Chapter 6: Analytical Papers

Editorial Note

This chapter presents further analyses of the artifactual and ecofactual material from the excavations at City Hall Park. As opposed to Chapter 5, which presents a feature-by-feature descriptive analysis, the analyses and discussions in this chapter synthesize the data in order to present a more extended view of the institutions and inhabitants of the Common. Each section examines the remains which might be associated with a single structure of the eighteenth-century Common: the Almshouse, the Barracks, and the Gaol. Although some of the data from each report may duplicate that given in Chapter 5, the synthetic approach combines the historic sources with the archaeological material in a very different way.

As a caveat, we have mentioned several times that the association of the trash features with historically-known structures may be open to question. The papers in this chapter assume that this association is valid, and base their various interpretations on this assumption. Regardless of the correctness of the assumption, the following papers complement the analyses of Chapter 5 by putting the features into their historic and societal context.

The papers were written at different times between 2003 and 2007. The authors are (or were at that time) graduate students, mostly in the Department of Anthropology at the City University Graduate Center. All of the research was based on analysis of the artifacts by each author, and the papers were presented at graduate seminars, laboratory meetings, and as the final papers for independent study projects. They differ in subject matter, depth of analysis and voice, as befits the contribution of individual researchers. They have been lightly copy-edited, but not appreciably changed.

The contributions in this chapter are all the more interesting in that they, in a sense, give us a "what if" scenario. Like Parson's original project scope (1999a), they provide a glimpse of the kind of questions that could have been asked and possibly answered had the associations of the archaeologically-discovered features and the historically-known institutions been secure. In effect, they are saying "What could we

deduce from the bones and the artifacts if the trash features could be securely associated with a particular structure?" This is not an idle or trivial question. As stated several times in this report, the assumption that a trash feature (or privy, well or cistern at other sites) holds artifacts which come from the occupants of the closest structure is one commonly made in Historic Archaeology. Without denying the validity of this assumption in many cases (most particularly in isolated rural settings), we question its universality. Without documentation, especially in urban settings, the assumption remains an unproven hypothesis, and one which is very difficult to prove. Privies, cisterns, and wells, after their periods of active use, and certainly trash middens, could have been depositories for unwanted detritus from anywhere in the vicinity. Occupants of nearby structures may even have welcomed their neighbors' help in filling these features (especially in landfilling operations or in filling possibly hazardous holes)[1], or may have been powerless to stop clandestine dumping. In the excavations at City Hall Park, the wide distribution of kiln furniture and wasters, as well as the evidence of probable industrial butchering waste in many of the faunal assemblages found in the trash deposits, seem to indicate that diverse material was being included, generated from diverse points of origin. The same inference may be drawn from the homogeneity of the artifact types in the deposits themselves. Except for the size of the group of trash deposits in the northeast part of the park, the middens do not differ from each other in any way which would connect them with individual structures. Thus, while the artifact and ecofact assemblages from the various trash contexts can provide general information about the life and material culture of New York City in the mid-eighteenth to early-nineteenth century period, they can give little information beyond what is known from historic sources about the specific populations of the institutions themselves. This is unfortunate in terms of framing and answering research questions relating to the behavior of the soldiers, poor people, and prisoners whose lives we would like to know more about.

A. Zooarchaeology of the Almshouse in New York City Hall Park

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[1] One often sees signs requesting "clean fill" in modern contexts.

Introduction

The appreciable rise in commercial trade into and out of New York City during British rule in the 17th and 18th centuries (Kammen, 1975:162) precipitated an increase in the number of the city's poor, prompting direct government intervention in the form of the city's first municipal almshouse. Erected on the present site of New York's City Hall in lower Manhattan in 1736, the almshouse was home to the city's indigent population consisting of what was then categorized as the "deserving" and "non-deserving" poor. Although the structure no longer stands, some insight into the lives of its inhabitants has been gleaned from the most recent excavations at the site of New York City Hall Park (1999) which, along with many additional finds, uncovered midden deposits thought to be associated with the almshouse and its auxiliary buildings.

This study focuses on one of the larger midden deposits, Feature 91, originally designated as an almshouse feature by its excavators, in order to ascertain the association of the excavated material with the almshouse complex and enable the reconstruction of consumption patterns of its residents while allowing for inferences to be made about the population makeup and the activities undertaken within it. The study also contributes to a broader study of socio-economic status in the colonial and early post-colonial years of the American northeast as well, building on recent studies of the archaeological expression of status in historic sites.

On the issue of the social integration of the almshouse poor with the rest of the rapidly urbanizing city - a subject debated among some scholars (Baugher, 2001; Cray, 1988; Nash, 1976; Ross, 1988; Rothman, 1971) – the material record in this case may be evidencing a still somewhat cohesive social structure. The absence of personal documents from alms recipients or accounts of the poor of Colonial New York in general, naturally complicates the reconciliation of the historical and material record to determine the level of integration among the general populace and the almshouse residents, however the finds from this feature appear to bolster the argument made by Sherene Baugher (who

excavated the kitchen feature of the almshouse in 1989) that life in the poorhouse may have more closely resembled that of the majority of the agrarian community rather than of a marginalized group of people, and further, that the almshouse residents, though having lived at subsistence level, may have to a certain extent participated in the local market economy.

Though written records confirm the locale of New York City Hall Park as the site of city's earliest municipal almshouse, the dearth of historical documentation describing aspects of daily life for the city's poor makes the existence of this archaeological material valuable as a means to address questions about poor relief in colonial and post-revolutionary New York City. The transformation from the small rural community of Dutch New Amsterdam to the proto-metropolis of British New York may have corresponded to a transformation in the way the City's poor were treated and viewed by society at large. While some scholars suggest that benevolent attitudes may have persisted (Baugher, 2001, Rothman, 1990) others favor a more unforgiving model in which poverty was equated with moral shortcomings and treated as such (Cray, 1988; Huey, 2001; Ross,1988). Excavations at New York City Hall Park may provide insight into the lives of this segment of the population, which if not marginalized socially, was certainly under-represented in the documentary material from that time.

The analysis of the archaeological assemblage from Feature 91 of the NYCHP site was made possible by funding provided by the Brooklyn College Zooarchaeology Lab, NSF-Polar Programs REU initiative, and NABO (North Atlantic Biocultural Organization). It was undertaken with several goals in mind, the first and foremost being the identification of Feature 91 as a low-status deposit associated with the first almshouse. The initial assessment of Feature 91's provenience by Parsons Engineering Science, Inc. was based on its physical position within the site, more specifically its propinquity to what would have been the original location of the almshouse complex. However the question of whether Feature 91 actually represented a deposit from the almshouse or one of the many other contemporaneous structures on the Commons remained open, especially in light of the fact that those buildings also housed individuals of presumably low socio-economic

status, such as soldiers and prisoners. An unequivocal assignment of the material would not only contribute to the scant documentation of life for the poorest of colonial and post-Revolutionary New York, but would also add to the growing body of scholarship of the manifestation of status in archaeological assemblages.

The documentary evidence in this case proved useful in formulating a hypothetical faunal and artefactual pattern for the almshouse to which the actual data could be compared.

Background of Poor Relief in Colonial New York

Despite an almost 400 year history of poor relief beginning in the 17th century the problem of indigence continues to plague New York City's government. The reasons for the economic disparities within its population throughout its history are complex and varied, but there is general agreement that the underlying causes stem from the city's role within a global capitalistic economy. Not surprisingly, a cyclical trend can be observed in the very similar circumstances accompanying the great jumps in the number of urban poor in the colonial and modern periods in the city's history. Just as in the 17th century, the problem of poverty in New York in the 20th has been exacerbated by economic restructuring; with the earlier colonial period seeing a progressive transition from a rural to a mercantile economy and the latter experiencing a replacement of the industrial sector with service-based industries. In both periods, the allure of financial opportunity in the industrializing city caused waves of immigration by poor foreigners, most of whom stayed poor while the wealth of the city became increasingly concentrated in the hands of a small minority. Additionally, as a market economy overtook the more rural structure of exchange, it favored the creation of an unskilled wage-labour pool that was especially susceptible to market fluctuations.

The most recent census for New York City (2000) estimates that 18.5 percent of families currently live below the poverty level while only 3.4 percent of all households earn a yearly income of more than $200,000. In 1796, one year before the city razed its first municipal almshouse to make way for a new City Hall, the top ten percent of the population – comprised primarily of merchants – owned 61 percent of the land in New

York while the bottom 50 owned only 4.8, with each individual holding of the latter valued at half or less than half of one owned by a member of the city's elite (Rothschild, pp.111). One could argue that one of the reasons for this relative stability of socioeconomic inequality has to do with New York's increasing dependence on an even more globalized economic system; with commensurate population growth maintaining the similar rich to poor ratios of the early industrializing city.

If one is to maintain that the underlying cause of poverty in the city has remained essentially unchanged in the 21st century, one could also make the argument that central ideologies of poor relief in the 18th century are still being observed in federal welfare reforms and city welfare programs. The perception of poverty in the cases of the "able-bodied poor" as a moral shortcoming that could be overcome through "betterment" finds resonance in the language of modern welfare programs such as New York City's "Work, Accountability, and You" instituted in 1995 which provides employment for "able-bodied recipients" of relief (NYCIBO). Despite now centuries-long efforts on the part of its government however, poverty continues to be a critical issue for New York City; to such an extent that at least half of the expenditures towards poor relief come from federal sources (NYCIBO – AFDC program 1986 stats).

The rise in the number of poor in New York City and the ways in which the government managed their relief can be traced from the earliest Dutch settlement in 1614 and through its history under British and self rule through the 18th century.

New Amsterdam (present day New York City) served as a trading outpost for the Dutch West India Company beginning in the early 1600's after having been settled for millennia by native Indian groups. The small rural settlement of New Amsterdam, concentrated on the southern tip of Manhattan Island, initially provided Holland with revenue from a beaver-fur trade with the Indians and later gained prominence in the eyes of the Mother Country as a more mercantile economy, based on the Caribbean trade, was set into place followed by a rise of a wealthy merchant class. Under Dutch rule, New Amsterdam was still quite limited in its geographical extent and demographic makeup. The earliest maps

of the settlement show a village-like settlement extending no further than modern-day Wall Street. The population, consisting primarily of Dutch immigrants numbered less than 4,000 people prior to the British annexation in 1664 (Valentine, 1853). According to Huey (2001) poverty was not a serious factor during the earliest colonial period under Dutch rule, when disruptions to a rural existence on Manhattan Island came primarily from migrations southward by victims of Indian attacks on settlements north of the city; but as a newly established colony, poverty comprised part of daily life in the early settlement. Early court documents from New Netherland even reveal an interest by the leader of the new colony, Kiliaen van Rensselaer, to develop agricultural lands on Manhattan using a labor force made up of the poor from the Netherlands, and makes mention of a shipload of Dutch orphans that arrived in the colony in 1654 from the Amsterdam almshouse (Huey, 2001).

Care for the poor of New Amsterdam was administered primarily by the Church and individual benefactors, following a European model of welfare known as "outdoor relief", where donations of cash, clothing, food and other necessities were delivered to families without necessitating relocation from their homes (Baugher, 2001:Mohl, 1971: Huey, 2001). Some families in the community also provided room and board for the poor in exchange for some form of compensation. At least two church-owned almshouses were in operation during this time, which, according to Rothman (1971), resembled family homes rather than institutions in both their architecture and operation, reflecting what he feels was the benevolent attitude towards the poor at that time.
The rural nature of the settlement may have accounted for a social cohesiveness among all members of the community and a more compassionate outlook on the poor, as Cray (1988) argues.

As the city engaged in more mercantile activities, an increase in migration by people looking to take advantage of the city's burgeoning prosperity started to strain the colony's resources as well as its tolerance towards the needy, prompting the drafting of a new law in 1661 requiring new immigrants to present written testament of their poverty and character from the "deacons of their place of residence" (Stokes, 1922 cited in Huey,

2001 and Burrows & Wallace, 1999). There is a general consensus however that a fundamental shift in the public's perception of the poor took place after the Dutch ceded New Amsterdam to the British.

Cray (1988) argues that by the time of the British takeover in 1664, "the rural social codes that emphasized harmony, order, and the subordination of the individual had disintegrated" and the poor came to be seen as outcasts rather than unfortunate victims.
With the British in control, New York City witnessed a rapid rise to economic prominence in the global marketplace; mediating a reconfiguration of the physical and social landscape along class lines as a more aggressive commercial network was set into place. Baugher and Lenik (1997) describe the expansion of the market economy as "laissez-faire capitalism", and cite it as the primary cause for the increased poverty in British New York after 1664. The combination of increased shipping from Manhattan's port and the use of low-wage labourers served to increase revenue for the merchant class while simultaneously growing a disproportionate number of urban poor.
The latter was accomplished through many factors, including high unemployment for local unskilled labourers who had to compete with the immigrant and slave labor pools, (all of whom were susceptible to fluctuations in the market); as well as the spread of tropical diseases like malaria and yellow fever - which traveled on ships that now frequently arrived from the Caribbean – leaving many families without its primary, or only, wage earner. Plagues such as smallpox and measles, new wars with France over commercial interests, and the continuous arrival of more impoverished European immigrants to the city only intensified the problem, leaving more men, women, and children dependent on the city and independent charitable institutions - like the Church and private benevolent associations - for aid.

The British initially retained the same system as the Dutch in dealing with the poor, doling out assistance to what was then referred to as the "outdoor poor"; but in hopes of lessening the city's fiscal burden, they eventually enacted new laws which required the poor to receive aid within their own regional parishes. The parish system, which had its roots in the Elizabethan Poor Laws of 1601, staved migration to the urban center from

other regions for a short while but other factors already mentioned, led to the continuing rise in the number of urban poor, prompting city officials to take harsher measures to address the problem. Religious and private organizations continued to play a role in poor relief, but civil aid replaced ecclesiastical assistance as the primary source of relief, and ushered in a new vision of poverty, which mirrored attitudes long prevalent in England.

Following the work ethic espoused in Early Modern Europe during the Protestant Reformation and the scientific approach to problem solving dictated by the intellectuals of the Enlightenment, secular and institutionalized care, rather than out-relief, became the favored solution in the British colony. The institutionalization of poor relief in British New York, which included the erection of workhouses and houses of correction, followed the theories on the rise of poverty that were popular in Europe, and which promulgated a mainstream perception of a "culture of poverty". This fictive perception, which blamed the moral shortcomings of individuals for their descent into poverty, looked to moral reform through the development of a work ethic as the means to achieve a way out of need while simultaneously lessening the state's financial burden through self-sufficiency. Mohl blames the importation of this British ideology beginning in the 18th century for shaping negative colonial attitudes towards the poor (Mohl, 1971) where distinctions between the "deserving" and "non-deserving" were drawn just as they had been in England; in which the former category consisted of widows, orphans, disabled war veterans, and the mentally ill, while the "non-deserving" included unemployed but able-bodied persons, vagrants and runaway servants.

The switch to institutionalized care may indeed have reflected changing attitudes towards the poor in New York City and elsewhere in the British colonies, but they do not stem exclusively from the importation of Western European ideologies. The rapidly changing social and physical environment of the city also played a major role in influencing how the poor were regarded and treated by society at large Like in other major colonial ports such as Boston and Philadelphia, exponential population growth created a more ethnically mixed, urban society resulting in more impersonal social relations among its many members. No longer made up exclusively of "orphans, widows, servants, and

transients who suffered calamity" (Lee, 1982), the poor now included people from all walks of life who no longer formed part of a small, integrated community, and because of this, some methods of poor relief were just no longer an option. Referring to the early practice of housing indigent persons Lee (1982) writes, "boarding neighbors and life-long town inhabitants was one thing; trying to board…those not fully accepted as part of the community was quite another". Feelings of communal responsibility faded as a culture of individualism emerged from participation in the capitalistic economy.

Centralizing poor relief in the form of institutions may have been an imposition of a rigid social ideology, but it also reflected a growing economic ideology as well; one which favored individual achievement at the expense of the communal good. Further partitioning the social structure was the city's spatial layout. Rothschild's (1990) analysis of spatial clustering within the city's six wards (political subdivisions as initially defined by the Dongan Charter of 1686 and subsequent modifications to it) found that in 18th century New York, neighborhoods became increasingly segregated by occupation; a precedent, she argues, of the spatial order prevalent in the 19th century in which socio-economic class trumped occupation in the distribution of people within the city (ibid., pp.126). Treating the poor as unfortunate members of the community was no longer desirable in an environment where neither familial bonds nor the rural settlement that engendered them, existed.

As the number of poor visibly increased in colonial urban centers, the almshouse – sometimes referred to as a workhouse in the literature - was considered a promising alternative to outdoor relief for dealing with the most extreme cases of indigence by the local governing bodies. As part of what Nash (1976) describes as the "public workhouse movement" institutionalized care would not only provide immediate relief to the sick and "deserving" destitute, but also reform "idlers" into productive members of society.

In rapidly urbanizing centers such as Boston, Philadelphia, and New York the almshouse was symbolic of "a new social order" which would, through the instilment of a work ethic in the "non-deserving" poor, resolve the problem of poverty altogether (Nash,

1976). Minimizing the poor-tax burden rather than social reform seems to have been the motivating factor behind the implementation of municipal poor relief, which more likely constituted a response to rising expenditures than concerns for the well being or rehabilitation of the urban poor. In colonial New York, annual expenditures for poor relief more than doubled within a quarter century, rising from £250 in 1697 to £523 by 1723 (figures from Mohl, 1971), and there, as in other urban centers facing similar circumstances, the decision to oversee aid distribution from a central location was deemed a cost-efficient solution. Scholars argue however, that by confusing the consequences of an unforgiving market system with personal moral shortcomings, the measures taken by the British and post-revolutionary governments to redress the issue were not only ineffective but also marginalized and maintained the poor in their economic condition (Mohl, 1971; Cray, 1988; Nash, 1976).

In the early 18th century, New York City faced issues familiar to the other large colonial port towns such as Boston and Philadelphia, including growing numbers of poor inhabitants and increased spending on their relief by its taxpayers. Similarly, the solution to the crisis, adopted by the city's Common Council in 1735, was the erection of an almshouse in the northern edge of town. It was hoped that the facility would not only centralize the administration of aid and essentially end the system of outdoor-relief, but would provide the able-bodied with employment, and the young with education. Most likely, the administrators believed that in a highly structured atmosphere, where even meals would be regulated, the results would be far-reaching; lessening the city's immediate financial burden through the sale of goods produced at the almshouse while training the next generation to be productive members of society through apprenticeship. The North American almshouses were designed to be self-sufficient operations in which residents would perform some types of labour ranging from domestic chores, which in New York included cooking, child-care, spinning yarn, sewing, and cobbling shoes, as well as harder labour such as gardening, picking oakum, rock splitting and land improvement.

New York's almshouse was completed in March, 1736; a complex with an architectural layout similar to European almshouses (Huey cited in Baugher, 2001) that included a two-story residential brick structure (Figure **xx**) and auxiliary buildings such as a kitchen and stable flanking the main building slightly to the north, and a garden placed directly behind it; all of them located on a parcel of land on the northern margin of the city once used as a public pasture during Dutch times known as de Vlaackte. During the early British period, the land was used as a public meeting place and execution ground known as the Commons. Spatial divisions within the main structure consisted of an infirmary, a workroom, a cellar within which the unruly were confined, and a separate ward for quarantining persons infested with lice or other bodily pests (Mohl, 1971). Other buildings, including a hospital, washhouse, and storehouses were added to the complex in later years. In 1757 the British Army erected their barracks just north of the almshouse complex, while a jail was built to the east. In the late 18th century, looking to apply stricter measures to dissuade vagrancy, the City also erected the Bridewell workhouse on the Commons and concentrated the "unworthy" poor and their tasks there.

New York City's almshouse initially housed the "deserving" and "undeserving" poor together, as well as a superintendent and his family. In its first year of operation 19 individuals resided at the almshouse, and by 1772, the total figure amounted to 425 persons with children comprising about 30% of the total in both those years. According to Rothman (1971), these numbers represent the most extreme cases of indigence and do not reflect the number of poor who continued to receive aid through other agencies such as the Church and benevolent associations. *Gotham* authors Burrows & Wallace point to the low numbers of residents at the opening of the almshouse (19 people in 1736 when 400 persons out of a population of 8,622 were documented as requiring assistance between 1731-35) as evidence of the deplorable conditions within it (Burrows and Wallace, 1999:156) while Huey (2001) also cites a high death rate at the almshouse (50 deaths per year) to support Burrows & Wallace's theory. He mentions however, that Revolutionary activity in the mid-18th century gave rise to sympathetic attitudes, which may have alleviated an oppressive situation. As mentioned earlier, able-bodied residents were required to contribute to the upkeep of the house by engaging in some industrious

activity which according to Baugher (2001) would not have been unusual for anyone living in 18th century New York; suggesting that life within the almshouse may have more likely reflected societal norms.

The primary sources of information regarding New York City's first municipal almshouse consist of the few Common Council minutes that make mention of it via abbreviated entries referring to construction costs, plans for the erection of additional structures to the complex, the appropriation and distribution of funds and other necessities for the almshouse (New York, 1905; see Appendix **XX**). Several entries also offer glimpses into the daily workings of the institution in the form of set regulations for its daily operation. These records indicate that the Common Council set a weekly menu for the almshouse residents consisting of bread, cheese, beef broth, and milk, and awarded them fishing rights off of Bedloe's Island. The Common Council minutes also specify that chores undertaken by the residents of New York's almshouse included sewing clothing, spinning yarn, laundering, cooking, baking, caring for young children, and picking oakum (cited in Baugher, 2001). No personal documents in the form of diaries or letters belonging to the almshouse residents exist to corroborate or supplement the more official records of the Common Council, making any recovered material remains discarded by the almshouse residents all the more valuable for reconstructing their lifeways.

The Zooarchaeology of Feature 91

In the investigation of consumption patterns at the almshouse, the Common Council minutes provide a basic starting point from which to approach the faunal assemblage in its documentation of a proposed weekly menu for the almshouse, which as mentioned earlier, was comprised of beef broth, milk, cheese and bread. Although these items undoubtedly comprised a good portion of the almshouse meals given their simplicity and low cost, they were likely supplemented by other foods mentioned elsewhere in the documents, such as vegetables from the garden during the growing seasons, the

occasional confiscated pig donated to the almshouse by the Common Council, and other foods such as local fish species obtained from nearby Bedloe's Island, from which the residents had a permit to fish. Going beyond the documentary record, one could easily imagine that domesticated fowl may have shared the almshouse grounds with other livestock such as the dairying herd responsible for providing the almshouse with its milk and cheese. Market purchases were perhaps limited to cheap but not immediately accessible foods such as grain, commercial fish species, such as cod, and quite possibly some beef as well. During the period under study, most urban dwellers purchased beef from central markets (Rothschild, 1990) however the record is silent on the procurement of beef for the almshouse. On the assumption that the cows at the almshouse were kept exclusively for dairying purposes, on-site butchery at the almshouse may have been limited to senescent animals or young male calves, while cheap cuts of beef may have been obtained from local markets on a more regular basis. Limited funds no doubt restricted market access for the almshouse residents and unlike the majority of 18th century New Yorkers who, according to Rothschild (1990, but see Crabtree, 1990:174) obtained most of their food from markets, the poor of the almshouse likely procured most of their food from their own stables, gardens, and orchards.

Scholars have reconstructed the relative values of different foods available during the colonial period in the American northeast, allowing for certain inferences to be made about the hypothetical makeup of a low-status faunal assemblage such as that of the almshouse. Fish was considered the most common and cheapest food available in 18th century New York, especially with the rise in commercial fishing in the middle of the century (Cantwell and Wall, 2001:180) as were mollusks such as oysters and clams.
Somewhat more expensive and possibly providing the core of the meat portion of the colonial diet were the smaller domesticated mammals such as sheep, goats and pigs, and domesticated birds such as chickens. The most expensive market purchase would have been beef, of which a modest cut, according to Crabtree and Milne (2002) would have, in value, equaled the most expensive cut of pork. The demand for a larger and more readily available food supply in rapidly expanding urban centers such as New York limited the amount of wild foods consumed by the colonial and post-colonial populations. This may

account for the limited representation of such animals such as deer and wildfowl in faunal assemblages from colonial deposits relative to domesticated species (Rothschild, 1990). Considering the documentary evidence of foods available to the almshouse, their relative values in the colonial economy, and inferences about consumption patterns in urbanizing centers like New York made from analyses of contemporaneous sites, the expected faunal pattern for the almshouse feature then, assuming good bone preservation, complete recovery of the material and its thorough analysis, would include a disproportionate amount of inexpensive foods such as fish and shellfish relative to more costly animals such as pigs, caprines, and cows. Element distribution in the higher-valued animals would be expected to reflect a bias towards less desirable meat cuts with higher frequencies of cranial bones and lower limb bones. In the case of midden Feature 91, it was expected that the faunal pattern would at least approximate that derived by Tom Amorosi from the analysis of the faunal remains of an excavation in City Hall Park conducted in 1989 from a feature concluded to be associated with the almshouse kitchen, in which fish comprised 56% followed by domestic fowl at 22.35%, caprines at 8.94%, cow at 8.38%, and pig at 3.9%. The most frequently occurring elements recovered from the pig and cow remains were head and foot bones.

Along with almost 4,000 artifacts, the midden designated Feature 91 produced 7,712 faunal specimens on which a zooarchaeological analysis was made using NISP (Number of Identified Specimens per Taxon) and MNI (Minimum Number of Individuals) counts where possible to quantify the data and produce species ratios. Unfortunately, neither method can accurately account for taphonomic alterations to the archaeological faunal assemblage, nor do they reflect the true sequence of its deposition. However, the biases created by the respective drawbacks to these methods can be offset somewhat with the presentation of both data sets (Klein and Cruz-Uribe, 1984; Crabtree, 1990; Grayson, 1981).

Good preservation of the faunal material allowed over half of the specimens to be identified to species or order and for element distributions to be charted. Whole bones and diagnostic bone fragments were identified to species where possible with the aid of

comparative bone collections housed at the Brooklyn College Zooarchaeology Laboratory and the Hunter Bioarchaeology Laboratory and zooarchaeology manuals (Cohen and Serjeantson, 1996; Hillson, 1986; Hesse and Wapnish, 1985; Gilbert, 1980; Gilbert et al., 1981**).** Zooarchaeologists Dr. Sophia Perdikaris of Brooklyn College and Dr. Thomas McGovern of Hunter College provided assistance with the identification of the many enigmatic bone fragments in the assemblage. Where possible, measurements were taken following procedures outlined in von den Driesch (1976) on elements outlined in the Nabone Zooarchaeological Database Recording System Codes (6th Edition) and are presented here as an appendix to the main body of the report.

Mammalian bone elements such as vertebrae and ribs, as well as undiagnostic bone fragments were classified into either large, medium, or small terrestrial mammal categories where appropriate. When identification in terms of size category was not possible, mammalian bone was then classified as terrestrial mammal (TM). Highly fragmented bone material that eluded classification into any of the above categories was assigned to Scrap. NISP and MNI calculations as well as relative percentages of species abundance are presented in Table 1.

Table 1.

NYCHP 1999

Taxon by Economic Group	UNIT : NISP	**Feat.91/Level 1Bone** % of Total Nisp	**Bag 1255** % of group
DOMESTICATES			
Bos taurus	318	7.23	76.08
Ovis/Capra sp.	67	1.52	16.03
Sus scrofa	33	0.75	7.89
total Domesticates	418	9.51	

OTHER MAMMALS			
Felis catus	3	0.07	
Rattus rattus	1	0.02	
Cervus	1	0.02	
Total Other Mammals	5	0.11	
BIRDS			
Wildfowl - land birds	9	0.20	12.68
Domestic fowl	14	0.32	19.72
Unid bird sp.	48	1.09	67.61
Total Birds	71	1.61	
FISH			
Gadidae (cods)	59	1.34	23.41
Sparidae (porgies)	24	0.55	9.52
Serranidae (basses)	39	0.89	15.48
Scianidae (drums)	29	0.66	11.51
Clupeidae (herring)	1	0.02	0.40
Pleuronectidae (flatfish)	1	0.02	0.40
Unid fish sp.	99	2.25	39.29
Total Fish	252	5.73	
MOLLUSCA			
C.v. (Atlantic Oyster)	1516	34.48	
M.m. (Hard Clam)	2135	48.56	
Total Mollusca	3651	83.03	
TOTAL NISP (Identified fragments) =	4,397	100.00	
Small Terrestrial Mammal	4	0.05	
Medium Terrestrial Mammal	597	7.74	
Large Terrestrial Mammal	356	4.62	
Unident. Mammal Frags	2358	30.58	
TOTAL TNF (all fragments) =	7,712		

Shellfish

Atlantic oysters (*Crossostrea virginiacus*) and hard-shelled clams (*Mercenaria mercenaria*) comprise the majority of the 4,397 identified faunal remains of the assemblage with 83% of the total NISP, followed by domesticated mammals comprising 9.5%, fish 6%, birds 2%, commensal species 1%, with wild mammals making up less than 1%. Given their usually excellent preservation in archaeological deposits, their abundance around Manhattan and nearby shores during the 18th century, and their affordability during that same period, it is not surprising that mollusks outnumber other fauna in this assemblage. When considering the MNI counts alone, oysters outnumber clams by a ratio of 1.48.

Domesticates

Domesticated mammals, 9.5% of the total NISP, consist of cow (*Bos taurus*), pig (*Sus scrofa*), and caprines, a category in which both sheep (*Ovis aries*) and goat (*Capra hircus*) are classified. Cow remains make up 76% of this group and outnumber the other taxa in the MNI count as well. The relative abundance remains unchanged with the inclusion of the LTM count into the Bos category and by evenly distributing the MTM count into the caprine and pig categories. Given the higher relative value of beef to either pork or mutton, the higher abundance of cow bones would at first appear inconsistent with a low-status deposit; one would expect the species distribution to favor the more affordable animals such as pigs and caprines. Interestingly however, the element distribution of cow bones in this assemblage represents the use of the most economical cuts, a pattern consistent with a low-status deposit expected from an almshouse context. Although cranial elements dominate the caprine and pig samples as well, loose teeth combined with small sample sizes may be biasing the data in this case.

The majority of the identified cow elements originate from marginal parts of the animal that contain little, or less desirable, meat such as the head and feet. The relative percentage of cranial elements remains at least 20% higher than those from other body

parts and this percentage approaches 90 when loose teeth are factored into the total and the NISP of LTM remains are excluded. Considering the identified cow bones together with the data from the LTM category (of bones which may well correspond to *B. taurus* considering that it was the most prevalent large domesticate in the colonies) the ratio derived of bones from marginal areas of the animal to those originating from meatier parts amounts to 2.71:1 According to Lyman (1977) and Szuter (1991) an abundance of low-value bones such as heads and feet within a deposit suggests the discard of waste material from butchering activities. The presence of butchered high-value bones such as vertebrae and ribs (assuming they derive from cow) precludes this interpretation for the cow assemblage from Feature 91 however, suggesting instead that the deposit represents consumption waste.

Posing a significant complication to this initial interpretation of status from element distribution is the issue of on-site butchery at the almshouse, which could not be verified from the historical record. Had the almshouse acquired its meat from markets, the frequency of marginal cuts of meat, especially beef, might point to the deliberate selection of low-valued food that would reflect budgetary constraints on behalf of the consumer. On-site butchery however, as Reitz (1988:12**)** argues, "alters the customary association made between cuts of meat and status" by providing the consumer with access to all parts of the animal, as evidenced by Feature 91's domesticate assemblage (if the ribs and vertebrae assigned to the terrestrial mammal categories are included in the domesticate fauna). Despite often-repeated ordinances by the Common Council requiring that all cattle in New York City be killed at slaughterhouses, these laws may not have applied to the almshouse (MCC,1905). Consumer choice in the colonial period further confuses the issue, as both low-status and elite households would have utilized "undesirable" meat cuts in certain recipes such as soups and stews (Reitz, 1988; Rothschild, 1990). In hopes of circumventing these issues, this study considered other variables such as age-profiles obtained from tooth-wear and long-bone fusion patterns to determine whether the domesticates in Feature 91 were procured and butchered on-site or through market channels.

Tooth-wear patterns in preserved cow mandibles were analyzed in order to evaluate the quality of beef consumed at the almshouse and determine whether animals were procured from stock raised at the institution and butchered on-site. The analysis works from the assumption that meat purchased at New York's markets would have come from prime meat-yielding animals whereas meat obtained from the almshouse stock would have come from older animals in the dairy herd that had stopped lactating or from expendable young males. Tooth wear analysis was conducted on mandibles where the deciduous third molar, the fourth permanent premolar, or the permanent molars were preserved for comparison to wear stage charts in Hesse and Wapnish (1985). A total of five relatively intact mandibles were evaluated despite the many loose cow teeth in the assemblage. Extremely late-stage wear patterns on several specimens suggest that the almshouse residents consumed senesecent animals along with animals of moderate age. Fig (#?) illustrates the most dramatic example of tooth wear from the sample, the left mandible of an adult cow in which the mesial half of the first permanent molar has been worn below the cervico-enamel juncture. In the same specimen, the fourth premolars, as well as the second and third molars show significant wear, with the third molar represented by only a small portion of its mesial portion. Resorption of the alveolar socket, which would have held the distal roots of the third molar, is also evident. Infection in the area is also a possibility. Similarly, wear in two other mandibulae approaches the upper limits illustrated in the published charts. If we accept tooth-wear patterns to accurately represent relative ages, then the data suggests that these specimens represent old animals of poor meat-quality that probably would not have been available for sale in the city markets. Rather, the data suggests on-site butchery of animals that ceased to serve their economic function within the household. The cow tooth-wear pattern correlates with the element distribution pattern to suggest that on-site butchery produced the latter, while financial constraints the former.

Analysis of epiphysial fusion showed that subadult animals also comprised part of the cow assemblage within Feature 91. Of thirteen long bones with preserved articular surfaces, 7 were found to have detached epiphyses, signaling the slaughter of young animals, perhaps male calves that could not contribute to the dairying economy at the

almshouse. The consumption of young animals suggested by the fusion patterns supports the data obtained from the tooth-wear analysis that points to the consumption of animals that did not meet the standards for prime quality meat.

Subadult animals are also well-represented in the caprine and pig assemblages (Table 1), suggesting that these species were raised primarily for food rather than secondary products (Reitz, 1988:16) and may have been purchased either through market channels or raised on site. Preserved pig maxillary and mandibular teeth show very minimal wear, and most of the long bones with intact articular ends have detached epiphyses. A similar pattern is evident in the caprine sample. Figure 5 shows the right mandible of an individual with a deciduous fourth premolar in place and erupting permament dentition (specify). Caprine long bones with missing epiphyses or with epiphyses in the process of fusing are also well represented in the assemblage.

The data obtained from the major domesticate taxa strongly tie this portion of the faunal deposit from Feature 91 to New York City's first municipal almshouse. Element distributions favoring marginal food cuts in all three species (but primarily in higher-valued animals such as cows) and wear patterns suggesting the consumption of senescent cattle along with prime-aged, but affordable animals such as caprines and pigs, point to a consumption pattern by a population constrained by limited financial resources.

Fish

Fish account for the next largest food group in Feature 91, comprising about 6% of the faunal NISP. The historical records indicate that fish were abundant off the shores of colonial New York (Denton, 1670 cited in Rothschild, 1990), and the shallow coastal waters, bays, lagoons and estuaries in the vicinity would have provided access to various species such as porgies, basses, drums, herrings, and flatfish. Taxa from these families comprise 61% of the identified fish from Feature 91 suggesting the almshouse took advantage of fishing rights afforded them by the Common Council.

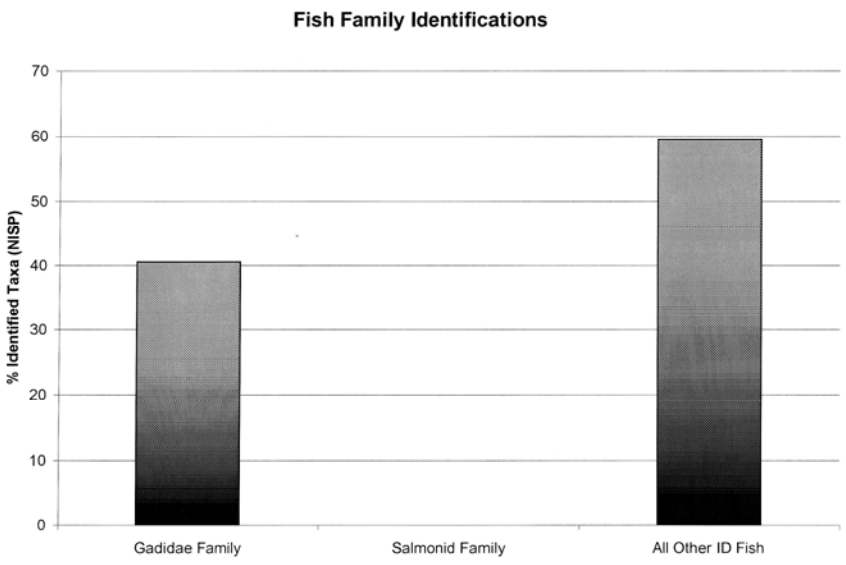

Table 2: Fish—Identified taxa

Technological advances in the fishing industry made deep-water oceanic species such as cod a cheap food source commercially available by the mid 18th century. Atlantic cod (*Gadus morhua*) constitutes 39% of the identified fish from Feature 91 and outnumbers all other identified fish species in the sample (Table 2). The species ratio of commercial to locally harvested fish suggests that by the mid 18th century, rather than harvesting local waters, acquiring cheap commercial species through the market may have been a more practical and economical means of supplying the almshouse with fish. Feature 91's fish sample may be one of the most suggestive of all the faunal categories. The NISP percentage, which approaches that for the domesticate mammalian fauna, may be indicating that, unlike for the rest of the city's residents, for the creators of this deposit, fish did not solely comprise a supplementary food to a "core of domesticated mammals" as evidenced by other zooarchaeological deposits from the same period (Rothschild, 1990). The high frequency of an affordable commercial species such as Atlantic cod

suggests that budgetary issues, such as those affecting a low-status household such as the New York almshouse, may have influenced its acquisition.

Context **Feature 91 - Lev. 1** **Summary**

Bone bag 1255 *Fish*

Scientific Names	***English Common Names***		% all ID	of Family
Gadus morhua	Atlantic cod			
Pollachius virens	Saithe		0.00	0.00
Pollachius pollachius	Pollack		0.00	0.00
Melanogramus aeglfinus	Haddock		0.00	0.00
Molva molva	Ling		0.00	0.00
Brosme brosme	Torsk		0.00	0.00
Gadidae, sp. Indet.	Gadid family		0.00	
Clupea harengus	Herring	1	0.68	
Micropterus dolomieui	Black Seabass	4	2.70	
Micropterus sp.	Bass	34	22.9	
Morone saxatilis	Striped Bass	3		
Amia calva	Blackfish	15	10.1	
Pagrus pagrus	Porgy	3	2.03	
Sciaenidae sp.	Drum or Croaker family	24	16.2	
Archosargus probatucephalus	Sheepshead	3	2.03	
Bothus ocellatus	Flounder	1	0.68	
Salmo salar	Atlantic salmon		0.00	
Salvelinus alpinus	Arctic Char		0.00	
Salmo trutta	Trout		0.00	
Salmonidae	Salmonid family		0.00	
Other Fish				
Fish, sp. & family Indet.	Fish species	456		
Total Fish		***604***		

Family Breakdown

	NISP	% Identified to Taxon
Gadidae Family	60	40.54
Salmonid Family	0	0.00
All Other I D Fish	88	59.46
All Fish ID to taxon	148	100.00

Gadid ID to species 60

Although the problems inherent to the archaeological recovery of fish remains may bias the figures obtained in analysis, one might still consider the fact that almost all the identified species fall within the lowest rank of a market index compiled for those fish species available commercially during this period (Singer, 1987). Unfortunately, since the requisite MNI count was not calculated for the fish remains from Feature 91, this study can not incorporate Singer's (1987) statistical measure of a deposit's socio-economic signature through the calculation of its "threshold of affordability" from fish remains (or weighted mean value) and its subsequent comparison to this index. Future use of Singer's calculation may favorably enhance the analysis and further support the contention that the fish remains from Feature 91 are consistent with a low status deposit.

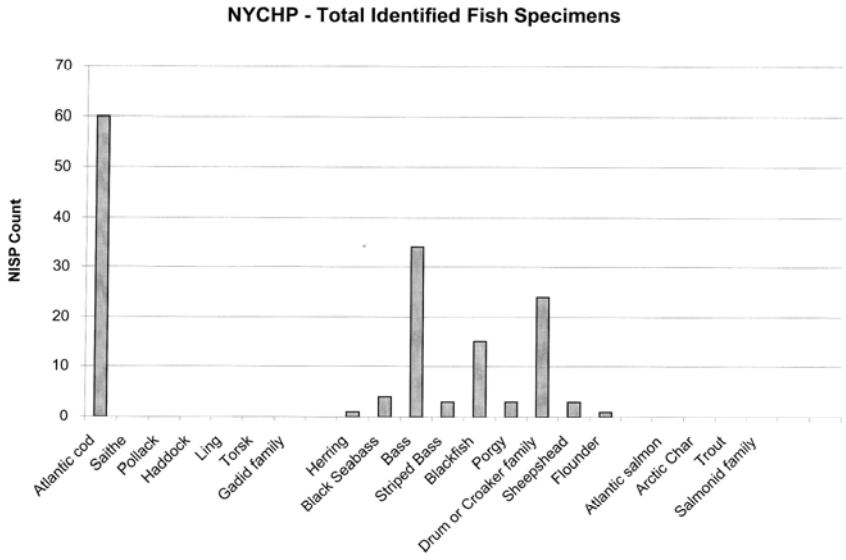

Table 3:Fish species - NISP count

Birds

Birds constitute a low percentage of the faunal deposit (1.61%). Goose, duck, and domestic fowl are classified as domesticates, and comprise the majority of the identified avian remains. Wild species include pheasant and pigeon. The small representation may indicate either a preservational bias due to the delicate nature of the bones, or perhaps given the relatively small meat yield from birds, an occasional indulgence by the almshouse residents or the superintendent's family.

Wild mammals and commensal species

Deer (*Cervus elaphus*) and commensal species such as rat (*Rattus norvegicus*) and cat (*Felis catus*) are also represented in the faunal remains, although they account for less than one percent of the deposit.

What emerges from the zooarchaeological evidence then is a consumption pattern suggestive of a very modest but varied diet consisting of animal foods procured both on-site and through market channels. Moreover, age profiles and element distribution patterns from costly foods such as beef, as well as species ratios favoring inexpensive foods such as shellfish, strongly suggest that the faunal assemblage from Feature 91 originates from a household of low socio-economic status, and appears to support the association of Feature 91 to New York City's first municipal almshouse.

Taking into consideration that recovery techniques and differential preservation potentially bias the data, and that written records document other low-status structures on the Commons contemporaneous with the almshouse from which the faunal material could also have originated, an analysis of the artifacts was undertaken to provide another dimension to the study and to possibly strengthen the faunal signal.

Artifact Analysis – Feature 91

The artifacts recovered from Feature 91 were classified according to guidelines specified by the Brooklyn College Archaeology Laboratory. Several references and a comparative collection assembled for the lab by Jennifer Borishansky, one of the Brooklyn College students working on the material from City Hall Park, aided in the identification and dating of the ceramic assemblage, as did a visit to the lab by ceramic specialist, Meta Janowitz (November 21, 2002) and advice from the Lab Director, Alyssa Loorya. Jones and Sullivan (1989) was consulted for the typing of the bottle glass remains. Clay pipes were dated following Harrington **(**1978) and with the help of Diane Dallal, curator of the South Street Seaport Museum and clay pipe expert, during a visit to the Brooklyn Archaeology lab on December 3, 2001.

Artifacts from Feature 91 were recorded onto forms that specified a general class and subclass into which the object was classified, ending with a detailed description of the object itself, including its form, material, diagnostic markings or decorations, and any information that could be inferred from these details, such as date of manufacture. General class categories under which the material from Feature 91 fall include Architecture, Food Related, Industrial Tools and Equipment, Personal Artifacts, Recreation, and Unidentifiable. Tables 3 and 4 below provide the relative percentages of artifacts that fall into these categories as well as into their respective subcategories.

Architecture

Building materials such as brick, mortar, door hinges and knobs comprise 20% of the artifacts from Feature 91. These are explained as debris resulting from episodes of building demolition that occurred at City Hall Park during the late 18th century. It is likely that the recovered material belonged to the first almshouse, which was razed by the city in 1797.

Food-Related Artifacts

Ceramics

The ceramic ratio of .82 (after South's functional analysis model) allowed Feature 91 to be identified as a domestic deposit. The ceramics in particular provided mean dates for

the fill episode (Table 5), while serving as one possible indicator of socio-economic status for the deposit. As Table 3 illustrates, food-related material constitutes over half of the artifacts from Feature 91 and include all of the ceramic, utensil, drinking and bottle glass remains. Ceramics comprise 45% of the food-related category. Despite the highly fragmented state of the material, diagnostic features such as shape and decorative technique were preserved on many of the sherds allowing for an assessment of ceramic type to be made and a median date of manufacture to be assigned to them. Table 6 lists the relative percentages of all the ceramic types recovered from Feature 91, as well as their median dates (after Noel Hume, 1969). Status wares (as identified by Baugher and Venables, 1987) include porcelain, creamware, tin-glazed earthenware, pearlware, and white salt-glazed stoneware, and are listed above the utilitarian wares in Table 6, which include redwares and coarse stonewares.

A mean date for the deposit of 1758 was obtained after applying South's (1978) mean ceramic date-frequency formula to the ceramics from Feature 91. Porcelains were included in the calculation despite South's determination that a more accurate mean date could be obtained by excluding this class of ceramic ware type from the calculations.

In March 1736, the Minutes of the Common Council documented the recommendation by the committee in charge of provisioning the almshouse with essential staples for the purchase of two-dozen plates and four dishes (*MCC* 1905:308). Presumably if such a purchase was made, it would be reasonable to suppose that it would have consisted of fairly inexpensive set of dishes of the same ware type for use by the almshouse residents for the preparation and consumption of their daily meals. As a consequence of this particular purchase choice, one would expect that discarded ceramics originating from the almshouse would consist primarily of utilitarian vessels fashioned perhaps of coarse earthenwares and stonewares. Surprisingly, the archaeology stands in sharp contrast to the written sources. Status wares comprise the majority of the ceramic assemblage from Feature 91, with utilitarian wares making up only 21% of the total.

The presence and variety of relatively expensive ceramic wares such creamware, porcelain, tin-glazed earthenware and pearlware contrasts sharply with what would be expected from an almshouse context. Contrary to the faunal pattern, the ceramic pattern does not indicate a strong association of the material with the almshouse; considered alone, it may even suggest a higher-status domestic deposit. Although there are many possible interpretations for the ceramic pattern – personal belongings of almshouse residents who had once seen more prosperous days, donations of random dishes to the almshouse by more well-to-do citizens of the city, or that the higher status dishes belonged to the superintendent's family as has been suggested for assemblages from earlier excavations at City Hall Park – it better serves to illustrate the potential for the misinterpretation of status in the archaeology using ceramics alone, as argued and demonstrated by Baugher and Venables (1987).

Personal Artifacts, Recreational Objects, and Industrial Materials

Other material from Feature 91 may ultimately provide a better support for the strong faunal pattern if not as material proxies for socio-economic status, then as representations of the mixed population of indigent men, women and children who took shelter there and the activities undertaken by them at the institution as outlined by the historical texts. Gender- and age-specific artifacts relating to women and children hold particular interest as this group was not documented as having been confined to any of the other institutions that formerly stood on the grounds of City Hall Park.

Although personal and recreational objects comprise a limited component of the material culture of Feature 91 several may indicate the use of the City Hall Park site by women and children, both of whom were documented as having resided at the first municipal almshouse during its years of operation. The finds include a single hoop earring made of an unidentified metal, an ornate pewter shoe buckle, a miniature porcelain teacup sherd, and two stone marbles. The recovery of sewing pins and bone button blanks supports the documentary evidence of garment-making activities undertaken by women and girls at the first almshouse and suggests a close correspondence of Feature 91 with the structure.

Clay pipes recovered from Feature 91 may represent the male population of the almshouse, but rather than serving as aids in the linking of Feature 91 with the structure (since men were not confined exclusively to that institution) the importance of pipes in the context of this study lies primarily in the questions they raise regarding trade relations with the Netherlands after the British takeover of the Dutch colony, and in their providing a rough time-period of deposition for the midden (discussed below).

Clay Pipes

The ubiquity of clay pipes at American historical sites warrants further mention of the finds from Feature 91 in order to further the identification of the diverse types available during the period and to provide additional data to scholars who have interest in contributing to the reconstruction of chronologies from them.Most of the pipebowls recovered from Feature 91 (31 bowls, 574 stems were analyzed) are of Dutch origin with some British examples, and all are of average quality relative to the pipes produced and imported into New York during this period. Many of the Dutch examples (identified by their distinct shapes, marks, and decorating techniques) carry a distinctive raised "s" mark over a shield on the sides of their heels to indicate that these were not only produced in Holland, but were of ordinary quality. The Dutch examples provide a *terminus post quem* of 1739, when the city of Gouda first began impressing their pipes with its official shield. The three British pipebowls were determined to date to the late 18th century. Because of the short time lag between use and deposition for clay pipes, a more accurate *terminus ante quem* date might be obtained through any historical documents that record when British goods replaced Dutch imports into the colony. The presence of Dutch products after the British takeover of New Amsterdam in 1664 and during a period of increased industrial output from England targeted toward the Colonial market raises interesting questions about the trade relations between the two colonial powers during the 18th century. In some ways it also speaks to the issue of identity, perhaps Dutch identity, and its preservation through material culture in colonial New York as yet another culture put its roots down in the city.

Table 3. Relative Percentages of Artifact Categories

Category	Count	% of Total
Architecture	773	20.0
Food-Related	2185	56.0
Industrial	83	2.0
Personal	678	17.0
Recreation	4	.10
Unidentified	189	5.0
Total	3912	100.0

Table 4. Relative Percentages of Artifact Classes

Category	Class	Count	% of Total	% of Category
Architecture	Bldg component	767	20.0	99.0
	Furnishing	6	.20	1.0
Food-Related	Ceramics	1773	45.0	81.0
	Bottle glass	391	10.0	18.0
	Glassware	21	1.0	1.0
Industrial	Raw Material	61	2.0	73.0
	By-Product	10	.30	12.0
	Sewing	6	.20	7.0
	Pottery Mfr	4	.10	5.0
	Button Mfr	2	.10	2.4
Personal	Smoking gear	605	15.0	89.0
	Medicinal	45	1.0	7.0
	Clothing	19	.50	3.0
	Toilet article	5	.10	1.0

	Personal gear	2	.10	.30
	Accessory	1	.02	.12
Recreation	Game	3	.10	75.0
	Toy	1	.02	25.0
Unidentified	Metal	182	5.0	96.0
	Glass	7	.20	4.0
	Clay	1	.02	.50
Totals		3912		100.00

Table 5. Breakdown of Ceramics within General Ware Categories and Mean Dates

Ware Type	Count	Date Range	Mean Date
Creamware:			
Creamware	966	1762-1820	1791
Overglaze Handpainted	30	1765-1810	1788
Clouded	52	c.1760	1760
Earthenware:			
Unid	14		-
Clouded	10	1740-1770	1755
Tin-Glazed (decorated)	55	17th C.-18th C.	1750
Jackfield	24	1740-1780	1760
Combed Yellow Slipware	26	1670-1795	1733
Buckley Ware	3	1720-1775	1746
Redware:			
Wheel-turned and etched	9	1770-1780	1775
American Slipware	17	1700-1800	1750
Lead Glazed	126	-	-
Pearlware:			
Underglaze Blue Handpainted	165	1780-1820	1800
Undecorated	7	-	-
Overglaze handpainted	4	-	-

Blue and Green Edge Ware	7	1780-1830	1805
Porcelain:			
Chinese Export "Imari"	41	1660-1800	1730
Unid	7	-	-
Underglaze Blue Chinese	45	1660-1880	1730
Stoneware:			
Nottingham	23	1700-1810	1755
White Salt-Glazed	42	1740-1765	1753
Burslem	2	1700-1775	1738
Brown Frenchen	3	1620-1770	1695
Scratch Blue	12	1744-1775	1760
Salt-Glazed (Storage)	83	post 1730	post 1730

TAQ = 1620
TPQ = 1880
Mean Ceramic Date = 1758

Table 6. Relative Percentages of Ceramic Wares

Ware Type	Count	% of Total
Status Wares:		
Creamware	1048	59.0
Pearlware	183	10.0
Porcelain	93	5.0
Tin-Glazed Earthenware	55	3.0
White Salt-glazed Stoneware	42	2.4
Total Status Ware	**1421**	**79.4**
Utilitarian Wares:		
Redware	152	9.1
Stoneware	123	7.0
Earthenware	77	4.0
Total Util. Ware	**352**	**20.1**

Total	1773	100.0

Conclusion

Several studies (Reitz and others) have already attempted to interpret status from archaeological material based on purported evidence of consumer choice in recovered faunal and ceramic assemblages, and have ultimately questioned the reliability of applying modern socio-economic indicators within a historic context. Considered in isolation, aspects of this deposit would also appear to constrain an accurate interpretation of status from it; however, considered holistically, the data appear to substantiate the conclusion that Feature 91 represents a low-status assemblage most likely associated with New York City's first municipal almshouse.

The suggestion of status comes primarily from the faunal deposit; in the species ratios, element distributions of major domesticated taxa as well as in age profiles assembled for the most costly species represented in the deposit, *Bos taurus*.

The study revealed that mollusks, the most inexpensive food available during the mid-18th century, figured prominently in the diet at the almshouse, while an expensive item such as beef may have been provided by animals past or before their prime culled from herds raised and slaughtered on the almshouse grounds. Poverty however, did not preclude access to a varied diet at the almshouse or to market channels by its residents. Smaller domesticates such as pigs and caprines, as well as fish and birds also form part of the consumption pattern that emerged from Feature 91. Presumably, fresh fruits and vegetables from the almshouse gardens occasionally supplemented the diet seasonally.

The faunal evidence supports the interpretation of a certain level of integration of the destitute in early colonial New York. Although quantity may have been the limiting factor, almshouse residents accessed many of the foods widely available to the rest of the community. Social integration may be further evidenced in the use at the almshouse of both fine and utilitarian ceramic wares that are often recovered at many domestic colonial

sites; the interpretation of status from the ceramic assemblage poses a significant challenge however.

The ceramic record both contradicts the textual material as well as expected patterns for a low-status deposit in that status wares comprise a significant portion of the assemblage. Although numerous plausible explanations for this pattern exist, it only stresses the potential problems, as iterated by several scholars, of utilizing sole indicators from an assemblage as status markers.

Other material from Feature 91 was seen as better able to provide an association with the almshouse thereby supporting the faunal interpretation. Objects traditionally associated with women and children such as jewelry and toys, were seen to correspond with the diverse residents of the almshouse during the mid-18th century rather than with the male-dominated institutions such as the army barracks, jail, and workhouse.
The presence of objects related to clothing manufacture together with the documentary evidence suggesting that this activity was undertaken by the women at the almshouse further strengthens the association of the material with the colonial structure.

B. ***The British Soldier and Material Culture in Feature 88, City Hall Park, New York City***

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Section I: Introduction

This report will discuss Feature 88 located northeast of Island 11 in Manhattan's City Hall Park. (Figure 2; Table 1, Summary of Trash Pit Features) This is a large midden feature encompassing two units (Map 7) associated with the Second Barracks (c.1774-1792) that were built to house British soldiers during their occupation of New York City throughout the Revolutionary War. (Stokes 1915-28:1290) Features 71, 85, 86, 87, 99, 156,161, and 163 have all been identified as midden features concentrated between and just to the east of Islands 9, 10, and 11 (Figure 2) and associated with the Second Barracks as well.[2] (Table 2) In total, these features, including Feature 88, are presumed to be a part of a larger midden area encompassing a portion of the northeastern corner of City Hall Park. This analysis will add to our present understanding of the British Army in New York City during the American Revolution as well as encapsulate the experiences that led to the creation of Feature 88.

In order to discuss this feature one must first contextualize it within the excavation itself. Feature 88 is located in Units G1-3 and G1-4, though mainly in G1-4. (Map 7) These units are part of a trench encompassing Units G1-1 through G1-5 located in the northeastern section of today's park. (Figure 2) According to the excavating company's notes ("NYC Hall Park, Unit G1-3, Feature 88") the feature is a "trash heap" with a sand and clay lining and a clay overburden. Seven levels were distinguished in the stratigraphy of Unit G1-4 (Maps 8 and 9) while eleven were excavated in Unit G1-3. (Map 10) These levels were placed into numbered bags as they were excavated. Table 2 lists the contexts for each bag number within Feature 88. Stratum H was left unexcavated due to disturbance from the construction of a nearby MTA elevator. This disturbance,

[2] Feature 174, located north of Island 1, has been associated separately from the others as a midden belonging to the Upper Barracks. (Figure 2, Table 1)

combined with the nature of the midden feature itself and the use of strata, levels and numbered bags while excavating, created a complex and multi-faceted stratigraphy.

> Unit G1-3's soil ranges from clayey sand with charcoal deposits, to silty clay, to black sand by level 11. Unit G1-4 has a similar soil make up, although above level 1 there are lenses of cinder and red-gray. These were taken out as Feature 87/88. The artifact assemblage in both units is quite similar and were found to contain many cross-mends leading me to corroborate the initial excavators' interpretation that the two were part of the same midden.

An examination of the feature's taphonomy appears to show a continuous type of deposition behavior, although limited in time. The levels were deposited regularly, but haphazardly, and not for very long. The Second Barracks were built in 1774 and torn down in 1792, meaning Feature 88's use (assuming our identification with the barracks is correct) did not exceed 20 years. (Stokes 1915-1928:1290) Oddly enough though, the calculated Mean Ceramic Date is c.1734. (Table 3) This does appear early but one must keep in mind two things: first, that ceramics are used as long as possible, i.e. until breakage occurs; and second, this average date is based on the original manufacture date not on the date of the object's actual purchase or use. Many of the ceramics were manufactured throughout the entirety of the 18th century, including multiple items originating in the 17th century. For example, the date range for items made from American redware or stoneware covers 200 years. Hence, it is apparent that our Mean Ceramic Date will be a bit misrepresentative, as it must incorporate the early end of the manufacture date as well as the later and does not include any calculation for actual use of the artifact.

The ceramic assemblage, along with the glass, building materials and metals of Feature 88 are discussed further in Section IV. They are combined in order to not only identify or associate the midden with the population of the Second Barracks but to determine the meaning of this assemblage. Why did the soldiers own these specific goods? There is some question in earlier literature about the British enlisted army in the colonies and their use of material culture. (Smith 1983; Sussman 1978) Officers are often believed to have played a part in the greater social world through the acquisition of items increasingly identified with the middle classes in North America, while the soldiers

are seen to have been a population separated from this type of use of material culture. The historical documentation stating that these enlisted men were provisioned with everything from forks and plates to beer and blankets has largely been understood to have been accurate, or at least accurate enough, to dismiss their use of material culture as meaningful because they did not have enough money to choose the items they used. There is another perspective though. Material culture and society are understood here to be mutually constitutive. (Buchli 2004; Meskell and Preucel 2004) Humans use material goods to communicate within and between social classes (Bourdieu 1979) while the materials available at any given time make only certain types of communication possible. In this way material culture is believed to reify the social order while at the same time create it. By removing the soldiers from the stage of material culture, they are removed from the social stage of the 18th century. This does not make sense. We now have evidence from Feature 88 that the soldiers in New York owned items not provisioned to them. How did they buy the items then? One possibility is that since the soldiers were allowed to moonlight out in the greater city, mostly working as laborers or tradesmen, (Burrows and Wallace 1999:193) they were making their own money. The British Army was notoriously negligent at paying their men on time, which explains the fact that they were allowed to moonlight in the first place. Why though, did they buy these particular goods? Were they not, in fact, provisioned by the military as the documents state? Is the use of these specific goods random? Perhaps the soldiers were provisioned but preferred the goods we find in Feature 88 to the ones they were given. It is the hope of this analysis to shed some light on the issue.

Section II will discuss the context of British soldiers in the city and in the park (then known as The Commons.) The soldiers of the Second Barracks were part of a larger occupation army placed in New York City during the Revolutionary War by the British and, as such, are understood to have been affected by the broader social events of the time. Understanding this context makes it possible to draw better conclusions from the archaeological record.

The cartographic record is examined in Section III in order to situate the construction of the Second Barracks in relation to the rest of the buildings on The Commons, as well as place Feature 88 in a relationship with the Second Barracks. The

transition to the park as we know it today occurred at the beginning of the 19th century which also plays a part in this study. The Second Barracks were torn down at the beginning of the renovation cycle, which culminated in the de-institutionalization of the space and the construction of City Hall.

Section IV, as stated previously, examines the artifacts and their meaning to the men who used them. They are analyzed in relation to each other and in conjunction with other assemblages of the same type and time period. Namely, I will examine the ceramic assemblages from Fort Michilimackinac, Fort Beausejour, and Crown Point, New York (Feister 1984; Miller 1970; Sussman 1978) in order to contextualize the City Hall Park information.

Section II: The British Military in New York City, Mid to Late-18th Century

> British soldiers were first brought to City Hall Park in 1757 when the fear of attack by the French during the French and Indian War forced the British to send 1000 troops to protect New York City. They were first placed near Fort George but quickly outgrew the space and many citizens were forced to quarter both officers and enlisted men. This led to a general uproar that forced the Common Council to order the construction of more barracks. In October 1757 they ordered "The Immediate providing of materials for the Carrying on and Compleating [of] Barracks to Contain Eight Hundred men," and wondered "wheather a Suffecient Number of Carpenters Can be had, so as to Compleat the said Barracks in a fortnight."[3] (Lucey 2004:24-5)

The newly arrived British soldiers were held responsible for a rising crime rate and were believed to be a fire hazard as well. Large stockpiles of highly flammable materials like tar, pitch, resin, turpentine and gunpowder were stored all over the city. In response, the Common Council created the job of Building Inspector and developed new regulations for the storage of these types of materials. (Burrows and Wallace 1999:185)

The economy of New York City grew quickly in the mid-18th century. The presence of hundreds of British Military and Naval officers in New York coincided with the demand for more civilian housing. (Burrows and Wallace 1999:183) This developed

[1] *MCC, 1675-1776,* 6: 108, 111-112.

into a housing boom that boosted the economy through the 1760s into the 1770s. There were 1,991 houses in New York City in 1753. By 1760, just seven years later, there were 2,600. In addition, the officers were interested in very specific types of luxury items at this time. They "created a rich new market for the luxury goods produced by local carvers and gilders, watchmakers, furniture makers, painters, pewterers and potters, silversmiths, perfumers, glovers, seamstresses, hoopmakers, and mantua makers." (Burrows and Wallace 1999:183) Even during the war years, 41 wig-makers and hairdressers were employed in the city. The British officers were provisioning themselves with wine, tobacco, ceramic and glasswares, stationary and teas in specialty shops around the city as well. (Ibid:183)

The question is, were the enlisted men involved in similar sorts of interactions? The assemblage examined here clearly seems to make it appear so. Although the goods were not perhaps of the same quality, they are not what one expects of a provisioned population. (Table 4) Food and drink were apparently rationed to the enlisted men but it is never apparent how much of this official amount they received. (Smith 1983) It is possible to speculate that they were, in the end, privately purchasing their own goods and foodstuffs to supplement their rations.

Rum was one of the most common drinks for army men at this time. In the beginning the rum was imported from England but eventually Manhattan produced its own. Rum is distilled from molasses, which is a byproduct of sugar and the sugar trade. The molasses was imported into New York specifically for rum production and by 1753 there were 10 distilleries in New York City. (Burrows and Wallace 1999:183)

Up to this point, the soldiers have been identified as British because they were all a part of the British military but it is important to remember that they were not all actually British in origin. They came from various ethnic European backgrounds. According to Burrows and Wallace (1999:246) the Waldeckers wore "gaudy yellow-trimmed cocked hats" while the Hessians were "mustachioed." There were Scottish highlanders and Anspach grenadiers as well. Lastly were the impressed men. The Royal Navy long practiced local New York impressments, kidnapping and forcing whoever they picked up to immediately join them onboard (Burrows and Wallace 1999:182) and the regular army did much the same to the English boys at home. (Brumwell 2002:63)

Since then these heterogeneous soldiers have become homogenous to us. It is next to impossible to examine ethnicity more closely than this, as the record describes the inhabitants of the Second Barracks only as soldiers.[4] Complicating the matter further is the fact that these men were "all trailed by numerous dependents and camp followers." (Burrows and Wallace 1999:246) These dependents and followers were wives (common-law or legal), prostitutes, and children. Brumwell (2002:126) discusses examples of women following the camps throughout the colonies. For Brumwell, these women did play an important role in the mens' lives, and undoubtedly, they played a large role in the creation of the archaeological record. But, this is a group we cannot examine very closely through this assemblage since there is, as of now, no evidence (documentary or archaeological) that places them in the barracks specifically. In the interest of multivocality, though, the subject must be broached. For example, did the men in the barracks cook for themselves? Surely they hired cooks. Were they from the Almshouse or the broader neighborhood? Who were these women?

The men of the Second Barracks would have known another group of women as well. During the Revolutionary War there was a population of prostitutes living in a stockade in Lispenard's Meadow, near Broadway and Duane Streets, not far from The Commons. (Ralph 2001) According to Ralph, who cites a certain amount of "legend," a sea captain named Jackson was hired by the British command in New York to bring over 3500 women from England to serve the soldiers in the city. During the voyage across the Atlantic, one of the ships was lost, so Jackson sent a ship to the Caribbean to pick up 400 more women. These two groups of women become known as the "Jackson Whites" and the "Jackson Blacks." During the British evacuation the women were set free from the stockade and are believed to have ended up as a part of the cultural group called "The Ramapo Mountain People" from New Jersey. Unfortunately, we must stop there again. The Ramapo Mountain People and their relationship with the soldiers in The Commons cannot be discussed here with any more accuracy but it is important to mention in order to even begin to understand the multifaceted interactions that occurred in the park.

The number of men stationed in New York City rose just before and then during the years of the American Revolution. In 1774 the rise in the number of soldiers

[4] See Stokes 1915-1928, MCC 1651-1831

stationed in New York led the Common Council to build additional barracks, measuring 20 feet by 200 feet. They were constructed on the green between the original barracks and the almshouse. (Lucey 2004:31) These became known as the Second Barracks. In November 1777 British soldiers in the city numbered 5000 but by July 1778, due to the war, the number rose by 15,000. In December 1779 the amount had fallen to 4000 but rose again in August 1781 to 10,000. By December 1782, in the last year of the war, 17,000 soldiers were living in New York.[5] (Burrows and Wallace 1999:246)

As their numbers may suggest, the British Army was an occupying force in New York City during the Revolutionary War. On November 15, 1776 the Colonial troops had been run out of the city by British General Howe who led Hessians and other British soldiers to beat the colonials out of Fort Washington, their last hold-out. According to Black (2000:172), General Washington had allowed political considerations to get in the way of his military campaign in New York City, and therefore was not able to hold the city with the troops he had. According to the British soldiers, on the other hand, the Colonial Army was made up of boys of 15 and old men who did not have much of a chance of defending Fort Washington either way. General Washington wouldn't be able to set foot in city again until 7 years later. (Burrows and Wallace 1999:243)

As the occupying force they were responsible for numerous civilians and their needs. This made them responsible for the clean up and reconstruction effort after the Great Fire of September 21, 1776 burnt almost all of the buildings down on Manhattan's lower west side. This fire created the beginnings of a housing shortage as the army was not able to rebuild fast enough. The return of the Tories who fled the city between 1774-76 raised the city's population as well and so by 1777 the population was up to 12,000 people. By 1779, the city was inhabited by 33,000 people, a record high. Tens of thousands of soldiers were reportedly marching in and out of the city at this time as well. (Burrows and Wallace 1999:245) Meanwhile, the housing crisis grew and a "Canvas Town" was set up west from the beginning of Broad Street. (Burrows and Wallace 1999:251) Three hundred people sought housing in the Almshouse in City Hall Park as well. Rents increased by 400 % while the cost of food went up by 800%. There was

[5] Modern-day Chambers Street was, in fact, named Barrack Street at this time. (Burrows and Wallace 1999:253)

another fire in August of 1778 that exacerbated the loss of housing so that by 1778, one quarter to one third of the total housing had been lost due to fire. The occupying army began commandeering the churches and societies seen to have sympathy for the Patriots to use for their own purposes. King's College (now Columbia University) became a military hospital. (Burrows and Wallace 1999:150)

To contain the price of food farmers from outside the city were forced to provide food for the soldiers. Williams (1944) stated that the American Revolution created food supply problems for the entirety of the British colonies. The Triangle Trade is known to have moved West African slaves to the Caribbean and the American South but it is less often discussed that staple food items like corn, wheat, and potatoes traveled from the northern colonies to those plantations as well. "In exchange for their provisions the mainland colonists took West Indian sugar, rum and molasses, in such quantities that as early as 1676 the English merchants complained that New England was becoming the great mart and staple of colonial produce. It was a mutual interdependence between the two units." (Williams 1944:112)

With the advent of war, the Patriots (still nearby) made it harder to get provisions from the farmlands outside of New York into the city. The region no longer exported foodstuffs to the other British colonies either, which forced a reorganization within the remaining British colonies. Army Quartermasters had to begin importing food from "elsewhere in the Empire." (Burrows and Wallace 1999:151) "Between 1776 and 1778 victualing fleets arrived from Ireland and England with 2800 tons of beef, 10,000 tons of pork, 20,000 tons of bread and flour, 1000 tons of butter, and 2400 tons of oatmeal and rice." (Burrows and Wallace 1999:251) There still wasn't enough for the entire army though and this may have played a role in the moonlighting by British soldiers. In the summer of 1778, a French blockade briefly halted food supplies and officials discussed the possibility of the evacuation of the city in order to avert famine. The Patriots seized a shipment of Iroquois corn in 1779. Their army did not relent.

On top of the food and housing crises, there were small pox, cholera, and yellow fever epidemics in the city throughout the period of the war (Burrows and Wallace 1999:151) and the winters were getting harsher and harsher. The winter of 1779-80 was

one of the worst in recent history and this created, on top of everything else, firewood shortages.

> "The heaviest cutting occurred during the terrible winter of 1779-80, when snow fell almost every day from early November to March and the East River, Hudson River, Long Island Sound, and the Upper Bay became a solid mass of ice. Military authorities couldn't, or wouldn't, distribute firewood to civilians, and it became so expensive that some of the city's poorest inhabitants quietly froze to death. A year or so later, while studying the enemy's positions on Manhattan from the New Jersey palisades, Washington was astonished to see that 'the island is totally stripped of trees.'" (Burrows and Wallace 1999:155)

The British military leadership was in charge throughout this hard time as the civilian government had been disbanded by Governor Howe and then sustained by Generals Clinton (1778-82) and Carleton (1782-83). Martial law was imposed with a commandant in control of the city. He was aided by a small group of military leaders. (Burrows and Wallace 1999:249) There was a police department who "enforced military regulations." By 1780 a two-judge police court was set up for civilian complaints. (Burrows and Wallace 1999:249) The soldiers stationed in the Second Barracks would have taken part in this military control of the city and although this military force was occupying civilians predominantly sympathetic to the British Crown they were still occupied nonetheless. There were constant problems between the two groups.

> "General Clinton and others talked of the need 'to gain the hearts & subdue the minds of America,' but the military regime produced exactly the opposite effect. Merchants lost patience with the maddeningly arbitrary system of restrictions, passes, and permits…Conflicts with poorly paid, poorly provisioned, often poorly disciplined troops sharpened civilian discontent. The first Redcoats to enter town in September 1776 went on a rampage, looting

private houses and vandalizing City Hall, where they smashed equipment belonging to King's College, mutilated paintings, and destroyed books." (Burrows and Wallace 1999:249-50)

After the military occupation of New York City ended on Evacuation Day, November 25, 1783, the barracks no longer had a defined purpose. The last of the British soldiers followed the civilian sympathizers out of the city and Washington marched back in. In 1787 four rooms of the barracks were converted into a hospital for the Almshouse (Stokes 1915-28:1220) while there is other documentary evidence for the Upper Barracks being rented out to the civilian population that same year. (Ibid:1215) On January 15, 1790, the Common Council ordered the Treasurer to sell both barracks behind the Almshouse. This apparently did not actually occur and so by July 9, 1792 the Common Council ordered the destruction of the "lower" barracks. (Stokes 1915-28:1290; MCC 1784-1831, I:516) The materials were used for the renovation of the other buildings on The Commons.

Section III: The Cartographic Record

The earliest map examined here is the 1740 Carwitham Plan. (Map 1) This does not specifically show the Second Barracks and, in fact, was drawn many years before the barracks were erected but it is included here as it contains an early depiction of "Potter's Hill." This is presumed to reference the stoneware business of the German brothers-in-law Crolius and Remmey. The presence of their kiln just to the north of Feature 88 is significant because the North American Gray Stoneware, embellished with cobalt designs, present in this collection, is attributed to them.

Along with the soldiers, Crolius and Remmey are known to have used The Commons as their midden and it seems that some of their refuse has made its way into

Feature 88 by pure chance. On the other hand, this assemblage appears to contain an inordinate number of their wasters. In fact, 85% of the Crolius and Remmey material are wasters or pieces that were not fit for sale. (Borishansky 2003b) It is possible, though, that these were not exactly wasters as some are not completely glazed, or simply not well-glazed, but would have been usable just the same. It may be that Crolius and Remmey were selling these goods to the soldiers as seconds, imperfect vessels sold at a cheaper price. In addition, although Feature 88 contains mainly utilitarian storage wares such as jugs, jars, and pots from Crolius and Remmey, Borishansky's work further discusses unusual forms such as dishware like shallow dishes/plates, teacups, and bowls. (Borishansky 2003b) She has asked whether or not these forms were manufactured for the population in the park specifically. Were the potters attempting to compete with the larger manufacturers of the earthenware dinner and teawares (such as Creamwares) by producing these forms with stoneware in bulk for the people in the Almshouse and perhaps the barracks? Generally speaking, all body sherds, when not readily identified as a specific form, were described as hollowware here but I do not rule out the possibility that a percentage of this "hollowware" could have originated as these new and unusual forms. Sets of dishes became very important to the consumers of the mid-eighteenth century perhaps partially due to the mass manufacture of the sets themselves. (Feister 1984) Perhaps Crolius and Remmey saw a new market available to them in The Commons. The institutional nature of the lifestyle there would have perhaps made it a very good market. Large amounts of utilitarian goods as well as dinner and tea wares would have been needed at very cheap prices. This could then explain the large amount of kiln seconds as well as the new forms.

By 1767, on the Ratzen Plan (Map 2), British military presence is illustrated for the first time in The Commons with the addition of the Upper Barracks. The plan shows that these earlier barracks were placed just north of the Poor House and Prison and parallel with modern Chambers Street.

The first time we see the Second Barracks is on the British Headquarters Map of 1782. (Map 3) The map shows a new rectangular building in alignment with the Upper Barracks. The midden, Feature 88, was located to the southeast of the new

barracks. This general area has been circled and an arrow points to where, as best as can be determined, the feature is located.[6]

In the Directory Plan of 1789 (Map 4) we again see the Second Barracks aligned with the Upper Barracks and Chambers Street again, but by 1797, on the Tayler-Roberts Plan (Map 5), they are gone. This map confirms Stokes' information then that the barracks were taken down by 1792. (1915-28:1290) By the time of the 1807 Bridges Plan (Map 6) we can see that the transition from The Commons to City Hall Park has occurred. The new City Hall is depicted on this map, while the barracks are gone. The early 19th century sees more buildings removed from City Hall Park and this changed the character and use of the space. It went from a place set aside for the city's public institutions to one that could be advertised as the jewel of New York's crown. (Anonymous 1825) City Hall Park changed from a place to be sent to or stationed in to a place to go for a picnic.

Section IV: Artifact Analysis

As stated above, Feature 88 can be categorized as a midden feature found in the trench excavated at the northeastern corner of Island 11. (Table 1) It is located within Units G1-3 and G1-4 in City Hall Park. (Map 7) The Mean Ceramic Date for the assemblage has been calculated to be c.1734 (Table 3) but this date has been examined and is understood to contain certain elements that alter it. The period of manufacture of the ceramic type is the major factor in the Mean Ceramic Date equation, not the individual artifact's use, which is the more important piece of information. In order to examine this use issue Feature 88 has been compared with other similar assemblages. The glass and ceramics found in Feature 88 have been found at many other British soldier contexts in North America and Canada during the mid to late 18th century and are discussed in comparison with this collection. (Feister 1984; Miller 1970; Smith 1983; Sussman 1978)

[6] Unfortunately, this is not the most detailed of maps, which means that the placement of the arrow cannot be to scale. The point of this illustration is to show location generally in relation to the Second Barracks.

There are 16,527 artifacts in the Feature 88 assemblage, which have all been separated into categories, classes, forms, etc. The major categories are based on Parks Canada's classification system (1992) that concentrates on the use or function of the artifact. In Feature 88 the artifacts fall into ten categories – architectural, clothing, communication, faunal, floral, food related, furnishings, personal, tools and equipment, and unclassifiable or unknown. (Table 4)

The Food Related Category, being 48% of the whole, will be examined first. (Chart 1) It has been broken down into three basic functions – Food Preparation, Food Storage, and Food Consumption and Serving. (Parks Canada 1992) Items used in food storage make up the largest category (81%.) This can quite easily be explained by the fact that this category includes not just ceramics but glass bottles as well. The glass bottles excavated from Feature 88 are predominantly alcohol bottles, although there are some soda water bottles. Medicine bottles have been placed in the Personal category. In Food Storage rum, wine, and case bottles make up almost the entire category. (Chart 13) Unrefined stoneware and earthenware vessels make up the second and third largest class of artifacts in the Food Storage category. These include jugs and jars of North American Gray Stoneware originating from the Crolius and Remmey factory discussed in the previous section. American Manganese Mottled Redware also makes up a substantial proportion of the assemblage.

The second largest population of artifacts in the Food Related category are those involved in either food consumption or serving. These activities often take place at the same time so the artifacts involved have been combined into the one category. They make up 19% of the total. (Chart 9) There are many classes of artifacts found in this section: bone-handled cutlery, refined earthenwares, glass tablewares, porcelains, and stonewares.

The use of glass for tablewares and storage bottles can be compared and discussed within the greater context of the British military in North America before and during the Revolutionary War. During this time British soldiers were entitled to a ration of "weak beer" but this was often replaced by rum (Smith 1983:31) as rum became a very important trade good for the British colonial government. Most rum was produced in England until the mid-18th century, however by 1753, as discussed in Section II, New

York City had ten distilleries of its own. (Burrows and Wallace 1999:183) This is to say that we cannot be sure that the dark green glass bottles notoriously used for wine and rum contained imported liquid. Many bottles would have been filled and refilled within the city. Interestingly, these bottles may be identifiable as the soldiers' personal property. According to Smith (1983:33), "historical documents reveal that as far as the army authorities were concerned glass was not a major material for the transportation, storage, or consumption of alcoholic beverages. The army purchased and stored its official supplies of rum, wine and beer in wooden staved containers." This then would appear to substantiate the argument that the soldiers were supplying themselves with goods.

Another drink rationed out to the soldiers was Spruce beer. This was a slightly alcoholic drink made from molasses, spruce boughs, and water. It was a more seasonal drink according to Smith (1983:31) and not all that important, but in New York we do know that "the first Battalion of Guards…received three pints per man a day from January 4 until April 17, 1779. (Smith 1983:31) It is possible though that drink was also stored in barrels and so would not have contributed to the archaeological record.

Living with the British Army, even stationed in a city such as New York, was not the easiest life. The soldiers' lives were highly structured. They were contained by curfews and other regulations meant to control their drinking and any other habit that could lead to an undisciplined soldier population. When a soldier did not act correctly corporal punishment was usually the answer. "For example, Thomas Franklin of the 43rd Foot received 1000 lashes after a [drunken] fracas at Havana with Ensign James Robertson of his regiment." (Brumwell 2002:105) These regulations did not often work though and the "officers and men of the British military, like most men during the eighteenth century, [continued to] drink regularly and often heavily." (Smith 1983:31) This is evident in the collections from Crown Point and Fort Michilimackinac (Feister 1984; Miller 1970) and now from City Hall Park as well.

The glass stemwares bring up a more complicated issue. (Chart 10) As of now, there is no exact evidence for the use of the stemmed glass by the British soldier. This may not seem the most important issue at present and hence, not often examined, but could add to our growing body of knowledge about how the soldier was supposed to live versus how he actually lived. It has long been assumed that the British officers were the

historic actors who used glass tumblers and stemwares for wine and Madeira, as well as ceramics such as teawares, in social situations with other officers. Sitting around the table for a cup of tea became a popular activity due to the British Empire's trade in teas. The officers are characterized as eating and drinking with more refined manners while the soldiers are believed to have eaten out of the provided trenchers and pewter mugs. (Smith 1983; Sussman 1978) The question becomes then, why do we have a fairly large proportion of glass tablewares (Chart 16) and ceramic teawares, in addition to the matched sets of Creamware and White Salt-Glazed Stoneware dinnerwares from a context of the British soldier?

The British soldier is not often discussed outside of a military context. It is important to remember, though, that he would have been a part of two cultural contexts – the military and the civilian. Every soldier was once a civilian as well. It is my contention that if we stop taking the soldiers out of society, this assemblage will make more sense. It is important to see them as part of the society of the mid to late 18th century, not removed from it. Earthenware makes up 80% of the artifacts used in Food Consumption and Serving (Chart 10), while specifically, Creamware is almost half of the total ceramics present. (Chart 15) The other major types present are White Salt-Glazed Stoneware, English and French Tin-Glazed wares, American slipped redwares and Staffordshire Slipwares, to name a few. This signals a significant participation in the late 18th century material culture economy. Feister, working on the collection for Crown Point (1984) and Miller at Fort Michilimackinac (1970) have both discussed the use of these types of artifacts by the British soldier but have not examined what they could have meant to the soldier. Miller records a very similar collection to that of Feature 88 at Fort Michilimackinac Miller, as does Feister at Crown Point, as well as Smith, and Sussman. (Smith 1983; Sussman 1978) Staffordshire Slipwares decorated with the Dotware pattern are found throughout all collections. Hand-painted underglaze and Over-glaze polychrome enamel Chinese Export Porcelains are present as well. The majority of the dinnerwares appear to be molded Creamwares (the Royal Pattern and the Feather Edge predominate) and White Salt-Glazed Stonewares. Feister characterized the ceramic distribution of the barracks at Crown Point as mainly White Salt-Glazed Stonewares and Creamwares. Delftware or Tin-Glazed European wares come in third and utilitarian gray

stonewares are fourth. Red and buff-bodied earthenware were also found along with some Porcelain. Jackfield teaware is found in mentionable numbers as well. (Feister 1984:128-9) Much the same can be said for Feature 88's ceramic assemblage. There are French Faience teawares as well as a Red Stoneware dish and White Salt-Glazed Stoneware and Creamwares by the hundreds.

Is it possible that these enlisted soldiers were drinking tea? According to Feister, "tea was a drink that gained great popularity in England and in the colonies during the 18th century. Gathering around the tea table was a daily social event, especially among the higher social groups during the first half of the 18th-century." (Feister 1984:129-30) She sees teas and tea drinking as moving into the lower classes after 1750 though. More and more, people were drinking tea as the supplies increased and the prices dropped. Drinking tea then, as well as the consumption coffee and chocolate, would have been normal for soldiers living in barracks in the wilderness according to Feister, so why not soldiers living in the middle of the trade route itself? New York was one of the main ports of entry in the colonies. During the British occupation it would have been key to transporting goods in and out of the area as it was one of the few safe ports for them.

The similarities are alarming, not only to each other but to the civilian assemblages as well.[7] But who bought these ceramics? The presence of these tea and dinnerwares in Feature 88 could confirm that, as elsewhere, the British military was supplying their soldiers in bulk but that the use of trenchers and pewter mugs had been abandoned when the mass production of molded ceramics became less expensive and more popular. (Sussman 1978:100) Or, another possibility is that the British military never truly did provision their soldiers and so the men had to buy the collections in bulk together. If so, they would have had to go to the same merchants that everyone else used and hence, end up with a similar looking, civilian-type assemblage. Finally, it is possible that they specifically chose to go out and buy the plates and glasses themselves instead of using whatever may have been provided for them. It is the last two possibilities that place them squarely in the larger consumer society; yet in New York they were playing the part of an occupying force as well – soldiers and market consumers.

[7] Civilian assemblages have not been examined here. The types of goods used are believed to have been very similar, although perhaps, smaller in numbers as they would come from a domestic site and not an institutional one.

In the past, the presence of these dinnerwares, as well as teawares and glasswares, has been used as a way of identifying the British officers. (Smith 1983[8]; Sussman 1978) Sussman presumed that only the officers used the stemwares and Royal Pattern Creamware plates found at Fort Baeusejour while Feister (1984) and Miller (1970) have discussed the possibility of the soldiers themselves had access to these types of wares through traders and merchants. If enlisted soldiers were using these items as well, Sussman's analysis must change. Initially she reasoned that the range of ceramics used when compared to total civilian population use showed that the officers would have fallen into the middle class. "All the regimental tableware found is made of fine earthenware or fine stoneware, ceramic groups that are more expensive than coarse earthenware but much less expensive than porcelain or bone china." (Sussman 1978:101) The ceramic patterns used by her population are similar to those found at Crown Point, Fort Michilimackinac and City Hall (all believed to be populations of soldiers not officers) and, in fact, weren't as well made as others.[9] They are known to have been some of the first manufactured for mass markets. Mass markets have never held much appeal for the upper classes who more often look for elite goods and luxury items, i.e., things that are more difficult to find, which leads me to argue here that Sussman's assemblage should be looked at similarly. If this is correct then, it can be included in this study of the enlisted British soldier's use of the available types of material culture both before and during the Revolutionary War.

When examined together the food related artifacts in Feature 88 make up almost half of the total (7722), while faunal remains composed of marine shells such as oyster, clam, and whelk, make up the second largest category. In this study the mammal and fish bones have been counted and analyzed independently of the rest and so are not included in this analysis. According to Borishansky (2003a) the faunal remains were predominately mammal. In total, these faunal remains should be understood to be the remains of the number of meals, presumably eaten by the soldiers stationed in the Second Barracks.

[8] Smith mainly asserts that the soldiers were using this type of assemblage. She is referenced here as a source for the argument though.
[9] She references "Blue Willow, Royal Rim and Shell-Edge patterns." (Sussman 1978:94)

Ultimately, the total assemblage is made up of more than just food related items. The food related category, the largest category (48%), when combined with the faunal remains (22%), equals 70% of the total, and confirms that the initial analysis was correct. This does appear to be a midden feature used by a number of people every day as a disposal place for foodstuff and related categories. However, personal gear is also a significant portion of the assemblage excavated from Feature 88. 73% of Personal Gear is made up of clay smoking pipes, 17% are medicine bottles, 8% are clothing related items – mainly bone and copper buttons, and 2% are chamber pots. These three major categories (Food-Related, Personal Gear, and Faunal Remains in the form of marine shells) can be combined in order to examine the experience of everyday life in the Second Barracks. Together they make up 77% of the total assemblage (Chart 1) and are separate in use and type from the Architectural and Tools and Equipment categories. As such, it seems possible to say that the majority of the assemblage from Feature 88 is derived from the everyday activities of a number of individuals over a brief span of time towards the end of the 18th century.[10]

What is interesting and puzzling is that the gear so often employed by the soldier (gun flints and musket balls for example) makes up such a tiny percentage of the record. (Table 4) A possibility is that those artifacts were deposited elsewhere. There was differential deposition throughout the park, perhaps this was a kitchen midden used by the men for their personal items. The military items could have been deposited in one of the different, yet related, middens close by – there were eight to choose from.

Architectural Material includes fifteen sub-categories of which brick, square-cut iron nails, and window glass make up the largest portions. Window glass (as usual broken into small pieces and as such is not a very accurate count of the original total) makes up the largest category at 51%. (Chart 2)

The category of Tools and Equipment is predominately made up of Fuel, specifically different forms of coal (anthracite, bituminous, and charcoal) and fuel byproducts such as clinker. (Chart 5) These materials account for 85% of the artifacts in

[10] There are not many ceramics that could be dated from the mid-19th century. Creamware (c.1762-1820) for instance, outnumbers Pearlware (c.1780-1840) 156 to 1. (Chart 15)

the Tools and Equipment category while the remaining 15% is dominated by iron artifact remnants (13% of the previously mentioned 15%.)

In the final analysis then, it seems that the majority of Tools and Equipment found in Feature 88 are, in actuality, the fuel and its byproduct, meaning that this category is dominated by items used personally for and by the soldiers as well. This midden is most obviously not from a construction zone but was created through the daily activities of a group of people.

Section V: Conclusion

Feister (1984) states that the archaeological context at Crown Point was exceptional in that she could determine exactly which buildings the soldiers lived in versus the officers. Her evidence from the soldier's habitation site at Crown Point seems to demonstrate that there was "a standard of living at least comparable to that found in 18th century domestic sites, despite the isolated location of this British fort." (Feister 1984:127) For Feister, then, the material culture signature of the British soldiers from this time and region places them at relatively the same class level as that of the majority of people who were using mass produced Creamwares and the like. Sussman (1978:101), on the other hand, takes the British Army's historical documents at face value in order to say that the soldiers did not enjoy open access to civilian material culture while the officers provided themselves with the best they could, ending up with a middle class signature. The same documents were studied by the other three sources here (Feister 1984; Miller 1970; and Smith 1983) but when faced with the archaeological record they realized that a different story needed to be told. It does seem that although the British military advised and formulated plans for the provisioning of their armies in North America one of two things happened, or both. Either the British military leadership was unable to provide their soldiers with the proscribed benefits, or the soldiers were provisioning themselves on their own through dealings with local merchants. In New York City, this would have been easier than on the frontier as the soldiers in New York had been placed in an emerging center of global commerce and trade. It is interesting though, if the last is true, they would have had many types of goods available to them yet

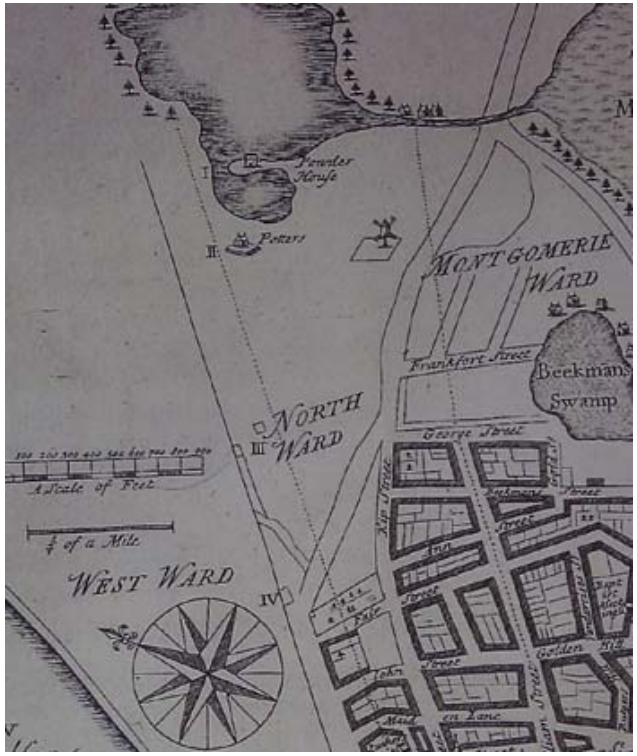
they chose, as did most of the emerging middle class, to buy such items as sets of Creamware dinner or teawares. What do these items do for an individual? It is not the item exactly but the sets of meanings inscribed in the item that is important for Bourdieu. (1979) He sees luxury items and cultural goods (material culture) as perfectly placed to express social differences. "The relationship is objectively inscribed within [the material culture] and is reactivated, intentionally or not, in each act of consumption." (Bourdieu 1979:226) The soldiers consumed many of the same types of ceramic and glasswares as the civilian classes over whom they ruled. This does seem to go against the normal understanding of military life at this time but not against the archaeological record of the comparative collections. We must stop assuming that this population had nothing to do with and had no interest in popular society and begin to consider the fact that they searched for and bought commodities in much the same pattern as the rest of society, in New York and also on the frontier. While British class relations at the time aided in convincing the British soldiers and their officers that the Colonial Army were all lower class rabble (Burrows and Wallace 1999:232-33), it appears possible that our modern day class relations have aided in convincing many archaeologists that lower class enlisted soldiers were not interested in and did not use material culture in the same way as civilians did.

It is important to realize as well that while the Feature 88 assemblage has been compared to those of British barracks from the same time, it has not been compared to any from the same area or same type of area. This collection is the most urban of the four and it would not make sense to ignore the larger material world available to these men. It is also important to remember that the societal and economic pressures that affected New York City's civilian population before, during, and after the Revolutionary War were acting on the soldier population as well.

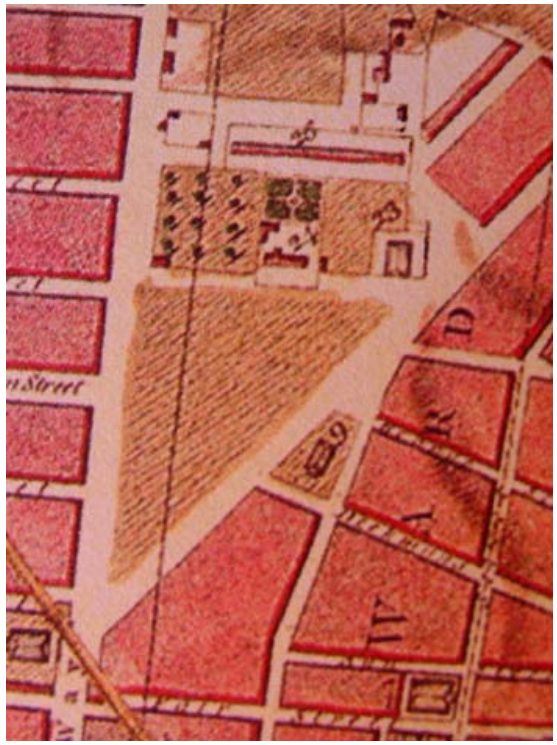
It seems to make sense that if British soldiers had access to the material culture they consumed before they were soldiers they would probably take advantage of this opportunity. When compared with the other collections, the soldiers in City Hall Park could then demonstrate an even closer connection to the fashions of the material culture of the time, as they were located in one of the largest trading ports in North America. They did not have to wait for traders to come to their fort but had ready

access to many of the new commodities brought into and/or manufactured in New York City. We do have some documentary evidence for this at Crown Point where, in 1765, General Gage ordered that the soldiers be repaid for the purchase of their own silverware and smaller items. (Feister 1984:127) This type of arrangement could explain their assemblage variation and ours.

Soldiers are portrayed in the historical record as having been supplied with all of their needs, i.e. trenchers, bowls, and cutlery, but the fact is, we see here a much different assemblage than would be expected if this were so. Feature 88 appears to contain evidence for the consumption, by the soldiers, of the mass-produced wares that had become popular by the end of the 18th century. The sets of Creamware dinner plates and teawares such as white and brown French Faience appear all over North America at this time regardless of military status. What does it mean then to be living the highly disciplined military life of the British soldier as described by Brumwell (2002) while, at the same time, living with the goods that are typical of the civilian classes? There will not be one answer to this question, mainly because it has not been asked enough. By examining the record here, with the understanding that material culture plays a large part in the constitution of identity, I believe new questions have been asked of this type of assemblage, questions which can go a long way towards making the history of artifactual use a bit clearer. In the end then, this new perspective illuminates the life of the British soldier in Manhattan at the end of the British Empire's control of the colonies. Previously seen as a mass of 5000 to 20,000 soldiers roaming the streets of the city, we can now examine the picture more closely and see the individual agents involved. We can look more closely at the meanings they themselves may have ascribed to the material culture they chose to use. It seems that they chose to play a part in regular society while, at the same time, they patrolled it.

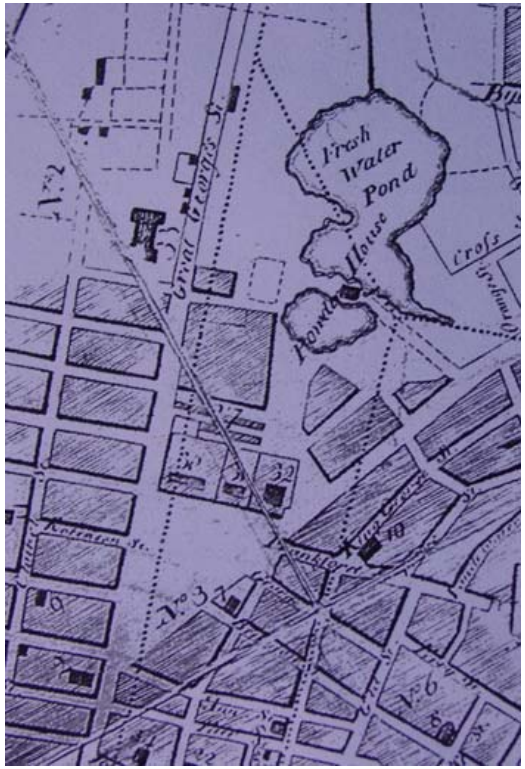


Map 1: Carwitham Plan, c.1740
Cohen 1997:58



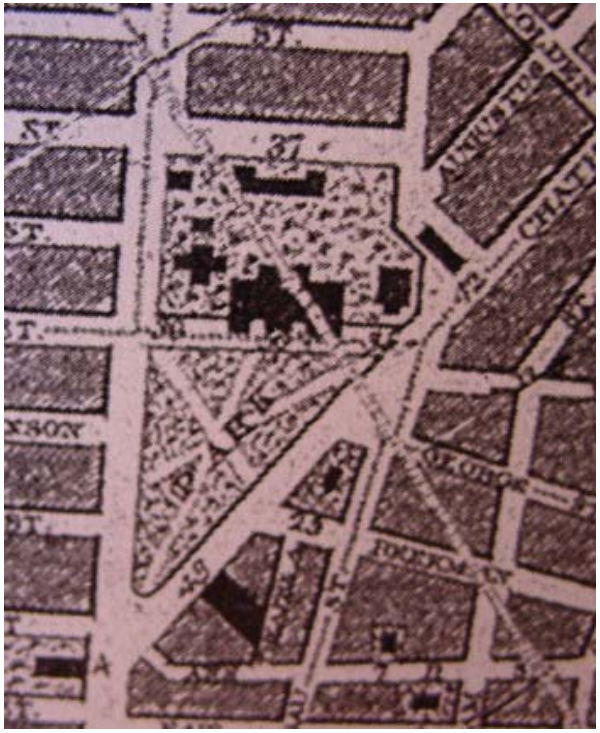
Map 2: Ratzen Plan, c.1767
Cohen 1997:74

Map 3: British Headquarters Map, c.1782
Cohen 1997:85

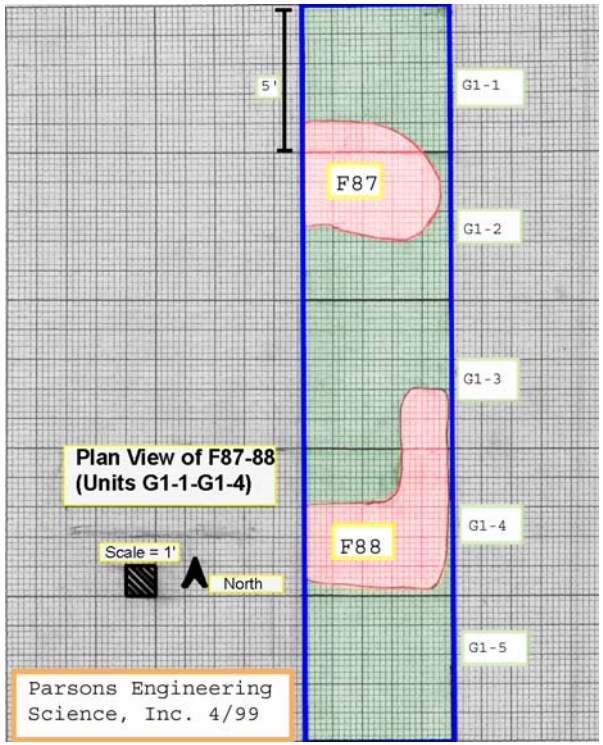


Map 4: Directory Plan, c.1789
Cohen 1997:92

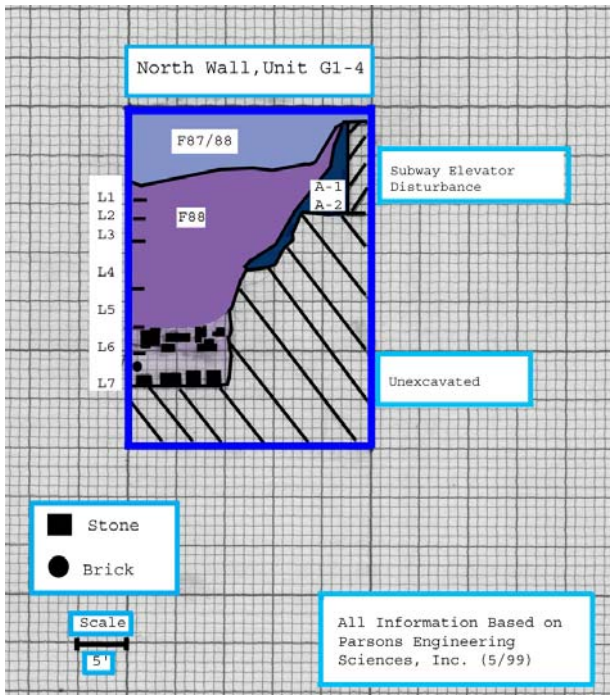
Map 5: Taylor-Roberts Plan, c.1797
Cohen 1997:94



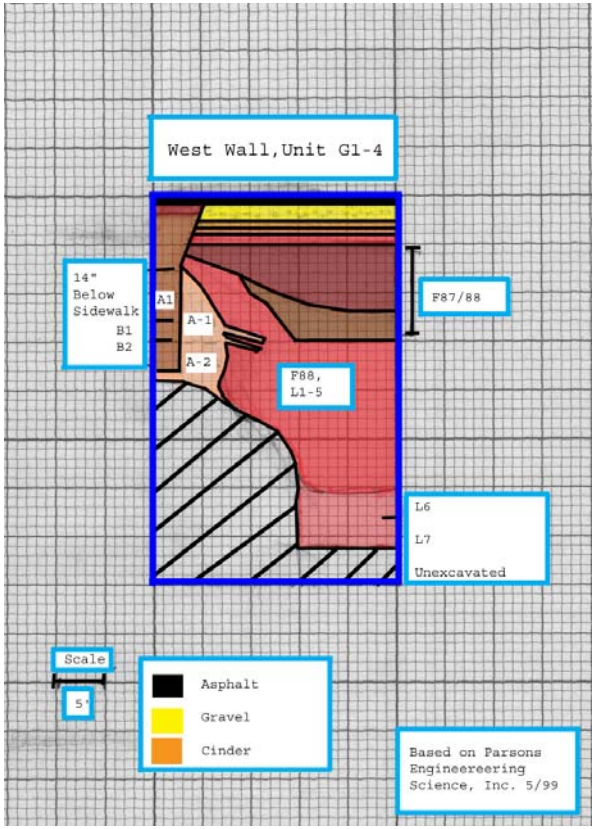
Map 6: Bridges Plan, c.1807
Cohen 1997:96


5'
G1-1
F87
G1-2
G1-3
Plan View of F87-88
(Units G1-1-G1-4)
F88
G1-4
Scale = 1'
North
G1-5
Parsons Engineering
Science, Inc. 4/99

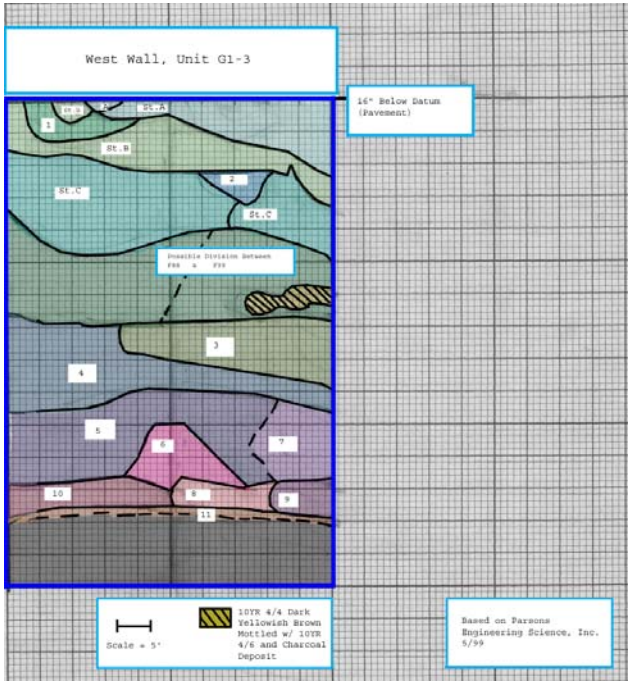
Map 7


North Wall,Unit G1-4
F87/88
Subway Elevator
Disturbance
A-1
A-2
L1
L2
L3
F88
L4
L5
L6
L7
Unexcavated
Stone
Brick
Scale
5'
All Information Based on
Parsons Engineering
Sciences, Inc. (5/99)

Map 8


West Wall,Unit G1-4
14" Below Sidewalk
B1
B2
A1
A-1
A-2
F88, L1-5
F87/88
L6
L7
Unexcavated
Scale
5'
Asphalt
Gravel
Cinder
Based on Parsons Engineereering Science, Inc. 5/99

Map 9


West Wall, Unit G1-3
16" Below Datum (Pavement)
St.A
St.B
St.C
St.C
Possible Division Between F88 & F89
1
2
3
4
5
6
7
8
9
10
11
Scale = 5'
10YR 4/4 Dark Yellowish Brown Mottled w/ 10YR 4/6 and Charcoal Deposit
Based on Parsons Engineering Science, Inc. 5/99

Map 10

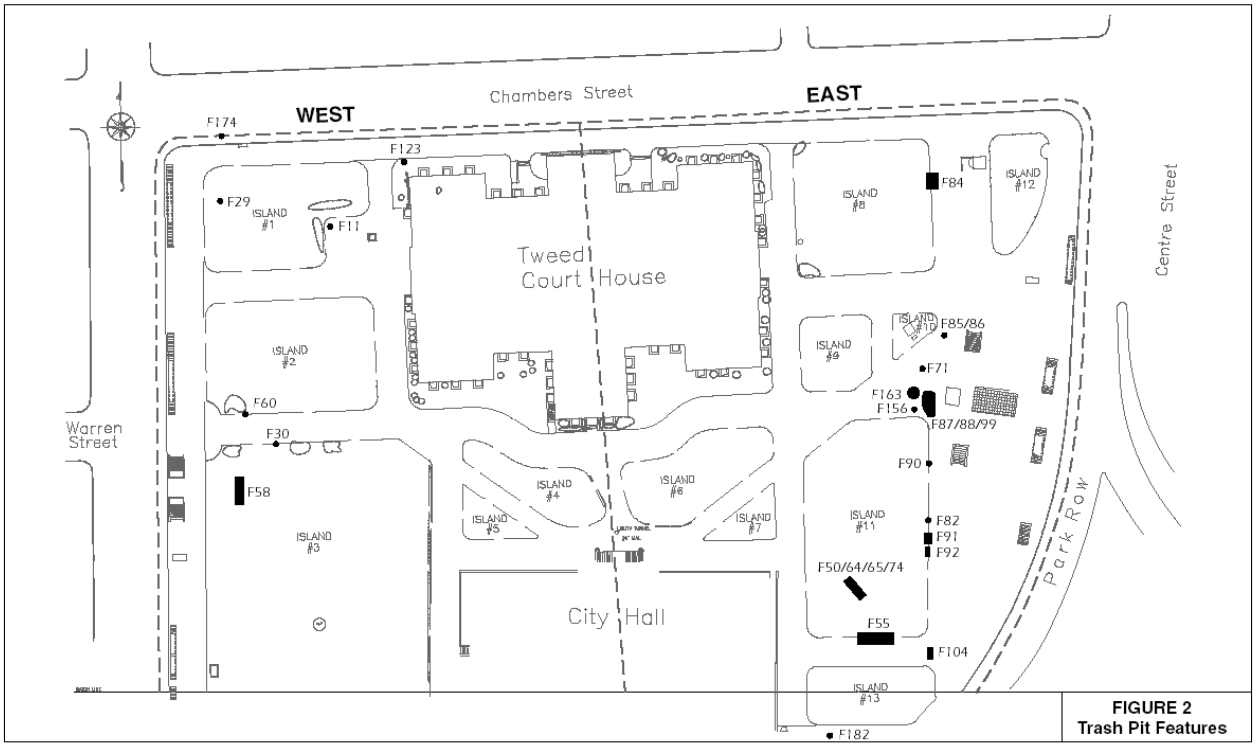


FIGURE 2
Trash Pit Features

NORTHERN HALF OF PROJECT AREA
WEST AND EAST PORTIONS
(EXISTING CONFIGURATION OF ISLANDS)

60' 40' 20' 0' 60'
Approximate Scale in Feet

PARSONS ENGINEERING SCIENCE, INC.

Table 1: Summary of Trash Pit Feature

Feature(s)	Time Period	Possible Association(s)	Location
11	Early 19th century	Second Almshouse	East of Island #1
29	18th century	Upper Barracks, Teller Houses	Northwest end of Island #1
30	Early to mid 19th century	Bridewell	North edge of Island #3
50, 64, 65, 74	18th century	First Almshouse, New Gaol	South end Island #11
55	18th century	First Almshouse, New Gaol	South edge of Island #11
58	18th, early 19th century	British Barracks, Bridewell	Northwest end of Island #3
60	18th, early 19th century	British Barracks, Bridewell	South edge of Island #1
71	18th century	Second Barracks, First Almshouse, New Gaol	South of Island #10
82	18th century	New Gaol, First Almshouse	East edge of Island #11
84	18th century	Upper Barracks	East edge of Island #8
85/86	18th century	Second Barracks	Southeast of Island #10
87/88/99	18th century	Second Barracks	Northeast of Island #11
90	18th century	New Gaol, First Almshouse	East edge of Island #11
91	18th century	New Gaol, First Almshouse	East edge of Island #11
92	18th century	New Gaol, First Almshouse	East edge of Island #11
104	18th century	First Almshouse, New Gaol	Southeast of Island #11
123	18th, early 19th century	Upper Barracks, Second Almshouse	Northwest corner of Tweed Courthouse
156	18th century	Second Barracks	South of Island #10
161	18th century	Second Barracks	South of Island #10
163	18th century	Second Barracks	South of Island #10
174	18th century	Upper Barracks	North of Island #1
182	18th century	First Almshouse	South of Island #13

Table 2: F88 Master Provenience List

Bag #	Provenience
1301	Level 1
1302	Level 1, G1-4
1303	G1-4
1304	Level 3, G1-4
1305	Level 4
1306	F88
1307	Level 6, G1-4
1308	Level 7, G1-4
1309	Strata 4, G1-4
1310	Strata Level 1, G1-4
1311	Strata B – Level 1, G1-4
1312	Strata B – Level 2, G1-4
1406	Level 1, G1-3
1407	F88
1408	Level 3, G1-3
1409	Level 4, G1-3
1410	Level 5, G1-3
1411	Level 6, G1-3
1412	G1-3
1413	Level 1-2, G1-3
1414	Strata A Level 1, G1-3
1415	Strata A – Level 2, G1-3
1416	Strata A – Level 54", G1-3
1417	Strata A, G1-3
1418	Strata C – Level 1
1419	Strata C – west, Level 1, G1-3
1423	Basal Level, G1-4
1892	N510, E510
1951	N520, E510, Level 1
2046	F88

Table 3: Mean Ceramic Date

Mean Ceramic Dating =x(f)/f				
		f	**x**	
Ceramics Ware Types	**Dates**	**# Sherds**	**Mean Dat**	**(x)(f)**
American Redware	c.1700-1800	248	c.1750	434000
Borderware	c.1600-1700	4	c.1650	6600
Buckleyware	c.1720-1775	4	c.1747.5	6990
Chinese Export Porcelain	c.1660-1840	54	c.1750	94500
Creamware	c.1762-1820	780	c.1791	1396980
Derbyshire Stoneware	c.1800-1875	3	c.1837.5	5512.5
English Porcelain	c.1745-1795	2	c.1770	3540
English Tin-Glazed	c.1600-1800	12	c.1700	20400
French Faience/Tin-Glazed	c.1700-1800	29	c.1750	50750
Jackfield	c.1740-1770	8	c.1755	14040
Mocha	c.1780-1820	1	c.1800	1800
North American Stoneware	c.1700-1800	195	c.1750	341250
Nottingham	c.1700-1810	41	c.1755	71955
Pearlware	c.1780-1840	5	c.1810	9050
Red Stoneware	c.1750-1800	4	c.1775	7100
Redware	c.1700-1830	10	c.1765	17650
Slipware	c.1700-1800	3	c.1750	5250
Staffordshire Slipware	c.1670-1795	94	c.1732.5	162855
Tin-Glazed	c.1600-1800	166	c.1700	282200
Unidentified		7		0
Unidentified Earthenware		15		0
Unidentified Porcelain		4		0
Unidentified Stoneware		3		0
Westerwald	c.1600-1775	1	c.1687.5	1687.5
White Salt-Glazed Stoneware	c.1720-1765	124	c.1742.5	216070
Total Ceramics		**1817**		3150180
Total #1	3150180			
Total #2	1817			
Total#1/Total #2 = Mean Date	**c.1734**			

Table 4: Feature 88 Artifact Totals

Category	Totals
Architectural	1888
Clothing	53
Communication Artifacts	2
Faunal	3656
Floral	27
Food Related Category	7722
Furnishings	46
Personal Artifacts	1145
Tools & Equipment	1331
Unclassifiable/Unknown	657
Total	**16527**

Architectural	Totals
Brick	166
Building Component - Cement/Mortar/Plaster	43
Building Component - Raw Material, stone	7
Building Component - Unknown	128
Copper Alloy Lock	1
Flat Iron Object	127
Iron Bolt	1
Iron Fencing	1
Iron Hook	1
Iron Spike	8
Iron Stake	2
Square Cut Iron Nails	440
Unidentified Iron	5
Unidentified Wood	5
Window Glass	953
Total	**1888**

Communication Artifacts	Totals
Brass MTA Token	1
Ink Jar - North American Stoneware	1
Total	**2**

Faunal	Totals
Clam Shell	2633
Oyster Shell	1014
Whelk Shell	9
Total	**3656**

Floral	Totals
Soil Sample	2
Unidentified Nut	1
Unidentified Seed Casing	24
Total	**27**

Furnishings	Totals
Lamp Chimney Glass	46
Total	**46**

Tools & Equipment	Totals
Armament - Gun Flint	1
Armament - Musket Ball	1
Fuel/Fuel Byproduct	1120
Iron Horseshoe	3
Iron Padlock	3
Iron Shackle	3
Kiln Furniture	12
Raw Material - Mica	1
Raw Material - Unidentified Stone	2
Raw Material - Unidentified Wood	1
Square Cut Copper Nail	11
Unidentified Construction Artifact	1
Unidentified Iron	169
Unidentified Lead	3
Total	**1331**

Unclassifiable/Unknown	Totals
Unidentifiable	3
Unidentifiable Bone	1
Unidentifiable Copper Alloy	38
Unidentifiable Ceramic	1
Unidentifiable Glass	3
Unidentifiable Iron	599
Unidentifiable Lead	1
Unidentifiable Stone	2
Unidentifiable Worked Bone	9
Total	**657**

Table 4: Feature 88 Artifact Totals, continued

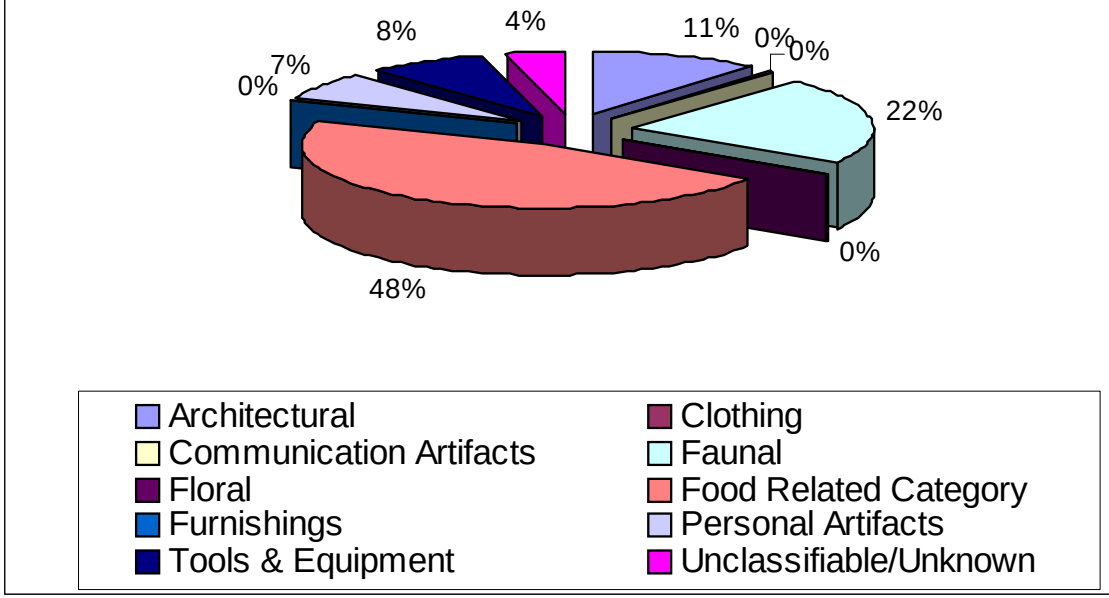
Category	Totals
Personal Artifacts	**Totals**
Clothing	53
Medicine Bottles	112
Personal Gear - Pipes	485
Toilet Article - Chamber Pot	10
Total	**660**
Clothing	**Totals**
Bone Buttons	38
Copper Alloy Buckle	2
Copper Alloy Buttons	7
Lead Buttons	1
Leather Buttons	1
Unidentified Adornment	1
Unidentified Copper Adornment	1
Unidentified Copper & Leather Adornment	1
Unidentified Cloth	1
Total	**53**
Pipes	**Totals**
Bowls	108
Stems - 6/64"	4
Stems - 5/64"	155
Stems - 4/64"	173
Stems - 3/64"?	1
Stems - 4/64" & 5/64"	40
Stems - 5/64" & 6/64"	1
Unidentifiable Stems	3
Total	**485**
Bowls Dated	35
Food Related Category	**Totals**
Food Consumption and Serving	1503
Food Preperation	20
Food Storage	6179
Unidentified	13
Unknown Earthenware	1
Unknown - Glass	6
Total	**7722**

Category	Totals
Food Consumption and Serving Materials	**Totals**
Bone-Handled Cutlery	5
Earthenware	1202
Glass	57
Porcelain	60
Stoneware	184
Unidentified	3
Unknown ceramic	3
Total	**1514**
Food Preperation Materials	**Totals**
Bone	1
Iron	8
Stoneware	12
Total	**21**
Food Storage Materials	**Totals**
Earthenware	244
Glass	5758
Stoneware	175
Unidentified	1
Unidentified Ceramic	1
Total	**6179**
Glass Food Storage Breakdown	**Totals**
Case Bottle	282
Possible Tonic/Water Bottle	23
Rum/Wine Bottle	5352
Unidentified Bottle	79
Water/Soda Bottle	22
Total	**5758**

Table 4: Feature 88 Artifact Totals, continued

Category	Totals
Ceramics Ware Types	**Totals**
American Redware	248
Borderware	4
Buckleyware	4
Chinese Export Porcelain	54
Creamware	780
Derbyshire Stoneware	3
English Porcelain	2
English Tin-Glazed	12
French Faience/Tin-Glazed	29
Jackfield	8
Mocha	1
North American Stoneware	195
Nottingham	41
Pearlware	5
Red Stoneware	4
Redware	10
Slipware	3
Staffordshire Slipware	94
Tin-Glazed	166
Unidentified	7
Unidentified Earthenware	15
Unidentified Porcelain	4
Unidentified Stoneware	3
Westerwald	1
White Salt-Glazed Stoneware	124
Total Ceramics	**1817**

Chart 1: F88 Category Totals Compared



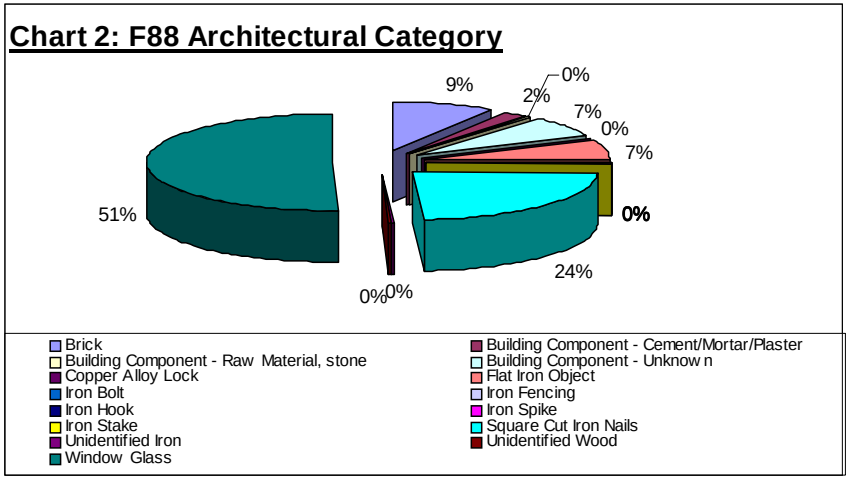


Chart 2: F88 Architectural Category
9%
2%
0%
7%
0%
7%
0%
24%
0%
0%
51%
Brick
Building Component - Cement/Mortar/Plaster
Building Component - Raw Material, stone
Building Component - Unknown
Copper Alloy Lock
Flat Iron Object
Iron Bolt
Iron Fencing
Iron Hook
Iron Spike
Iron Stake
Square Cut Iron Nails
Unidentified Iron
Unidentified Wood
Window Glass

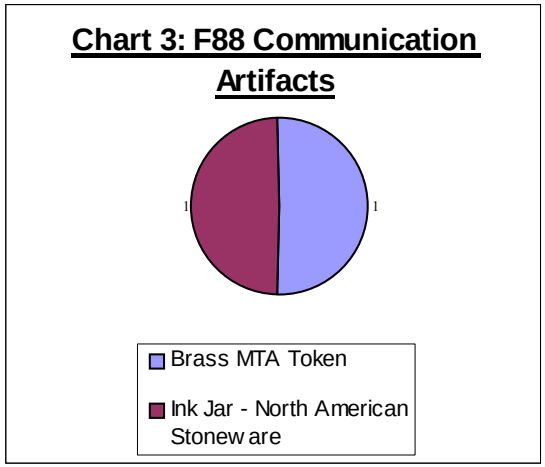


Chart 3: F88 Communication Artifacts
1
1
Brass MTA Token
Ink Jar - North American Stoneware

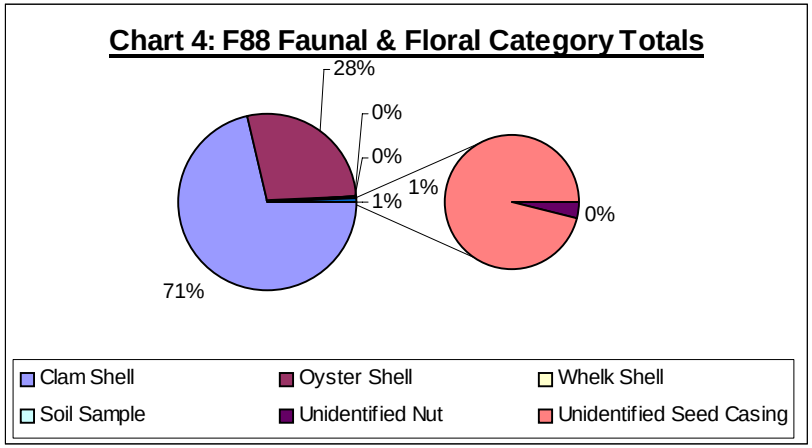
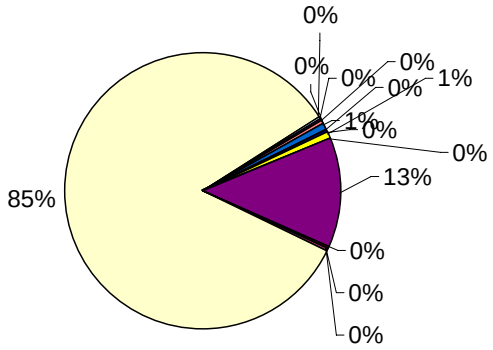


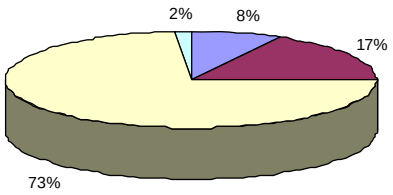
Chart 4: F88 Faunal & Floral Category Totals
28%
0%
0%
1%
1%
0%
71%
Clam Shell
Oyster Shell
Whelk Shell
Soil Sample
Unidentified Nut
Unidentified Seed Casing

Chart 5: F88 Tools & Equipment Category Totals



- Armament - Gun Flint
- Armament - Musket Ball
- Fuel/Fuel Byproduct
- Iron Horseshoe
- Iron Padlock
- Iron Shackle
- Kiln Furniture
- Raw Material - Mica
- Raw Material - Unidentified Stone
- Raw Material - Unidentified Wood
- Square Cut Copper Nail
- Unidentified Construction Artifact
- Unidentified Iron
- Unidentified Lead

Chart 6: F88 Personal Artifacts Category



- Clothing
- Medicine Bottles
- Personal Gear - Pipes
- Toilet Article - Chamber Pot

Chart 7: F88 Clothing Category Totals

- Bone Buttons
- Copper Alloy Buckle
- Copper Alloy Buttons
- Lead Buttons
- Leather Buttons
- Unidentified Adornment
- Unidentified Copper Adornment
- Unidentified Copper & Leather Adornment
- Unidentified Cloth

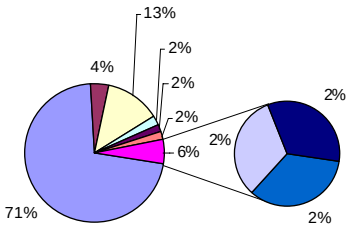
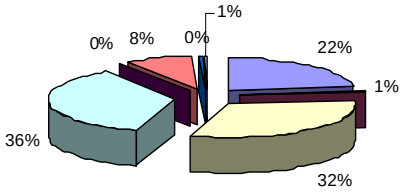
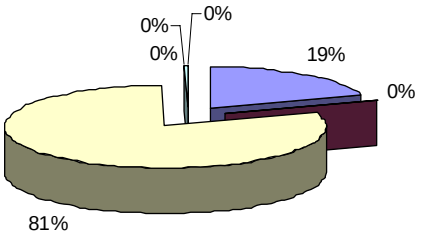


Chart 8: F88 Clay Smoking Pipes - Totals



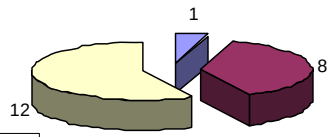
- Bowls
- Stems - 6/64"
- Stems - 5/64"
- Stems - 4/64"
- Stems - 3/64"?
- Stems - 4/64" & 5/64"
- Stems - 5/64" & 6/64"
- Unidentifiable Stems

Chart 9: F88 Food Related Category



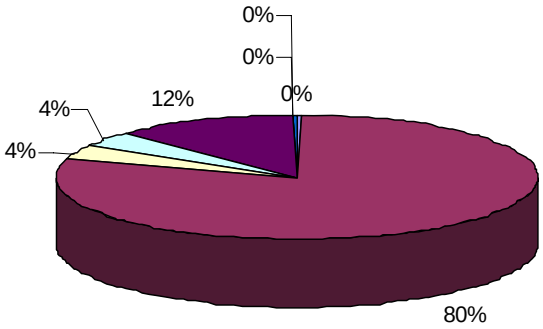
Food Consumption and Serving | Food Preperation
Food Storage | Unidentified
Unknown Earthenware | Unknown - Glass

Chart 11: F88 Food Preperation Numbers

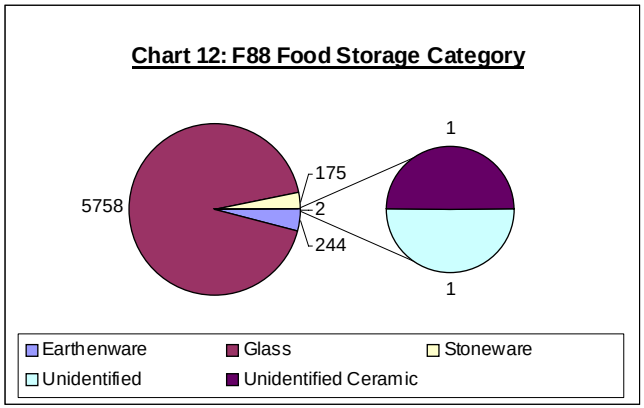


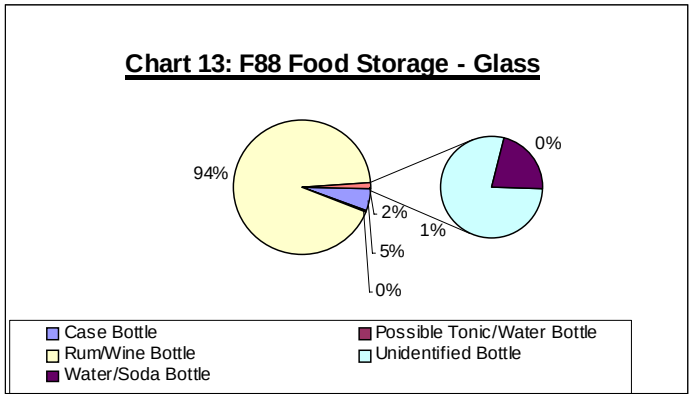
Bone
Iron
Stonew are

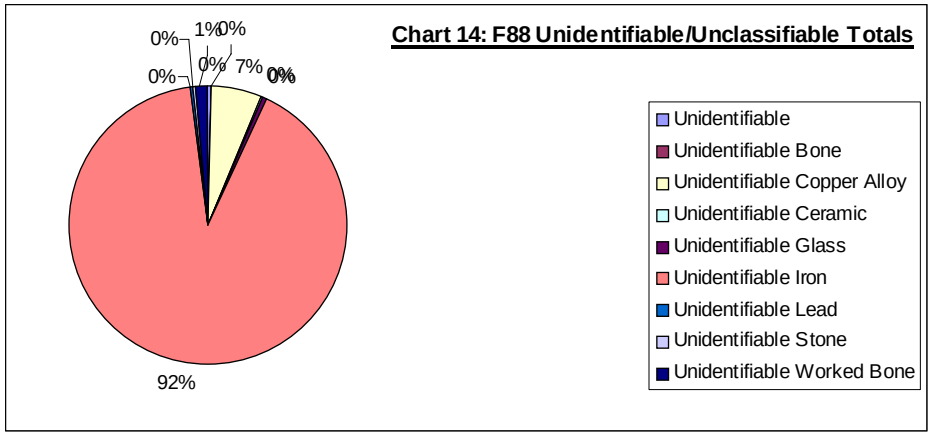
Chart 10: F88 Food Consumption & Serving Totals



Bone-Handled Cutlery | Earthenware | Glass Tableware
Porcelain | Stoneware | Unidentified
Unknown ceramic







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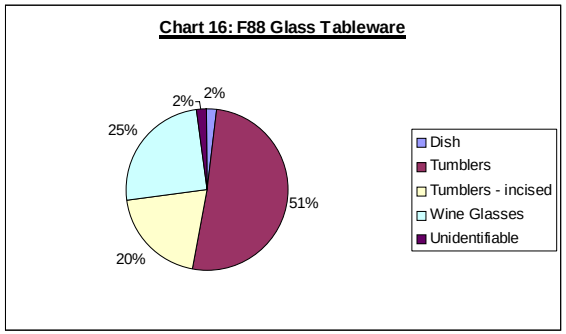
Chart 16: F88 Glass Tableware
2%
2%
25%
51%
20%
Dish
Tumblers
Tumblers - incised
Wine Glasses
Unidentifiable

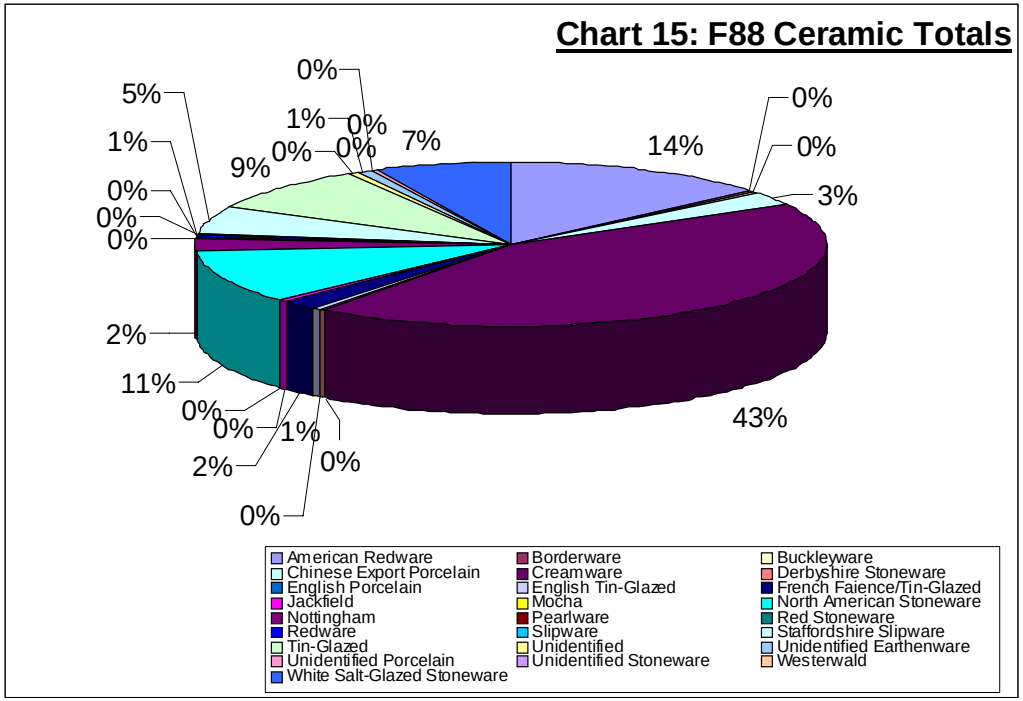
Chart 15: F88 Ceramic Totals
0%
5%
1%
0%
0%
7%
1%
0%
9%
0%
0%
0%
0%
14%
0%
0%
3%
2%
11%
0%
0%
1%
2%
0%
0%
43%
American Redware
Borderware
Buckleyware
Chinese Export Porcelain
Creamware
Derbyshire Stoneware
English Porcelain
English Tin-Glazed
French Faience/Tin-Glazed
Jackfield
Mocha
North American Stoneware
Nottingham
Pearlware
Red Stoneware
Redware
Slipware
Staffordshire Slipware
Tin-Glazed
Unidentified
Unidentified Earthenware
Unidentified Porcelain
Unidentified Stoneware
Westerwald
White Salt-Glazed Stoneware

C. ***New York City Hall Park: An Analysis of Features 85/86, 71 and 55***

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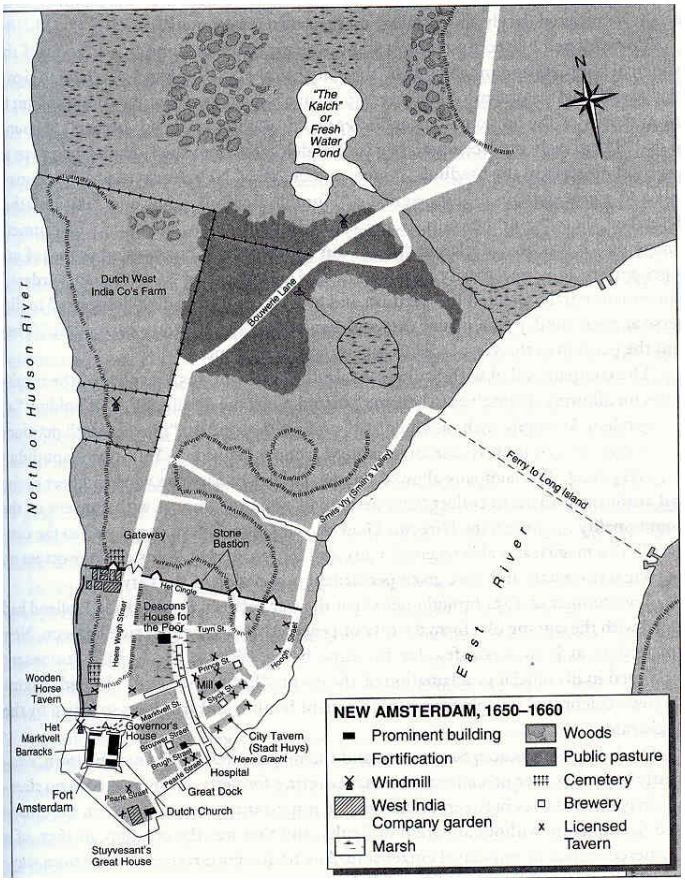
Introduction

In 1999, Parsons Engineering Science, Inc. conducted an archaeological excavation at City Hall Park in Manhattan, New York. The excavation was part of mitigation efforts required by New York City law in conjunction with the renovation of City Hall Park. Although scheduled to last eight weeks, the excavation phase ultimately stretched to eight months, from December 1998 to August 1999, due to the large volume of material present. Because of the resulting budgetary shortfall, Parsons was unable to complete the analysis of the artifacts and that work was eventually contracted to the City University of New York. This report presents a summary and analysis of three features from the 1999 archaeological excavation: feature 85/86, a midden initially identified with the second British barracks, feature 71, identified as a mixed barracks, New Gaol and first almshouse midden, and feature 55, identified as another combined midden, specifically from the almshouse and gaol.

City Hall Park is located in the southern



portion of Manhattan island, New York, on a triangular segment of land bordered by Chambers Street on the north, Broadway on the west and Park Row on the south and east. (Fig. 1). Prehistoric use of this particular space is not known. Manhattan was home to the Lenape at the time of European contact and may have hosted previous occupations. (Burrows & Wallace 1999:4-5). Burrows and Wallace refer to a Lenape settlement just north of City Hall Park near a pond, which presumably is the same one later known as Collect Pond. (1999:6). A native presence at least in transit, is likely in the area of the Park, but there is no evidence of any more enduring use of this space. In 1664, the British took Dutch New Amsterdam through a show of military force to which the Dutch had little choice but to capitulate. (Burrows & Wallace 1999:73). Although the Dutch retook the colony a decade later, it was soon returned to British control and remained in British hands until the Revolution. In 1691, the British conducted the first public execution on the eastern side of the Commons, hanging two accused traitors then cutting off their heads. (Burrows & Wallace 1999:102). No buildings stood on the Commons until the construction of the first of the two private residences, the John Harris house, in 1720.

Approximately fifteen years later, the Commons became the location of the earliest New York City municipal almshouse.

Within a few years, however, the land took on a military function, being used in the 1740s as a parade ground by the British, who also constructed a palisade across the northern boundary in 1745. (Fig. 3). While the military usage did not displace the public function, the boundary between the two became somewhat blurred as tensions increased between Britain and the colonies. By 1757, the same year that the City completed construction of the New Gaol on the eastern side of the Commons, the British erected the Upper Barracks to house the increasing number of soldiers present in the city. Before the end of the War, additional British barracks were constructed, although the Commons continued to be used as a public gathering place, including the erection of at least five liberty poles in the decade prior to the Revolution. The City also built a second poorhouse, the Bridewell,

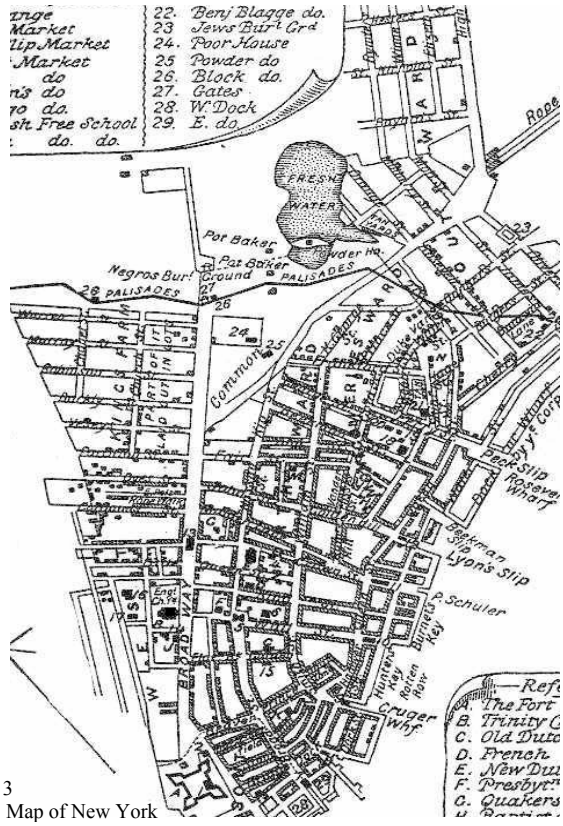


FIG. 3
1755 Map of New York

on the land just one year before the War began. Figure 4 shows the location of buildings on the Commons in the last quarter of the 18th century.

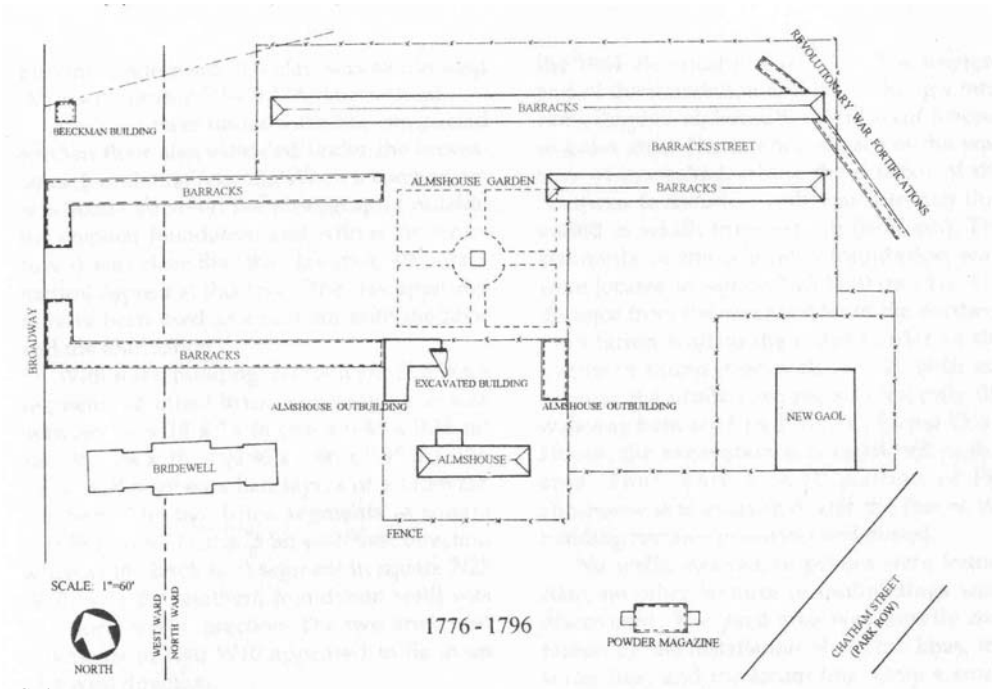


FIG. 4
Location of structures on the Commons, 1776-1796.

The turn of the century brought a number of changes to the Commons. By this time, all of the barracks had been dismantled. A new almshouse was built on the site of the upper barracks and the original one was torn down. The new City Hall went in its former location, with construction beginning in 1803. The other major structure currently on the site, the New York County Courthouse, was built in the second half of the 19th century. The General Post Office occupied the southernmost portion of the Commons from 1878 to 1938, but this portion of the Park was not subject to archaeological testing during the current renovation. A summary of structures on the Commons from the 17th through the 19th centuries is contained in table 1.

Construction Date	Structure
1650s	*windmill (fig. 2)*
c.1720	John Harris House
1735	first Almshouse
1745	Palisade
1747	Powder Magazine
1757	New Gaol
1757	Upper Barracks
1760	Teller House
1774	Second Barracks
1782	additional British Barracks
1760s	five Liberty Poles
1775	Bridewell
1784	City Gallows
1796	second Almshouse
1803	City Hall
1818	Rotunda

Table 1
Chronology of structures on the Commons.

The present-day City Hall Park remains the site of City Hall, as well as the Courthouse building, which is currently used by the Board of Education. The latter building was recently renovated and excavations conducted in conjunction with that renovation are the subject of another report. The entire area is part of "the African Burial Ground and The Commons Historic District," which was designated in 1993. This is the only archaeological (as opposed to architectural) historic district in New York City. Any

subsurface work requires a permit from the Landmarks Preservation Commission, and must provide for mitigation of any potential impact on historical resources.

Parsons Engineering Science, Inc. of Fairfax, Virginia was retained in 1998 to conduct an archaeological salvage excavation to mitigate the impact of the Park renovation on the resources contained therein. The project consisted of excavation and monitoring of a 15,325 square foot area. The result of the 8 month long project was the location of 51 features consisting of 25 trash pits and 26 architectural features, and the recovery of more than 400,000 artifacts and faunal remains. Given this vast amount of material, which apparently was not anticipated by Parsons, the excavation extended six months beyond its expected duration. The firm and the City could not agree on the financial issues raised by this discrepancy, and the artifacts were placed in storage, where they remained for almost two years.[11]

In 2001, the City University of New York reached an agreement with the New York City Department of Parks to conduct the cataloguing, preservation and analysis of the artifacts. In September 2001, students from the Graduate Center and Hunter and Brooklyn Colleges began work on the collection. Human remains were analyzed by the Smithsonian Institution in Washington, D.C. Faunal remains, with the exception of shell, are being analyzed at Brooklyn College under the direction of Dr. Thomas McGovern and Dr. Sophia Perdikaris. Analysis is being conducted on the remaining artifacts through the Brooklyn College Archaeological Research Center under the direction of Dr. Arthur Bankoff and lab director Alyssa Loorya.

[11]This does not include the human remains, which had already been sent to the Smithsonian Institution for analysis.

Feature 85/86

Feature 85/86 was designated by Parsons Engineering as an 18th century Trash Pit Feature possibly associated with the Second Barracks. The location of this feature, shown in figure 5, supports this preliminary designation. The midden is situated just behind these barracks on the eastern end, very close to the structure. Further, as discussed below, the artifacts recovered from this feature support an 18th century time-frame, which is when the Second Barracks stood on the Commons. The two other institutions that were present in this same time frame (the Gaol and the First Almshouse) were located at a greater distance from the midden.

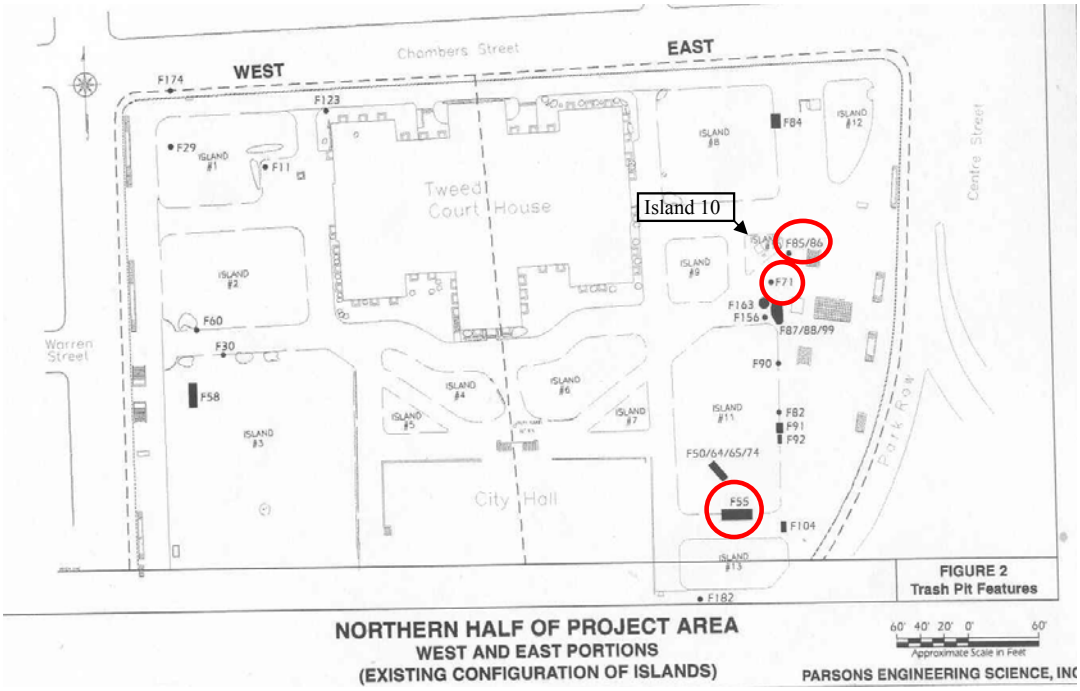


FIG. 5
Map of Project Area showing location of features.

It should be noted, however, that the demarcation of midden usage was most likely not clear-cut, and some trash from one institution or from passers-by could certainly have

ended up in the midden of a different institution. Generally, however, human nature would suggest the course of least resistance, or the use of the midden closest to one's location, so it is likely that this midden was used more frequently by the inhabitants of the Second Barracks.

The British army first housed soldiers on the Commons in 1757 during the French and Indian War. The Second Barracks, however, were not erected until almost 15 years later, in 1774, as the number of soldiers stationed in New York City grew in the years immediately preceding the American Revolution. Both Martin (2004, above) and Borishansky (2003, below) have presented the history of the British presence in New York City and, specifically, of their use of the Commons and the barracks. Martin, in particular, has provided a detailed analysis of the British occupation of this site and reference should be made to these reports for further background. The Second Barracks measured 20 by 200 feet (Martin 2004:8) and occupied a portion of the northern end of the Commons just to the south of the original barracks. They remained in this spot until in 1792, when they were demolished. The feature 85/86 midden, then, was likely in use for less than 20 years. It is not known for certain who occupied the barracks: officers or enlisted men, British or mercenaries of other ethnicities, such as Hessian. These questions are some of the issues raised in this analysis.

Feature 88, which is analyzed in the Martin and Borishansky reports, is the main midden associated with the Second Barracks. Both feature 85/86 and feature 71, which will be discussed below, appear to be secondary middens associated with the barracks and contain far fewer artifacts than F88. Also associated with the Second Barracks are features 87, 99, 156, 161 and 163, all trash pit features. These middens were found in

close association in an area to the south and slightly east of Island #10. (Fig. 5). Feature 85/86 is set very slightly northeast and apart from the other middens, but when the site is viewed as a whole appears to be part of this group of trash pits. Reports on all of these features should therefore be considered in conjunction with one another and artifacts checked for items that cross-mend.

Feature 85 is described in Parsons' feature log as a "dark, gritty pit or post hole, surrounded by F86." The same log records Feature 86 as a "lighter colored pit surrounding F85." Field notes indicate that Feature 86 was "found to the north and south and also appears to lie underneath" Feature 85. (Fig. 6). It appears, then, that F86 existed prior to F85 and the latter

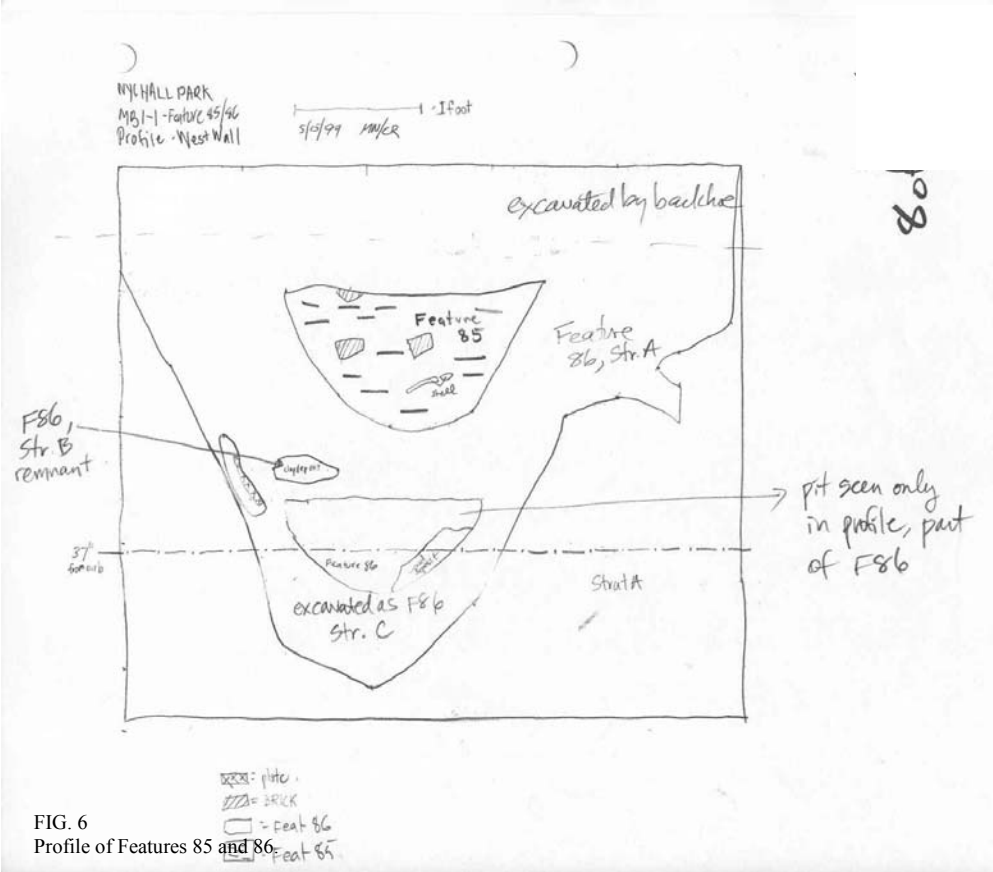


FIG. 6
Profile of Features 85 and 86.

was a pit dug out of the former. The measurements of this secondary pit are 20 inches along the central north/south line and 6 inches along the east/west line. At its deepest point, the pit measures 25 inches below the curb line. The original pit, F86, measures 40 inches north to south and 16 inches east to west according to the Parsons map, although the excavator's map lists slightly larger dimensions. Its deepest point reaches to 37 inches below curbline, which, if the midden was excavated to sterile soil, means it was too shallow to have been a privy or cistern. Parsons' records also note that Feature 85

and most of Feature 86 were excavated prior to superimposing a test unit, labeled MB1-1, over the features.[12]

According to the Parsons Bag Inventory, the bulk of the material B bags 1350 through 1354 B was recovered on April 30 and May 1, 1999, as backhoe trenching was being monitored by Parsons' personnel. The features were excavated and artifacts placed in bags with at least 7 separate designations: bags 1350 to 1354, and bags 1550 and 1551.[13] While Feature 86 contained three strata, Feature 85 contained only one layer. Records connecting the bags to their related features and stratum are not wholly clear. Most of the bags are designated in the inventory as belonging to either F85 or F86, but bag 1350 is designated as mixed 85/86. Further, there is some discrepancy in the notes regarding the designation for bags 1550 and 1551.[14] Given the difficulty of determining association for every bag, particularly in light of the small number of artifacts overall, all seven have been analyzed as a whole. This course of action is unlikely to prejudice the results of the analysis as the usage span of the midden was so short that distinctions between the artifacts from each feature are likely to be minimal. Further, artifacts from each feature may have already mixed in the course of natural taphonomy.

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[12]This test unit was placed at the location in which a manual bollard was to be installed, hence the designation "MB."

[13]The Bag Inventory lists two additional bags which have not been considered here: bag 1466, relating to a "wall collapse" from Features 85/86, and bag 1552, relating to Feature 86. These bags were not included with the original set and were only noted upon review of the inventory sheet after analysis was complete.

[14]Both bag 1550 and 1551 are designated as part of "Unit 2," an unknown designation. Further, bag 1551 appears to be assigned to stratum C-1, although it belongs to F85 which did not have stratum.

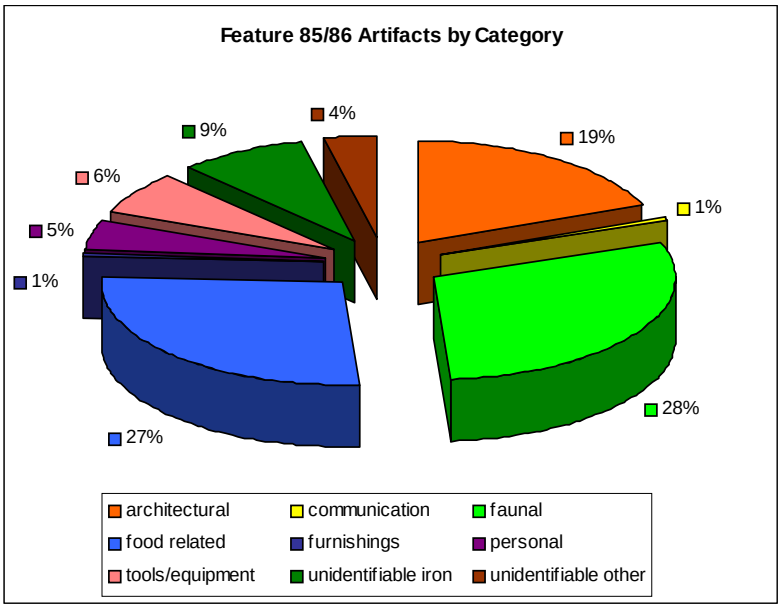


FIG. 7

Feature 85/86 consists of 170 total artifacts. (Fig. 7). Despite the exclusion of bones from this analysis (as mentioned above, all bones are being analyzed separately), the largest percentage of artifacts are faunal, consisting of oyster and clam shells. At a total of 50, these shells constitute 29.4% of the assemblage. Oyster is by far the largest portion of shell, totaling 44, or 88% of the faunal remains, to only 6 clam. None of the clam shells are complete, but there are 7 complete oyster shells.

The next largest category, food related artifacts, is only slightly smaller at 46 items or 27.1% of the assemblage. Of the total food related items, 9 are glass, all of which are liquor bottles, and the remaining pieces, 37, are ceramic. Thus, of the total food-related items, 19.6% are liquor bottles. Figure 8 breaks down the food-related ceramics as a group, excluding bottles. Over two-thirds of the total ceramic is tableware. There are 25 items in the food consumption and serving category, or 67.6% of the food-

related ceramics. Only 8 sherds, or 21.6%, are storage related while 3, or 8.1%, are preparation items, and are apparently part of the same redware bowl. The one unidentifiable sherd equals 2.7% of the group. Ceramic distributions will be further analyzed below.

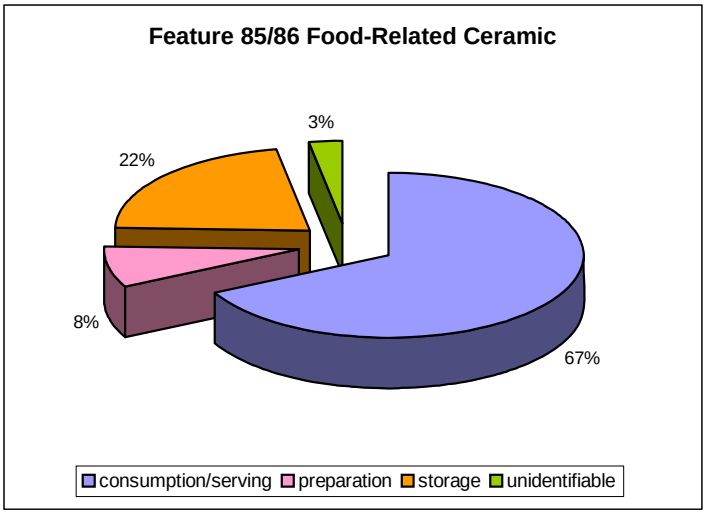


FIG. 8

The third largest category in the feature 85/86 assemblage is architectural, which, at 32 items constitutes 18.8% of the assemblage. There are also 15 pieces of unidentified iron, which, with one exception, are likely nails, making up 8.8% of the artifacts, although these cannot conclusively be placed in the architectural category. Of the 32 known architectural items, 62.5%, or 15, are brick. It should be noted that Parsons' field notes record the presence of Avery small fragments of brick@ in Feature 85, of which only a sample was taken. This percentage is therefore lower than the actual amount of brick that was present in the feature. The other items represented in this category are square nails, at 5 or 20.8%, and window glass, at 4 sherds, or 16.7%.

Tools and equipment comprise 6.5% of the feature 85/86 assemblage. These items

include 2 pieces of bituminous coal and 4 pieces of charcoal for 54.5% of the tools category, and 5 items related to pottery manufacture, for 45.5% of these artifacts. Four of these latter items are kiln wasters and one is a spool, a piece of kiln furniture used in the ceramic firing process.

The feature contains 8 personal items, or 4.7% of the total number of artifacts. Only two types of personal artifacts are represented in this feature: clay pipes and chamber pots. Three sherds of a redware chamber pot, all from the same piece, were recovered from the midden, along with 5 clay pipe pieces, all stems.[15] Six pieces of an unidentified substance, possibly some type of hardened resin or unvulcanized rubber, make up 3.5% of the assemblage and, finally, both the furnishings and communication categories are represented at 1 item, or 0.6%, each. These last two items are, respectively, a piece of lighting glass and a copper coin, which appears to be unidentifiable, but which Parsons has designated in the Feature Record as a ARoman coin.@

[15] Two of these pieces mend, so only 4 pipes are actually represented.

The artifacts from Features 85/86 date almost exclusively to the 18th century. The mean ceramic date is c.1763. (Table 2). It must be kept in mind, however, that these dates are typically

Ware Type	Production Dates	Mean Date (x)	# of sherds (f)	(x)(f)
Brown Frenchen stoneware	c.1700-1800	c.1750	1	1750
Chinese porcelain	c.1660-1840	c.1750	3	5250
Creamware	c.1762-1820	c.1791	6	10746
Manganese Mottled	c.1680-1750	c.1715	1	1715
North American stoneware	c.1700-1800	c.1750	5	8750
Redware	c.1700-1830	c.1765	21	37065
White salt-glazed stoneware	c.1720-1765	c.1742.5	3	5227.5
TOTALS			40	70503.5
Mean Ceramic Date [(x)(f)]/f]				**1763**

TABLE 2

earlier than the actual date of deposition for a site. First, they are based on the manufacturing date for the ceramics rather than the date of use. Since ceramics are typically used over a number

of years until they break, the manufacturing date may be substantially earlier than the date they were discarded in the midden, when the site was in use. For example, an item may be manufactured in 1700 but used for fifty years until broken. The actual date of deposition then is 1750, but manufacturing places it half a century earlier. Second, a ware type may have been manufactured for a lengthy period of time. The mean date is only the average of these dates, not the actual date of manufacture. Nevertheless, the dates are useful for getting a general idea of the site time period. The broader 18th century time frame is consistent with dates from the few pipe stems that are contained in the assemblage: three dating from 1720 to 1750 and one from 1750 to 1800. While the validity of later pipe stem dates is questionable (see, for example, Binford 1962), they are

generally considered accurate for the early- to mid-18th century and can provide a general time-frame, particularly when combined with other data. In this case, the stems and mean ceramic date together strongly suggest a mid to late 18th century context.

Due to the small number of artifacts, it seems clear that this midden was used for a very short period of time, probably not for the entire existence of the Second Barracks. While clearly a kitchen/dining midden, it may also have been used as a personal dumping spot by one or a few soldiers who tossed aside their used liquor bottles and pipes. It is also possible, of course, that the pit was dug for another purpose then used later for trash disposal although, as mentioned, it appears to be too shallow to have been a privy or cistern. Whatever the processes that led to its existence, the only thing we can say with any certainty is that this was not the main Second Barracks midden. It may have been used simply as a function of convenience, or laziness, due to its position slightly closer to the Barracks.

Despite its geographic association with the barracks, this feature contains no overtly military objects, such as gun flint, buttons or insignia or musket balls. The lack of such items, however, does not mean that the association with the barracks should be dismissed. Other archaeological studies of British military sites have revealed similar, non-military assemblages. (e.g., Feister 1984; Sussman 1978; Miller & Stone 1970). This makes sense as the barracks were not the site of combat but of daily life for the soldiers. The detritus of non-military, quotidian activities must be represented even in military trash. While we might expect some items that could have been carried on the person, such as gun flint, strictly military activities were not the focus of this site.

Rather, the Feature 85/86 midden consists mainly of food and tableware remains. The activities represented by the ceramics are largely preparing, serving and consuming food. Clearly, both food preparation and dining were occurring in this building. Other items were thrown in to the pile, such as broken clay pipes possibly smoked by soldiers lingering outside the Barracks after a meal, but the primary purpose of the dump was for the disposal of institutional, not personal trash. Other middens associated with the Second Barracks should be compared to discern a more complete picture with respect to food and food-related items used in the barracks.

One of the many questions that arises from this analysis is who was consuming the food and using the tableware represented in this assemblage and whether the answer to that can tell us anything about the people who inhabited the barracks. It is likely that at least a portion of the Barracks was occupied by enlisted men, as the minutes of the Common Council indicate that it was intended to hold 800 individuals (Martin 2004:5). No definitive documentation of the number or status of military personnel occupying the Barracks has been found, however.

Overall, 67.6% of the ceramic assemblage, or 25 sherds, is coarse, and 32.4%, or 12 sherds, is refined. When tableware is considered as a subgroup, more of a balance exists between the two types of ceramic. Of the 25 tableware sherds, 13 (52%) are coarse

and 12 (48%) refined.

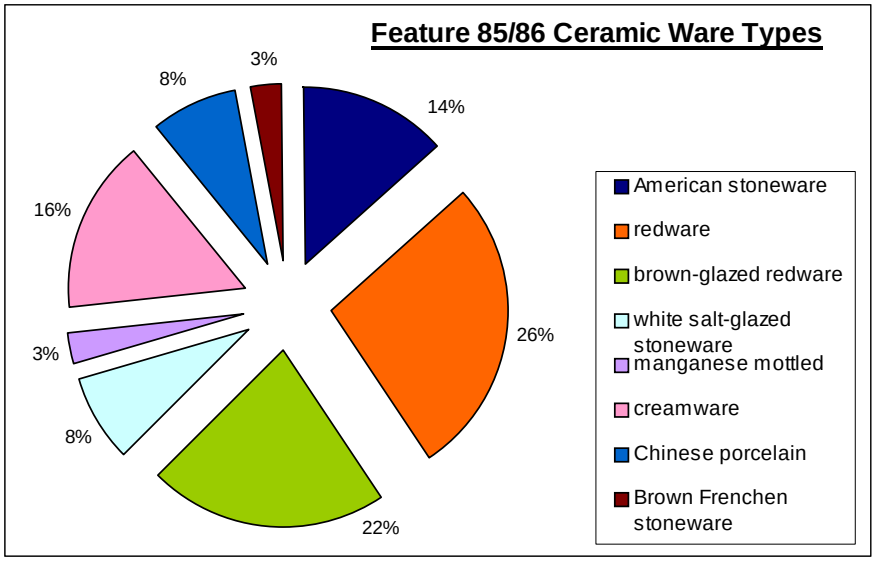


FIG. 9

The refined tablewares consist mainly of creamware with sherds from 1 or possibly 2 porcelain teacups and 2 white saltglazed stoneware plates. A breakdown of the ware types is contained in figure 9. Kitchenware exhibits a different pattern: of the 11 sherds in this category, 100% are coarse. This is characteristic of kitchen assemblages generally, however, as coarse stone and earthen wares of sturdier construction would have typically been used for utilitarian kitchen duties, while the more fragile refined ceramics would have been used for dining, where display is generally more important than utility.

	Coarse	Refined	Domestic	Imported
Kitchenware	11	0	10	1
Tableware	13	12	13	12

TABLE 3

The ceramics in Feature 85/86 display a similar tableware/kitchenware dichotomy in terms of their origins. Overall, 13 sherds, or 35.1%, derive from imported ceramics while 24, or 64.9%, are domestic. Of the kitchenwares, however, only one piece, the brown frenchen stoneware jar, is imported while 10 sherds (5 from gray salt-glazed stoneware containers, 4 from redware containers and one sherd of manganese mottled) were probably manufactured domestically. In contrast, almost half of the tableware (12 of 25 sherds) is imported while slightly more than half (13 sherds) is domestic, the same division as exhibited between refined and coarse ceramic.

The existence of refined tableware in the assemblage might suggest that the Second Barracks housed officers, rather than enlisted men. The association of refined wares with the presence of officers has been the traditional analysis of British military ceramics. Sussman, for example, argues that enlisted men were given mainly wooden and metal wares or other unbreakable items (1978:94-95). This accuracy of this assertion, however, has been questioned. Feister argues that even in a non-urban setting, the material culture of enlisted men is much more complex than traditionally believed. Her work at Crown Point Fort on Lake Champlain with an assemblage from a barracks specifically designated for enlisted men revealed a quality of artifacts "previously assumed to have been associated with officers." (1984:123). The largest proportion of ceramics from the site were creamwares and white salt-glazed stonewares, with tin-glazed earthenware and gray stonewares the third and fourth largest categories. Redware and buff-bodied earthenware, as well as a small amount of porcelain, were also present. (1984:128-129). Feister argues that this collection is "at least comparable to" what is found in many 18th century North American domestic sites. (1984:124, 127).

The association of refined ceramics with officers should be particularly questioned in the context of New York, a busy port city where the soldiers and civilians were in close contact, which would unavoidably have altered the quality of soldiers' lives. (See Martin 2004). With the exception of the tin-glazed and buff-bodied earthenware, the wares in Feister's study are similar to what was recovered from Feature 85/86. If it was feasible for enlisted personnel at a wilderness outpost to obtain these ceramics, it would certainly have been possible in a large urban port.

Martin dismisses the standard view of enlisted men as separated from this type of material culture by their economic status, arguing that this artificially removes them from the social processes of the 18th century. (2004:3). In fact, she argues, soldiers purchased their own consumer items, including ceramics, and engaged with the civilian, consumer society of New York City. (Martin 2004:24). Given Feister's similar findings regarding enlisted consumerism in a location where access to such commodities would have been much more limited, Martin's conclusions are reasonable. Martin's arguments are a persuasive hypothesis on how the Barracks collection, including F85/86, can be reconciled with their habitation by enlisted personnel.[16]

It is interesting to consider the social function that may have been served by the use of refined ceramics by British soldiers. Burrows and Wallace characterize the attitude of the British towards the colonists as one of "unshakeable class contempt." (1999:233). British officers viewed the colonial army as "rabble," (Burrows & Wallace 1999:232), an attitude that likely extended to the colonial civilian population as well.

[16] It must be noted, however, that this conclusion assumes that the Second Barracks were inhabited solely or mainly by enlisted men, a premise that is still somewhat speculative.

Although many of the inhabitants of New York were loyalist, it seems likely that maintenance of identity for the British would have been extremely important in separating themselves from the colonial population they so despised. By maintaining class conventions such as the use of refined tableware and social tea drinking (see Martin 2004:19-20), even though most of the soldiers were not members of the upper class, they created boundaries between themselves and the colonists.

Glass is another category that can be considered in examining status and Barracks habitation. The presence of liquor bottles in the midden is consistent with a military presence at the site. While these bottles constitute only slightly more than 5% of the total assemblage, they are almost 20% of the food-related items and 100% of the food-related glass. Both enlisted men and officers drank a great deal. Enlisted men officially were allotted daily rations of weak beer but rum was more commonly provided. (Smith 1983:31). Canteens were used to hold these rations, but Martin has argued that soldiers were commonly purchasing their own supplies of alcohol, and thus the presence of glass does not necessarily distinguish between officers and enlisted men as Smith asserts (1983:38).[17] Thus we would expect a large portion of liquor bottles in a barracks midden if it were in general use, whether used by officers or enlisted men.

Interestingly, Burrows and Wallace note possible markers of ethnicity with a reference to the disparaging remarks of a German officer regarding the English and their "love of drink." (1999:250). More likely, the remark is the result of status distinctions between officers and enlisted men, or simply the result of ethnic stereotyping.

[17]See Martin for a more detailed discussion of British soldiers and alchohol. (2004:16-17).

As for table glass, this is completely lacking from the Feature 85/86 assemblage. Smith argues that table glass was "probably exclusively the private property of officers and their messes" (1983:38), but Martin's argument (2004) calls this assertion into question. If Smith is correct, the lack of such glass in the present assemblage could indicate that no officers were using the dining facilities in the Second Barracks. It certainly is not proven, however, that Smith's conclusion holds true for all British military contexts, particularly, as Martin has argued, in the urban port environment of New York City. More likely, the absence of table glass from the present assemblage may simply be a result of the small size of the feature.

In terms of what was being eaten, the only item we can identify from these artifacts is shellfish.[18] Since shellfish were generally associated with the lower class in the 18th century (Baugher 2001:187), it is reasonable to associate these food remains with enlisted men and not officers. Given the food shortages during the war, however, it is likely that such distinctions were frequently blurred in practice if not in theory. It will be important to consider the results of the bone analysis regarding the cuts of meat represented in the midden in order to obtain a more complete picture of class associations that may be inferred from the faunal remains.

Returning to ceramics for a moment, it is interesting to consider where the soldiers obtained their pottery, and how this connected them to the local economy. The existence of a stoneware potter, Crolius and Remy, in such close proximity must be considered. The pottery was located just to the north of City Hall Park on Pot Baker's Hill from 1742 to 1814. Before 1800 they did not consistently mark their wares

[18]Again, the bones from this site are being analyzed separately.

(Janowitz 1992:4), so it is difficult to assign a piece of stoneware definitively to these potters prior to the 19th century. Only two pieces of the Feature 85/86 North American stoneware are painted, both with cobalt blue, which was typical of Crolius and Remy but was also widely used by other pot makers. The pieces are too fragmented to discern the particular motifs. Janowitz notes that Crolius and Remy often used incising (1992:4), which is present on one of the sherds. The potters did give a discount for wholesale, according to their broadsides (Janowitz 1992:5-6), likely an incentive for large institutional purchases. Vessels that were slightly damaged in the manufacturing process often were still sold (Janowitz 1992:6), probably for a discount, which would have been another incentive for institutions to purchase from this vendor. A few of the stoneware pieces in this assemblage do exhibit irregularities, including overfiring and uneven glaze. There is no indication in Feature 85/86, however, of heavy reliance on these potters for stoneware supply. Given the small size of the assemblage, this fact cannot be used to draw any conclusions about the Barracks stoneware collection. As for redwares, the other ware type most represented in the assemblage, Crolius and Remy apparently did not make redware items, so they were probably procured from another local potter, as there are several who are known to have produced wares of this type. (Janowitz 1992:8-9).

Based on the architectural garbage found in the assemblage, it is reasonable to suppose that this midden was in use early in the existence of the second barracks, or, at least, was no longer being used when the Barracks was destroyed. The small number of nails, brick and window glass are insufficient to be remains from the Barracks' destruction. Parsons' Feature Notes for 85 did mention that small fragments of brick were present, and that only a sample was collected, but there is no indication that brick

was an overwhelming presence in the feature. The nails and small brick pieces may be the scattered detritus of the Barrack's construction which remained on or close to the surface for several years after the building's completion and got tossed or displaced into the midden, while the 4 sherds of window glass most likely come simply from a broken window. The Feature Record also notes the trace presence of wood beams, but no further information is available. The coal and charcoal in the feature are negligible and insignificant in the overall composition of the midden. It is not known whether, like the brick, these materials were only a sample or represent all of the material found in the feature.

One interesting detail in the assemblage is the presence of a few items associated with pottery manufacture. As mentioned, the local potter Crolius and Remy was located just to the north of the Commons. While there is insufficient manufacturing waste in this assemblage for it to represent a potter's midden, it is enough in the context of a barracks midden to raise some questions. Although it is possible that the institutions situated on the Commons were obtaining seconds at a discounted or bulk rate from the potter, the pieces in question do not represent seconds but wasters B unusable pieces B and kiln furniture used in the firing process. The debris may have washed down onto the Commons from Crolius and Remy's location on the nearby hilltop, although the Palisade, when it existed, would have blocked its flow. This may be a disturbed context with earlier garbage, but it is also possible that the potters were using the Commons as a dumping ground. This would be an interesting consideration for the study of the communal use of space in urban colonial settings. It will be important to consider pottery

manufacturing waste as a whole throughout contemporaneous levels to begin to answer these questions.

Feature 71

Feature 71 was initially described by Parsons in the Feature Log as "an artifact concentration, south of Island 10." Ultimately it was grouped by the firm with "trash pit features" and its initial association designated as "Second Barracks, First Almshouse, New Gaol." It lies roughly 20 feet to the south and slightly to the west of Feature 85/86, according to Parsons' site drawings. (Fig. 5).

Excavation history for Feature 71 is minimal and ambiguous. In particular, F71's association with Feature 70 and the relevance of information in Parsons' field notes and records to each of these features is indeterminate. With one exception (the Feature Log), all sources discuss or represent F71 in conjunction with F70: the Bag Inventory Sheet lists Bag 1089 as relating to Feature "70-71," a Feature Record refers to backhoe excavation of "features 70 & 71" and a plan view depicts the two features, along with Feature 72, in close association. (Fig. 10). Apparently F70 and 71, and possibly F72, were excavated at the same time.[19] It is unlikely that the above-mentioned backhoe excavation refers specifically to the features themselves as they appear from the plan drawing to be small, circular pits, so it may be that the artifacts found in the screened backhoe dirt were recovered during monitoring after the features were excavated. If this is the case, it is unknown whether artifacts from this process are included in Bag 1089. The Feature Record refers to "[s]oil from vicinity of Features 70 & 71" - a larger area than the features themselves. A further question is the relevance of the human remains

[19]Features 70 and 72 are not listed in the "Summary of Trash Pit Features."

noted in the Feature Record in conjunction with both features and in the Feature Log only under Feature 70, not 71.

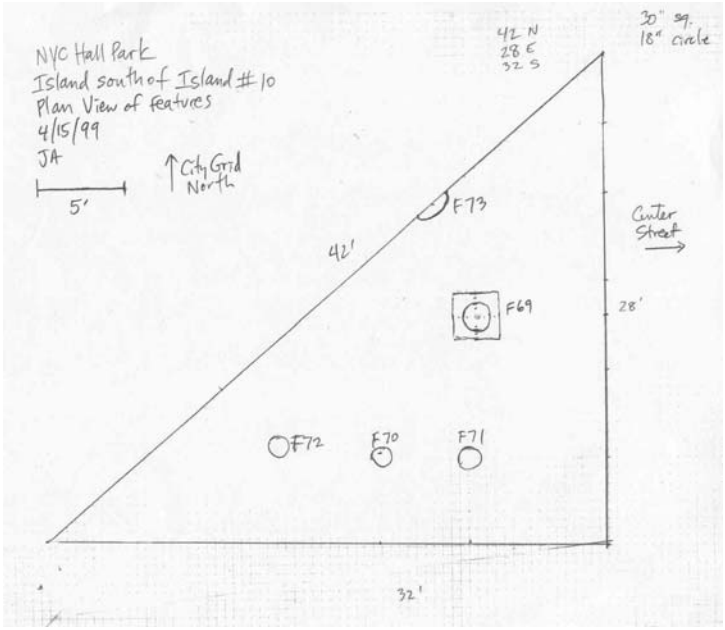


FIG. 10
Plan view of Features 70, 71 and 72.

Not surprisingly, no notes regarding stratigraphy have been located. The plan drawing from April 15, 1999 (fig. 10) is the only visual representation of Feature 71. This drawing depicts Features 72, 70 and 71, respectively, along and east/west axis at intervals of approximately 5 feet. The axis lies approximately at a 45º angle to the hypotenuse of island 10. This places Feature 71 squarely in the midst of the group of Second Barracks related trash middens including F85/86, F87, F99, F156, F163 and the largest midden, F88. This location more strongly supports placement as a Second Barracks midden rather than the mixed context deposit assigned by Parsons. It makes no logistical sense that this one pit would have been singled out for use by the Gaol and Almshouse. Further, as discussed below, the artifacts support a Second Barracks

association.[20] Of course, as mentioned in the above discussion of Feature 85/86, it is unlikely that the middens were used exclusively by one group of people.

Feature 71 consists of a total of 1075 artifacts. Figure 11 contains a breakdown of these artifacts by category. As with Feature 85/86, the largest category is faunal, at 31.7% of the assemblage, followed by food related artifacts, which make up 22.8% of the total, unidentifiable iron (16.3%) and architectural (14.9%).[21] Unlike Feature 85/86, however, in F71, personal artifacts (8.7%) are almost double the size of the tools/equipment category (4.9%), whereas in the former feature, those numbers are reversed. Finally, there is one communication item, a slate pencil, which constitutes less than 0.1% of the assemblage, and several additional unidentifiable artifacts: four sherds of ceramic (0.4%) and two "other": one stone, possibly architectural, and one piece of modern plastic garbage (<0.2%).

[20] It should also be noted that the 19th to 20th century time frame initially postulated in the Feature Record is not borne out by the laboratory analysis.

[21] To enable a clearer analysis, the category of "unidentifiable" has been broken down into "unidentifiable iron," "unidentifiable ceramic" and "unidentifiable - other."

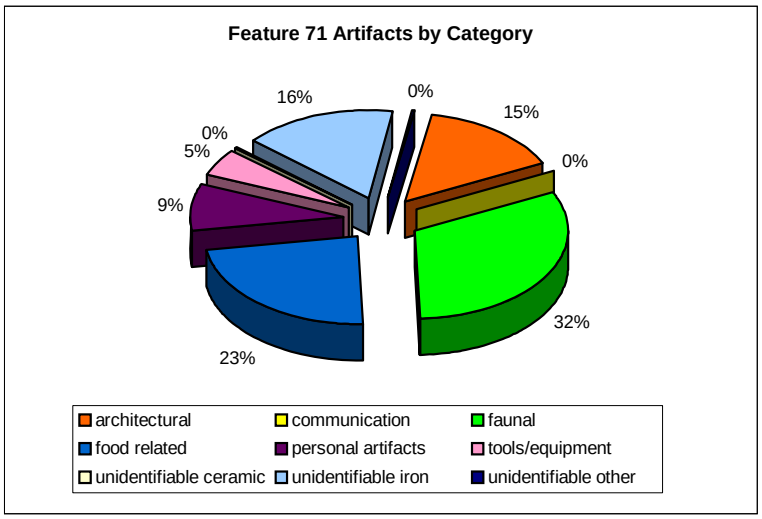


FIG. 11

In the faunal category, the distribution of oyster and clam for Feature 71 is roughly equal, unlike F85/86. Oyster, which was by far the largest proportion of the latter midden, constitutes a slightly smaller percentage of the total shell in F71 at 152 (44.6%) oyster shells or shell fragments to 189 (55.4%) clam. There are few whole shells, but the clam appear to be more intact than the oyster, which is not unusual as oyster shells tend to decay more quickly. In an institutional setting with a large number of people eating at one time, 341 shell pieces B which likely represent far fewer shellfish B is not a terribly large amount. In the broader context of the entire feature, however, it seems to be significant. As with F85/86, shell constitutes a large portion of the assemblage B almost one-third in this case. The total number of artifacts does not indicate long-term use of the trash site. It seems safe to assume that, at least for the time this midden was in use, shellfish were a significant food in the diet of the creators of this

trash. Quite possibly they were used in soups and stews as an inexpensive alternative to meat.

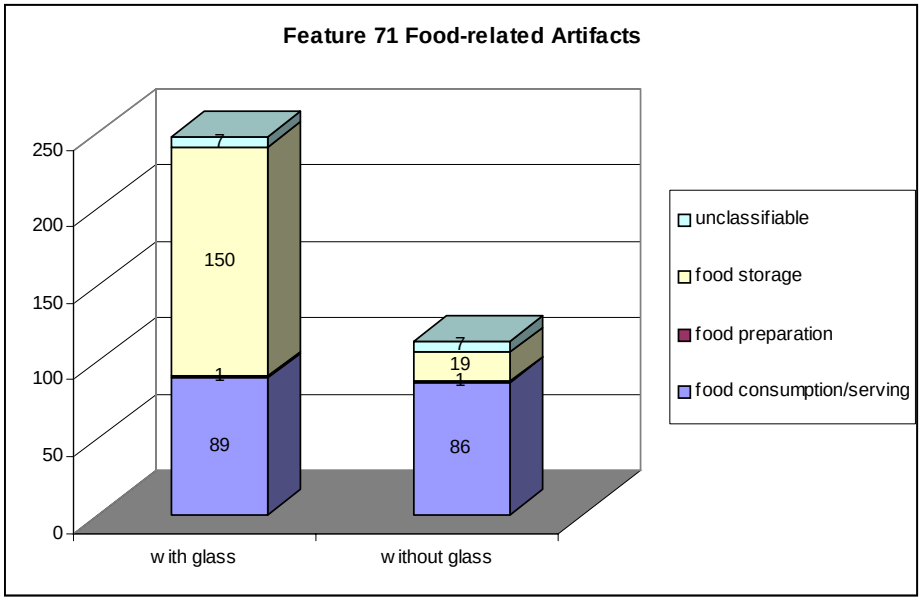
As noted in the discussion of F85/86, in the 18th century, shellfish did not enjoy the status it has today but was considered a food of the lower class. It was relatively easy to obtain, particularly in a port city, and inexpensive. Whether this means that, assuming this is a Second Barracks deposit, the garbage represents the remains of enlisted soldiers rather than officers, cannot yet be determined. Provisioning the British Army during the War was extremely difficult and starvation was a serious problem, particularly in the winter. (Burrows and Wallace 1999:251; Martin 2004:10-11). It is probable, then, that most food would have been acceptable for both officers and enlisted men. It would be helpful to incorporate the bone data into this analysis to consider food selection as a whole. How much meat was being eaten and of what quality should give us more complete picture by putting the consumption of shellfish in a broader context.[22]

Food-related artifacts comprise the second largest category, after faunal remains. The combination of the two groups, totaling 54.5% of the assemblage, leads to the conclusion that this was another midden for disposal of dining/kitchen garbage.[23] As with F85/86, the food consumption and serving category is substantially larger than the

[22]Additionally, if this is a Barracks midden, another consideration is that this building was occupied in its final years by poor people who made up the overflow from the Almshouse.

[23]This percentage will increase when bone data is added.

other categories. (Fig. 12).



The former items make up 70.3% of the ceramic collection, while storage vessels account for 9.9% and food preparation only 0.9%. Not all of the ceramic was categorized, however, with 18.9% of the assemblage too small to determine function. The food-related remains seem to pertain more to dining than kitchen functions. Only 10.8% is kitchenware while 70.3% is tableware. This is relevant for looking at spatial arrangements within the barracks and possibly at divisions of labor. Of course, it is unlikely that there was a clear division in where the two types of trash were deposited, both probably ending up mixed together in the various middens.

There are slightly more coarse wares than refined ones in this assemblage, with 54.9% coarse to 45.1% refined. Of the tablewares, however, 59.3% are refined.

Kitchenwares are 100% coarse ceramic. Almost three-quarters, or 73.5%, of the food-related ceramic is imported. (Table 4).

	Coarse	Refined	Imported	Domestic
Kitchenware	20	0	6	16
Tableware	35	51	80	6

TABLE 4

Creamware is the most common ware type, making up slightly over one-quarter (26.5%) of the total. Staffordshire slipware and tin-glazed earthenware (14.2% each), white-salt glazed stoneware (12.4%) and North American stoneware (11.5%) are also well-represented. Redware

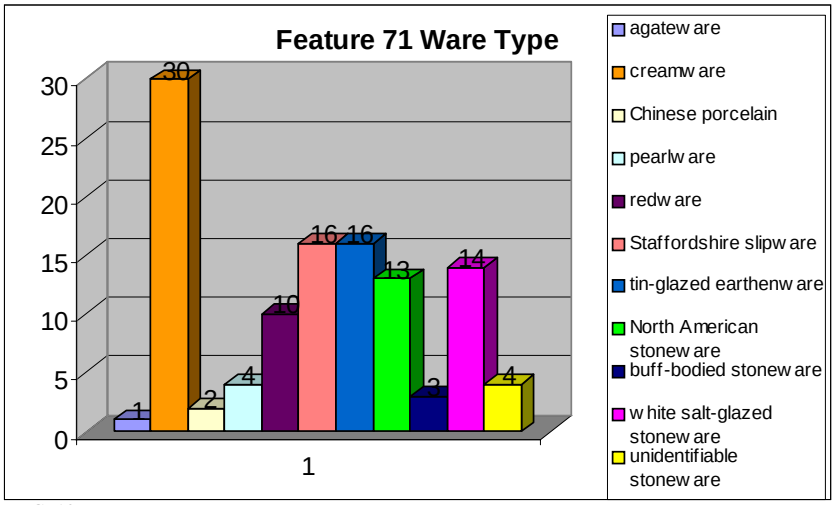


FIG. 13

constitutes 8.8% of the total food-related ceramic, while pearlware, Chinese porcelain and buff- bodied stoneware each account for less than 4%. One sherd of agateware was also identified in the assemblage. (Fig. 13).

Two interesting vessels were recovered from this feature. One is a debased scratch-blue mug with elaborate molding including a medallion bearing the initials "GR." The initials stand for "George Rey," or King George III, and were common on debased scratch-blue vessels such as this one. (Dinnel and Chaney 2005; Richardson 2005). The other vessel of note is a tin-glazed earthenware punch bowl, decorated with a handpainted cobalt blue fish and manganese splashing. This is an English delft produced in the 18th century and found in other British military contexts. (Miller & Stone 1970:40). The punch bowl form suggests that some form of entertaining was going on, an activity that almost certainly would have been associated with officers.

Feature 71 contains a large percentage of liquor bottles, which is consistent with the placement of British soldiers as its primary users. The ubiquity of liquor bottles in British military assemblages of this time period has been discussed above in conjunction with Feature 85/86.

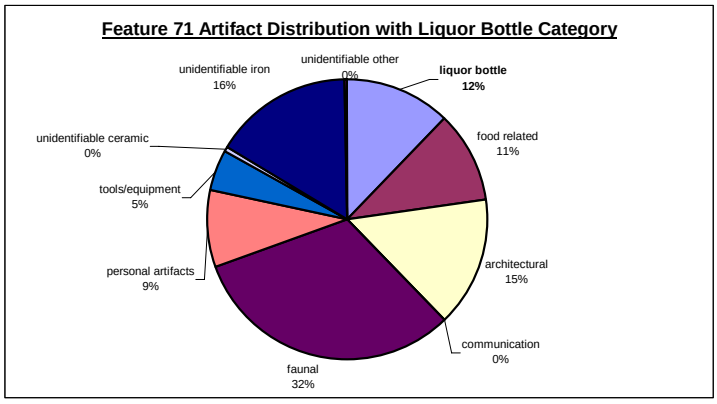


FIG. 14

When placed in their own category, liquor bottles constitute 12% of the assemblage, the fourth largest group after faunal, unidentifiable iron and architectural remains. (Fig. 14). Of the food-related artifacts, they make up slightly more than 53%, over half of this category, and approximately 97% of food-related glass. These proportions are smaller than what was found in Feature 88, the largest Second Barracks midden, where liquor bottles constitute approximately 73% of the total food-related items, but much greater than Feature 85/86, where liquor bottles account for only about 20% of the food-related items, although this latter figure may be sampling error due to the small number of artifacts. Regardless, it is clear that the Feature 71 midden was used by a group of people who consumed a large amount of alcohol. While not definitively British soldiers, this would be wholly consistent with findings at other 18th century British military sites.

The third and fourth largest categories in Feature 71 are unidentifiable iron at 16.3% of the assemblage, and architectural remains at 14.9%. These are mentioned together here as a number of the unidentifiable iron pieces are most likely nails, based on their form, which would increase the size of the architectural category. The known architectural group consists wholly of building components, mostly square nails (38.1%) and window glass (30%) along with some brick (13.8%). The rest of the group is made up of round nails, mortar, sandstone, plaster, slate and one ceramic tile, each of which comprise less than 5% of the assemblage. The ceramic tile is modern, and the round nails 19th century or later. The small number of 19th century artifacts makes it unlikely that this is a mixed deposit, so some disturbance must have occurred.

Personal artifacts make up 8.7% of the Feature 71 assemblage. These items consist mainly of the remains of one or a few chamber pots and clay smoking pipes. (Fig. 15). Pipes constitute 72.3% of the personal artifacts and sherds from chamber pot(s) 22.3%. Five additional items complete this category: two brass shoe buckles, two pieces of a glass medicine or perfume bottles and one modern plastic cigarette holder.

Finally, the tools and equipment category, 4.9% of F71, is almost wholly fuel or fuel by-products, with one piece of flint. Coal makes up 41.5% of this group, and clinker or slag 56.6%.

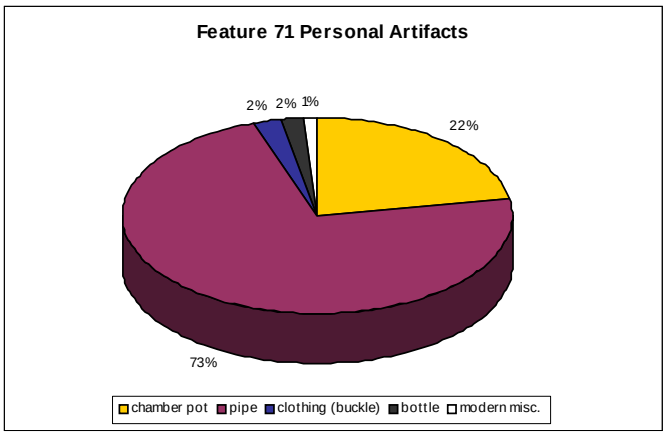


FIG. 15

Dating for this feature suggests an 18th century formation. The mean ceramic date is c.1754, which places the feature in the second half of the 18th century. (Table 5). Two-thirds of the pipe stems which were able to be accurately sized date to this time period: specifically, 1750-1800.[24] The few ceramic pieces with later dates, mainly the

[24]See the discussion of the validity of mean ceramic dates and pipe stem dating in the Feature 85/86 section.

pearlware, could indicate that the midden was formed partially by those individuals using the Barracks after the War ended.

Ware Type	Production Dates	Mean Date (x)	# of sherds (f)	(x)(f)
Agateware	c.1725-1750	c.1737.5	1	1737.5
Chinese porcelain	c.1660-1840	c.1750	2	3500
Creamware	c.1762-1820	c.1791	30	53730
North American stoneware	c.1700-1800	c.1750	13	22750
Pearlware	c.1780-1840	c.1810	4	7240
Redware	c.1700-1830	c.1765	10	17650
Staffordshire slipware	c1670-1795	c.1732.5	16	27720
Tin-glazed earthenware	c.1600-1800	c.1700	16	27200
White salt-glazed stoneware	c.1720-1765	c.1742.5	14	24395
TOTALS			106	185923
Mean Ceramic Date [(x)(f)]/f]				**c.1754**

TABLE 5

Feature 55

Feature 55 is the largest of the three features described in this report, consisting of a total of 7,920 artifacts excluding bones. It is a trash pit feature located on the southern edge of Island 11, which lies in the southeast corner of the site. The midden was assigned a mixed New Gaol/First Almshouse context by Parsons. This association is suggested by its location, which is almost directly between the two structures.

The Almshouse was the first public institutional building erected on the Commons. Opening in 1736, it marked a shift in the responsibility for poor relief from private religious groups to government. (See Baugher and Lenik 1997:3; Burrows and Wallace 1999:145). The two-story stone and brick building housed "a cross-section of the city's lower classes, ranging from 'Poor Needy Persons and Idle Wandering Vagabonds' to 'Sturdy Beggars,' petty criminal, rogues and 'parents of Bastard

Children.'" (Burrows and Wallace 1999:156). "Unruly and ungovernable servants and slaves" could also be sent to the Almshouse for "hard labour." (Burrows and Wallace 1999:156). Like most 18th century poor houses, the institution was organized on the "family model," mixing all ages and sexes. (Spencer-Wood 2001:118). Residents, however, were mainly women, children and the elderly, with a few disabled or injured men. (Baugher 2001:198). Space for the superintendent and his family within the Almshouse building was provided for by the Common Council. (Baugher 2001:186). "Rigid order" was imposed on inmates, who were required to adhere to a strict daily regimen including work such as carding wool or raising crops. (Burrows and Wallace 1999:156).

The New Gaol was erected more than 20 years later, in 1759, as a response to increasing crime in the city. (Burrows and Wallace 1999:185). The three-story masonry building was intended to house criminals, but was used for a number of other purposes throughout its history, including the detention of debtors (Burrows and Wallace 1999:191-192) and prisoners from both the French and Indian War (Burrows and Wallace 1999:185) and the American Revolution (Burrows and Wallace 1999:192). Severe overcrowding was an ongoing problem. (Burrows and Wallace 1999:213). During the Revolution, American prisoners were "jammed into" the building and endured horrendous conditions, with men starving or freezing to death, or dying of disease. (Burrows and Wallace 1999:252-253). When the war ended, the building was returned to its earlier function of housing felons and debtors, the latter of whom paid for their own clothing, food and fuel. (Burrows and Wallace 1999:365). The Gaol continued to house

prisoners until 1824, and was eventually refurbished and converted into the City's Hall of Records.

Documentation for Feature 55 is exceedingly sparse. Field notes record its initial discovery on April 8, 1999, during unspecified monitoring. "Triage recovery" was conducted on April 9, with only "scanty documentation due to [the] speed of excavation." The only descriptive notation regarding the feature concerns its contents, which are labeled "18th century." The large amount of "clam shell and butchered bones" is also noted.

The artifact distribution for Feature 55 is represented in Figure 16. As with both previous features, the largest category of artifacts is faunal. In F55, however, the percentage of shell is almost double that of the other two collections, constituting 66.8% of the total artifacts.[25] The second largest category is food-related artifacts, comprising 13.4% of the assemblage. Architectural artifacts, the third largest, account for 10.2% of the Feature 55 group. Unidentifiable metal is 3.8% and personal items 3.7%, with tools and equipment, furnishings,

[25]As with the other features, it is essential that an analysis of this assemblage be conducted with bone data included.

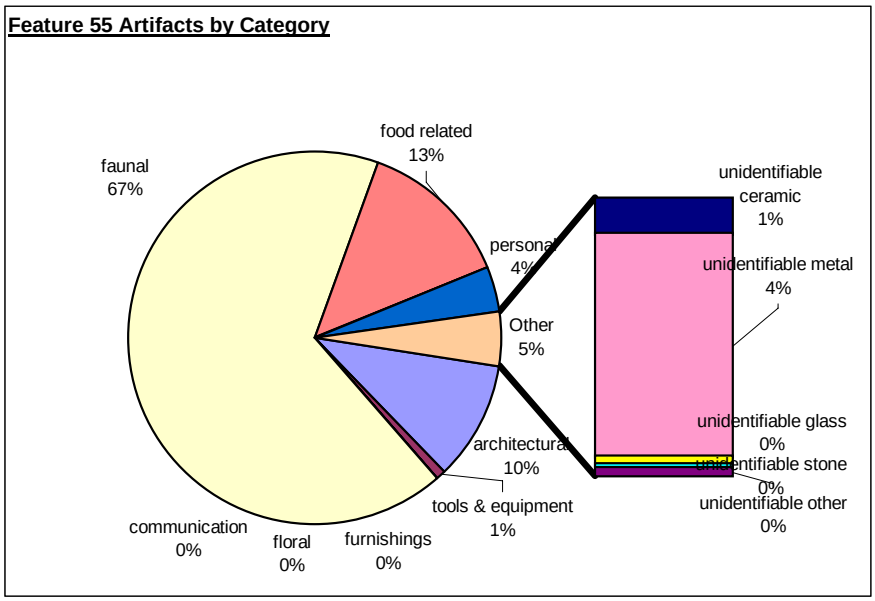
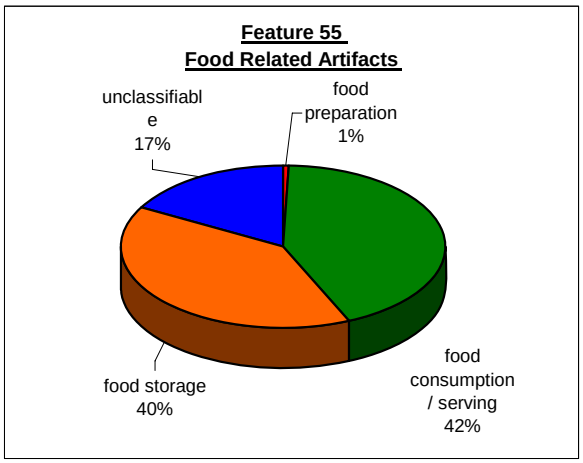


FIG 16

communication, floral and each of the unidentifiable groups all constituting less than 1% each.

Oyster accounts for 7.6% of the faunal remains with clam making up the remaining 92.4%. This may be consistent with a lower class assemblage. Chowders, including clam chowder, were considered "poor man's food" (Stradley 2004) and would have been an easy and inexpensive meal for use in an institutional setting such as the almshouse or gaol. It is surprising, however, that the number of oysters is so much smaller than clam, as oysters have been called "the mainstay of the poor." (Burrows and Wallace 1999:187). This may reflect a slightly better diet for the Almshouse inhabitants than for most of the poor. Huey characterizes the Almshouse fare as "decent," with a higher number of daily calories per person than almshouses in England, and including some tea, chocolate and sugar. (2001:144).

Approximately half of the identifiable food related artifacts are for consumption and serving and half for storage, although this figure drops slightly when unidentifiable items are included in the total. Specifically, 42.8% of the artifacts belong in the consumption/serving category, 39.7% in the storage category and 0.6% in the food preparation category, while 16.5% are unidentifiable. (Fig. 17). Thus, the assemblage is divided essentially evenly between table and kitchen wares, with 42.8% of the total belonging to the former category and 40.3% to the latter.[26] A greater disparity exists in these percentages when liquor bottles are removed from the group. (Fig. 18). In this case, consumption and serving increases to 48.9% while storage decreases to 31%. Nevertheless it is clear, particularly in conjunction with the large amount of faunal remains, that this midden is associated with both food preparation and consumption, and both activities likely were occurring in the related institutions, although given the probable mixed composition of the collection, it is difficult to delineate these activities with any precision.



[26]Of the total *identified* food-related artifacts, 51.5% are tablewares and 48.5% kitchenwares.

FIG. 17

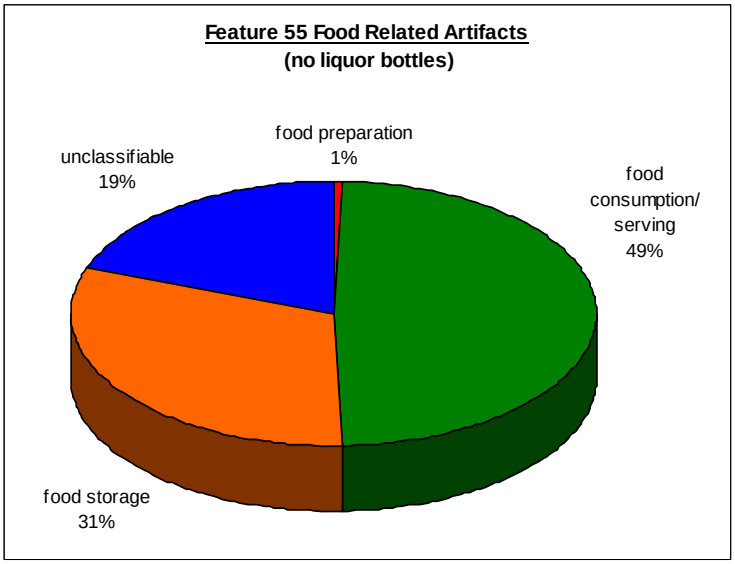


FIG. 18

Of the total food-related artifacts, 890 are ceramic and 159 are glass. Of the latter category, 82.4% is liquor bottle glass and 17.6% is table glass. Of the entire food-related assemblage, however, 12.5% is liquor bottle glass, while this item makes up only 1.7% of the entire feature. Although liquor was used by the midden's creators, it was not pervasive.

Figure 19 provides an overview of the different ware types present in the Feature 55 assemblage. The majority of the ceramics in this assemblage, 56.3%, are imported. The percentage is much higher for earthenware, at 81.8% imported as compared to 23.1% of stoneware. (Fig. 20). This may be due largely to the presence of the local stoneware potters, as discussed above. In fact, North American stoneware is the most numerous

ceramic type, at 33.8% of the total food-related ceramics, or 35.1% of all ceramic.[27] The next largest category,

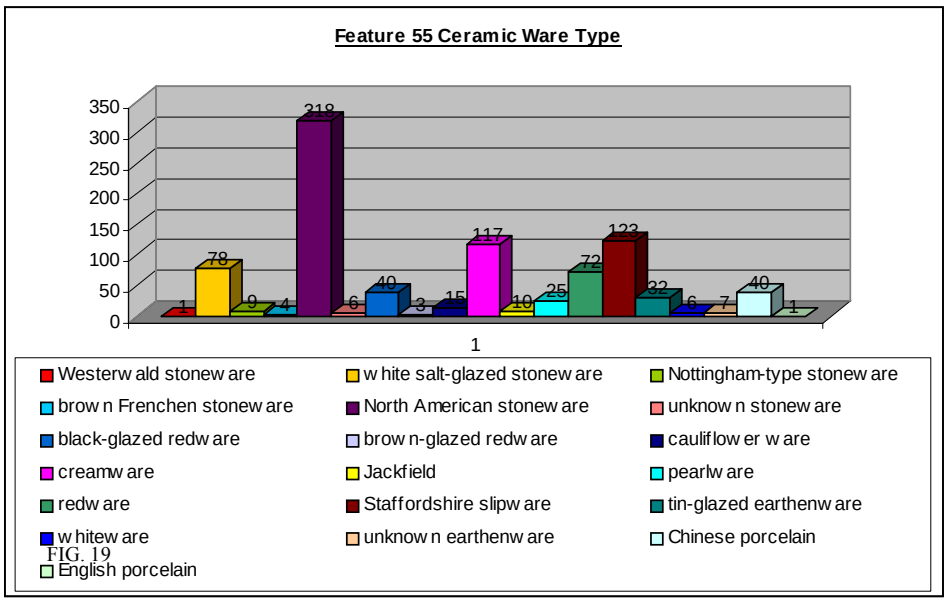


FIG. 19

[27]One hundred percent of personal ceramics (chamber pots) in this feature are North American stoneware. There are only 17 pieces of personal ceramic, and, unless stated, the ceramic analysis here covers food-related ceramic.

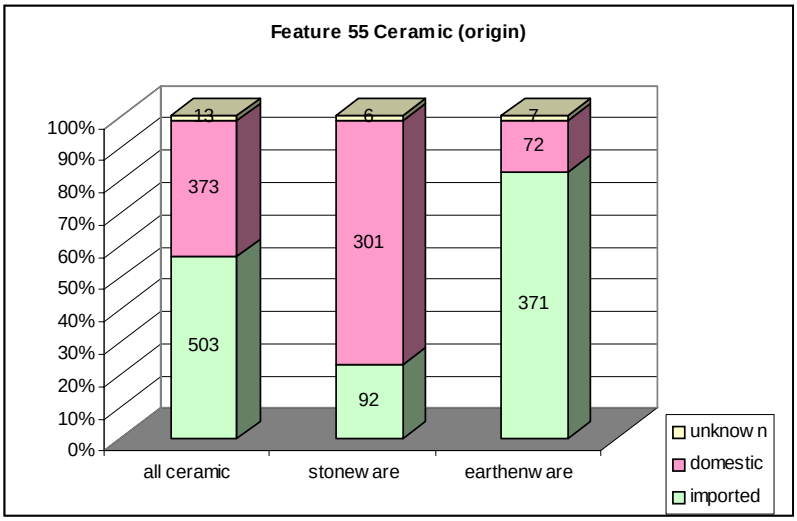


FIG. 20

Staffordshire slipware, is less than half the size of this stoneware group, at 13.8% of the total. Creamware is almost as numerous as slipware, with 117 pieces, or 13.1% of the total ceramic. Every other ceramic type is represented by less than one hundred sherds, and only two of these B white salt-glazed stoneware (78) and redware (72) B include more than 50 sherds. All of the kitchenware is coarse ceramic (291 sherds). While the majority of the tableware is refined (263 sherds) there is still a large number of coarse tableware pieces (123). (Table 6).

	Coarse	Refined	Domestic	Imported
Kitchenware	291	0	251	40
Tableware	133	289	76	346

TABLE 6

In addition to North American stoneware, the other predominant coarse tableware is Staffordshire slipware, while white salt-glazed stoneware and creamware make up the bulk of the refined table ceramic. It appears, then, that coarse and refined wares were both used for dining, perhaps indicating that the inhabitants or the administrators of the Gaol and/or Almshouse took what pieces they were able to obtain easily and cheaply. There are at least three-dozen damaged or imperfect pieces of North American stoneware, which could have been sold in bulk to the Almshouse at a discount. This is reinforced by the presence of a number of unusual stoneware pieces, shallow bowls or deep plates, probably from Crolius and Remy. Further, although there are a number of similar pieces, no discernable sets are present, which also suggests need and affordability, not display, were the main dictates of ceramic purchases in these institutions.

Nevertheless, there are indications in the ceramic assemblage that residents of the Almshouse, and possibly the Gaol, were able to obtain some luxury items for themselves. There is a surprisingly large amount of Chinese porcelain, for example, for what might be expected from a group of destitute and incarcerated individuals. Schwind states that "oriental" porcelain was the "most expensive" tableware (Baugher 2001:186), yet forty pieces were found in the Almshouse/Gaol midden. This amount does not represent a large percentage of the ceramics, but neither is it insignificant at 4.4% of the total. There are also over a dozen pieces of handpainted pearlware, several pieces of scratch-blue stoneware and creamware tea items. Perhaps these objects represent bits and pieces of their former lives the residents were able to bring with them, or possibly they were able to obtain small quantities – odds and ends – at reduced prices. (See Baugher 2001:199).

Whatever their significance, it is important to recognize the complexity of the groups that inhabited these institutions.

The third largest category in Feature 55 is architectural. Baugher and Lenik found "a tremendous amount" of architectural debris in their Almshouse excavation. (1997:17). The building was demolished intentionally in 1797, which would have created a large amount of debris. The records of the Common Council indicate that the building was brick, with mortar, brownstone and lime components. (Burrows and Wallace 1999:156). The F55 assemblage consists mainly of brick, at 38.4% of the category. Square nails are the second most numerous artifacts, comprising 24.9% of the architectural group. Window glass is 16.1%, plaster 7.9% and mortar 6.2%. There is also a small collection, 5.6%, of unidentifiable stone. The rest of the category consists of a lock and a hinge, 4 pieces of an iron pipe and 2 pieces of tin-glazed earthenware tile. As mentioned, there is also a large amount of unidentifiable metal: 303 pieces, all but 4 of which are iron. It is likely that nails make up a large portion of this category. The composition and size of the architectural category, then, indicates that it is largely remains of the Almshouse demolition. While the New Gaol was also a brick building, (Landmarks Preservation Commission 1993:12), it was not demolished until 1903. As F55 is an 18th century feature, the brick and other remains are likely from the Almshouse.

The vast majority of personal items are pipes, which comprise 79.3% of this category. (Fig. 21). Smoking itself is not an indicator of class, as pipes and tobacco were readily available to all economic strata. (Baugher 2001:191). The quality of the artifacts, however, does seem to indicate a lower-class assemblage, or, at least, not an upper-class one. Most of the pipes are plain. Only 8 of the 230 pieces have incised or molded

decoration: 5 with rouletting on the bowl rims and three with floral molding. Three other bowls have the Gouda shield on both sides of the foot, showing their Dutch origin. Two of these pipes also bear an 'S' which means "sleght" or ordinary, probably indicating they were not smoked by upper-class individuals. There is one bowl with an 'L,' but the meaning of this letter is unknown. One additional pipe has an eye-shaped mark on its foot.

All other groups within the personal category each account for less than 7% of the total. Four of these categories make up greater than 1% of the total: toilet articles (chamber pots and one lice comb), clothing (buttons and a few buckles), medicine (bottles) and unclassifiable items. Broken down by object, chamber pots make up 5.9% of the category, buttons 3.8% and buckles and medicine bottles 1.4% each. There are 5 copper, 2 brass, 2 bone and 2 bone and brass buttons, with molding on one copper and one bone and brass item. The shoe-buckles are copper,

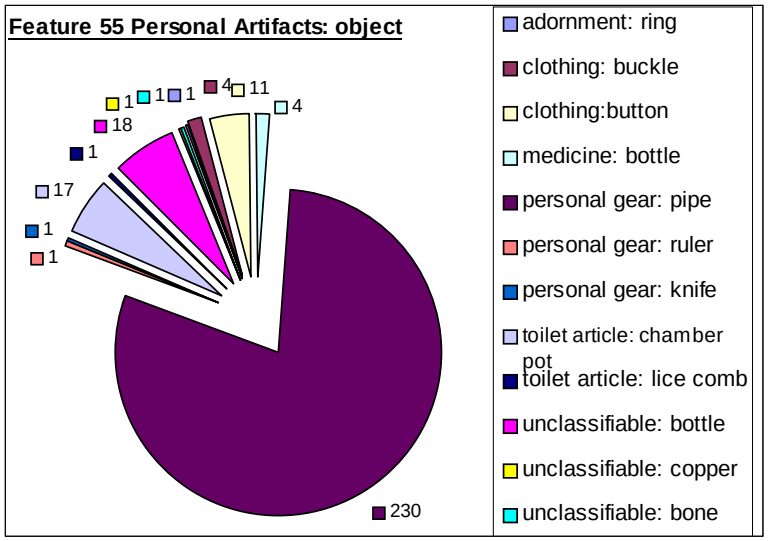


FIG. 21

brass or lead, and 2 have fairly intricate designs. The assemblage also includes a small piece of a brass ruler, a bone lice comb, a plain ring and an iron knife or razor blade. While not extravagant, this group does include a few items that are more than mere utilitarian objects, particularly the two molded buckles. As with the finer ceramic, the meaning of these items is not understood, but they undoubtedly add complexity to the individuals who inhabited these structures.

The majority of the tools and equipment category is fuel, at 58.7%. This class includes clinker (10), anthracite and bituminous coal (18) and charcoal (16). Twelve pieces of an iron pipe (16.0%) and 9 pieces of unidentifiable iron (12.0%) are the next largest group. Five pieces of kiln furniture, used in pottery manufacturing, were recovered. This constitutes 6.7% of the category. The collection also includes one lead chain link and two items probably associated with productive activities: a straight pin (sewing) and a button blank. The pin is copper with a rounded head and is embedded in a clump of rusty iron. These latter items may be from the Almshouse, since, as noted above, the residents were required to engage in some type of labor. Whether this was true for the Gaol as well is not known. If this is a First Almshouse feature, the single button blank would seem to indicate that button making was not a central activity.

Of the three features, this is ironically the only one to contain any potential military artifacts. In this case, the assemblage includes two pieces (2.7%) of what is probably gun flint. This does not mean, however, that this is a military assemblage, particularly when considered in the context of the other barracks' middens, and other British military contexts as discussed above. Most likely, these pieces are simply

confirmation that middens were not exclusive and the disparate groups that shared this space interacted in the minutiae of their daily lives.

The furnishing category, which comprises 0.05% of F55, contains two types of objects: 3 pieces of lamp chimney glass and one piece of molded tin furniture hardware. The floral and communications category each consist of one item: a shell from a nut and a piece of paper.

Ware Type	Production Dates	Mean Date (x)	# of sherds (f)	(x)(f)
Brown Frenchen stoneware	c.1700-1800	c.1715	4	6860
Cauliflower ware	c.1760-1780	c.1770	15	26550
Chinese porcelain	c.1660-1840	c.1750	40	70000
Creamware	c.1762-1820	c.1791	117	209547
English porcelain	c.1745-1795	c.1770	1	1770
Jackfield/black glazed redware	c.1740-1780	c.1760	50	88000
North American stoneware	c.1700-1800	c.1750	318	556500
Nottingham stoneware	c.1700-1800	c.1750	9	15750
Pearlware	c.1780-1840	c.1810	25	45250
Redware	c.1700-1830	c.1765	75	132375
Staffordshire slipware	c.1670-1795	c.1732.5	123	213097.5
Tin-glazed earthenware	c.1600-1800	c.1700	32	54400
Westerwald stoneware	c.1650-1775	c.1712.5	1	1712.5
White salt-glazed stoneware	c.1720-1765	c.1742.5	78	135915
Whiteware	c.1820-1900	c.1860	6	11160
TOTALS			**894**	**1568887**
Mean Ceramic Date [(x)(f)]/f]				**1755**

TABLE 7

The mean ceramic date for this feature is 1755. (Table 7). Pipe stems are divided almost evenly between the first and second halves of the 18th century, with 51% dating from 1750 to 1800 and 48% from 1720 to 1750. (Fig. 22). While these methods are not precise, they do tell us generally that most deposition in this midden probably occurred in the later portion of the 18th century.[28]

[28]See the discussion of the validity of mean ceramic dates and pipe stem dating in the Feature 85/86 section.

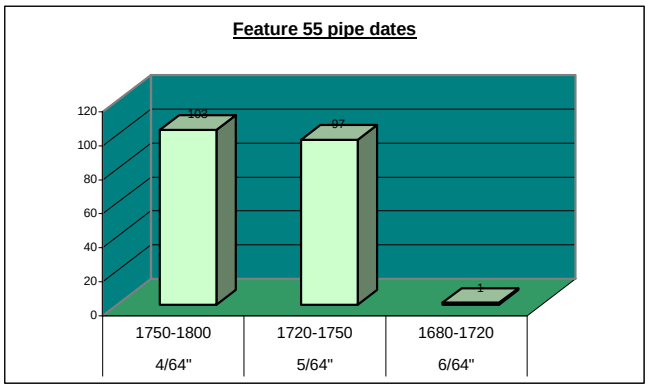


FIG. 22

Conclusion

Based on the above analysis, Features 85/86 and 71 are most likely Second Barracks middens and Feature 55 a First Almshouse or mixed Almshouse and Gaol midden. F85/86 and F71 appear similar in the overall distribution of artifacts while F55 exhibits significant differences. Figure 23 provides a comparison of the three assemblages by artifact category.[29]

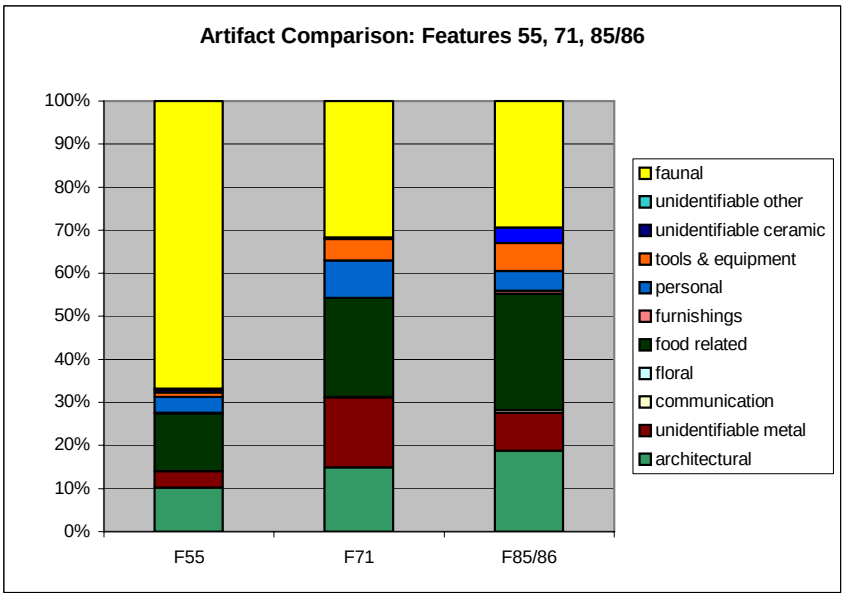


FIG. 23

[29] One problem is the small size of F85/86, which casts doubt on the representativeness of the sample.

The largest category for all three features, faunal remains, is much larger in Feature 55: more than double that of the other two features. The second largest category for all three is food-related artifacts, but this group is significantly smaller in Feature 55 than in F71 and F85/86. Architectural and unidentifiable iron/metal are either third or fourth in all three features. The fifth and sixth categories are either personal artifacts or tools and equipment, the former being smaller only in F85/86. The remaining categories are the additional unidentifiable items and small

categories with no more than a few items, including furnishings and communication.

Despite this comparison, it cannot be said with certainty that Feature 85/86 and Feature 71 are from similar contexts, while Feature 55 is from a different context. When examined in more detail, this distinction becomes less clear. A closer analysis of ceramics, for example, shows significant differences between the features. The same general ware types are present in all three assemblages, but in differing proportions. (Fig. 24). In F55, North American stoneware is by far the most numerous type of ceramic, perhaps reflecting a heavier dependence on the local potters in the city institutions than in the British military context. In contrast, creamware is by far the predominant type in F71, while in F85, redware dominates the assemblage. Tableware is evenly split in F85/86 between imported and domestic, and refined and coarse, whereas in the other two features, refined and imported tablewares are much more common than coarse or domestic.

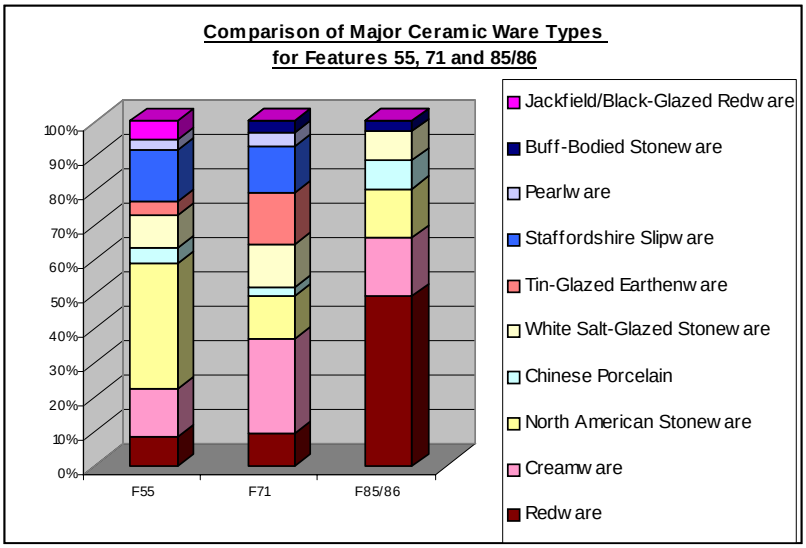


FIG. 24

More comparative analysis, considering the City Hall Park site as a whole, needs to be done before identifiable patterns can be discerned.

D: ***An Analysis of British Barracks During the Revolutionary War in New York City***

Jennifer Borishansky

Brooklyn College Archaeological Research Center

Figure 1. Current map of Manhattan overlay on map of pre-colonization.

In the vast and expanding city of New York, whose motto of the past 400 years seems be 'tear down the old and build the new,' it is remarkable that any secrets remain hidden under the pavement. Most of the city's buried past has been destroyed by subway tunnels, building foundations, sewer lines and the like, but there still remain a few undisturbed sites in this thriving metropolis. One of the best-preserved sites is that of City Hall Park, formerly known as the Commons, in lower Manhattan. The Commons have been used as public land from the early 17th century to the present. It was the location of British Barracks, almshouses, and jails, as well as the site used for public rallies and demonstrations.

The Commons: An Overview

City Hall Park, known as the Commons in the 18th century, is a triangular plateau of land with the modern borders of Broadway on the west, Park Row and Centre Street on the east, and to the north by Chamber's Street. Early colonial use of the Commons, rooted in Dutch tradition, was as communal pasture and as a source of raw materials. Because of its location in the outer limits of town, the 18th century Commons was an attractive site for dangerous industries such as pottery manufacture. The first known governmental use of the Commons dates to an execution in 1691, but governmental usage increases steadily throughout the 18th century. The first almshouse was built in 1735. In the 1730's and 1740's the military began using the Commons as a parade ground and erected a Palisade in 1745 across the northern boundary. In 1757, the Upper Barracks and New Gaol was constructed on the grounds.

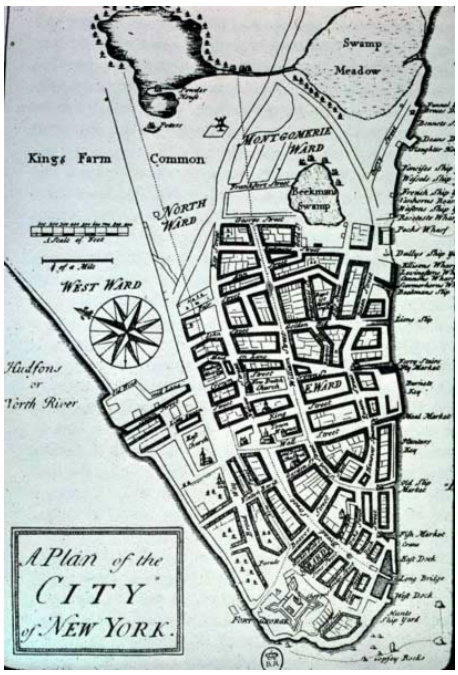


Figure 2. Map of New York, 1728.

As the city continued its growth north, the Commons became less isolated. Despite the increased institutional use, the Commons continued to be used as public gathering space, either for celebration or demonstration. Opponents of British policies rallied at the Commons, and from 1766-1770, British soldiers cut down four of the five Liberty Poles erected by the "Sons of Liberty". During occupation, American prisoners-of-war was housed in the Gaol and Bridewell. It was a time of change and strife for the city. After the war, the barracks were removed and the primary function of the Commons was again civic. Construction began on City Hall in 1803 and Tweed Courthouse in 1861 and both structures remain in City Hall Park today.

The Commons have been public lands since the early 17th century, and is an example of rare archaeological preservation in New York City. Little is known about the daily life of the occupants of the commons; they are nearly invisible in the historical record. The research potential of this site is vast and crucial to the history of the city. Avenues of

research will include examination of public space and changing land use in an urban environment.

Timeline of Structures on the Commons

- Windmills, built 1663-64 and 1692-95
- John Harris House (c. 1720-30)
- First Almshouse, 1735
- Palisade, 1745
- Powder Magazine, 1747
- New Gaol, built 1757-59
- Upper Barracks, 1757
- Second Barracks, 1774
- British Barracks, 1782
- First four Liberty Poles, 1766-67, location unknown
- Fifth Liberty Pole, 1770 (on Harris Lot)
- Bridewell, 1775
- City Gallows, 1784
- Second Almshouse, built 1796-97
- City Hall, built 1803-1812
- Rotunda, 1818
- New York County (Tweed) Courthouse, 1861

The Barracks

In 1745, the city began construction of palisades, which extended from Cherry Street near the East River to the Hudson and what is now Chambers Street. This defensive measure was prompted by the war between Spain and England and the fear of an attack from Florida. For the first time, access to the Commons was restricted and use of the land, although still municipal land, became more defensive in nature.

During the French and Indian War in the 1750's, the English sent 1000 troops to winter in New York. Because the barracks at Fort George could not house the additional troops, and the free quartering of soldiers in people's home was considered too heavy a burden, the Common Council voted in 1757 to build a barracks on the Commons that could house 800 men. Construction began on October 31 and was finished by November 29.

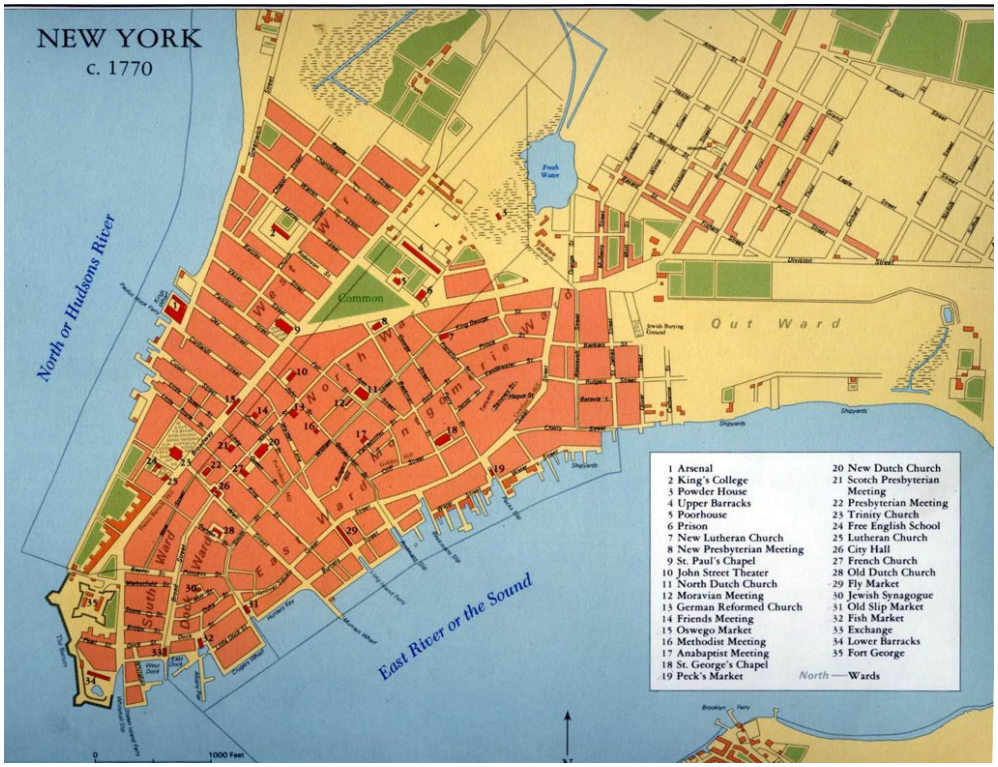


Figure 3. Map of New York City, 1770.

By 1764 the war with France had ended, but there was a growing rift between the American colonists and England. The Commons became a rallying ground for those Americans that opposed British policies such as the Stamp Act and the Navigation Act. When the Stamp Act was repealed in 1766, the Sons of Liberty erected a Liberty Pole on the Commons, which British soldiers promptly cut down the next day. The American Sons of Liberty and the British soldiers increasingly competed with one another in the years leading up the Revolutionary War. From 1766 to 1770, the Sons of Liberty erected 5 Liberty Poles, four of which were cut down by the soldiers. The fifth pole was mounted on the Harris House lot, land that had not been acquired by the Commons yet, and stood until the British Occupation of 1776.

In 1774 and 1782, additional barracks were built on the commons in the build up to the war, and after New York City became the headquarters of the British army (See Figure 4). Prior to the occupation of New York City, the population was 25,000. After the Battle of Long Island was lost the population dropped to 5,000 as rebels evacuated the city, and then rose to 33,000 as loyalist swarmed in from the countryside. During the war, public buildings such as those located on the Commons were used to house prisoners of war. These prisoners were treated harshly and most died. The provost marshal for British prisons in New York City, William Cunningham confessed in 1791 that he starved "more than 2,000 prisoners…by stopping their rations, which [he] sold." Furthermore he admitted that:

> There were also 275 American prisoners and obnoxious persons executed, out of which number there were only about one dozen public executions, which chiefly consisted of British and Hessian deserters…for private execution…the unfortunate prisoners were conducted, gagged, just behind the Upper Barracks, and hung (sic) without ceremony, and there buried[30].

[30] Stokes, quoted in NYC Landmarks Designation Report

The feeding of the British troops, much less the American prisoners, was a logistical nightmare for the British army. Rebel pirates routinely attacked supply ships, and foraging off of the local land was hazardous. The few supplies that did manage to make it to the troops were often spoiled, and livestock seldom survived the harsh trip across the Atlantic. For the most part the only meat that the troops received was salted meat, apart from the occasional successful raid rebel livestock. As the war progressed several of the small islands off of Manhattan, such as Governors Island and Randalls Island, were used for gardens and the pasturing of sheep, cows, and pigs. Although the troops never completely ran out of food, there were many times throughout the war in which they received on starvation rations. It is no wonder that the prisoners of war were starved.

In addition to the scarcity of food, soldiers had to forage for fuel. The Treasury considered shipping coal an overly costly expense. Winters in New York are typically harsh, but the coldest winter on record occurred during the occupation in the late 1770's. The entire harbor was frozen solid, and no shipments of supplies could reach the soldiers. It was during the British occupation that what is now New York City was nearly completely deforested.

Excavation and Analysis

Parsons Engineering excavated the City Hall site as a rescue operation in 1999 prior to reconstruction of the park. Originally scheduled to last eight weeks, the amount of material recovered, including human remains, the actual excavation took eight months. Excavators literally were digging just ahead of bulldozers. Because the projected extended well beyond the original projection, the cost was higher than anticipated. The city's refusal to supplement funds for analysis resulted in the project being shelved for several years. In 2001, Brooklyn and Hunter College received funding to do analysis on the non-human bone and archaeological remains recovered under the direction of Dr. Arthur Bankoff, Dr. Sophia Perdikaris, and Dr. Tom McGovern.

Although several of the major features have been identified, work is still in progress and the full analysis of the site is still several years away. However, over 25,000 bones and artifacts recovered trash pits in association with the Upper Barracks (Feature 84) and the Second Barracks (Features 88 and 99) have been through the preliminary stage of identification and analysis (see figure 5). Features 84 and 99 are complete, whereas Feature 88, the largest feature, is approximately 60% complete.

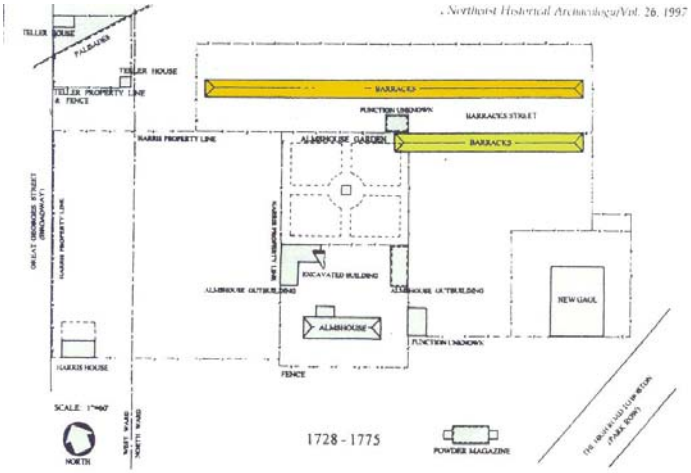


Figure 9. *A Composite Map of the Northern Portion of City Hall Park Depicting 1728–1775.* Hunter Research, Inc., produced the original map showing the location of all known structures including our excavated colonial foundation. In this version, redrafted by Claudia Diamont, the code numbers have been replaced with identification labels.

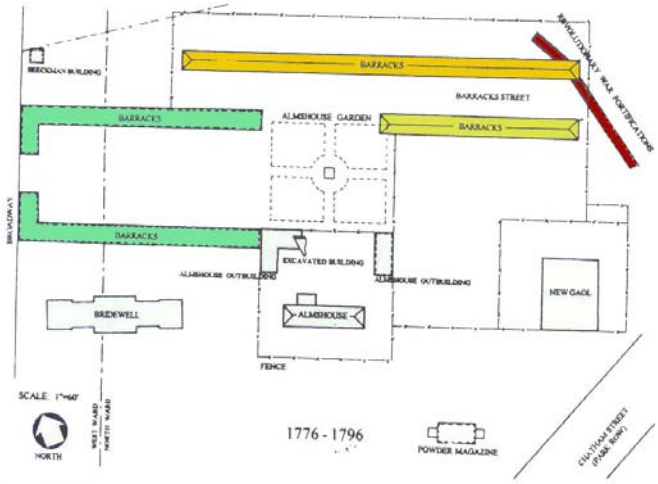


Figure 10. *A Composite Map of the Northern Portion of City Hall Park Depicting 1776–1796.* Hunter Research Inc., produced the original map showing the location of all known structures including our excavated colonial foundation. In this version, redrafted by Claudia Diamont, the code numbers have been replaced with identification labels.

Figure 4. Maps of the Commons in the 18th century showing placement of the British Barracks. Copied from Hunter Research.

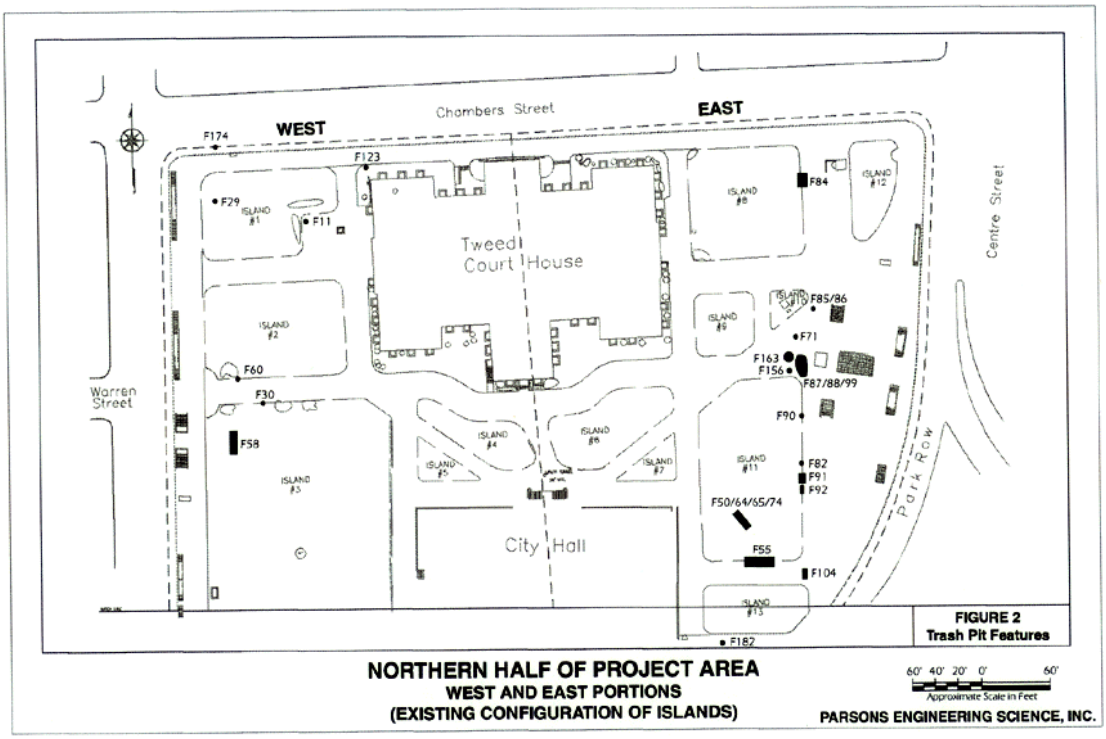


Figure 5. Summary of trash pit features.

[NOTE ON ANALYSIS OF ARTIFACTS AND BONES: Data is represented in terms of actual number of fragments recovered. This particularly affects interpretation of actual number of ceramic and glass vessels as well as mammal individuals. Because this is intended to be a preliminary report and not a final analysis, interpretation will assess the general trend apparent in the remains.

Feature 84

Ceramics dominate in percentage the recovered material from Feature 84 (see table 1), followed by architectural material. This material includes nails, bricks, mortar, plaster, window glass, and other identified building material. Following these categories is liquor

bottle fragments. These are round hand blown bottles of green glass, and are assumed to be remnants of the soldiers' rum rations and possibly wine. The next category, that of pipes, are considered to be personal gear of the soldiers and/or residents of the Commons. Surprisingly, distinctly military objects are the smallest category of artifacts recovered from this feature. Only three objects, two gunflints and one lead musket ball, have been directly associated with the British military. Further comparison with other British military sites is required before full interpretation can be completed. However, one major difference between this site and other forts is of course the barracks' location in the middle of a major urban zone that did not see battle.

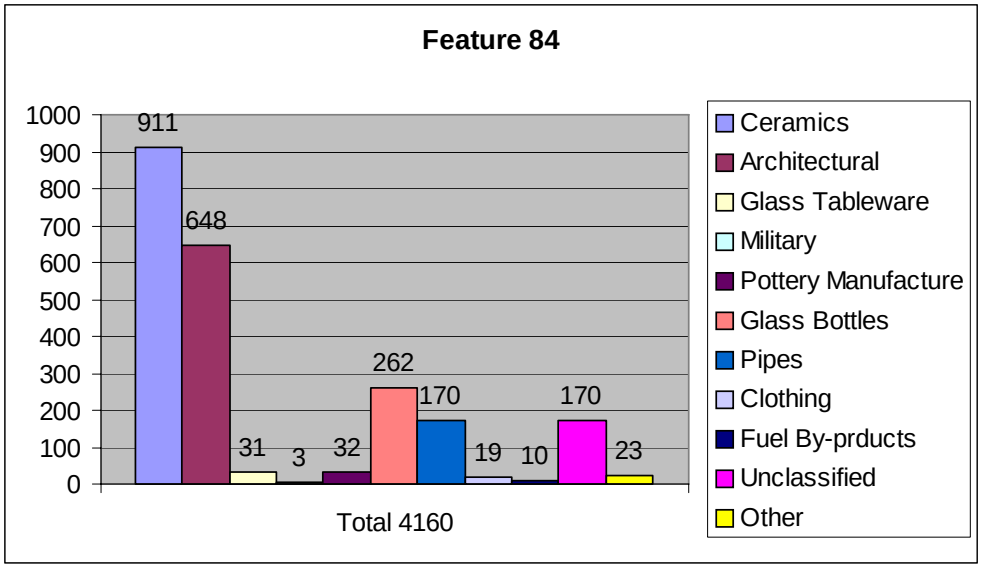


Table 1. Artifacts recovered from Feature 84

Of the ceramic material recovered, approximately 53% of the material is stoneware, and of the stoneware 75% is American-made gray salt-glaze stoneware produced by the Crolius and Remmey potteries, which were located nearby on Potter's Hill just south of the Collect Pond. Redware was also largely coarse America wares such as American slipware and black glazed redware. Tin-glazed earthenwares, also more coarse wares are found in higher percentage than the more refined earthenwares such as creamware or

Staffordshire style slipwares. Expensive imported Chinese porcelain makes up only 6% of the total ceramics.

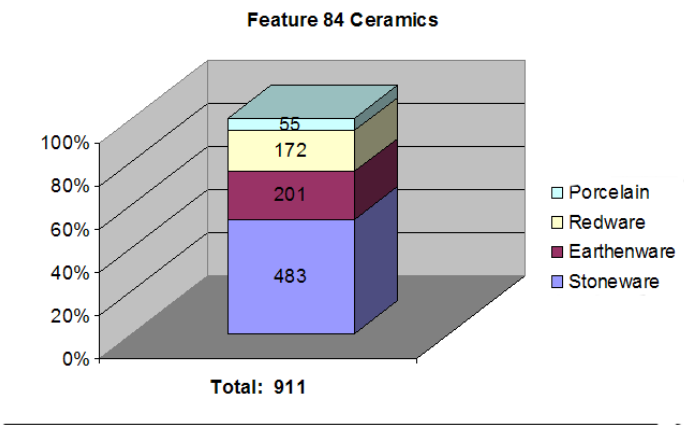


Table 2. Feature 84 ceramics.

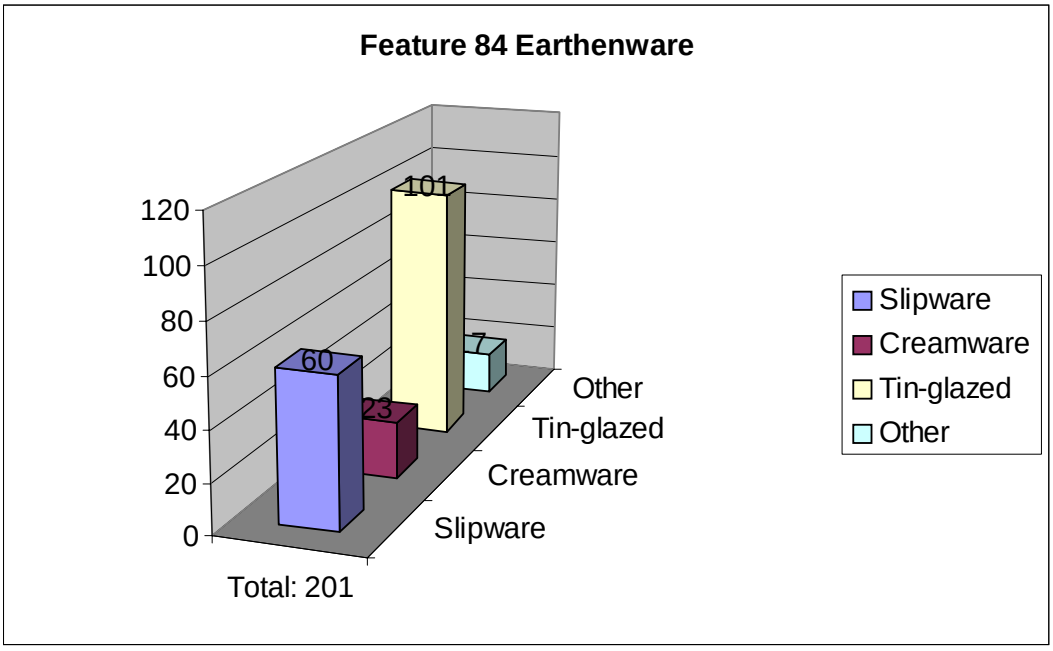


Table 3. Beak down of earthenwares. In this case 'Slipware' refers to buff-bodied earthenware with lead glaze and Staffordshire-style slip decorations.

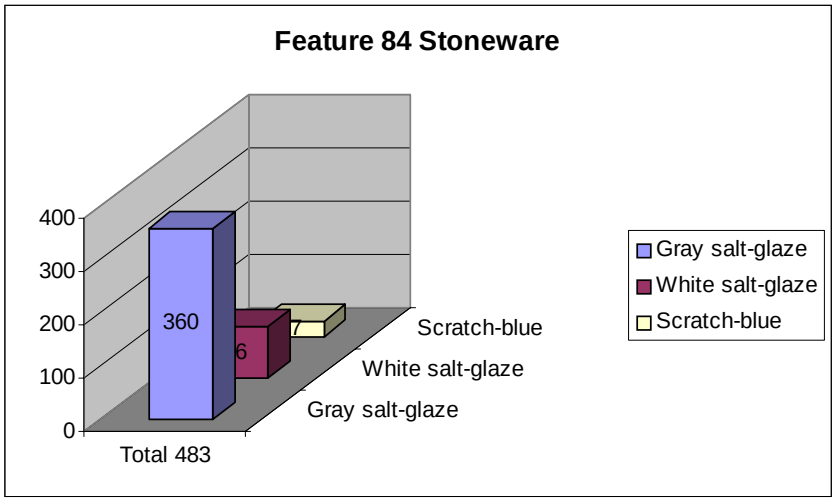


Table 4. Stoneware categories. 99% of the gray salt-glaze stoneware is waster material deposited from the nearby Crolius and Remmey potteries.

The makeup of the shell recovered is roughly 50% oyster and 50% clam. However, the majority of faunal remains are mammal.

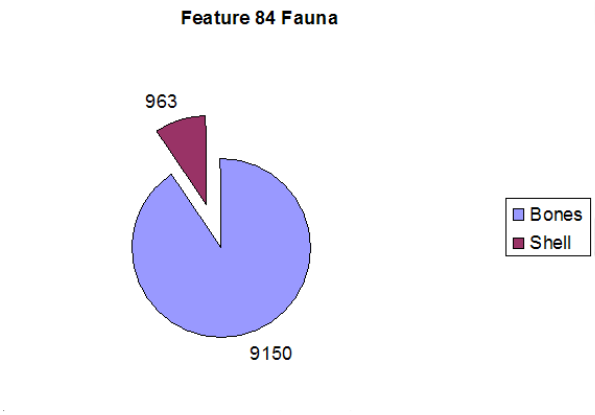


Table 6. Fauna material from Feature 84.

Cow and unidentified large terrestrial mammal (LTM)bones makeup 59% of the species. Because of the absence of other large terrestrial mammals, it can be assumed that LTM bones are most likely cow. Caprine and medium terrestrial mammal (MTM) bones comprised 38% of the collection. Pig represents 1.6% of the identified remains. In this case it has been assumed that the unidentified MTM bones are probably largely caprine with only a small fraction being pig. Of the other identified species, none were considered foodstuffs with the possible exception of the two deer bones that were identified. The environment that once supported such wildlife had long been replaced by farms and domestic animals by this point.

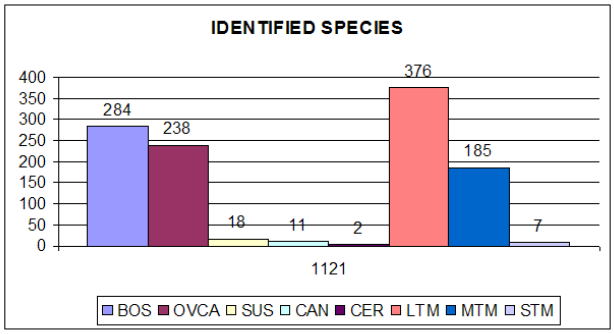


Table 7. Feature 84 identified mammal species. Note: approximately 35 fish bones and 15 bird bones have yet to be identified and have been temporarily excluded from this analysis.

Various skull and tooth fragments dominate the bone elements identified as cow, or Bos Taurus. Once the MNI has been determined, the data will be more useful, but in general terms it is apparent that the ratio of cranial fragments is much greater than the post-cranial remnants. Following the same pattern, the vast majority of the LTM bone elements are also identified as cranial.

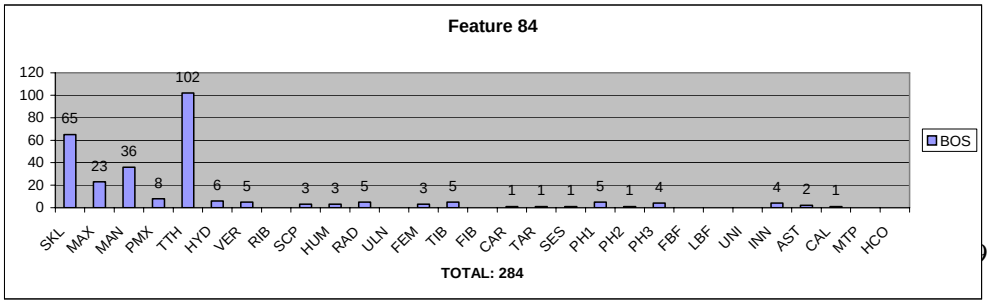
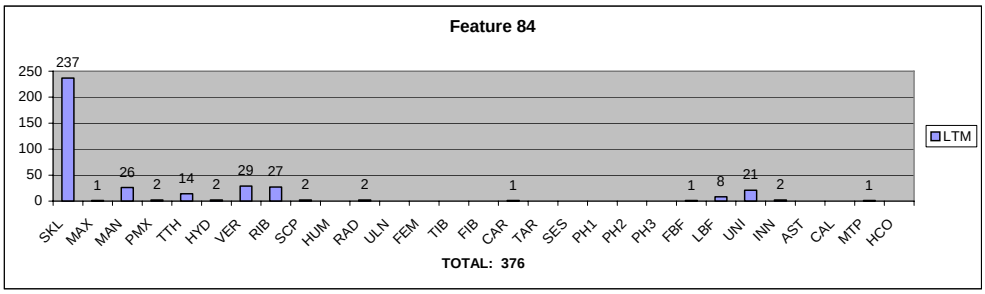


Table 7. BOS bone elements

Table 8. LTM bone elements



This trend continues with the caprines (OVCA) with a high ratio of cranial elements compared to post-cranial elements.

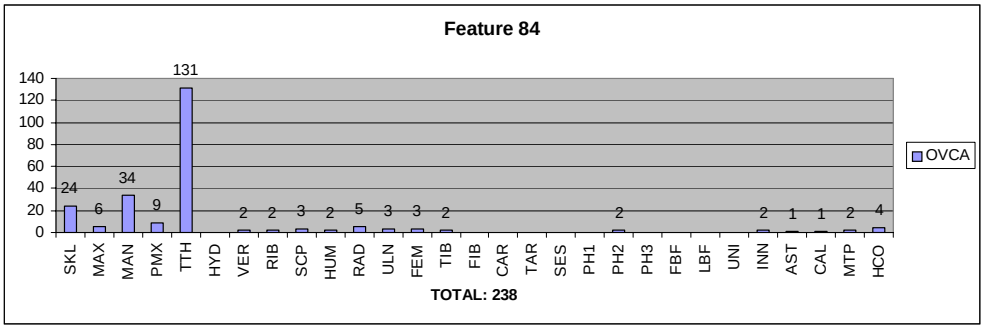


Table 9. OVCA one elements

A difference begins to emerge among the pig bone elements. Although there are fewer bones recovered, the distribution between cranial and post-cranial elements is more even.

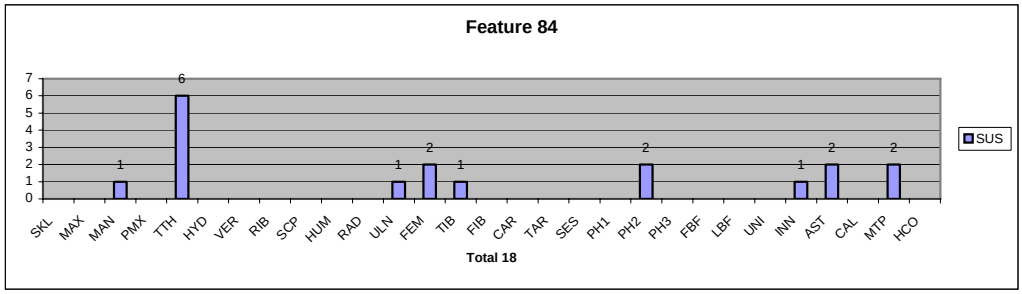


Table 10. SUS bone elements

Rib and vertebral fragments are not speciated in this analysis. Therefore the high percentage of these elements in MTM is difficult to analyze. However, the absence of such elements between the LTM and cow is noted. Otherwise, the pattern revealed in the MTM is similar to that seen among the caprines, cows, and LTM.

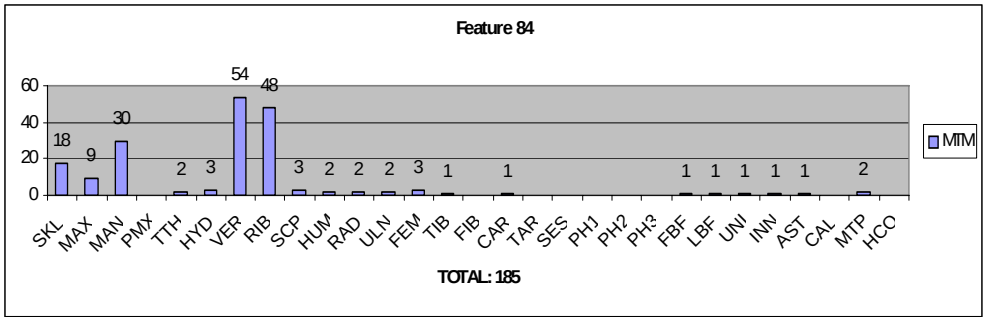


Table 11. MTM bone elements

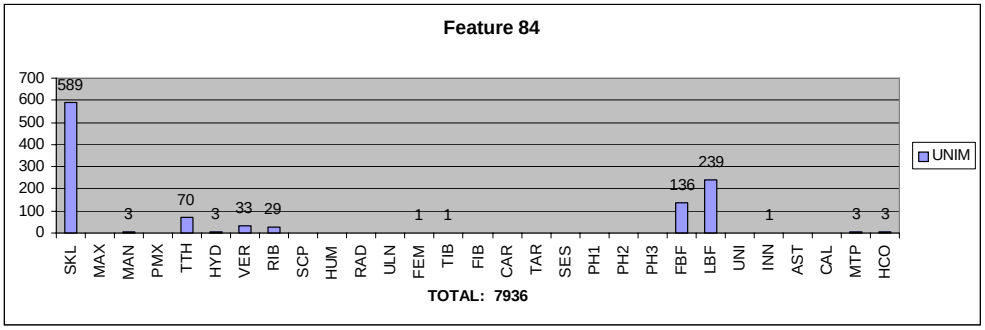


Table 12. Unidentified bone elements

Feature 99

Feature 99 is a trash pit in association with the second barracks. Of the artifacts recovered from this midden, liquor bottle fragments were found in the highest percentage, followed by architectural elements and ceramics. Similar to the finds in Feature 84, only one distinctly military object, a gunflint, was recovered.

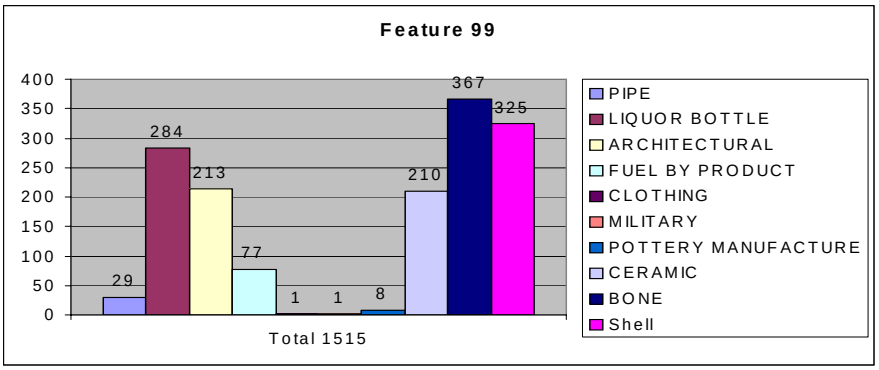


Table 13. Material recovered from Feature 99

Table 14 reveals the first major contrast between the materials recovered in Feature 84 and 99. Creamware makes up 45% of the ceramics. Creamware is a refined earthenware and more expensive than the coarse earthenwares that were present in Feature 84. The second largest category is gray salt glazed stoneware from the Crolius and Remmey potteries. This stoneware is present is nearly every feature excavated on the Commons.

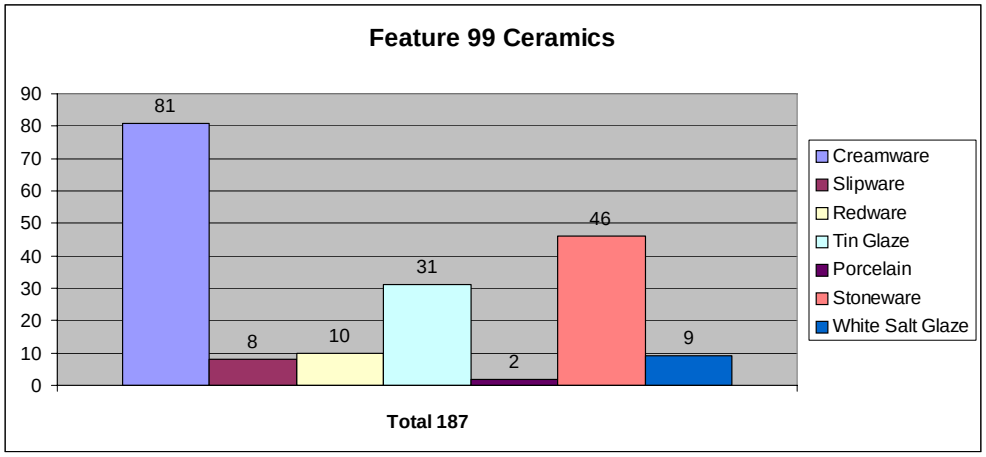


Table 14. Categories of ceramics.

Clam makes up 55% of the shell and oyster is 45%. As seen in Feature 84, mammal bone comprises the majority of faunal material.

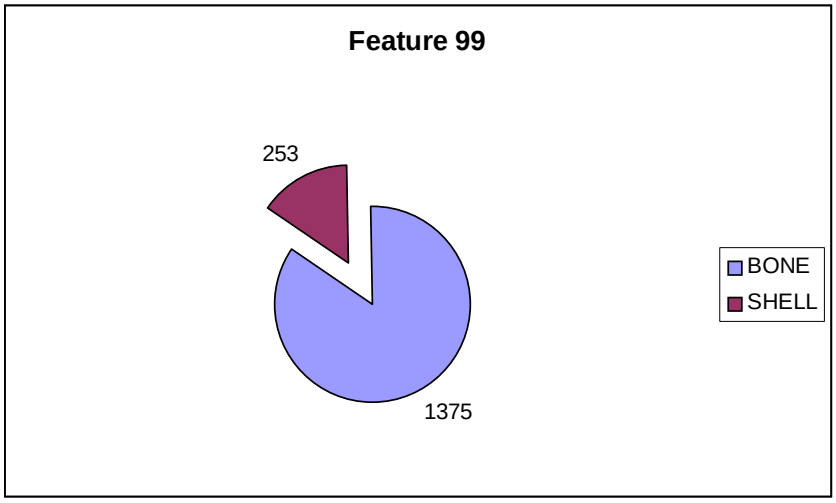


Table 15. Faunal remains

Although the artifacts show a distinction between the two barracks, the faunal remains are similar in composition. Cow and LTM comprise 45% of bones recovered, and caprines and MTM comprise 37%. There is a slightly larger percentage of pig in this deposit, about 6%.

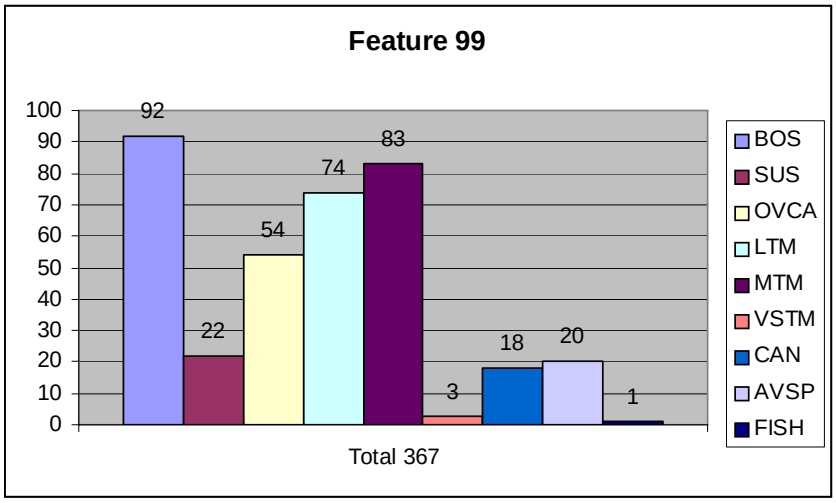


Table 16. Identified species.

The trend continues in bone elements of cow, LTM, caprine, and MTM with the majority of elements being cranial, and the majority of the postcranial elements made of ribs and vertebrae.

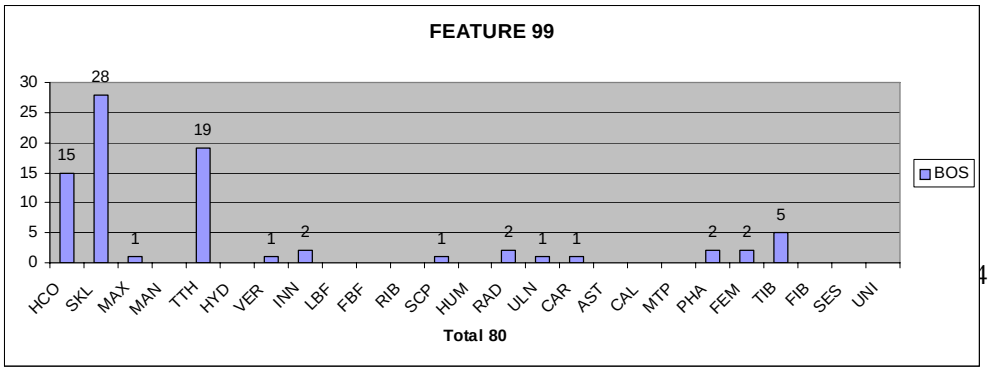


Table 17. Bos bone elements.

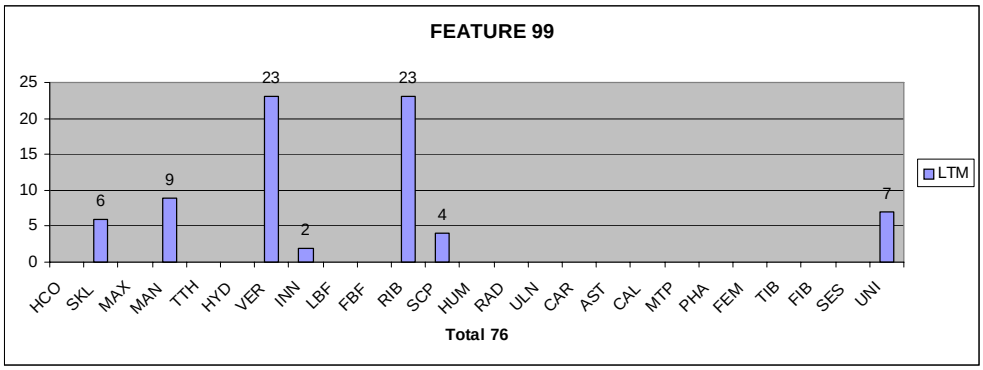


Table 18. LTM bone elements.

Different from the even distribution of elements of pig remains, in Feature 99 we find no cranial elements at all. The majority of elements are post-cranial, specifically long bones.

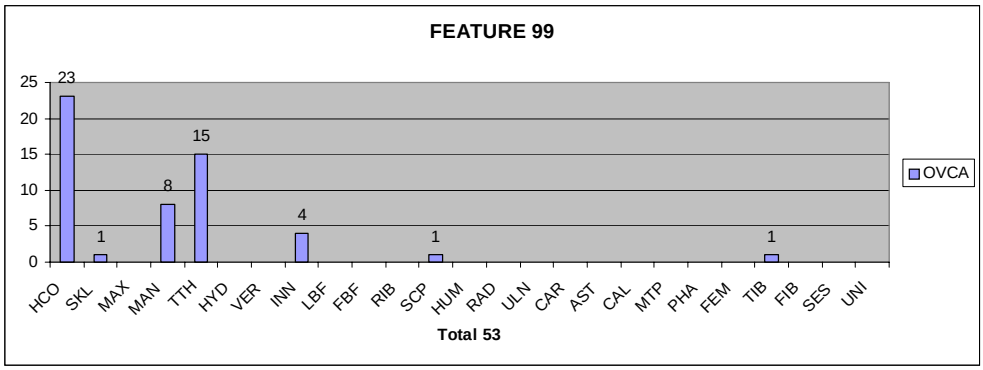


Table 19. OVCA bone elements.

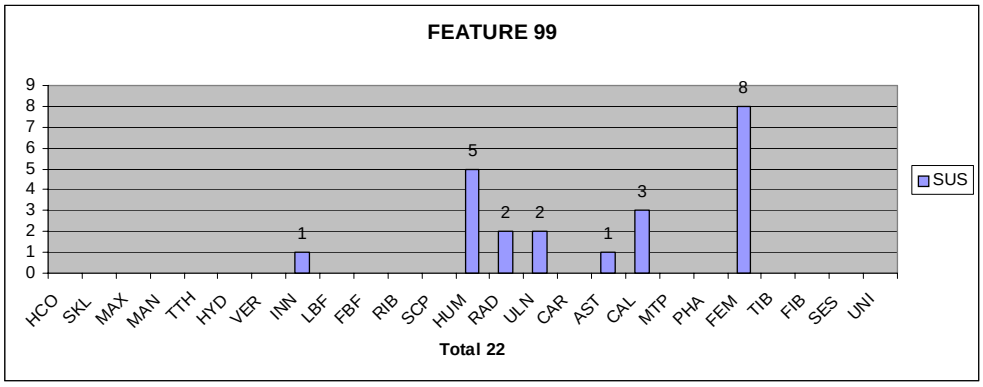


Table 20. Sus bone elements

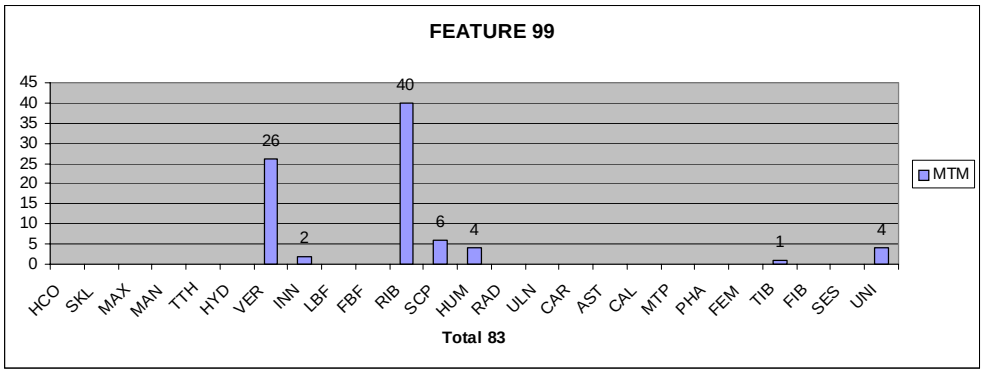


Table 21. MTM bone elements

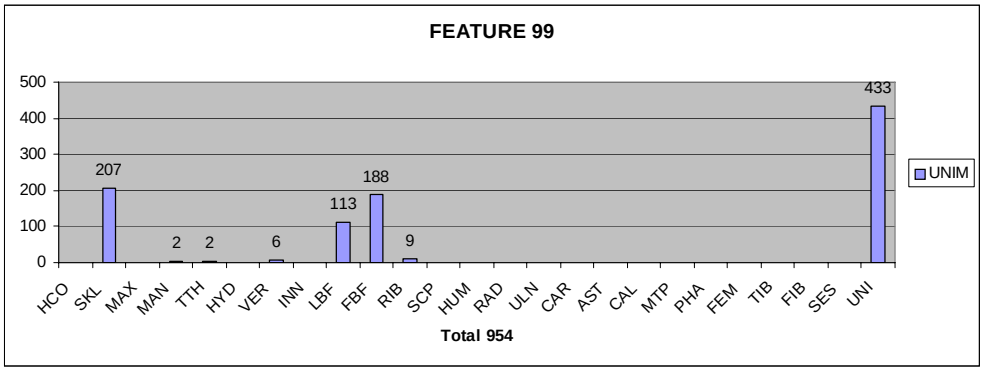


Table 22. Unidentified mammal bone elements.

Feature 88

Feature 88, the largest of the midden features, is also in association with the second barracks. Similar to Feature 99, the artifacts of Feature 88 are dominated by liquor bottle glass, and followed by architectural elements and ceramics. In addition, only one military artifact, a lead musket ball was recovered.

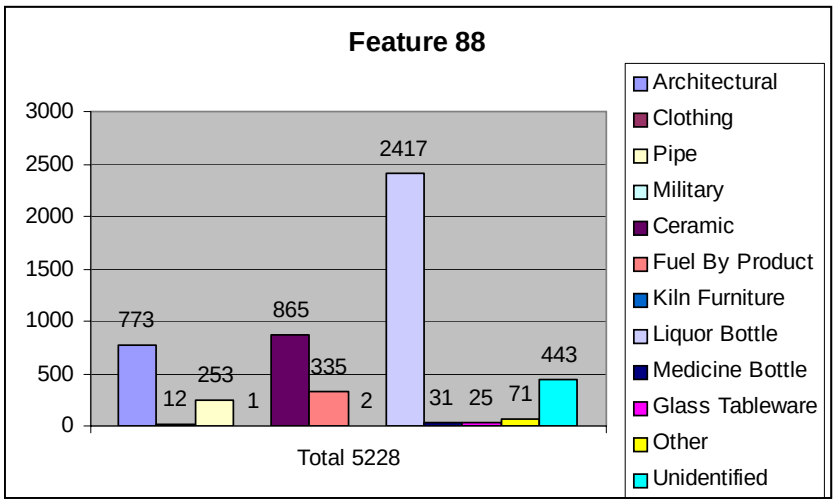


Table 23. Categories of artifacts from Feature 88.

Feature 88 ceramics are also dominated by creamware, which makes up 43% of the collection. American redware and imported tin glazed earthenware are the second and third most abundant ceramics, with the ever-present Crolius and Remmey stoneware comprising 11%(see table 24).

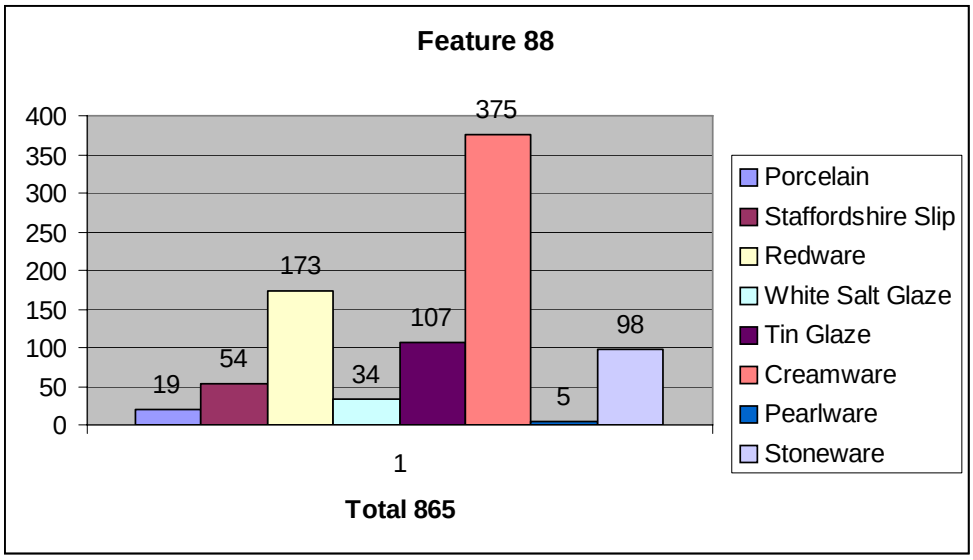


Table 24. Feature 88 ceramics.

To date, shell comprises the majority of the faunal remains. However, this information is not accurate as analysis is still ongoing, and as many as 10,000 bones have not been counted or identified.

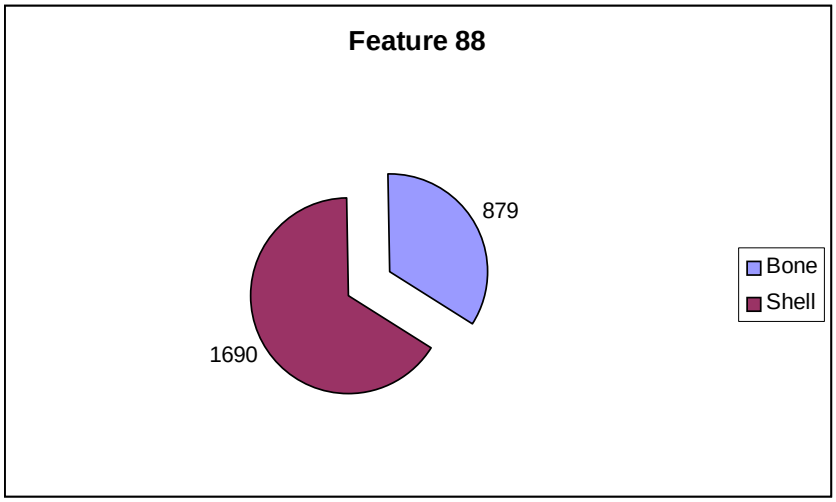


Table 25. Faunal remains to date.

In sharp contrast to the identified species found in Features 84 and 99, the majority of bones identified in Feature 88 are pig and MTM. Unlike the assumption made with Features 84 and 99, it cannot be assumed that MTM are most likely caprine. Caprine make less than 1% of the identified species, whereas pig makes up 14%. Cow makes up 3% and LTM 14%.

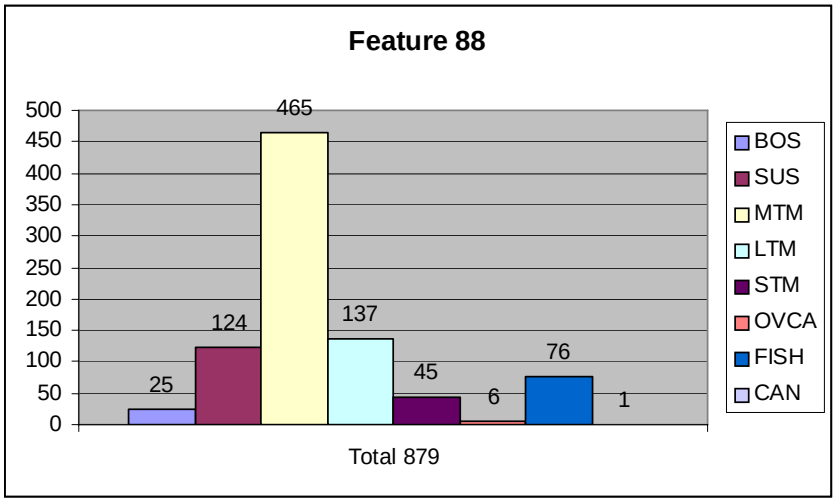


Table 26. Identified species for Feature88

Apart from the absence of cow noted, the distribution of elements also shows a contrast to Features 84 and 99. The elements are largely post-cranial long bone, with presence of flat bones like scapula and innominate. This represents very different cuts of meat in this deposit.

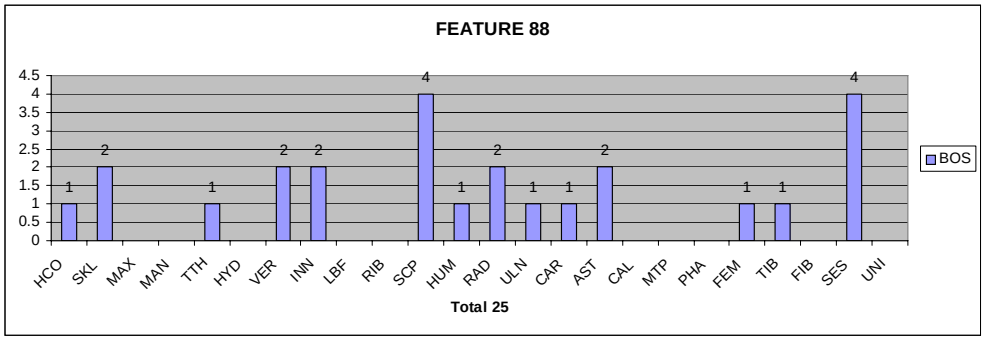


Table 27. Cow bone elements

The distribution of LTM bone elements is not drastically different from that seen in the other features, however, there are a higher percentage of long bone fragments and a noticeable decline in cranial elements.

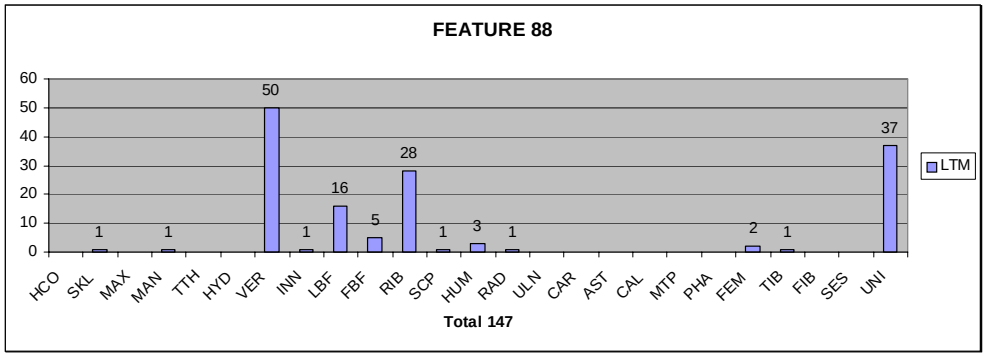


Table 28. LTM bone elements.

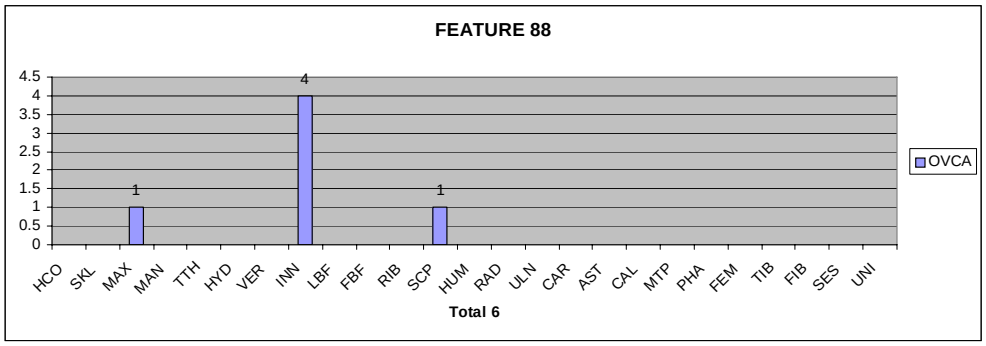


Table 29. OVCA bone elements.

6 identifiable bone fragments, 4 of which are innominate, only represent Caprines. Pig, however, surpasses the caprines in this feature, and as was seen in the other feature, the vast majority of identified bones are post-cranial. This perhaps also represents choice cuts of meat.

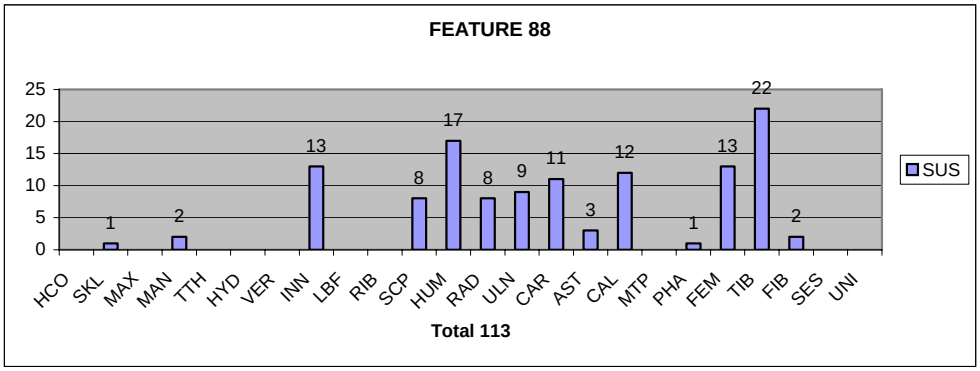


Table 30. Pig bone elements.

As states above, rib and vertebrae fragments are not speciated, which results in the MTM and LTM categories showing a higher percentage of these elements. It should be noted that Feature 88 MTM bone elements do no show a high percentage of cranial fragments.

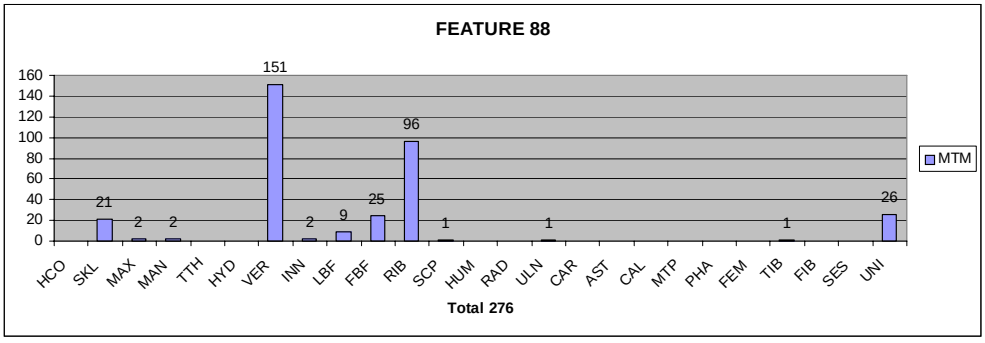


Table 31. MTM bone elements

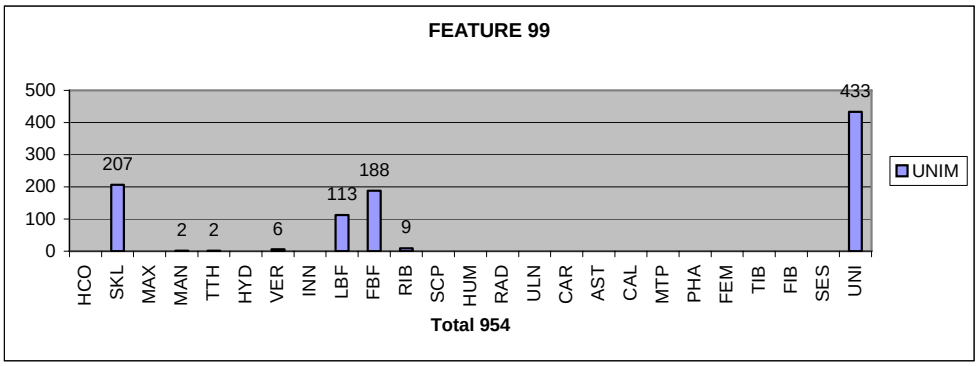


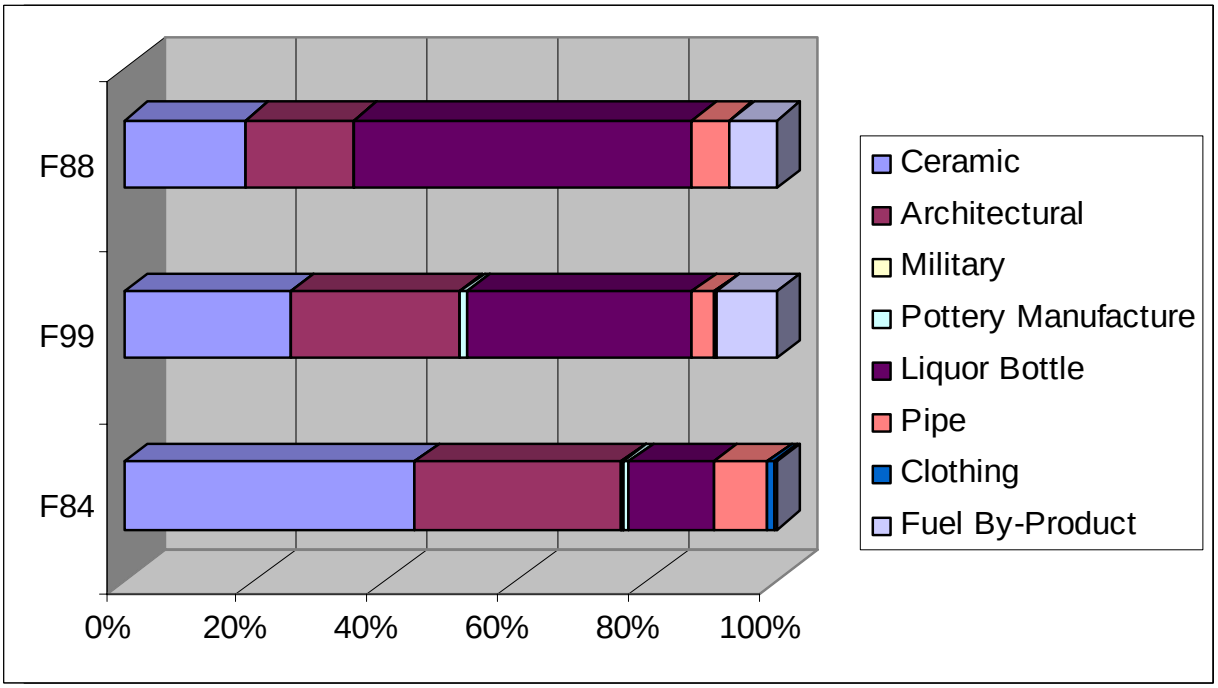
Table 32. Unidentified mammal bone elements.

Preliminary Conclusion

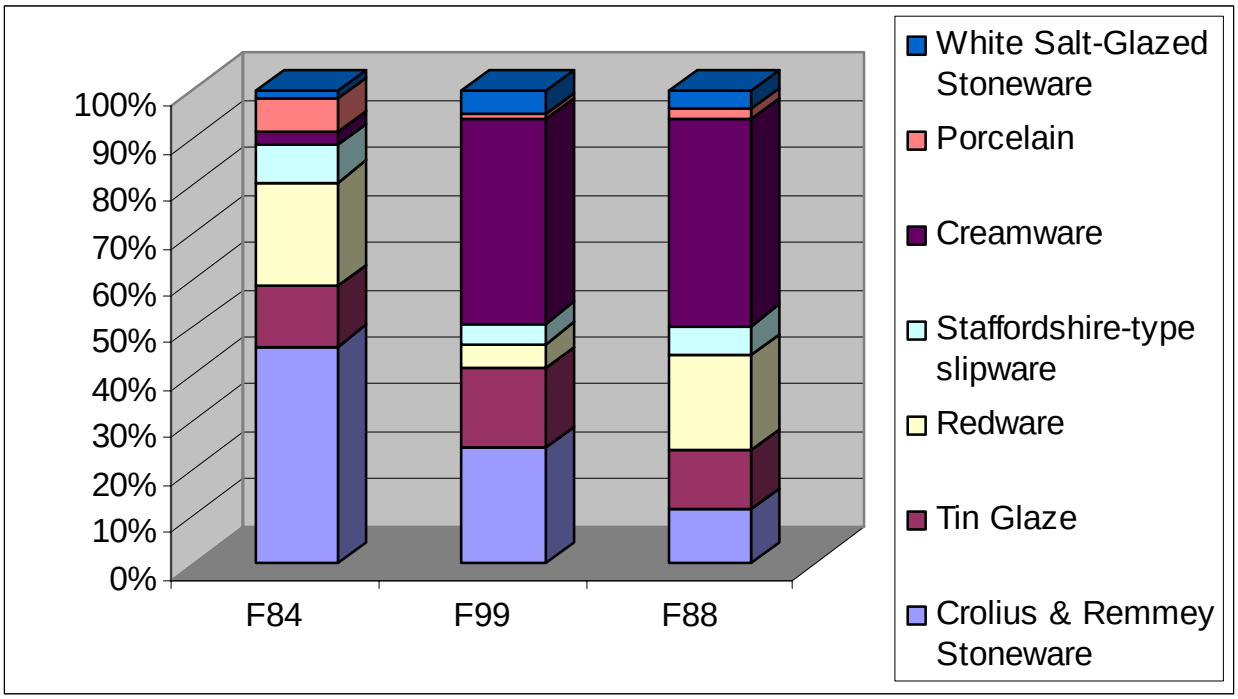
It is apparent that the deposits found in Features 84, 99, and 88 were created under different circumstances, although dating based on stratigraphic levels and age of ceramics place the deposits in the same time period. Feature 84 has a higher percentage of cheap ceramics and the cuts of meat are inferior. It is perhaps an indication of the distinction in living conditions between regular army and the officers. Feature 99 reveals the same inferior cuts of meat, however the quality of the ceramics is superior to that of Feature 99. The Feature 88 deposit, although located in proximity to Feature 99, is quite distinct and perhaps the most rich of the military middens. A shift away from cranial caprine and cow bones, this deposit shows more post-cranial choice cuts of bone in addition to finer ceramics. Although it is not certain where officers were house, it is likely the occupants that deposited these materials had a substantially higher standard of living.

Once Feature 88 is complete, the next step is analysis of the British Barracks trash pit features for a full comparison of the barracks on the Commons.

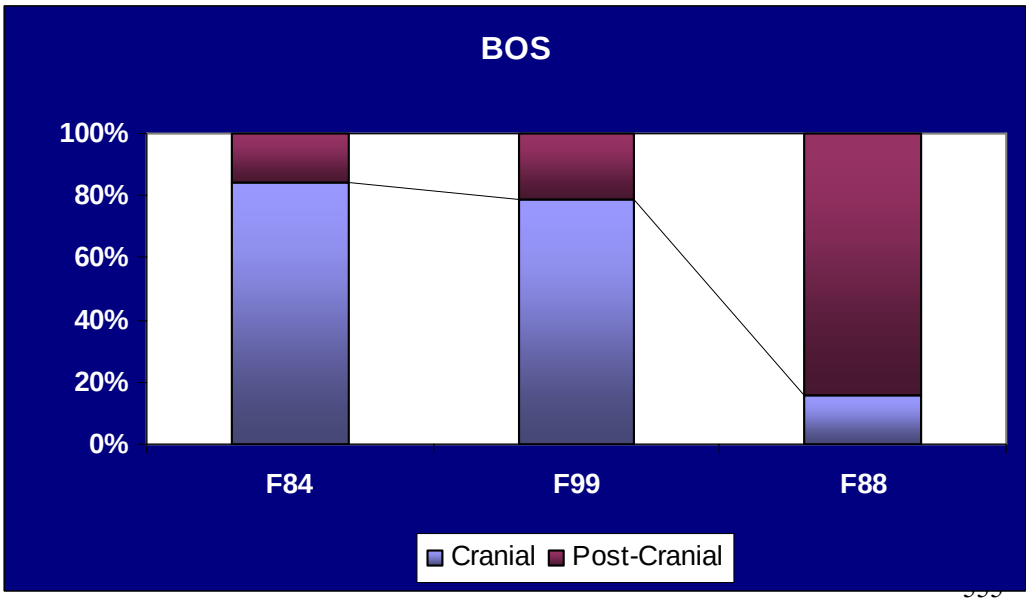
Artifact Composition Per Feature


F88
F99
F84
0%
20%
40%
60%
80%
100%
Ceramic
Architectural
Military
Pottery Manufacture
Liquor Bottle
Pipe
Clothing
Fuel By-Product

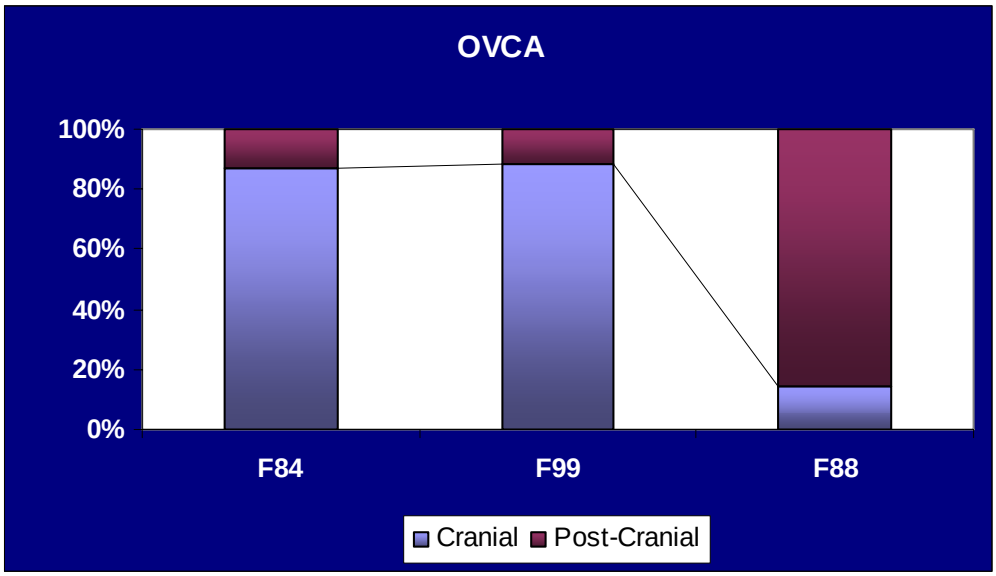
Ceramic Composition Per Feature



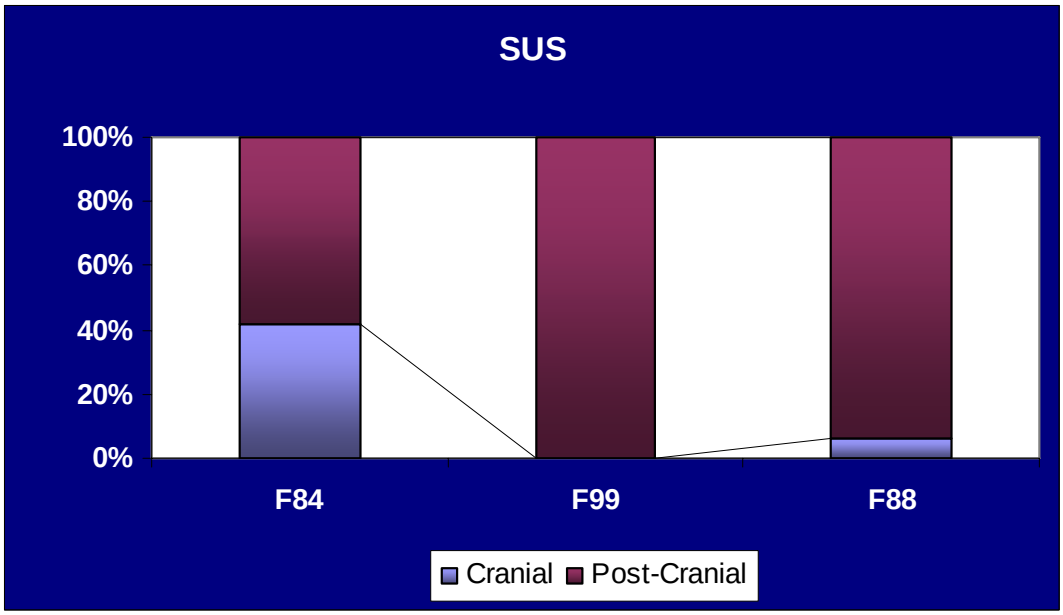
Element Distribution of Cow Per Feature



Element Distribution of Sheep/Goat Per Feature



Element Distribution of Pig Per Feature



E. Preliminary Faunal Analysis

George Hambrecht and Seth Brewington
CUNY Graduate Center

This section presents the results of analysis of faunal remains, exclusive of shell, from those trash features which contained significant amounts of animal bones. The object of the analysis was not only to provide a descriptive overview of the materials excavated, but to attempt to see whether the features differed significantly from one another in terms of types and cuts of meat, indicating dietary preferences or economic stringencies, and whether some of the bones could have been the refuse from tanning and other activities from off the site.

Introduction

Parsons Engineering excavated the City Hall site as a rescue operation in 1999 prior to reconstruction of the park. Originally scheduled to last eight weeks, the amount of material recovered, including human remains, meant that the actual excavation took eight months. Excavators literally were digging just ahead of bulldozers. Because the project extended well beyond the original projection, the cost was higher than anticipated. Lack of funds for analysis resulted in the project being shelved for several years. In 2001, Brooklyn and Hunter College received funding to do analysis on the non-human bone and archaeological remains recovered under the direction of Dr. Arthur Bankoff, Dr. Sophia Perdikaris, and Dr. Tom McGovern. The faunal remains from the major features of the City Hall Park excavation have been recorded and analyzed and the initial results are presented in this report. This report will address issues of quantity, taphonomy (bone survivability) species identification, and use patterns among the surviving animal bones.

The features excavated have been revaluated in light of artifact analysis. Feature 88 and feature 99 are being treated as one deposit – F99/F88. Features 84, 55 and 91, F84, F55 and F91 respectively, are being analyzed as separate defined features. Features 64 and 65

have been combined into its larger area DL-2 designation. The rational behind these changes may be found in the artifact report.

Laboratory Methods

Analysis of the City Hall Park collection was carried out at the Brooklyn College and Hunter College Zooarchaeology Laboratories and made use of extensive comparative skeletal collections at both laboratories and the holdings of the American Museum of Natural History. All fragments were identified as far as taxonomically possible (selected element approach not employed) but most mammal ribs, long bone shaft fragments, and vertebral fragments were assigned to "Large Terrestrial Mammal" (cattle-horse sized), "Medium terrestrial mammal" (sheep-goat-pig-large dog sized), and "small terrestrial mammal" (small dog-fox sized) categories. Only elements positively identifiable as *Ovis aries* were assigned to the "sheep" category, with all other sheep/goat elements being assigned to a general "*caprine*" category potentially including both sheep and goats. Following NABO Zooarchaeology Working Group recommendations and the established traditions of North Atlantic zooarchaeology we have made a simple identified fragment count (NISP) the basis for most quantitative presentation. Note that the state of these assemblages does not allow for some common forms of zooarchaeological analysis. There is little meaningful bone fusion and no tooth eruption/wear data that might aid in ageing the animals represented in these deposits. Nor were there any significant number of measurements possible for size reconstruction. Digital records of all data collected were made following the 8th edition NABONE recording package (Microsoft Access database supplemented with specialized Excel spreadsheets, see discussion and downloadable version at www.geo.ed.ac.uk/nabo). CD R versions of this report and all archived data are also available on request from nabo@voicenet.com.

Overview of Species Present

Table 1 presents a count of the identified specimens (NISP 12,236) and the less well identified categories of "Large Terrestrial Mammal" , "Medium Terrestrial Mammal" and "Small Terrestrial Mammal" and unidentified mammal bone fragments which contribute to the overall bone count (TNF) of 44,258.

City Hall Park NISP and TNF

Table 1							
Scientific Names	English Common Names						
		F88/F99	**F91**	**F84**	**DL-2**	**F55**	**Total**
Bos taurus dom.	cattle	167	318	294	170	740	1689
Equus caballus	horse	2	0	0	0	7	2
Canis familiaris	dog	32	0	12	0	1	44
Sus scrofa	pig	390	33	19	4	87	533
Capra hircus	goat	0	0	0	0	0	0
Ovis aries	sheep	1	0	0	0	20	1
Ovis or Capra sp.	caprine	116	67	247	6	233	669
	All domestic	708	418	572	180	1088	2938
Odocoileus virginiacus	white tailed deer	0	0	0	0	9	9
	deer species	0	1	1	0	0	2
Gadidae	cod	1	59	0	0	0	60
Sparidae	porgies	14	24	0	0	0	38
Serranidae	bass	12	39	0	0	0	51
Scianidae	drums	0	29	0	0	0	29
Clupeidae	herring	0	1	0	0	0	1
Pleuronectidae	flatfish	0	1	0	0	0	1
	unid fish sp.	51	99	35	0	0	185
	wildfowl - land birds	0	9	0	0	0	9
	domestic fowl	0	14	0	0	0	14
	unid bird sp.	20	48	3	0	0	71
Crassotrea	oyster	2162	1603	551	83	404	4803

virigniacus							
Mya sp.	clam sp.	2825	2252	503	8	4885	10473
Mollusca sp.	shellfish sp.	0	0	0	1	6	1
	total identified (NISP)	5793	4597	1665	181	6392	12236
	Large terrestr. Mammal	606	356	401	145	1076	2584
	Medium terrestr. Mammal	1515	597	201	50	2012	4375
	Small terrestr. Mammal	13	4	7	0	0	24
	Unidentified fragments	4857	1831	8146	1538	2275	18647
	total all fragments (TNF)	12784	7385	10420	1914	11755	44258

NISP (number of identified specimens) refers to all fragments that could be identified to a useful level, in this case to species level except for the "caprine" category. As most bones of sheep and goat skeletons cannot be identified to species, zooarchaeological analyses produce a substantial number of bones that can be securely identified as either sheep or goat but not assigned to either species. Thus "caprine" refers to both these indeterminate fragments and to both species taken together (equivalent to "ovicaprid" or "O/C" of other workers) when they are collectively compared to cattle, horse, or pig (all of which are far easier to identify to species level). The following charts begin the process breaking down these numbers by species, feature and percentages in order to get a better idea of relative abundance.

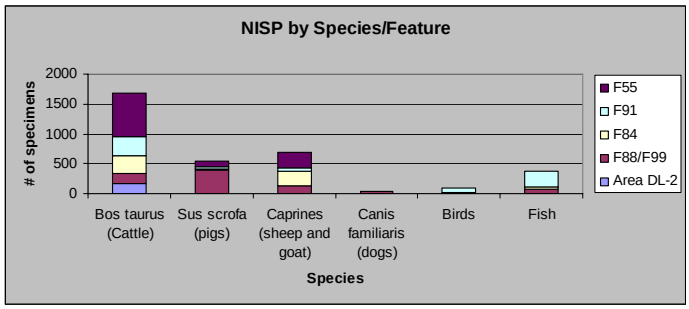


Figure 1

Overall cattle are the most prevalent species in the City Hall Park assemblages. Cattle are a significant presence in each feature analyzed. As will be discussed in each feature discussion as well as the conclusion the type of cattle bone in each feature does differ significantly. F88/99 and F55 contain large numbers of highly productive cattle bone, in terms of potential meat load as well as grease and sinew content. F84, F91, and DL-2, though containing large numbers of cattle bones, contain much higher proportions of less productive bone. This could be due to a variety of factors, among them taphonomy (post deposition bone survival), or differential consumption and deposition behavior. F55's high numbers are also a function of the large total number of cattle bones. Within these bones the percentage of high value cattle bones is actually pretty modest. Pigs and caprines are also well represented, though not consistently through all features. F55 has caprine bones with indications of good survivability. Birds and fish are also present though in lower numbers and not consistently across all features.

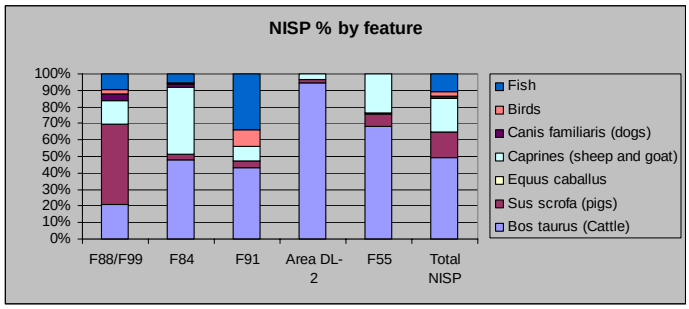


Figure 2

Figure 2 presents the site data in percentages in order to get an idea of relative abundance of each species within each feature. Again the prevalence of cattle is clear though the differences also emerge more clearly. Pigs only make up a large proportion of F88/F99, while caprines only make up a large proportion of F84. Area DL-2 is overwhelmingly dominated by cattle while F91 contains significant percentages of both birds and fish. F55 has the largest number of cattle elements, though a high percentage of these are loose

teeth. Yet even with this taken into account F55 has the greatest number of cattle bones of any of the features.

Figure 3 presents only the percentages of domestic mammals in each feature. The four features show marked differences in their make-up of domestic animals. F88/F99 contains significant percentages of all three domestic species, while the rest of the features are much more varied, though all have high percentages of cattle present.

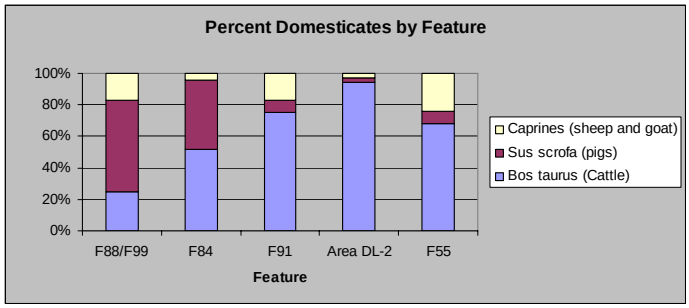


Figure 3

Taphonomy

The figures shown in table 2 can give us an indication whether these features had similar rates of survivability after deposition (taphonomy). The rate of survivability can give an idea of how complete an assemblage is in terms of how much of the initial dump survived until excavation. Similar rates of survivability can also be one basis for establishing whether these different features are comparable in a meaningful way. These figures can also give us indications of the sources of these features (Lyman, 1996).

Table 2

City Hall Park Midden Taphonomy										
	F88/F99		**F84**		**F91**		**DL-2**		**F55**	
Fragment Size	Count	%	Count	%	Count	%	Count	%	Count	%
up to 1 cm	605	8.00	4006	43.0	170	28.0		20.0	220	4.00

				0	5	0	387	0		
1 - 2 cm	2208	28.00	1641	17.00	1963	32.00	694	36.00	1131	17.00
2 - 5 cm	4102	53.00	3068	33.00	1880	31.00	664	35.00	3835	59.00
5 - 10 cm	759	10.00	543	6.00	359	6.00	129	7.00	1081	17.00
> 10 cm	121	1.00	74	1.00	135	3.00	28	1.00	198	3.00
total	7795	100.00	9332	100	6042	100	1902.00	100	6465	100.00
% teeth										
Cattle		16.56		36.92		49.5		55.88		68.58
Caprine		29.82		55.83		n/a		n/a		9.17
Pig		6.38		n/a		n/a		n/a		85.00
Bone Density 1 st quartile										
Cattle	72.6		125.93		132.39		69.31		221.56	
Caprine	32.63		86.11		n/a		n/a		64.23	
Pig	85.3		n/a		n/a		n/a		n/a	
Caprine Bone Density (Binford 1976)										
1st (most dense)	32.63		86.11		n/a		n/a		64.23	
2nd	10.29		8.42		n/a		n/a		54.43	
3rd	0.50		0.44		n/a		n/a		16.91	
4th (least dense)	9.78		1.76		n/a		n/a		3.03	
Chew Marks										
none	7793		9330		0		1901		6461	
Dog	0		0		0		0		3	
Rodent	2		2		0		1		1	
Human?	0		0		0		0		0	
total	7795		9330		6042		1902		6465	

Overall element distribution can be a good indication of survivability in an archaeological faunal assemblage. Bone density has been shown to greatly affect the differential

destruction of skeleta of different species, and of different skeletal elements within the same species (Binford 1976, Binford & Bertram 1977). A relatively even spread between denser and thus more likely to survive bones versus less dense and thus less likely to survive bones can suggest that an assemblage has survived fairly well from deposition through to excavation. The proportion of teeth surviving in an assemblage is one good gauge of this. Teeth are the densest and most durable bones in bovid skeletons. They often survive after other bones have dissolved due to high soil acidity or been broken up due to disturbance and compaction. A high number of teeth without any corresponding high number of other elements can indicate less survivability on the part of the whole bone assemblage. A smaller percentage can indicate better survivability. The values on the bone density quartile sections of table 2 reflect the presence of high density bones. The higher the number the greater their presence relative to the whole collection.

All the features show a large percentage of cranial elements. This is in part due to the fact that the cranium has many thin sections that break up into many small parts, skewing the bone proportions towards cranial units. In this case this is happening in area DL-2, where the total density number for cattle bone is relatively low. This is due to the high number of cranial fragments, which break up easily into many small pieces.

Of all the features F88/F99 shows the best indicators of a high rate of survivability. F88/F99 has the lowest percentage of teeth of any of the features, 16% for the cattle bones and 29% for the caprines (table 2). Compare this to the much higher tooth percentages in F55, F91 and area DL-2. F88/F99 also has the lowest value in terms of the 1st quartile bone density for cattle of all the features. This suggests that for the purposes of using a feature as an accurate reflection of what initially was deposited there, F88/F99 would be the most useful.

F55 shows mixed indications of bone survivability. For instance a very large percentage of the cattle and pig bones are teeth (68% and 85% respectively). The cattle bones are dominated by denser bones that survive in tougher conditions. This suggests that there was a large amount of attrition in these bones until excavation. There are however a large

enough number of cattle bones that even with bad survivability there are still a significant number of elements and this is a good feature in terms of analytically substantial numbers. The pig bones on the other hand are, once the teeth are discounted, too few for any meaningful analysis. F55's caprine bones show a different pattern. The taphonomy numbers for these bones reveals a fairly intact assemblage not skewed by large numbers of anyone section of the body or density. There are comparatively few cranial elements. This might be the result of a particular butchery or deposition pattern.

F84, area DL-2 and possibly F91 all show indications of being "ravaged" collections with low rates of survivability from deposition to excavation. High percentages of teeth and denser bone all point to this possibility. These features might have been subjected to more destructive chemical or weathering processes between deposition and excavation. The basic taphonomy indicators presented in table 2 indicate that features F91, F84 and DL-2 are not particularly good assemblages in terms of bone preservation and should be treated with caution when being used for faunal analysis. All show high numbers of teeth surviving along with other high density elements. Their high teeth numbers are not offset by high numbers of less dense bones leading to the conclusion that these features have seen high faunal attrition after deposition. F91 might be in better shape than F84 and DL-2 as the presence of fish and bird bone (which normally are more vulnerable to the same processes that might destroy mammal bone) in this assemblage might argue for this also being a fairly intact feature.

While the difference between F88/F99 and the other features suggests a difficulty in comparison between them there is also a noticeable lack of similar patterning between the features in terms of fragment size with the exception of F88/F99 and F55 which do show a similar pattern. This could be used to argue that these features were produced by different sources though considering the different rates of survivability this suggestion should be treated cautiously. The similarity between F88/F99 and F55 could mean that these two dumps came from somewhat similar processes.

One very interesting piece of information to come out of table 2 is the complete absence of dog chewing in any of these features, except for the very few in F55. Dog chewing is a common site within many archaeological faunal assemblages. In an urban setting such as the New York Commons in the late eighteenth century dogs would, it should be assumed, have been ubiquitous. Dog bones are present in F88/F99, F55 and F84, reinforcing the obvious point that dogs were present in the city. Not only scavenging dogs but foraging pigs would have left their chew marks on any bones left accessible to them. Their complete absence and the presence of very small numbers of rodent chewing marks suggests that either these dumps were deposited very fast with one covering the last quickly and completely, making it impossible for the dogs and pigs to get at them, or they were deposited in a privy or some other deep hole in the ground. It is known that there were privies in the area of these excavations in the late eighteenth century so the chew marks data strongly suggests that these deposits might have been made in privies (New York, 1905).

F88/F99

Figure 4 presents the terrestrial NISP for F88/F99. Contrary to all other features in this report pigs are the species with the highest numbers of identified bones present. Cattle and sheep appear in significant numbers while two horse bones are present. Dog and bird species are also present.

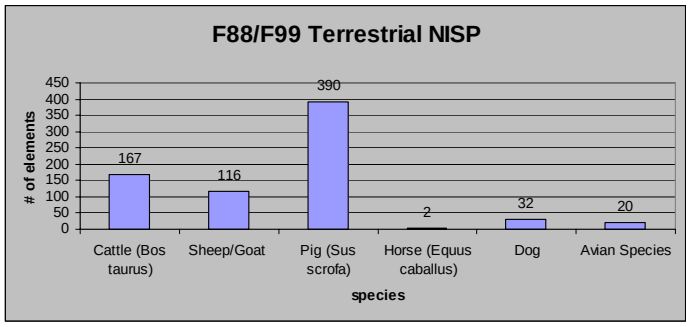


Figure 4

Figure 5 presents the maritime NISP for F88/F99. While the bulk of these fish bones are unidentifiable the few that were identifiable came largely from local fish. The striped bass and porgy are definitely local catches. The single cod bone could have been locally caught but also could have been a product of the global trade in dried Atlantic cod. A single bone is of course not enough to determine whether this fish was consumed fresh and locally caught or consumed dry and imported in from the northern Atlantic fishing grounds.

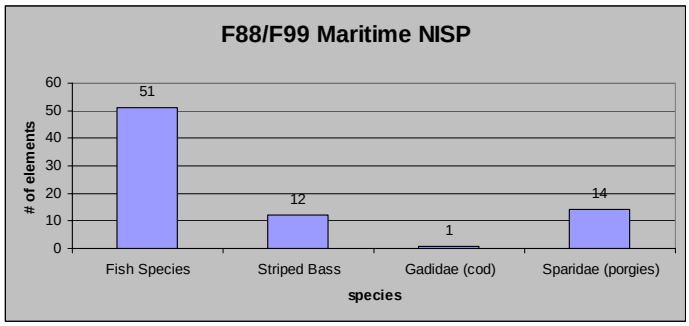


Figure 5

Element distribution for the cattle bones found in F88/F99 is shown in figure 6.

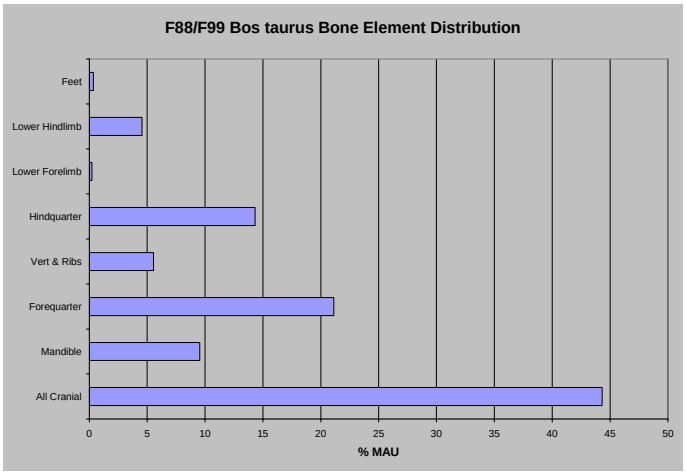


Figure 6

Zooarchaeologists often use the MAU (minimum animal unit, see Lyman 1994) measure (which divides the bones found per skeletal element by the number of times it appears in

the live animal to allow for a direct comparison of different parts of the skeleton) as a tool for investigating patterns of differential deposition and survival. An MAU score converted to percents should show equal numbers for each element in the unlikely event that all survive to reach the analyst's laboratory in actual anatomical proportion. Note again that cranial elements due to their thinness often show up in large numbers in archaeological contexts. In this case the MAU element distribution shows that a large proportion of the bones come from areas of a cow that carry large amounts of meat. Specifically the hindquarter and forequarter of a cow are represented in significant percentages.

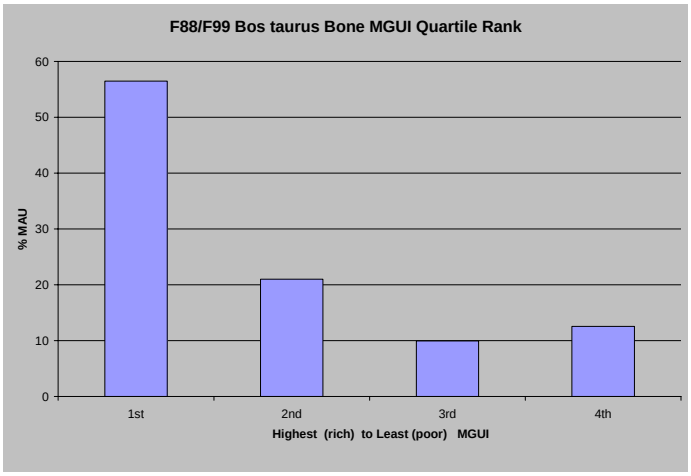


Figure 7

A widely used meat utility measure (Binford 1976) attempts to evaluate the overall "modified general utility index (MGUI)", which provides a numerical score for each bone element (including marrow and sinew values as well as attached muscle meat). While MGUI scores are not precise indicators of amount of associated meat and marrow, they can highlight major differences in the content of bone assemblages. Figure 7 shows the MGUI values for F88/F99 in quartiles. The first and richest quartile dominates the assemblage, but it should also be noted that the presence of significant numbers in the other three quartiles reinforce the impression that this feature is an intact non-ravaged deposit. The cattle bones of F88/F99 came from some of the best, in terms of meat and grease load, sections of a cow's body. Yet with the presence of elements from areas such

as the feet and lower limbs it is possible that the cows were slaughtered somewhere near the site of the F88/F99 deposit. In an urban setting this would likely be the product of primary butchery – meat processing as opposed to consumption and secondary butchery marks. The butchery marks strengthen this impression. The great majority of the butchery marks are those characteristic of primary butchery (see Butchery section). This feature's cattle bones might be the product of a butcher supplying meat to consumers of high quality beef.

The pigs of F88/F99 show a much more extreme version of the cow story. The MAU element distribution (figure 8) shows a very heavy preponderance of the major meat bearing areas of a pig. The cranial and mandibular elements are present in small numbers and the very lean areas of the lower limbs and feet are barely present at all.

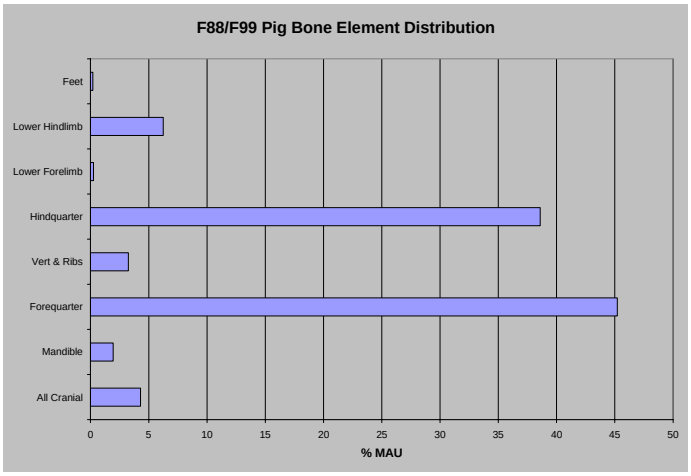


Figure 8

The MGUI scores for these pig bones (figure 9) show the dominance of meat bearing areas even more dramatically. It seems most likely in this case that the pork involved here was being brought in from outside the immediate neighborhoods surrounding the New York City Commons in the form of hams and shoulders with some heads and tongues as well. These pigs were most likely coming in as provisions, not being slaughtered and butchered within this area of the city. The F88/F99 pig bones do have decent bone fusion

preservation and this data indicates that the great majority of the pigs represented here were juveniles. This lines up well with classic pork provisioning, in which juveniles are used because pigs produce many young who grow very fast.

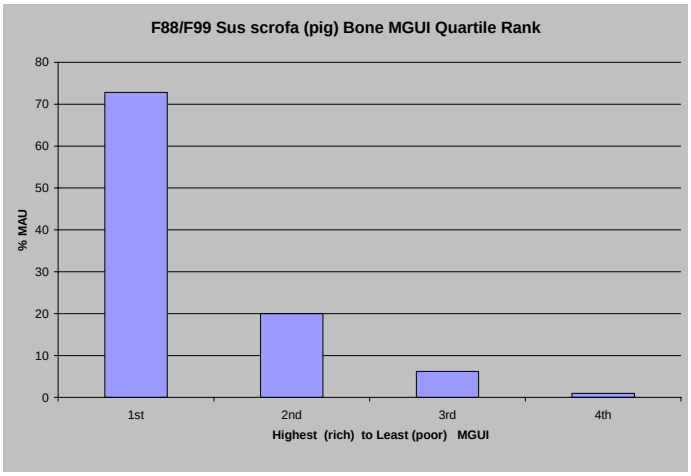


Figure 9

Caprines of F88/F99 show a pattern fairly similar to that of cattle.

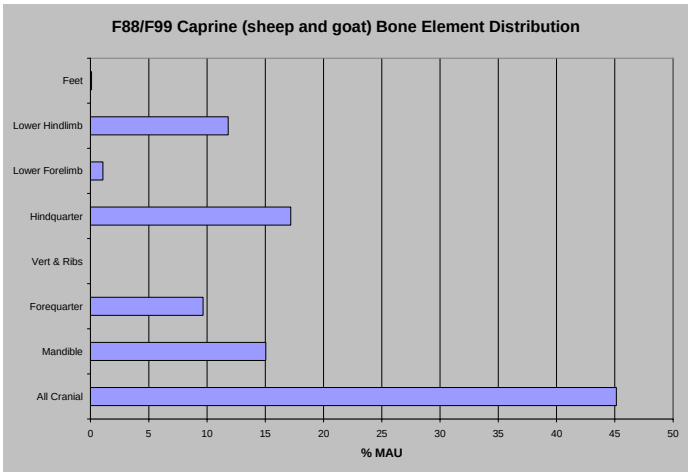


Figure 10

The caprine MGUI scores (figure 11) reinforce this. The caprine bones are dominated by those bearing high amounts of meat, marrow, sinew, and grease. The absence of feet and vertebral elements might indicate that these sheep were also brought in as separate cuts of meat, not as live animals though that is not conclusive.

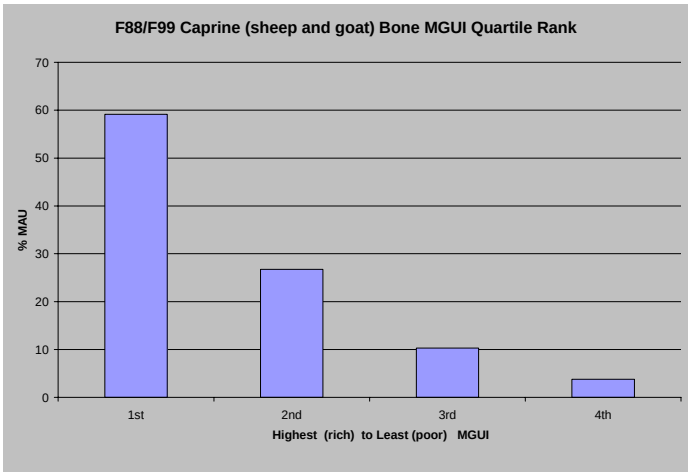


Figure 11

One final part of the F88/F99 faunal assemblage that needs to mentioned in the presence of significant numbers of both caprine (27 elements) and cattle horn cores (16 elements). The horn cores are most likely the refuse left over from craft production centered on the horn sheath. Horn was a valuable craft material for the production of a variety of utensils and accessories. These horn cores then could be the result of craft production at one of the institutions within the Commons such as the Almshouse or the Bridewell.

F91

Feature 91 NISP (figure 12) shows a majority of cattle bone as seen in all the other features. The pigs and caprines are present but in small numbers (too small for MAU and MGUI analysis). Birds, largely domestic fowl, are present and fish are present in significant numbers. Very small numbers of rat and cat give us a good view into the environment around the City Hall Commons at that time. The one deer bone must have been the product of hunting far outside the city at this point in time, midtown for example.

The fish present (figure 13) are all species that can be caught locally, though again it is very possible that the cod were the dried product of the North Atlantic trade.

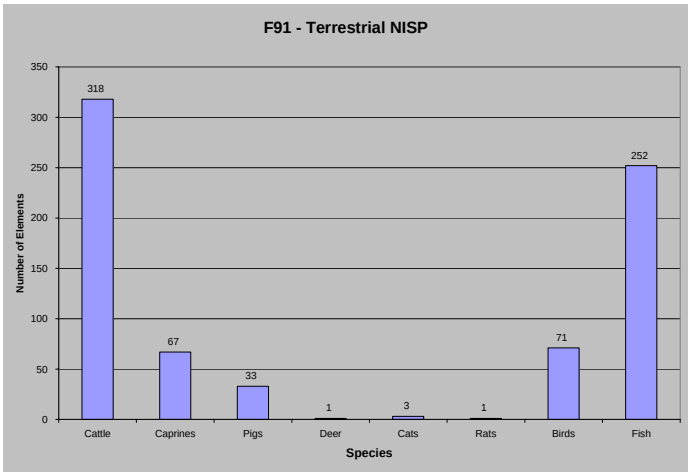


Figure 12

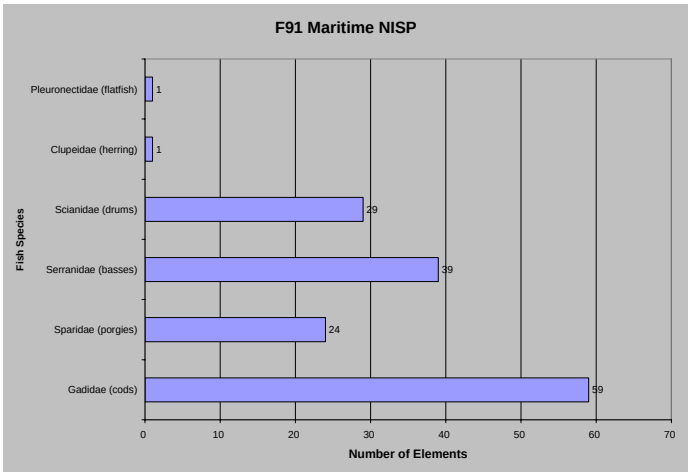


Figure 13

The cattle bone of F91 present a very different picture from those of F88/F99. These bones are dominated by cranial and mandibular elements while the heavy meat bearing areas are less well represented. This dump, if it was the product of butchery for meat

consumption, was supplying a considerably lower value product. There is also the possibility that this feature has been ravaged, though the presence of the bird and fish bones makes this somewhat less likely than F84 and DL-2. The MGUI scores for the F91 cattle (figure 15) are also dramatically different than those of F88/F99. The less rich bones are better represented than the very rich first quartile. These scores also suggest that if these bones were the product of butchery for meat consumption then they were supplying less valuable meat. The other possibility here is that this dump of cattle bones was the product of industrial activities close by. There was a tannery in operation close to the site and this dump might be part of its waste.

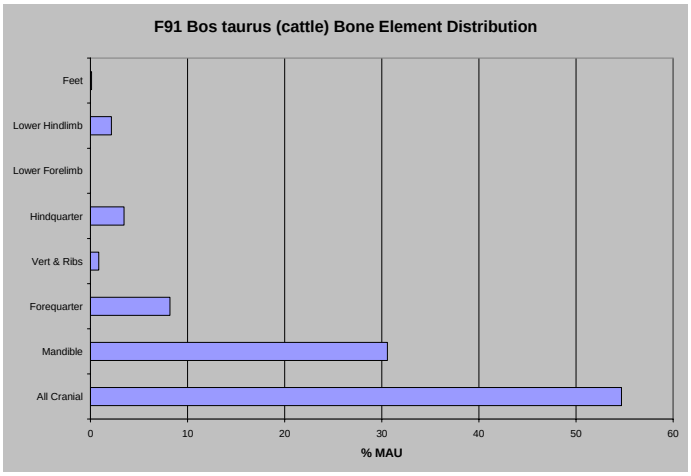


Figure 14

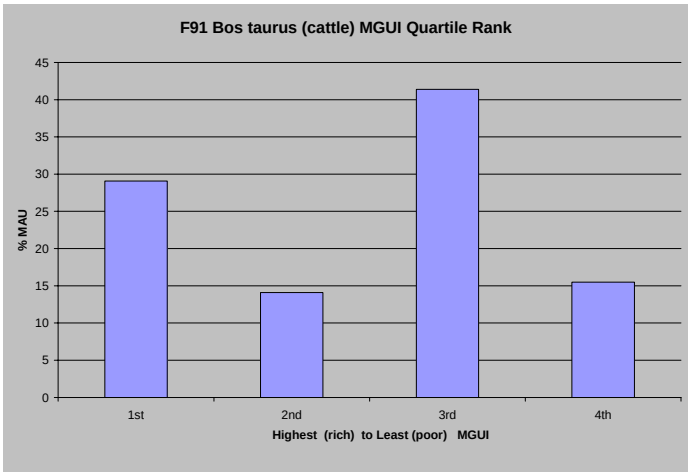


Figure 15

F84

This feature is dominated by domesticates. Cow and caprine teeth and cranial are skewing the assemblage pushing up the numbers of cows and caprines, though they are still the clear majority even when this is taken into account. As discussed in the Taphonomy section F84 shows signs of being a 'ravaged' collection were the material in the initial dump was subjected to degenerative processes before excavation. Besides the caprines and cattle, pigs, dogs and one deer bone are present. The fish and bird bones were not identifiable beyond those categories.

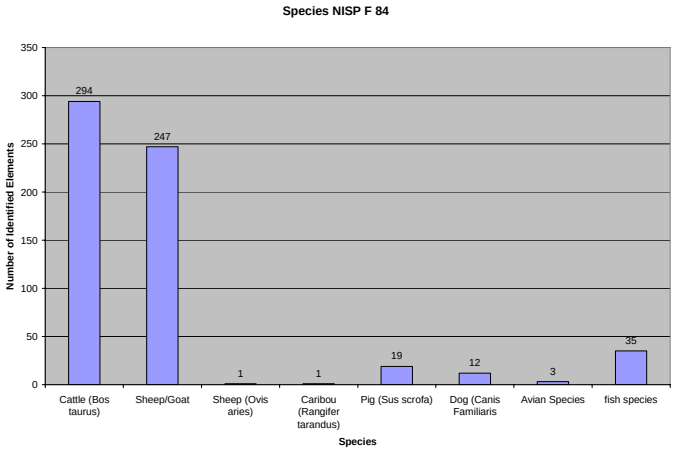


Figure 16

The MAU element distribution of the cattle in F84 (figure 17) are badly skewed towards cranial elements and again mainly teeth. Yet the presence of elements from every area of the animal, even in such small numbers might be the consequence of the whole body being slaughtered and butchered near by. The condition of the bones of F84 precludes any definitive statement. The MGUI values for the F84 cattle are also badly skewed by differential survival. The high values in the fourth quartile are from the large numbers of teeth and mandibular element while those of the third quartile are from the lower limbs and feet.

If we take into account a differential bias towards teeth and denser elements plus the natural occurrence of large numbers of cranial elements due to break-up then we might speculate that the MAU patterns in the cattle would be similar to that of F88/F99, except that in this case the mandibular elements are significantly higher. The mandible is among the densest bones in the mammalian body yet it breaks up less due to its size. The higher number of mandibles along with other elements from across a cow might suggest butchery for a slightly less wealthy group of New Yorkers. Tongue and headcheese were cheaper and might have been bought more often by the less wealthy.

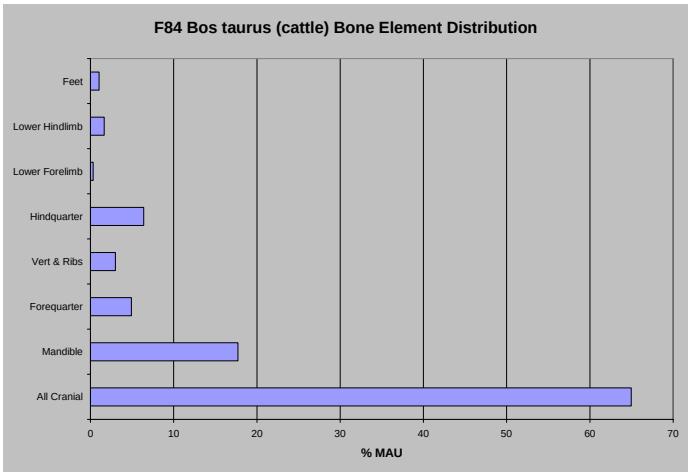


Figure 17

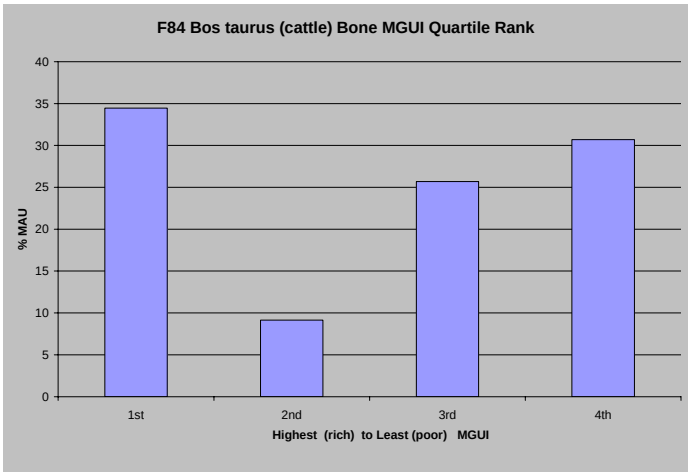


Figure 18

Caprine bones in F84 are largely in the same condition as the cattle bones. There is bad skewing by cranial and tooth elements in both the element distribution (figure 19) and the MGUI values (figure 20).

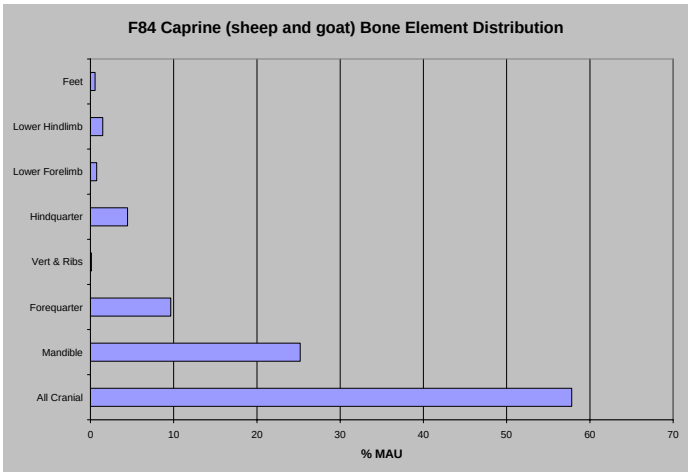


Figure 19

If, even though F84 is not an ideal or even especially good body of representative data reflecting the original dump, these figures indicate something about the cultural/economic activity behind their appearance then it might suggest either primary

butchery or industrial activity (from the tannery for example). Dumps of a majority of heads, mandibles and feet might be the low cost waste from a butcher. On the other hand these might also be the low cost waste of low status consumers such as those in the Almshouse, Bridewell or Barracks.

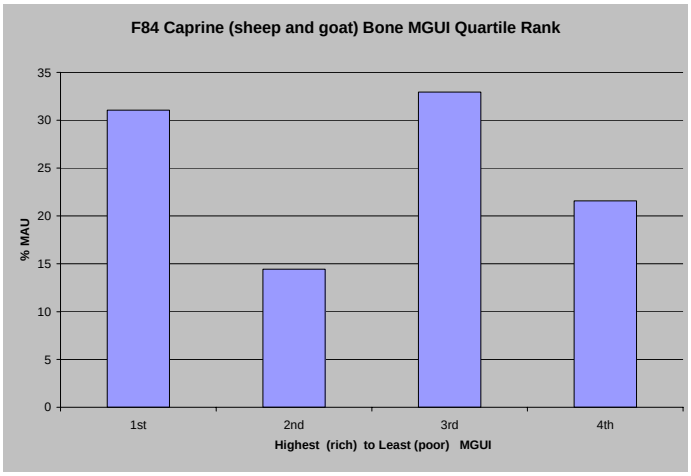


Figure 20

Area DL-2[31]

Area DL-2 is in the worst shape of any of the features in this report. More than half (95 elements) of the cattle NISP for this feature is made up of teeth and the great majority of the rest is made up of cranial and mandibular elements. The MAU element distribution (figure 22) illustrates this well. While this feature might have been a dumping ground for cow heads discarded by butchers (unlikely as heads were often consumed) or by an industrial activity such as the tannery it is most likely that at least in terms of faunal remains we are looking at a very ravaged and incomplete assemblage from which it is unlikely to gather good analysis. The majority in the NISP of cow elements in this feature (figure 21) does however continue the trend found in all the features discussed in this report. The implications of this will be discussed in the conclusion.

[31] Editor's note: DL-2 is Feature Group 50-64-64-74.

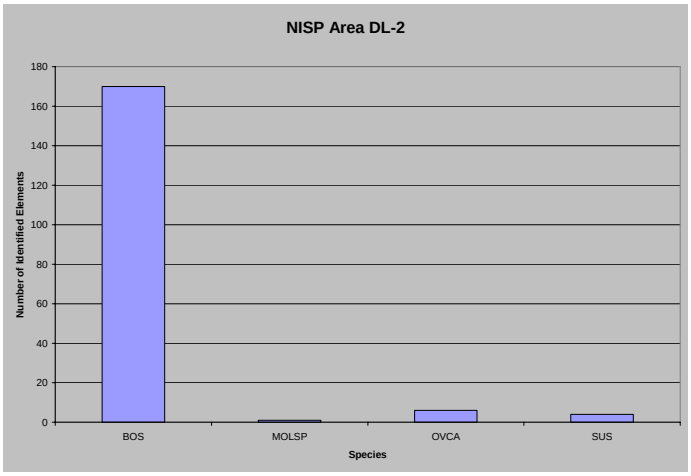


Figure 21

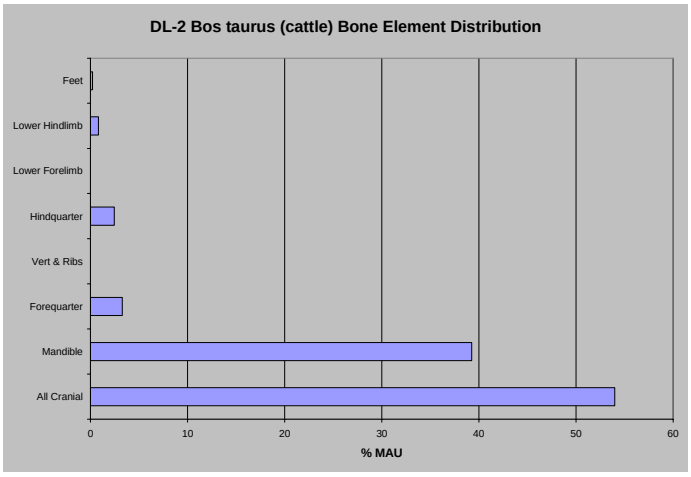


Figure 22

F55

F55 has the largest accumulation of cattle bones and a significant number of caprines as well. The pigs are present but the great majority of these bones are teeth as discussed previously.

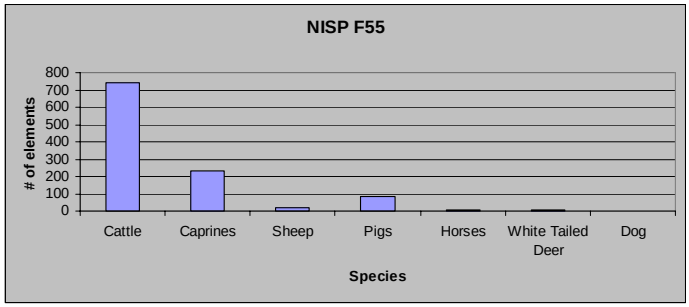


Figure 23

Element distribution for the cattle bones (figure 24) reveals that even with the large number of cranial elements and teeth, this dump has significant numbers of bones from those areas of a cow that carry most of the meat, especially the hind and forequarters. The MGUI numbers (figure 25) reflect this though the 2nd and third quartile bones are present. Not unlike F88/F99, this pattern might suggest a butchery pattern reflective of the consumption of the more highly productive and presumably higher value cuts of beef. This also suggests that whole cattle were being brought into and slaughtered in the city. Elements from across the cow are present.

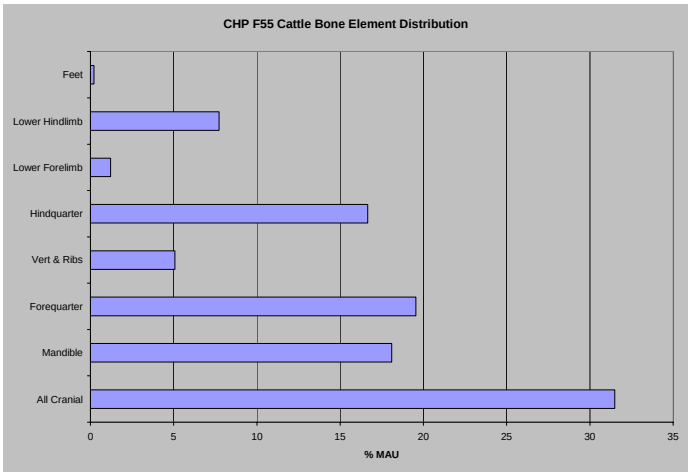


Figure 24

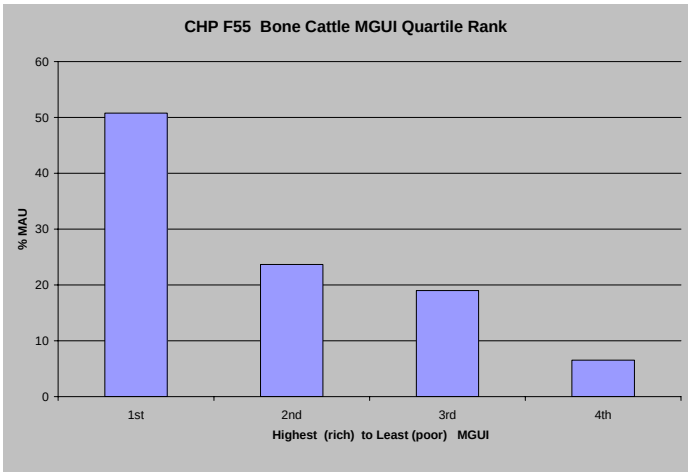


Figure 25

F55 had cattle bones in enough numbers and of high enough quality to do ageing analysis according to long bone fusion. The use of fusion of long bones for age assessment is complicated by differential attrition due to different bone densities (proximal humeri are far less dense than distal humeri and survive in smaller numbers) and by butchery practices. In this report four bone ends of roughly comparable density and survival rates which fuse at different ages (1-1.5 years for distal humerus to 3.5-4 years for distal radius) are used to give an indication of the proportion of cattle who lived long enough to

reach a particular skeletal fusion state. In this case there were 3 specimens each of the distal humerus, tibia, and femur while there were 6 examples of the distal radius.

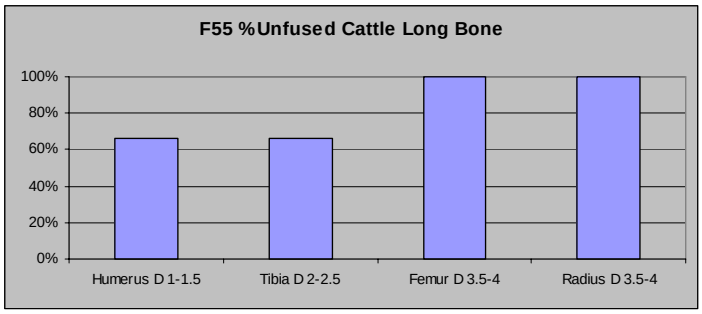


Figure 26

The fusion percentages (figure 26) show that all of the cows in this dump were at least younger than four years old. None of their distal femurs or radii had fused yet, an action which does not take place until sometime in the second half of the fourth year of a cow's life. The majority of the cattle represented by these long bones were older than 2 years old, while a few were younger than a year old. What is clear is that the animals represented by these bones were not old and most of them were not very young newborns. These cattle were mostly of the perfect age for their slaughter for beef. Cattle generally stop growing after their fourth year of life. If you are raising cattle for beef this is the best time to slaughter them because any more time creates a waste of fodder since they no longer grow and increase their meat yield. These cattle in F55 were prime beef cattle, not aged milkers past their productive prime or worn out draft animals, both of which could be sources for cheap beef. Taken together, the element distribution, MGUI numbers, and age/fusion data strongly suggest that these were high value, beef dedicated cattle and represent a high value source of beef.

Caprine element distribution percentages (figure 27) show high numbers of bones from the most meat heavy portions of a sheep or goat. The fore and hind quarter appear in the greatest numbers with the lower hind limb, source of the lamb or mutton shank, also shows up in significant percentage.

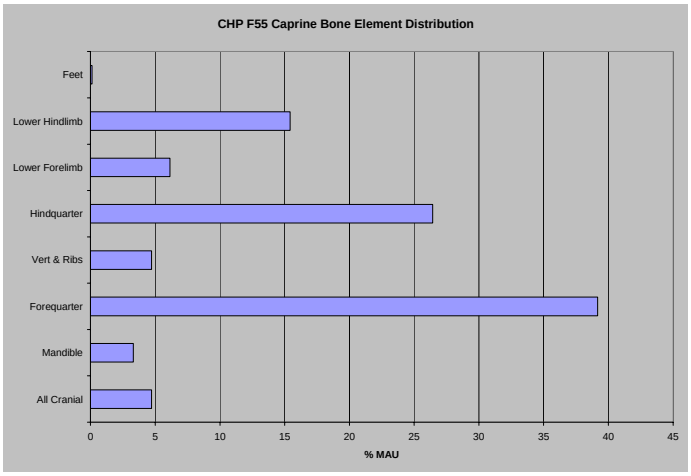


Figure 27

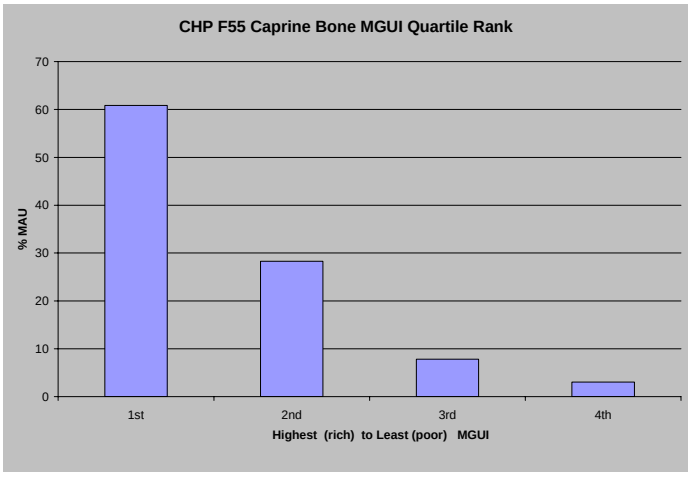


Figure 28

The MGUI percentages (figure 28) reinforce this and coupled with the element distribution numbers the caprine bones from F55 represent also represent a fairly high value dump of caprine butchery waste for meat. The cheaper, less productive parts of a sheep or goat in terms of meat and grease production do not appear in significant numbers at all.

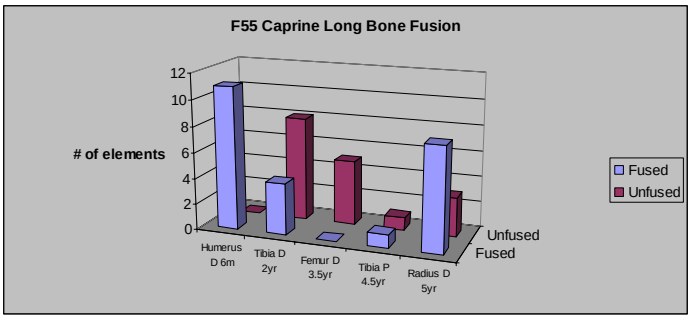


Figure 29

The bone fusion data for the caprines of F55 (figure 29) show a range of ages being processed and consumed. Though no very young, under 6 months of age, animals appear, there is a range from under two years old to over 5 years old present in the assemblage. What can be taken from these numbers is that both lambs and mature sheep were being consumed by the people who produced this dump. It is problematic to make assumptions about status in this case since mutton was often as popular as lamb. Yet we can see that the majority of these animals were either lambs or mature sheep and not very old sheep. There might be very old sheep in the assemblage, we do not have the mandibular tooth rows with which to do more aging analysis, but we can say that they are a minority within the assemblage. The caprine butchery waste in F55 represents a collection of high value cuts of meat from young to mature high value animals.

Butchery

Butchery marks were recorded as follows. Chop marks are the product of heavy chopping with cleavers, the sort of activity that would most likely only happened through primary butchery for human consumption. Impact marks are the product of crushing or breaking bones with a blunt instrument, again most likely the product of primary butchery or possibly industrial activity. Saw marks are the product of butcher's saws. Split bones were separated down the medial line of the bone most likely for marrow extraction. Knife marks are the product of cutting and stripping on bones. Knife marks are a usual product of secondary, household consumption of meat and are interpreted as such in this case.

Figures 30-33 show the number and type of butchery marks found and recorded with the faunal materials in these features.

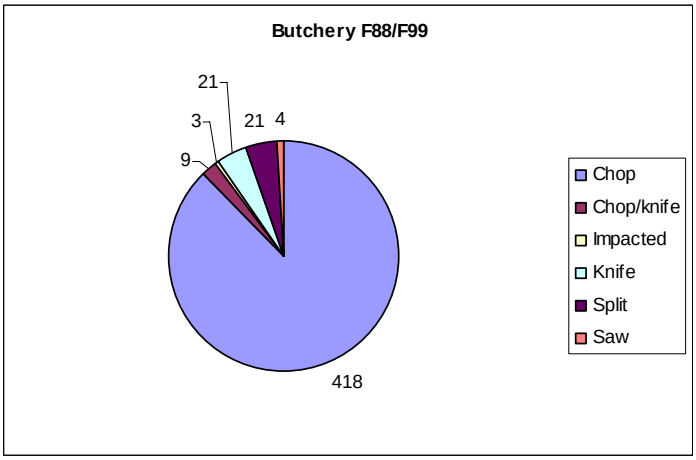


Figure 30

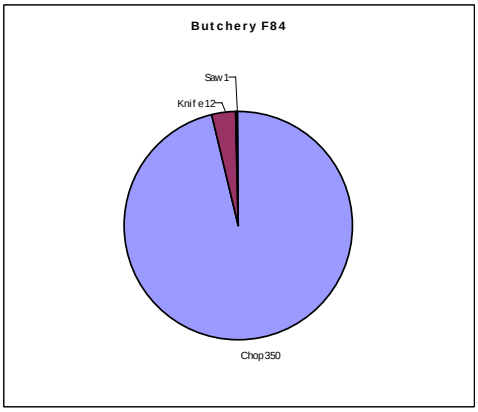


Figure 31

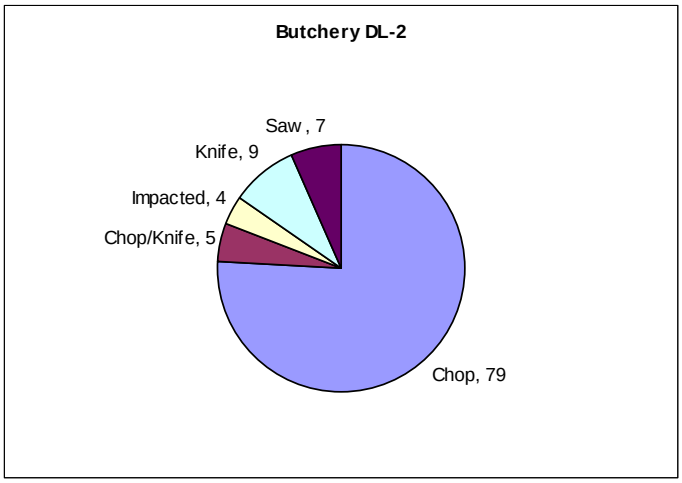


Figure 32

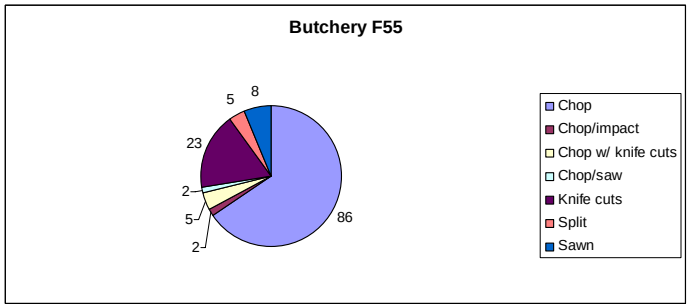


Figure 33

All of the features in this report have a very large majority of chop marks in their butchery profile. These are the result of activities that would most likely have taken place at a butcher's shop or in an industrial butchery setting. It is less likely that these would have been the product of home kitchen or dining activities. The butchery patterns in all these assemblages suggest that the majority of the bones in these features came from primary butchery and/or industrial activities. The saw and impact marks are highly likely to have came from the same source as the chop marks, i.e. butcher shops or industrial activities. Sawing and impact blows are often the hallmark of butchery specialization. There are some knife marks that might have originated from the secondary consumption of a home and kitchen but they are in the minority.

The saw marks, though small in number are a good indication of the late 18th century provenience of these features. They appear alongside a change in cuisine often paralleled with the introduction of the Georgian order cultural package into 18th century North America (Deetz, 1996). Deetz contrasts saw marks with chop marks, characterizing the former as a Georgian introduction reflecting a new cuisine concentrating on separate dishes and cuts of meat, and the latter with the pre-Georgian cuisine based on stews and pottages. It is impossible to go further into such an analysis without the artifact data yet these different butchering techniques might be indicative of differential status among the people who created these features.

Burning

Table 3 presents the burnt bone numbers and percentages in all the features in this report. The great majority of bone from all features is unburnt, and only F88/F99 shows any real, though small, presence.

Table 3

Burnt Bone	F88/F99		F84		F91		DL-2		F55	
Burning	Count	%	Count	%	Count	%	Count	%	Count	%
Unburnt	7004	90	9170	98	6022	99	1824	96	6445	99
Blackened	201	3	47	>1	12	>1	27	1	5	>1
White Calcined	532	6	74	1	6	>1	42	2	14	>1
Scorched	58	1	41	>1	2	>1	9	>1	1	>1
Total	7795		9332		6042		1902		6465	

Burnt bone can come from variety of sources. It can be the product of domestic meat consumption, either the ends of bones on roasted joints or possibly the product of

throwing away bones into a fire after consumption, and both might be the product of sweepings from the cleaning of dining rooms and kitchens. The lack of knife marks makes these scenarios less likely. Industrial activity is another possibility and the small numbers of burnt bone suggest once again that the majority of the refuse from these features on the Commons came not from domestic household refuse but from primary butchery waste and/or industrial activities such as the tannery.

Discussion

The New York City Commons housed the civic institutions dealing with the poor, the infirm, the marginalized and the military of Eighteenth Century New York City. It was also a large public space next to major avenues of traffic in and out of the city. It was surrounded by neighborhoods of great variety, from those of the fairly wealthy to the red-light district on the west side of the park, to the Almshouse, Barracks and Bridewell within it (Burrows and Wallace, 1999; Rothschild 1990). The Commons also was close to industrial operations such as a tannery and the Crolius and Remmey workshop producing stoneware. It is highly likely that all of these different areas contributed to the faunal assemblages of F88/F99, F55, F84, F91 and area DL-2.

Though we have a lack of differential patterning between these features in terms of fragment size, NISP, and element distribution data, and that of all these features only F88/F99 and F55 stand out as good candidates for well founded analysis, there are a few broad similarities in these features. Of course further analysis might reveal further similarities hidden at this stage.

- The significant numbers of cow bones in all features
- The almost total absence of dog or pig chewing marks and the very small numbers of rodent chewing make it probable that these features were all dumps into privies.
- The dominance of butchery marks that suggest primary butchery over household consumption

The numbers of cows is significant in that beef was the most expensive and desirable meat in eighteenth century NY (Crabtree and Milne 2002). Some of the better cuts might have been going to wealthier people living near butchers who dumped their waste on the Commons. The high number of heads could also reflect the provisioning of the Commons institutions with cheap meat. The proposed menu for the Almshouse inhabitants included broth as opposed to meat on the bone (Commons Committee Minutes, 1905). The large number of heads from cows and caprines might have been used for this.

Comment [AB1]: Probably MCC, but bad reference.

Given the high likelihood of differential sourcing for these features considering their placement within Eighteenth century New York City it is not surprising that there might be so few similarities. Yet between these similarities, the differences between the features and their geographical position we might be able to propose a few possible initial interpretations for these collective features.

● Industrial dumping is present. The horn cores from F88/F99 plus the high numbers (even with cranial skewing) of cranial elements in F84, F91, and area DL-2 might indicate industrial activity. This could have originated with the nearby tannery or with craft work either in, at the Almshouse for example, or outside of the Commons.

● Primary butchery waste is present. The lack of knife cuts and high percentage of chopping marks within each feature strongly suggest that this waste came from primary butchery activity. This could either have been from local butchers or from 'institutional' butchers at the Almshouse, Bridewell, or Barracks.

● Evidence of provisioning. The pig bones from F88/F99 clearly come from provision hams and shoulders coming in from outside the neighborhood. These could have been for provisioning the Commons institutions or surrounding households.

● Overall the assemblage suggests little in the way of domestic dumping. These features seem to represent a mixture between industrial, institutional, and primary butchery activities.

- Both F88/99 and especially F55 show strong indications of having been produced by the butchery of prime animals for high value cuts of meat. This suggests that people with good incomes contributed to the creation of the faunal dumps in these features.

The tannery and the institutions of the Commons are good candidates for the origins of the less valuable faunal assemblages of these features, especially features F84, F91, and DL-2. The tannery might have contributed heads and possibly whole carcasses from their operation. The heads and odd cuts might also have been for the provisioning of the Common's institutions. Yet there is also the high value evidence from F88/99 and F55 suggesting the participation of richer portions of New York City's population. Within F88/99 there is also evidence of industrial/craft activity in the form of the horn cores. On the whole the faunal assemblage from the City Hall Park Excavation seems to be a civic dump, made up of additions from the all the surrounding communities as well as those within the Commons itself. The assemblage is a good reflection of the civic uses and purpose of the Commons. The Commons was no longer a communal grazing area but a public/civic space where the city authorities placed the sick, the poor and those in need of redemption through work and/or incarceration. It looks as if the New Yorkers in the surrounding neighborhoods, as well as the inhabitants of the civic institutions of 'rehabilitation' dumped their excess waste there as well.

Acknowledgements

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