Frag.	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92
SKL Skull	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	5
FRNT Frontal	-	1	-	-	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
LAC Lacrim	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SFRAG Skull Frag.	222	18	-	-	18	-	-	6	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	265
MAX Maxilla	-	-	2	-	29	4	1	-	1	-	1	-	-	-	-	-	-	-	10	-	-	-	-	1	-	49
VC01 Atlas (1st C.)	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
VT Thoracic ver.	-	13	18	-	21	-	-	-	1	-	2	-	-	-	-	-	-	2	-	-	4	-	-	-	1	62
VD Caudal vertebr.	5	46	86	15	162	10	12	6	23	59	9	29	5	6	6	3	2	1	10	-	10	-	32	4	100	641
VX Vertebra, inden.	54	14	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69
SCAP Scapula	3	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
CER Ceratohyal	-	-	1	-	9	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	14
PMAX Premaxilla	-	1	3	1	27	4	-	1	2	1	1	-	-	-	-	-	-	6	-	-	-	1	-	-	-	48
ETH Ethmoid	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
VOM Vomer	1	-	3	-	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32
MEST Mesethmoid	-	1	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
PARA Parasphenoid	-	5	2	-	9	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	18
SUPRA Supraoccipital	-	1	-	-	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35
EXOC Exooccipital	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
BAS Basioccipital	-	2	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
OPIS Opisthotic	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DENT Dentary	2	2	4	-	28	-	-	4	3	2	4	-	-	-	-	-	-	1	4	-	-	-	-	-	1	55
SPOPE Supraopercle	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
PREOP Preopercle	-	2	-	-	21	-	-	1	2	1	6	1	-	-	-	-	-	3	-	1	1	-	-	-	-	39
ANG Angular	-	-	1	2	26	4	-	1	2	3	5	-	-	-	-	-	-	1	-	-	-	1	-	-	-	46
OPER Opercle	1	2	-	-	30	-	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39
SBOPE Subopercle	-	-	1	1	13	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
INOP Interopercle	-	1	3	-	14	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	22
BRAY Branchiostegal	21	3	1	-	-	-	-	-	-	1	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	31
PAL Palatine	-	3	-	-	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
ECTO Ectopterygoid	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MESOP Mesopterygoid	-	-	-	-	6	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
QUAD Quadrate	-	2	3	-	7	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
HYOM Hvomandibular	1	3	4	-	31	1	-	-	1	-	1	1	-	-	-	-	-	1	3	-	-	-	-	-	1	48
SYM Svmplectic	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
INTER Interhyal	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
EPIH Epihyal	-	1	2	-	-	-	-	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
HYPO Hypohal	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
EPIB Epibranchial	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
CERBR Ceratobranchial	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
HYPOR Hypobranchial	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UROH Urohyal	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
PHARY Pharyngobranch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	2
POST Post temporal	-	-	9	-	7	3	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
SPCLE Supracleithrum	-	3	1	-	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
CLEI Cleithrum	1	7	2	-	10	5	-	-	-	5	2	-	1	-	-	-	-	-	-	-	-	-	1	-	-	34
PTCLE Postcleithrum	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CORA Coracoid	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
PVD Precaudal Vert.	-	25	37	2	51	7	1	-	1	3	3	4	-	2	2	-	-	3	1	7	1	3	2	5	160	
ULT Ultimate Vert.	3	-	1	-	3	-	-	-	-	-	4	-	1	-	-	-	-	1	-	-	-	-	-	-	-	13
PEN Penultimate Ver.	2	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
SPINE Indet. Spine/Ray	287	1	2	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	301
SCALE Scale	267	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	267
Col. Total	963	172	190	22	665	40	15	28	42	82	50	41	7	9	8	3	2	6	43	1	24	2	38	8	108	2569

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 78. Shellfish from Feature J (AS V)

	OYS	CLAM	MUSS	SCALP	UNSH	CRUST	CONC	TOTAL
FRAG Bone Frag.	-	-	2	-	-	-	-	2
HALF Shell incl hinge	755	143	3	5	-	-	-	906
SHL Shell fragment	513	143	97	1	5	3	1	763
WHL Whole Shell	-	-	-	-	-	-	2	2
Col. Total	1268	286	102	6	5	3	3	1673

Table 79. Distribution of Shellfish in Feature J (AS V)

	OYS	CLAM	MUSS	SCALP	UNSH	CRUST	CONC	TOTAL
C738	63	30	1	-	-	-	1	95
C739	69	11	-	-	-	-	-	80
C758	105	8	-	-	-	-	1	114
C762	76	21	-	-	4	-	-	101
C767	30	7	6	-	-	2	-	45
C780	76	11	7	1	1	-	-	96
C795	135	170	13	1	-	1	1	321
C812	200	-	50	2	-	-	-	252
C823	117	1	-	-	-	-	-	118
C825	208	8	9	2	-	-	-	227
C830	5	7	3	-	-	-	-	15
C851	184	12	13	-	-	-	-	209
Col. Total	1268	286	102	6	5	3	3	1673

Lot 6, Feature K

Table 80. Mammals and Birds from Feature K

	PIG	CAT	OXO	UNB	TOTAL
RIB Rib	-	-	1	-	1
RAD Radius	1	-	-	-	1
MP Metapodial	-	1	-	-	1
LFRAG Long bone fragment	-	-	-	1	1
Col. Total	1	1	1	1	4

Lot 7, Feature N (wood-lined privy)

Feature N (AS I and II), TPQ - 1903

A total of 6.9 pounds of shell were recovered from the entirety of Feature N. No fish bone or shell was recovered from AS I. With the exception of one thoracic vertebra identified as Atlantic Cod, no fish bone was recovered from AS II either.

Table 81. Mammals from Feature N (AS I)

	COW	TOTAL
RIB Rib	2	2
Col. Total	2	2

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 82. Fish and Shellfish from Feature N (AS II)

		MOR.	OYS	CLAM	MUSS	SCALP	TOTAL
VT	Thoracic vertebra	1	-	-	-	-	1
HALF	Shell including hinge	-	10	6	-	-	16
SHL	Shell fragment	-	40	36	6	1	83
Col. Total		1	50	42	6	1	100

Feature N (AS III), TPQ - 1840

Table 83. Mammals and Birds from Feature N (AS III)

		COW	S/G	PIG	CAT	SAR	OXO	ROD	UNM	FWZ	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	37	-	37
FRNT	Frontal	-	-	1	-	-	-	-	-	-	1
OCIP	Occipital	-	-	1	-	-	-	-	-	-	1
INC	Incisive	1	-	-	-	-	-	-	-	-	1
VT	Thoracic vertebra	-	-	-	-	-	1	-	-	-	1
VL	Lumbar vertebra	-	2	-	-	-	-	-	-	-	2
VS	Sacrum	2	-	-	-	-	-	1	-	-	3
VX	Vertebra, indetermin.	-	-	-	-	-	1	-	-	-	1
RIB	Rib	2	2	2	-	4	-	-	-	-	10
ILM	Ilium	1	-	-	-	-	-	-	-	-	1
ISH	Ischium	-	1	-	-	-	-	-	-	-	1
FEM	Femur	-	-	-	-	-	-	1	-	-	1
SCAP	Scapula	-	-	1	-	-	-	-	-	-	1
HUM	Humerus	-	-	-	1	-	-	-	-	-	1
RAD	Radius	-	1	2	-	-	-	-	-	-	3
MP	Metapodial	-	-	1	3	-	-	-	-	-	4
CPH	3rd phalanx	-	-	2	-	-	-	-	-	-	2
UM1	Upper 1st molar	-	-	1	-	-	-	-	-	-	1
TMT	Tarsometatarsus	-	-	-	-	-	-	-	-	2	2
Col. Total		6	6	11	4	4	2	2	37	2	74

Table 84. Fish and Shellfish from Feature N (AS III)

		UNF	SUNF	SPAR	OYS	CLAM	TOTAL
SKL	Skull	-	-	1	-	-	1
MAX	Maxilla	-	-	1	-	-	1
VT	Thoracic vertebra	-	-	1	-	-	1
VD	Caudal vertebra	-	-	3	-	-	3
VOM	Vomer	-	-	1	-	-	1
DENT	Dentary	-	-	1	-	-	1
ANG	Angular	-	-	1	-	-	1
INOP	Interopercle	-	-	2	-	-	2
QUAD	Quadrate	-	1	-	-	-	1
CLEI	Cleithrum	-	-	1	-	-	1
SPINE	Indet. Spine/Rav	6	-	-	-	-	6
HALF	Shell including hinge	-	-	-	5	-	5
SHL	Shell fragment	-	-	-	7	4	11
Col. Total		6	1	12	12	4	35

Appendix C

Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature N (AS IV), TPQ - 1830

Table 85. Mammals and Birds from Feature N (AS IV)

	COW	SHE	S/G	PIG	CAT	SAR	OXO	ROD	UNM	FOW	GOO	DUC	UNB	UNX	MOUSE	RAT	FWZ	GSZ	PGN	TOTAL
FRAG Bone Frag.	-	-	-	-	-	-	-	-	427	-	-	-	51	78	-	-	-	-	-	556
SKL Skull	2	-	-	-	1	-	-	2	-	6	2	-	-	-	2	3	-	-	-	18
FRNT Frontal	1	-	-	15	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
PAR Parietal	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
OCIP Occipital	-	-	-	8	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
TEMP Temporal	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
BSPH Basisphenoid	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
ZYG Zygomatic/Malar	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
INC Incisive	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
SFRAG Skull frag.	-	-	-	14	3	-	-	1	6	2	-	-	-	-	-	-	-	-	-	26
MAX Maxilla	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	7
JAW Mandible	2	-	-	3	10	-	-	-	-	10	-	2	-	-	-	19	-	-	-	46
VC01 Atlas (1st Cervical)	-	-	-	3	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	6
VC02 Axis (2nd Cervical)	2	-	-	4	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	9
VC Cervical vertebra	-	-	-	1	-	3	-	2	2	-	-	-	-	-	-	-	-	-	-	8
VT Thoracic vertebra	3	-	6	5	3	6	2	7	6	-	-	-	-	-	-	-	-	-	-	38
VL Lumbar vertebra	2	-	-	1	3	2	-	7	1	-	-	-	-	-	-	-	-	-	-	16
VD Caudal vertebra	-	-	-	1	5	-	-	10	-	-	-	-	-	-	-	-	-	-	-	16
VS Sacrum	2	-	-	1	1	-	-	4	-	-	-	-	-	-	-	-	-	-	-	8
VX Vertebra, indetermin	-	-	-	-	-	8	2	-	4	9	-	-	-	-	-	-	80	3	-	106
CC Costal cartilage	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	3
RIB Rib	21	-	12	20	2	24	8	-	19	-	-	-	1	-	-	-	75	-	-	182
STX Sternum	-	-	-	2	-	-	-	-	-	5	-	-	-	-	-	-	6	-	-	13
OC Pelvis	-	-	-	-	2	-	-	11	-	11	-	-	-	-	-	-	7	-	-	31
ILM Ilium	4	-	-	6	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	11
ISH Ischium	1	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
FEM Femur	3	-	1	13	3	-	-	15	-	10	-	-	1	-	-	-	-	-	-	46
TIB Tibia	2	1	-	8	2	1	-	18	-	-	-	-	-	-	-	-	-	-	-	32
FIB Fibula	-	-	-	3	2	-	-	-	-	6	-	-	-	-	-	-	1	-	-	12
SCAP Scapula	1	-	3	7	10	2	2	8	-	10	-	-	-	-	-	-	1	-	-	44
HUM Humerus	4	2	-	4	11	-	-	9	-	10	-	4	-	-	-	-	1	-	-	45
RAD Radius	-	2	2	10	-	-	-	2	-	13	-	-	-	-	-	-	-	-	-	29
ULN Ulna	-	2	1	7	-	-	-	6	-	13	-	-	-	-	-	-	-	-	-	29
AST Astragalus	1	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
CAL Calcaneus	4	-	-	6	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
CQ Centro-quartal	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
TARG Fused 2nd & 3rd tars	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
CARR Radial Carpal	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
CARI Intermediate carpal	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CARU Ulnar carpal	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CARD 4th carpal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MT Main metatarsal (ung)	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MTC 3rd metatarsal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MP Metapodial	-	-	-	8	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
MPG Lateral (ancillary)	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
APH 1st phalanx	-	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
BPH 2nd phalanx	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CPH 3rd phalanx	-	-	-	6	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
TFRAG Tooth frag.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LI Lower incisor	-	-	-	2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	4
UI Upper incisor	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DUI Deciduous upper inci	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LM2 Lower 2nd molar	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UMI Upper 1st molar	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Table 85. Mammals and Birds from Feature N (AS IV) (Continued)

	COW	SHE	S/G	PIG	CAT	SAR	OXO	ROD	UNM	FOW	GOO	DUC	UNB	UNX	MOUSE	RAT	FWZ	GSZ	PGN	TOTAL
SYN Synsacrum	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	1	-	-	7
COR Coracoid	-	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-	-	-	18
FUR Clavicle (Furcula)	-	-	-	-	-	-	-	-	-	13	-	1	-	-	-	-	-	-	-	14
CMC Carpometacarpus	-	-	-	-	-	-	-	-	-	9	-	2	-	-	-	-	-	-	1	12
PHL Phalanx	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	144	5	-	151
TBT Tibiotarsus	-	-	-	-	-	-	-	-	-	25	-	-	1	-	-	-	3	-	-	29
TMT Tarsometatarsus	-	-	-	-	-	-	-	-	-	27	6	9	-	-	-	-	1	-	-	43
LFRAG Long bone fragment	-	-	-	-	-	2	-	-	1	-	-	-	2	-	-	-	-	-	-	5
RING Troc. Ring	-	-	-	-	-	-	-	-	-	-	-	-	97	-	-	-	-	-	-	97
OVB Trachial Bulla	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	3
Col. Total	63	9	29	192	90	51	14	110	467	205	8	21	153	78	2	28	320	8	1	1849

Table 86. Fish from Feature N (AS IV)

	UNF	SUNF	MOR	SPAR	HERR	SHAD	PLEU	SERR	SEA	BLACK	MACK	TOTAL
FRAG Bone Frag.	10	-	-	-	-	-	-	-	-	-	-	10
SKL Skull	-	-	-	3	-	-	-	-	-	-	-	3
FRNT Frontal	-	-	-	2	-	-	-	1	2	-	-	5
SFRAG Skull frag.	19	-	-	-	2	-	-	-	-	-	-	21
MAX Maxilla	-	-	-	7	-	1	-	-	-	-	-	8
VT Thoracic vertebra	-	-	-	5	-	-	-	-	-	-	1	6
PVD Precaudal vertebra	-	-	-	-	-	-	-	1	-	-	-	1
VD Caudal vertebra	-	-	2	10	-	-	-	-	3	-	1	16
ULT Ultimate vertebra	1	-	-	1	-	-	-	-	-	-	-	2
COR Coracoid	-	-	-	-	-	-	-	1	-	-	-	1
CER Ceratohyal	-	-	-	5	-	-	-	-	-	-	-	5
PMAX Premaxilla	-	-	-	7	-	-	-	-	-	-	-	7
VOM Vomer	-	-	-	1	-	-	-	-	-	-	-	1
PARA Parasphenoid	-	-	-	1	-	-	-	-	-	-	-	1
SUPRA Supraoccipital	-	-	-	1	-	-	-	-	-	-	-	1
BAS Basioccipital	1	-	-	-	-	-	-	-	-	-	-	1
DENT Dentary	-	-	-	9	1	-	-	-	-	-	-	10
SPOPE Supraopercle	-	-	-	1	-	-	-	-	-	-	-	1
PREOP Preopercle	-	-	-	4	-	-	-	-	-	1	-	5
ANG Angular	-	1	-	5	-	-	-	-	-	-	-	6
OPER Opercle	-	-	-	4	1	-	-	-	-	-	-	5
INOP Interopercle	-	-	-	8	-	-	-	-	-	-	-	8
PAL Palatine	-	-	-	9	-	-	-	-	-	-	-	9
QUAD Quadrate	-	1	-	1	-	-	-	-	-	-	-	2
HYOM Hyomandibular	-	-	-	3	1	-	-	-	-	-	-	4
POST Post temporal	-	-	1	4	-	-	-	-	-	-	-	5
SPCLE Supracleithrum	-	-	-	4	-	-	-	-	-	-	-	4
CLEI Cleithrum	-	-	1	1	-	-	-	-	-	-	-	2
BASIP Basipterygium	-	-	-	-	-	-	1	-	-	-	-	1
SPINE Indet. Spine/Ray	16	-	-	-	-	-	-	-	-	-	-	16
SCALE Fish Scale	19	-	-	-	-	-	-	-	-	-	-	19
Col. Total	66	2	4	96	5	1	1	3	5	1	2	186

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 87. Shellfish from Feature N (AS IV)

		OYS	CLAM	MUSS.	PERI	LOB	TOTAL
CLAW	Claw, crustacean	-	-	-	-	2	2
HALF	Shell including hinge	65	26	-	-	-	91
SHL	Shell fragment	75	59	3	-	-	137
WHL	Whole Shell	-	-	-	1	-	1
Col. Total		140	85	3	1	2	231

There was no bone recovered from Feature N, AS V.

Table 88. Mammals from Feature N (AS VI)

		COW	PIG	OxO	UNM	FOW	UNX	TOTAL
FRAG	Bone Frag.	-	-	2	8	-	1	11
STX	Sternum	-	-	-	-	2	-	2
TIB	Tibia	2	-	-	-	-	-	2
HUM	Humerus	-	4	-	-	-	-	4
ULN	Ulna	-	2	-	-	-	-	2
MP	Metapodial	-	1	-	-	-	-	1
COR	Coracoid	-	-	-	-	2	-	2
Col. Total		2	7	2	8	4	1	24

Lot 7, Feature O

Altogether, 22.4 pounds of shell were recovered from Feature O. Although only one analytical stratum (AS III) was designated for Feature O, the largest concentration of shells (8.4 pounds) was recovered from C607 and C765. A single tarsometatarsus indentified as barn owl (*Tyto alba*) was recovered from C892.

Feature O (AS III), TPQ - 1862

Table 89. Mammals and Birds from Feature O (AS III)

		COW	SHE	S/G	PIG	DOG	CAT	SAR	OxO	ROD	UNM	FOW	GOO	UNB	UNX	RAT	FWZ	GSZ	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	-	-	2197	-	-	28	735	-	-	-	2960
FRNT	Frontal	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
PAR	Parietal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
OCIP	Occipital	-	-	1	18	-	-	-	-	-	-	-	-	-	-	-	-	-	19
TEMP	Temporal	-	-	-	9	-	-	1	-	-	-	-	-	-	-	-	-	-	10
ZYG	Zygomatic/Malar	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
SFRAG	Skull frag.	-	-	2	6	-	-	-	1	-	-	-	-	-	-	-	-	-	9
MAX	Maxilla	-	-	-	3	-	-	-	-	1	-	-	-	-	-	-	-	-	4
JAW	Mandible	-	-	4	7	1	-	-	-	3	-	-	-	-	-	5	-	-	20
VC01	Atlas (1st Cervical)	2	-	4	20	-	-	-	-	-	-	-	-	-	-	-	-	-	26
VC02	Axis (2nd Cervical)	1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	7
VC	Cervical vertebra	4	-	5	38	-	-	23	7	-	-	-	-	-	-	-	-	-	77
VT	Thoracic vertebra	5	-	8	27	-	-	19	8	3	-	-	-	-	-	-	-	-	70
VL	Lumbar vertebra	3	-	11	14	-	-	31	8	6	-	-	-	-	-	-	-	-	73
VD	Caudal vertebra	-	-	-	1	-	-	2	-	1	-	-	-	-	-	-	-	-	4
VS	Sacrum	3	-	2	6	-	-	-	6	2	-	-	-	-	-	-	-	-	19
VX	Vertebra, indetermin.	-	-	-	-	-	-	43	21	2	-	-	-	1	-	-	10	7	84
CC	Costal cartilage	2	-	-	-	-	-	8	9	-	-	-	-	-	-	-	-	-	19
RIB	Rib	17	-	14	50	-	-	173	9	1	-	-	-	-	-	-	-	-	264
STX	Sternum	1	-	-	4	-	-	1	2	-	-	1	-	1	-	-	2	-	12
OC	Pelvis	-	-	1	4	-	-	-	-	7	-	-	-	-	-	-	1	-	13
ILM	Ilium	5	-	3	5	-	1	1	-	-	-	-	-	-	-	-	-	-	15
ISH	Ischium	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	7
PUB	Pubis	1	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
FEM	Femur	5	-	3	14	-	-	-	-	15	-	-	-	-	-	-	1	-	38
PAT	Patella	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	3

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 89. Mammals and Birds from Feature O (AS III) (Continued)

		COW	SHE	S/G	PIG	DOG	CAT	SAR	OXO	ROD	UNM	FOW	GOO	UNB	UNX	RAT.	FWZ	GSZ	TOTAL
TIB	Tibia	7	1	3	15	-	-	-	-	7	1	-	-	-	-	-	-	-	34
FIB	Fibula	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	1	-	9
SCAP	Scapula	7	-	3	9	-	-	-	3	2	-	1	1	-	-	-	-	-	26
HUM	Humerus	3	2	5	20	-	1	-	-	11	-	4	-	-	-	-	1	1	48
RAD	Radius	8	5	4	11	-	-	1	-	-	-	-	-	-	-	-	2	1	32
ULN	Ulna	5	1	13	16	-	-	-	-	1	-	1	-	-	-	-	1	-	38
AST	Astragalus	-	2	2	9	-	-	-	-	-	-	-	-	-	-	-	-	-	13
CAL	Calcaneus	3	1	1	9	-	-	-	-	-	-	-	-	-	-	-	-	-	14
CENT	Central tarsal	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4
TARD	4th tarsal	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4
CQ	Centro-quartal	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MAL	Malleolus	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CAR	Carpal	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CARI	Intermediate carpal	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
CARU	Ulnar carpal	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CARC	3rd carpal	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
CARD	4th carpal	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MT	Main metatarsal (ung)	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
MTC	3rd metatarsal	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MTD	4th metatarsal	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MC	Main metacarpal (ung)	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MCC	3rd metacarpal	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	7
MCD	4th metacarpal	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MP	Metapodial	-	-	1	12	-	3	-	-	-	-	-	-	-	-	-	-	-	16
MPG	Lateral (ancillary)	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	14
APH	1st phalanx	-	4	5	31	-	-	-	-	-	-	-	-	-	-	-	-	-	40
BPH	2nd phalanx	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	10
CPH	3rd phalanx	-	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	18
PSES	Proximal sesamoid	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
LI	Lower incisor	1	-	4	4	-	-	-	-	9	-	-	-	-	-	-	-	-	18
DLI	Deciduous lower incisor	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
LC	Lower canine	-	-	-	1	1	-	-	-	1	-	-	-	-	-	-	-	-	3
UI	Upper incisor	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	5
UC	Upper canine	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
UP	Upper cheek tooth	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DUP2	Deciduous upper 2nd	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DUP3	Deciduous upper 3rd	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DUP4	Deciduous upper 4th	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DLP	Deciduous lower premolar	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UPM	Upper premolar	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	3
LM1	Lower 1st molar	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
LM3	Lower 3rd molar	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UM1	Upper 1st molar	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	3
UM3	Upper 3rd molar	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LM	Lower molar	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UM	Upper molar	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SYN	Synsacrum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2
COR	Coracoid	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	5
FUR	Clavicle (Furcula)	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2
CMC	Carpometacarpus	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
TBT	Tibiotarsus	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2	-	3
TMT	Tarsometatarsus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
LFRAG	Long bone fragment	-	-	-	-	-	-	5	37	-	-	-	-	3	-	-	-	-	45
Col. Total		87	21	115	476	2	5	308	111	72	2198	16	1	33	735	5	23	10	4218

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 90. Fish from Feature O (AS III)

	UNF	GAD	MOR	HAD	WHITE	SPAR	HERR	PLEU	HAL	SBASS	SEA	PERCH	BLUE	BLACK	TOTAL
FRAG Bone Frag.	8	-	-	-	-	-	-	-	-	-	-	-	-	-	8
FRNT Frontal	-	-	1	-	1	7	-	-	-	-	1	-	-	-	10
SFRAG Skull frag.	24	68	-	-	10	3	-	-	-	-	-	-	-	-	105
MAX Maxilla	-	-	4	1	-	2	-	-	-	-	-	-	1	-	8
VC01 Atlas (1st Cervical)	-	-	5	-	-	-	-	-	-	-	-	-	-	-	5
VT Thoracic vertebra	-	-	7	-	-	-	-	-	-	-	1	-	-	2	10
PVD Precaudal vertebra	-	-	-	4	-	4	-	-	-	1	-	-	-	-	9
VD Caudal vertebra	1	4	16	1	-	13	1	2	1	-	-	-	1	7	47
VX Vertebra, indetermin.	14	-	-	-	-	-	-	-	-	-	-	-	-	-	14
CER Ceratohyal	-	1	3	-	-	-	-	-	-	-	1	-	-	-	5
PMAX Premaxilla	-	-	14	2	-	3	-	-	-	-	-	-	-	2	21
ETH Ethmoid	-	-	-	-	-	2	-	-	-	-	-	-	-	-	2
VOM Vomer	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
MEST Mesethmoid	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
PARA Parasphenoid	-	1	4	-	-	1	-	-	-	-	-	-	-	-	6
SUPRA Supraoccipital	-	-	-	-	-	3	-	-	-	-	-	-	-	-	3
BAS Basioccipital	-	-	6	1	-	1	-	-	-	-	-	-	-	-	8
OPIS Opisthotic	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
PRO Prootic	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
NAS Nasal	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2
DENT Dentary	-	1	3	-	-	-	-	-	-	-	-	-	1	1	6
PREOP Preopercle	-	-	-	-	-	1	-	-	-	-	2	-	-	-	3
ANG Angular	-	-	7	-	-	-	-	-	-	-	2	-	-	2	11
OPER Opercle	-	-	1	-	-	3	-	-	-	-	-	-	-	-	4
INOP Interopercle	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
BRAY Branchiostegal Ray	2	12	-	-	-	-	-	1	-	-	-	-	-	-	15
PAL Palatine	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
QUAD Quadrate	-	1	-	1	-	-	-	-	-	-	-	-	-	-	2
HYOM Hyomandibular	-	-	4	1	-	-	-	-	-	-	2	-	-	-	7
SYM Symplectic	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
EPIH Epihyal	-	-	2	-	-	-	-	-	-	-	1	-	-	-	3
PHRPL Pharyngeal Plate	-	3	1	-	-	-	-	-	-	-	-	-	-	1	5
EPIB Epibranchial	-	-	5	-	-	-	-	-	-	-	-	-	-	-	5
POST Post temporal	-	-	5	2	-	1	-	-	-	-	-	-	1	-	9
SPCLE Supracleithrum	-	-	7	3	-	-	-	-	-	-	-	-	-	-	10
CLEI Cleithrum	-	1	2	3	-	-	-	-	-	-	-	1	-	-	7
PTCLE Postcleithrum	-	-	1	1	-	-	-	-	-	-	-	-	-	-	2
SPINE Indet. Spine/Ray	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
SCALE Fish Scale	3	-	-	-	-	-	-	-	-	-	-	-	-	-	3
OTO Otolith	-	-	4	-	-	-	-	-	-	-	-	-	-	-	4
Col. Total	54	93	105	22	11	47	1	3	1	1	10	1	4	15	368

Lot 6 Feature T

Table 91. Mammals and Birds from Feature T

	COW	S/G	SAR	OXO	UNM	GSZ	TOTAL
FRAG Bone Frag.	-	-	-	2	12	-	14
RIB Rib	1	-	1	-	-	-	2
SCAP Scapula	-	1	-	-	-	-	1
HUM Humerus	-	-	-	-	-	1	1
LFRAG Long bone fragment	-	-	-	-	1	-	1
Col. Total	1	1	1	2	13	1	19

Table 92. Fish from Feature T

		UNF	GAD	SPAR	BLUE	TOTAL
VX	Vertebra, indetermin.	-	-	1	-	1
SUPRA	Supraoccipital	-	-	3	-	3
QUAD	Quadrate	-	-	-	1	1
SPCLE	Supracleithrum	-	1	-	-	1
SPINE	Indet. Spine/Ray	1	-	-	-	1
Col. Total		1	1	4	1	7

Lot 3/4 - Feature W

There were 157 pounds of shell collected and weighed from Feature W before being discarded in the field. An additional 29.7 pounds were retained.

Table 93. Mammals and Birds from Feature W — By Catalog Number

	COW	SHE	S/G	PIG	HOR	CAT	SAR	OXO	ROD	UNM	FOW	GOO	TUR	UNB	FWZ	GSZ	TOTAL
C233	1	-	-	2	-	-	-	-	-	26	-	-	-	-	1	-	30
C234	1	-	1	-	-	-	-	-	5	-	-	-	-	-	-	-	7
C237	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	3
C249	1	-	2	-	-	-	-	-	-	15	-	1	1	-	-	-	20
C250	9	1	3	4	-	-	3	5	-	83	1	1	-	3	1	-	114
C251	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
C261	-	-	-	-	-	-	-	-	-	4	-	-	-	-	1	-	5
C262	2	-	-	-	-	1	-	-	-	2	-	-	-	1	-	-	6
C263	2	-	-	2	-	-	3	1	-	31	-	-	-	3	-	-	42
C316	23	-	10	2	-	-	5	3	-	108	1	-	-	2	1	-	155
C317	11	1	9	9	1	1	7	6	1	189	3	2	-	10	2	1	253
C318	1	-	-	1	-	2	-	-	-	3	-	-	-	-	-	-	7
C335	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
C337	2	-	-	1	-	-	-	-	-	6	-	-	-	-	-	-	9
C358	-	-	-	1	-	-	1	1	-	1	-	-	-	-	-	-	4
C359	8	-	4	-	-	-	1	2	-	19	2	-	-	-	1	-	37
C360	3	-	1	1	-	-	-	-	-	9	1	-	-	1	-	-	16
C362	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
C372	7	3	1	1	-	-	2	1	-	34	-	-	-	2	-	-	51
C373	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2
C426	3	-	4	4	-	-	2	-	-	56	-	-	-	-	2	-	71
C459	1	-	-	-	-	-	1	-	-	19	-	-	-	-	-	-	21
C487	1	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	11
C509	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Col. Total	77	6	35	28	1	4	25	20	1	626	8	4	1	22	9	1	868

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 94. Mammals and Birds from Feature W

		COW	SHE	S/G	PIG	HOR	CAT	SAR	OXO	ROD	UNM	FOW	GOO	TUR	UNB	FWZ	GSZ	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	-	-	625	-	-	-	19	-	-	644
TEMP	Temporal	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
HC	Horn core	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MAX	Maxilla	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
JAW	Mandible	1	-	1	1	-	2	-	-	-	-	-	-	-	-	-	-	5
HYD	Hvoid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
VC01	Atlas (1st Cervical)	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
VC	Cervical vertebra	1	-	4	-	-	-	2	1	-	-	-	-	-	-	-	-	8
VT	Thoracic vertebra	6	-	-	1	-	-	-	3	-	-	-	-	-	-	-	-	10
VL	Lumbar vertebra	2	-	2	1	-	-	4	2	-	-	-	-	-	-	-	-	11
VD	Caudal vertebra	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
VS	Sacrum	6	-	3	-	-	-	-	1	-	-	-	-	-	-	-	-	10
VX	Vertebra, indetermin.	-	-	-	-	-	-	1	3	-	-	-	-	-	-	1	-	5
RIB	Rib	18	-	4	4	-	-	17	7	-	1	-	-	-	-	-	-	51
OC	Pelvis	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	3
ILM	Ilium	5	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	9
ISH	Ischium	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
FEM	Femur	3	-	1	4	-	-	-	-	1	-	-	-	-	-	-	-	9
PAT	Patella	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
TIB	Tibia	1	-	4	1	-	-	-	-	-	-	-	-	-	-	-	-	6
FIB	Fibula	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
SCAP	Scapula	4	-	2	1	-	1	1	3	-	-	2	2	-	-	-	-	16
HUM	Humerus	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	6
RAD	Radius	3	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	5
ULN	Ulna	2	-	1	2	-	1	-	-	-	-	1	-	-	-	-	-	7
AST	Astragalus	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	3
CAL	Calcaneus	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
CQ	Centro-quartal	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CAR	Carpal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
CARG	Fused 2nd & 3rd carp.	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MT	Main metatarsal (ung)	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
MC	Main metatarsal (ung)	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MPG	Lateral (ancillary)	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	3
APH	1st phalanx	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	3
BPH	2nd phalanx	3	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	4
CPH	3rd phalanx	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LI	Lower incisor	1	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	4
DLP3	Deciduous lower 3rd	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DLP4	Deciduous lower 4th	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DUP4	Deciduous upper 4th	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UM3	Upper 3rd molar	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UM	Upper molar	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SYN	Synsacrum	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
COR	Coracoid	-	-	-	-	-	-	-	-	-	3	1	1	-	1	-	-	6
FUR	Clavicle (Furcula)	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
PHL	Phalanx	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	3
TBT	Tibiotarsus	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	3
TMT	Tarsometatarsus	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
LFrag	Long bone fragment	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2
Col. Total		77	6	35	28	1	4	25	20	1	626	8	4	1	22	9	1	868

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 95. Fish from Feature W

		UNF	GAD	MOR	SHAD	SBASS	MACK	TOTAL
FRAG	Bone Frag.	5	-	-	-	-	-	5
MAX	Maxilla	-	-	-	-	1	-	1
PVD	Precaudal vertebra	-	-	-	-	-	1	1
VD	Caudal vertebra	-	-	-	-	-	2	2
VX	Vertebra, indetermin.	-	1	-	-	-	-	1
COR	Coracoid	-	1	-	-	-	-	1
PREOP	Preopercle	-	-	-	1	-	-	1
ANG	Angular	-	-	-	-	1	-	1
OPER	Opercle	-	-	-	-	1	-	1
PTCLE	Postcleithrum	-	-	1	-	-	-	1
SPINE	Indet. Spine/Ray	6	-	-	-	-	-	6
Col. Total		11	2	1	1	3	3	21

Table 96. Shellfish from Feature W

		OYS	CLAM	SCALP	MUD	CORAL	TOTAL
	Unknown anatomy	-	-	-	-	1	1
HALF	Shell including hinge	136	40	-	-	-	176
SHL	Shell fragment	538	89	3	-	-	630
WHL	Whole Shell	-	-	-	1	-	1
Col. Total		674	129	3	1	1	808

Lot 6, Feature Z

There were 27.4 pounds of shell recovered from Feature Z, mostly from C781 and C792. This includes two pieces of coral—one from the overburden (C443) and one from AS III (C526).

Table 97. Mammals and Birds from Feature Z

	COW	S/G	PIG	CAT	SAR	ROD	UNM	FOW	GOO	DUC	TUR	UNB	FWZ	GSZ	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	10	-	-	-	-	56	-	-	66
VX	Vertebra, indetermin.	-	-	-	-	-	-	-	-	-	-	2	12	6	20
RIB	Rib	-	-	-	2	-	-	-	-	-	-	-	7	-	9
STX	Sternum	-	-	-	-	-	-	1	-	-	1	-	4	-	6
OC	Pelvis	-	-	-	-	-	-	-	-	-	-	-	4	-	4
FEM	Femur	-	-	-	-	-	-	2	-	-	1	-	-	-	3
SCAP	Scapula	-	-	-	-	-	-	3	1	1	1	-	-	-	6
HUM	Humerus	3	-	-	-	1	-	4	-	-	-	-	2	-	10
RAD	Radius	1	-	-	1	-	-	-	-	-	-	-	2	-	4
ULN	Ulna	-	-	-	1	-	-	1	-	-	-	-	3	-	5
SYN	Synsacrum	-	-	-	-	-	-	1	-	-	-	-	-	-	1
COR	Coracoid	-	-	-	-	-	-	3	-	-	-	-	-	-	3
FUR	Clavicle (Furcula)	-	-	-	-	-	-	1	-	1	-	-	-	-	2
CMC	Carpometacarpus	-	-	-	-	-	-	2	-	-	-	-	-	-	2
PHL	Phalanx	-	-	-	-	-	-	-	-	-	-	1	3	-	4
TBT	Tibiotarsus	-	-	-	-	-	-	1	-	-	1	-	3	-	5
TMT	Tarsometatarsus	-	-	-	-	-	-	-	-	-	-	-	2	-	2
LFRAG	Long bone fragment	-	-	-	-	-	-	-	-	-	-	8	-	-	8
LI	Lower Incisor	-	1	1	-	-	-	-	-	-	-	-	-	-	2
Col. Total		4	1	1	2	2	1	10	19	1	2	4	67	42	162

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 98. Fish and Shellfish from Feature Z

	GAD	MOR	HAD	LING	SPAR	FLO	CLUP	SERR	OYS	CLAM	SOFT	MUSS	SNAIL	LIMP	MUD	CORAL	TOTAL
Unknown anatomy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
SFRAG Skull frag.	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2
VT Thoracic vertebra	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
VD Caudal vertebra	3	1	3	2	2	1	-	1	-	-	-	-	-	-	-	-	13
PVD Precaudal vert.	1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	5
INOP Interopercle	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
OPIS Opisthotic	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
ANG Angular	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	2
PREOP Preopercle	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
HYOM Hvomandibular	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
HALF Shell including hinge	-	-	-	-	-	-	-	-	205	61	2	35	-	-	-	-	303
SHL Shell fragment	-	-	-	-	-	-	-	-	462	291	-	171	-	-	-	-	924
WHL Whole Shell	-	-	-	-	-	-	-	-	-	-	-	-	1	1	4	-	6
Col. Total	6	1	10	2	4	1	2	2	667	352	2	206	1	1	4	2	1263

Lot 3/4, Feature AA

A total of 7.6 pounds of shell were recovered from Feature AA.

Lot 3/4, Feature AB

Altogether, 11.7 pounds of shell were recovered from Feature AB. These were almost entirely the shells of oysters.

Table 99. Mammals and Birds from Feature AB

	COW	SHE	S/G	PIG	SAR	OXO	UNM	GOO	UNB	UNX	FWZ	GSZ	TOTAL
FRAG Bone Frag.	-	-	-	-	-	-	446	-	7	1	-	-	454
SKL Skull	1	-	-	-	-	-	-	-	-	-	-	-	1
TEMP Temporal	-	-	1	-	-	-	-	-	-	-	-	-	1
ZYG Zygomatic/Malar	-	-	1	-	-	-	-	-	-	-	-	-	1
INC Incisive	-	-	2	-	-	-	-	-	-	-	-	-	2
MAX Maxilla	-	-	1	1	-	-	-	-	-	-	-	-	2
JAW Mandible	-	-	2	-	-	-	-	-	-	-	-	-	2
VC Cervical vertebra	-	-	-	-	1	-	-	-	-	-	-	-	1
VT Thoracic vertebra	1	-	1	1	1	-	-	-	-	-	-	-	4
VL Lumbar vertebra	3	-	1	-	-	2	-	-	-	-	-	-	6
RIB Rib	10	-	2	1	11	-	-	-	-	-	1	-	25
STX Sternum	2	-	-	-	-	-	-	-	-	-	-	-	2
ILM Ilium	-	-	-	2	-	-	-	-	-	-	-	-	2
ISH Ischium	1	-	-	-	-	-	-	-	-	-	-	-	1
FEM Femur	3	-	1	-	-	-	-	-	-	-	-	-	4
TIB Tibia	2	-	3	1	-	-	-	-	-	-	-	-	6
SCAP Scapula	2	-	2	1	-	-	-	-	-	-	-	-	5
HUM Humerus	1	1	-	-	-	-	-	1	-	-	-	-	3
RAD Radius	1	-	-	-	-	-	-	-	-	-	-	-	1
ULN Ulna	-	-	1	-	-	-	-	-	-	-	1	-	2
AST Astragalus	-	-	-	1	-	-	-	-	-	-	-	-	1
CQ Centro-quartal	1	-	-	-	-	-	-	-	-	-	-	-	1
CARU Ulnar carpal	-	-	-	1	-	-	-	-	-	-	-	-	1
MT Main metatarsal (ung)	5	-	-	-	-	-	-	-	-	-	-	-	5
MTD 4th metatarsal	-	-	-	1	-	-	-	-	-	-	-	-	1
MC Main metacarpal (ung)	2	-	-	-	-	-	-	-	-	-	-	-	2
MCE 5th metacarpal	1	-	-	-	-	-	-	-	-	-	-	-	1
MP Metapodial	1	-	-	-	-	-	-	-	-	-	-	-	1

Table 99. Mammals and Birds from Feature AB (Continued)

		COW	SHE	S/G	PIG	SAR	OXO	UNM	GOO	UNB	UNX	FWZ	GSZ	TOTAL
BPH	2nd phalanx	2	-	-	-	-	-	-	-	-	-	-	-	2
CPH	3rd phalanx	4	-	-	-	-	-	-	-	-	-	-	-	4
DSES	Distal sesamoid	1	-	-	-	-	-	-	-	-	-	-	-	1
TFRAG	Tooth frag.	2	-	-	1	-	-	-	-	-	-	-	-	3
LI	Lower incisor	-	-	1	1	-	-	-	-	-	-	-	-	2
DUP	Deciduous upper premolar	1	-	-	-	-	-	-	-	-	-	-	-	1
UPM	Upper premolar	1	-	-	1	-	-	-	-	-	-	-	-	2
UM2	Upper 2nd molar	-	-	-	2	-	-	-	-	-	-	-	-	2
UM3	Upper 3rd molar	-	-	1	-	-	-	-	-	-	-	-	-	1
UM	Upper molar	-	-	2	-	-	-	-	-	-	-	-	-	2
COR	Coracoid	-	-	-	-	-	-	-	1	-	-	-	-	1
PHL	Phalanx	-	-	-	-	-	-	-	-	-	-	-	1	1
LFRAG	Long bone fragment	-	-	-	-	-	1	-	-	-	-	-	-	1
Col. Total		48	1	22	15	13	3	446	2	7	1	2	1	561

Lot 7, Feature AF

There was no shell recovered from Feature AF (AS I). A TPQ of 1800 was calculated for Feature AF, AS II. Twenty-four pounds of shell were recovered from AS II. Half (12 pounds) came from C892 along with a small fragment of unidentified coral.

Table 100. Mammals from Feature AF (AS II)

		COW	SHE	S/G	PIG	DOG	CAT	SAR	OXO	ROD	UNM	MOUSE	RAT	TOTAL
FRAG	Bone Frag.	5	-	-	-	-	-	1	-	-	444	-	-	450
SKL	Skull	-	-	-	-	-	-	-	-	2	-	-	1	3
FRNT	Frontal	-	-	-	1	-	-	-	-	1	-	-	-	2
SPH	Sphenoid	-	-	-	-	-	-	1	-	-	-	-	-	1
ZYG	Zygomatic/Malar	1	-	-	-	-	-	-	-	-	-	-	-	1
SFRAG	Skull frag.	-	-	-	5	-	-	2	-	4	1	-	-	12
HC	Horn core	2	-	-	-	-	-	-	-	-	-	-	-	2
MAX	Maxilla	1	-	-	6	-	-	-	-	1	-	-	-	8
JAW	Mandible	-	-	2	1	-	1	-	-	5	-	-	6	15
VC01	Atlas (1st Cervical)	1	-	2	-	-	-	-	-	1	-	-	-	4
VC	Cervical vertebra	13	-	2	4	1	-	-	-	1	-	-	-	21
VT	Thoracic vertebra	12	-	5	3	-	-	1	-	-	-	-	-	21
VL	Lumbar vertebra	1	-	5	-	1	1	-	-	-	-	-	-	8
VD	Caudal vertebra	3	-	-	-	-	-	-	-	-	-	-	-	3
VX	Vertebra, indetermin.	7	-	4	-	-	-	19	3	-	1	-	-	34
RIB	Rib	60	-	36	5	-	-	31	-	9	9	-	-	150
STX	Sternum	1	-	-	-	-	-	-	-	-	-	-	-	1
ACET	Pelvis (w/acetabulum)	-	-	1	1	-	-	1	-	-	-	-	-	3
OC	Pelvis	3	-	3	-	-	-	-	-	12	-	-	-	18
ILM	Ilium	4	-	5	2	-	-	-	-	-	-	-	-	11
ISH	Ischium	3	-	-	-	-	-	-	-	-	-	-	-	3
PUB	Pubis	1	-	1	-	-	-	-	-	-	-	-	-	2
FEM	Femur	6	1	4	3	-	2	-	-	15	-	-	-	31
PAT	Patella	2	-	-	-	-	-	-	-	-	-	-	-	2
TIB	Tibia	3	2	4	5	-	1	1	-	21	-	1	-	38
FIB	Fibula	2	-	1	3	-	-	-	-	-	-	-	-	6
SCAP	Scapula	5	1	4	2	-	-	1	-	3	-	-	-	16
HUM	Humerus	5	2	-	8	-	-	-	-	9	-	-	-	24
RAD	Radius	3	2	4	7	-	-	1	-	4	-	-	-	21
ULN	Ulna	3	1	2	2	-	-	-	-	9	-	-	-	17
AST	Astragalus	1	-	3	2	-	-	-	-	-	-	-	-	6
CAL	Calcaneus	2	-	3	-	-	-	-	-	-	-	-	-	5
MAL	Malleolus	1	-	-	-	-	-	-	-	-	-	-	-	1

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 100. Mammals from Feature AF (AS II) (Continued)

		COW	SHE	S/G	PIG	DOG	CAT	SAR	OXO	ROD	UNM	MOUSE	RAT	TOTAL
TAR	Tarsal	1	-	3	-	-	-	-	-	-	-	-	-	4
CAR	Carpal	3	-	3	-	-	1	-	-	-	-	-	-	7
CARR	Radial Carpal	4	-	1	-	-	-	-	-	-	-	-	-	5
CARI	Intermediate carpal	2	-	-	-	-	-	-	-	-	-	-	-	2
CARU	Ulnar carpal	4	-	-	-	-	-	-	-	-	-	-	-	4
MT	Main metatarsal (ung)	1	-	1	-	-	-	-	-	-	-	-	-	2
MTD	4th metatarsal	-	-	-	2	-	-	-	-	-	-	-	-	2
MC	Main metacarpal (ung)	-	-	2	-	-	-	1	-	-	-	-	-	3
MP	Metapodial	3	-	2	5	-	-	-	-	-	-	-	-	10
MPG	Lateral (ancillary)	-	-	-	4	-	-	-	-	-	-	-	-	4
APH	1st phalanx	2	-	1	1	-	-	-	-	-	-	-	-	4
BPH	2nd phalanx	1	1	2	4	-	-	-	-	-	-	-	-	8
CPH	3rd phalanx	-	-	2	3	-	-	-	-	-	-	-	-	5
TFRAG	Tooth frag.	5	-	1	2	-	-	-	-	-	1	-	-	9
LC	Lower canine	-	-	-	2	-	-	-	-	3	-	-	-	5
UPM1	Upper 1st premolar	-	-	-	1	-	-	-	-	-	-	-	-	1
LPM	Lower premolar	-	-	-	1	-	-	-	-	-	-	-	-	1
UPM	Upper premolar	1	-	-	-	-	-	-	-	-	-	-	-	1
UM2	Upper 2nd molar	-	-	-	2	-	-	-	-	-	-	-	-	2
UM3	Upper 3rd molar	-	-	-	1	-	-	-	-	-	-	-	-	1
LM	Lower molar	-	-	4	2	-	-	-	-	-	-	-	-	6
PHL	Phalanx	1	-	-	1	-	-	-	-	2	-	-	-	4
PM	Premolar	-	-	-	1	-	-	-	-	-	-	-	-	1
LFRAG	Long bone fragment	1	-	-	-	-	4	13	-	-	61	-	-	79
PAL	Palatine	1	-	-	-	-	-	-	-	-	-	-	-	1
Col. Total		181	10	113	92	2	10	73	3	102	517	1	7	1111

Table 101. Birds from Feature AF (AS II)

		FOW	GOO	DU	TUR	PGN	SUNB	FWZ	GSZ	UNB	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	-	11	11
SKL	Skull	2	-	2	-	-	-	-	-	-	4
VS	Sacrum	3	-	1	-	-	-	-	-	-	4
VX	Vertebra, indetermin.	3	2	1	-	-	-	-	3	2	11
RIB	Rib	-	-	-	-	-	-	1	1	29	31
STX	Sternum	1	-	-	-	-	1	-	-	6	8
OC	Pelvis	2	2	-	-	-	-	-	-	1	5
FEM	Femur	2	-	3	-	2	-	-	-	-	7
TIB	Tibia	-	-	1	-	-	-	-	-	-	1
FIB	Fibula	1	-	2	-	-	-	-	-	-	3
SCAP	Scapula	3	-	1	-	2	-	-	-	1	7
HUM	Humerus	3	4	7	1	2	1	-	-	4	22
RAD	Radius	5	-	1	-	3	-	-	-	-	9
ULN	Ulna	2	-	-	-	3	-	-	-	-	5
COR	Coracoid	3	3	5	-	3	1	1	-	2	18
FUR	Clavicle (Furcula)	2	1	-	-	-	1	-	-	-	4
CMC	Carpometacarpus	3	-	1	-	4	-	-	-	-	8
PHL	Phalanx	2	1	-	-	-	-	5	-	33	41
TBT	Tibiotarsus	3	2	4	-	-	5	-	1	-	15
TMT	Tarsometatarsus	7	3	11	-	4	-	2	1	6	34
LFRAG	Long bone fragment	2	-	-	-	-	-	-	6	95	103
Col. Total		49	18	40	1	23	9	9	12	190	351

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 102. Fish from Feature AF (AS II)

	UNF	HERR	SHAD	PLEU	SALMO	SERR	SEA	BLUE	BLACK	TOTAL
FRAG Bone Frag.	19	-	-	-	-	-	-	-	-	19
FRNT Frontal	-	-	-	-	-	-	3	-	-	3
SFRAG Skull frag.	-	3	-	-	-	1	1	-	-	5
MAX Maxilla	-	-	-	-	-	2	2	-	-	4
VT Thoracic vertebra	-	-	-	-	-	-	1	-	-	1
PVD Precaudal vertebra	-	-	-	-	-	1	5	-	-	6
VD Caudal vertebra	1	-	2	-	1	2	3	1	1	11
SCAP Scapula	-	-	-	-	-	-	1	-	-	1
CER Ceratohyal	-	-	1	-	-	2	3	-	-	6
VOM Vomer	-	-	-	-	-	-	1	-	-	1
PARA Parasphenoid	-	-	-	-	-	1	-	-	-	1
PRO Prootic	-	-	-	-	-	-	1	-	-	1
DENT Dentary	-	1	-	1	-	-	-	-	-	2
SPOPE Supraopercle	-	-	1	-	-	-	-	-	-	1
PREOP Preopercle	-	2	1	-	-	-	4	-	-	7
ANG Angular	-	-	1	-	-	-	2	-	-	3
OPER Opercle	-	-	-	-	-	-	1	-	-	1
SBOPE Subopercle	1	-	-	-	-	-	-	-	-	1
PAL Palatine	-	-	-	-	-	-	1	-	-	1
META Metapterygoid	-	-	-	-	-	-	1	-	-	1
QUAD Quadrate	1	-	-	-	-	-	2	-	-	3
HYOM Hyomandibular	-	1	-	-	-	1	3	-	-	5
EPIH Epihyal	-	-	2	-	-	-	1	-	-	3
POST Post temporal	-	-	-	-	-	1	-	-	-	1
CLEI Cleithrum	-	-	-	-	-	-	2	-	2	4
SPINE Indet. Spine/Ray	17	-	-	-	-	-	5	-	-	22
Col. Total	39	7	8	1	1	11	43	1	3	114

Lot 43, Feature AG (stone-lined privy)

A total of 52.2 pounds of shell were recovered from Feature AG. This is mostly oyster, and hard- and soft-shell clams. There was also a cowrie, at least nine fragments of large whelks, and a single piece of unidentified coral. There were 13.3 pounds in AS I and 36 pounds in AS III.

Feature AG (AS I), TPQ - 1892

Table 103. Mammals and Birds from Feature AG (AS I)

	COW	SHE	S/G	PIG	DOG	CAT	SAR	OXO	ROD	UNM	FOW	GOO	DUC	TUR	UNB	UNX	RAT	FWZ	GSZ	PGN	TOTAL
Unknown anatomy	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2
FRAG Bone Frag.	-	-	-	-	-	1	-	-	996	-	-	-	-	-	63	516	-	-	-	-	1576
SKL Skull	-	-	-	-	1	1	-	-	-	-	3	-	-	-	-	-	-	-	-	-	5
FRNT Frontal	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PAR Parietal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
OCIP Occipital	-	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
TEMP Temporal	1	-	-	4	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
BSPH Basisphenoid	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
ZYG Zygomatic/ Malar	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
INC Incisive	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
SFRAG Skull frag.	1	-	2	8	-	7	-	1	-	-	5	-	-	-	-	-	-	-	-	-	24
MAX Maxilla	-	-	2	2	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	6
JAW Mandible	-	-	1	1	2	8	-	-	2	-	3	-	-	-	-	-	5	1	-	-	23
VC01 Atlas (1st Cervical)	-	-	4	2	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	11
VC02 Axis (2nd Cervical)	-	-	5	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 103. Mammals and Birds from Feature AG (AS I) (Continued)

		COW	SHE	S/G	PIG	DOG	CAT	SAR	OXO	ROD	UNM	FOW	GOO	DUC	TUR	UNB	UNX	RAT	FWZ	GSZ	PGN	TOTAL	
VC	Cervical vertebra	12	-	22	1	-	1	4	5	3	-	-	-	-	-	-	-	-	-	-	-	-	48
VT	Thoracic vertebra	10	-	18	7	-	6	13	3	4	-	-	-	-	-	-	-	-	-	-	-	-	61
VL	Lumbar vertebra	5	-	6	3	-	5	4	3	11	-	-	-	-	-	-	-	-	-	-	-	-	37
VD	Caudal vertebra	-	-	-	1	-	7	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	10
VS	Sacrum	2	-	-	1	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	5
VX	Vertebra, indetermin.	-	-	-	-	-	-	51	13	-	-	-	-	-	-	1	-	-	31	6	-	-	102
CC	Costal cartilage	1	-	-	-	-	-	18	1	-	-	-	-	-	-	-	-	-	-	-	-	-	20
RIB	Rib	34	-	31	18	-	26	80	14	4	-	-	-	-	-	-	-	-	29	2	-	-	238
STX	Sternum	3	-	4	3	-	5	1	1	-	-	1	-	-	1	-	-	-	13	-	-	-	32
OC	Pelvis	1	-	-	1	-	-	-	-	4	-	5	1	1	-	-	-	-	6	-	-	-	19
ILM	Ilium	1	-	-	2	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	5
ISH	Ischium	2	-	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
PUB	Pubis	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
FEM	Femur	4	1	1	10	-	6	-	-	11	-	6	-	-	-	-	-	-	3	-	1	-	43
PAT	Patella	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
TIB	Tibia	2	-	1	8	-	2	-	-	12	-	2	-	-	-	-	-	-	1	-	-	-	28
FIB	Fibula	-	-	-	3	-	1	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	7
SCAP	Scapula	13	-	2	6	-	10	1	5	4	-	2	1	2	-	-	-	-	1	-	-	-	47
HUM	Humerus	3	2	3	11	-	4	-	-	11	-	8	-	-	-	-	-	-	-	-	1	-	43
RAD	Radius	4	-	4	4	-	3	-	-	3	-	4	-	1	-	-	-	-	3	3	-	-	29
ULN	Ulna	4	1	3	-	-	-	1	-	2	-	5	-	1	-	-	-	-	3	3	-	-	23
AST	Astragalus	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CAL	Calcaneus	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CENT	Central tarsal	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
TARD	4th tarsal	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
CQ	Centro-quartal	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
TAR	Tarsal	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CAR	Carpal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CARR	Radial Carpal	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
CARI	Intermediate carpal	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CARU	Ulnar carpal	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CARD	4th carpal	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CARG	Fused 2nd & 3rd carp	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MT	Main metatarsal (ung)	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MTC	3rd metatarsal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MTD	4th metatarsal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MCC	3rd metacarpal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MCD	4th metacarpal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
MP	Metapodial	-	-	-	2	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
MPG	Lateral (ancillary)	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
APH	1st phalanx	1	1	1	8	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
BPH	2nd phalanx	-	-	-	9	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
CPH	3rd phalanx	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
PSES	Proximal sesamoid	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 103. Mammals and Birds from Feature AG (AS I) (Continued)

	COW	SHE	S/G	PIG	DOG	CAT	SAR	OXO	ROD	UNM	FOW	GOO	DUC	TUR	UNB	UNX	RAT	FWZ	GSZ	PGN	TOTAL	
TFRAG Tooth frag.	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
LI Lower incisor	2	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	4
UI Upper incisor	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
DUP3 Deciduous upper 3rd	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DUP Deciduous upper prem.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UPM3 Upper 3rd premolar	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UM3 Upper 3rd molar	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LM Lower molar	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
UM Upper molar	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
SYN Synsacrum	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	2	1	-	-	9
COR Coracoid	-	-	-	-	-	-	-	-	-	-	8	2	-	-	-	-	-	-	-	-	-	10
FUR Clavicle (Furcula)	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	1	-	-	-	9
CMC Carpometacarpus	-	-	-	-	-	-	-	-	-	-	7	-	-	-	1	-	-	-	-	-	-	8
PHL Phalanx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	1	-	-	40
TBT Tibiotarsus	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	2	1	1	-	7
TMT Tarsometatarsus	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	4	-	1	-	11
LFRAG Long bone fragment	-	-	-	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	5
TRACH Tracheal ring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	-	-	-	-	-	-	22
Col. Total	115	5	129	166	3	115	180	50	80	996	83	4	5	1	88	516	6	141	17	4	4	2704

Table 104. Fish from Feature AG (AS I)

	UNF	SUNF	GAD	MOR	HAD	WHITE	SPAR	CLUP	HERR	SHAD	PLEU	PLAC	LEFT	HIP	SALMO	TROUT	SERR	BASS	SEA	PERCH	BLUE	BLACK	GREY	MACK	TOTAL
FRAG Bone Frag.	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27
SKL Skull	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
FRNT Frontal	-	-	-	2	-	-	6	2	3	-	-	-	-	-	-	-	7	-	1	1	-	2	-	-	24
LAC Lacrimal	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SFRAG Skull frag.	48	-	17	-	-	-	5	17	14	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	109
MAX Maxilla	-	-	-	-	-	-	10	3	-	1	3	-	-	1	-	-	1	-	-	-	1	-	-	-	20
VT Thoracic ver.	-	-	-	19	1	1	4	-	-	-	3	-	-	-	-	-	10	-	-	-	1	-	-	2	41
PVD Precaudal ve.	-	-	2	10	-	-	9	-	-	-	-	-	1	-	-	-	1	1	-	-	-	1	-	5	30
VD Caudal vert.	-	20	-	17	5	-	64	-	13	19	4	-	8	-	7	1	18	5	-	2	8	4	8	30	233
VX Vertebra, ind.	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
ULT Ultimate ver.	-	-	-	-	-	-	3	-	-	-	3	1	-	-	-	-	3	-	-	-	-	-	-	-	10
SCAP Scapula	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	1	-	-	5
CER Ceratohyal	-	-	-	-	1	-	1	-	6	1	3	-	-	-	-	-	1	-	-	-	3	1	-	1	18
PMAX Premaxilla	-	-	-	1	1	-	8	-	1	1	-	-	-	-	-	-	-	-	-	-	1	1	-	1	15
ETH Ethmoid	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PREF Prefrontal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
VOM Vomer	-	-	-	3	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
MEST Mesethmoid	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PARA Parasphenoid	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	11
SUPRA Supraoccip.	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
BAS Basisoccip.	-	-	-	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
SPHN Sphenotic	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PTER Pterotic	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
OPIS Opisthotic	-	-	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
PRO Prootic	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DENT Dentary	-	-	2	3	-	-	10	-	10	2	3	-	-	-	-	-	3	-	1	2	3	-	-	1	40

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 104. Fish from Feature AG (AS I) (Continued)

	UNF	SUNF	GAD	MOR	HAD	WHITE	SPAR	CLUP	HERR	SHAD	PLEU	PLAC	LEFT	HIP	SALMOTROUT	SERR	BASS	SEA	PERCH	BLUE	BLACK	GREY	MACK	TOTAL	
PREOP Preopercle	-	-	-	-	1	1	7	1	2	-	4	-	-	-	-	-	-	3	2	-	3	1	-	25	
ANG Angular	-	2	-	1	-	-	15	-	4	1	1	-	-	-	-	1	-	2	-	4	1	-	1	33	
OPER Opercle	-	-	-	1	-	-	13	2	3	1	-	-	-	-	-	2	-	1	-	-	2	-	-	25	
SBOPE Subopercle	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
INOP Interopercle	-	-	-	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	
BRAY Branchiosteg.	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2	
PAL Palatine	-	-	-	2	-	-	5	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	8	
MESOP Mesopterygoi.	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	
QUAD Quadrate	-	-	-	-	-	-	6	1	1	-	-	-	-	-	-	1	-	-	-	-	-	27	1	37	
HYOM Hyomandib.	-	-	1	2	1	1	10	-	3	2	3	-	-	-	-	1	-	3	1	2	-	-	-	30	
INTHY Interhval	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
EPIH Epihval	-	-	-	2	-	-	1	1	-	-	1	-	-	-	-	-	-	1	-	-	1	-	-	7	
HYPO Hypohyal	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	
PHRPL Pharyngeal Pl.	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	5	
EPIB Epibranchial	4	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	
UROH Urohval	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	
POST Post tempor.	-	-	-	-	1	-	6	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	10	
SPCLE Supracleith.	-	-	-	3	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	
CLEI Cleithrum	-	-	1	5	-	-	5	5	-	-	2	-	-	-	-	-	8	-	-	1	-	-	-	27	
BASIP Basipteryg.	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2	
INTER Interhaemal	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	
SPINE Indet. Spine	84	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	85	
SCALE Fish Scale	143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	143	
OTO Otolith	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Col. Total	321	22	33	82	14	5	226	34	61	27	34	2	9	1	7	1	64	6	14	9	24	46	18	41	1101

Table 105. Shellfish from Feature AG (AS I)

	SNAIL	CONC	MUD	MOON	BARN	UNSH	LOB	CRUST	TOTAL
Unknown anatomy	-	-	-	-	2	-	-	-	2
CLAW Claw, crustacean	-	-	-	-	-	-	3	-	3
SHL Shell fragment	-	1	-	-	-	-	-	9	10
WHL Whole Shell	3	1	4	3	-	9	-	-	20
Col. Total	3	2	4	3	2	9	3	9	35

Feature AG (AS II), TPQ - 1840

Table 106. Fish from Feature AG (AS II)

	UNF	SUNF	GAD	MOR	HAD	WHITE	SPAR	CLUP	HERR	SHAD	PLEU	FLO	PLAC	LEFT	SERR	BASS	SEA	PERCH	BLUE	BLACK	MACK	TOTAL	
FRAG Bone Frag.	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32
SKL Skull	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
FRNT Frontal	-	-	-	4	-	-	3	1	2	-	1	-	-	-	2	-	2	-	-	-	-	-	15
SFRAG Skull frag.	44	-	2	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	49
MAX Maxilla	1	-	-	-	-	1	4	-	4	2	1	-	-	-	-	-	-	-	3	-	1	-	17
VT Thoracic vert.	-	-	-	-	-	-	3	-	-	-	2	-	-	-	-	-	-	-	2	1	4	-	12
PVD Precaudal vert.	-	2	-	1	-	-	2	-	-	-	2	-	-	1	-	1	-	-	-	2	-	-	11
VD Caudal vert.	-	4	-	16	1	-	27	-	7	12	14	-	-	4	4	-	2	-	1	1	7	-	100
ULT Ultimate vert.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SCAP Scapula	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	3
CER Ceratohyal	-	-	-	-	-	-	1	-	2	1	-	-	-	-	1	-	-	-	1	-	-	-	6
PMAX Premaxilla	-	-	-	-	-	-	3	-	1	1	-	-	-	-	-	-	1	-	-	-	-	-	6
PREF Prefrontal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
VOM Vomer	-	-	-	-	-	-	2	-	-	-	2	-	-	-	1	-	-	-	-	-	1	-	6
PARA Parasphenoid	-	-	-	1	-	-	2	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	5
SUPRA Supraoccipital	-	-	-	2	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6

Table 106. Fish from Feature AG (AS II) (continued)

	UNF	SUNF	GAD	MOR	HAD	WHITE	SPAR	CLUP	HERR	SHAD	PLEU	FLO	PLAC	LEFT	SERR	BASS	SEA	PERCH	BLUE	BLACK	MACK	TOTAL	
BAS Basioccipital	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SPHN Sphenotic	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
OPIB Opisthotic	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
PRO Prootic	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
NAS Nasal	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DENT Dentary	-	-	1	-	-	-	5	-	2	1	-	1	1	-	-	-	1	-	2	-	2	-	16
PREOP Preopercle	-	-	-	-	-	-	3	-	4	-	6	-	-	-	-	-	-	-	-	-	-	-	13
ANG Angular	-	1	-	2	-	-	5	-	1	-	2	-	1	-	-	-	-	-	-	1	2	-	15
OPER Opercle	-	-	-	-	-	-	2	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	5
SBOPE Subopercle	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
INOP Interopercle	-	-	-	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
BRAY Branchiostegal Ray	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
PAL Palatine	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
QUAD Quadrate	-	2	-	2	-	-	4	-	1	-	-	1	-	-	-	-	-	-	-	1	-	-	11
HYOM Hyomandibular	-	-	-	-	-	1	4	-	2	1	-	-	2	-	-	-	-	-	-	-	-	-	10
SYM Symplectic	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
EPIH Epihyal	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2
EPIB Epibranchial	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CERBR Ceratobranchial	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
UROH Urohyal	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2
PHARY Pharyngobranchial	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
POST Post temporal	-	-	-	2	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	7
SPCLE Supracleithrum	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
CLEI Cleithrum	-	-	-	1	-	-	2	-	-	-	2	-	-	-	2	-	-	1	-	2	-	-	10
BASIP Basipterygium	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
INTER Interhaemal Spine	1	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	5
SPINE Indet. Spine/Ray	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64
SCALE Fish Scale	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
Col. Total	154	9	10	41	1	3	97	4	28	18	40	2	4	5	12	1	6	2	9	12	16	-	474

Table 107. Shellfish from Feature AG (AS II)

	OYS	CLAM	SOFT	LOB	CRAB	CRUST	TOTAL
CLAW Claw, crustacean	-	-	-	4	2	1	7
HALF Shell including hinge	14	-	2	-	-	-	16
SHL Shell fragment	-	15	-	-	-	9	24
Col. Total	14	15	2	4	2	10	47

	OYS	CLAM	SOFT	LOB	CRAB	CRUST	TOTAL
C900	-	1	-	4	1	7	13
C949	12	10	2	-	1	-	25
C980	2	4	-	-	-	3	9
Col. Total	14	15	2	4	2	10	47

Appendix C

Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature AG (AS III), TPQ - 1841

Table 108. Mammals and Birds from Feature AG (AS III)

	COW	SHE	S/G	PKG	DOG	CAT	RAB	SAR	OXO	ROD	UNH	FOW	GOO	DUC	TUR	UNB	UNX	RAT	FWZ	GSZ	PGN	SGRL	HUMAN	TOTAL	
FRAG Bone Frag.	-	-	-	-	-	-	-	-	-	-	1949	-	-	-	-	28	2764	-	-	-	-	-	-	-	4741
SKL Skull	1	1	-	1	-	-	-	-	-	1	-	4	-	-	-	-	-	4	-	-	-	-	-	-	12
FRNT Frontal	-	3	1	23	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38
PAR Parietal	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
OCIP Occipital	3	-	3	17	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
TEMP Temporal	7	-	4	26	-	10	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
BSPH Basisphenoid	1	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
ZYG Zygomatic/Malar	-	-	8	4	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
INC Incisive	-	-	9	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
SFRAG Skull frag.	5	-	7	33	-	14	-	2	-	1	-	1	-	-	-	-	-	-	3	-	-	-	-	-	66
HC Horn core	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MAX Maxilla	1	-	12	10	-	6	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	31
JAW Mandible	13	-	19	21	-	12	-	-	-	3	-	4	-	-	-	-	-	13	-	-	-	-	2	-	87
HYD Hvoid	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
VC01 Atlas (1st Cervical)	1	-	4	1	-	1	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
VC02 Axis (2nd Cervical)	2	-	2	2	-	1	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
VC Cervical vertebra	19	-	55	11	-	6	-	22	6	13	-	-	-	-	-	-	-	-	-	-	-	-	2	-	134
VT Thoracic vertebra	21	-	57	34	-	22	-	51	7	32	1	-	-	-	-	-	-	-	-	-	-	-	-	-	225
VL Lumbar vertebra	35	-	32	20	3	7	1	17	3	44	1	-	-	-	-	-	-	-	-	-	-	-	-	-	163
VD Caudal vertebra	5	-	3	15	-	7	-	2	-	11	-	3	-	-	-	-	-	2	-	-	-	-	-	-	48
VS Sacrum	7	-	3	8	-	1	-	1	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
VX Vertebra, indetermin.	3	-	-	2	-	5	-	219	37	1	-	13	-	-	-	2	-	-	57	1	-	-	-	-	340
CC Costal cartilage	5	-	-	-	-	-	-	35	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50
RIB Rib	57	-	141	59	2	30	-	174	15	22	1	-	-	-	-	-	-	-	41	-	-	-	-	-	542
STX Sternum	3	-	5	5	4	5	-	7	-	-	-	3	-	2	-	-	-	-	13	-	-	-	-	-	47
ACET Pelvis (w/acetabulum)	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
OC Pelvis	-	-	9	1	-	3	1	-	-	10	-	5	-	4	-	-	-	-	5	-	-	-	-	-	38
ILM Ilium	7	-	4	20	-	3	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35
ISH Ischium	4	-	3	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
PUB Pubis	7	-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
FEM Femur	13	-	12	50	-	6	2	2	1	13	-	10	-	3	1	1	-	-	1	-	-	-	-	-	115
PAT Patella	3	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
TIB Tibia	10	6	10	34	-	7	2	-	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	86
FIB Fibula	-	-	-	14	-	1	-	-	-	-	-	-	-	-	1	1	-	-	9	-	-	-	-	-	26
SCAP Scapula	13	2	5	45	2	17	-	1	3	9	-	12	2	7	-	-	-	-	-	-	-	-	-	-	118
HUM Humerus	18	7	12	47	1	9	1	-	-	11	-	9	-	3	-	-	-	-	5	-	1	-	-	-	124
RAD Radius	10	5	5	29	-	7	1	-	-	3	-	8	-	2	-	-	-	-	1	1	-	-	-	-	72
ULN Ulna	8	1	11	26	-	7	1	-	-	2	-	5	1	4	1	-	-	-	1	-	2	-	-	-	70
AST Astragalus	3	1	2	9	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
CAL Calcaneus	1	3	4	11	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
CENT Central tarsal	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
TARD 4th tarsal	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
CQ Centro-quartal	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MAL Malleolus	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
TARG Fused 2nd & 3rd tars	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
TAR Tarsal	-	-	-	1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
CAR Carpal	4	-	-	14	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
CARR Radial Carpal	4	-	2	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
CARI Intermediate carpal	2	-	1	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
CARU Ulnar carpal	-	-	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
CARC 3rd carpal	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
CARD 4th carpal	1	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
CARG Fused 2nd & 3rd carp	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MT Main metatarsal (ung)	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 108. Mammals and Birds from Feature AG (AS III) (Continued)

		COW	SHE	S/G	PIG	DOG	CAT	RAB	SAR	OXO	ROD	UNM	POW	GOO	DUC	TUR	UNB	UNX	RAT	FWZ	GSZ	PGN	SQRL	HUMAN	TOTAL
MTC	3rd metatarsal	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
MTD	4th metatarsal	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
MC	Main metacarpal (ung)	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
MCC	3rd metacarpal	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
MCD	4th metacarpal	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
MP	Metapodial	2	-	-	5	-	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35
MPG	Lateral (ancillary)	-	-	-	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34
APH	1st phalanx	9	4	-	41	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	57
BPH	2nd phalanx	9	-	-	32	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45
CPH	3rd phalanx	8	-	-	22	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31
PSES	Proximal sesamoid	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
TFRAG	Tooth frag.	3	-	8	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
LI	Lower incisor	4	-	14	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	5	-	-	-	-	25
DLI	Deciduous lower inci	1	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
LC	Lower canine	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UI	Upper incisor	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	8
DUI	Deciduous upper inci	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
UC	Upper canine	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	3
DLP2	Deciduous lower 2nd	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
DLP3	Deciduous lower 3rd	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DLP4	Deciduous lower 4th	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
DUP3	Deciduous upper 3rd	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DUP4	Deciduous upper 4th	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
DLP	Deciduous lower premolar	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
DUP	Deciduous upper premolar	-	-	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
LPM	Lower premolar	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
UPM	Upper premolar	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
LM1	Lower 1st molar	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UM2	Upper 2nd molar	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UM3	Upper 3rd molar	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LM	Lower molar	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5
UM	Upper molar	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SYN	Synsacrum	-	-	-	-	-	-	-	-	-	-	3	-	2	-	-	-	-	-	-	-	-	-	-	5
COR	Coracoid	-	-	-	-	-	-	-	-	-	-	13	-	9	2	-	-	-	1	-	-	-	-	-	25
FUR	Clavicle (Furcula)	-	-	-	-	-	-	-	-	-	-	9	-	2	-	-	-	-	-	-	-	-	-	-	11
CMC	Carpometacarpus	-	-	-	-	-	-	-	-	-	-	6	1	1	-	-	-	-	2	-	2	-	-	-	12
PHL	Phalanx	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	71	1	-	-	-	-	74
TBT	Tibiotarsus	-	-	-	-	-	-	-	-	-	-	12	-	2	3	1	-	-	4	-	-	-	-	-	22
TMT	Tarsometatarsus	-	-	-	-	-	-	-	-	-	-	10	-	2	1	-	-	-	1	-	-	-	-	-	14
PM	Premolar	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LFRAG	Long bone frag.	-	-	-	-	-	-	2	3	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	7
TRACH	Tracheal ring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	9
Col. Total		347	39	495	904	12	253	9	536	85	212	1952	131	4	44	9	44	2764	27	215	3	5	4	1	8095

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 109. Fish from Feature AG (AS III)

	UNF	SUNF	GAD	MOR	HAD	WHITE	SPAR	CLUP	HERR	SHAD	PLEU	FLO	PIAC	LEFT	HAL	SALMO	SERR	BASS	SEA	PERCH	BLUE	BLACK	GREY	MACK	TOTAL
FRAG Bone Frag.	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71
SKL Skull	-	-	-	-	-	-	4	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
FRNT Frontal	1	-	-	5	-	-	15	14	2	1	1	-	-	-	-	-	6	-	-	1	-	-	-	-	46
SFRAG Skull frag.	102	-	7	11	-	-	22	37	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	181
MAX Maxilla	-	-	-	5	-	-	23	5	5	3	5	-	-	-	-	-	-	-	-	-	1	2	-	-	49
VC01 Atlas (1st Cervical)	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	5
VT Thoracic vertebra	-	-	-	13	-	3	19	-	-	3	12	-	-	-	-	-	17	-	-	-	7	-	-	14	88
PVD Precaudal vertebra	-	-	-	15	2	-	20	-	1	5	47	-	-	-	-	1	2	-	-	7	1	6	1	19	127
VD Caudal vertebra	-	27	-	50	34	1	58	-	20	69	114	-	-	16	3	6	69	28	2	7	48	7	20	112	691
VS Sacrum	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
VX Vertebra, indetermin.	33	48	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	93
ULT Ultimate vertebra	-	-	-	1	-	-	2	1	-	-	9	-	-	-	-	-	-	-	-	-	1	1	-	-	15
SCAP Scapula	-	-	-	-	-	1	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
COR Coracoid	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
CER Ceratohyal	-	-	1	8	-	-	12	-	10	3	-	-	1	-	-	-	-	-	1	-	4	2	-	1	43
PMAX Premaxilla	-	-	-	4	-	-	35	-	-	-	3	-	-	-	-	-	-	-	-	-	8	-	-	-	50
EIH Ethmoid	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
PREF Prefrontal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	2
VOM Vomer	-	-	-	3	-	-	10	-	-	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	16
MEST Mesethmoid	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
PARA Parasphenoid	-	-	-	2	-	-	6	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	9
SUPRA Supraoccipital	-	-	-	2	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	11
EXOC Exoccipital	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
BAS Basioccipital	-	-	-	-	-	-	5	-	1	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	8
SPHN Sphenotic	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PTER Pterotic	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	4
OPIS Opisthotic	-	-	-	3	-	-	2	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
PRO Prootic	-	-	-	3	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
NAS Nasal	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
DENT Dentary	-	-	-	9	-	-	27	-	11	10	4	-	3	-	-	-	-	-	-	2	7	-	-	1	74
SPOPE Supraopercle	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
PREOP Preopercle	-	-	-	6	-	-	22	3	-	2	11	-	2	-	-	-	1	-	-	1	-	-	-	-	48
ANG Angular	1	2	-	7	-	-	25	6	3	2	3	-	-	-	-	-	-	-	1	1	8	2	-	2	63
OPER Opercle	-	-	1	4	-	-	10	-	10	-	2	-	-	-	-	-	1	-	-	-	-	-	-	-	28
SBOPE Subopercle	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	3
INOP Interopercle	-	-	-	3	-	-	13	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	18
BRAY Branchiostegal Ray	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
PAL Palatine	-	-	-	4	-	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
ECTO Ectopterygoid	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
MESOP Mesopterygoid	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
META Metapterygoid	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2
QUAD Quadrate	-	-	-	5	-	-	12	3	1	-	3	-	2	-	-	-	-	-	-	-	3	2	-	-	31
HYOM Hvomandibular	2	-	-	10	-	-	19	1	12	1	11	1	2	-	-	-	-	-	-	2	2	1	-	1	65
SYM Symplectic	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
INTHY Interhval	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
EPIH Epihval	-	-	-	4	-	-	1	3	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	10
HYPO Hypohval	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
PHRPL Pharyngeal Plate	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
EPIB Epibranchial	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
CERBR Ceratobranchial	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
HYPOR Hypobranchial	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
UROH Urohval	-	-	-	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	-	-	-	-	5
POST Post temporal	-	-	-	4	1	-	6	-	2	1	-	-	-	-	-	-	2	-	-	1	-	1	-	-	18
SPCLE Supracleithrum	-	-	-	1	-	-	4	3	-	-	-	-	-	-	-	-	3	-	-	-	-	1	-	-	12

Table 109. Fish from Feature AG (AS III) (Continued)

	UNF	SUNF	GAD	MOR	HAD	WHITE	SPAR	CLUP	HERR	SHAD	PLEU	FLO	PLAC	LEFT	HAL	SALMO	SERR	BASS	SEA	PERCH	BLUE	BLACK	GREY	MACK	TOTAL
CLEI Cleithrum	-	1	3	-	10	-	7	-	2	2	15	-	-	-	-	-	1	-	1	3	-	1	-	-	46
PTCLE Postcleithrum	-	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
BASIP Basipterygium	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	8
INTER Interhaemal Spine	2	-	-	1	-	-	1	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	9
SPINE Indet. Spine/Rav	96	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	99
SCALE Fish Scale	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62
Col. Total	382	78	25	211	50	5	421	79	88	104	265	1	11	16	3	7	107	29	7	27	91	30	21	150	2208

Table 110. Shellfish from Feature AG (AS III)

	OYS	CLAM	SOFT	MUSS	SCALP	SNAIL	LIMP	CONC	MUD	MOON	GLASS	BARN	UNSH	LOB	CRUST	CORAL	TOTAL
Unknown anatomy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
CLAW Claw, crustacean	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	2	6
HALF Shell including hinge	318	263	88	8	-	-	-	-	-	-	-	-	-	-	-	-	677
SHL Shell fragment	82	283	128	38	12	-	-	5	-	-	-	-	-	-	2	-	550
WHL Whole Shell	-	-	-	-	-	2	2	1	30	4	1	1	2	-	-	-	43
Col. Total	400	546	216	46	12	2	2	6	30	4	1	1	2	4	4	1	1277

Table 111. Distribution of Shellfish in Feature AG (AS III)

	OYS	CLAM	SOFT	MUSS	SCALP	SNAIL	LIMP	CONC	MUD	MOON	GLASS	LOB	CRUST	CORAL	TOTAL
C919	66	123	3	21	1	-	-	1	5	1	-	-	-	-	221
C921	65	161	25	3	-	2	1	4	-	-	-	1	2	-	264
C922	110	20	-	-	-	-	-	-	-	-	-	-	-	-	130
C926	30	30	1	-	-	-	-	-	-	-	-	-	-	-	61
C960	36	125	9	-	3	-	-	1	17	1	-	2	-	1	195
C966	11	17	-	-	7	-	-	-	4	-	-	-	-	-	39
C984	10	8	21	14	-	-	-	-	1	-	-	-	1	-	55
C985	38	24	154	8	-	-	1	-	2	-	1	1	1	-	230
C989	18	22	1	-	1	-	-	-	1	1	-	-	-	-	44
C1008	16	16	2	-	-	-	-	-	-	1	-	-	-	-	35
Col. Total	400	546	216	46	12	2	2	6	30	4	1	4	4	1	1274

Feature AG (AS IV), TPQ -1834

Table 112. Fish from Feature AG (AS IV)

	UNF	SUNF	MOR	HAD	SPAR	HERR	PLEU	SERR	SEA	PERCH	BLUE	BLACK	MACK	TOTAL
FRNT Frontal	-	-	-	-	1	-	-	-	-	-	-	-	-	1
SFRAG Skull frag.	12	-	-	-	2	-	-	-	-	-	-	-	-	14
VT Thoracic vertebra	-	-	-	-	-	-	-	-	-	-	-	-	1	1
PVD Precaudal vertebra	-	1	1	-	1	-	-	1	-	-	-	-	-	4
VD Caudal vertebra	-	-	2	1	3	1	-	3	1	-	-	-	1	12
CER Ceratohyal	-	-	-	-	-	-	-	-	-	-	1	-	-	1
PMAX Premaxilla	-	-	-	-	-	-	-	-	-	-	-	1	-	1
VOM Vomer	-	-	-	-	-	-	1	-	-	-	-	-	-	1
PARA Parasphenoid	-	-	-	-	1	-	1	-	-	-	-	-	-	2
SUPRA Supraoccipital	-	-	-	-	1	-	-	-	-	-	-	-	-	1
BAS Basioccipital	-	-	-	-	1	-	-	-	-	-	-	-	-	1
SPHN Sphenotic	-	-	-	-	1	-	-	-	-	-	-	-	-	1
DENT Dentary	-	-	-	-	1	-	-	-	-	-	-	-	-	1
PREOP Preopercle	-	-	-	-	1	-	-	-	-	-	-	-	-	1
ANG Angular	-	-	-	-	-	1	-	-	-	-	-	-	-	1
OPER Opercle	-	-	-	-	1	-	1	-	-	-	-	-	-	2
INOP Interopercle	-	-	-	-	2	-	-	-	-	-	-	-	-	2

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 112. Fish from Feature AG (AS IV) (Continued)

		UNF	SUNF	MOR	HAD	SPAR	HERR	PLEU	SERR	SEA	PERCH	BLUE	BLACK	MACK	TOTAL
PAL	Palatine	-	-	-	-	1	-	-	-	-	-	-	-	-	1
QUAD	Quadrate	-	-	-	-	1	1	-	-	-	-	-	-	-	2
HYOM	Hyomandibular	-	-	-	-	1	1	-	-	-	-	-	-	-	2
POST	Post temporal	-	-	1	-	-	-	-	-	-	-	-	-	-	1
CLEI	Cleithrum	-	-	-	-	-	-	-	1	-	1	-	-	-	2
BASIP	Basipterygium	-	-	-	-	-	-	1	-	-	-	-	-	-	1
SPINE	Indet. Spine/Ray	1	-	-	-	-	-	-	-	-	-	-	-	-	1
SCALE	Fish Scale	12	-	-	-	-	-	-	-	-	-	-	-	-	12
Col. Total		25	1	4	1	19	4	4	5	1	1	1	1	2	69

Table 113. Shellfish from Feature AG (AS IV)

		OYS	CLAM	CONC	TOTAL
HALF	Shell including hinge	2	1	-	3
SHL	Shell fragment	12	13	1	26
Col. Total		14	14	1	29

Lot 52, Feature AM

Feature AM was identified as a sandstone icehouse. Two deposits were recovered: the uppermost one (AS I) was assigned a *TPQ* of 1880, while the lower deposit (AS II) had a *TPQ* of 1860.

Feature AM (AS I), *TPQ* - 1880

Table 114. Mammals from Feature AM (AS I)

		COW	SHE	PIG	CAT	SAR	OXO	ROD	UNM	RAT	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	18	-	226	-	244
SKL	Skull	-	-	-	-	-	-	-	1	1	2
MAX	Maxilla	-	-	-	-	-	-	-	-	1	1
VC	Cervical vertebra	-	-	-	-	1	-	-	2	-	3
VT	Thoracic vertebra	-	-	-	1	-	1	-	1	-	3
VL	Lumbar vertebra	-	-	-	1	1	-	-	-	-	2
VS	Sacrum	-	-	-	-	-	-	-	1	-	1
VX	Vertebra, indetermin.	-	-	-	-	-	2	-	7	-	9
RIB	Rib	-	1	-	-	4	-	-	5	-	10
FEM	Femur	-	-	1	-	-	-	-	-	-	1
TIB	Tibia	-	-	1	-	-	1	-	-	-	2
SCAP	Scapula	-	1	-	-	-	-	-	-	-	1
HUM	Humerus	-	-	1	-	-	-	-	-	-	1
RAD	Radius	-	-	1	-	-	1	-	-	-	2
ULN	Ulna	-	-	-	1	-	-	-	-	-	1
CAL	Calcaneus	-	-	1	-	-	-	-	-	-	1
CARU	Ulnar carpal	1	-	-	-	-	-	-	-	-	1
MC	Main metacarpal (ung)	-	-	2	-	-	-	-	-	-	2
MPG	Lateral (ancillary)	-	-	1	-	-	-	-	-	-	1
APH	1st phalanx	-	-	3	-	-	-	-	-	-	3
BPH	2nd phalanx	-	-	2	-	-	-	-	-	-	2
TFRAG	Tooth frag.	-	-	-	-	-	-	1	-	-	1
LFRA	Long bone fragment	-	-	-	-	-	-	-	22	-	22
Col. Total		1	2	13	3	6	23	1	265	2	316

Table 115. Birds from Feature AM (AS I)

		FOW	UNB	TOTAL
FRAG	Bone Frag.	-	3	3
FEM	Femur	1	-	1
ULN	Ulna	1	-	1
Col. Total		2	3	5

Appendix C
Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature AM (AS II), TPQ - 1860

Table 116. Mammals from Feature AM (AS II)

		COW	SHE	S/G	PIG	CAT	SAR	OXO	ROD	UNM	MOUSE	RAT	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	54	39	-	2351	-	-	2444
SKL	Skull	-	-	-	-	-	-	-	4	-	-	1	5
OCIP	Occipital	-	-	-	-	3	-	-	-	-	-	-	3
SFRAG	Skull frag.	-	-	-	1	4	3	-	-	-	-	1	9
HYD	Hyoid	-	-	2	-	-	-	-	-	-	-	-	2
MAX	Maxilla	-	-	1	1	1	-	-	6	3	-	1	13
JAW	Mandible	4	-	-	8	7	-	-	1	-	-	8	28
VC01	Atlas (1st Cervical)	-	-	-	1	3	-	-	-	-	-	1	5
VC02	Axis (2nd Cervical)	-	-	-	1	1	-	-	-	-	-	-	2
VC	Cervical vertebra	2	-	3	1	7	7	2	1	1	1	2	27
VT	Thoracic vertebra	4	2	2	7	16	6	2	2	-	-	4	45
VL	Lumbar vertebra	13	2	6	2	10	16	10	6	-	1	11	77
VD	Caudal vertebra	9	-	-	-	19	8	2	1	-	-	-	39
VS	Sacrum	2	-	1	-	2	1	1	1	-	-	1	9
VX	Vertebra, indetermin.	1	-	-	1	2	25	19	1	72	-	-	121
CC	Costal cartilage	9	-	-	-	-	27	6	-	3	-	-	45
RIB	Rib	21	-	2	1	34	129	39	3	1	-	5	235
STX	Sternum	-	-	-	-	1	3	-	-	1	-	-	5
OC	Pelvis	-	-	1	1	5	-	-	-	-	-	6	13
ILM	Ilium	7	1	3	3	-	-	4	-	-	-	-	18
ISH	Ischium	6	1	-	3	-	-	-	-	-	-	-	10
PUB	Pubis	1	-	-	1	-	-	-	-	-	-	-	2
FEM	Femur	10	3	5	12	4	1	-	-	-	2	6	43
PAT	Patella	2	1	1	-	1	-	-	-	-	-	-	5
TIB	Tibia	4	3	4	5	1	1	-	7	1	1	13	40
FIB	Fibula	-	-	-	1	6	-	-	-	-	-	-	7
SCAP	Scapula	5	5	2	4	2	4	-	2	1	-	3	28
HUM	Humerus	7	3	-	15	5	-	-	1	-	1	5	37
RAD	Radius	4	2	2	17	4	-	-	1	-	2	2	34
ULN	Ulna	2	1	3	16	7	-	-	3	-	2	4	38
AST	Astragalus	5	-	-	2	2	-	-	-	-	-	-	9
CAL	Calcaneus	9	-	-	3	2	-	-	-	-	-	-	14
CENT	Central tarsal	-	-	-	1	-	-	-	-	-	-	-	1
TARD	4th tarsal	-	-	-	1	-	-	-	-	-	-	-	1
CQ	Centro-quartal	4	-	-	-	-	-	-	-	-	-	-	4
MAL	Malleolus	2	-	-	-	-	-	-	-	-	-	-	2
TAR	Tarsal	-	-	-	1	1	-	-	-	-	-	-	2
CAR	Carpal	-	-	-	-	3	-	-	-	-	-	-	3
CARR	Radial Carpal	-	-	1	-	-	-	-	-	-	-	-	1
CARI	Intermediate carpal	1	-	1	-	-	-	-	-	-	-	-	2
CARU	Ulnar carpal	-	-	1	1	1	-	-	-	-	-	-	3
CARD	4th carpal	1	-	-	-	-	-	-	-	-	-	-	1
MTD	4th metatarsal	-	-	-	5	-	-	-	-	-	-	-	5
MC	Main metacarpal (ung)	-	-	-	1	-	-	-	1	-	-	-	2
MP	Metapodial	-	-	-	5	21	-	-	-	-	-	1	27
MPG	Lateral (ancillary)	-	-	-	16	-	-	-	-	-	-	-	16
APH	1st phalanx	-	-	-	14	9	-	-	-	1	-	-	24
BPH	2nd phalanx	-	2	-	15	4	-	-	-	1	-	-	22
CPH	3rd phalanx	-	-	-	8	2	-	-	-	-	-	-	10
SES	Sesamoid	-	-	-	-	1	-	-	-	-	-	-	1
PSES	Proximal sesamoid	-	-	-	1	-	2	-	-	-	-	-	3
TFRAG	Tooth frag.	-	-	-	4	-	-	-	-	-	-	-	4
LI	Lower incisor	5	4	1	2	-	-	-	2	-	-	-	14
DLI	Deciduous lower inc.	-	-	-	3	-	-	-	-	-	-	-	3
LC	Lower canine	-	-	-	1	-	-	-	-	-	-	2	3
DUP4	Deciduous upper 4th	-	-	-	2	-	-	-	-	-	-	-	2
LPM3	Lower 3rd premolar	-	-	-	4	-	-	-	-	-	-	-	4
PHL	Phalanx	-	-	-	-	9	-	-	-	-	-	-	9
LFRAG	Long bone fragment	-	-	-	-	-	24	16	-	6	-	1	47
NAS	Nasal	-	-	-	1	-	-	-	-	-	-	-	1
Col. Total		140	30	42	193	200	311	140	43	2442	10	78	3629

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 117. Birds from Feature AM (AS II)

		FOW	DUC	TUR	UNB	TOTAL
FRAG	Bone Frag.	-	-	-	115	115
VX	Vertebra, indetermin.	-	-	-	2	2
STX	Sternum	-	1	-	-	1
FEM	Femur	2	-	-	1	3
FIB	Fibula	5	-	-	-	5
SCAP	Scapula	5	-	2	-	7
RAD	Radius	-	-	1	-	1
ULN	Ulna	1	-	2	-	3
SYN	Synsacrum	2	-	-	-	2
COR	Coracoid	8	-	-	-	8
FUR	Clavicle (Furcula)	5	-	-	-	5
CMC	Carpometacarpus	3	-	1	-	4
TBT	Tibiotarsus	6	-	2	-	8
TMT	Tarsometatarsus	13	-	3	-	16
Col. Total		50	1	11	118	180

Table 118. Fish from Feature AM (AS II)

		UNF	GAD	MOR	SUNF	SPAR	HAD	POL	CLUP	HERR	SHAD	PLEU	SAL	BASS	PERCH	SERR	SEA	MACK	BLACK	TOTAL
FRAG	Bone Frag.	102	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	103
SKL	Skull	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	2
FRNT	Frontal	-	-	-	-	1	-	-	-	-	2	-	-	-	-	-	-	-	-	3
SFRAG	Skull frag.	-	3	-	-	-	-	-	-	-	3	-	-	-	-	7	1	-	-	14
MAX	Maxilla	-	-	1	1	2	-	-	-	-	3	-	-	-	-	-	-	-	-	9
VC01	Atlas (1st Cervical)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
VT	Thoracic vertebra	-	1	3	3	1	-	-	-	-	-	-	-	-	1	1	1	-	2	12
VD	Caudal vertebra	4	-	8	59	-	1	1	-	4	40	-	1	-	1	1	9	19	5	153
VX	Vertebra, indetermin.	3	5	-	4	-	-	-	-	-	-	-	-	-	-	1	-	-	-	13
SCAP	Scapula	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
COR	Coracoid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
CER	Ceratohyal	2	-	-	-	-	-	-	2	-	-	-	-	-	-	1	3	-	-	8
PMAX	Premaxilla	-	-	2	1	1	-	-	-	-	3	-	-	-	-	-	2	-	-	9
MEST	Mesethmoid	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
ALIS	Alisphenoid	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
PARA	Parasphenoid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
SUPRA	Supraoccipital	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
BAS	Basioccipital	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SPHN	Sphenotic	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
EPIO	Epiotic	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DENT	Dentary	-	2	2	1	2	-	-	-	-	1	1	-	-	-	1	1	-	2	13
PREOP	Preopercle	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	2	-	-	3
ANG	Angular	-	-	2	5	2	-	-	-	-	2	-	-	1	-	1	-	-	-	13
OPER	Opercle	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	3
SBOPE	Subopercle	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
INOP	Interopercle	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PAL	Palatine	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
QUAD	Quadrate	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	2
HYOM	Hvmandibular	-	-	1	-	2	-	-	-	-	-	-	-	-	1	1	-	-	-	5
SYM	Symplectic	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
EPIH	Epihval	1	-	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	4
EPIB	Epibranchial	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
UROH	Urohval	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PHARY	Pharyngobranchial	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
POST	Post temporal	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	4
SPCLE	Supracleithrum	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	2	-	-	9

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 118. Fish from Feature AM (AS II) (Continued)

	UNF	GAD	MOR	SUNF	SPAR	HAD	POL	CLUP	HERR	SHAD	PLEU	SAL	BASS	PERCH	SERR	SEA	MACK	BLACK	TOTAL
CLEI Cleithrum	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	2	-	2	7
PTCLE Postcleithrum	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2
PVD Precaudal Vertebrae	1	-	3	6	-	-	-	-	-	1	-	-	-	-	-	-	6	3	20
ULT Ultimate Vert.	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	2	-	8
PEN Penultimate Vert.	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
SPINE Indet. Spine/Ray	100	-	-	-	4	-	-	-	-	-	-	-	-	-	1	-	-	-	105
SCALE Scale	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Col. Total	224	12	32	82	31	1	1	2	5	58	3	1	1	3	21	29	27	18	551

Table 119. Shellfish from Feature AM (AS II)

	OYS	CLAM	MUSS	UNSH	LOB	CRAB	CRUST	CORAL	TOTAL
Unknown anatomy	-	-	-	-	-	-	-	1	1
FRAG Bone Frag.	40	26	-	-	-	-	-	-	66
CLAW Claw Crustacean	-	-	-	-	4	4	3	-	11
HALF Shell incl hinge	349	66	-	-	-	-	-	-	415
SHL Shell fragment	143	97	8	-	-	-	-	-	248
ORG Hinge, Chitin	-	3	-	10	-	-	-	-	13
Col. Total	532	192	8	10	4	4	3	1	754

Lot 37, Feature AN

Feature AN (AS I), TPQ - 1880

Table 120. Birds from Feature AN (AS I)

	FOW	DUC	TUR	FWZ	LGB	UNB	TOTAL
FRAG Bone Frag.	-	-	-	-	-	11	11
VX Vertebra, indetermin.	-	-	-	3	3	-	6
RIB Rib	-	-	-	-	1	-	1
STX Sternum	1	-	-	-	-	-	1
FEM Femur	1	-	-	-	-	-	1
FIB Fibula	-	-	-	1	-	-	1
HUM Humerus	1	-	1	-	-	-	2
RAD Radius	-	-	1	-	-	-	1
SYN Synsacrum	1	-	-	-	1	-	2
TBT Tibiotarsus	-	1	-	-	-	-	1
Col. Total	4	1	2	4	5	11	27

Table 121. Fish from Feature AN (AS I)

	UNF	GAD	SPAR	LEFT	OYS	CLAM	TOTAL
FRNT Frontal	-	-	1	-	-	-	1
VD Caudal vertebra	-	-	3	1	-	-	4
ANG Angular	-	1	-	-	-	-	1
OPER Opercle	-	-	1	-	-	-	1
HYOM Hyomandibular	-	-	2	-	-	-	2
PVD Precaudal Vertebrae	-	-	1	-	-	-	1
SPINE Indet. Spine/Ray	3	-	-	-	-	-	3
LATS Lateral Facial Bones	-	-	1	-	-	-	1
SCALE Fish Scales	5	-	-	-	-	-	5
SHL Shell fragment	-	-	-	-	20	21	41
HALF Shell incl Hinge	-	-	-	-	12	7	19
Col. Total	8	1	9	1	32	28	79

Faunal Remains from Additional Features and Analytical Strata on Block 160

Feature AN (AS II), TPQ - 1840

Table 122. Mammals From Feature AN (AS II)

	FRAG	MPG	TOTAL
PIG Pig; <i>Sus scrofa</i>	-	1	1
UNM Undetermined mammal	2	-	2
Col. Total	2	1	3

Table 123. Bird from Feature AN (AS II)

	FOW	DUC	TUR	FWZ	LGB	UNB	TOTAL
FRAG Bone Frag.	-	-	-	-	-	14	14
VX Vertebra, indetermin.	-	-	2	5	-	-	7
RIB Rib	-	-	-	1	-	-	1
FIB Fibula	-	-	1	-	-	-	1
SCAP Scapula	-	1	-	-	-	-	1
HUM Humerus	-	-	-	2	-	-	2
RAD Radius	-	-	-	1	1	-	2
ULN Ulna	1	-	-	1	-	-	2
SYN Synsacrum	1	-	-	-	-	-	1
COR Coracoid	-	1	1	-	-	-	2
PHL Phalanx	-	-	-	-	1	-	1
Col. Total	2	2	4	10	2	14	34

Table 124. Fish from Feature AN (AS II)

	UNF	GAD	MOR	SPAR	POL	PLEU	LEFT	MACK	TOTAL
FRNT Frontal	-	-	-	1	-	-	-	-	1
SFRAG Skull frag.	29	-	-	-	-	-	-	-	29
VT Thoracic vertebra	-	-	3	-	-	-	-	-	3
VD Caudal vertebra	4	-	-	-	-	-	1	-	5
PMAX Premaxilla	-	-	1	-	-	-	-	-	1
DENT Dentary	-	-	-	-	-	-	-	1	1
OPER Opercle	-	-	-	1	-	-	-	-	1
BRAY Branchiostegal Ray	-	-	1	-	-	-	-	-	1
PAL Palatine	-	-	-	2	-	-	-	-	2
QUAD Quadrate	-	-	-	-	-	1	-	-	1
HYOM Hyomandibular	-	-	-	1	-	-	-	-	1
CLEI Cleithrum	-	-	-	1	-	-	-	-	1
PVD Precaudal Vertebrae	-	3	12	5	3	2	-	-	25
SPINE Indet. Spine/Ray	9	-	-	-	-	-	-	-	9
SCALE Fish Scales	8	-	-	-	-	-	-	-	8
Col. Total	50	3	17	11	3	3	1	1	89

Feature AN (AS III), TPQ - 1860

Table 125. Mammals from Feature AN (AS III)

		COW	SHE	S/G	PIG	DOG	CAT	LAR	SAR	OXO	ROD	UNM	RAT	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	-	36	-	3404	-	3440
FRNT	Frontal	-	-	1	-	-	-	-	-	-	-	-	-	1
PAR	Parietal	-	-	-	1	-	-	-	-	-	-	-	-	1
OCIP	Occipital	-	-	1	-	-	-	-	-	-	-	-	-	1
ZYG	Zygomatic/Malar	-	-	1	-	-	-	-	-	-	-	-	-	1
INC	Incisive	-	-	-	1	-	-	-	-	-	-	-	-	1
SFRAG	Skull frag.	-	-	-	-	-	5	-	-	-	-	3	1	9
MAX	Maxilla	-	-	-	1	-	1	-	-	-	-	-	-	2
JAW	Mandible	1	-	2	3	-	-	-	1	-	1	-	3	11
HYD	Hyoid	1	-	1	-	-	-	-	-	-	-	-	-	2
VC01	Atlas (1st Cervical)	6	1	1	1	-	-	-	-	-	-	-	-	9
VC02	Axis (2nd Cervical)	2	-	5	-	-	-	-	-	-	-	-	-	7
VC	Cervical vertebra	7	4	17	8	-	-	-	26	9	-	1	1	73
VT	Thoracic vertebra	8	1	22	14	-	-	-	19	9	-	6	-	79
VL	Lumbar vertebra	3	2	13	2	-	-	-	21	9	8	-	-	58
VD	Caudal vertebra	-	-	7	4	-	-	-	7	-	2	2	-	22
VS	Sacrum	7	-	5	1	-	-	-	7	2	-	1	-	23
VX	Vertebra, indetermin.	1	-	-	3	-	-	-	89	47	1	95	-	236
CC	Costal cartilage	-	-	-	-	-	-	-	23	19	-	17	-	59
RIB	Rib	41	-	3	4	-	-	-	219	22	3	141	-	433
STX	Sternum	-	-	1	2	-	-	-	10	1	-	9	-	23
ACET	Pelvis (w/acetabulum)	2	-	3	3	-	-	-	1	-	-	-	-	9
OC	Pelvis	-	-	2	-	-	-	-	-	6	3	6	-	17
ILM	Ilium	14	1	6	5	-	-	-	3	1	1	2	-	33
ISH	Ischium	2	-	2	4	-	1	-	-	-	-	-	-	9
PUB	Pubis	1	-	5	4	-	-	-	-	-	-	-	-	10
FEM	Femur	8	2	25	16	-	-	-	2	-	8	2	-	63
PAT	Patella	-	-	4	3	-	-	-	-	-	-	-	-	7
TIB	Tibia	3	2	13	7	-	-	-	1	-	5	1	-	32
FIB	Fibula	-	-	-	14	-	-	-	-	-	-	-	-	14
SCAP	Scapula	4	4	8	9	-	-	-	9	3	-	2	1	40
HUM	Humerus	2	7	9	8	-	2	-	1	-	1	-	-	30
RAD	Radius	1	7	6	6	-	-	-	-	-	-	1	-	21
ULN	Ulna	2	4	18	4	-	-	1	1	-	1	-	-	31
AST	Astragalus	1	5	7	4	-	-	-	-	-	-	-	-	17
CAL	Calcaneus	1	2	19	8	-	-	-	-	-	-	-	-	30
CENT	Central tarsal	-	-	2	1	-	-	-	-	-	-	-	-	3
TARD	4th tarsal	1	-	-	1	-	-	-	-	-	-	-	-	2
CQ	Centro-quartal	-	-	7	-	-	-	-	-	-	-	-	-	7
MAL	Malleolus	-	-	2	-	-	-	-	-	-	-	-	-	2
TARG	Fused 2nd & 3rd tars.	-	-	1	-	-	-	-	-	-	-	-	-	1
TAR	Tarsal	1	2	2	1	1	-	-	1	-	-	-	-	8
CAR	Carpal	7	-	7	1	-	-	-	-	-	-	-	-	15
CARR	Radial Carpal	-	-	2	-	-	-	-	-	-	-	-	-	2
CARI	Intermediate carpal	-	-	1	-	-	-	-	-	-	-	-	-	1
CARU	Ulnar carpal	-	-	4	-	-	-	-	-	-	-	-	-	4
CARD	4th carpal	1	-	1	2	-	-	-	-	-	-	-	-	4
CARG	Fused 2nd & 3rd carp.	-	-	2	-	-	-	-	-	-	-	-	-	2
MT	Main metatarsal (ung)	3	5	9	1	-	-	-	-	-	-	-	-	18
MTC	3rd metatarsal	-	-	-	2	-	-	-	-	-	-	-	-	2
MTD	4th metatarsal	-	-	-	1	-	-	-	-	-	-	-	-	1
MC	Main metacarpal (ung)	1	5	8	-	-	-	-	-	-	-	-	-	14
MCD	4th metacarpal	-	-	1	-	-	-	-	-	-	-	-	-	1
MP	Metapodial	2	-	5	6	-	-	-	1	1	-	-	-	15
MPG	Lateral (ancillary)	-	-	-	10	-	-	-	-	-	-	-	-	10
APH	1st phalanx	5	11	25	19	-	-	-	-	-	-	-	-	60
BPH	2nd phalanx	9	-	1	9	-	-	-	2	-	-	-	-	21

Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 125. Mammals from Feature AN (AS III) (Continued)

		COW	SHE	S/G	PIG	DOG	CAT	LAR	SAR	OXO	ROD	UNM	RAT	TOTAL
CPH	3rd phalanx	-	-	-	5	-	-	-	-	-	-	-	-	5
SES	Sesamoid	-	-	-	1	-	-	-	-	-	-	1	-	2
PSES	Proximal sesamoid	-	-	-	-	-	-	-	4	-	-	-	-	4
UT	Maxillary tooth	1	-	-	-	-	-	-	-	-	-	-	-	1
TFRAG	Tooth frag.	-	-	4	2	-	-	-	-	1	-	11	-	18
LI	Lower incisor	-	-	6	3	-	-	-	-	-	-	-	-	9
DLI	Deciduous lower incisor	-	-	-	1	-	-	-	-	-	-	-	-	1
LC	Lower canine	-	-	-	-	-	-	-	-	-	2	-	-	2
UI	Upper incisor	-	-	-	5	-	-	-	-	-	-	-	-	5
DUI	Deciduous upper incisor	-	-	-	1	-	-	-	-	-	-	-	-	1
DLP3	Deciduous lower 3rd	-	-	-	1	-	-	-	-	-	-	-	-	1
DLP4	Deciduous lower 4th	-	-	-	1	-	-	-	-	-	-	-	-	1
DUP4	Deciduous upper 4th	1	-	-	-	-	-	-	-	-	-	-	-	1
DUP	Deciduous upper premolar	1	-	-	1	-	-	-	-	-	-	-	-	2
UPM4	Upper 4th premolar	-	-	-	2	-	-	-	-	-	-	-	-	2
UM3	Upper 3rd molar	-	-	1	-	-	-	-	-	-	-	-	-	1
LFRAG	Long bone fragment	-	-	-	-	-	-	10	2	36	-	150	-	198
Col. Total		151	65	298	217	1	9	11	450	202	36	3855	6	5301

Table 126. Birds from Feature AN (AS III)

		FOW	GOO	DUC	TUR	FWZ	GSZ	LGB	UNB	TOTAL
FRAG	Bone Frag.	-	-	-	-	-	-	-	408	408
SKL	Skull	5	-	-	1	1	-	-	-	7
INC	Incisive	1	-	-	-	-	-	-	-	1
SFRAG	Skull frag.	-	-	-	-	1	-	-	-	1
JAW	Mandible	1	-	-	-	1	-	-	-	2
VX	Vertebra, indetermin.	-	-	-	19	53	4	-	3	79
RIB	Rib	-	-	-	4	31	-	2	-	37
STX	Sternum	6	1	-	5	13	-	-	3	28
OC	Pelvis	-	-	-	7	11	-	-	1	19
FEM	Femur	7	-	2	3	2	-	-	-	14
TIB	Tibia	-	-	-	-	2	-	-	-	2
FIB	Fibula	-	-	-	2	5	-	-	-	7
SCAP	Scapula	8	-	2	7	-	-	-	2	19
HUM	Humerus	12	2	2	3	3	-	-	-	22
RAD	Radius	-	-	1	1	11	1	-	-	14
ULN	Ulna	7	-	-	1	1	1	-	-	10
CAR	Carpal	1	-	-	-	-	-	-	-	1
BPH	2nd phalanx	1	-	-	-	-	-	-	-	1
SYN	Synsacrum	6	-	-	4	3	-	1	3	17
COR	Coracoid	8	3	2	7	1	-	-	-	21
FUR	Clavicle (Furcula)	3	1	2	-	-	-	-	-	6
CMC	Carpometacarpus	6	-	-	1	1	-	-	-	8
PHL	Phalanx	-	-	-	4	17	1	-	-	22
TBT	Tibiotarsus	9	-	3	9	6	-	1	-	28
TMT	Tarsometatarsus	5	1	-	5	2	-	-	-	13
LFRAG	Long bone fragment	1	-	-	-	-	-	-	-	1
Col. Total		87	8	14	83	165	7	4	420	788

Appendix C
Faunal Remains from Additional Features and Analytical Strata on Block 160

Table 127. Fish from Feature AN (AS III)

	UNF	GAD	MOR	SPAR	HAD	POL	LING	HERR	SHAD	PLEU	FLO	HAL	PLAC	LEFT	BLACK	BLUE	SBASS	BASS	PERCH	SERR	SEA	MACK	TOTAL
Unknown anatomy	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
FRAG Bone Frag.	350	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	359
SKL Skull	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
FRNT Frontal	-	1	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
SFRAG Skull frag.	547	120	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	691
MAX Maxilla	-	1	7	12	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	21
VC01 Atlas (1st Cervical)	-	2	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
VT Thoracic vertebra	-	39	44	8	8	-	-	-	-	5	3	-	6	-	-	-	-	1	-	1	-	1	116
VD Caudal vertebra	-	33	49	124	5	28	-	2	19	1	15	30	42	12	4	15	1	3	-	15	1	101	500
VX Vertebra, indetermin.	15	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	33
SCAP Scapula	-	1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
FRAGS Unidentified Frag.	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
CER Ceratohyal	-	4	8	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
PMAX Premaxilla	-	2	22	11	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	37
ETH Ethmoid	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
VOM Vomer	-	-	8	11	3	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	23
MEST Mesethmoid	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PARA Parasphenoid	-	5	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
SUPRA Supraoccipital	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
BAS Basioccipital	-	6	4	6	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	17
SPHN Sphenotic	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PRO Prootic	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
DENT Dentary	-	14	19	13	-	-	1	-	-	-	-	-	1	-	-	2	-	-	-	-	-	-	50
RETRO Retroarticular	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SPOPE Supraopercle	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PREOP Preopercle	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	1	-	-	9
ANG Angular	-	3	22	9	-	-	-	-	-	1	-	-	1	-	1	-	-	-	-	-	-	-	37
OPER Opercle	-	6	6	7	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	22
SBOPE Subopercle	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	2
INOP Interopercle	1	-	1	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	10
BRAY Branchiostegal Ray	-	34	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35
PAL Palatine	-	3	-	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
MESOP Mesopterygoid	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
QUAD Quadrate	-	5	15	6	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	27
HYOM Hyomandibular	-	4	6	11	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	23
SYM Symplectic	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
EPIH Epihval	-	3	4	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	10
PHRPL Pharyngeal Plate	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
EPIB Epibranchial	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
BASIB Basibranchial	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
BASPL Basibranchial Plate	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PHARY Pharyngobranchial	-	5	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
POST Post temporal	-	3	18	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
SPCLE Supracleithrum	-	6	12	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
CLEI Cleithrum	-	4	2	4	-	1	-	-	-	2	-	1	-	-	-	-	-	-	1	-	-	-	15
PTCLE Postcleithrum	-	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
PVD Precaudal Vertebrae	-	62	111	19	7	32	-	-	1	-	9	-	14	-	-	1	-	3	-	2	-	6	267
ULT Ultimate Vert.	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	2
PEN Penultimate Vert.	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
EPUR Epural	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	3
SPINE Indet. Spine/Ray	146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	146
LATS Lateral Facial Bones	4	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
SCALE Fish Scales	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	108
OTO Otolith	-	2	12	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Col. Total	1181	403	385	376	25	66	2	2	20	13	27	33	64	12	7	21	2	12	3	22	3	109	2788

Table 128. Shellfish from Feature AN (AS III)

		OYS	CLAM	MUSS	LOB	CRAB	CRUSTWHELK	LIMP	TOTAL	
	Unknown anatomy	-	42	-	-	-	-	1	1	44
FRAG	Bone Frag.	-	-	-	-	-	9	-	-	9
VALVE	Valve	-	-	3	-	-	-	-	-	3
CLAW	Claw Crustacean	-	-	-	1	26	-	-	-	27
SHL	Shell fragment	120	165	126	-	-	6	-	-	417
HALF	Shell incl Hinge	73	84	9	-	-	-	-	-	166
Col. Total		193	291	138	1	26	15	1	1	666



ERY

Key
ORANGE ST

GO
GIN

ANTHONY ST
GROCERY GROCERY

CROSS ST

BEDS

RUM LIQUORS

ANTHONY'S
LIQUORS

CLERK'S